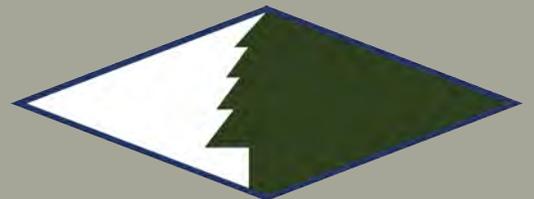




Placer County

Community Wildfire
Protection Plan



ANCHORPOINT

WILDLAND FIRE SOLUTIONS

2012

Placer County, California

Community Wildfire Protection Plan

Prepared by
Anchor Point
Boulder, CO
December 2012



ANCHORPOINT
WILDLAND FIRE SOLUTIONS



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EXECUTIVE SUMMARY

The Placer County Community Wildfire Protection Plan (CWPP) is the result of a community-wide planning effort that included extensive field data gathering, compilation of existing documents and geographic information system (GIS) data, and scientific analyses and recommendations designed to reduce the threat of wildfire-related damages to values at risk. Values at risk include people, property, ecological elements, and other human and intrinsic values within the project area. They are identified by inhabitants as important to the way of life in the study area, and are particularly susceptible to damage from wildfire.

This document incorporates new and existing information relating to wildfire, which will be valuable to citizens, policy makers, and public agencies throughout western Placer County, California. Participants in this project include the Placer County Fires Safe Alliance (PCFSA), Foresthill/Iowa Hill Fire Safe Council (FSC), Greater Auburn Area FSC, Greater Lincoln FSC, Placer Sierra FSC, California Department of Forestry and Fire Protection (CAL FIRE), United States Forest Service (USFS), Placer County Resource Conservation District (PCRCDD), other Placer County officials, numerous local fire departments and protection districts, and landowners.

The assessment portion of this document estimates the hazards and risks associated with wildland fire in proximity to Wildland-Urban Interface (WUI) areas. This information, in conjunction with identification of the values at risk, defines areas of special interest (ASI) and allows for prioritization of mitigation efforts. From the analysis of this data, solutions and mitigation recommendations are offered that will aid homeowners, land managers, and other interested parties in developing short-term and long-term planning efforts. The products and benefits of the efforts are as follows:

1. This document provides a comprehensive analysis of wildfire-related hazards and risks in the WUI areas covered by the Greater Auburn Area, Foresthill/Iowa Hill, Lincoln, and Placer Sierra FSCs. The WUI is the area where human development and activity meets and intermixes with undeveloped, “wild” vegetation. The analysis is delivered in the form of a CWPP. It strives to follow the standards for CWPPs that have been established by the Healthy Forests Restoration Act (HFRA).
2. Using the results of the analysis, a variety of types of recommendations have been generated that aid stakeholders in preventing and/or reducing the threat of wildfire to values in the study area. These recommendations are included throughout the report, wherever appropriate.
3. These recommendations, which include defensible space and fuels treatments, will facilitate the implementation of future mitigation efforts.
4. This report complements local agreements and existing plans for wildfire protection to aid in implementing a seamless, coordinated effort in determining appropriate fire management actions in the study area.

This CWPP is a living document, and, as such, the project list will need to be updated annually, and/or after a major “event,” such as wildfire, flood, insect infestation, or significant new home development.

HOW TO USE THIS DOCUMENT

The main CWPP document provides pertinent information for both the study area as a whole and for individual communities. A general overview of the CWPP process is provided first. This includes the goals and objectives of the report, a summary of the wildfire risk, information on the ecology of the area, previous fuels treatments, and an analysis of fire department capabilities. The next sections of the document are for the individual FSCs, including an introduction, description of the wildland-urban interface, community analysis, and an analysis of areas of special interest (ASI). Each set of community write-up pages can be regarded as a separate and complete report, and can be delivered to a community independently of the overall document.

Community and ASI recommendations for each FSC address five broad categories: public education; structural ignitability/defensible space; water supply; access/evacuation; and street and home addressing. Specific recommendations regarding landscape-scale fuels treatments are also included in the community analysis and recommendations section of the report. With this format, each community has all the relevant information available in several pages, separate from the overall document. Combined with general recommendations in Appendix A, “General Recommendations,” an individual or community should have the information necessary to begin the fire-mitigation process.

Because much of the information contained in the report is extensive and/or technical in nature, detailed discussions of certain elements are contained in appendices:

Appendix A: General Recommendations

Appendix A provides further detail on recommendations. General defensible space guidelines, which are applicable for every property, are described at length. Home construction, preparedness planning, infrastructure, public education, water supply and recommendations are also found in this appendix.

Appendix B: Project Collaboration

One of the main requirements of HFRA is to ensure community participation. A summary of the collaborative process undertaken for this project are found in Appendix B.

Appendix C: Fire Behavior Technical Reference

Appendix C describes the methodology used to model the fire behavior, and thus the threat represented by physical hazards such as fuel, weather and topography to values at risk.

Appendix D: Additional Information

As part of its FRAP program, CAL FIRE has developed Fire Hazard Severity Zones (FHSZ), which are an important component of many state and county building codes and regulations. FRAP and FHSZ reference documents and information are contained in Appendix D.

GOALS AND OBJECTIVES

Goals for this project include the following:

- Enhance life safety for residents and responders.
- Mitigate undesirable fire outcomes for property and infrastructure.
- Identify communities at risk and values at risk.
 - Reduce fuel hazards and prevent fires in these communities.
 - Consider fuels treatment prescriptions and locations.
 - Continue fuels treatment projects already initiated.
- Mitigate undesirable fire outcomes for the environment, watersheds, and quality of life.
- Improve the county and individual fire district's position as they compete for grants.

To accomplish these goals, the following objectives have been identified:

- Establish an approximate level of risk (the likelihood of a significant wildfire event).
- Provide a scientific analysis of the fire behavior potential of the study area.
- Group values at risk into areas that represent relatively similar hazard factors.
- Identify and quantify factors that limit (mitigate) undesirable fire effects on the values at risk (hazard levels).
- Recommend specific actions that will reduce hazards to the values at risk.

OTHER DESIRED OUTCOMES

1. Promote community awareness:

Quantifying the community's hazards and risk from wildfire will facilitate public awareness and assist in creating public action to mitigate the defined hazards. Educating the public on how CAL FIRE and Placer County Fire approach fires in the wildland-urban interface will motivate homeowners create more effective defensible spaces, make changes to existing construction and to complete mitigation projects.

2. Improve wildfire prevention through education:

Community awareness, combined with education, will help reduce the risk of unplanned human ignitions. This type of education can also limit injury, property loss, and even death. Programs like Ready, Set, Go! (www.wildlandfirersg.org) provide education and tools for firefighters and the FSC to reach out and educate the public on what to do to prepare their homes and belongings before a wildfire, and promotes early evacuation when there is a fire.

3. Facilitate and prioritize appropriate hazardous fuels reduction projects:

Organizing and prioritizing hazard mitigation actions will provide stakeholders with the tools and knowledge to evaluate these projects, ensuring that they are valuable and viable for the local community.

4. Promote improved levels of response:

The identification of specific community planning areas and their associated hazard and risk rating will improve the focus and accuracy of preplanning and facilitate the implementation of cross-boundary, multi-jurisdictional projects.

CURRENT RISK SITUATION

The surrounding federal lands report an active, but far from extreme, fire history. Fire occurrences for the American River (formerly Foresthill) Ranger District of the Tahoe National Forest were calculated from the U.S. Forest Service Personal Computer Historical Archive for the 40-year period from 1970 to 2010.

AMERICAN RIVER RANGER DISTRICT (USFS) NEVADA-YUBA-PLACER UNIT (CAL FIRE)

The information in the following graphs includes areas beyond the FSC boundaries. The data is for the entire Tahoe National Forest and Nevada-Yuba-Placer (NEU) unit. While the total number of fires and acres represent the total organization boundaries, the percentages and fire types are still applicable. Figure 1 shows USFS fire statistics for the entire Tahoe National Forest, and Figure 2 shows the fire statistics provided by CAL FIRE, which incorporates a greater range than the study area. For both figures, the upper left shows the number of fires (red bars) and the total acres burned (blue hatched bars) in the fire district each year. The number of annual fires for the American River Ranger District ranges from roughly two to slightly more than 30 fires per year. Between 1970 and 2010, seven fires burned more than 100 acres in the ranger district; the majority (387 of 519) were under a quarter acre. The total number of acres burned was greatest in 2008, when more than 20,000 acres burned. 2005 was another large fire year. The number of fires reported annually by CAL FIRE is much higher, with the lowest being 300 in one year and the most being upwards of 700. On average, there are about 400 fires reported for the NEU.

The figure in the upper right shows the percentage and number of fires occurring each month of the year between 1970 and 2010. Historically, August and September have had the greatest number of fires, followed by June and October. The fewest fires have occurred between November and May, a fact that reflects the seasonal conditions for the area. Autumn and winter fires within the ranger district have occurred infrequently. Fires outside the summer months are typically wind driven and can have rapid rates of spread. According to the NEU Unit (CAL FIRE), July had the most fires, followed by August, and then July. CAL FIRE information shows that there are more fires in the winter months; this could be the result of several factors. For one, the NEU unit includes areas outside of Placer County that may experience fires throughout the year. Or, because of the population in the SRAs, there are more fires throughout the year than in the Tahoe National Forest.

The figure on the bottom left shows the size class distribution of fires. Table 1 offers an explanation of the size class figure. Approximately 97.8 percent of the reported fires for the American Ranger District were less than 10 acres in size. These statistics reflect the widely held opinion that, throughout the western United States, the vast majority of fires are controlled during initial attack. The CAL FIRE data show that the majority (56 percent) of the fires were under 0.25 acre, and 40 percent were between 0.25 and 9 acres, so in all, 96 percent were less than 10 acres in size.

The bottom middle shows the number of fires caused by each factor. Table 1 offers an explanation of the cause class figure. By far the most common cause of ignitions is lightning, followed by campfires for the ranger district. This reflects the high level of recreationists who visit the area each year. Educating camping area users

and increased monitoring will help to reduce this risk. The third most common cause of ignitions is classified as miscellaneous, followed by smoking. All other causes are roughly equal, and although they are lesser threats, they should also be taken into consideration. From the CAL FIRE information, a much larger percentage (31 percent) of fires were caused by various equipment. Another 39 percent were classified only as miscellaneous, meaning the cause does not fit into the broad categories, or it was unable to be identified.

Finally, the bottom right figure represents the number of starts for each day designated as a fire weather day. Nearly all of the fire days in the ranger district (273 out of 343) had only a single start. Forty fire days (11.6 percent) had two fires ignite, and overall, less than 20 percent of the fires days have historically experienced more than one start. This information can be useful in determining resource needs. If there were numerous fires on fire days, this would indicate that additional firefighting responders would be necessary. Within the NEU, 39 percent of the fire days experienced one start, 25 percent had two starts, and 17 percent had three starts. While it did occur, it is very rare to have more than 10 fires on any given day designated as a fire-day.

Figure 1. USFS fire statistics (American River Ranger District)

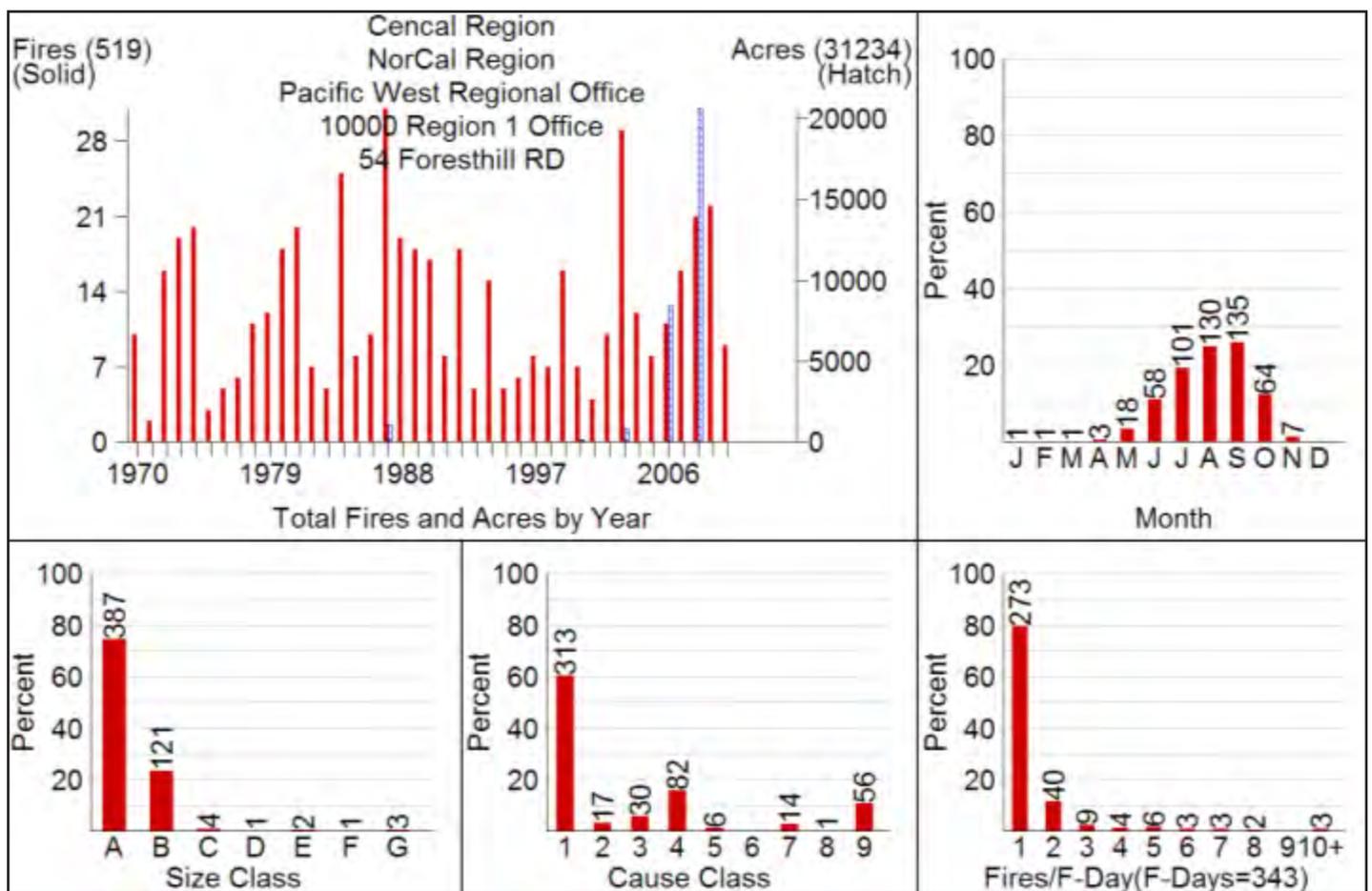


Figure 2. CAL FIRE fire statistics (Nevada-Yuba Placer Unit)

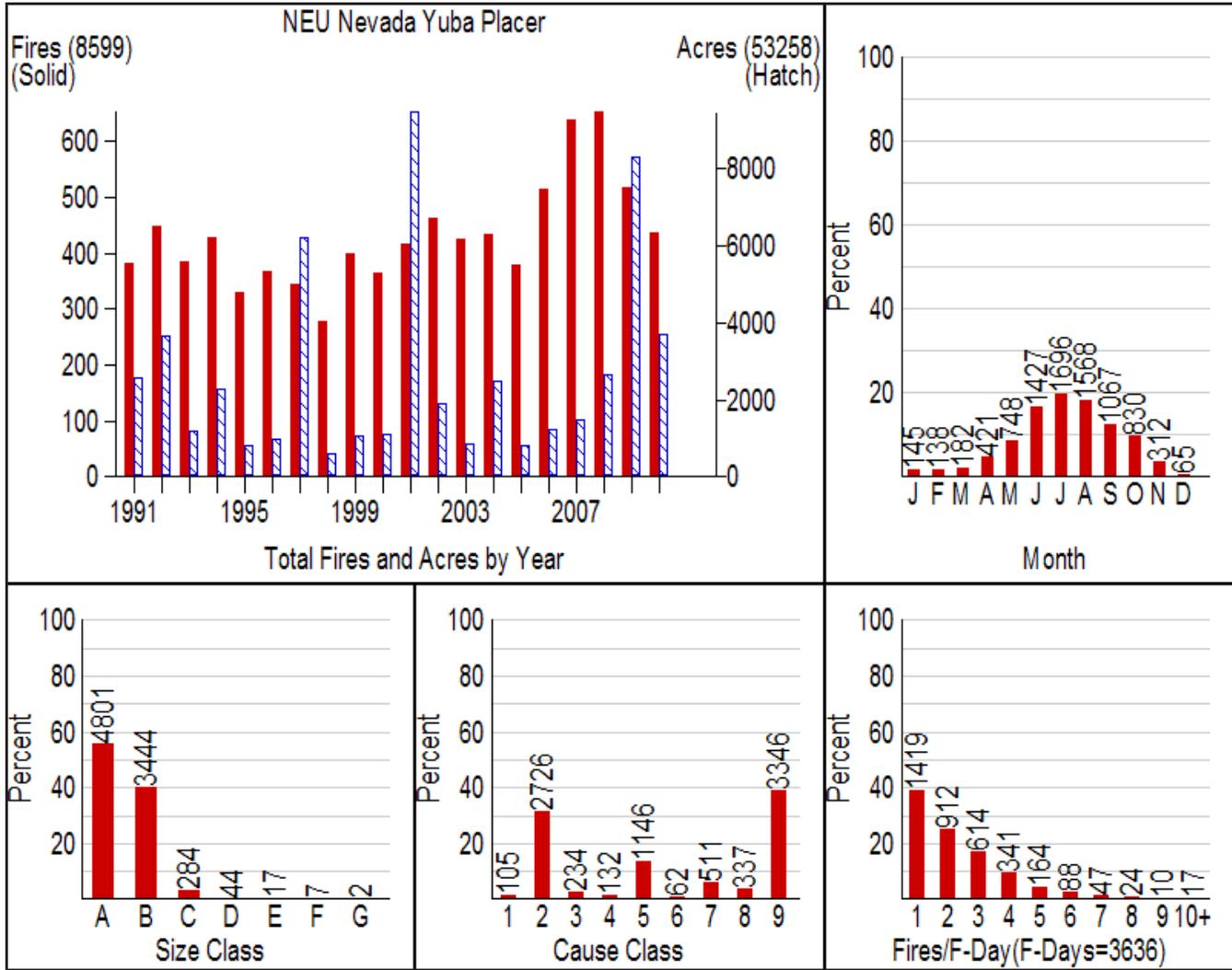


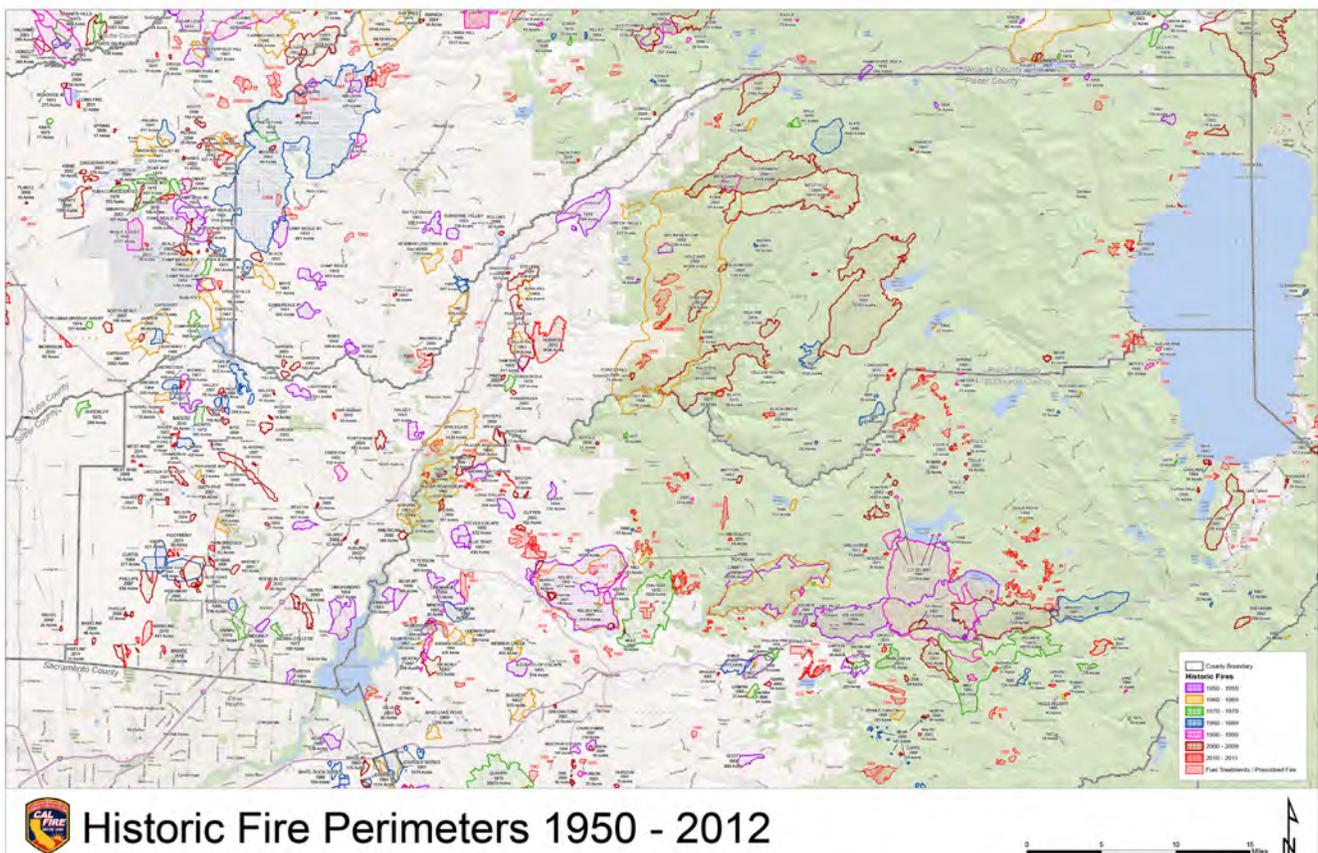
Table 1. Explanation of fire statistics in Figures 1 and 2.

Size Class (acres)	A	B	C	D	E	F	G		
	<1/4	1/4-9	10-100	100-299	300-999	1000-4999	5000+		
Cause Class	1	2	3	4	5	6	7	8	9
	Lightning	Equipment	Smoking	Campfire	Debris Burning	Railroad	Arson	Children	Misc.

PLACER COUNTY FIRE HISTORY

There is a long history of fires in the study area. The map below provides information on the locations and sizes of some of the more recent fires. Click on the map below to access an Adobe PDF document that can be zoomed into.

Figure 3. Historic fire perimeters for study area and extended area.



2012 Robbers Fire – 2,650 acres
 2009 Gladding Fire – 1089 acres
 2009 Forty-Nine Fire – 343 acres
 2008 Westville Fire – 11,090 acres
 2007 Phillips Fire – 935 acres
 2003 TNF 1993 Cod Complex – 830 acres
 2001 Ponderosa Fire – 2,780 acres

2009 Mammoth Fire – 643 acres
 2009 Foresthill Fire – 30 acres
 2008 Government Fire – 9,220 acres
 2008 Peavine Fire – 580 acres
 2006 Ralston Fire – 8,423 acres
 2004 Stevens Fire – 934 acres
 2001 Star Fire – 16,464 acres

ENVIRONMENTAL RESOURCES

Placer County is rich in natural resources, with watersheds and streams being the most important. Streams, lakes and rivers provide habitat for numerous fishes, mammals, and vegetative species. The water resources in the county also provide recreational opportunities, including camping, fishing, and rafting. There are 14 primary watersheds in Placer County, which are part of the larger Sacramento River Basin. Water that begins in these watersheds provides the majority of the source water for the Sacramento and San Joaquin Valleys. The watersheds are characterized by steep slopes covered in fairly dense vegetation. Although a natural ecosystem function, intense wildfire is one of the largest threats to watershed function, as the removal of soil-stabilizing vegetation leads to increased erosion and sedimentation. As a result, fire control and suppression are often the primary goals during a wildfire. Fire is a natural part of how the ecosystem in the area functions, but because of land-use changes for functional use, management goals and objectives must be adapted to limit the potential damage of a severe wildfire.

Within the county, numerous plant species are found. Herbaceous species include bluegrasses, clovers, hairgrass, mountain brome, sedges, and wiregrass. Manzanita, sagebrush, and other chaparral-associated species comprise the shrubs. Forest composition changes in elevation, and includes ponderosa, sugar, Jeffrey, and lodgepole pines, as well as some white and California red firs, Douglas-fir, and incense-cedar. At lower elevations, oak-pine woodland stands are dominant, and include blue oak, California black oak, valley oak, interior live oak, tanoak, and gray pine. Grasses, including many non-native species, and forbs form most of the understory. These stands range from dense, closed canopies to open savannahs, and are often separated by large grassland areas and/or

agricultural lands. Agricultural areas, which occur primarily in the lower elevations of the county, comprise a variety of crops and land-use techniques, including livestock grazing, orchards, and vineyards. Moreover, not all agricultural and grazing areas are irrigated, and some are burned annually or bi-annually.

Animal species include Columbian black-tailed deer, California Mule Deer, bobcats, crows, gray foxes, gray and ground squirrels, mountain lions, mourning doves, turkey vultures, and quail. Rivers, streams, and lakes are home to various trout species such as brook, brown, and rainbow trout. Specific to Placer County, threatened species and species of concern include: Swainson's hawk, giant garter snake, bank swallow, burrowing owl, and foothill yellow-legged frog. This list is by no means all inclusive, and additional information on all animals can be found on the Placer County website.

A more recent concern is the expansion of Scotch and French broom. Both species of broom are aggressive non-native plants that out-compete native plants for nutrients and water. The plants are highly flammable, and have large components that provide dry, dead fuels. The invasive brooms have a deep root system that allows them access to water that native species cannot reach. What makes the plants even more successful is the fact that their numerous seeds can last up to seven years in the soil, and cutting brush can promote additional growth. Removal of Scotch and French broom is extremely difficult, and there is no single "right" way to completely eliminate them.

RESOURCES FOR RESIDENTS

PROJECTS TO IMPLEMENT

A list of fuels treatments for each of the communities can be found within each FSC section. A map of the projects is included. The recommendations are not a prescription for the area, and any project should be done in conjunction with a licensed professional

forester. The projects detailed in the CWPP are not the only projects that are viable within the planning areas. Landscape-scale projects are excellent options as well, but often require multiple communities working with federal and state agencies, county governments, utility companies, and adjacent private landowners. As support and community involvement grows through these smaller projects, larger treatments become more viable. Additional projects at all scales should be considered by each fire safe council, especially as communities begin to complete the initial projects identified.

To facilitate implementation, ANY action item, such as fuel modification, public education, etc., can be populated into the Action Item Worksheet - below - to organize information on key issues, develop ideas for implementation, coordinate with partner organizations, generate a timeline, and plan goals.

PLACER COUNTY VEGETATION ABATEMENT ORDINANCE

Beginning in 2007 with specific areas, the Placer County Hazardous Vegetation Abatement (HVA) is now applicable to numerous communities. The HVA Ordinance extends the enforceability of the California State Law, PRC 4291, which requires defensible space, to unimproved parcels. This requires landowners who do not have a structure on their property to still remove vegetation in order to protect the homes in the vicinity. Detailed information regarding the Ordinance can be found on the Placer County website at: <http://www.placer.ca.gov/Departments/Fire/HVAO.aspx>.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Before beginning any project, landowners, contractors, and fire departments should be aware of the California Environmental Quality Act (CEQA). Under this act, certain activities must comply with CEQA when completed by public agencies. In addition to

fuels reduction projects, most physical development in California is subject to the provisions outlined in CEQA. For more information, please visit the link below: <http://ceres.ca.gov/ceqa/more/faq.html>.

FOREST PRACTICES

Regulations and enforcement of laws regarding logging on private property is done through the CAL FIRE Forest Practice department. This ensures that residents are abiding by the laws outlined in the Forest Protection Act of 1973. Details on Forest Practice are found at: http://www.fire.ca.gov/resource_mgt/resource_mgt_forestpractice.php.

ENVIRONMENTAL IMPACT REPORTS

Project Environmental Impact Reports (EIRs) may be necessary when completing large projects. The EIR will analyze the potential impacts of management practices. Currently, the community of Meadow Vista has a Program Timberland EIR, available at <http://www.docstoc.com/docs/23557152/Overview-of-the-Meadow-Vista-Vegetation-Management-Program>. For a more general understanding of PTEIRs, please visit this site:

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

TREATMENT OPTIONS

Thinning

A treatment made to reduce stand density of trees primarily to improve growth, enhance forest health, or recover potential mortality; types of thinning include the following:

- *Chemical thinning*: the killing of unwanted trees by using an herbicide, e.g., including band or frill girdling
- *Crown thinning*: the removal of trees from the dominant and codominant crown classes in order to favor the best trees of those same crown classes —synonym thinning from above, high thinning

- *Free thinning*: the removal of trees to control stand spacing and favor desired trees, using a combination of thinning criteria without regard to crown position
- *Low thinning*: the removal of trees from the lower crown classes to favor those in the upper crown classes —synonym thinning from below
- *Mechanical thinning*: the thinning of trees in either even- or uneven-aged stands, involving removal of trees in rows, strips, or by using fixed spacing intervals —synonym geometric thinning
- *Selection thinning*: the removal of trees in the dominant crown class in order to favor the lower crown classes —synonym dominant thinning

Prescribed Fire

To deliberately burn wildland fuels in either their natural or their modified state and under specified environmental conditions, which allows the fire to be confined to a predetermined area and produces the fireline intensity and rate of spread required to attain planned resource management objectives — synonym controlled burn, prescribed fire —see broadcast burn, smoke management; kinds of prescribed burn include the following:

- *Prescribed managed fire*: a fire ignited by management to meet specific objectives —note a written prescribed fire plan must be approved and all legal requirements (e.g., NEPA in federal situations) met prior to ignition
- *Prescribed natural fire*: a naturally ignited wildland fire that burns under specified conditions where the fire is confined to a predetermined area and produces the fire behavior and fire characteristics to attain planned fire treatment and resource management objectives.

Prescribed fire is a tool used throughout the project area on public and private lands. Talk with your local fire officials before considering any

project that may require prescribed fire.

FUEL REMOVAL

Placer County Chipper Program

The Placer County Chipper Program, managed by Placer County Resource Conservation District, provides residents with a low-cost chipping service to assist in reducing their fire hazard. The Chipper Program is operated through the use of grants and homeowner cost-sharing. Other partners involved in the program include the Placer County Office of Emergency Services, Placer County Sheriff's Department, Placer County Air Pollution Control District and CAL FIRE. This curb-side service is an excellent way for homeowners to dispose of limbs and stumps (under 12 inches) from their projects, thus reducing the number of large flammable burn piles. For more information, call 530-885-3046 or visit www.placer-countyrcd.org.

Biomass Utilization

Placer County has made a proactive decision in how to handle the excess woody biomass produced by thinning projects throughout the county. In addition to removing hazardous fuels, the Program's goals are to:

- Reduce the risk of catastrophic wildfires in Placer County.
- Protect Placer County citizens and visitors from the consequences of catastrophic wildfires.
- Find one or more beneficial uses for excess biomass in Placer County.
- Improve air quality in Placer County.

More information can be found on the Placer County website at: <http://www.placer.ca.gov/Departments/CommunityDevelopment/Planning/Biomass.aspx>
Pile Burning

The link below contains information for specifications on burning piles in Placer County. Always check with your local fire agency before completing any landscape or pile burns. <http://www.placer.ca.gov/Departments/Air/openburning/residentialburning.aspx>.

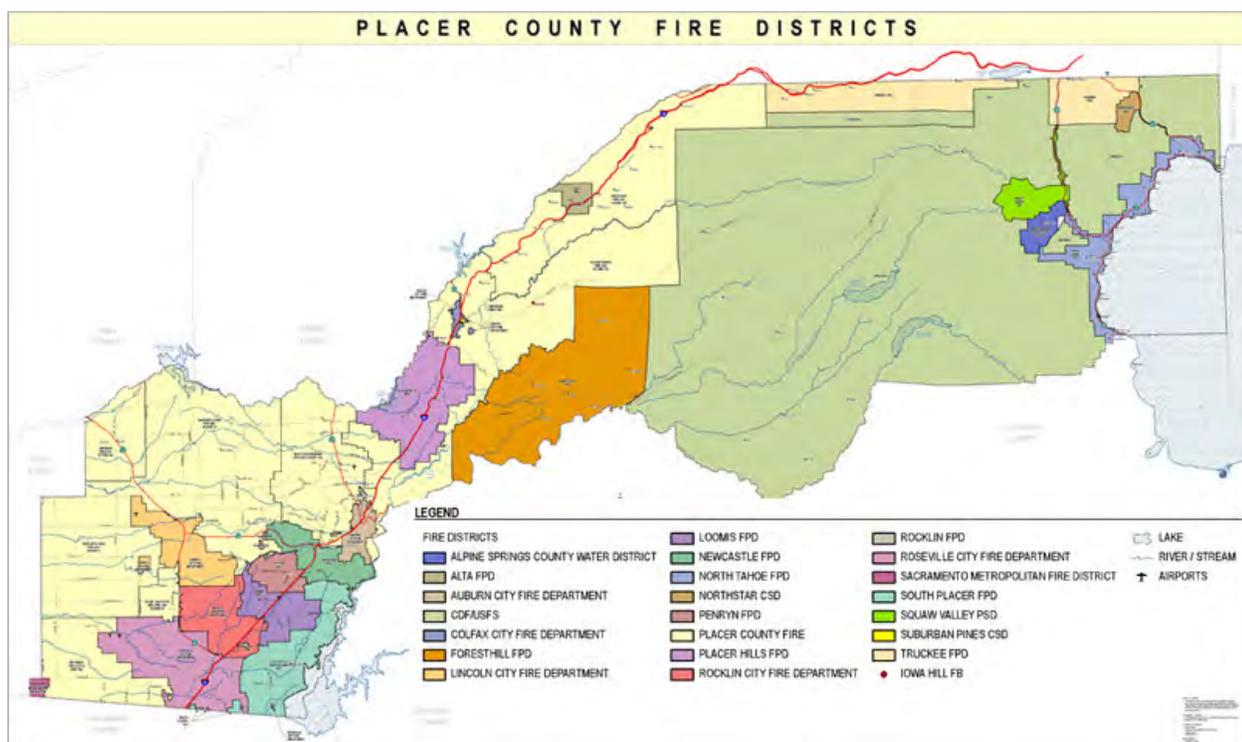
FIRE DEPARTMENT CAPABILITIES

Fire services in Placer County are provided by a number of municipalities that include: Placer County Fire comprised of County Service Areas, independent Fire Protection Districts, incorporated City Fire Departments, Cal Fire; responsible for State Responsibility Areas, U.S. Forest Service (USFS); responsible for federal forest lands, Bureau of Land Management (BLM); responsible for federal recreation lands under the department of the Interior, and U.S. Bureau of Reclamation (BOR) who does not employ fire suppression resources but through agreement with other fire service agencies, receives such services for lands in Placer County.

Emergency services are provided to 1,506 square miles of Placer County with a population base of 325,000. Areas of service are diverse in topography, density, climate variations, fuel types, and fire history. Placer County hosts recreational, industrial, residential, and seasonal opportunities that draw significant numbers to the area. Fire stations are located throughout Placer County operating on both a 24/7 and volunteer staffing capacity. Fire service personnel in Placer County are comprised of full time career, volunteer, volunteer/call back, part time, and seasonal hired.

Fire agencies in western Placer County are participants in The Western Placer County Fire Chief's Association *WESTERN PLACER COUNTY COOPERATIVE FIRE SERVICES RESPONSE AGREEMENT*, an operational plan that utilizes the closest resource(s) concept to an emergency incident regardless of the jurisdictional boundary.

Figure 4. Fire district map for Placer County, including areas outside of the FSC boundaries.



FIRE SAFE COUNCIL ANALYSIS AND RECOMMENDATIONS

COMMUNITY ASSESSMENT METHODOLOGY

The community level assessment uses a methodology that was developed specifically to evaluate communities within the WUI for their relative wildfire hazard. The assessment combines physical infrastructure, such as structure density and roads, and fire behavior components, such as fuels, topography, rate of spread, and flame length, with the field experience and knowledge of wildland fire experts. The assessment is intended to compliment the work done by CAL FIRE, not replace it. CAL FIRE has independently developed its own wildfire and fuels assessment, known as the Fire and Resource Assessment Program (FRAP). This program includes a variety of products, including Fire Hazard Severity Zones (FHSZ), which are integral to the implementation of California's Building Codes and Standards. Fire Hazard Severity Zones are placed into three (3) categories: Very High Fire Hazard Severity Zone, High Fire Hazard Severity Zone, and Moderate Fire Hazard Severity Zone. Each zone presents its own risk and challenges when planning for mitigation of wildfire. The FHSZs for Placer County have been included in Appendix D. The intent of using a second assessment methodology is to provide useful information to assist in developing projects and or programs that mitigate the impact of wildfire while using FRAP to plan and develop communities that may be prone to wildfire risk.

Defined communities are the centerpiece of a CWPP. The definition of a community, for the purposes of a CWPP, has been refined by Anchor Point over the last 10 years while producing these plans. In doing so, state and federal requirements and definitions have been taken into consideration. The communities identified by Anchor Point are displayed in the individual FSC sections. Lot/parcel sizes should be small enough that actions taken by individual residents will likely have an effect on their neighbor's fire risk, and may motivate further action. Close proximity is an easy way to encourage collaboration, and often a community will include multiple smaller subdivisions.

Each FSC and community write-up can be regarded as individual documents. These pages can be delivered to a community independently of the overall document. As a result, you will see general recommendations for each community listed first, followed by community descriptions, areas of special interest, and finally a fuels reduction project list. While seemingly repetitive, with this format, each community has all the pertinent information available for them, separate from the overall document. Not every community has a specific landscape-scale fuels project identified. In these communities, and in all of the communities, defensible space is the highest priority fuels treatment recommended. **Defensible space and home construction is determined to be the greatest benefit for the least cost for landowners in all communities, regardless of whether landscape-scale fuel breaks are recommended.** This does not mean that a larger, landscape-scale project within the community/planning area could not be beneficial for the area, but it was not identified as the most important step in protecting life safety and values at risk. Identifying larger projects in the surrounding influence zones will be meaningful for obtaining grants to help fund all of the projects, especially the small acreage projects. Although large fuel breaks are not always as effective for individual home protection as defensible space, if implemented correctly, they can act as anchor points for suppression activities to begin.

Although the graphics provide general information regarding the overall hazard and risk rating for specific communities, they do not describe fully the specific information that formed the rating. At a minimum, it is necessary to review the individual community write-ups and recommendations. Complete understanding only can be attained by reading the accompanying text, in addition to looking at the graphics. Recommendations in this document are not prescriptive, but are intended to assist in the identification

of possible solutions or mitigation actions to reduce the impact of wildfire on values at risk. The views and conclusions in this document are those of the authors and should not be interpreted as representing the opinions or policies of any governmental entity or fire agency, signatory companies, Placer County or the United States Government. The methodology used is proprietary and as such may not match with other existing hazard and risk ratings. In the event the language of this document conflicts with any regulatory documents, policies, or local laws, this document does not supersede any regulatory documents, local laws, or policies.

AREA OF SPECIAL INTEREST ASSESSMENT METHODOLOGY

ASIs are places within the CWPP study area that could be threatened from wildfire and have a social or economic value that is not based on residential development. Unlike communities, ASIs are not given hazard ratings. Frequent candidates for ASIs include recreation areas, such as parks, reservoirs, ski areas, and designated open space. Guest ranches, church camps, RV parks, and other large acreage recreational camps that have a significant, but temporary, population are typically included as ASIs. Also included as an ASI is critical infrastructure, such as communication arrays, that is vital to the local community. ASIs are identified separately from communities because they either lack, or have low permanent population densities.

Recommendations for ASIs and critical infrastructure follow the accompanying write-ups. These recommendations are not inclusive and should be utilized in conjunction with those planned by local utility and railroad companies, fire departments, and local, state and federal agencies.

AGENCY TREATMENTS

The U.S. Forest Service, CAL FIRE, and local communities all have planned and completed fuel mitigation projects in the vicinity. A snapshot of most of these efforts is difficult to show at a large scale, so these treatments are found within the individual community graphics. All of the treatments shown have either been completed or are in progress. The proposed Anchor Point treatments are often tied into these existing agency projects or are in close proximity. Homeowners' associations and individuals should supplement these efforts with their own wildland fire mitigation treatments, which are detailed in the Community Analysis section.

The CWPP has collected the data from multiple agencies, including CAL FIRE, the USFS, and the Placer County Resource Conservation District. During the data gathering process, a newer tool, Cal MAPPER, was mentioned as an existing resource that will be an invaluable resource as Placer County proceeds with fuels projects. It is an existing statewide database that is managed by CAL FIRE for interagency data collection. While still being developed, Cal MAPPER is designed to be a one-stop place where all agencies involved in prevention, urban forestry, Forest Legacy, CFIP, Proposition 40, and other activities can track their projects and share them with others. In addition to having the treatment type, Cal MAPPER is able to display the location, layout, treatment method, acreage, and dates in one location. Promoting and using Cal MAPPER will help improve fiscal reporting, project planning and maintenance, open doors for additional funding, and help with emergency response. To not duplicate efforts, it is important to make all of this information available in an online forum, where all agencies involved in Placer County (and the rest of California), can track and summarize the ongoing efforts.

GREATER AUBURN AREA FIRE SAFE COUNCIL



GREATER AUBURN AREA FIRE SAFE COUNCIL

INTRODUCTION

Location

The Greater Auburn Area FSC (GAAFSC) covers a large portion of western Placer County. Beginning in Loomis, the council boundary goes west and north in both directions before meeting the county boundary. The eastern boundary runs between Christian Valley and Meadow Vista, and between the communities of Bowman and Clipper Gap. The total size of the FSC is approximately 58,000 acres, or 90.5 square miles. Cities and communities within the FSC include Auburn, Bowman, Christian Valley, Loomis, Newcastle, North Auburn, Ophir, and Penryn. Most of the FSC area is privately owned (55,400 acres), except for public lands owned by the Bureau of Reclamation and administered by State Parks (2,300 acres) and state of California (115 acres) along the American River, and scattered parcels owned by the Bureau of Land Management (BLM) (190 acres) along the south-eastern boundary. The FSC boundary can be seen in Figure 5.

Demographics and Economics

The estimated population of the area within the FSC is between 40,000 and 45,000, with most people clustered along the Interstate 80 and Highway 49 corridors. Many residents also reside on larger parcels on the periphery of area towns. The largest segment of the population is between the ages of 50 and 64, followed by the 65-and-older age group.¹ Because of its location near the booming Sacramento job market, many residents commute to the city and neighboring suburbs. However, there are also a number of large employers in the area, primarily centered in Auburn and North Auburn. Numerous local businesses in Auburn and North Auburn also serve people from the larger surrounding area that come into the towns for goods and services. Towns within the FSC also receive significant tourist traffic throughout the year, but primarily during the summer and shoulder seasons.

Weather

Areas within the FSC tend to have cool, wet winters and hot, mostly dry summers. An average of 68 days each year has highs above 90 degrees. The record high temperature is 113 °F, set in July of 1972. The driest year occurred in 1976, when only 11.8 inches of precipitation fell.² Dry conditions normally begin around the end of May and extend into November.

Table 2. Weather Data for the GAAFSC.

	Temperature ²	Precipitation ²	Winds*
Monthly High/Low	High: 93° (July)	Low: 0.05" (July)	6.1 mph (March)
Yearly Average/Total	72°	34.3" (Total)	5.2 mph

* <http://www.wrcc.dri.edu/htmlfiles/westwind.final.html#CALIFORNIA>

¹ "2010 Census Interactive Population Search." US Census Bureau.. Web. 06 Mar. 2012. <<http://2010.census.gov/2010census/popmap/ipmtext.php?fi=06>>.

² <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?caabu+nca>

Topography

Elevations in the area range from approximately 400 feet above sea level to over 2,000 feet along the north-west boundary. Along the eastern boundary of the FSC, steep slopes rise up from the American River, ascending more than 1,000 feet in just over half a mile. Grades in this area easily exceed 30 percent, with many areas greater than 100 percent. Because of the steepness, fire spread uphill will be rapid due to the pre-heating of fuels above. Moving west from Auburn and Bowman, the terrain is dominated by small canyons and rolling hills. Many of these canyons have steep slopes, which will actively funnel winds and fire. Many homes in the FSC area are located in higher-risk topographic areas, including atop hills, within canyons, and above steep slopes and chimneys. The northern boundary is also dominated by steep slopes rising up from the North and Middle Fork of the American River.

Fuels

The majority of the Greater Auburn Area FSC area is dominated by oak-pine woodlands and annual grasslands with montane hardwood-conifer woodlands (Pacific madrone, black oak, incense cedar, ponderosa pine, and Douglas-fir) along the eastern boundary.³ See Appendix C for more information.

Fire Behavior

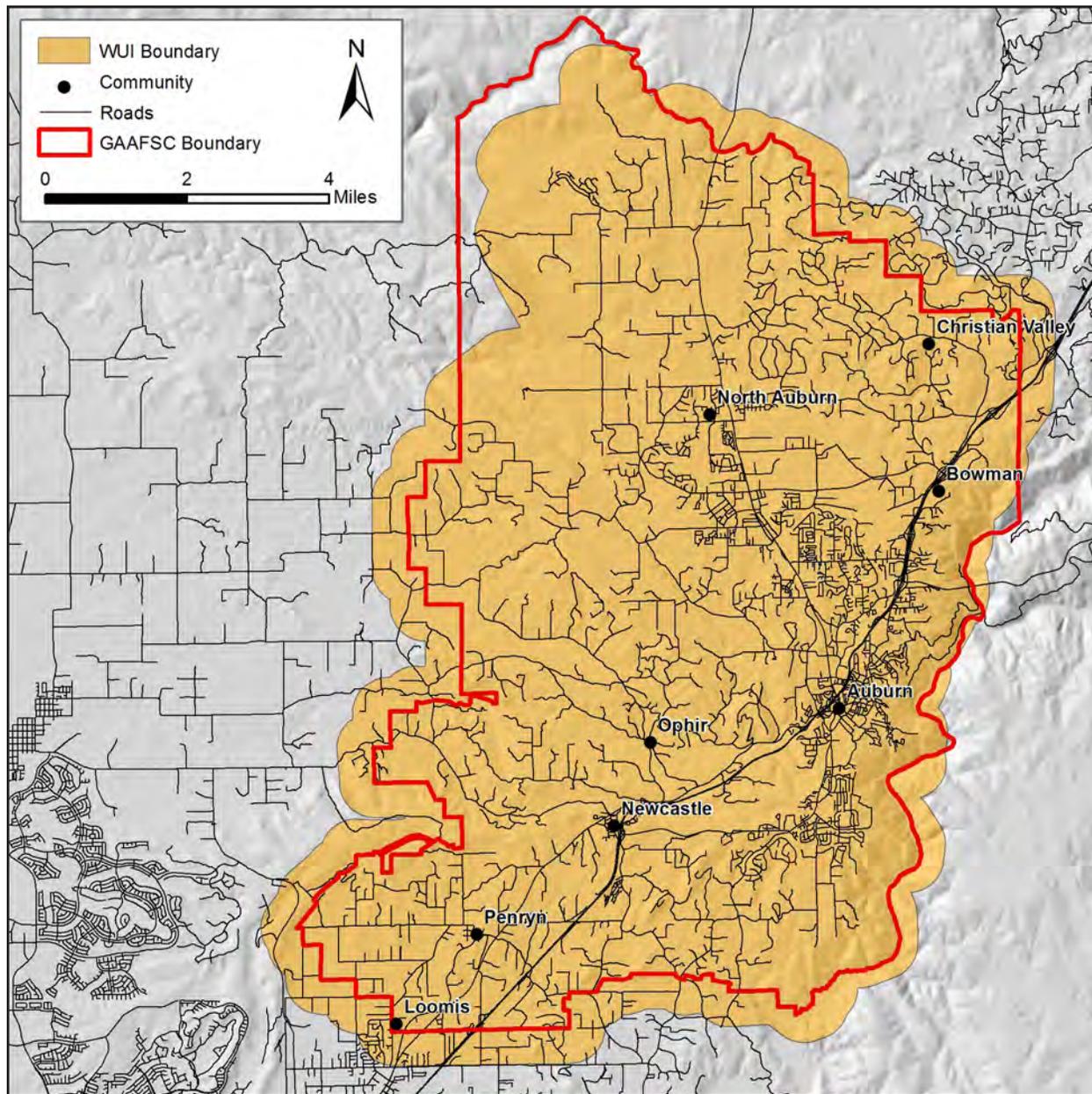
Fire behavior was modeled using two different weather scenarios: moderate and high. For more detailed information on the parameters used for the model, please see Appendix C. Because of the similarity of fuel types throughout most of the FSC area, fire behavior parameters do not vary widely geographically. In general, all three indices increase in areas of steep slopes, heavy fuel loadings, and on south-facing slopes. Under moderate weather conditions, flame lengths in most areas are generally zero to 4 feet, with pockets of 4 to 8 feet and 8 to 11 foot flames, especially on the northern and western boundaries. This means that firefighters are often able to attack a wildland fire directly in most of the area, either as part of a hand crew or with wildland fire apparatus. Indirect strategies and aerial equipment are likely not necessary. However, under high weather conditions, flame lengths exceeding eight feet are more likely, meaning that firefighters will not be able to attack the fire directly. Crown fire potential remains similar under moderate and high weather conditions, with mostly surface fire predicted. In areas of dense canopy cover, individual and group tree torching is likely. Sustained crown fire behavior is not predicted under high-percentile weather conditions, although such scenarios are possible and have occurred historically. Rates of spread are predicted to be less than 20 chains per hour given moderate weather conditions throughout most of the area. Conversely, rates of spread are highly variable under high weather conditions. On south-facing slopes and steep hillsides and in drainages, rates of spread exceeding 60 chains per hour are predicted. While the rate of spread to the communities is fast, rates of spread directly in and around the communities are likely to be much slower.

³ Holl, Steve. Community Wildfire Protection Plan for the West Slope of the Sierra Nevada in Placer County. Ref. Online < <http://www.placerfirealliance.org/Documents/CWPP%20Final.pdf>>

WILDLAND-URBAN INTERFACE BOUNDARY

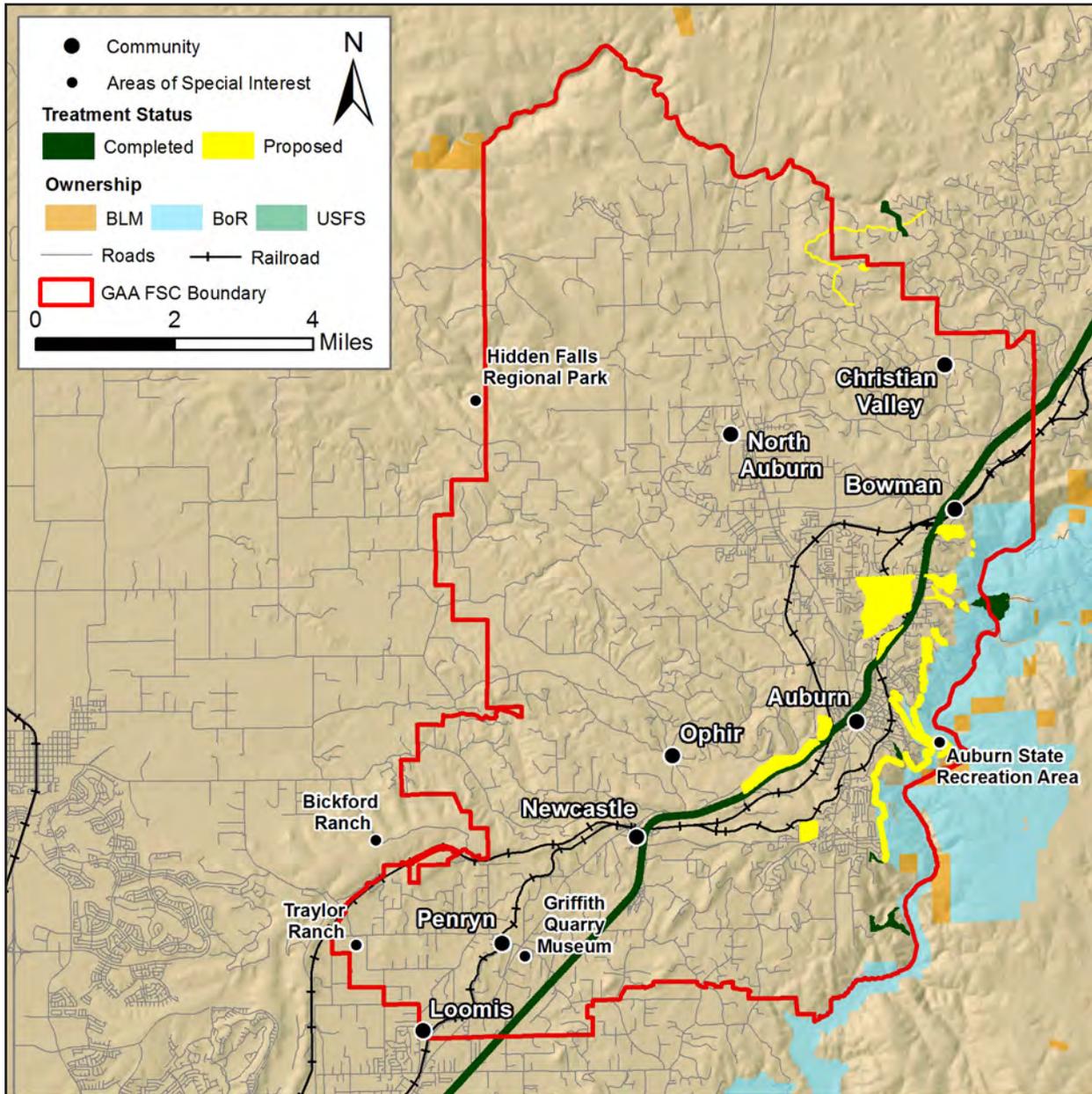
For the purpose of this CWPP, the WUI in the Greater Auburn Area FSC was defined using a 0.5 mile buffer surrounding populated areas. The majority of the GAAFSC is designated as WUI, with only the areas with lowest populations outside of the defined WUI.

Figure 5. WUI Boundary for the GAAFSC.



GREATER AUBURN AREA COMMUNITIES

Figure 6. Community locations, projects, and areas of special interest for GAAFSC.



COMMUNITY RECOMMENDATIONS FOR RESIDENTS

For all of the homes in the FSC, properly implemented defensible space and Firewise home construction is the most important recommendations for home survivability. Due to limited firefighting resources, especially during the early stages of an expanding wildfire incident, high home density, and/or long response times, individual firefighting entities may not be able to stay and protect each home. In order to survive a passing flame front, a home will need good defensible space and home construction. Often, homeowners will assume that because they have adequately constructed their homes from noncombustible materials and have cleared vegetation around the structures, firefighters will be able to save their homes. However, defensible space needs to be maintained and re-assessed throughout the fire season.

Because of scattered, discontinuous home locations, individual fuel breaks will not be the most effective deterrent to fire spread. In addition, all homes adjacent to flammable wildland fuels should have adequate defensible space. Connecting, or linking, defensible space between homes creates a larger fuel break, providing greater protection from adjacent vegetation. More in-depth information on home construction, defensible space, preparedness planning and evacuation, infrastructure, and water supply can be found in Appendix A.

The GAAFSC has been planning and completing fuel reduction, defensible space and public education projects in their area since 2001. Table 3 defines their current actions and recommended projects. This list will be reviewed and updated on an annual basis to reflect the latest conditions as well as FSC and community priorities. Table 4 is the general fuels recommendations for the area, while Table 5 includes general recommendations beyond fuels, including home construction. A document of the American River Canyon Shaded Fuel Break is included in Appendix D. This project includes approximately 300 acres of public and private land adjacent to Auburn.

The project categories in the Table 3 are defined as such:

Category 1: Large fuel break project that is intended to protect an entire community comprised of commercial, residential, and recreational facilities.

Category 2: A fuel break in the WUI designed to offer protection to a specific residential subdivision.

Category 3: Projects that focus on Open Space/Defensible Space that offers protection to individual buildings.

Category 4: Implementation of a Defensible Space Program that contains outreach, recommendations, inspections, and follow-up.

COMMUNITY ANALYSIS

Table 3. Fire mitigation and fuels reduction projects for the Greater Auburn Area FSC.

Project Name	Status	Treatment	Category	Acres
American River Canyon Shaded Fuel Break	Various stages of work have been implemented since 2002 including initial and maintenance. There are approximately 17 different project sites throughout the City of Auburn. This is an ongoing project to retain viability.	Application of the American River Canyon Shaded Fuel Break Prescription. (Refer to the “Project Canyon Safe” document for additional description and project detail)	1	110+/-
City of Auburn Defensible Space Program	Approximately 14 communities within the City of Auburn have been identified for defensible space programs and inspections. To date approximately 3 communities have had inspection.	Defensible Space guidelines in accordance with Firewise, PRC, and local requirements. (Refer to listing of specific communities)	4	955 Homes
City of Auburn Open Space Areas	Various communities contain Open Space Areas needing fuels treatment to prevent risk of wild-fire to surrounding development. Approximately 12 projects have been identified that range from initial treatment to maintenance and enhancement.	Apply the Shaded Fuel Break Prescription where applicable; provide 100’ of defensible space from development. (Refer to listing of specific Open Space Areas)	3	295
Taylor Ranch	No fuel treatment has been applied to this area. This area is used as a passive recreation area surrounded by development.	Apply the Shaded Fuel Break Prescription where applicable; provide 100’ of defensible space from development. Provide access throughout project area for fire suppression and fuel maintenance activities.	2	76
Bickford Ranch	This is an undeveloped planned community. No fuel treatment has occurred.	Apply fuel reduction such as perimeter disc/till, cross trailing, dead and downed fuel removed, and provide access for fire suppression and fuel work activities.	2	1942
Griffith Quarry	This is an active State Park use area. No fuel reduction has occurred.	Apply appropriate fuel treatments that include: the Shaded Fuel Break Prescription where applicable; provide 100’ of defensible space from development. Provide access throughout project area for fire suppression and fuel maintenance activities.	2	23
Dry Creek Road at Northpark Subdivision	Initial treatment has occurred. This area significantly contributed to the fuel loading during the 49 Fire in 2009.	Maintenance needed for sustainability. This includes fuel reduction; mowing, weed eating, and herbicide use.	2	40
Deer Ridge Open Space and ARD Meadow	Mastication and mowing complete, herbicide in use.	Maintenance needed for sustainability. This includes fuel reduction; mowing, weed eating, and herbicide use.	3	30
Timberline Senior Housing Development Area	This is an undeveloped planned community development. No fuel treatment has occurred.	Apply initial fuel reduction treatment to area; mastication and removal. Provide 100’ of defensible space from current development. Provide ongoing maintenance.	2	119

Table 4. General Fuels Treatment Recommendations for the GAAFSC

Name	Priority	Description	Methods	Acres*
Individual Defensible Space	1	Defensible space around individual homes. See Appendix A for details.	Mowing; limbing; chipping; individual and group tree removal; mechanical	200 feet around the home
Linked Defensible Space	2	Connect defensible spaces around communities for enhanced effectiveness. This is especially important in high-density areas, as linked defensible space can act as a larger fuel break around the community area.	Mowing; limbing; chipping; individual and group tree removal; mechanical treatments	Varying
Continue thinning along I-80 and railroad tracks	3	These areas are at an increased risk for ignitions, and consistent fuels reduction can greatly reduce potential fire spread.	Mowing; shrub removal; weed abatement treatments	At least 20 feet on both sides

* Mechanical treatments in timbered areas include all varieties of logging equipment.

** Defensible space distances will vary by property based on slope and fuels.

COMMUNITY ANALYSIS

Table 5. General recommendations for home construction, vegetation, and infrastructure.

Category	Priority	Description
Home Construction	1	Discourage the use of combustible materials for decks, siding, and roofs, especially where homes are upslope from heavy vegetation.
		Replace any shake-shingle or slab-wood siding and roofs with noncombustible types.
		Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above heavy fuels.
		Conduct individual home assessments.
Landscaping/Fuels	2	Clean leaf and needle litter from roofs and gutters and away from foundations.
		Thin vegetation alongside roads and driveways. This is especially important for narrow driveways and road segments, and for any areas where ravines with heavy fuels are below the access. Focus on removing vegetation in drainages that cross roads.
		Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or even with homes, never downhill.
		Encourage individual landowners to mow fuels near homes and along roadways and fence lines during times of high fire danger.
		Discourage the planting of flammable ornamentals such as eucalyptus and conifers within 30 feet of homes.
Preparedness Planning/ Evacuation	3	Add reflective addressing to all driveways or homes. A good guideline is to use all metal white markers that are 4 inches in width on a green background. These should be placed 3 to 5 feet above ground.
		Develop an evacuation plan for the community, including identifying escape routes and an evacuation center.
Infrastructure	4	Provide adequate turnarounds for fire apparatuses throughout the community.
		Rate and mark bridges for use by fire apparatus.
		Identify all water sources within the community, including hydrants, cisterns, and ponds. Make sure that they are visible, maintained, and operable.

For more detailed recommendations on how to enhance the safety of your home and community, please refer to Appendix A. See also the Ready, Set, Go! Program in Appendix A.

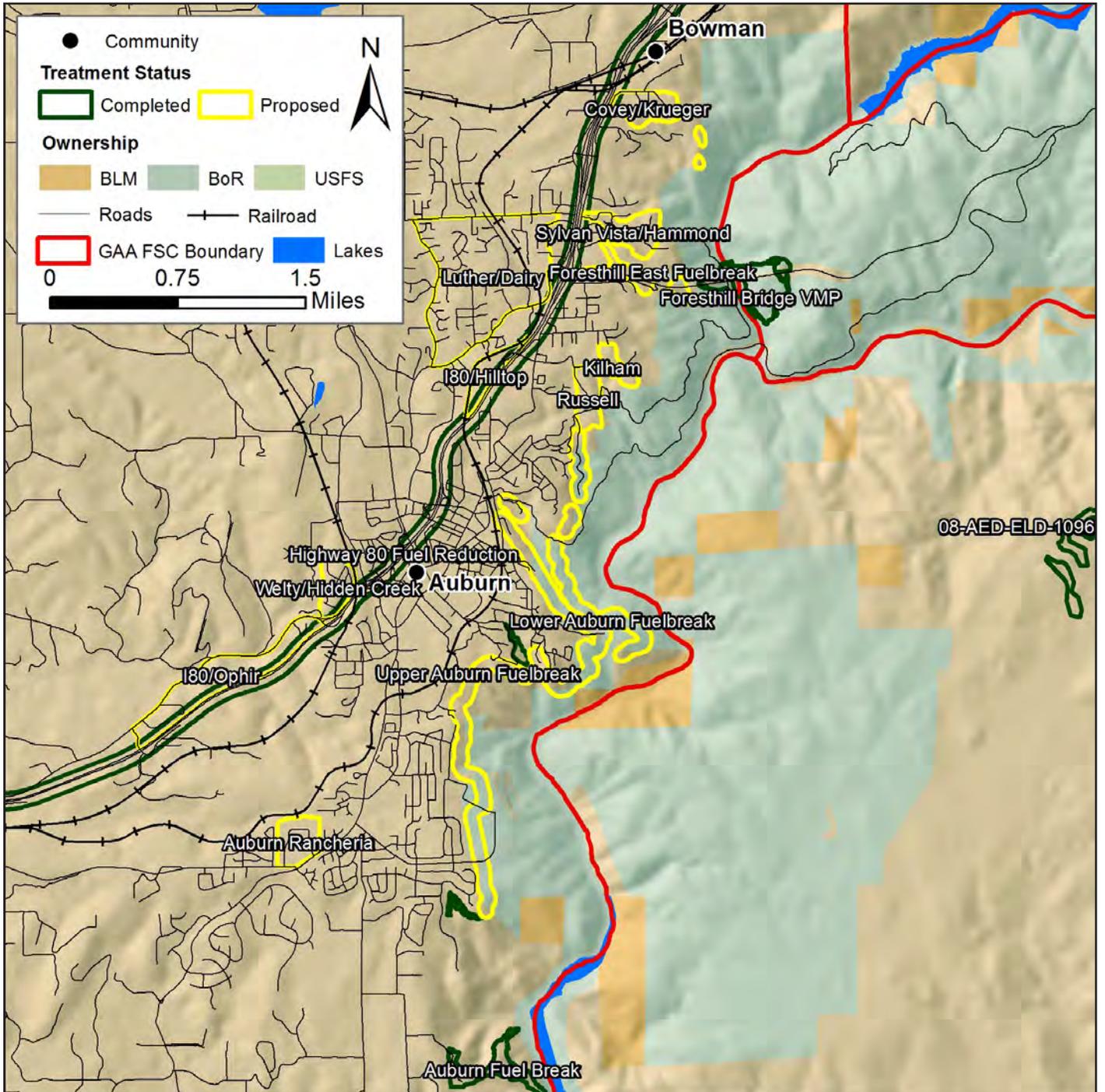
1. City of Auburn WUI

Number of Structures	Estimated at 4,280
Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs, some shake-shingle; noncombustible siding; wooden decks
Average Lot Size	Generally <1 acre, some larger lots on the outskirts of town
Home Addresses	Present; inconsistent: mostly nonreflective
Dual Access Roads	Most; some one-way streets, especially in areas adjacent to the canyon
Road Widths, Slope, and Surface	Generally >24', aside from areas near canyon; <10%; mostly paved
Emergency Vehicle Turnarounds	Some, but limited in fire-susceptible areas, especially adjacent to the canyon
Water Supply	Hydrants with more than adequate pressure
Proximity to Nearest Fire Station	Generally <2 miles
Other Hazards	Ignitions off of I-80 and HW 49; potential ignitions in American River canyon from recreationists; railroads can cut off access for emergency responders and evacuees; Shockley parcel
Specific Recommendations	Continue defensible space fuelbreak along the east side of the community. Other areas around the city would also greatly benefit from linking defensible space, especially on the southern and eastern ends. Additional suggested fuelbreaks are shown in green, and are intended to connect those identified by the PCRCO. See also the Strategic Plan to Aid in the Prevention of Catastrophic Wildfire in the City of Auburn.

The city of Auburn (population 13,330) is located directly above the confluence of the North Fork and Middle Fork of the American River, in west-central Placer County. The community is located along both sides of Interstate 80, which along with Highway 49 comprises the main points of access into the city area. There is little fire concern in the center of the city, as it is highly developed. Vegetation along the less-developed areas is mostly oak-pine woodlands, although smaller areas of conifer and annual grasslands exist. Terrain in and around the city consists mainly of rolling hills, though the area directly east of the city area drops precipitously down to the American River. In this portion of the area there are steep slopes and drainages that lead directly up to the city limits. Many homes are located on the edges of the steep hillsides, and will be more susceptible to fire spread uphill. Rapid rates of spread are expected in these areas, as dense fuel loadings combine with steep terrain. Along this edge of the city, additional clearing is both ongoing and planned, and, as a result, many homes have good defensible space. Fire protection is provided by the city of Auburn Fire Department.

COMMUNITY ANALYSIS

Figure 7. City of Auburn Community Map



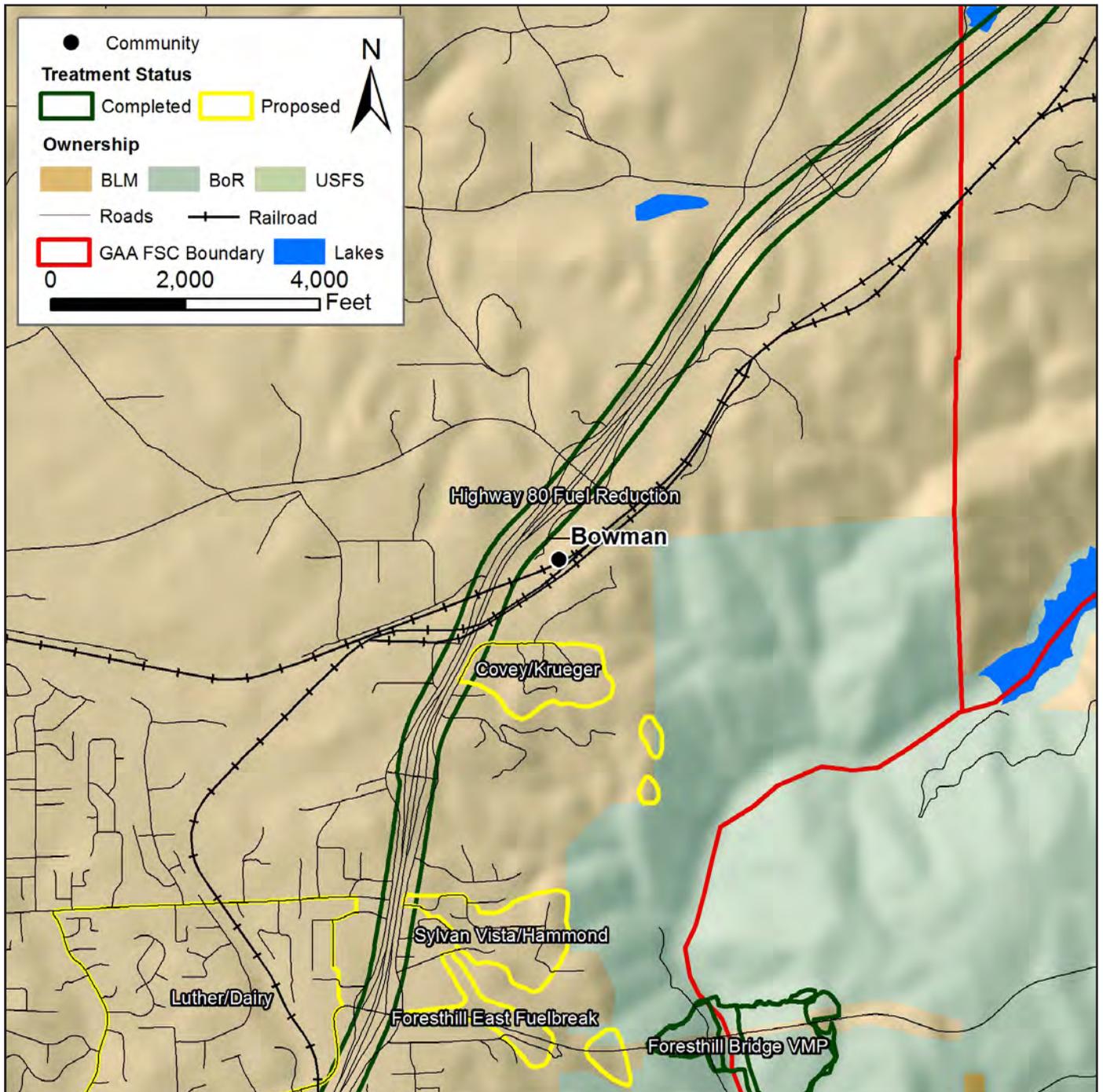
2. Bowman

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; noncombustible siding; wooden decks
Average Lot Size	<1 acre
Home Addresses	Present; inconsistent: mostly nonreflective
Dual Access Roads	Most; many one way streets, especially in areas adjacent to the canyon
Road Widths, Slope, and Surface	>24'; <10%; paved
Emergency Vehicle Turnarounds	Some, but limited in fire-susceptible areas, especially adjacent to the canyon
Water Supply	Hydrants in most areas
Proximity to Nearest Fire Station	Generally <1 one mile
Other Hazards	Ignitions off of I 80 and Foresthill Rd. Potential ignitions in American River canyon from recreationists
Specific Recommendations	Continue the defensible space fuelbreak already begun by the city of Auburn along the eastern edge of Bowman. Additional suggested fuelbreaks are shown in green, and are intended to connect those identified by the PCRCO.

Bowman is an unincorporated community located north of the city of Auburn, along Interstate 80. The majority of the town area is located north of the intersection of I-80 and Foresthill Road, though the two areas of Auburn and Bowman essentially connect. The primary fuels found in the community are oak-pine woodlands, with denser areas of conifers east of the community area. There is also a variety of planted ornamentals. The eastern boundary of the town abuts the steep slopes leading down to the American River. These steep slopes, along with dense vegetation, are expected to exhibit rapid rates of spread up to the town. Moreover, many homes in this area lack adequate defensible space, and are located directly above chimneys and other funneling terrain features. Fire protection is provided by Placer County Fire.

COMMUNITY ANALYSIS

Figure 8. Bowman Community Map



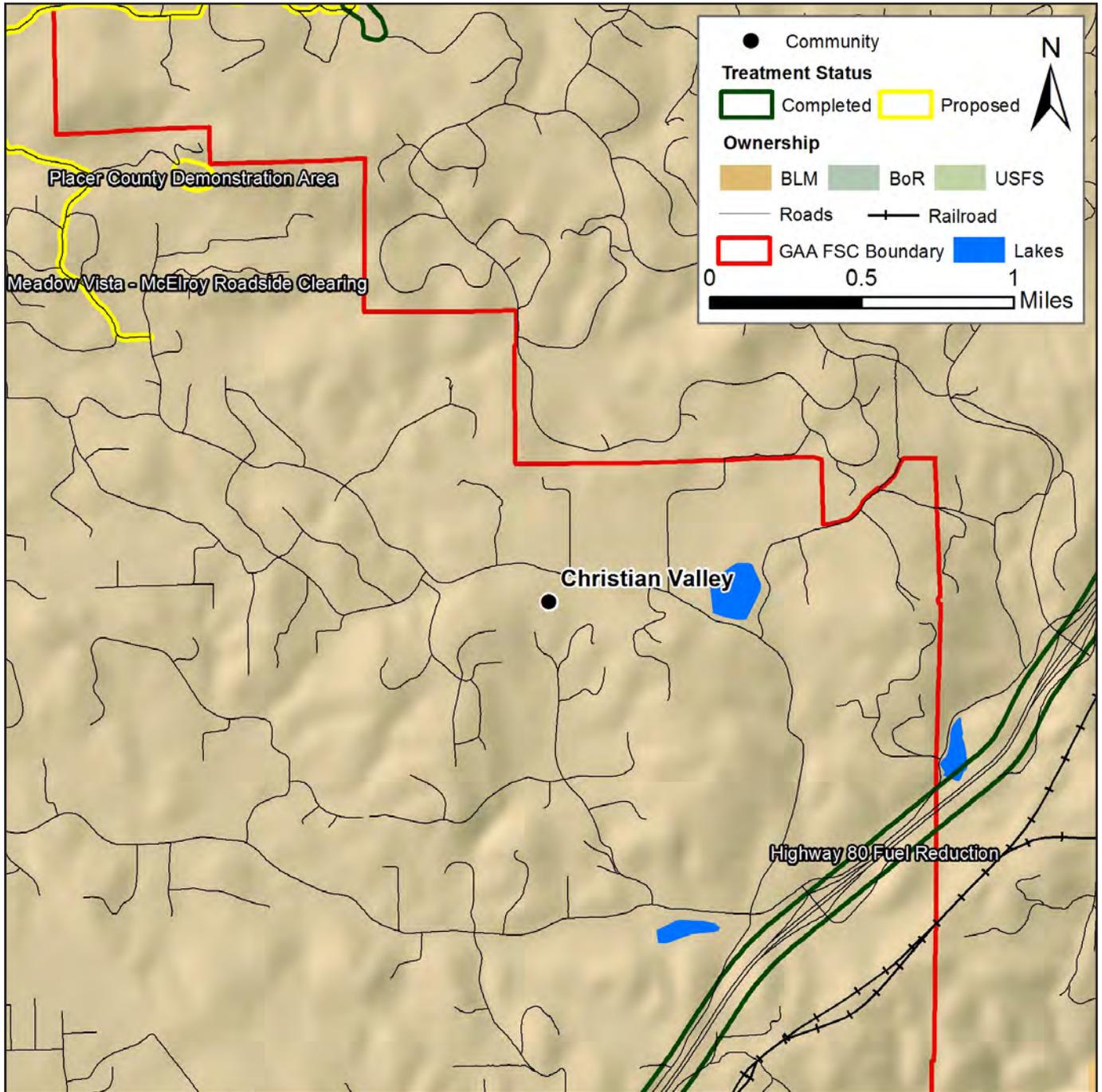
3. Christian Valley

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; noncombustible siding; wooden decks
Average Lot Size	1 to 40+ acres
Home Addresses	Mostly present, but sometimes hard to see; inconsistent; mostly nonreflective
Dual Access Roads	Most side roads off of main thoroughfares are one way in-out; many roads run parallel, but don't connect
Road Widths, Slope, and Surface	Vary from <20' to >24'; <5%; paved
Emergency Vehicle Turnarounds	Some, but not in all areas; targeted for improvement
Water Supply	Some hydrants and areas to draft, but very limited
Proximity to Nearest Fire Station	> 2 miles
Other Hazards	Landowner burning - agricultural and woody material

The community of Christian Valley is located in the northeast corner of the Greater Auburn Area FSC area, along both sides of Christian Valley Road and Dry Creek Road and west of Interstate 80. It is part of a community service district, with many 1-acre parcels. Most of the community area consists of oak-pine woodlands, with smaller areas of annual grasslands. The terrain is mostly rolling hills, with some steep hillsides and drainages. Most homes throughout the community lack adequate defensible space and many have planted ornamentals abutting the home. In addition to residences, the community also includes the California Conservation Corps facilities. Fire protection is provided by Placer County Fire.

COMMUNITY ANALYSIS

Figure 9. Christian Valley Community Map



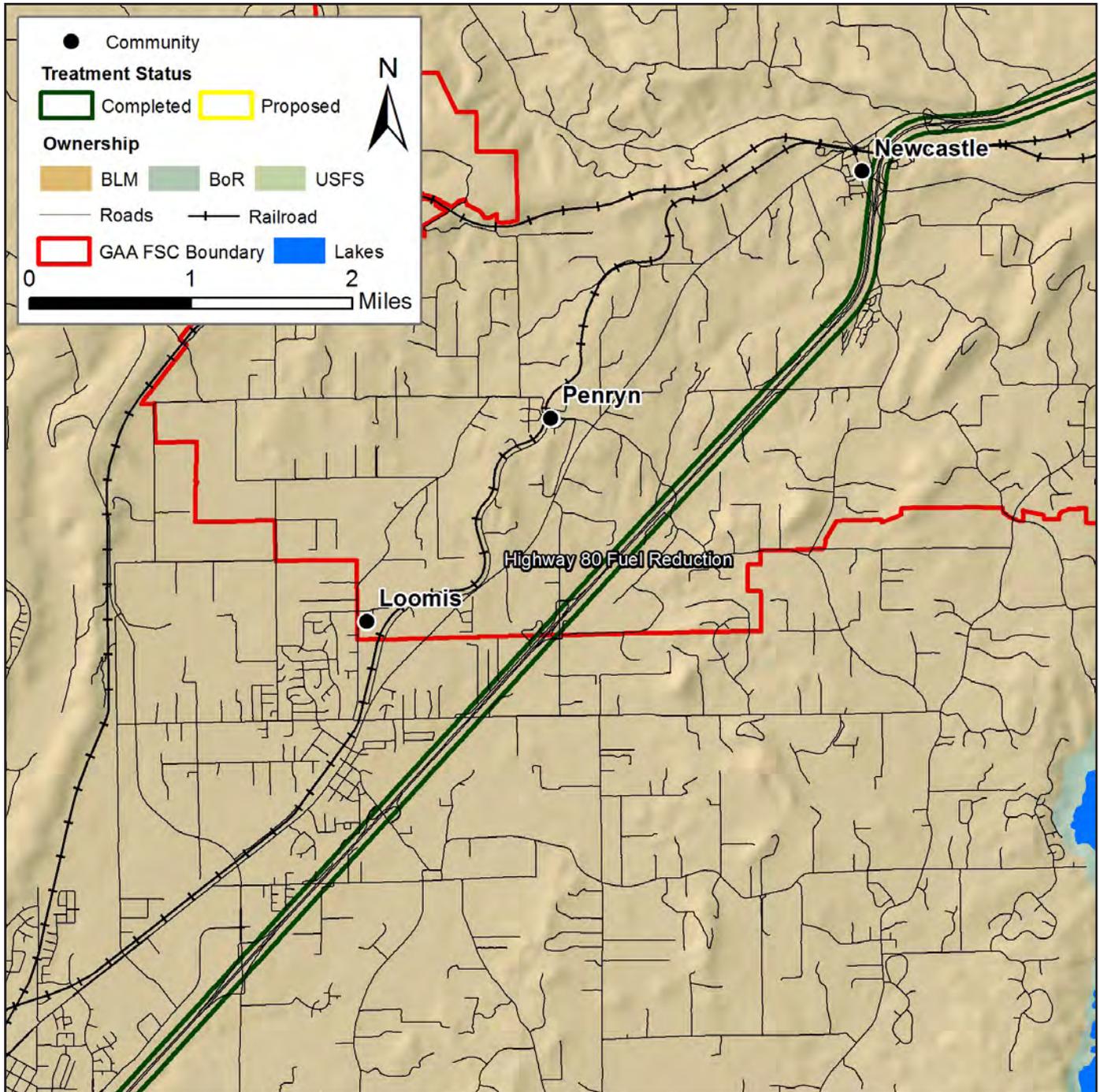
4. Loomis

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; noncombustible siding; wooden decks
Average Lot Size	Varies from <1 to 40+ acres
Home Addresses	Present; inconsistent; mostly nonreflective
Dual Access Roads	Most side roads off of main thoroughfares are one way in-out
Road Widths, Slope, and Surface	Generally >24'; <5%; mostly paved
Emergency Vehicle Turnarounds	Some, but not in all areas
Water Supply	Some hydrants and areas to draft, but very limited
Proximity to Nearest Fire Station	Generally <1 mile
Other Hazards	Ignitions off of I-80; railroads can cut off access for emergency responders and evacuees and potentially cause ignitions; some unrated bridges

The town of Loomis is located along Interstate 80, north of the city of Rocklin. This incorporated town includes a population of approximately 6,500 people, though not all of the town area has been included in this analysis. Much of the actual town area is considered urban, and is thus at a lower risk from wildfire. The primary area of concern is on the northern side of the community. Vegetation in this area includes oak woodlands, annual grasslands, and some agricultural land, and the area around Loomis is more open than other communities in the FSC. The terrain consists mostly of rolling hills, and the area is flatter than surrounding communities. Most homes throughout the area lack adequate defensible space, especially in more forested areas. Fire protection is provided by the Loomis Fire Protection District.

COMMUNITY ANALYSIS

Figure 10. Loomis Community Map



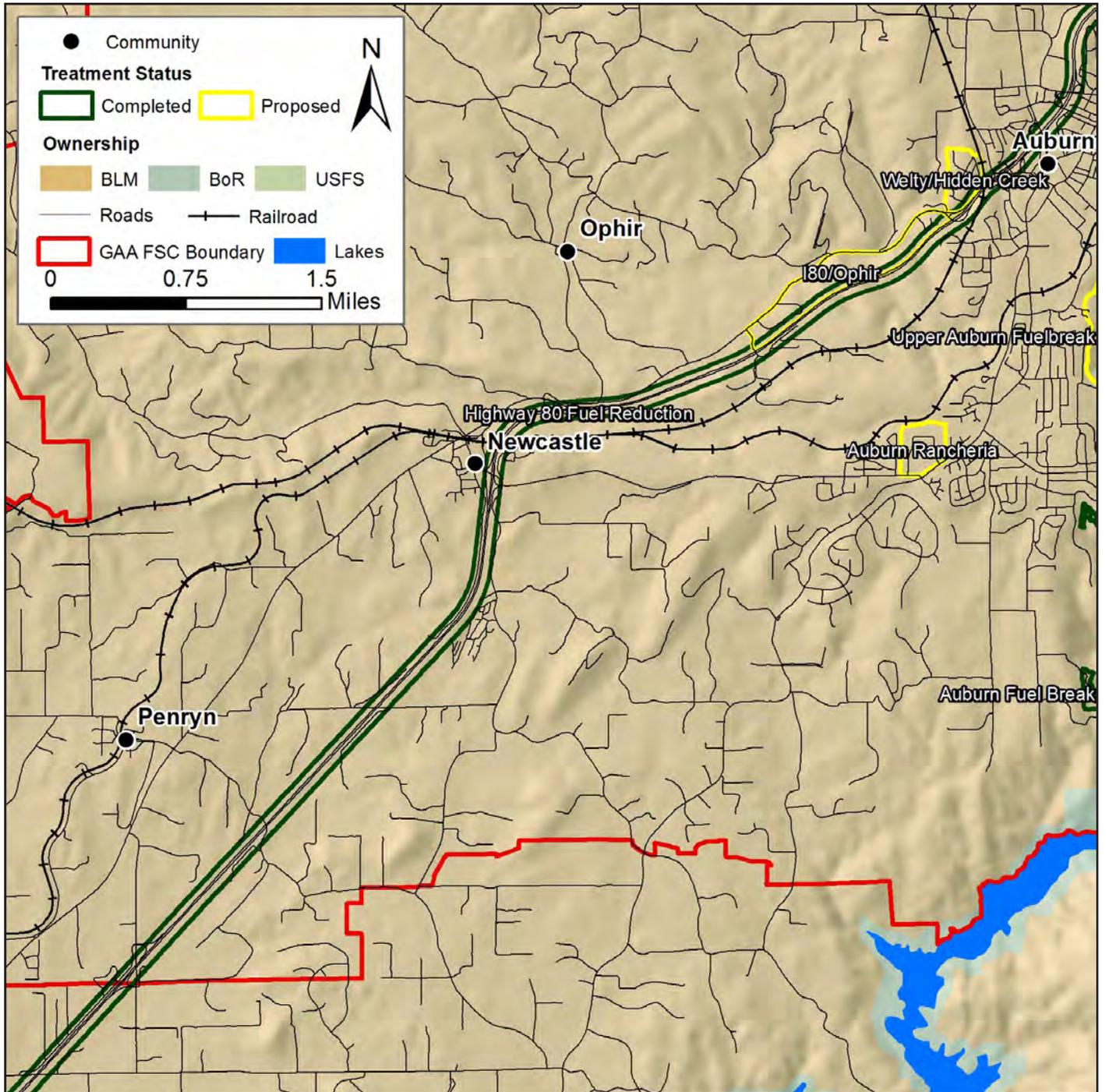
5. Newcastle

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; noncombustible siding; wooden decks
Average Lot Size	<1 acre in town; 3 to 40+ acres outside of town
Home Addresses	Mostly present, but sometimes hard to see; inconsistent; mostly nonreflective
Dual Access Roads	Most side roads off of main thoroughfares are one way in-out; many roads run parallel but don't connect
Road Widths, Slope, and Surface	Varies from <20' to >24'; <10%; paved
Emergency Vehicle Turnarounds	Some, but not in all areas; targeted for improvement
Water Supply	Some hydrants and areas to draft, but very limited
Proximity to Nearest Fire Station	Some areas > 2 miles
Other Hazards	Landowner burning – ag and woody material; railroad tracks can cut off access and evacuation, as well as potentially cause ignitions; some unrated bridges

Newcastle is an unincorporated community located between Auburn and Loomis. The actual town area (population 1,220) is centered along both sides of Interstate 80, though homes on larger parcels spread out from there. Density is highest in the actual town area, though the Castle City mobile home park is another densely populated area south of the town center. The primary fuels in the community are oak-pine woodlands and open areas of annual grasses. The terrain consists primarily of rolling hills and a network of drainages, many of which align with the predominant wind direction, out of the south-west. North of the community there is also an east-west-running valley. Most homes on larger parcels and on the edges of the town area lack adequate defensible space. Fire protection is provided by the Newcastle Fire Protection District.

COMMUNITY ANALYSIS

Figure 11. Newcastle Community Map



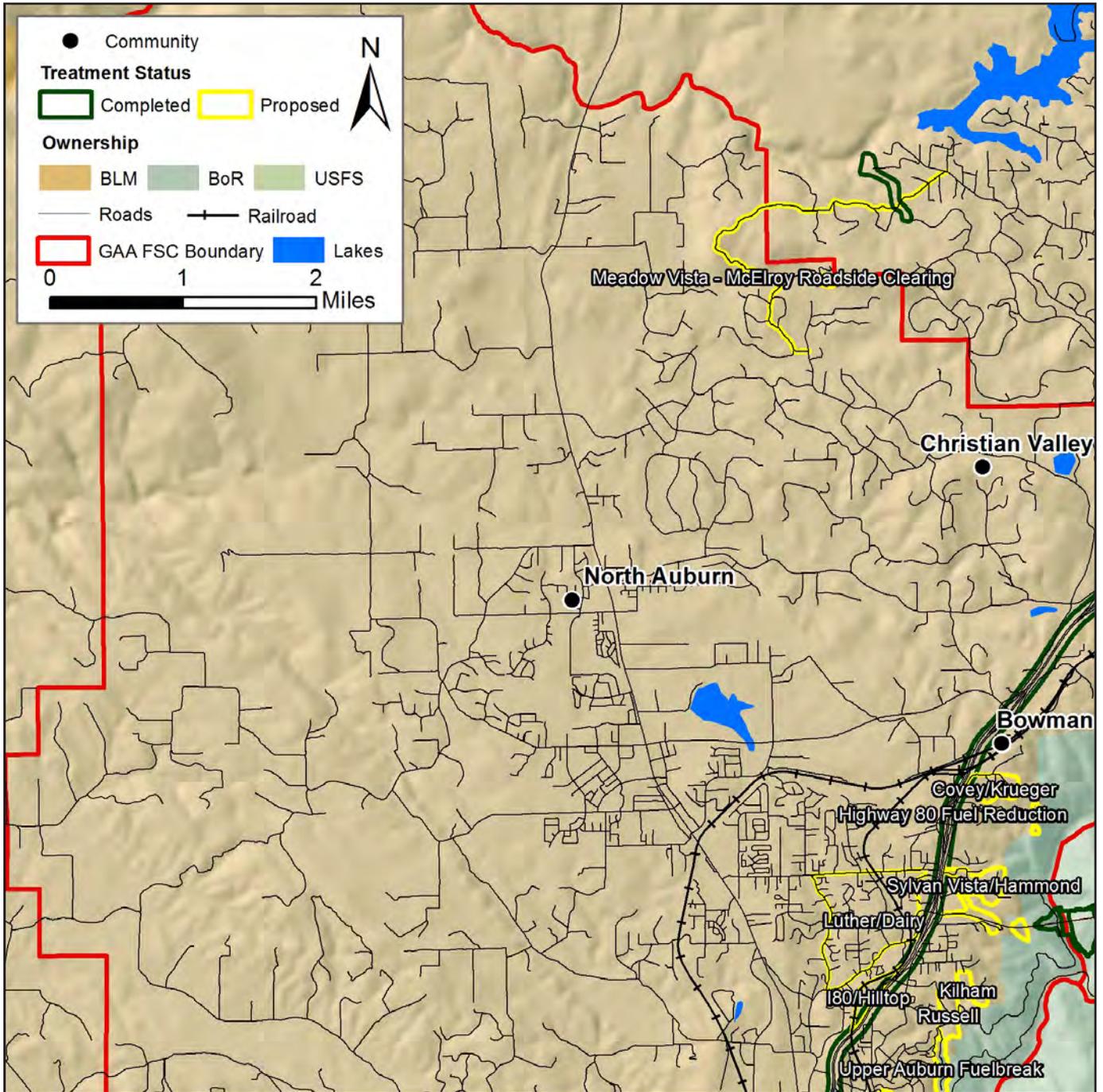
6. North Auburn

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; noncombustible siding; wooden decks
Average Lot Size	<1 to 40+ acres
Home Addresses	Mostly present, but sometimes hard to see; inconsistent; mostly nonreflective
Dual Access Roads	Most side roads off of main thoroughfares are one way in-out; many roads run parallel but don't connect
Road Widths, Slope, and Surface	Varies from <20' to >24'; <5%; paved
Emergency Vehicle Turnarounds	Some, but not in all areas; targeted for improvement
Water Supply	Some hydrants and areas to draft, but very limited
Proximity to Nearest Fire Station	> 2 miles
Other Hazards	Landowner burning – ag and woody material; livestock in areas; very few fields are irrigated

North Auburn is a larger community located along both sides of Highway 49, northwest of Auburn. The town area itself is urban, with a population of more than 13,000 people. However, much of the larger community area that is at risk from wildfire spreads out in all directions far beyond the developed urban area. Owing to its large expanse, there is a wide variety of vegetation found throughout the community. This includes oak-pine woodlands, grasslands, non-irrigated agricultural lands, vineyards, and orchards. Terrain throughout the community is relatively flat in many areas, with some steep, rolling hills and drainages. Particularly steep drainage areas include those along Dry Creek and Dead Man Creek. Most homes throughout the community area lack adequate defensible space, and there are many areas throughout the community with relatively high density. Fire protection is provided by Placer County Fire.

COMMUNITY ANALYSIS

Figure 12. North Auburn Community Map



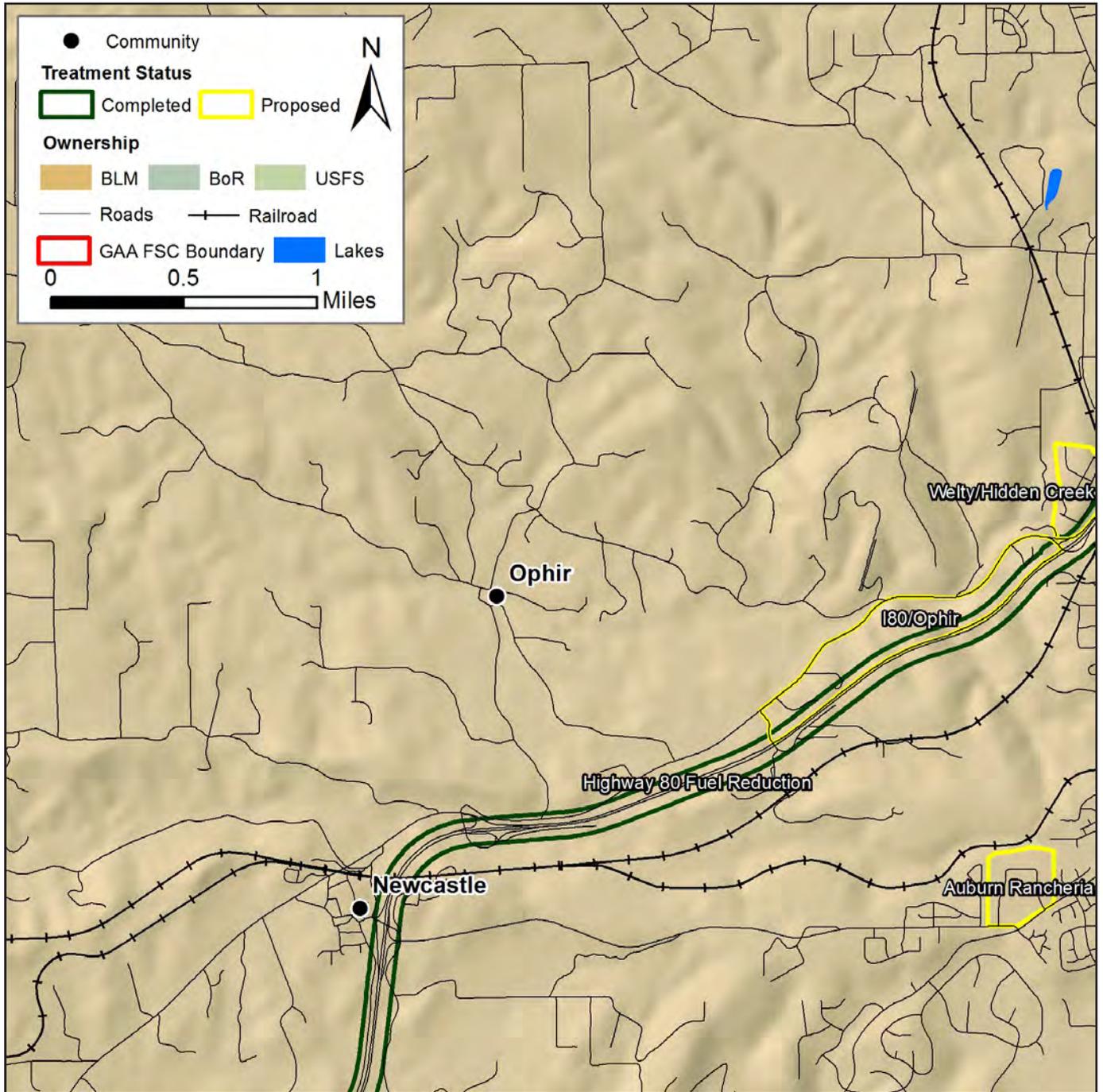
7. Ophir

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; variety of siding construction
Average Lot Size	<1 to 40+ acres
Home Addresses	Mostly present, but sometimes hard to see; inconsistent; mostly nonreflective
Dual Access Roads	Most side roads off of main thoroughfares are one way in-out
Road Widths, Slope, and Surface	Varies from <20' to >24'; <5%; paved
Emergency Vehicle Turnarounds	Some, but not in all areas; targeted for improvement
Water Supply	Some hydrants and areas to draft, but very limited
Proximity to Nearest Fire Station	>2 miles
Other Hazards	Landowner burning – ag and woody material

The community of Ophir is located west of Auburn and north of Newcastle, at the intersection of Chili Hill Road and Lozanos Road. There is a variety of fuel types found throughout the community area, including oak woodlands, grasslands, agricultural lands, vineyards, and riparian areas. The community resides in a broad valley, and the terrain is relatively flat in areas, along with steep, narrow drainages and precipitous hillsides. Most homes in the community lack adequate defensible space. Moreover, there are a number of areas where narrow driveways with no turnarounds lead to multiple homes tucked into the forest. Fire protection is provided by Placer County Fire.

COMMUNITY ANALYSIS

Figure 13. Ophir Community Map

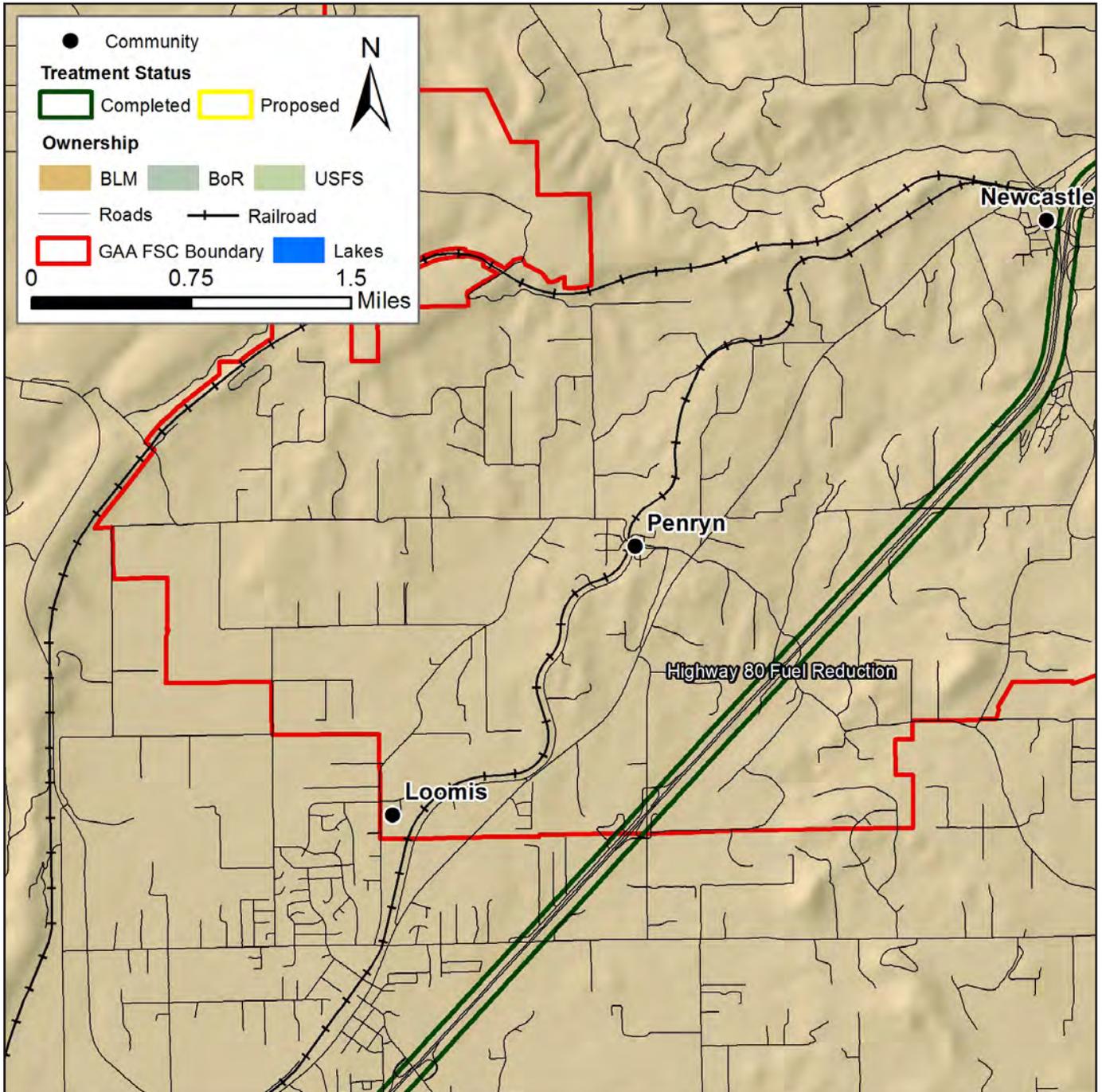


8. Penryn

Number of Structures	1,164 homes, 63 businesses
Utilities Above or Below Ground	Propane tanks; below-ground gas lines; overhead and underground power lines
General Construction	Asphalt shingle and shake-shingle roofs; combustible and non-combustible siding
Average Lot Size	0.17 to 70+ acres
Home Addresses	Mostly present, but sometimes hard to see; inconsistent: mostly nonreflective
Dual Access Roads	Most side roads off of main thoroughfares are one way in-out
Road Widths, Slope, and Surface	Varies from 10' to >24'; up to 10%; paved and dirt/gravel
Emergency Vehicle Turnarounds	Some, but not in all areas
Water Supply	Hydrants near town and some other areas, but very limited elsewhere
Proximity to Nearest Fire Station	> 2 miles in areas outside of town
Other Hazards	Landowner burning – ag and woody material; unrated bridges; Bickford Ranch and Traylor Park areas have limited access and a buildup of fuels; railroad tracks can cut off access and evacuation, as well as potentially cause ignitions

The Penryn community is situated between Loomis and Newcastle, west of Interstate 80. The actual town area is centered on the intersection of English Colony Way and Rippey Road. While the town itself has a population of approximately 850 people, many residents reside beyond the city limits. The surrounding area is dominated by rolling hills, with steep drainages, especially those leading up to the plateau where Bickford Ranch sits. The area is evenly split between oak woodlands and more open areas of shrubs, grasses, and agricultural lands, which includes a number of orchards. Many homes on the edges of the town and in outlying areas lack adequate defensible space. Another area of concern is the nearby Twelve Bridges golf course and retirement community. Fire protection is provided by the Penryn Fire Protection District.

Figure 14. Penryn Community Map



GREATER AUBURN AREA FSC AREAS OF SPECIAL INTEREST

See page 23 for a methodology and definition of Area of Special Interest. Areas of special interest are included on the map in Figure 5.

Auburn State Recreation Area (ARA)

The Auburn State Recreation Area is popular recreational destination located along 40 miles of the American River, east of Auburn and Bowman. The total size of the ARA is approximately 35,000 acres, including the Mammoth Bar OHV (off-highway vehicle) area, most of which is on federal lands. Major recreational uses include hiking, boating, fishing, camping, biking, gold panning, hunting, horseback riding and OHV use. Terrain in the area is steep, and most areas contain heavy fuel loadings. Because of the high level of use (more than 900,000 visitors per year), and human-caused ignition is possible. Since homes are located directly above the ARA in Auburn and Bowman, efforts should be made to reduce this risk.⁴

Bickford Ranch

The planned Bickford Ranch development is a nearly 2,000 acre community located between Penryn and Fowler. Initially, the community was to include nearly 2,000 homes, a golf course, community center, school, and a section of open space. Construction of the community has stalled, and only limited work has been completed thus far to prepare for future development. Currently, a significant amount of untreated fuels are present on the property, which could present a problem should an ignition occur, especially since access into the area is limited.⁵

Griffith Quarry Museum

The quarry was established in 1864 as Penryn Granite Works. The 23-acre quarry produced granite that was used to build buildings in Sacramento and San Francisco. Granite was a major economic factor in the area in the 19th century. The office of the quarry is now a museum, where some of the original furniture is still located. The site is listed on the National Register of Historic Places and the California Landmark Program.

Hidden Falls Regional Park

Hidden Falls Regional Park is a 2220-acre open space area between the Fowler and North Auburn communities. The park is a popular recreation destination that includes a network of trails, picnic areas, parking and visitor facilities, and an equestrian staging area. Fuel loadings are relatively dense throughout the area, although fuels reduction work has been done, including a shaded fuel break along Turkey Ridge Road. Directly adjacent to Hidden Falls is the 961-acre Spears Ranch property. Following an environmental review, additional improvements will be made to the Spears Ranch property. Combined, the two parcels comprise almost 1,200 acres of open space.⁶

⁴ "Auburn ARA." California Department of Parks and Recreation. <http://www.parks.ca.gov/?page_id=502>.

⁵ "Bickford Ranch Specific Plan." Placer County, n.d. Web. <<http://www.placer.ca.gov/Departments/CommunityDevelopment/Planning/Documents/~/media/cdr/Planning/SpecificPlans/BickfordRanch/BR1.ashx>>.

⁶ "Hidden Falls Regional Park." California Department of Parks and Recreation. N.p., n.d. Web. 19 June 2012. <<http://www.placer.ca.gov/Departments/Facility/parks/hiddenfalls.aspx>>.

AREAS OF SPECIAL INTEREST

Traylor Ranch

The Traylor Ranch Nature Preserve is a preserved area located between Penryn and Lincoln off of English Colony Way. The total size of the ranch is approximately 76 acres, and it is primarily used for wildlife viewing and limited recreational use, including hiking and equestrian use. There is limited vehicle access into the park and flammable vegetation throughout. Further, it is surrounded on all sides by residential development, which means an ignition in the preserve could be difficult to contain initially and it could approach proximate structures quickly.⁷

GREATER AUBURN AREA ASI RECOMMENDATIONS

Table 6. ASI Recommendations for the GAAFSC.

Name	Priority	Description	Methods*
Continue fuels mitigation work in Hidden Falls State Park and in the Auburn State Recreation Area	1	There are already-completed and planned fuels reduction treatments in these areas, which will protect visitors and adjacent homeowners. Thin vegetation and mow along access roads and trails that might be used for evacuation purposes.	Mowing; limbing; chipping; individual and group tree removal; mechanical equipment where applicable
Begin fuels reduction work in the Bickford and Traylor Ranch areas	2	These areas contain heavy fuels loadings, and are directly adjacent to homes and infrastructure. These treatments should strive to maintain the aesthetic of the area, while still reducing fire risk. Thin vegetation and mow along access roads and trails that might be used for evacuation purposes.	Mowing; limbing; chipping; individual and group tree removal; mechanical equipment where applicable
Preparedness Planning	3	Continue working on evacuation planning in these areas, including clearly posting evacuation routes and procedures. Post a fire danger sign at the entrance to each recreation area. Provide visitors with information on wildfire, especially during times of high fire danger.	N/A

* Mechanical treatments in timbered areas include all varieties of logging equipment.

⁷ "Traylor Ranch Bird Sanctuary." California Department of Parks and Recreation. N.p., n.d. Web. 19 June 2012. <<http://www.placer.ca.gov/Departments/Facility/Parks/parkpolicies/traylorranchbird.aspx>>.

FORESTHILL/IOWA HILL FIRE SAFE COUNCIL



FORESTHILL/IOWA HILL FIRE SAFE COUNCIL

INTRODUCTION

Location

The Foresthill/Iowa Hill Fire Safe Council covers 96,600 acres between the North and Middle Forks of the American River. After crossing the Foresthill Bridge, the council area encompasses both sides of Foresthill Road, which is the primary transportation corridor within the FSC. Iowa Hill was initially its own, highly successful FSC, located on a divide, separated from Foresthill by the North Shirttail Creek canyon. Because of the remote location, Iowa Hill FSC merged with Foresthill FSC. Located between the North and Middle Forks of the American River, Foresthill is also on a divide. The small towns within the FSC area were originally established as gold mining communities in the 1850s. As the gold rush slowed, logging became a primary source of income for the miners. Mills were established all over Foresthill. This industry too became costly, and individuals began working outside of Foresthill in areas like Auburn and Sacramento. Although mining and timber harvesting are no longer the primary source of income in the community, many residents continue to commute daily to Auburn and even Sacramento for work. Foresthill Road is the primary road for residents commuting to and from the area. The largest community within the FSC area is Foresthill. Other towns in the study area include Iowa Hill, Michigan Bluff, and Todd Valley. In all, approximately 6,150 people live in the Foresthill/Iowa Hill FSC area.

Demographics and Economics

The largest town in the FSC area is Foresthill, with a population of 1,483. This number does not take into account the dispersed areas throughout the FSC boundary. In total, upwards of 6,500 people live within the council boundary. The majority of people living in the area are between 50 and 64 years old, followed by the 35 to 49 age range. Many communities in the council area have become appealing places for people living in the city to own a second home, especially for the summer months. Currently there are 2,700 housing units, not all of which are occupied. Discussion and proposals have been ongoing regarding additional development in the area, but no actual plans have been approved. The majority of people who live within the Foresthill/Iowa Hill FSC area commute to Auburn or Sacramento for work. There are a handful of businesses within the area, including some locally owned shops in Foresthill and Iowa Hill. Timber harvesting is the largest industry within the FSC. The 2,500 to 5,400-foot elevation range is the prime conifer timber production zone. Foresthill Drive is the primary corridor through the entire FSC and provides critical access and egress for the majority of residents within the FSC boundary.

COMMUNITY ANALYSIS

Weather

Winters at the higher elevations can be cold; low temperatures average 36°F. The average high in the winter is around 52°F. July is typically the warmest month, with average highs around 88°F. Most of the precipitation comes between November and March, peaking in December with 8.49 inches. The summers are typically dry; July receives fewer than 0.02 inches of precipitation on average, and August only sees 0.13 inches.⁸

Table 7. Weather Data for the Foresthill/Iowa Hill FSC

	Temperature ⁸	Precipitation ⁸	Winds*
Monthly High/Low	High: 88° (July)	Low: 0.02" (July)	8.2 mph (June)
Yearly Average	75°	22.8" (Total)	6.6 mph

*<http://www.wrcc.dri.edu/htmlfiles/westwind.final.html#CALIFORNIA>

Topography

The topography of the area is complex, ranging from approximately 1,000 feet above sea level to over 5,500 feet along the eastern boundary. Precipitous slopes exist throughout the area, including those along the North and Middle Forks of the American River. Numerous narrow, steep canyons also exist along smaller creek drainages. Most communities in the FSC are located near these steep drainage areas, with multiple chimneys and chutes leading directly up to the homes. Rapid rates of spread can be expected in these areas, especially when terrain features align with high wind speeds and dense vegetation.

Fuels

Vegetation within the Foresthill/Iowa Hill FSC is diverse, although a majority of the area is covered by hardwood and conifer forests. The southern and western portions of the FSC are dominated by chaparral, montane hardwood conifer, black oak, incense cedar, ponderosa pine, and Douglas-fir. The remainder of the area is dominated by ponderosa pine, Douglas-fir, and white fir forests. See Appendix C for more information on the fuel models found in the FSC boundary.

⁸ "Average Weather for Foresthill, CA – Temperature and Precipitation," 8 June 2011. <<http://www.weather.com/outlook/health/fitness/wxclimatology/monthly/graph/USCA0390>>.

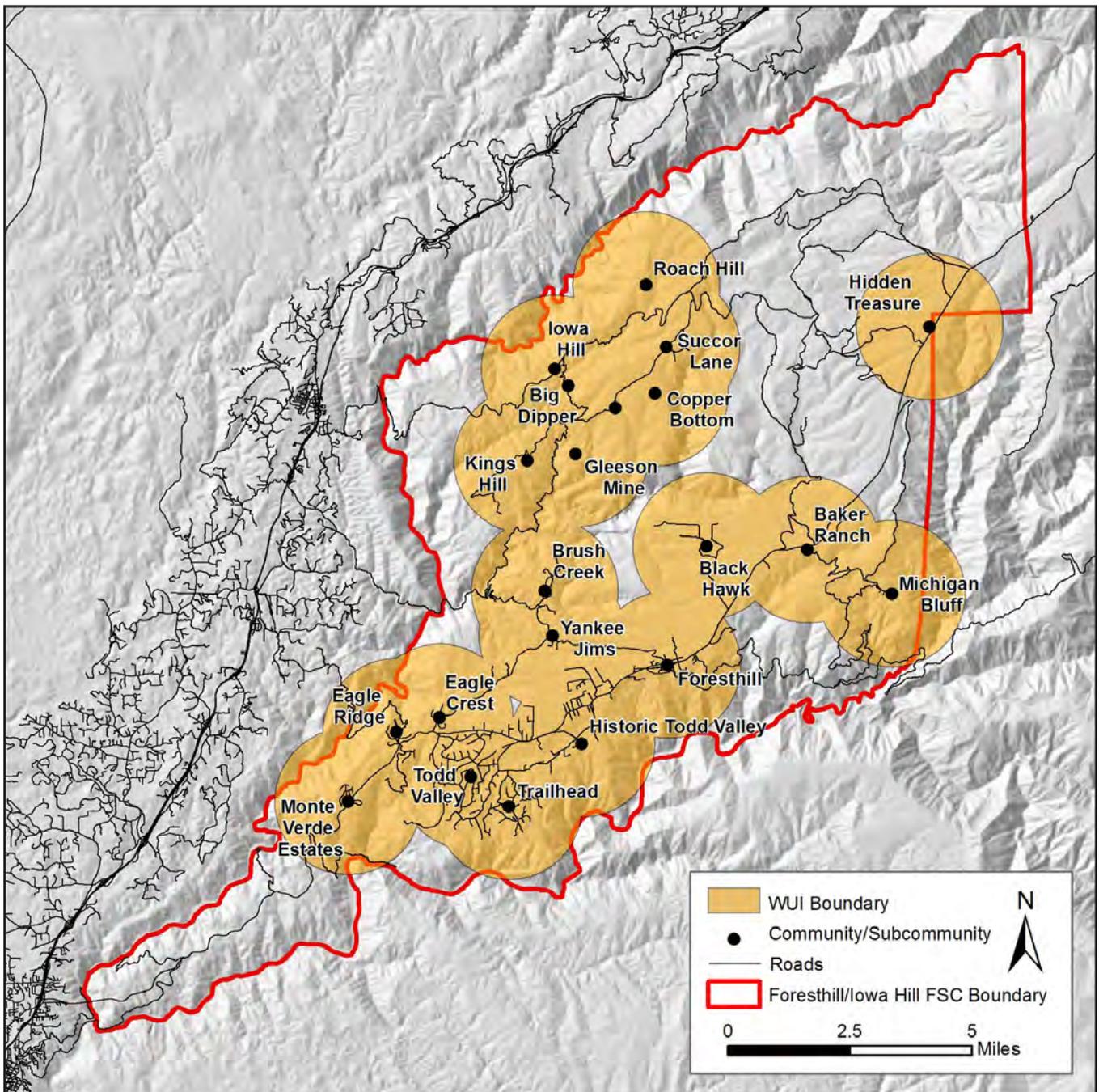
Fire Behavior

Fire behavior was modeled using two different weather scenarios: moderate and high. For more detailed information on the parameters used for the model, please see Appendix C. The timber vegetation that is found on the steep slopes on the canyon typically does not have a thick understory, and fire is carried by coarse fuels, leading to slower rates of spread and shorter flame lengths. Given moderate and high conditions, flame lengths are greater than 11 feet on the steep slopes. Flame lengths are longer than can be handled by hand crews or engines. The lack of roads would also dictate that aerial resources would likely be required. As the slopes become less steep, flame lengths diminish to 4 to 8 feet. Faster wind speeds increase the flame lengths in most areas of the FSC. Most areas north east of Todd Valley are likely to experience flame lengths greater than 8 feet. Fuel densities and lack of fine fuels on the forest floor limit the rate of spread through most of the area, except on the steepest slopes. The majority of the area is predicted to have rates of spread less than 20 chains per hour with moderate and high weather scenarios. Active crown fire is unlikely under most weather scenarios, but individual tree torching is not. This means that firefighters are often able to directly attack a wildland fire in most of the area, either as part of a hand crew or with wildland fire apparatus. Indirect strategies and aerial equipment are likely not necessary. High weather conditions do not drastically change flame lengths below Cape Horn, except where the small patches with 8 to 11 foot flame lengths increase to greater than 11 feet. These areas are limited and generally surrounded by large areas with lower flame lengths. Similar patterns are seen for crown fire based on elevation and topography. Moderate weather conditions result in surface fire at low elevations. It is when there is denser canopy cover that individual tree torching is common, considering the ladder fuels. Even with high-percentile weather conditions, there are rarely any sustained crown fire runs. The exception is on the extremely steep slopes along the river corridor between the Placer Sierra and Iowa Hill/Foresthill FSCs. Rates of spread are typically less than 20 chains per hour. On the steep south-west-facing slopes below Moody Ridge and Dutch Flat, rates of spread are modeled to be the highest. On the slopes, rates of spread are predicted to be greater than 60 chains per hour, under moderate and high weather scenarios. While the rate of spread to the communities is fast, rates of spread directly in and around the communities are likely to be much slower.

WILDLAND-URBAN INTERFACE BOUNDARY

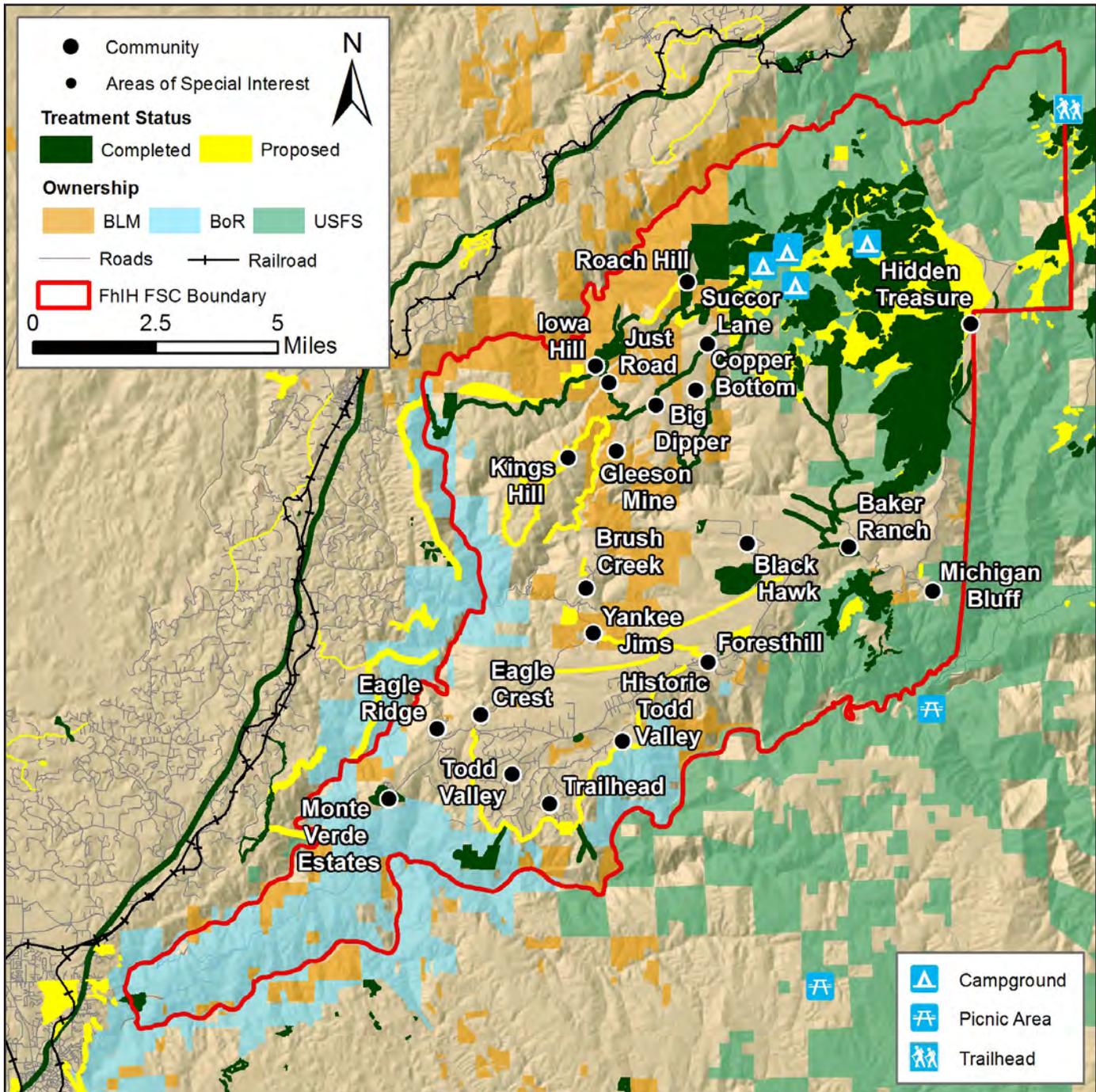
For the purpose of this CWPP, the WUI in the Foresthill/Iowa Hill FSC was defined using a 1.5-mile buffer surrounding each identified community. The purpose of this section is to examine the communities in greater detail.

Figure 15. WUI Boundary for the Foresthill/Iowa Hill FSC



FORESTHILL / IOWA HILL COMMUNITIES

Figure 16. Overview of the Foresthill/Iowa Hill FSC communities, and projects in the area.



COMMUNITY RECOMMENDATIONS FOR RESIDENTS

For all of the homes in the FSC, properly implemented defensible space and Firewise home construction is the most important recommendations for home survivability. Due to limited firefighting resources, especially during the early stages of an expanding wildfire incident, high home density, and/or long response times, individual firefighting entities may not be able to stay and protect each home. In order to survive a passing flame front, a home will need good defensible space and home construction. Often, homeowners will assume that because they have adequately constructed their homes from noncombustible materials and have cleared vegetation around the structures, firefighters will be able to save their homes. However, defensible space needs to be maintained and re-assessed throughout the fire season. The following fuels treatment and general wildfire mitigation recommendations provide a good start for properly protecting one's individual home and the community as a whole. More in-depth information on home construction, defensible space, preparedness planning and evacuation, infrastructure, and water supply can be found in Appendix A. Tables 9 and 10 are general treatment for the Foresthill/Iowa Hill FSC area, while Table 8 is a more detailed list of projects identified by the FSC.

Table 8. Fire mitigation and fuels reduction projects for the Foresthill/Iowa Hill FSC.

Project Name	Treatment	Priority	Acres
Community Defense Projects			
Michigan Bluff	Treat vegetation beyond the 100' defensible space beyond residence as a community defense buffer	1	100
Fuelbreak Projects			
Todd Valley II	Construct a fuel break on the Middle Fork American River Canyon Rim adjacent to Todd Valley	1	150
Pipeline II	Construct a fuel break along the PUD Pipeline From Yankee Jims Rd. South.	2	100
Mosquito Ridge Rd.	Construct a shaded fuel break along Mosquito Ridge Rd. adjacent to the town of Foresthill	3	50
Todd Valley I	150 acres were completed in 2009 portion have new growth that needs to be maintained.	4	150
Pipeline I	100 acres were completed in 2009 portion have new growth that needs to be maintained.	5	100
Roadside Clearing Projects			
Melody Lane Roadside Clearing	Treat both sides of Melody Lane	1	
Polaris Road	Treat both sides of Polaris Road	1	
Johnson Valley/Pecky Cedar	Treat both sides of Johnson Valley and Pecky Cedar	1	
Red Ridge Road	Treat both sides of Red Ridge Road	1	
Ebbert Ranch Rd	Treat both sides of Ebbert Ranch Road	1	
Educational and Outreach Projects			
Firewise	Conduct community assessments and help communities with National Recognition	1	Fire Safe Council

Fire Prevention Program K-12		2	Fire Safe Council
Senior Assistance	Provide assistance to seniors to create defensible space	3	Fire Safe Council
Community Education of PCR 4290 and 4291		4	Fire Safe Council
Homeowner education for burning piles	Host workshops to help homeowners with safe pile burning practices	5	Fire Safe Council
Invasive species removal and native plant restoration	1-2 day volunteer events to remove invasive species such as Scotch Broom, French Broom, Spanish Broom, and yellow star thistle and restore area to native vegetation	6	Fire Safe Council
Chipper Program & Community Green Waste Bins	Continue to support the need for a Placer County Chipper Service and Designate green waste disposal sites for residence	7	Fire Safe Council

Table 9. Fuels Treatment Recommendations for the Foresthill / Iowa Hill FSC

Name	Priority	Description	Methods*	Acres**
Individual Defensible Space	1	Defensible space around individual homes. See Appendix A for details.	Mowing; limbing; chipping; individual and group tree removal	200 feet around the home
Linked Defensible Space	2	Connect defensible spaces around communities for enhanced effectiveness.	Mowing; limbing; chipping; individual and group tree removal	Varying
CAL FIRE / PCRCD / USFS Fuel breaks	3	These agencies and homeowners have put forth a great effort, along with the FPD, to reduce fuel loadings. These treatments throughout the FSC will potentially inhibit fire spread and reduce fire severity.	Limbing; individual and group tree removal; shrub removal; prescribed burning where applicable; mechanical treatments where slope and access allow	Varying

* Mechanical treatments in timbered areas include all varieties of logging equipment.

** Defensible space distances will vary by property based on slope and fuels.

COMMUNITY ANALYSIS

Table 10. General Recommendations for the Foresthill / Iowa Hill FSC

Category	Priority	Description
Home Construction	1	Discourage the use of combustible materials for decks, siding, and roofs, especially where homes are upslope from heavy vegetation.
		Replace any shake-shingle or slab-wood siding and roofs with noncombustible types.
		Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above heavy fuels.
		Conduct individual home assessments.
Landscaping/Fuels	2	Clean leaf and needle litter from roofs and gutters and away from foundations.
		Thin vegetation along side roads and driveways. This is especially important for narrow driveways and road segments, and for any areas where ravines with heavy fuels are below the access. Focus on removing vegetation in drainages that cross roads.
		Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or even with homes, never downhill.
		Encourage individual landowners to mow/rake fuels near homes and along roadways and fence lines during times of high fire danger.
		Discourage the planting of flammable ornamentals such as eucalyptus and conifers within 30 feet of homes.
Preparedness Planning/ Evacuation	3	Add reflective addressing to all driveways or homes. A good guideline is to use all-metal white markers that are 4 inches in width on a green background. These should be placed 3 to 5 feet above ground.
		Develop an evacuation plan for the community, including identifying escape routes and an evacuation center.
Infrastructure	4	Provide adequate turnarounds for fire apparatuses throughout the community.
		Rate and mark bridges for use by fire apparatus.
		Identify all water sources within the community, including hydrants, cisterns, and ponds. Make sure that they are visible, maintained, and operable.

For more detailed recommendations on how to enhance the safety of your home and community, please refer to Appendix A. See also the Ready, Set, Go! Program in Appendix A.

FORESTHILL/IOWA HILL COMMUNITIES

The Foresthill/Iowa Hill FSC has a wide range of elevation; meaning fuels and fire behavior also are quite variable. Communities were grouped by a combination of elevation and potential fire behavior, because that will lead to similar fuel-reduction recommendations. It should be noted that a significant amount of work has already been completed within the FSC boundary. The FSC is extremely active and has done numerous fuel projects ranging from individual defensible space to landscape-scale treatments that stretch for miles along the ridgelines and roads.

The variation in vegetation in the Foresthill/Iowa Hill FSC is strongly impacted by the differences in temperatures and precipitation between low and high elevations. There are large transitions in fuels, and some areas may experience extreme rates of spread, especially on the steep slopes. The typical wind patterns follow up-canyon, up-slope in the morning and down-canyon/down slope in the evenings. Southern and western portions have chaparral species, Pacific madrone, black oak, incense cedar, and ponderosa pine. Higher elevations, especially north of Foresthill Road have more Douglas-fir in the understory below the ponderosa, as well as white firs. There are no lodgepole pines in the area, unlike what is found at the high elevations within the Placer Sierra FSC. Chaparral shrubs are prevalent on the southwest slopes at lower elevations, and shrubs, mixed with timber are found all along the south west slopes. Along the divide and on the gentle slopes at the top of the river bottoms, the forested areas have dense tree cover and greater understory vegetation. Regular burning of the understory is necessary to limit the amount of understory regrowth. Regeneration is fairly fast, with understory vegetation growing within a month, and tree regeneration within a few years. Regeneration varies with fire severity, but these patterns are generally consistent. There is Sierran mixed conifer at the farthest northern parts of FSC.

LOWER FORESTHILL ROAD AREA

1. Historic Todd Valley

Number of Structures	100; 150 space mini storage; 130 unit multiple housing project
Utilities Above or Below Ground	Above
General Construction	Asphalt shingle roofs; combustible siding and decks
Average Lot Size	2 to 5 acres
Home Addresses	Present, but generally non reflective
Dual Access Roads	Multiple ways in/out
Road Widths, Slope, and Surface	20-24'; <5%; paved, some are not paved
Emergency Vehicle Turnarounds	Yes, using driveways
Water Supply	A few cisterns
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Potential of ignition from recreation occurring along the Middle Fork of the American River

2. Monte Verde Estates

Number of Structures	25
Utilities Above or Below Ground	Below
General Construction	Tile roofs; noncombustible siding – stucco or stone
Average Lot Size	1 to 3 acres
Home Addresses	Present, but non reflective
Dual Access Roads	Multiple ways in/out
Road Widths, Slope, and Surface	>24'; <5%; paved
Emergency Vehicle Turnarounds	Built in turnarounds
Water Supply	Hydrants throughout
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Area is well mitigated, but untreated BOR property surrounds the estates

3. Todd Valley

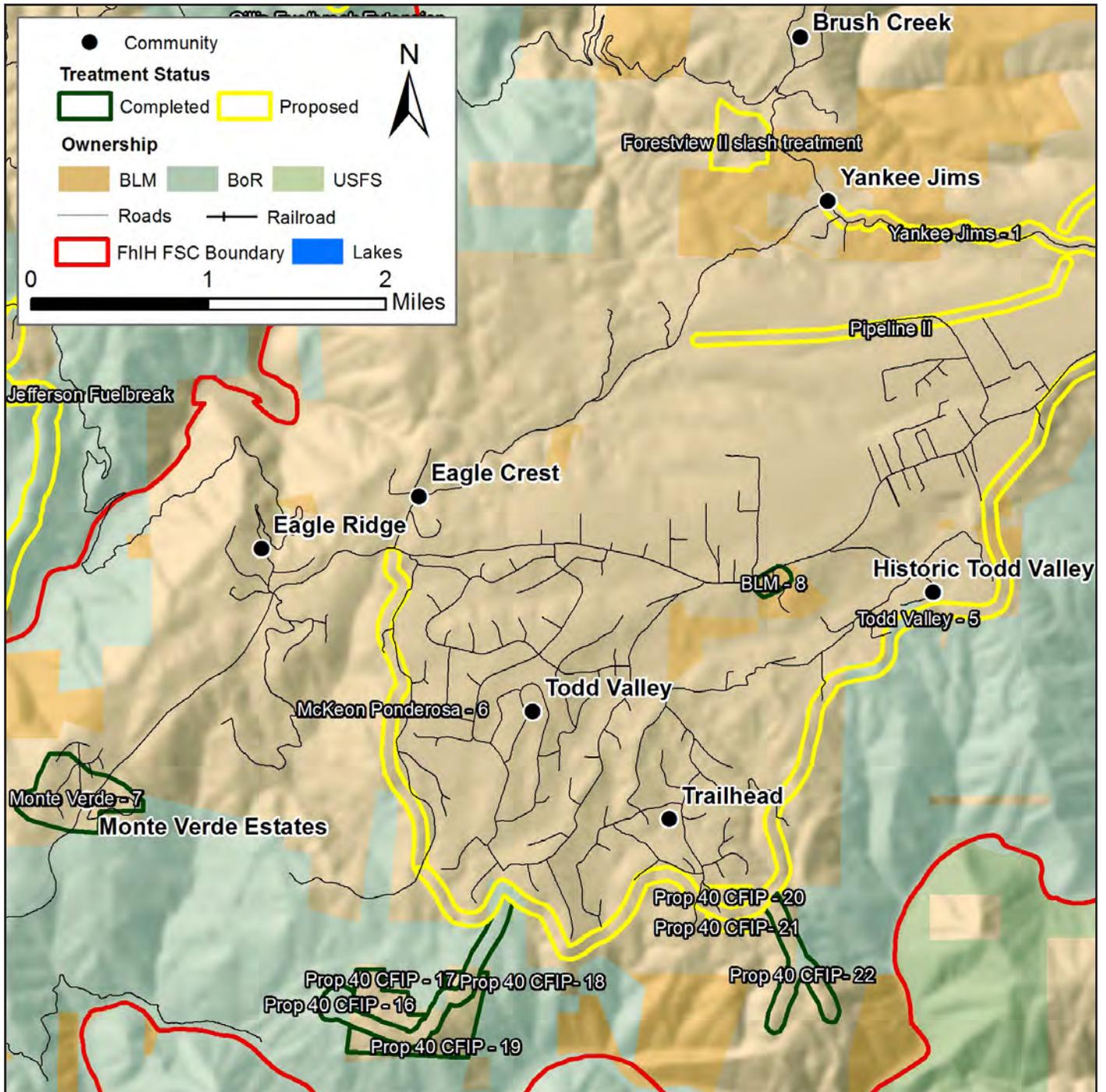
Number of Structures	1,200
Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding and decks
Average Lot Size	1 to 10 acres
Home Addresses	Present, but sometimes hard to see; mostly nonreflective
Dual Access Roads	Multiple ways in and out; marked evacuation route
Road Widths, Slope, and Surface	20 to 24'; <5%; paved, sections of unpaved
Emergency Vehicle Turnarounds	Some, using driveways
Water Supply	Hydrants throughout
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Confusing road network; steep slopes; ignition sources from recreationalists along Middle Fork of the American River

4. Trailhead

Number of Structures	50
Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; noncombustible siding
Average Lot Size	1 to 2 acres
Home Addresses	Mostly present, reflective
Dual Access Roads	Most side roads off of main thoroughfares are one way in-out
Road Widths, Slope, and Surface	Main road is 24 feet, most are 10-20 feet; mostly paved
Emergency Vehicle Turnarounds	Yes
Water Supply	Pressurized hydrants
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Ignition sources from recreationalists on the Middle Fork of the American River

COMMUNITY ANALYSIS

Figure 17. Southern Area / Todd Valley Community Map



WEST/MIDDLE FORESTHILL ROAD AREA

5. Brush Creek

Number of Structures	30
Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	1 to 20+ acres
Home Addresses	Present; reflective
Dual Access Roads	Multiple access, via narrow, windy roads
Road Widths, Slope, and Surface	<20'; <10%; paved
Emergency Vehicle Turnarounds	Some, but not in all areas
Water Supply	Some individual home cisterns
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Steep topography; Mine shafts

6. Eagle Crest

Number of Structures	80
Utilities Above or Below Ground	Above and below– power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	1-20 acres
Home Addresses	Present; reflective
Dual Access Roads	Multiple ways in/out
Road Widths, Slope, and Surface	20' to 24'; paved
Emergency Vehicle Turnarounds	Adequate for all apparatus
Water Supply	Some individual home cisterns and pressurized hydrant system
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Steep topography

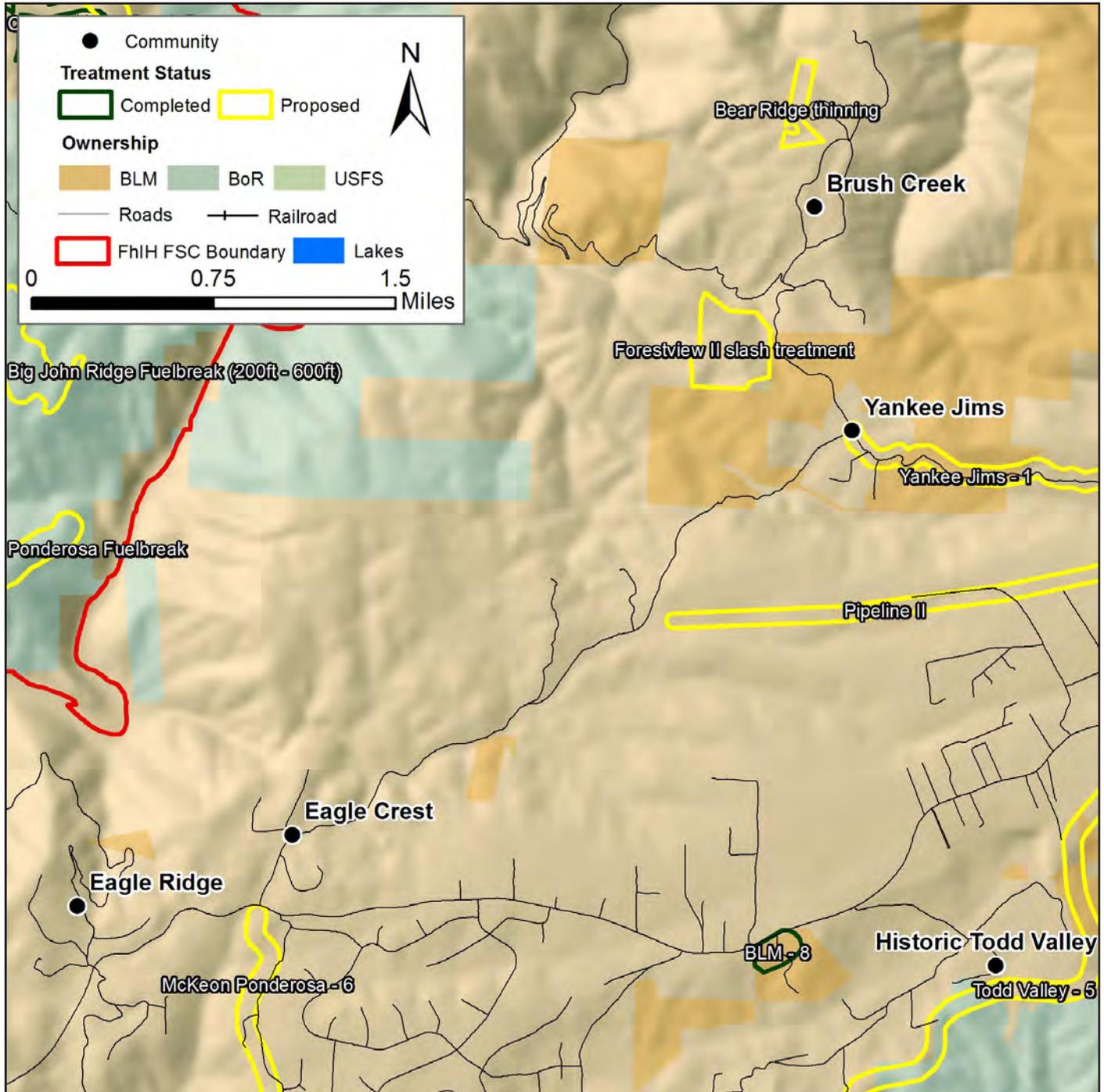
7. Eagle Ridge

Number of Structures	~40
Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding; wooden decks
Average Lot Size	<5 acres
Home Addresses	Present; reflective
Dual Access Roads	Multiple ways in/out, some steep roads
Road Widths, Slope, and Surface	20' to 24'; <10%; paved
Emergency Vehicle Turnarounds	Yes
Water Supply	Some hydrants – greater than 1000' away
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Steep topography; potential ignitions from recreationalists along the North Fork of the American River

8. Yankee Jims

Number of Structures	50
Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	>5 acres
Home Addresses	Mostly present, but sometimes hard to see; nonreflective
Dual Access Roads	Multiple ways in/out; along narrow roads
Road Widths, Slope, and Surface	<20'; <10%; paved, sections of unpaved
Emergency Vehicle Turnarounds	Some, using driveways
Water Supply	Some individual home cisterns
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Narrow roads; heavy fuels; mine shafts

Figure 18. Foresthill Area Community Map



UPPER FORESTHILL ROAD AREA

9. Baker Ranch

Number of Structures	32 mobile homes; ~60 houses
Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs, combustible siding and decks
Average Lot Size	1 to 20 acres
Home Addresses	Present; reflective
Dual Access Roads	Yes
Road Widths, Slope, and Surface	>20'; <10%; paved/unpaved sections
Emergency Vehicle Turnarounds	Some, but limited to smaller apparatus
Water Supply	Gravity fed hydrants with adequate pressure
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Potential ignitions along American River canyon from recreationists; Wind driven fire from Middle Fork drainage

10. Black Hawk

Number of Structures	40
Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Metal; noncombustible siding
Average Lot Size	1 to 20 acres
Home Addresses	Present; reflective
Dual Access Roads	Most; some one way in/out
Road Widths, Slope, and Surface	20' to 24'; <10%; paved
Emergency Vehicle Turnarounds	Some, but limited in fire-susceptible areas, especially adjacent to the canyon
Water Supply	Some individual home cisterns; Three 10,000 gallon tanks w/ hydrants
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Steep, north facing canyon walls leading to Black Oak Ridge/ Eberts Ranch Road

11. Foresthill

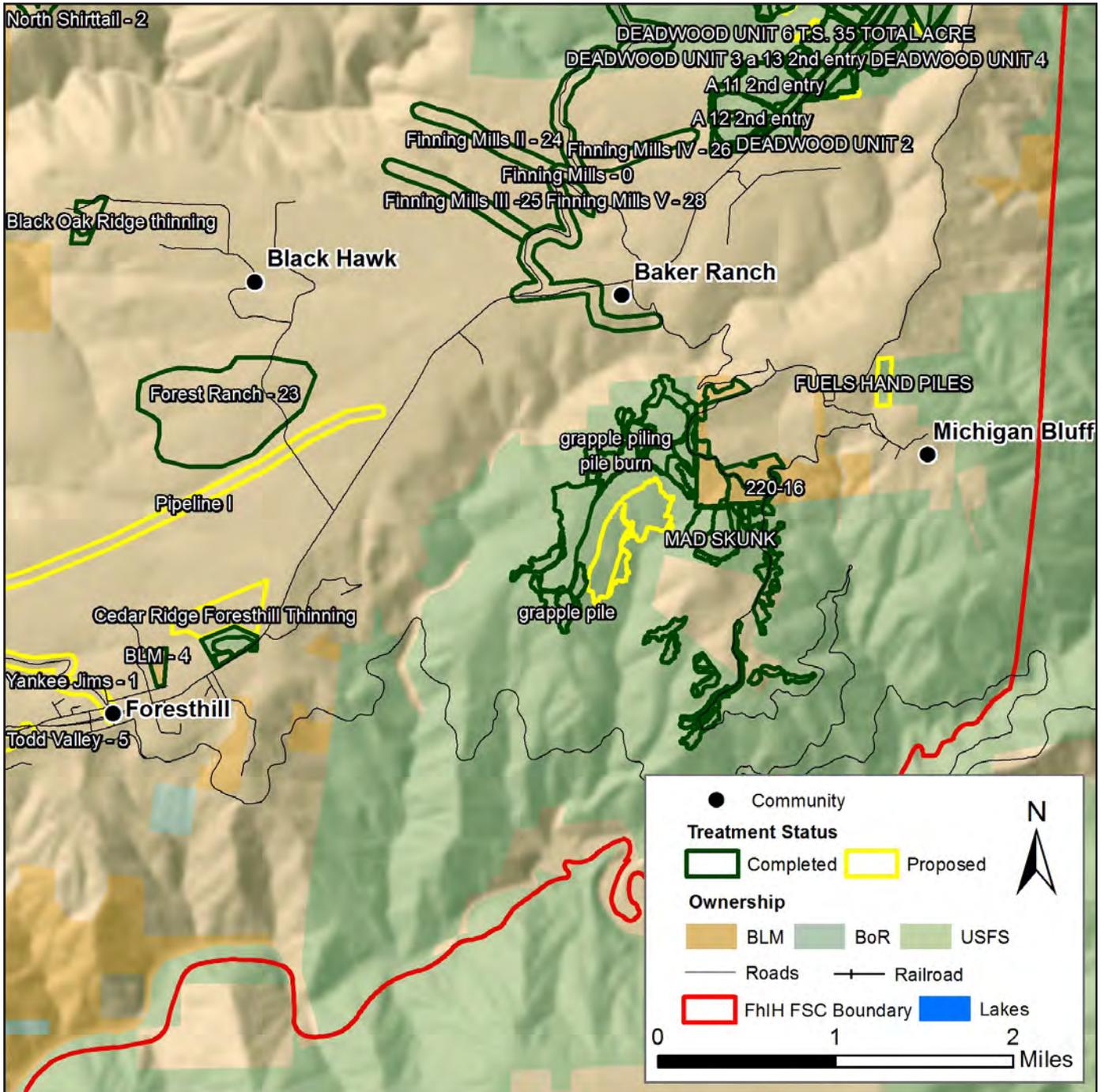
Number of Structures	200+
Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding; wooden decks
Average Lot Size	<1 acres in town, 1 to 5 acres outside of downtown
Home Addresses	Mostly present, but sometimes hard to see; mostly nonreflective
Dual Access Roads	Most side roads off of main thoroughfares are one way in-out
Road Widths, Slope, and Surface	>24'; <5%; paved
Emergency Vehicle Turnarounds	Adequate in most areas
Water Supply	Hydrants located throughout
Proximity to Nearest Fire Station	<2 miles
Other Hazards	Potential ignitions from recreationalists along the Middle Fork of the American River

12. Michigan Bluff

Number of Structures	50 in the community; 20 in surrounding area
Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	1 to 10 acres
Home Addresses	Present, but sometimes hard to see; mostly nonreflective
Dual Access Roads	Secondary access/egress is along dangerous dirt road
Road Widths, Slope, and Surface	20' to 24'; <10%; paved, some unpaved sections
Emergency Vehicle Turnarounds	Some, but not in all areas
Water Supply	Some individual home cisterns
Proximity to Nearest Fire Station	>5 miles
Other Hazards	Lightning; steep narrow roads

COMMUNITY ANALYSIS

Figure 19. Baker Ranch / Michigan Bluff Community Map



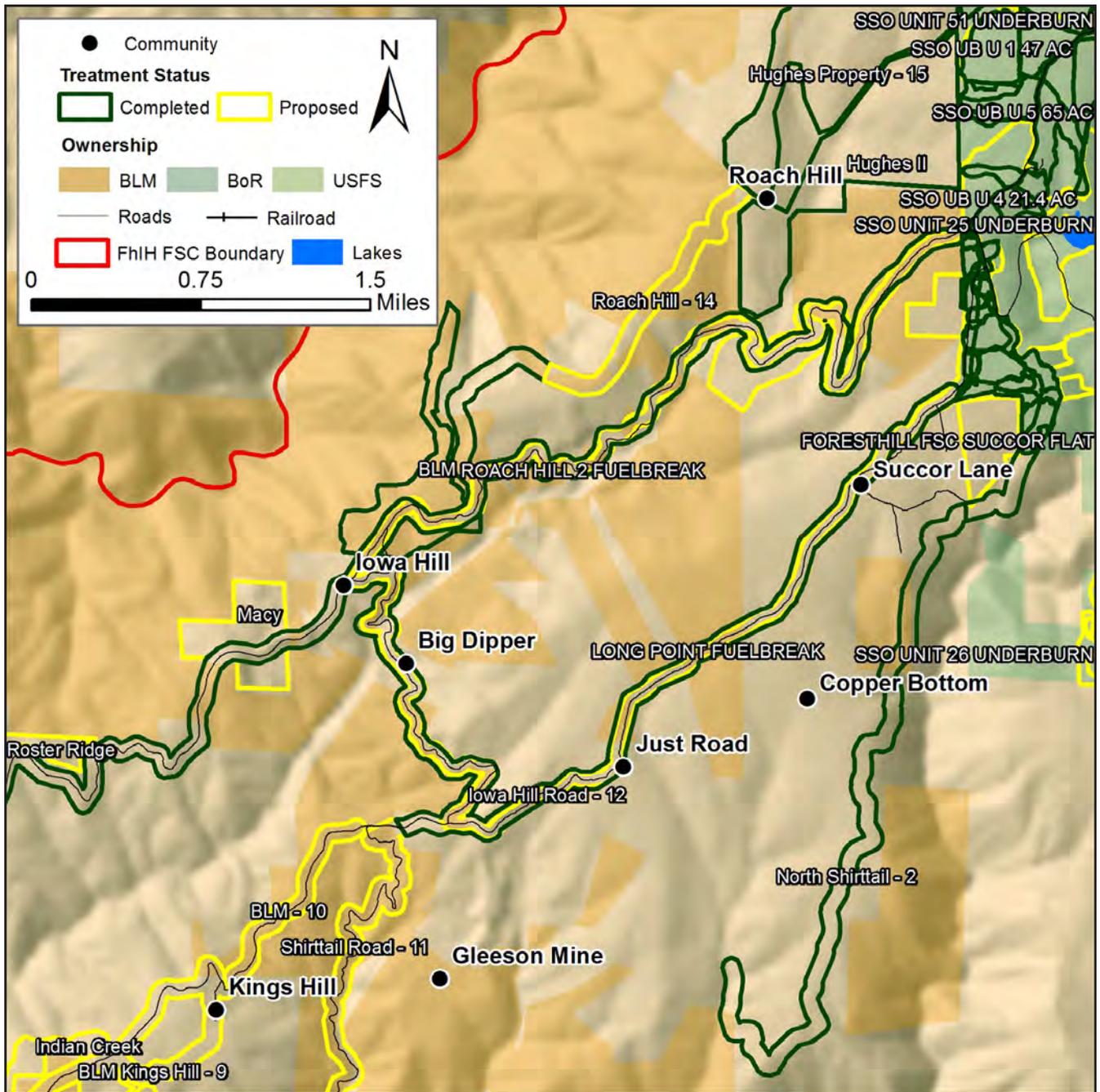
IOWA HILL AREA, INCLUDING SUB-COMMUNITIES

13. Iowa Hill

Sub-Communities & # of Structures	Roach Hill (8); Kings Hill (24); Copper Bottom (9); Succor Lane (11); Gleeson Mine (4); Just Road (6); Big Dipper
Utilities Above or Below Ground	Telephone line below; generators and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	<1 to 40+ acres
Home Addresses	Mostly present, but sometimes hard to see; inconsistent; mostly nonreflective
Dual Access Roads	Most side roads off of main thoroughfares are one way in-out
Road Widths, Slope, and Surface	20' to >24'; <5%; paved
Emergency Vehicle Turnarounds	Some, but not in all areas
Water Supply	Some individual home cisterns
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Generators at all homes

COMMUNITY ANALYSIS

Figure 20. Map of Iowa Hill Area Communities



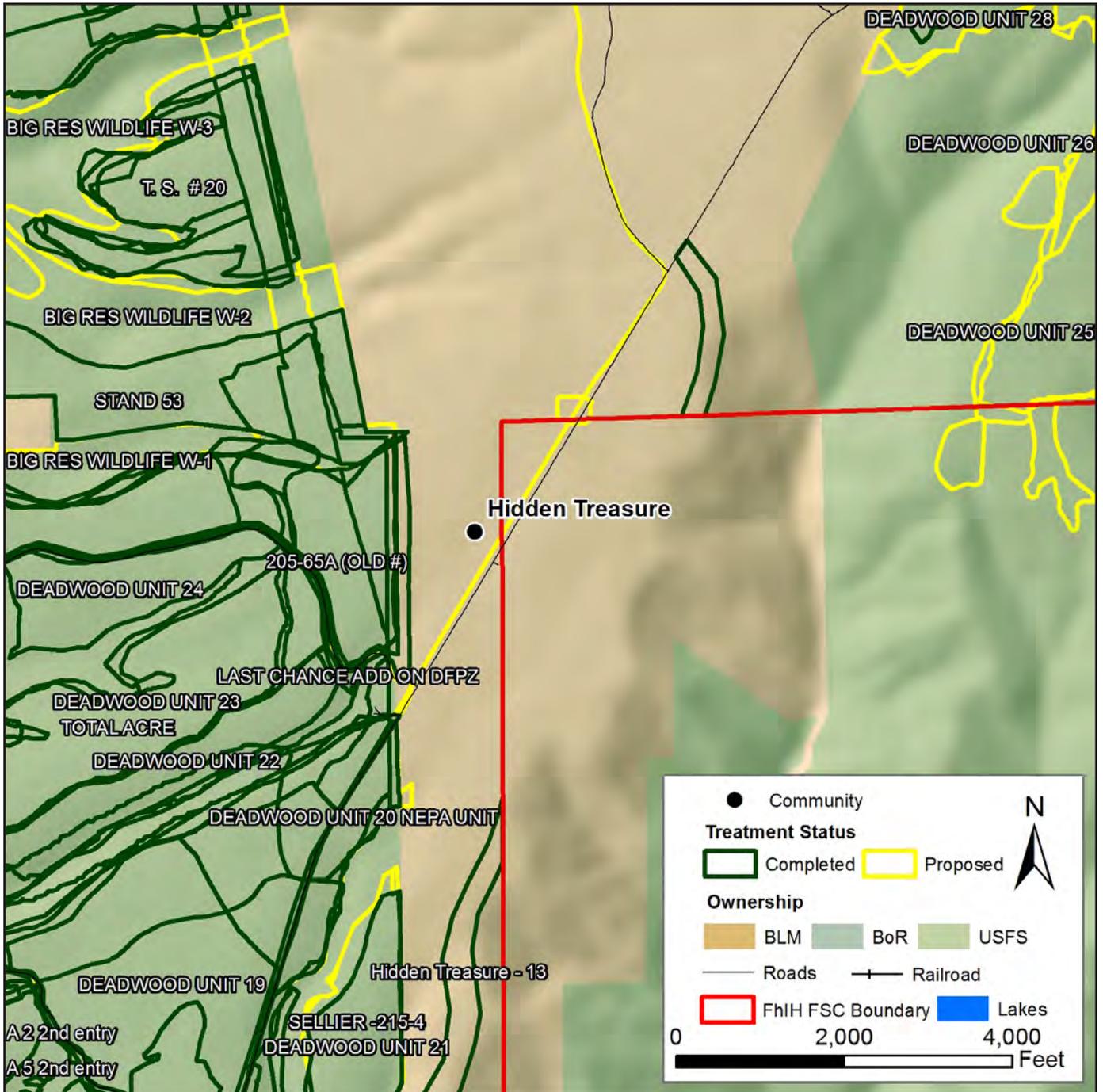
HIDDEN TREASURE

14. Hidden Treasure

Number of Structures	10
Utilities Above or Below Ground	Generators and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	10 to 15 acres
Home Addresses	Present; all reflective
Dual Access Roads	Most side roads off of main thoroughfares are one way in-out
Road Widths, Slope, and Surface	20' to 24'; <5%; paved, some unpaved sections
Emergency Vehicle Turnarounds	In some areas
Water Supply	Some individual home cisterns
Proximity to Nearest Fire Station	>5 miles
Other Hazards	Steep slopes up to Old Foresthill Rd, potential ignitions from recreationalists

COMMUNITY ANALYSIS

Figure 21. Hidden Treasure Community Map



FORESTHILL/IOWA HILL FSC AREAS OF SPECIAL INTEREST

There are numerous recreation areas located on national forest lands throughout the FSC. These include picnic areas and designated and dispersed camping areas, as well as access to hiking trails and four-wheel-drive roads. Nearly all of the vegetation found within the area is susceptible to wildfire, and human-caused ignition is possible. Moreover, because of the number of camping areas, an evacuation could be difficult. Should a wildfire occur, precaution must be taken to ensure the safe and orderly evacuation of visitors. An evacuation could be complicated due to the potential number of visitors, and because of steep, narrow roads that are one way in and out.

Placer County's rich history and culture is preserved in many historic buildings. Mining in particular played a predominant role in the growth and development of Placer County as it is known today. Many historic mine structures remain intact in the county, but they are vulnerable to wildland fire.

FORESTHILL/IOWA HILL AREA ASI RECOMMENDATIONS

Table 11. ASI Recommendations for the Foresthill/Iowa Hill FSC

Name	Priority	Description	Methods
Landscaping/Fuels	1	Maintain thinning and mowing around campground sites and fire pits. Thin vegetation and mow along access roads and trails which might be used for evacuation purposes. Defensible space around historical infrastructure	Mowing; limbing; chipping; individual and group tree removal
Continue fuels mitigation work within and near recreation areas	2	There are already-completed and planned fuels reduction treatments in these areas.	Mowing; limbing; chipping; individual and group tree removal
Preparedness Planning/ Evacuation	3	Continue working on evacuation planning in these areas, including clearly posting evacuation routes and procedures. Post a fire danger sign at the entrance to each recreation area, where applicable. Provide visitors with information on wildfire, especially during times of high fire danger. All historical structure locations should be mapped in an easily-readable format and available for all incoming resources.	N/A

GREATER LINCOLN FIRE SAFE COUNCIL



GREATER LINCOLN FIRE SAFE COUNCIL

INTRODUCTION

Location

The Greater Lincoln FSC covers the vast majority of the non-urban areas of western Placer County. The northern and western council boundaries follow the Placer County line. In the east, the council area is bordered by the Greater Auburn Area FSC boundary, which runs roughly north up from Loomis, separating the communities of Fowler and Gold Hill from Ophir. The southern boundary separates wildland areas from the urban areas of Roseville and Rocklin. The total size of the FireSafe council is approximately 114,314 acres or 178.6 square miles. Towns and communities within the FSC include Amoruso, Fowler, Gold Hill, Paige, Sheridan, and Thermalands.

Demographics and Economics

Outside of the cities of Lincoln, Rocklin, and Roseville, the FSC area is largely rural. Because many of these areas are unincorporated, population estimates are difficult to make, but are assumed to be between 10,000 and 15,000 people (between 65,000 and 70,000 if urban areas are included). The largest demographic group is people age 18 and younger, followed by the 35 to 49 age bracket. This data is for the entire FSC area, including the city of Lincoln, so it may or may not be representative of the area as a whole.⁹ Communities within the FSC tend to spread out in all directions, and apart from a few concentrated areas of development, such as Sheridan and Amoruso, lot sizes are relatively large. Most people in these areas commute to nearby Lincoln or the larger Sacramento Metropolitan Area. Other employment within the FSC is largely centered on agriculture or industry, including farming and ranching, wineries and vineyards, and a number of industrial/manufacturing areas.

Weather

Areas within the FSC tend to have cool, wet winters and hot, dry summers. On average, 90 days each year have highs above 90 degrees. The record high temperature is 115 °F set in June 1961. The driest year occurred in 1976, when only 10.7 inches of precipitation fell.¹⁰ In general, dry conditions begin around the end of May and extend into November.

Table 12. Weather Data for the Lincoln FSC

	Temperature ¹⁰	Precipitation ¹⁰	Winds*
Monthly High/Low	High: 97° (July)	Low: 0.03" (August)	8.2 mph (June)
Yearly Average/Total	75°	22.8" (Total)	6.6 mph

* <http://www.wrcc.dri.edu/htmlfiles/westwind.final.html#CALIFORNIA>

9 "2010 Census Interactive Population Search." US Census Bureau. Web. 06 Mar. 2012. <<http://2010.census.gov/2010census/popmap/ipmtext.php?fl=06>>.

10 "Rocklin, CA Climate Summary." Western Regional Climate Center. Web. <<http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7516>>.

Topography

Elevations in the council area range from approximately 50 feet above sea level in the Pleasant Grove area to over 1,400 feet along the eastern boundary. The majority of the area along and west of Highway 65 is relatively flat. North and west of the highway, rolling hills steadily increase in steepness, with numerous small, narrow canyons running between hills. Especially in the area north and east of Fowler and Thermalands, steep slopes and canyons will act to spread fire rapidly.

Fuels

Fuels within the Lincoln FSC are dominated by grasses and agricultural crops in the western half and oak-pine woodlands interspersed with annual grassland areas in the eastern half. See Appendix C for more information.

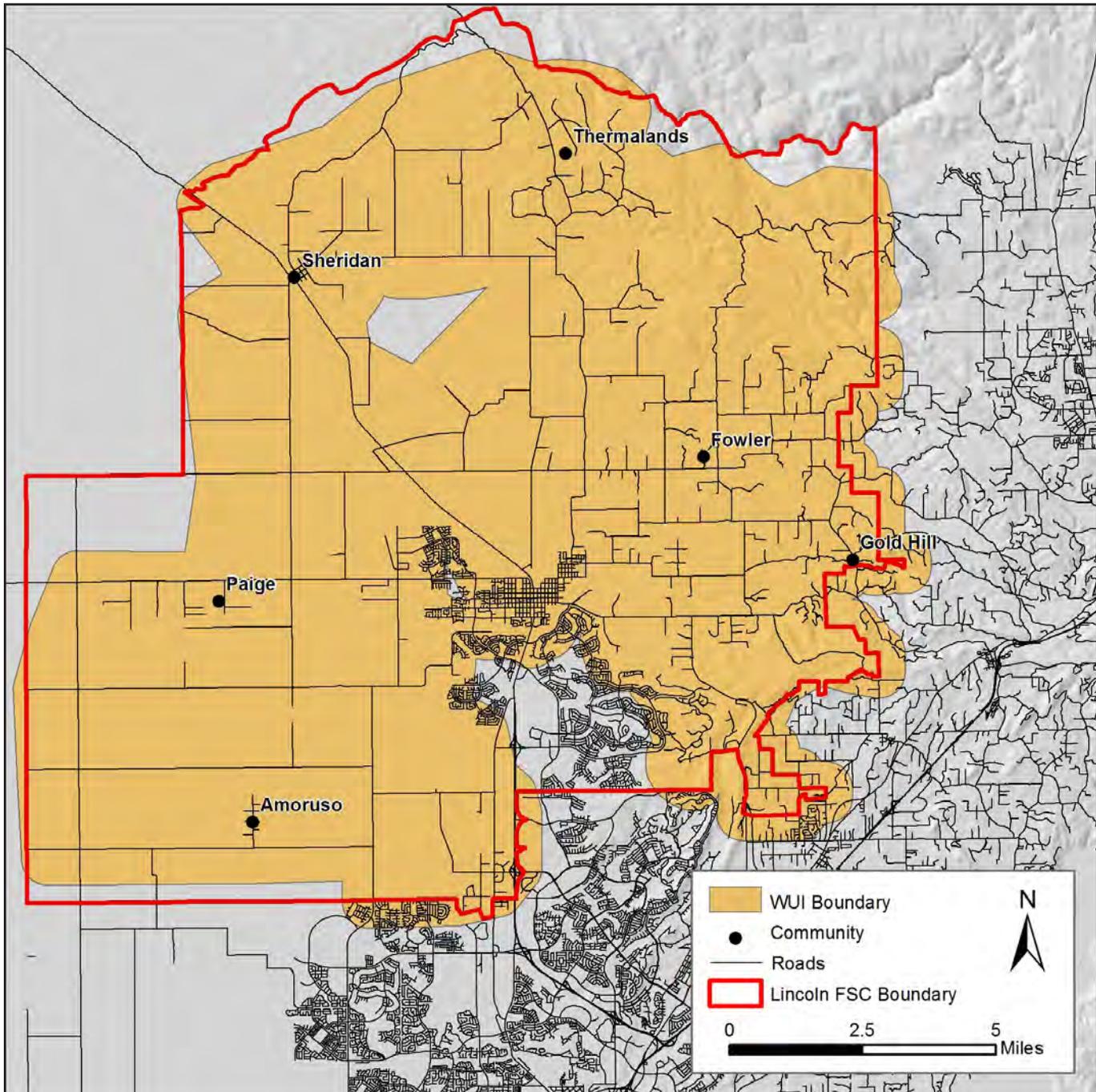
Fire Behavior

Fire behavior was modeled using two different weather scenarios: moderate and high. For more detailed information on the parameters used for the model, please see Appendix C. The severity of fire behavior indices for the FSC area are roughly split between areas east and west of Highway 65. In general, the agricultural and grassland areas west of the highway are expected to experience less-severe fire behavior than the oak-pine woodland areas east of the highway. Under moderate weather conditions, flame lengths throughout the FSC area are predicted to be less than 4 feet, with pockets of 4 to 8 feet and 8 to 11 feet flame lengths along the northern and western boundaries. This means that firefighters are often able to attack a wildland fire directly, either as part of a hand crew or with wildland fire apparatus. During high weather conditions, flame lengths of less than 4 feet are still predicted for most of the western half of the FSC area, while most of the eastern half is predicted to have flame lengths exceeding 8 feet. Indirect strategies and aerial equipment will thus likely be necessary in these areas. Crown fire potential remains similar under moderate and high weather conditions for the entire FSC area, with mostly surface fire predicted. In areas of dense canopy cover along the northern and eastern boundaries, individual and group tree torching is predicted. Sustained crown fire behavior is not predicted in these areas under high-percentile weather conditions, though such scenarios are possible and have occurred historically. Rates of spread are predicted to be less than 20 chains per hour given moderate weather conditions throughout most of the area. During high weather conditions, rates of spread between 20 and 40 chains per hour are expected throughout most of the western half, while the eastern half is likely to experience rates of spread greater than 60 chains per hour.

WILDLAND-URBAN INTERFACE BOUNDARY

For the purpose of this CWPP, the WUI in the Greater Lincoln FSC was defined using a 1.5-mile buffer surrounding each identified community. The purpose of this section is to examine the communities in greater detail.

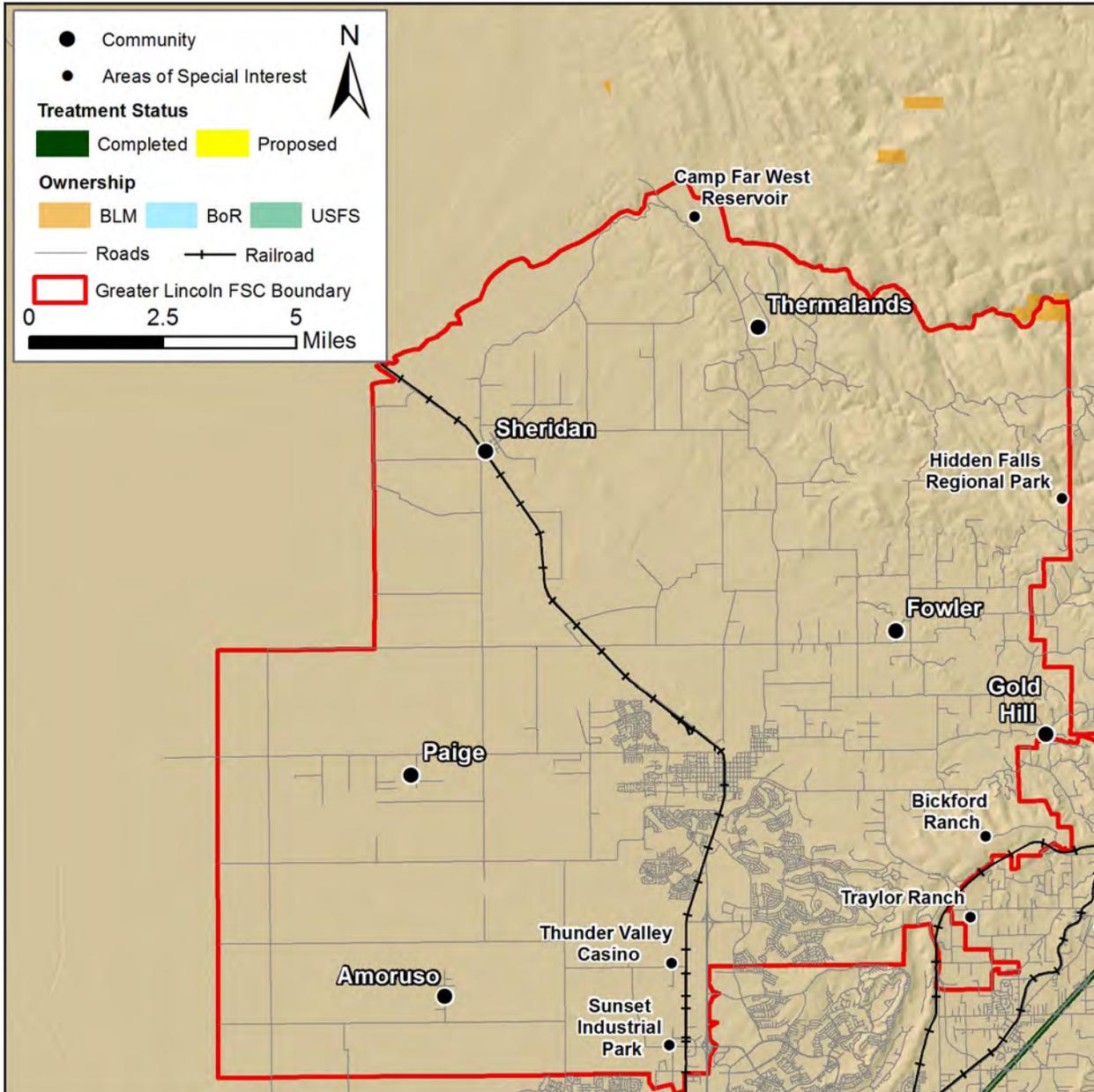
Figure 22. WUI Boundary for the Greater Lincoln FSC



GREATER LINCOLN COMMUNITIES

The purpose of this section is to examine the communities in greater detail.

Figure 23. Overview of the Greater Lincoln FSC



GREATER LINCOLN COMMUNITY RECOMMENDATIONS FOR RESIDENTS

For all of the homes in the FSC, properly implemented defensible space and Firewise home construction is the most important recommendations for home survivability. Due to limited firefighting resources, especially during the early stages of an expanding wildfire incident, high home density, and/or long response times, individual firefighting entities may not be able to stay and protect each home. In order to survive a passing flame front, a home will need good defensible space and home construction. Often, homeowners will assume that because they have adequately constructed their homes from noncombustible materials and have cleared vegetation around the structures, firefighters will be able to save their homes. However, defensible space needs to be maintained and re-assessed throughout the fire season.

Because of scattered, discontinuous home locations, individual fuel breaks may not be the most effective deterrent to fire spread. Instead, all homes adjacent to flammable wildland fuels should have adequate defensible space. Connecting, or linking, defensible space between homes creates a larger fuel break, providing greater protection from adjacent vegetation. More in-depth information on home construction, defensible space, preparedness planning and evacuation, infrastructure, and water supply can be found in Appendix A. Table 12 below includes specific recommendations from the Greater Lincoln FSC. General recommendations for fuels projects and defensible space are listed in Tables 13 and 14.

Table 13. Fire mitigation and fuels reduction projects for the Greater Lincoln FSC.

Project Name	Status	Treatment	Category	Acres
Bickford Ranch	This is an undeveloped planned community. No fuel treatment has occurred.	Apply fuel reduction such as perimeter disc/till, cross trailing, dead and downed fuel removed, and provide access for fire suppression and fuel work activities.	1	1942
Clark Tunnel Road	The 4 mile segment that was closed as part of the Bickford Ranch development.	Maintenance needed for sustainability. This includes fuel reduction; roadside clearing and brush removal	1	TBD

COMMUNITY ANALYSIS

Roadside Disking on private property	<p>This is the expansion of the successful project in the Dry Creek area. In 2011,</p> <ul style="list-style-type: none"> • 16 roadside fires occurred on properties that were asked to disk. • 9 fires were on properties that did not disk that burned a total of 21 acres. • 7 roadside fires occurred on properties where disking occurred and burned less than 1 acre. 	Work with property owners to encourage a 20' disk line on property adjacent to public roadside	2	Fire Safe Council Boundaries
Invasive species removal and native plant restoration	Invasive species continues to move throughout the area. This project is to inform the community as well as establish removal projects	1-2 day volunteer events to remove invasive species such as Scotch Broom, French Broom, Spanish Broom, and yellow star thistle and restore area to native vegetation	3	Fire Safe Council Boundary
Firewise	There are currently no recognized Firewise communities within the GLFSC	Conduct community assessments and help communities with National Recognition	3	Fire Safe Council Boundaries
Chipper Program & Community Green Waste Bins	The chipper program is used primarily in the Newcastle area of the FSC. This program needs to be expanded to the remaining areas.	Continue to support the need for a Placer County Chipper Service and Designate green waste disposal sites for residence	3	Fire Safe Council Boundary
Homeowner education for burning piles	This type of project would be a new offering to the newly established GLFSC	Host workshops to help homeowners with safe pile burning practices. A fire safety day type of project every spring with Safe mowing instructions with handouts/flyers and large signs and Fire extinguisher training demos	3	Fire Safe Council Boundary
Senior Assistance	This type of project would be a new offering to the newly established GLFSC	Provide assistance to seniors to create defensible space	3	Fire Safe Council Boundary

Hidden Falls Regional Park	This is an active Regional Park use area. Multiple shaded fuel breaks have been performed inside the park but there have been no studies to determine if these fuel breaks need to extend beyond the park boundaries.	Apply appropriate fuel treatment that include: the Shaded Fuel Break Prescription where applicable; provide 100' of defensible space from development. Provide tie in to the current project area for fire suppression and fuel maintenance activities.	4	TBD
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Table 14. Fuels Treatment Recommendations for the Lincoln FSC

Name	Priority	Description	Methods*	Acres**
Defensible Space	1	Defensible space around individual homes. See Appendix A for details.	Mowing; limbing; chipping; individual and group tree removal	200 feet around the home
Continue the disk-ing program that is on-going throughout the FSC	2	The creation of fire breaks along roads aids in the evacuation of residents and inhibits fire spread.	Disking	20 feet wide adjacent to roadways and/or property lines
Thin along major side roads in forested areas	2	Forested areas on the eastern half of the FSC would also benefit from reducing fuels loads along major roadways, which will aid in ingress/egress and potentially slow fire spread.	Mowing; limbing; chipping; individual and group tree removal; mechanical treatments	At least 20 feet on each side of the road, where possible

* Mechanical treatments in timbered areas include all varieties of logging equipment.

** Defensible space distances will vary by property based on slope and fuels.

COMMUNITY ANALYSIS

Table 15. General Recommendations for the Lincoln FSC

Category	Priority	Description
Home Construction	1	Discourage the use of combustible materials for decks, siding, and roofs, especially where homes are upslope from heavy vegetation.
		Replace any shake-shingle or slab-wood siding and roofs with noncombustible types.
		Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above heavy fuels.
		Conduct individual home assessments.
Landscaping/Fuels	2	Clean leaf and needle litter from roofs and gutters and away from foundations.
		Thin vegetation along side roads and driveways. This is especially important for narrow driveways and road segments, and for any areas where ravines with heavy fuels are below the access. Focus on removing vegetation in drainages that cross roads.
		Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or even with homes, never downhill.
		Encourage individual landowners to mow fuels near homes and along roadways and fence lines during times of high fire danger.
		Discourage the planting of flammable ornamentals such as eucalyptus and conifers within 30 feet of homes.
Preparedness Planning/ Evacuation	3	Add reflective addressing to all driveways or homes. A good guideline is to use all metal white markers that are four inches in width on a green background. These should be placed 3 to 5 feet above ground.
		Develop an evacuation plan for the community, including identifying escape routes and an evacuation center.
		Annual spring fire safety day project
		Safe mowing instructions with handouts/flyers and large signs
		Fire extinguisher training demos
Infrastructure	4	Provide adequate turnarounds for fire apparatuses throughout the community.
		Rate and mark bridges for use by fire apparatus.
		Identify all water sources within the community, including hydrants, cisterns, and ponds. Make sure that they are visible, maintained, and operable.

For more detailed recommendations on how to enhance the safety of your home and community, please refer to Appendix A. See also the Ready, Set, Go! Program in Appendix A.

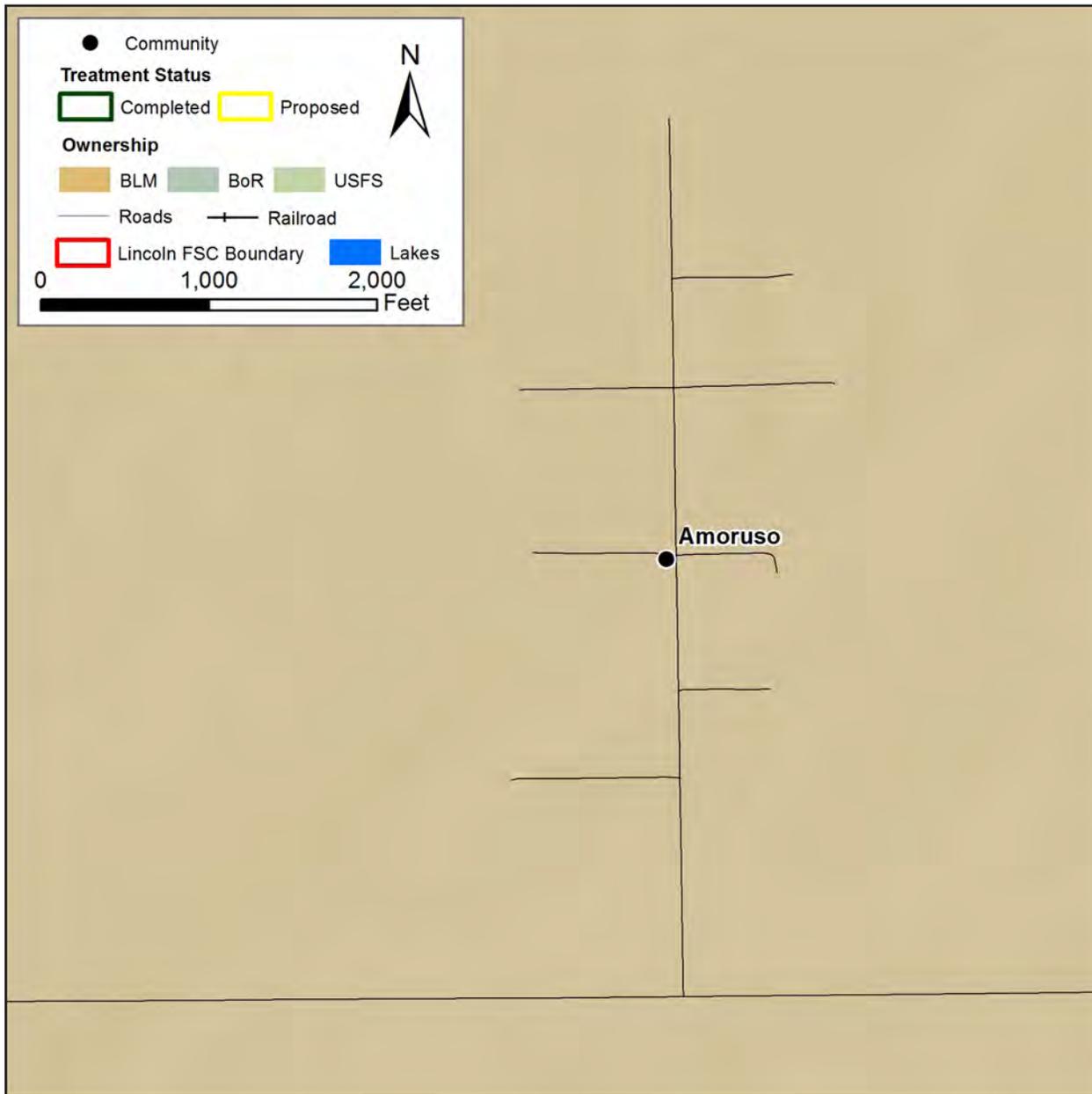
1. Amoruso

Number of Structures	104 homes
Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; noncombustible siding; wooden decks
Average Lot Size	<1 acre
Home Addresses	Mostly present, but not always visible; inconsistent; mostly nonreflective
Dual Access Roads	One way in and out
Road Widths, Slope, and Surface	>24'; flat; paved
Emergency Vehicle Turnarounds	Small turnaround at end of street; short driveways
Water Supply	Some available from pumps and wells, and draft sites
Proximity to Nearest Fire Station	>5 miles
Other Hazards	Adjacent agricultural burning

The community of Amoruso is located directly west of the city of Lincoln, off of Sunset Boulevard West. It consists of 320 acres of residential development surrounded on all sides by agricultural lands. Apart from surrounding agricultural crops (not all of which are irrigated year-round), other fuels within and around the community include planted ornamentals such as eucalyptus trees. The terrain throughout the area is flat, with no noteworthy hazardous terrain features. Most homes contain adequate defensible space because of the types of fuels present, although residents should continue to mow around homes, especially during times of high fire danger. Fire protection is provided by Placer County Fire Department.

COMMUNITY ANALYSIS

Figure 24. Amoruso Community Map

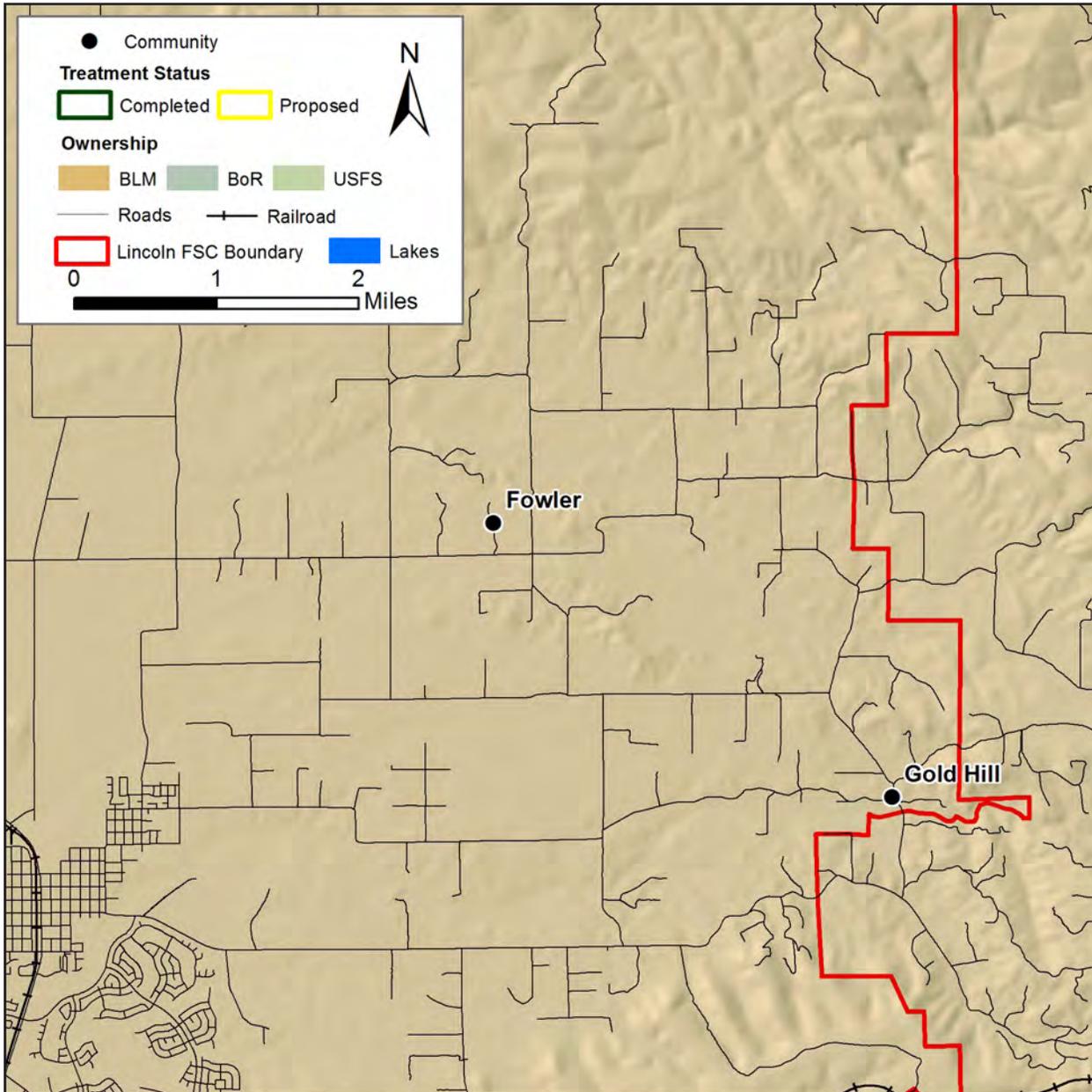


2. Fowler

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle and stucco roofs; mostly noncombustible siding
Average Lot Size	<1 to 40+ acres
Home Addresses	Mostly present, but not always visible; inconsistent; mostly nonreflective
Dual Access Roads	Most; many one-way side roads, especially in steep canyon areas
Road Widths, Slope, and Surface	Vary between <20' to >24'; <10%; mostly paved
Emergency Vehicle Turnarounds	Some, but not in all areas
Water Supply	Some area hydrants and drafting, with mandated cisterns
Proximity to Nearest Fire Station	Some areas >5 miles
Other Hazards	Landowner burning – ag and debris; some lightning; potential development at Bickford Ranch
Specific Recommendations	Thin along major side roads in order to aid in access/egress

The community of Fowler is located north and east of the city of Lincoln, covering a broad area between Coon Creek, Hidden Falls Regional Park, and the community of Gold Hill. There is a wide variety of vegetation in the area, including dense stands of oak-pine woodland, open grassland areas, agricultural lands, vineyards, and riparian corridors. There are also a number of flammable ornamentals around homes, including species of eucalyptus. The western side of the community is largely flat, transitioning to rolling hills with steep drainages and hillsides moving north and east. Especially in these areas, steep terrain and dense fuel loadings are expected to produce rapid rates of spread. A primary area of concern is the northern section of the community area, which contains narrow, one-way roads and steep, heavily vegetated hills and drainages. The vast majority of homes in this area and many homes in the rest of community lack adequate defensible space. Fire protection is provided by Placer County Fire.

Figure 25. Fowler Community Map

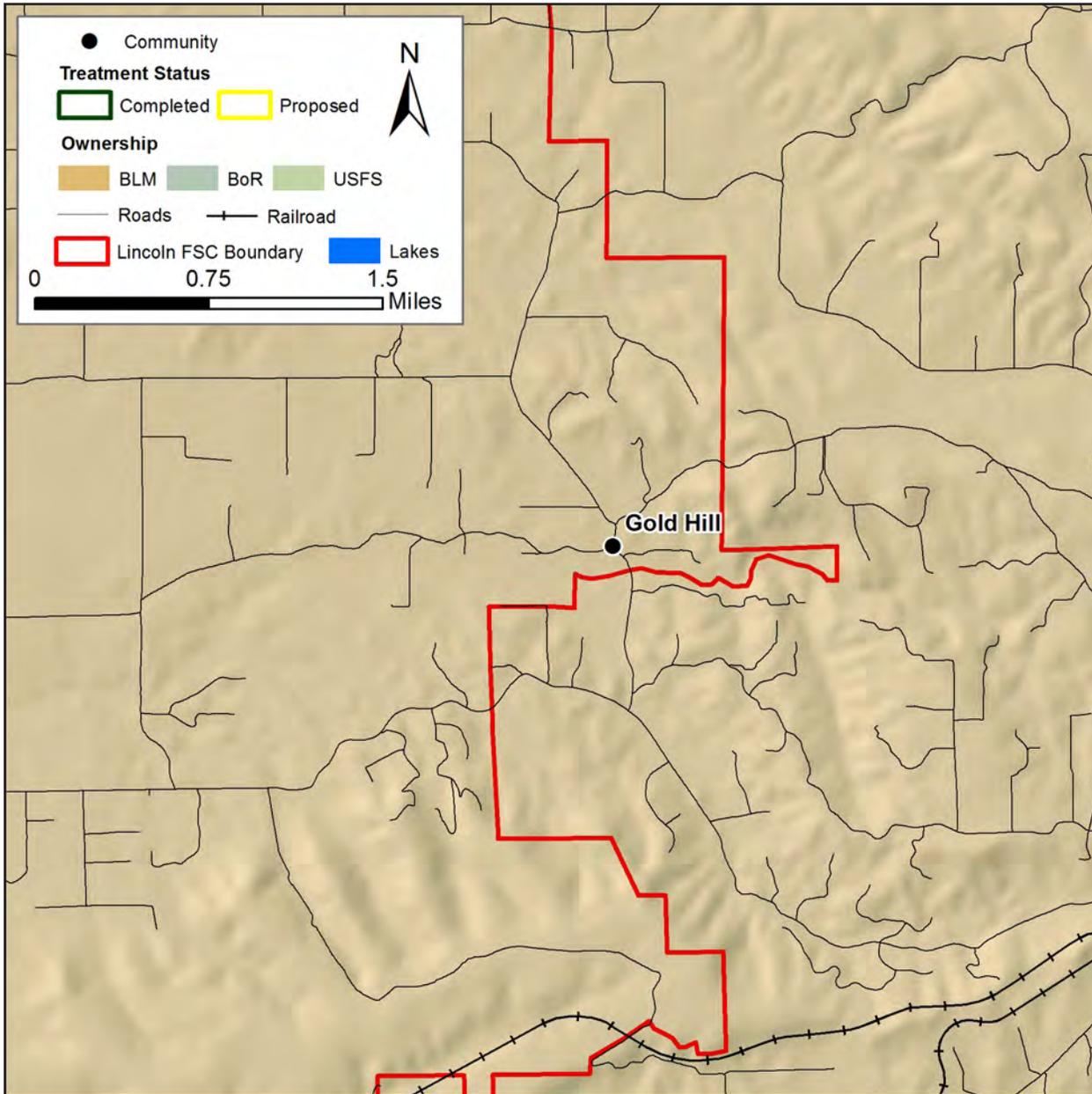


3. Gold Hill

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle; mostly noncombustible siding
Average Lot Size	<1 to 40+ acres
Home Addresses	Mostly present, but not always visible; inconsistent; mostly nonreflective
Dual Access Roads	Most; many one way side roads, especially in steep canyon areas
Road Widths, Slope, and Surface	Vary between <20 and >24'; <10%; mostly paved
Emergency Vehicle Turnarounds	Some, but not in all areas
Water Supply	Some area hydrants and drafting, but limited elsewhere
Proximity to Nearest Fire Station	>2 miles
Other Hazards	Landowner burning – ag and debris; some lightning; some live-stock and horses in the area
Specific Recommendations	Thin along major side roads in order to aid in access/egress

Gold Hill is a former mining community situated between Ophir and Lincoln, centered on the intersection of Gold Hill Road and Virginiatown Road. Terrain in the area is mostly rolling hills with steep, narrow drainages. There is a wide variety of vegetation and fuel types, including oak-pine woodlands, open grassland areas, and vineyards. Homes reside on 1-acre or larger parcels throughout the community, although high density exists in the Gold Hill mobile home park. Fire protection is provided by Placer County Fire.

Figure 26. Gold Hill Community Map



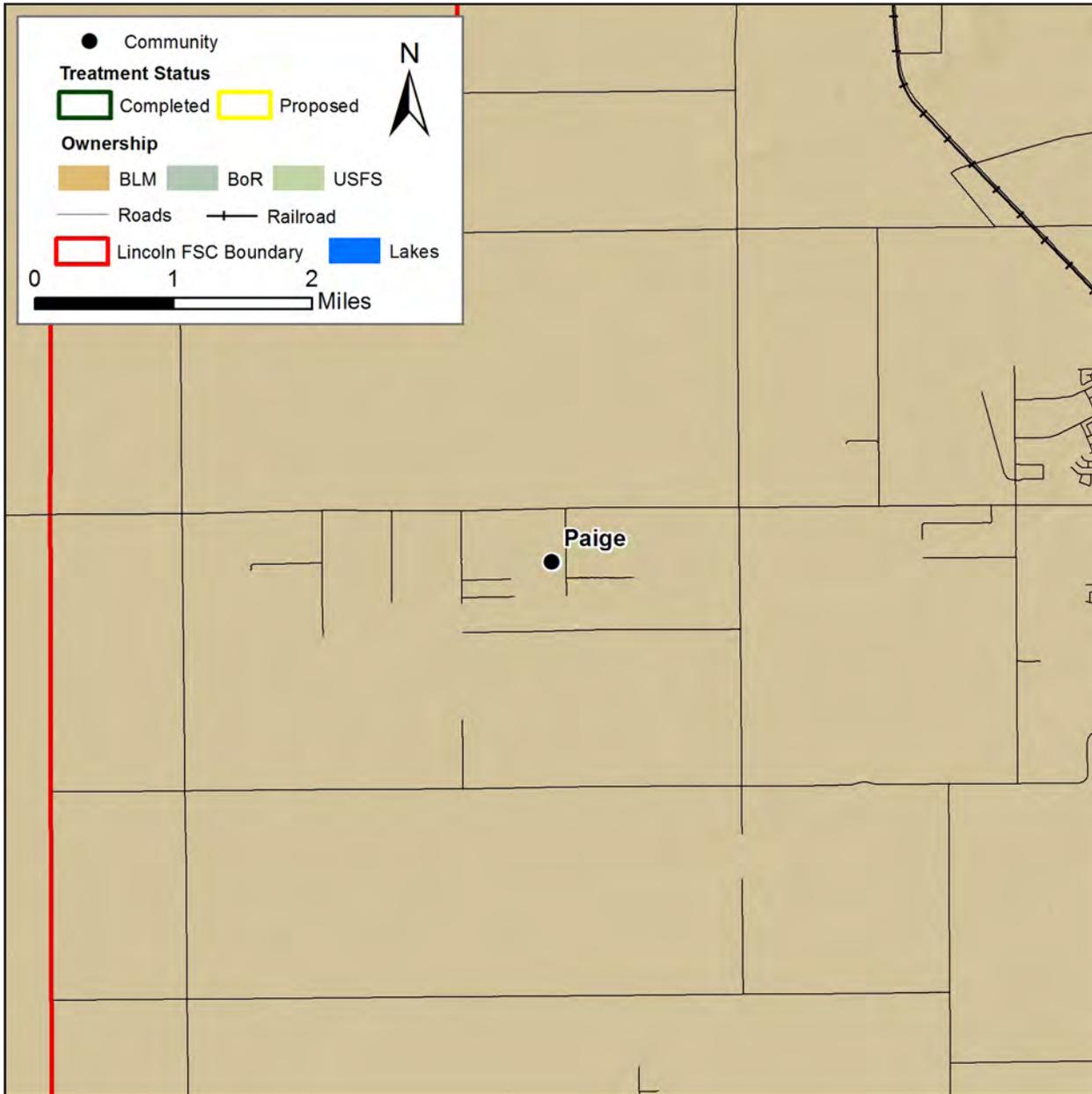
4. Paige

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle; mostly noncombustible siding
Average Lot Size	~ 2 to 40+ acres
Home Addresses	Mostly present, but not always visible; inconsistent; mostly nonreflective
Dual Access Roads	All major roads; many one way side roads and long driveways
Road Widths, Slope, and Surface	Vary between <20' and >24'; <5%; paved
Emergency Vehicle Turnarounds	Mostly yes
Water Supply	Limited; no hydrants
Proximity to Nearest Fire Station	Some > 5 miles
Other Hazards	Adjacent agricultural burning; birds hitting high voltage lines; debris around homes; HW 65 diversion road being built; JP4 lines in area; solar fields to be built in area; ignitions off of railroads
Specific Recommendations	Remove debris around homes

The community of Paige covers a large portion of the agricultural areas west of the city of Lincoln. Vegetation in the area is largely agricultural crops, including hay, alfalfa and rice. Some of these areas are used as grazing lands, and are thus kept fairly cut most of the year. Other crop areas, including those planted with rice, are burned frequently. Terrain throughout the community is largely flat, with no potentially dangerous terrain features that might increase fire spread. Most homes contain adequate defensible space because of the types of fuels present, although residents should mow around homes and remove debris adjacent to structures. Fire protection is provided by Placer County Fire.

COMMUNITY ANALYSIS

Figure 27. Paige Community Map

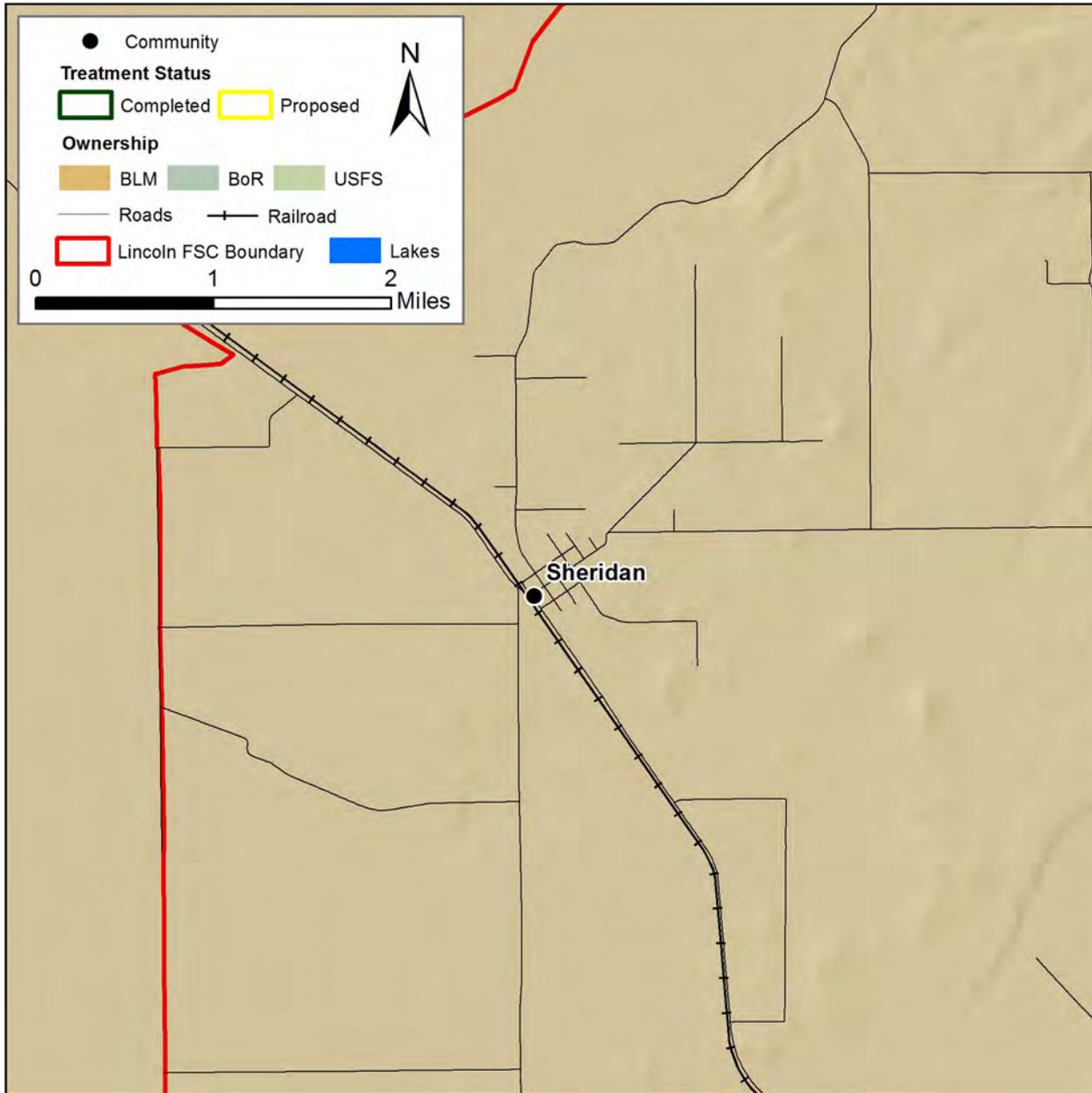


5. Sheridan

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle; noncombustible siding
Average Lot Size	<1 acre in town, to >40 acres just outside of town
Home Addresses	Mostly present, but not always visible; inconsistent; mostly non-reflective
Dual Access Roads	Most; many one way side roads and long driveways
Road Widths, Slope, and Surface	Vary between <20' and >24'; <5%; mostly paved
Emergency Vehicle Turnarounds	Some, but not in all areas
Water Supply	Hydrants in town, about to undergo water improvement project which should increase flow rates
Proximity to Nearest Fire Station	Generally <1 mile
Other Hazards	Landowner burning – ag and debris; potential ignitions off of Hwy 65 and railroad; degraded bridges in area

The town of Sheridan is located along Highway 65, northwest of the city of Lincoln. The actual town area has a population just over 1,200 people, though numerous homes on larger parcels spread beyond the city limits to the north and east. The primary fuels in the community are open areas of annual grasses and agricultural lands, though there a number of pockets of trees surrounding homes and properties. Terrain throughout the community is largely flat, with no noteworthy terrain features that could increase fire spread. The vast majority of homes in the town and the larger community area contain decent defensible space, although this could be improved by mowing around homes, especially during times of high fire danger. Fire protection is provided by Placer County Fire.

Figure 28. Sheridan Community Map



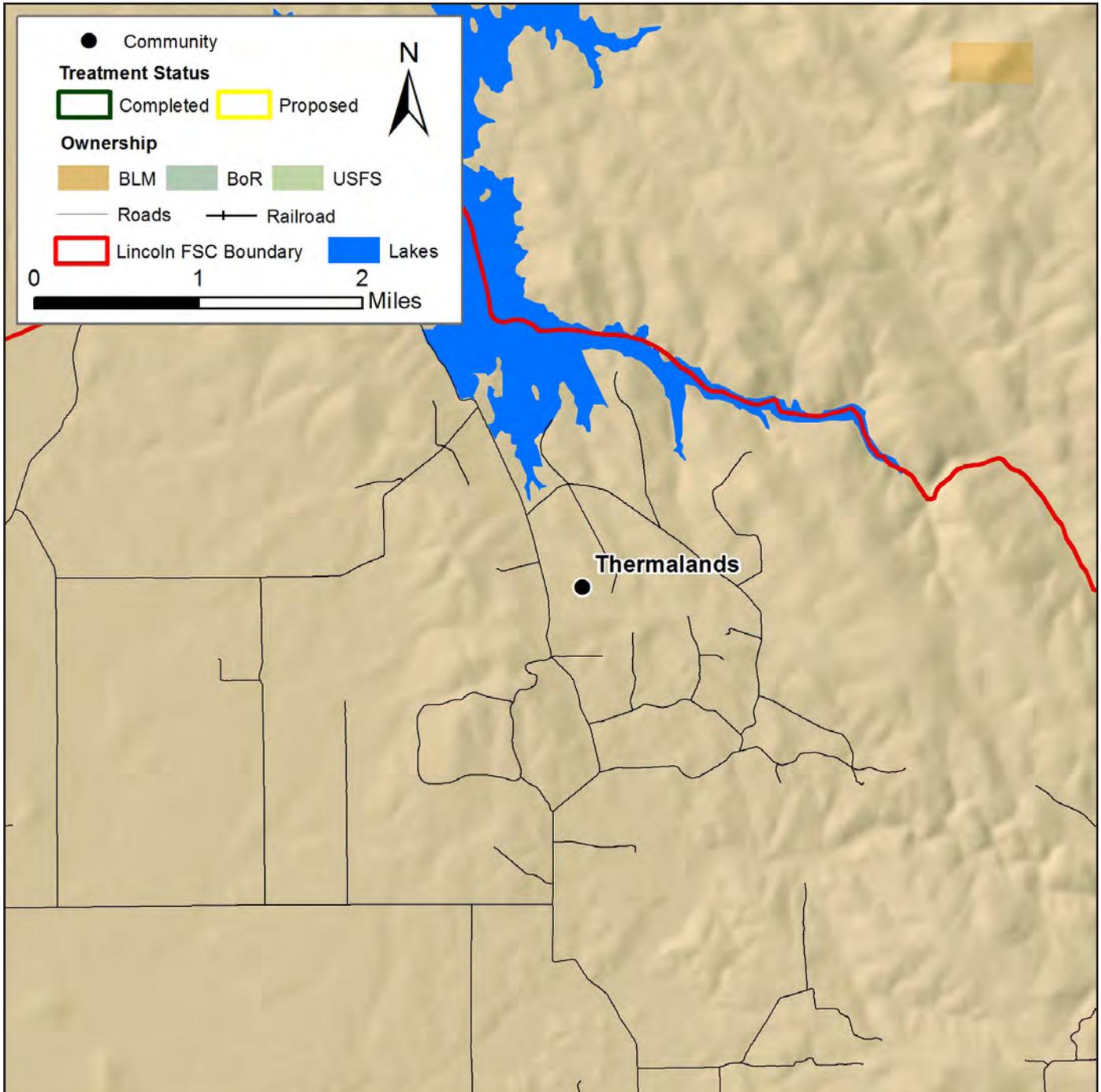
6. Thermalands

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle; mostly noncombustible siding
Average Lot Size	2 acres to 40+ acres
Home Addresses	Mostly present, but not always visible; inconsistent; mostly non-reflective
Dual Access Roads	All major roads; many one way side roads and long driveways
Road Widths, Slope, and Surface	Vary between <20' and >24'; <10%; mostly paved
Emergency Vehicle Turnarounds	Some, but not in all areas
Water Supply	Some cisterns and drafting, but limited elsewhere
Proximity to Nearest Fire Station	Generally < 3 miles
Other Hazards	Landowner burning – ag and debris; more likely to have lightning; open range grazing
Specific Recommendations	Thin along major side roads in order to aid in access/egress

The community of Thermalands is located north of the city of Lincoln, on the south side of Camp Far West Reservoir. The primary access into the community is off of McCourtney Road, which runs north and south. Vegetation in the area includes oak-pine woodlands, open grassland areas, irrigated and non-irrigated farmland, and vineyards. In general, oak stands exist on the edges of the community, as well in the numerous drainages that run throughout. Moreover, densely populated stands of continuously forested areas exist around the reservoir, and to the east and south of the community. Terrain in the community consists primarily of rolling hills, with many steep slopes and narrow drainages. In general, most homes in the community area lack adequate defensible space. Fire protection is provided by Placer County Fire.

COMMUNITY ANALYSIS

Figure 29. Thermalands Community Map



LINCOLN FSC AREAS OF SPECIAL INTEREST

Bickford Ranch

The planned Bickford Ranch development is a nearly 2,000-acre community located between Penryn and Fowler. Initially, the community was to include nearly 2,000 homes, a golf course, community center, school, and a section of open space. The potential community is still in the planning phases, and limited work has been completed thus far to prepare for development. Currently, a significant amount of untreated fuels are present on the property, which could present a problem should an ignition occur, especially since access into the area is limited.¹¹

Camp Far West Reservoir

Also known as Camp Far West Lake, this is a popular recreation area at the junction of Placer, Nevada and Yuba counties. Facilities at the lake include 137 campsites and eight recreational vehicle hookup areas. The north and south shores also each have a boat ramp and mini-mart for visitors.

Nearly all of the vegetation found within the park is capable of carrying fire, especially in the fall. Visitors should be well informed of the dangers of wildfire and its potential impacts, and actions should be taken to reduce the risk of a human-caused ignition from the campground or picnic areas. Should a wildfire occur, precaution must be taken to ensure the safe and orderly evacuation of visitors and personnel. An evacuation could be complicated due to the potential number of visitors, potential of boats being towed, and livestock grazing in the area. In a wildfire event, the lake can also be a water source for fire trucks and drafting via helicopters.¹²

Hidden Falls Regional Park

Hidden Falls Regional Park is a 221 acre open space area between the Fowler and North Auburn communities. The park is a popular recreation destination that includes a network of trails, picnic areas, parking and visitor facilities, and an equestrian staging area. Fuel loadings are relatively dense throughout the area, though CAL FIRE has done fuels reduction work, including a shaded fuel break along Turkey Ridge Road. Directly adjacent to Hidden Falls is the 961-acre Spears Ranch property. Following an environmental review, additional improvements will be made to the Spears Ranch property. Combined, the two parcels will comprise almost 1,200 acres of open space.¹³

Sunset Industrial Park

This area, on the outskirts of Roseville, contains a number of manufacturing and processing areas adjacent to wildland fuels. Some of these facilities contain flammable and/or hazardous materials, including a wood processing center, which could be susceptible to a nearby wildfire and/or spontaneous combustion.

¹¹ <http://www.placer.ca.gov/Departments/CommunityDevelopment/Planning/Documents/~-/media/cdr/Planning/SpecificPlans/BickfordRanch/BR1.ashx>

¹² <http://www.nevadacounty.com/2009/07/camp-far-west-reservoir/>

¹³ <http://www.placer.ca.gov/Departments/Facility/parks/hiddenfalls.aspx>

AREAS OF SPECIAL INTEREST

Thunder Valley Casino

The Thunder Valley Casino and Resort is a popular year-round destination on the western side of Lincoln. Surrounded on all sides by non-flammable surfaces, the resort is at low risk from wildfire. However, because it is adjacent to flammable wildland fuels, a wildfire in the area could cause panic among visitors.

Traylor Ranch

See Greater Auburn Area FSC ASIs.

LINCOLN FSC ASI RECOMMENDATIONS

Table 16. ASI Recommendations for the Lincoln FSC

Name	Priority	Description	Methods*
Landscaping/Fuels	1	Thin and mow around campground sites and fire pits at Camp Far West. Thin vegetation and mow along access roads and trails at all recreation areas that might be used for evacuation purposes. Mow around facilities at the Sunset Industrial Park, especially during times of high fire danger.	Mowing; limbing; chipping; individual and group tree removal
Continue fuels mitigation work at Hidden Falls State Park	2	There are already completed and planned fuels reduction treatments in these areas, which will protect visitors and adjacent homeowners.	Mowing; limbing; chipping; individual and group tree removal
Preparedness Planning/ Evacuation	3	Develop evacuation planning for all ASIs, including recreation areas and the casino. Post a fire danger sign at the entrance to each recreation area, where applicable. Provide visitors with information on wildfire, especially during times of high fire danger.	N/A
Begin fuels reduction work in the Bickford and Traylor Ranch areas	4	These areas contain heavy fuel loadings, and are directly adjacent to homes and infrastructure. These treatments should strive to maintain the aesthetic of the area, while still reducing fire risk.	Mowing; limbing; chipping; individual and group tree removal; mechanical treatments

* Mechanical treatments in timbered areas include all varieties of logging equipment.

PLACER SIERRA FIRE SAFE COUNCIL



PLACER SIERRA FIRE SAFE COUNCIL

INTRODUCTION

Location

The Placer-Sierra Fire Safe Council covers 93,100 acres within Placer County. The council boundaries include Bear River in the north, the North Fork of the American River in the south, Christian Valley in the west, and Emigrant Gap in the east. Starting just east of Auburn, the council area encompasses both sides of Interstate 80, and is adjacent to the Foresthill/Iowa Hill FSC to the south. The largest town in the council is Colfax, which is 50 miles north-east of Sacramento along Interstate 80. The history of the area is heavily tied to the gold rush and the Transcontinental Railroad. The majority of the communities identified in the CWPP were originally established along the railroad line. Freight and passenger depots were scattered along the rail line, as were trading posts and mining camps. Many of the original buildings are still standing and sometimes still in use within the small communities like Dutch Flat and Alta.

Demographics and Economics

The estimated population of the area within the FSC is between 30,000 and 45,000, with most people clustered in towns along the I-80 corridor. The largest segment of the population is between the ages of 50 and 64, followed by the 65-and-older age group.¹⁴ Most people in the area work in the tourism/service industry or commute to nearby Auburn or farther to the greater Sacramento area. Tourism is popular in the area, and towns throughout the FSC receive significant traffic during the busy tourist season.

Weather

The large variety in topography and elevation makes defining the climate in the Placer-Sierra FSC area difficult. There are large discrepancies in precipitation totals, including what form the precipitation comes in (rain or snow), and in temperature extremes. The table below is information for Colfax, which sits at approximately 2,600 feet elevation and is below the heavy snow line.

Table 17. Weather Data for the Placer Sierra FSC

	Temperature ¹⁵	Precipitation ¹⁵	Winds*
Monthly High/Low	High: 91° (July)	Low: 0.09" (July)	6.9 mph (Dec)
Yearly Average	71°	46" (Total)	5.4 mph

* <http://www.wrcc.dri.edu/htmlfiles/westwind.final.html#CALIFORNIA>

¹⁴ "2010 Census Interactive Population Search." US Census Bureau. Web. 06 Mar. 2012. <<http://2010.census.gov/2010census/popmap/ipmtext.php?fl=06>>.

¹⁵ <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca1912>

Topography

The topography within the FSC boundary is complex: elevations range from 1,000 feet to over 5,500 feet near Emigrant Gap. Along both sides of the narrow FSC boundary, steep slopes rise from the Bear River and North Fork of the American River. The precipitous canyon sides give way to a network of rolling hills; small, narrow drainages; and chimneys, all of which will act to promote rapid rates of fire spread.

Fuels

Vegetation found in the Placer Sierra FSC is the most diverse of the four FSC areas because of the large change in elevation. Lower elevations are dominated by montane hardwood conifers (Pacific madrone, black oak, incense cedar, ponderosa pine, and Douglas-fir) and blue oak-foothill pine woodlands. Intermediate elevations are primarily Douglas-fir and ponderosa pine forests, while Sierra mixed conifer species are predominate at higher elevations. See Appendix C for more information on the specific fuel models within the FSC.

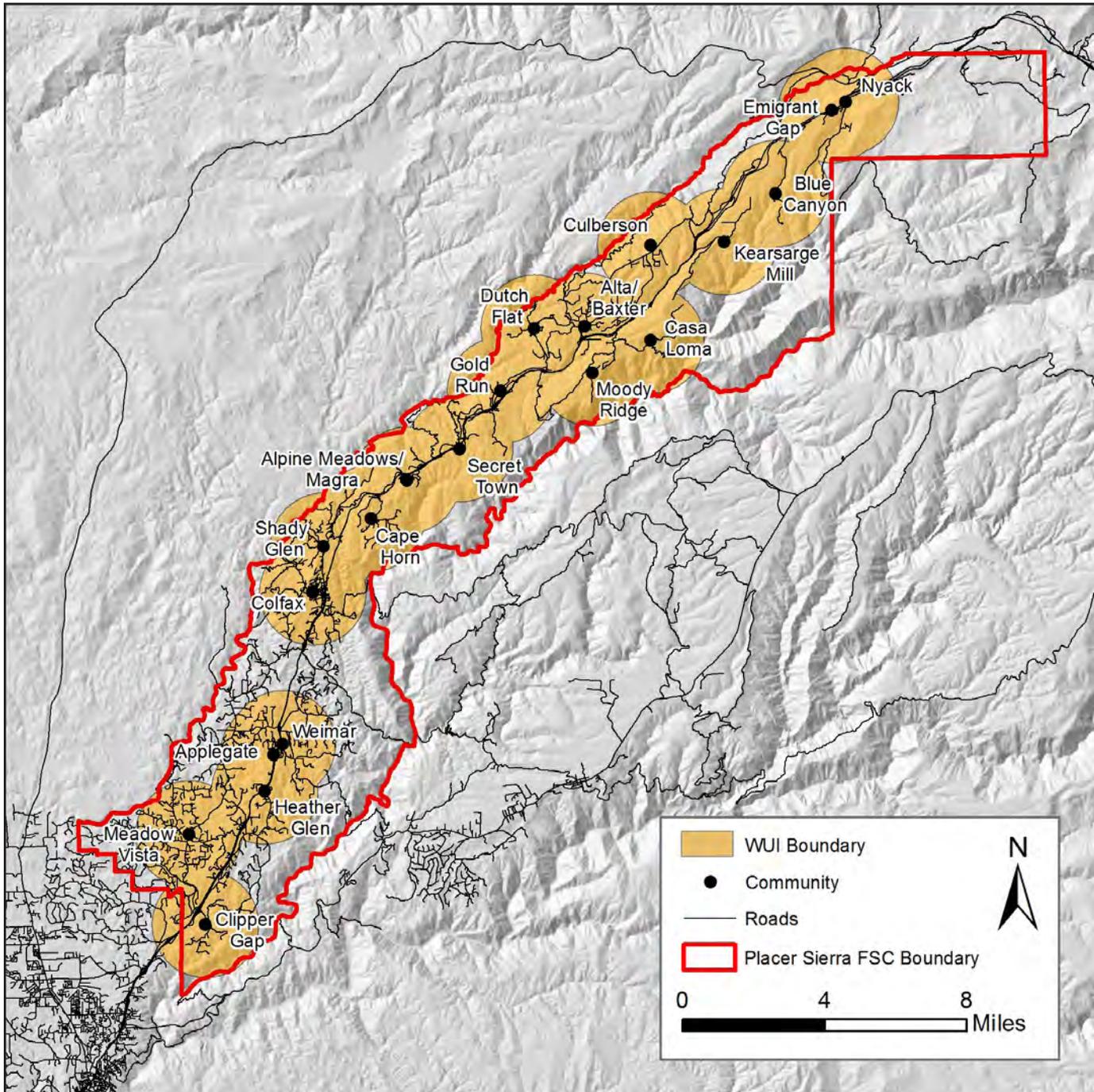
Fire Behavior

Fire behavior was modeled using two different weather scenarios: moderate and high. For more detailed information on the parameters used for the model, please see Appendix C. Because of the fuel types and arrangement, flame lengths for both the moderate and high weather scenario are the lowest at lower elevations. Under moderate weather conditions, flame lengths in areas below Cape Horn are generally zero to 4 feet, with pockets of 4 to 8 feet and 8 to 11 feet. This means that firefighters are often able to directly attack a wildland fire in most of the area, either as part of a hand crew or with wildland fire apparatus. Indirect strategies and aerial equipment are likely not necessary. High weather conditions do not drastically change flame lengths below Cape Horn, except the small patches with 8 to 11 foot flame lengths increase to greater than 11 feet. These areas are limited and generally surrounded by large areas with lesser flame lengths. Similar patterns are seen for crown fire based on elevation and topography. Moderate weather conditions result in surface fire at low elevations. When there is denser canopy cover; individual tree torching is common, considering the ladder fuels. Even with high-percentile weather conditions, there is rarely any sustained crown fire runs. The exception is on the extremely steep slopes along the river corridor between the Placer Sierra and Iowa Hill/Foresthill FSCs. Rates of spread are typically less than 20 chains per hour. On the steep south-west-facing slopes below Moody Ridge and Dutch Flat, rates of spread are modeled to be the highest. It is on those slopes that rates of spread are predicted to be greater than 60 chains per hour, under moderate and high weather scenarios. While the rate of spread to the communities are fast, rates of spread directly in and around the communities is likely to be much less.

WILDLAND-URBAN INTERFACE BOUNDARY

For the purpose of this CWPP, the WUI in the Placer Sierra FSC was defined using a 1.5-mile buffer surrounding each identified community.

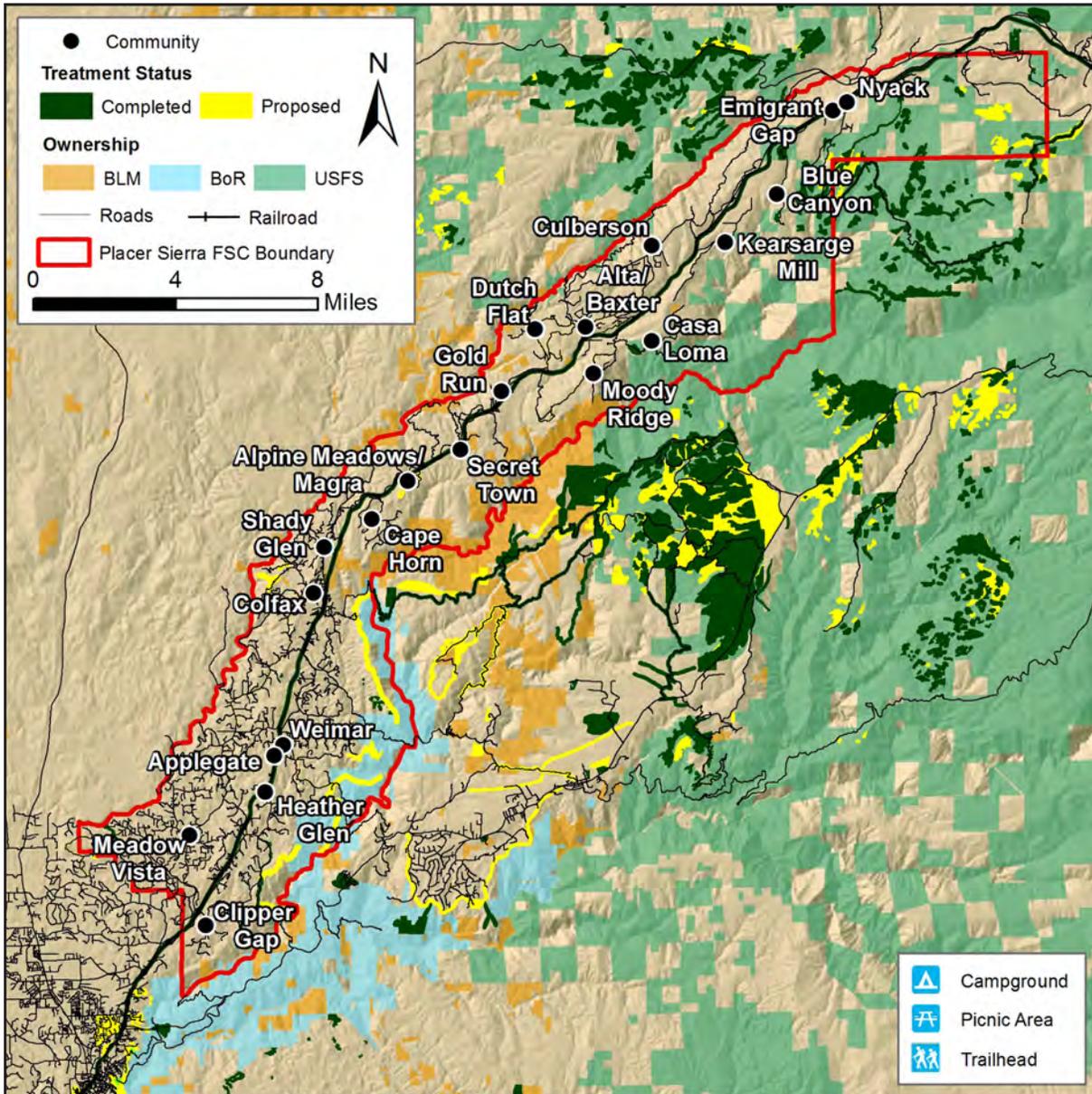
Figure 30. WUI area in the Placer Sierra FSC.



PLACER SIERRA FSC COMMUNITIES

The purpose of this section is to examine the communities in greater detail.

Figure 31. Overview of the Placer Sierra FSC.



COMMUNITY RECOMMENDATIONS FOR RESIDENTS

Being part of a FSC is one of the first steps in accomplishing mitigation work and educating the public on how to reduce the risk of loss due to wildfire. The Placer Sierra FSC has an active group of citizens promotes the communities' needs, but the area would benefit by having a paid representative. There is enough work and there are numerous agencies working within the FSC that would be brought together by someone in this position, even if only part-time. Creating a full-time position by incorporating the other FSCs in Placer County would also be an option.

For all of the homes in the FSC, properly implemented defensible space and Firewise home construction is the most important recommendations for home survivability. Due to limited firefighting resources, especially during the early stages of an expanding wildfire incident, high home density, and/or long response times, individual firefighting entities may not be able to stay and protect each home. In order to survive a passing flame front, a home will need good defensible space and home construction. Often, homeowners will assume that because they have adequately constructed their homes from noncombustible materials and have cleared vegetation around the structures, firefighters will be able to save their homes. However, defensible space needs to be maintained and re-assessed throughout the fire season. The following fuels treatment and general wildfire mitigation recommendations provide a good start for properly protecting one's individual home and the community as a whole. More in-depth information on home construction, defensible space, preparedness planning and evacuation, infrastructure, and water supply can be found in Appendix A. Table 18 below includes specific recommendations from the Placer Sierra FSC. General recommendations for fuels projects and defensible space are listed in Tables 19 and 20.

COMMUNITY ANALYSIS

Table 18. Fire mitigation and fuels reduction projects for Placer Sierra provided by the Fire Safe Council.

Project Name	Treatment	Priority	Acres
Community Defense Projects			
Alpine Meadows Subdivision Community Defense	Treat vegetation beyond the 100' defensible space beyond residence as a community defense buffer	1	40
Fuelbreak Projects			
Gillis Hill Fuelbreak	Construct a fuelbreak south of Iowa Hill Road	1	187
Gillis Hill Fuelbreak Extension	Construct a fuelbreak from the existing fuelbreak south of Camel's Hump	2	146
Moody Ridge Fuelbreak	Phase One of the Moody Ridge Project - this project will extend the 100 foot defensible. Near repeater site and on BLM property.	3	13
Long Point Fuelbreak	Construct a fuelbreak from Cerro Vista Road to Long Point along the American River	4	74
Canyon Rim Fuelbreak	Construct a fuelbreak from Cerro Vista Road to Heather Glen Drive	5	137
Colfax Fuelbreak	Construct a fuelbreak along Hillcrest and saddle-back Roads	6	50
Secret Town Fuelbreak	Construct a fuelbreak on the ridge east of Secret Town Creek	7	100
Big John Ridge Fuelbreak	Construct a fuelbreak along Big John Ridge	8	102
Ponderosa Way Fuelbreak	Construct a fuelbreak along Cross Road from Ponderosa Way to Sore Finger Point	9	118
Jefferson Fuelbreak	Construct a fuelbreak from Ponderosa Way to Codfish Creek and the American River	10	189
Roadside Clearing Projects			
Meadow Vista-McElroy Roadside Clearing	Treat vegetation on both sides of McElroy road from Meadow Vista Road to Christian Valley Road	1	23
Moody Ridge Roadside Clearing	Treat vegetation on both sides of Moody Ridge	2	40
Placer Hills Roadside Clearing	Treat vegetation on both sides of Placer Hills and Tokayana Way Road	3	52
Alpine Meadows Subdivision Roadside Clearing	Treat vegetation on both sides of road throughout subdivision	4	31
Ponderosa Way Roadside Clearing	Treat vegetation on both sides of Ponderosa Way from Sun Valley Road to Heather Glen Drive	5	19
Boole Roadside Clearing	Treat vegetation on both sides of Boole Road	6	16
Cerro Vista Roadside Clearing	Treat vegetation on both sides of Cerro Vista Road	7	23
Dutch Flat/Alta Roadside Clearing	Treat vegetation on both sides of Sacramento Street, Main Street, Ridge Road, Frost Hill Road, Frost Hill Place, Alta Bonny Nook, Bonny Nook, and Towle Roads	8	72

Educational and Outreach Projects			
Firewise	Conduct community assessments and help communities with National Recognition	1	Fire Safe Council Boundary
Senior Assistance	Provide assistance to seniors to create defensible space	2	Fire Safe Council Boundary
Homeowner education for burning piles	Host workshops to help homeowners with safe pile burning practices	3	Fire Safe Council Boundary
Invasive species removal and native plant restoration	1-2 day volunteer events to remove invasive species such as Scotch Broom, French Broom, Spanish Broom, and yellow star thistle and restore area to native vegetation	4	Fire Safe Council Boundary
Chipper Program & Community Green Waste Bins	Continue to support the need for a Placer County Chipper Service and Designate green waste disposal sites for residence	5	Fire Safe Council Boundary

*Prescriptions for treatments will vary depending on the cost, funding, and topography of the project. A combination of the following can be used to implement the project: thinning, pile and burn, biomass removal, prescribed fire, and mastication.

Table 19. General Fuels Treatment Recommendations for the Placer Sierra FSC

Name	Priority	Description	Methods*	Acres**
Individual Defensible Space	1	Defensible space around individual homes. See Appendix A for details.	Mowing; limbing; chipping; individual and group tree removal	200 feet around the home
Linked Defensible Space	2	Connect defensible spaces around communities for enhanced effectiveness. This is especially important for community areas adjacent to steep terrain.	Mowing; limbing; chipping; individual and group tree removal	Varying
CAL FIRE / PCRCD / USFS Fuelbreaks	3	These agencies and homeowners have put forth a great effort, along with the FPD, to reduce fuel loadings. These treatments throughout the FSC will potentially inhibit fire spread and reduce fire severity.	Limbing; thinning; shrub removal; prescribed burning; mechanical treatments	Varying
Continue thinning along I-80 and railroad tracks	4	These areas are at an increased risk for ignitions, and consistent fuels reduction can greatly reduce potential fire spread.	Mowing; shrub removal; weed abatement treatments	At least 20 feet on both sides

* Mechanical treatments in timbered areas include all varieties of logging equipment.

** Defensible space distances will vary by property based on slope and fuels.

COMMUNITY ANALYSIS

Table 20. General Recommendations for the Placer Sierra FSC

Category	Priority	Description
Home Construction	1	Discourage the use of combustible materials for decks, siding, and roofs, especially where homes are upslope from heavy vegetation.
		Replace any shake-shingle or slab-wood siding and roofs with noncombustible types.
		Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above heavy fuels.
		Conduct individual home assessments.
Landscaping/Fuels	2	Clean leaf and needle litter from roofs and gutters and away from foundations.
		Thin vegetation alongside roads and driveways. This is especially important for narrow driveways and road segments, and for any areas where ravines with heavy fuels are below the access. Focus on removing vegetation in drainages that cross roads.
		Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or even with homes, never downhill.
		Encourage individual landowners to mow fuels near homes and along roadways and fence lines during times of high fire danger.
		Discourage the planting of flammable ornamentals such as eucalyptus and conifers within 30 feet of homes.
Preparedness Planning/Evacuation	3	Add reflective addressing to all driveways or homes. A good guideline is to use all metal white markers that are 4 inches in width on a green background. These should be placed 3 to 5 feet above ground.
		Develop an evacuation plan for the community, including identifying escape routes and an evacuation center.
Infrastructure	4	Provide adequate turnarounds for fire apparatuses throughout the community.
		Rate and mark bridges for use by fire apparatus.
		Identify all water sources within the community, including hydrants, cisterns, and ponds. Make sure that they are visible, maintained, and operable.

For more detailed recommendations on how to enhance the safety of your home and community, please refer to Appendix A. See also the Ready, Set, Go! Program in Appendix A.

PLACER SIERRA COMMUNITIES DESCRIPTION

Because of the diversity in elevation, fuels, and fire behavior within the Placer Sierra FSC, it was determined to divide the communities into four groups. The lowest elevation group includes Applegate, Clipper Gap, Heather Glen, and Meadow Vista. The second group consists of Alpine Meadows/Magra, Cape Horn, Colfax, Gold Run, Secret Town, Shady Glen, and Weimar. Third are Alta/Baxter, Casa Loma, Culberson, Dutch Flat, and Moody Ridge. The highest elevation communities include Blue Canyon, Emigrant Gap, Kearsarge Mill, and Nyack. It should be noted that Gold Run is grouped in the second group; although the community identity is more associated with Dutch Flat, the fuels, potential fire behavior, and recommendations fit better with the second group.

The vegetation variation in the Placer Sierra FSC is strongly impacted by the differences in temperatures and precipitation between low and high elevations. There are large transitions in fuels, and some areas may experience extreme rates of spread. The typical wind patterns follow up-canyon/up-slope in the morning and down-canyon/down-slope in the evenings. The fuel density in the lowest areas of the Placer Sierra FSC boundary is not as great as in other areas. Vegetation at the lower elevations includes pine species such as sugar, foothill, and ponderosa pine, along with blue oak and incense-cedar. Historically, the woodlands burned approximately every 30 years, so understory vegetation was typically minimal. There are manzanita and chaparral species of shrubs at the lower elevations. As you get higher in elevation, species like Douglas-fir and lodgepole pines begin to grow, mixed with the pines and cedars. Jeffrey pines grow on some slopes as well. At the highest elevations, lodgepole pine forests are dominant. Because of the dense canopy cover, understory vegetation is sparse.

Vegetation becomes increasingly dense as elevation increases. Open stands of ponderosa pines, mixed with oak and meadows are typical of the Applegate-Clipper Gap-Meadow Vista area. At the Colfax-Gold Run-Weimar elevation, the ponderosa are denser, with more understory shrub vegetation. Small Douglas-firs grow in the understory as there is more precipitation at higher elevations, increasing the ladder fuels and potential for crown fire. At the highest elevations Douglas fir and lodgepole pine stands are dominant. These forest types are typically dense and have evolved with high severity, if not stand-replacing fires. This is the natural fire regime for high-elevation Sierra forests.

Post-fire regeneration at the highest elevations occurs slowly; fire scars can still be seen from fires that burned more than a decade ago. Following a fire the forest will be dominated by forbs, gramminoids, flowering plants, and shrubs, rather than trees. Some tree regeneration may occur within one year following the fire, and potentially even sooner. Because of the lower temperatures and increased moisture, it takes more extreme weather conditions before forests at high elevations will burn. The result is less frequent fires, but when the area burns, the fires are intense. The regeneration at lower elevations is much faster, with understory vegetation growing within a month, and tree regeneration within a few years. Obviously, regeneration varies with fire severity, but these patterns are generally consistent.

LOW ELEVATION COMMUNITIES

The communities at the lowest elevation in the Placer Sierra FSC have the some of the highest density housing in the council boundary. Highway 80 is the main thoroughfare, and the individual communities are located on either side of the highway. Topography within and around these communities is not as extreme as with some of the high-elevation areas. There are still steep canyon walls, but the terrain within the communities is rolling hills. The roads through the towns are paved, but often narrow, with thick vegetation along the sides. Narrow roads further complicate evacuation procedures in the event of a wildfire, reducing speeds while fire resources try to gain access. Bridges within some of the communities are not rated for fire apparatus, making it dangerous, if not impossible, to access homes. Many of the smaller streets within the communities provide a single way in and out and do not have adequate turnarounds for fire trucks. The roads are well-marked with reflective signs. The home addresses are variable and sometimes difficult to see, especially at night or in smoky conditions. Adding reflective addressing would be useful for responders, not only for wildland but for medical calls as well. In addition to fire hydrants, there are also cisterns. The volume is not currently marked on all of the cisterns, and whether water is available within them is not guaranteed. The newest construction within the area follows all of California’s wildland-urban interface code requirements, meaning there is complete defensible space around all homes, there are no shake-shingle roofs, and other aspects of the home and infrastructure have been altered to reduce loss from wildfire.

1. Applegate

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt roofs; combustibile siding; some d-space
Average Lot Size	1-20 acres; most around 5 acres
Home Addresses	Mostly present, mostly nonreflective
Dual Access Roads	Most side roads off of main thoroughfares are one way in-out
Road Widths, Slope, and Surface	20 -24’; <5%; paved
Emergency Vehicle Turnarounds	Available in some areas
Water Supply	Wells and some individual home cisterns
Proximity to Nearest Fire Station	Less than five miles
Other Hazards	Invasive species: Scotch broom; lack of water

2. Clipper Gap

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	<1 acre
Home Addresses	Mostly present, but sometimes hard to see; mostly nonreflective
Dual Access Roads	One way in and out
Road Widths, Slope, and Surface	>24'; <10%; paved
Emergency Vehicle Turnarounds	Some, using driveways
Water Supply	Some hydrants
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Higher housing density increases ignition potential

3. Heather Glen

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	<1 to 40+ acres
Home Addresses	Mostly present, but sometimes hard to see; inconsistent; mostly nonreflective
Dual Access Roads	Most side roads off of main thoroughfares are one way in-out
Road Widths, Slope, and Surface	20' to 24'; <5%; paved
Emergency Vehicle Turnarounds	Adequate
Water Supply	Hydrants
Proximity to Nearest Fire Station	<2 miles
Other Hazards	Mobile home park, aging population in the area

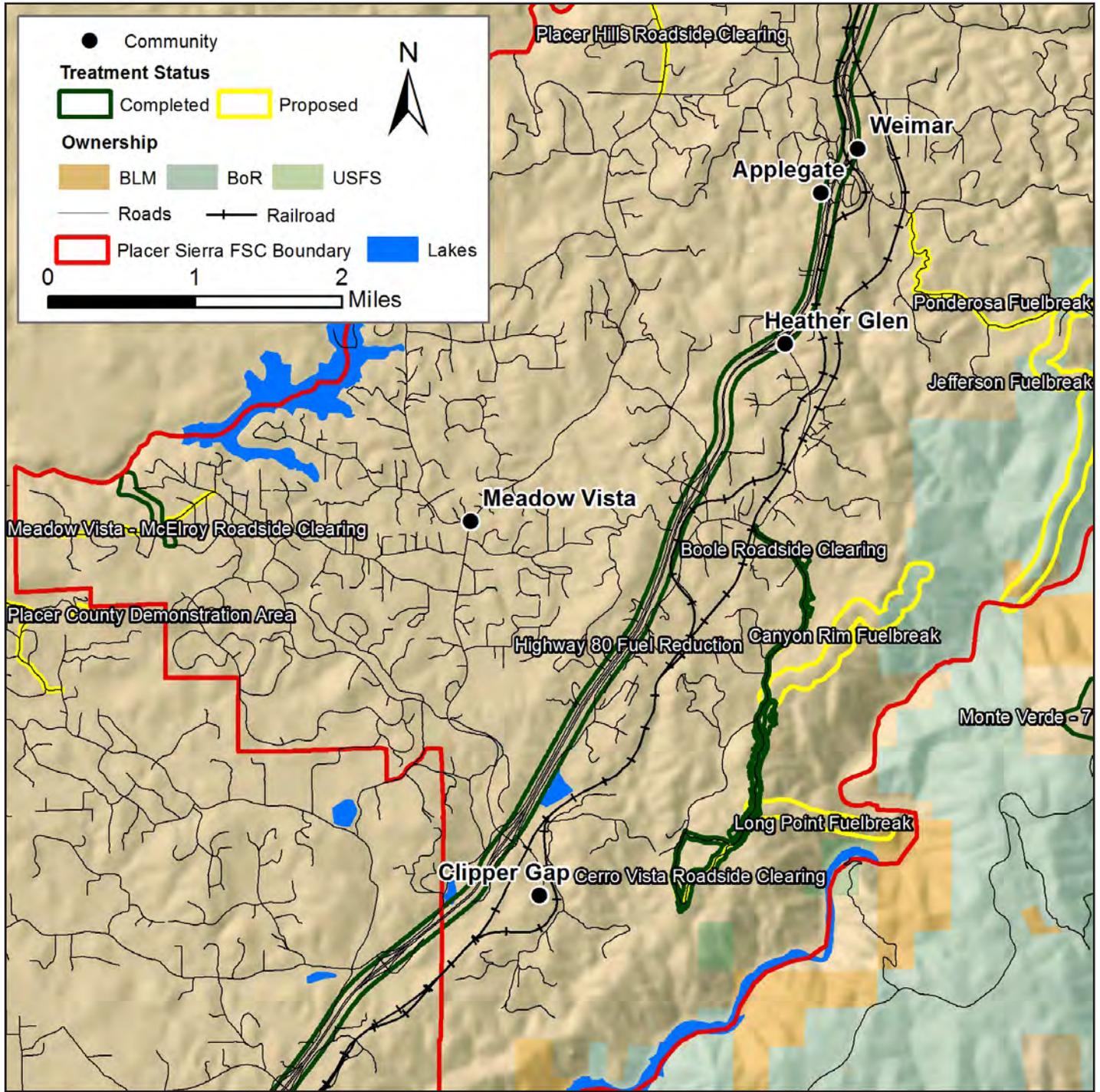
4. Meadow Vista

Utilities Above or Below Ground	Above – power lines and propane tanks (underground in newer development)
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	1 to 10 acres
Home Addresses	Mostly present, often non reflective
Dual Access Roads	Multiple routes in and out
Road Widths, Slope, and Surface	>24'; <5%; paved
Emergency Vehicle Turnarounds	Adequate in newly developed areas; mixed in older areas
Water Supply	Hydrants
Proximity to Nearest Fire Station	<2 miles
Other Hazards	Invasive species: Scotch broom; variable construction type; evacuation route along McElroy

5. Weimar

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	<1 acre
Home Addresses	Mostly present, but sometimes hard to see; nonreflective
Dual Access Roads	Multiple ways in and out via unrated bridge
Road Widths, Slope, and Surface	20' to >24'; <10%; paved
Emergency Vehicle Turnarounds	For smaller apparatus
Water Supply	Cisterns some hydrants
Proximity to Nearest Fire Station	<2 miles
Other Hazards	Unrated bridges
Specific Recommendations	Cisterns are needed where hydrants are absent every 1000'

Figure 32. Low Elevation Community Map.



LOW-MIDDLE ELEVATION COMMUNITIES

The highest density and greatest number of communities fall within the second lowest elevation range. Colfax is the largest town in the Placer Sierra FSC boundary and has a population of 1,963 with 823 households. The main roads are paved, but many of the spur roads have numerous houses and provide one way in and out. Evacuations may be further complicated because of the narrow roads and the need to evacuate horses in the area. There are hydrants located throughout some of the towns, but in many of the areas, only cisterns have water. Often the cisterns are not maintained or are robbed of their water, leaving nothing for fire department resources. This is especially true in the community of Weimar. None of the ponds in the area should be considered to be reliable water sources. Numerous people use the area along the river to recreate and have campfires, increasing the number of potential ignitions. Fire restrictions and bans should be enforced during times drought or fire-weather days.

6. Alpine Meadow / Magra

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding; wooden decks
Average Lot Size	<1 acre
Home Addresses	Present; mostly nonreflective
Dual Access Roads	Most; many narrow streets
Road Widths, Slope, and Surface	<20'; >10%; paved
Emergency Vehicle Turnarounds	Some fire lanes
Water Supply	Hydrants
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Ignitions off of I- 80; excess vegetation on roofs

7. Cape Horn

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	1 to 5 acres
Home Addresses	Present; mostly reflective
Dual Access Roads	Multiple ways in and out
Road Widths, Slope, and Surface	<24'; <10%; paved
Emergency Vehicle Turnarounds	Mixed; not in all areas
Water Supply	20,000-gallon cisterns; seasonal ponds
Proximity to Nearest Fire Station	> 2 miles
Other Hazards	Higher housing density – more ignition sources; large variety in fuels
Specific Recommendations	Mark volume on cisterns

8. Colfax

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	<1 acre
Home Addresses	Mostly present; mostly nonreflective
Dual Access Roads	Multiple ways in and out
Road Widths, Slope, and Surface	20'to 24'; <5%; paved
Emergency Vehicle Turnarounds	In most areas, but not throughout
Water Supply	Hydrants throughout
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Mixed construction, including residential and commercial; very high residential population

9. Gold Run

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	1 to 5 acres
Home Addresses	Mostly present, but sometimes hard to see; nonreflective
Dual Access Roads	Most side roads off of main thoroughfares are one way in-out
Road Widths, Slope, and Surface	20' to >24'; <5%; paved
Emergency Vehicle Turnarounds	Some, but not in all areas
Water Supply	Hydrants near town and some other areas, but very limited elsewhere
Proximity to Nearest Fire Station	> 2 miles
Other Hazards	Spur roads with multiple homes; a lot of recreational use along the river

10. Secret Town

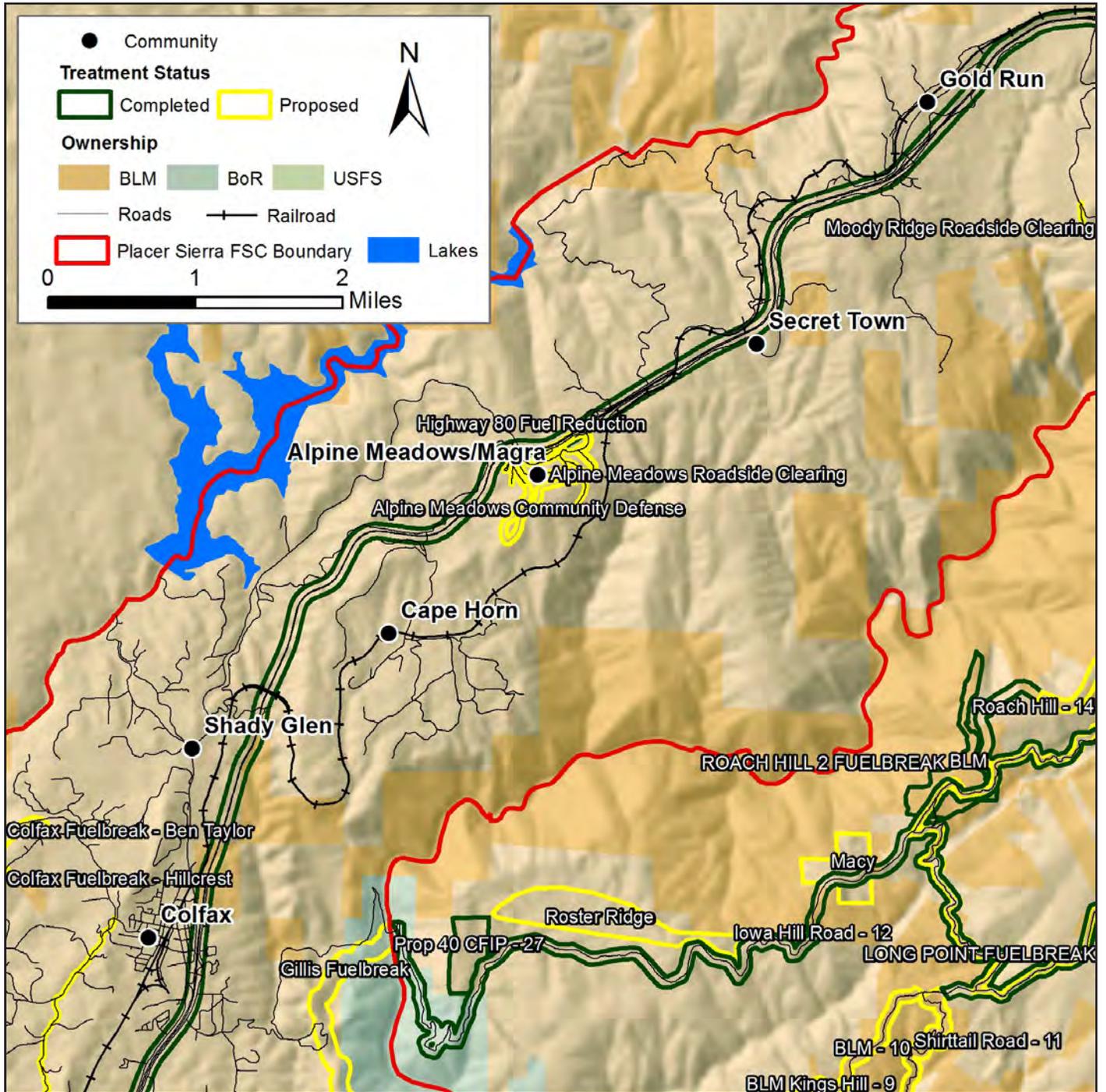
Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	<1 to 40+ acres
Home Addresses	Mostly present; nonreflective
Dual Access Roads	Primarily one way in and out
Road Widths, Slope, and Surface	<24'; <5%; paved
Water Supply	Some individual home cisterns
Proximity to Nearest Fire Station	>2 miles

11. Shady Glen

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Metal roofs; combustible siding
Average Lot Size	<1 acre
Home Addresses	Mostly present, but sometimes hard to see; nonreflective
Dual Access Roads	Primarily one way in and out
Road Widths, Slope, and Surface	<20'; <10%; paved
Emergency Vehicle Turnarounds	No
Water Supply	Hydrants
Proximity to Nearest Fire Station	> 2 miles

COMMUNITY ANALYSIS

Figure 33. Low-Middle Elevation Community Map



HIGH-MIDDLE ELEVATION COMMUNITIES

Home construction and road infrastructure in this group of communities is similar to the high elevation communities. The majority of the roofs are asphalt and siding is wood. Some of the homes have shake-shingle siding or shake roofs, which are very flammable. In historic towns like Dutch Flat, about 20 to 30 percent of the population is non-year-round residents. The canyon is not as steep because of hydraulic mining that took place in the past. Roads within the communities are narrow but mostly paved. There are two gated communities, including Canyon View, and the 17 cabins owned by the Forest Service. Defensible space has been completed for most of the homes in the gated communities, but additional outreach from CAL FIRE is encouraged to help educate homeowners. Water supply is limited in most of the areas, with very sporadic hydrants, wells, and a few locked 10,000-gallon cisterns. There is also a water ditch in Alta, which is available for use.

12. Alta / Baxter

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt and some cedar shake-shingle roofs; combustible siding
Average Lot Size	1 to 40 acres; highly variable
Home Addresses	Present; mostly nonreflective
Dual Access Roads	Single access in and out of most neighborhoods
Road Widths, Slope, and Surface	<20'; <10%; paved
Emergency Vehicle Turnarounds	Some; very limited
Water Supply	Some individual home cisterns or wells; ditch water
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Ignitions off of I-80

13. Casa Loma

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Metal roofs; combustible siding; good defensible-space
Average Lot Size	~10 acres
Home Addresses	Mostly present, but sometimes hard to see; mostly nonreflective
Dual Access Roads	Multiple ways in and out; single access streets
Road Widths, Slope, and Surface	>24'; <10%; maintained dirt and paved
Emergency Vehicle Turnarounds	Adequate in most areas
Water Supply	Locked 10,000 gallon cisterns
Proximity to Nearest Fire Station	<5 miles
Other Hazards	
Specific Recommendations	Rake needles around structures

14. Culberson

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	5 to 20 acres
Home Addresses	Mostly present, but sometimes hard to see; mostly nonreflective
Dual Access Roads	Primarily one way in and out
Road Widths, Slope, and Surface	20' to 24'; <5%; paved
Emergency Vehicle Turnarounds	Some, but not in all areas
Water Supply	Some individual home cisterns
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Ignition sources from I-80

15. Dutch Flat

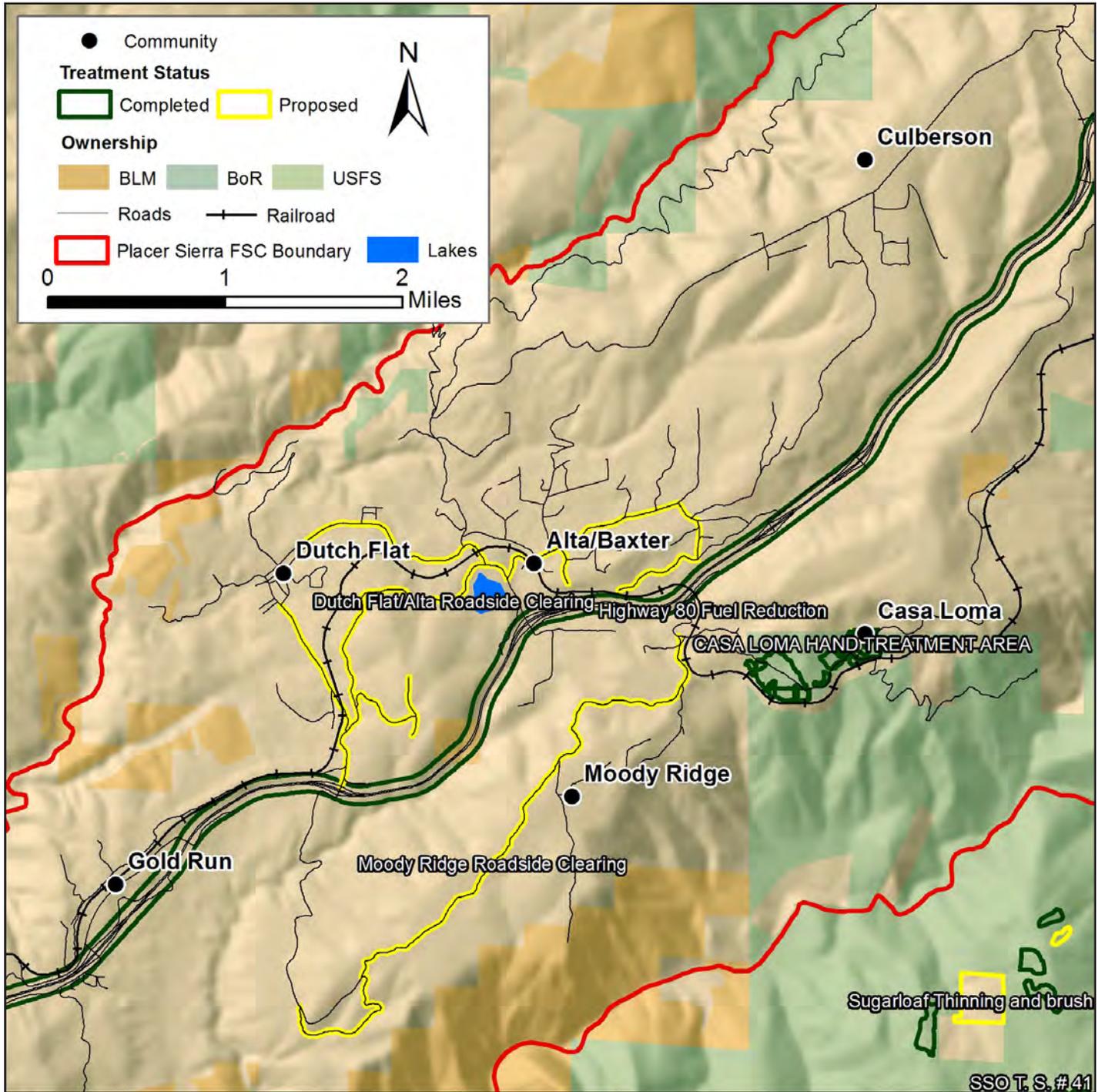
Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	<5 acres
Home Addresses	Mostly present, but sometimes hard to see; mostly nonreflective
Dual Access Roads	Most side roads off of main thoroughfares are one way in-out
Road Widths, Slope, and Surface	20' to 24'; <10%; paved
Emergency Vehicle Turnarounds	Not in most areas due to narrow roads
Water Supply	No water supply
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Historical structures; open pit mine in the area; non-year round population

16. Moody Ridge

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Highly variable
Average Lot Size	1 to 20 acres
Home Addresses	Often hard to see; nonreflective
Dual Access Roads	Most side roads off of main thoroughfares are one way in-out
Road Widths, Slope, and Surface	>20'; <10%; paved
Emergency Vehicle Turnarounds	Some, but not in all areas
Water Supply	10,000-gallon cisterns near Casa Loma
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Heavier fuel loads; highly variable construction; ignitions from I-80 and Gold Run

COMMUNITY ANALYSIS

Figure 34. High-Middle Community Map.



HIGH ELEVATION COMMUNITIES

The population density in these communities is lower than in the other groups. Housing is more dispersed, and many of the lots are larger, although still variable. The roads within the communities are narrow and have dense vegetation along the sides. Even during the day, visibility is limited by the thick tree canopy and winding roads, which would be made worse at night and/or in smoky conditions. Many of the roads are unpaved. Road names are consistently marked with reflective signage. House addressing is difficult to see, as it is usually nonreflective.

As a result of being at a higher elevation, the area receives substantially more precipitation in the form of snow-fall. There are a few communities with non-year round residents, but the majority of people live in this area consistently. Several homes have been constructed on parcels without the knowledge of Placer County, so they do not follow any of the standard building codes. Time should be taken to identify these houses and additional care should be used when working around them.

17. Blue Canyon

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	1 to 10 acres
Home Addresses	Present; non-reflective; sometimes difficult to see
Dual Access Roads	One way in neighborhoods; multiple ways out/in via I-80
Road Widths, Slope, and Surface	20' to 24'; <10%; paved
Emergency Vehicle Turnarounds	In some areas on the larger, main roads
Water Supply	None
Proximity to Nearest Fire Station	>5 miles
Other Hazards	Ignitions from I-80; non-year-round population
Specific Recommendations	Cisterns need to be installed throughout; volume and location TBD based on fire department assessment

18. Emigrant Gap

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle roofs; combustible siding
Average Lot Size	5to 20 acres
Home Addresses	Hard to see; inconsistent; nonreflective
Dual Access Roads	Primarily one way in and out
Road Widths, Slope, and Surface	<20'; <10%; paved and good dirt
Emergency Vehicle Turnarounds	Not available except for driveways
Water Supply	No water available
Proximity to Nearest Fire Station	>2 miles
Other Hazards	Dense vegetation

19. Kearsarge Mill

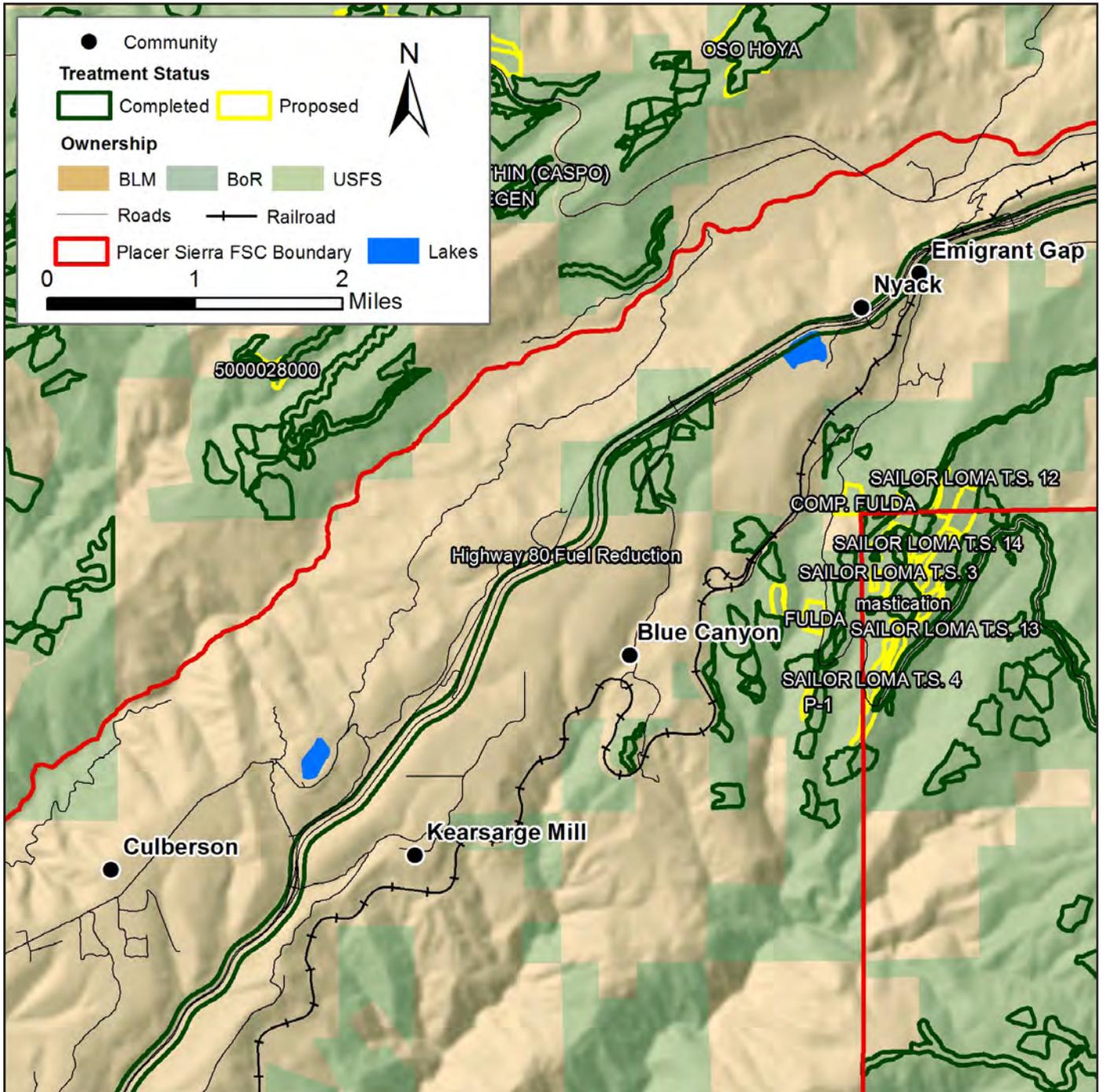
Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Asphalt shingle and metal roofs; combustible siding
Average Lot Size	1to 5 acres
Home Addresses	Mostly present, but sometimes hard to see; nonreflective
Dual Access Roads	Primarily one way in and out
Road Widths, Slope, and Surface	20' to 24'; <5%; paved
Emergency Vehicle Turnarounds	Adequate
Water Supply	Some individual home cisterns
Proximity to Nearest Fire Station	<5 miles
Other Hazards	Frequently occurring fires along the highway

20. Nyack

Utilities Above or Below Ground	Above – power lines and propane tanks
General Construction	Metal roofs; combustible siding
Average Lot Size	5to 20 acres
Home Addresses	Hard to see; inconsistent; nonreflective
Dual Access Roads	Primarily one way in and out
Road Widths, Slope, and Surface	<20'; <10%; paved
Emergency Vehicle Turnarounds	Not available except for driveways
Water Supply	Private hydrants with less than 500 gpm
Proximity to Nearest Fire Station	>2 miles
Other Hazards	Dense vegetation

COMMUNITY ANALYSIS

Figure 35. High Elevation Community Map.



PLACER SIERRA FSC AREAS OF SPECIAL INTEREST

Campgrounds and Recreational Sites

The American River provides numerous recreational opportunities for local residents and tourists, alike. Reservoirs in the area also bring large numbers visitors to the area. Recreation sites like put-ins for rafting operations, camp grounds, picnic areas, and trailheads are plentiful. Thousands of visitors access the Tahoe and Eldorado National Forests every year. Visitors during the summer months pose an ignition threat from campfires, camp stoves, cooking pits, and general use. Additional people using the national forests not only increases the number of ignition sources, but they increase the complexity of an incident if there were a wildland fire in the vicinity. Life safety is the primary concern of responders on the fire; accounting for and coordinating evacuation of citizens takes extensive planning and effort. Having an accurate guess of the number of people that could potentially be in the forest is imperative to streamline the evacuation process.

Historical Buildings and Mines

Placer County's rich history and culture is preserved in many historic buildings. Mining in particular played a predominant role in the growth and development of Placer County as it is known today. Many historic mine structures remain intact in the county, and some are even still in use. Because of the activities going on here and the surrounding vegetation, they are vulnerable to wildland fire.

PLACER SIERRA ASI RECOMMENDATIONS

Table 21. ASI Recommendations for the Placer Sierra FSC.

Name	Priority	Description	Methods*
Landscaping/Fuels	1	Maintain thinning and mowing around campground sites and fire pits. Thin vegetation and mow along access roads and trails that might be used for evacuation purposes. Create defensible space around historical infrastructure	Mowing; limbing; chipping; individual and group tree removal
Continue fuels mitigation work in and near recreation areas	2	There are already-completed and planned fuels reduction treatments in these areas.	Mowing; limbing; chipping; individual and group tree removal; mechanical treatments
Preparedness Planning/Evacuation	3	Continue working on evacuation planning in these areas, including clearly posting evacuation routes and procedures. Post a fire danger sign at the entrance to each recreation area, where applicable. Provide visitors with information on wildfire, especially during times of high fire danger. All historical structure locations should be mapped in an easily-readable format and available for all incoming resources.	N/A

* Mechanical treatments in timbered areas include all varieties of logging equipment.

CRITICAL INFRASTRUCTURE

Placer County has a mix of private and public lands. Aside from the obvious negative impacts to people and property by wildfire, there is additional infrastructure within the study area that could be adversely affected. The Interstate 80 corridor could be affected by smoke produced by a large wildfire. Road closure, for example, would cut off the main west-east route between Sacramento and Reno. Other important infrastructure includes an abundance and wide distribution of power lines; transportation systems such as railways, roads, and airports; and vital communication towers (cellular, am/fm, cell, radio communications, television, and telephone). Water filtration stations, power lines, and telephone lines are found throughout the area. Many areas that contain these important pieces of infrastructure are currently at risk to wildland fire. These at-risk facilities are shown for each of the four FSCs.

Airports

Airports in the area could be affected by smoke production from a large wildfire. Incoming and outgoing air traffic could be delayed or detoured if the airport was utilized for wildfire operations. For example, the Forty-Nine Fire of 2009 shut down operations at the Auburn Municipal Airport, as it burned right up to the runways.

CalARP Sites and Hazardous Facilities

These are sites that contain potentially hazardous materials. All sites that could be potentially at-risk from wildfire should be included in fire department tactical planning and be a priority for defensible space implementation and/or continuous mowing where applicable.

Communication Towers and Power Lines

Communication towers and power lines serve a vital function during emergency operations. An encroaching fire can cause this infrastructure to not only be shut down, but also damaged or destroyed.

Gas Pipelines

In general, gas lines are not considered to be at risk from wildfire but do constitute an exposure during work/repair times. Firefighting equipment should be readily available near all welding operations. When welding, cutting, or performing other hot work in locations where anything other than a minor fire might develop, a person should be designated as a fire watch. Firefighters and command personnel will also need to be aware of pipeline locations in order to avoid tracking over pipelines with heavy equipment. Local utilities should be notified in the event of an adjacent wildfire if heavy equipment is to be used to suppress the fire.

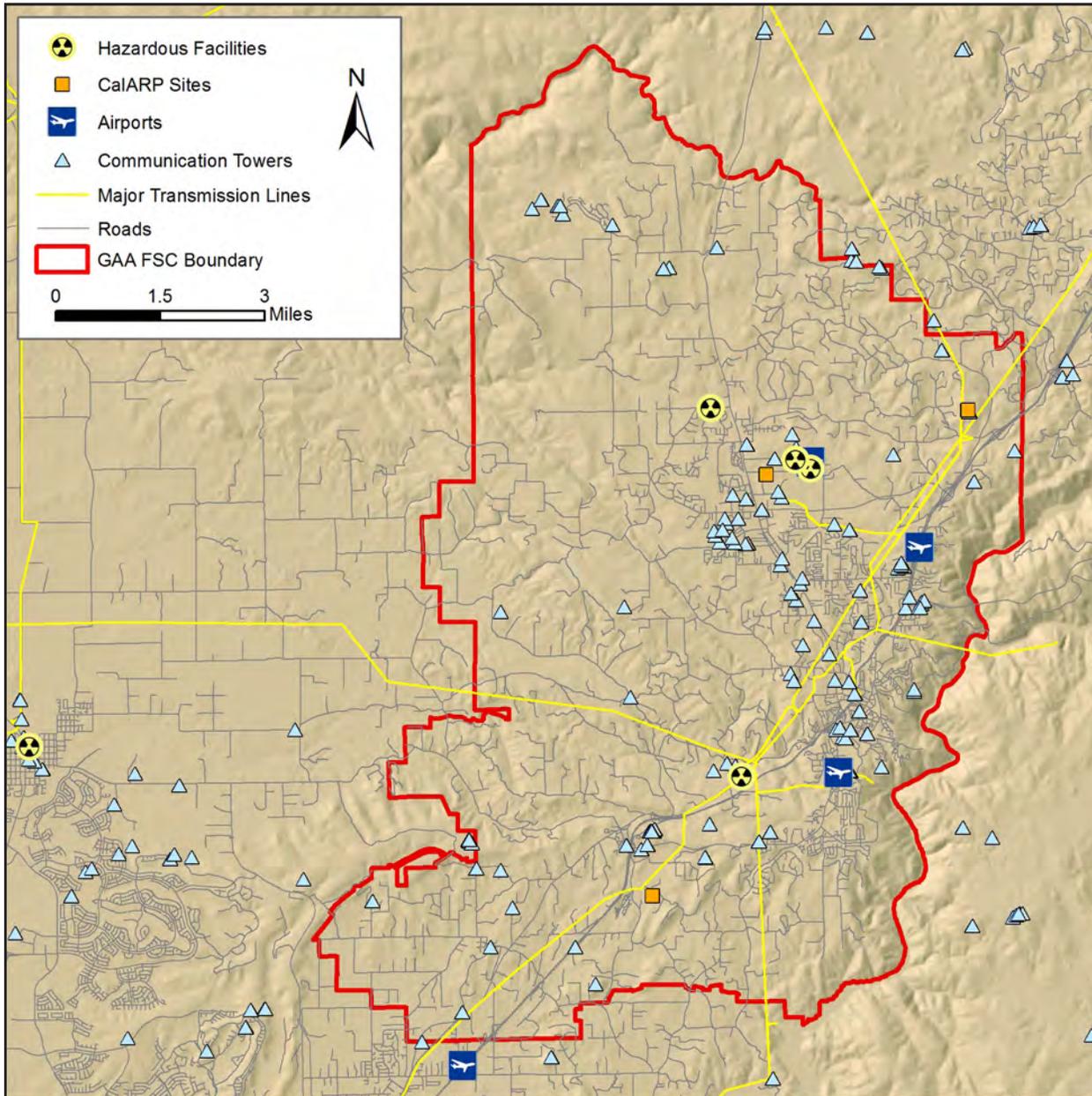
Highways and Major Roads

Car crashes, malfunctioning catalytic converters, cigarette butts thrown from cars, and other potential human-caused ignition sources increase the likelihood of a fire start along roads and highways. Thinning and mowing in these areas is vital to reduce the potential for ignitions and fire spread.

Railroads

Railroads could serve as a source of ignition within the area. Track grinding operations, sparks from the wheels, and/or improperly maintained turbo chargers can easily ignite fine flashy fuels along the sides of the tracks. Mowing and thinning out other vegetation along the railroad lines is imperative to reduce the risk of fire spreading into the communities. Railroads can also cut off ingress and egress for residents and emergency responders.

Figure 36. Critical Infrastructure within the Greater Auburn Area FSC.



CRITICAL INFRASTRUCTURE

Figure 37. Critical Infrastructure within the Greater Lincoln FSC.

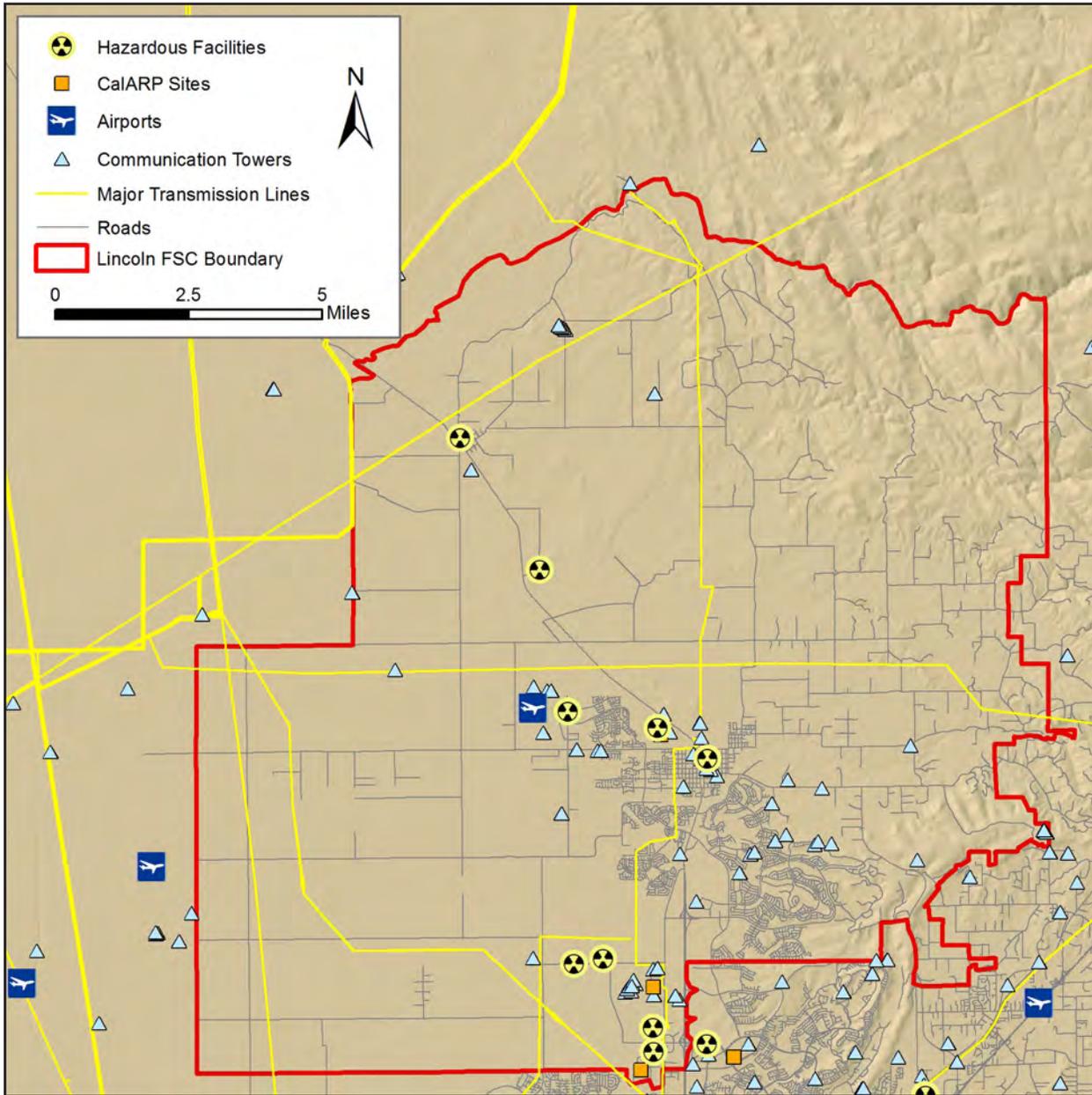


Figure 38. Critical Infrastructure within the Foresthill/Iowa Hill FSC.

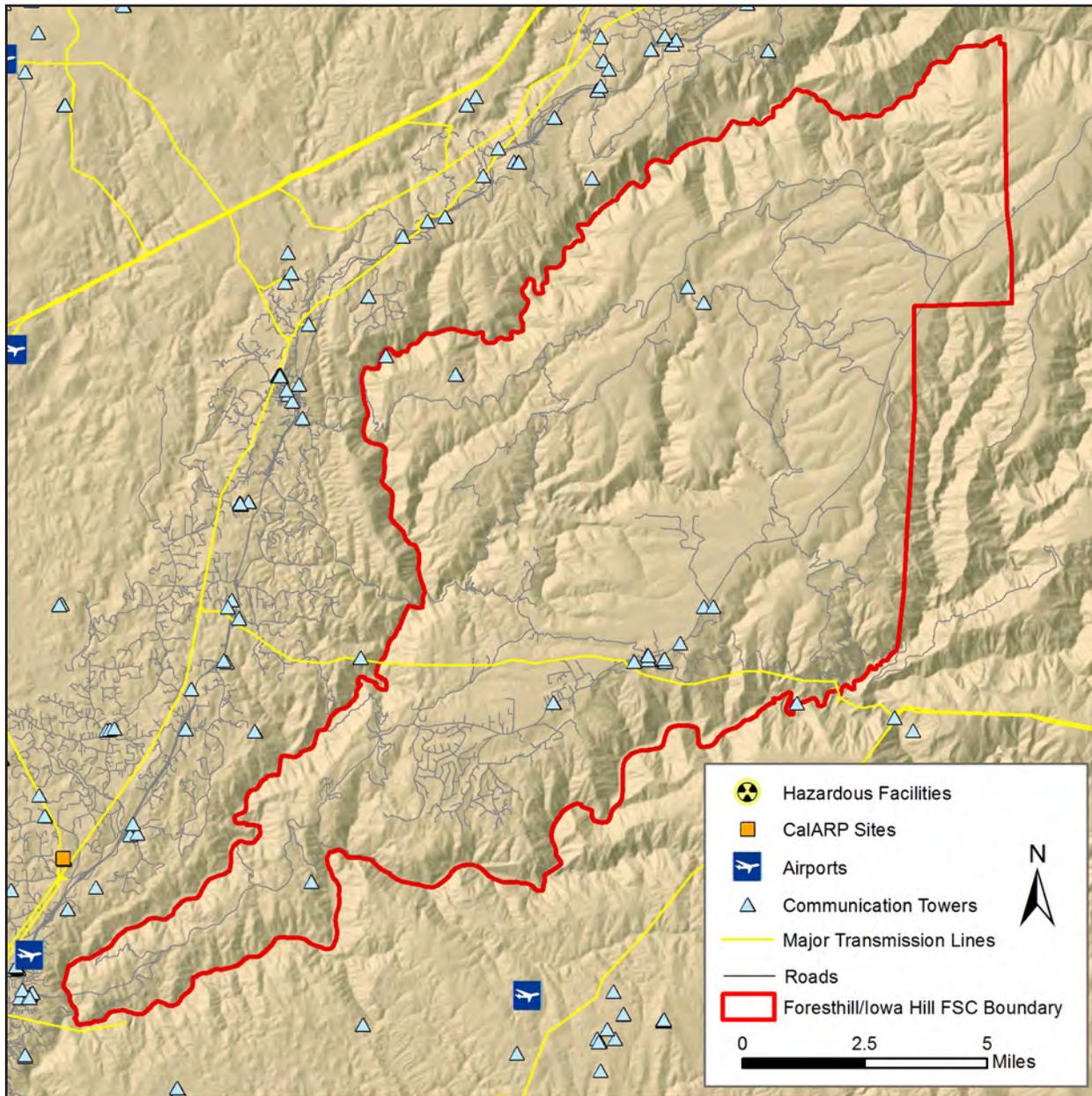
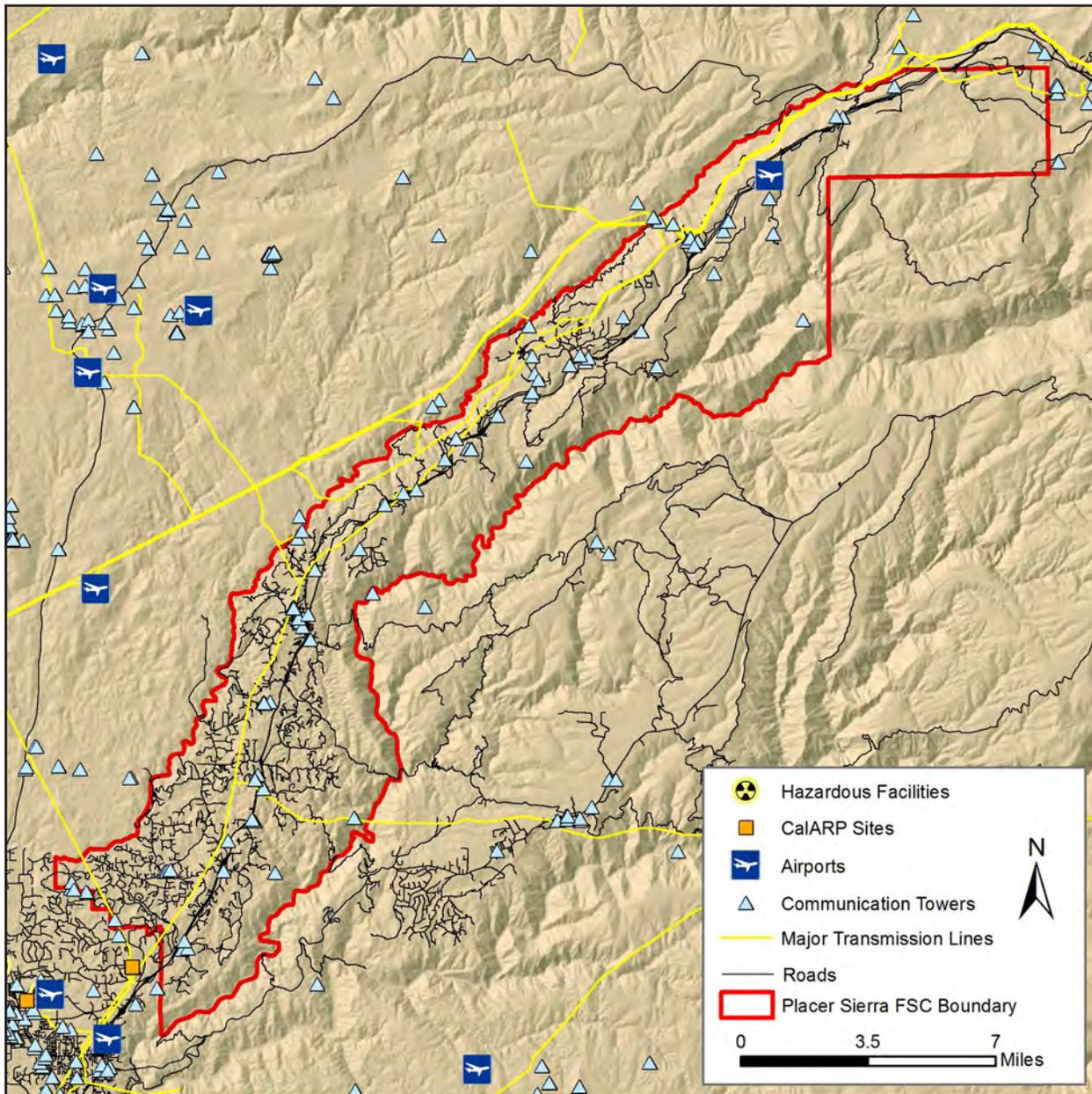


Figure 39. Critical Infrastructure within the Placer Sierra FSC.



CRITICAL INFRASTRUCTURE RECOMMENDATIONS

Table 22. Critical Infrastructure Recommendations

Name	Priority	Description	Methods*	Acres**
Defensible Space	1	Defensible space is recommended for all infrastructure located near hazardous fuels.	Hand felling and limbing; mowing; mechanical treatments	~300 feet or more depending on terrain
Thin Below Power lines	2	Reduce fuels below power lines in areas of heavy fuel loadings.	Hand felling and limbing; mechanical treatments where slope and access allows	N/A
Thin Along Railroad Tracks and Highways	3	Reduce susceptible fuels along railroads and highways in order to reduce ignition potential and spread	Mowing; weed abatement	At least 20 feet on each side
Preparedness Planning	4	All infrastructure locations should be mapped in an easily-readable format and made available to Placer County emergency responders	N/A	N/A

* Mechanical treatments in timbered areas include all varieties of logging equipment.

** Defensible space distances will vary by property based on slope and fuels.

CONCLUSIONS AND NEXT STEPS

The Placer County CWPP is a comprehensive analysis of wildfire-related hazards and risks in the WUI areas on the western slope of the Sierra Nevada in Placer County. The results of the analysis were used to determine a variety of fuel-reduction projects throughout the study area. Although these are recommendations made by Anchor Point Group LLC, the stakeholders can also use these results to guide decision making for additional fuel-reduction projects. Recommendations focus on reducing the threat of wildfire to values within the study area. Additional recommendations are presented throughout the main document, as well as in Appendix A.

The concerns and comments of public land management agencies, private landowners, and residents were used to generate this document. The Placer County CWPP is a multiyear, guiding document that will facilitate the implementation of future mitigation efforts. The CWPP is a living document, meaning it changes and evolves through time. Consequently, it should be revisited at least annually to assess the relevance and progress on the given recommendations. There is no official way to amend a CWPP, but any changes must be collaborative and include stakeholder representation.

RECOMMENDATIONS FOR THE PLACER COUNTY FIRE SAFE ALLIANCE

The four Fire Safe Councils that partner with the Placer County Fire Safe Alliance (PCFSA) are responsible for managing the projects in their FSC boundary. However, the PCFSA is a resource that should be used to compile the information for all the projects. There should be an annual cycle where the FSCs report their work to the FSA, including acres treated, GIS data of the project, current status, where the funding came from, etc. From there, the information can be given to CAL FIRE, who then enters the information into CAL MAPPER, a state-wide database. Actions to implement this would include:

- Create a position for an individual that can help FSCs by:
 - Obtain funding for projects
 - Facilitate interagency cooperation and information exchange
- Creating an annual revision sheets for FSCs to update
- Setting-up a formal revision process for the CWPP and annual updates
- Setting deadlines for when FSCs must provide this information
- Providing resources for non-spatial information to be hand digitized into a GIS

ACTION ITEM WORKSHEET

Proposed Action Item Identification

(Each action item includes a list of the key issues that the activity will address. Action items should be fact based and tied directly to issues or needs identified through the planning process.)

Proposed Action Title

(Utilize the appropriate recommendation name or title in the CWPP.)

Rationale for Proposed Action Item

(Utilize any justification or report language in the CWPP.)

Ideas for Implementation (Optional)

(Each action item includes ideas for implementation and potential resources. This information enables a transition from theory to practice. The ideas for implementation serve as a starting point for this plan. This component is dynamic in nature, as some ideas may not be feasible and new ideas may be added during the plan maintenance process. Report graphics can add value to this section.)

Coordinating Organization

Internal Partners

(Internal partners are members of the CWPP advisory committee and may be able to assist in the implementation of action items by providing Relevant resources to the coordinating organization.)

External Partners

(External partner organizations can assist the coordinating organization in implementing the action items in various ways. Partners may include local, regional, state, or federal agencies, as well as local and regional public and private sector entities.)

Timeline

Short Term (0-2 years)

(Action items or activities that may be implemented with existing Resources and authorities within one to two years.)

Long Term (More than 2 years)

(Action items or activities that may require new or additional resources and/or authorities, and may take from one to five years to implement.)

Estimated Cost

(If available, list cost estimate.)

To facilitate implementation, each action item, such as fuel modification, public education, etc., can be populated into the provided worksheet on the next page, to organize information on key issues, develop ideas for implementation, coordinate with partner organizations, generate a timeline, and plan goals addressed.

GLOSSARY AND FURTHER INFORMATION

GLOSSARY

The following definitions apply to terms used in the Placer County Community Wildfire Protection Plan and/or are widely used wildland firefighting terms.

1-hour time lag fuels: Grasses, litter, and duff; less than ¼-inch in diameter

10-hour time lag fuels: Twigs and small stems; ¼-inch to 1-inch in diameter

100-hour time lag fuels: Branches; 1 to 3 inches in diameter

1000-hour time lag fuels: Large stems and branches; greater than 3 inches in diameter

active crown fire: This is a crown fire in which the entire fuel complex – all fuel strata – become involved, but the crowning phase remains dependent on heat released from the surface fuel strata for continued spread (also called a running crown fire or continuous crown fire).

crown fire (crowning): The movement of fire through the crowns of trees or shrubs; may or may not be independent of the surface fire.

defensible space: An area around a structure where fuels and vegetation are modified, cleared, or reduced to slow the spread of wildfire toward or from the structure. The design and distance of the defensible space is based on fuels, topography, and the design/materials used in the construction of the structure.

fine fuels: Fuels that are less than ¼-inch in diameter, such as grass, leaves, draped pine needles, fern, tree moss, and some kinds of slash, which, when dry, ignite readily and are consumed rapidly.

fire behavior potential: The expected severity of a wildland fire expressed as the rate of spread, the level of crown fire activity, and flame length. This is derived from fire behavior modeling programs using the following inputs: fuels, canopy cover, historical weather averages, elevation, slope, and aspect.

fire danger: In this document, we do not use this as a technical term, due to various and nebulous meanings that historically have been applied.

fire hazard: Given an ignition, the likelihood and severity of fire outcomes (fire effects) that result in damage to people, property, and/or the environment. The hazard rating is derived from the community assessment and the fire behavior potential.

fire mitigation: Any action designed to decrease the likelihood of an ignition, reduce fire behavior potential, or protect property from the impact of undesirable fire outcomes.

fire risk: The probability that an ignition will occur in an area with potential for damaging effects to people, property, and/or the environment. Risk is based primarily on historical ignitions data.

flame length: The distance between the flame tip and the midpoint of the flame depth at the base of the flame (generally the ground surface); an indicator of fire intensity.

fuel break: A natural or constructed discontinuity in a fuel profile that is used to isolate, stop, or reduce the spread of fire. Fuel breaks may also make retardant lines more effective and serve as control lines for fire suppression actions. Fuel breaks in the WUI are designed to limit the spread and intensity of crown fire activity.

ISO (Insurance Standards Office): A leading source of risk (as defined by the insurance industry) information to insurance companies. ISO provides fire risk information in the form of ratings used by insurance companies to price fire insurance products to property owners.

passive crown fire (torching): A crown fire in which individual or small groups of trees torch out (candle), but solid flaming in the canopy fuels cannot be maintained except for short periods.

shaded fuel break: An easily accessible strip of land of varying width (depending on fuel and terrain), in which fuel density is reduced, thus improving fire control opportunities. The stand is thinned, and remaining trees are pruned to remove ladder fuels. Brush, heavy ground fuels, snags, and dead trees are disposed of, and an open, park-like appearance is established.

slash: Debris left after logging, pruning, thinning, or brush cutting. This includes logs, chips, bark, branches, stumps, and broken understory trees or brush.

spotting: Refers to the behavior of a fire producing sparks or embers that are carried by the wind and start new fires beyond the zone of direct ignition by the main fire.

structural triage: The process of identifying, sorting, and committing resources to a specific structure.

surface fire: A fire that burns the surface litter, debris, and small vegetation on the ground.

values at risk: People, property, ecological elements, and other human and intrinsic values within the project area. Values at risk are identified by inhabitants as important to the way of life in the study area, and are particularly susceptible to damage from undesirable fire outcomes.

WHR (Wildfire Hazard Rating; community assessment): A 140-point scale analysis designed to identify factors that increase the potential for and/or severity of undesirable fire outcomes in WUI communities.

WUI (Wildland Urban Interface): The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. This is sometimes referred to as Urban Wildland Interface, or UWI.

RECOMMENDED READING

At Home in the Woods – Lessons Learned in the Wildland/Urban Interface, FEMA, 2004.

Bachmann, A., and Allgower, B., *A Consistent Wildland Fire Risk Terminology is Needed!*, Fire Management Today (61, 4), USDA Forest Services, Washington, DC, Fall 2001.

Dennis, F.C., *Fuel break Guidelines for Forested Subdivisions*, Colorado State Forest Service, Colorado State University, 1983.

Developing a Cooperative Approach to Wildfire Protection, National Wildland-Urban Interface Fire Protection Program.

Firefighter Safety in the Wildland/Urban Interface – A Video Series (VHS Video - 60 Minutes.), National Wildland/Urban Interface Fire Program, 2003.

Fires that Changed the Fire Service – Wildlands (VHS Video – 84 Minutes.), American Heat, March 2000.

Home Improvement: A Firewise Approach (VHS Video – 15 Minutes.), 2003.

Introducing Firewise Communities Workshops (VHS Video– 6 Minutes.), Firewise Communities, Quincy, MA.

Preparing a Community Wildfire Protection Plan – a Handbook for Wildland-Urban Interface Communities, Sponsored by: Communities Committee, National Association of Counties, National Association of State Foresters, Society of American Foresters, Western Governors' Association, March 2004.

Slaughter, R. (ed.), *California's I-ZONE – Urban/Wildland Fire Prevention & Mitigation*, Sacramento, California, Jan. 1996.

Standard for Protection of Life and Property from Wildfire, NFPA 1144(02) (Formerly NFPA 299) National Fire Protection Association, Quincy, MA, 2002.

Urban-Wildland Interface Code™, International Fire Code Institute, Whittier, California, Jan. 2000.

White, C., *Dry Hydrant Manual – A Guide for Developing Alternative Water Sources for Rural Fire Protection*, Developed for Summit County, Colorado.

Wildland/Urban Interface Fire Hazard Assessment Methodology, Developed by National Wildland/Urban Interface Fire Protection Program. Wildland/Urban Interface Fire Policy Action Report, Western Governors' Association, Feb. 1996.

RESOURCES FOR IMPLEMENTING CWPP RECOMMENDATIONS (GRANTS)

Often the biggest hurdle to overcome when trying to implement a CWPP or wildfire mitigation projects is funding. By having an official CWPP, a multitude of funding sources become available to complete the work outlined in the plan. Federal, national, state, and county funds are available to begin treatments. The list below is not all inclusive, but it provides the most commonly available sources for funding and outreach.

California Fire Safe Council Grants Clearinghouse Program (CFSC)

- Purpose: The California Fire Safe Council provides a one-stop-shop program that simplifies the process of finding and applying for grant opportunities. Grant funding may be used for hazardous fuels reduction and maintenance projects on nonfederal land, to develop community risk assessments and Community Wildfire Protection Plans (CWPP), and to provide education and outreach opportunities for landowners and residents in at-risk communities. The CFSC also provides grant writing workshops for newcomers to the process. The following entities are able to apply:
 - State, county, municipal, interstate, intermunicipal, special district, independent school district, state controlled institution of higher learning, private university, Native American tribe, profit organization, and nonprofit organization

<http://www.grants.firesafecouncil.org>

California Forest Improvement Program (CFIP)

- Purpose: CFIP is a program aimed at improving the economic value and environmental quality of forestlands. CFIP can help rebuild forest and wildlife resources to meet our future needs for a healthy environment and productive forests. Forest landowners can be reimbursed up to 75 percent of their expenses for the following:
 - Preparation of a Management Plan
 - Site preparation, tree planting, and follow-up work
 - Tree thinning or release
 - Erosion control to reduce soil erosion and stream sedimentation
 - Fish and wildlife habitat improvement, including creation of corridors and openings, planting oaks or riparian species, maintaining wetlands, and stream restoration.
 - Project supervision by a Registered Professional Forester

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

Federal Emergency Management Agency (FEMA)

- **Assistance to Firefighters Grant Program**
 - Purpose: to improve firefighting operations; purchase firefighting vehicles, equipment, and personal protective equipment; fund fire prevention programs; and establish wellness and fitness programs.
 - Necessary information includes a DUNS number, Tax ID number and Central Contractor Registration.
 - Grants are usually required to be submitted by the end of September.

<http://www.fema.gov/firegrants/afggrants/index.shtm>

GLOSSARY AND FURTHER INFORMATION

- **Fire Prevention and Safety Grants (FP&S)**
 - Purpose: The Fire Prevention and Safety Grants (FP&S) are part of the Assistance to Firefighters Grants (AFG) and are under the purview of the Grant Programs Directorate in the Federal Emergency Management Agency. FP&S Grants support projects that enhance the safety of the public and firefighters from fire and related hazards. The primary goal is to target high-risk populations and reduce injury and prevent death. In 2005, Congress reauthorized funding for FP&S and expanded the eligible uses of funds to include Firefighter Safety Research and Development.
<http://www.fema.gov/firegrants/fpsgrants/index.shtm>
- **Hazard Mitigation Assistance Grant Program (HMGP)**
 - Purpose: to provide grants to states and local governments to implement long-term hazard mitigation measures after a major disaster declaration. The purpose of the HMGP is to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented during the immediate recovery from a disaster.
<http://www.fema.gov/government/grant/hmgp/index.shtm>
- **Pre-Disaster Mitigation Grant Program (PDM)**
 - Purpose: to provide funds to states, territories, Indian tribal governments, communities, and universities for hazard-mitigation planning and the implementation of mitigation projects prior to a disaster event. Funding these plans and projects reduces overall risks to the population and structures.
<http://www.fema.gov/government/grant/pdm/index.shtm>

Forest Stewardship Program

- Purpose: a federally-mandated program designed to encourage the long-term stewardship of private forestland, to assist landowners in improving their management of the land, and to establish a positive land ethic among forestland owners.
<http://ceres.ca.gov/foreststeward>

Firewise Communities

- Purpose: a multi-agency organization designed to increase education of homeowners, community leaders, developers, and others on the wildland-urban interface about actions they can take to reduce fire risk to protect lives, property, and ecosystems.
<http://www.firewise.org>

National Volunteer Fire Council

- Purpose: to support volunteer fire protection districts. Includes both federal and nonfederal funding options and grant writing help.
<http://www.nvfc.org/resources/grants>

Natural Resources Conservation Service Emergency Watershed Protection Program

- Purpose: to undertake emergency measures, including the purchase of flood plain easements, for runoff retardation and soil erosion prevention to safeguard lives and property from floods, drought, and the products of erosion on any watershed whenever fire, flood, or any other natural occurrence is causing or has caused a sudden impairment of the watershed.
<http://www.nrcs.usda.gov/programs/ewp>

Staffing for Adequate Fire and Emergency Response (SAFER)

- Purpose: to provide funding directly to fire departments and volunteer firefighter interest organizations in order to help them increase the number of trained, “front-line” firefighters available in their communities. The goal of SAFER is to enhance the local fire departments’ abilities to comply with staffing, response and operational standards established by the NFPA and OSHA.
<http://www.fema.gov/firegrants/safer/index.shtm>

State and Private Forestry Grant Program (S&PF)

- Purpose: The S&PF Redesign effort was conceived in response to the combined impacts of increasing pressures on our nation's forests and decreasing S&PF resources and funds. Significant threats to forests, such as insect and disease infestations, catastrophic fire, and the loss of critical forested landscapes to development, coupled with the pressure placed on local economies by the increasingly global nature of the forest products industry, point to the need for more progressive strategies for conserving our nation's forest resources.
 - The S&PF program can be utilized for a variety of programs, including public education, equipment, and fuels reduction treatments.

<http://wflccenter.org/sapf/index.php>

State Fire Assistance (SFA)

- Purpose: to assist state forestry agencies in wildfire response coordination and delivery, compliance with the national safety and training standards that ensure state and local crew deployment to federal fires and other emergency situations, hazard assessments, fuels treatment projects, and public education efforts.

<http://www.cafirealliance.org/grants>

US Forest Service Cooperative Forestry Assistance

- Purpose: to assist in the advancement of forest resources management, the control of insects and diseases affecting trees and forests, the improvement and maintenance of fish and wildlife habitat, and the planning and conduct of urban and community forestry programs.

<http://www.fs.fed.us/spf/coop>

Vegetation Management Program (VMP)

- Purpose: a cost-sharing program that focuses on the use of prescribed fire, and mechanical means for addressing wildland fire fuel hazards and other resource management issues on State Responsibility Area (SRA) lands. The use of prescribed fire mimics natural processes, restores fire to its historic role in wildland ecosystems, and provides significant fire hazard reduction benefits that enhance public and firefighter safety.

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

Western States Wildland-Urban Interface Grant Program

- Purpose: to apply for financial assistance toward hazardous fuels and educational projects within the four goals of: improved prevention, reduction of hazardous fuels, and restoration of fire-adapted ecosystems and promotion of community assistance.

<http://www.firesafecouncil.org/articles.cfm?article=345>

US Forest Service Cooperative Forestry Assistance

- Purpose: to assist in the advancement of forest resources management, the control of insects and diseases affecting trees and forests, the improvement and maintenance of fish and wildlife habitat, and the planning and conduct of urban and community forestry programs.

<http://www.fs.fed.us/spf/coop>

OTHER USEFUL LINKS

Environmental Protection Agency Watershed Protection

<http://cfpub.epa.gov/fedfund>

ESRI Grant Assistance Program for GIS Users

<http://www.esri.com/grants>

The Fire Safe Council

<http://www.FireSafeCouncil.org>

FRAMES (Fire Research and Management Exchange System)

<http://www.frames.gov/tools>

Government Grants

www.grants.gov

National Association of State Foresters Listing of Grant Sources and Appropriations

<http://www.stateforesters.org>

National Database of State and Local Wildfire Hazard Mitigation Programs

<http://www.wildfireprograms.com>

Placer County Fire Alliance

<http://www.placerfirealliance.org>

Standard for Protection of Life and Property from Wildfire, NFPA 1144

<http://www.normas.com/NFPA/PAGES/NFPA-1144.html>

Standard for Protection of Life and Property from Wildfire, NFPA 299

<http://webstore.ansi.org/RecordDetail.aspx?sku=NFPA+299-1997>

APPENDIX A: GENERAL RECOMMENDATIONS

The following categories have been identified as areas to focus on within the Placer County CWPP study area to mitigate impacts from wildfire: home construction, landscaping/fuels, preparedness planning, infrastructure, public education and water source supply. Recommendations are provided for each category in the tables that follow. Priorities are based on actions that are most likely to protect life safety, property and other values at risk. To improve life safety and preserve property, every home in the study area should have compliant, effective defensible space. DEFENSIBLE SPACE AND PROPER HOME CONSTRUCTION ARE THE MOST IMPORTANT ACTIONS AN INDIVIDUAL CAN DO TO PROTECT THEIR HOME.

Homeowners, please visit the following link for more information on protecting your home:

<http://www.placer.ca.gov/Departments/CEO/Emergency/~media/ceo/pio/images/PDF%20Docs/OES%20PIO%20Wildfire%20Prevention.ashx>

All of the recommendations found in the plan are summarized in the following tables. Implementation of the actions will be a shared responsibility in many cases and include individual homeowners, county staff, fire departments/protection districts, federal agencies, CAL FIRE, and other stakeholders. Suggestions for an implementation lead are identified for each action. These suggestions are not all-inclusive, and may require additional support from state and federal agencies. A summary table of all the specific fuels reduction recommendations within the county can be found in the Conclusions and Next Steps section in the main document.

All new construction within Placer County is subject to the State of California Building Codes in the Wildland-Urban Interface. Any new houses being built should automatically adhere to these fire codes. Changes to existing structures should be done with the assistance of a Fire Protection Engineer, who will know which codes have been adopted for new or remodeled structures. Recommended alterations to a home may include: double pane windows, non-combustible siding, Class A roof materials and screens over soffits, gable vents, etc. The following link provides more information on building codes.

http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_codes.php

Additional details on recommendations and issues specific to the recommended action items are discussed in text that follows the summary tables.

Table A1. Home Construction Recommendations

HOME CONSTRUCTION	
Action Items	Implementation Lead
Post reflective house numbers so that they are clearly visible from the main road. Reflective numbers should also be visible on the structure itself.	Individual homeowners
Discourage the use of combustible materials for decks, siding and roofs, especially where homes are upslope from heavy vegetation.	Individual homeowners, County
Maintain and clean spark arresters on chimneys.	Individual homeowners
Enclose under decks so firebrands do not fly under and collect.	Individual homeowners
Use glass skylights; plastic will melt and allow embers into the home.	Individual homeowners
Enclose eaves and soffits.	Individual homeowners
Cover openings with 1/8" metal screen to block fire brands and embers from collecting under the home or deck.	Individual homeowners
The roof is the most important element of the home. Use rated roofing material. Replace any shake-shingle roofs with non-combustible types.	Individual homeowners, HOAs, County
Use fire-resistant building materials on exterior walls.	Individual homeowners

Table A2. Landscaping/Fuels Recommendations

LANDSCAPING/FUELS	
Action Items	Implementation Lead
Maintain your defensible space constantly	Individual homeowners
Clean your roof and gutters at least twice a year especially as vegetation begins to cure in the autumn.	Individual homeowners
Stack firewood uphill or on a side contour, at least 30 feet away from structures, outbuildings, and other infrastructure, such as propane tanks and power poles.	Individual homeowners
Do not store combustibles or firewood under decks or downhill.	Individual homeowners

When possible, maintain an irrigated greenbelt around the home. Be sure to mow grass regularly, especially along roads and fence lines.	Individual homeowners
Trees and vegetation along driveways should be thinned as necessary to maintain a minimum 15' vertical and horizontal clearance for emergency vehicle access along driveways. This includes removing ladder fuels, which are low lying branches that allow a fire to climb from the ground into tree canopies.	Individual homeowners
Focus on removing vegetation in drainages that intersect roads or are under bridges.	Individual homeowners, HOAs, County
Create a cinder block wall around the perimeter of your yard and use grass and slate to break up the landscape.	Individual homeowners
Use pavers, rock or xeriscaping to break up fuel continuity immediately adjacent to the home.	Individual homeowners
Use groupings of potted plants that include succulents and other drought resistant vegetation.	Individual homeowners
Use faux brick and stone finishes and high-moisture content annuals and perennials.	Individual homeowners
Use grass and driveways as fuel breaks from the house.	Individual homeowners

Table A3. Preparedness Planning Recommendations

PREPAREDNESS PLANNING	
Action Items	Implementation Lead
Connect, and have available, a minimum of 50 feet of garden hose to extinguish small fires before they spread.	Individual homeowners
Have nearby evacuation centers for citizens and staging areas for fire resources. This is especially important in communities with single access and a high population density.	County, FPD
Where available, large safety zones should be maintained and identified in all evacuation planning. These safety zones will need to be of adequate size and quality in order to be effective.	Communities, HOAs, County, FPD
Identify and pre-plan primary escape routes for all CWPP communities. Emergency management personnel should be included in the development of preplans for citizen evacuation. Reevaluate and update these plans as necessary.	County, FPD

Educate citizens on the proper escape routes and evacuation centers to use in the event of an evacuation. This also applies to animal rescue.	County, FPD
Create an evacuation plan that is presented and distributed to residents.	County
Ensure the existing reverse 911 system includes wildfire notifications.	County, FPD
Perform response drills to determine the timing and effectiveness of escape routes and fire resource staging areas.	County, state, FPD
Conduct a parcel-level wildfire hazard analysis for all the homes in the study area, especially those with an extreme or very high rating.	County, FPD
Identify areas where large animal evacuation is an issue and develop a plan for evacuation.	County, FPD
Maintain or develop pre-attack/operational plans for each community/FSC. The pre-attack plan assists fire agencies in developing strategies and tactics that will mitigate damage when incidents do occur.	County, FPD
Develop fire safety brochures that can be distributed and made available to tourists in popular areas in the summer months.	Communities, HOAs, County, FPD

Table A4. Infrastructure Recommendations

INFRASTRUCTURE	
Action Item	Implementation Lead
A program of replacing worn or difficult to read street signs should be developed. Include specifications and input from County officials, developers, HOAs, and the fire protection districts.	County
A “No Outlet” sign should identify all dead end streets and roads.	County, communities, HOAs
Provide adequate turnarounds for emergency equipment throughout all communities.	County, developers
Encourage the placement of all utilities, including propane tanks and power lines, below ground.	County, communities, HOAs
Determine and post load limits for all bridges and applicable culverts within the study area.	County, private communities
All utility companies should provide information about the locations of powerlines, substations, natural gas lines, and any other relevant infrastructure to the FPD.	County, FPD, utility companies

Table A5. Public Education Recommendations

PUBLIC EDUCATION	
Action Item	Implementation Lead
Remain aware of the current fire danger in your area.	All
Implement fire prevention, fire preparedness, and defensible space and hazard reduction recommendations for each community.	County, state, communities, HOAs
Obtain additional “Smokey Bear” signs for use along entrances into towns and popular recreation areas to inform the public of the current fire danger and to promote fire prevention. Ensure that fire danger messages are kept up to date with Daily Fire Danger broadcast to maintain credibility and effectiveness.	County, state, FPD, communities, HOAs
Hold multiple meetings per year to educate residents on wildfire risk, defensible space, and evacuation.	County, CAL FIRE, FPD
Provide citizens with the findings of this study including: Levels of risk and hazard Values of fuels reduction programs Consequences of inaction for the entire community	County, CAL FIRE, FPD
Make use of regional and local media to promote wildfire public education messages in the fire district.	County, state, FPD
Maintain a current wildfire educational presentation explaining the concepts of defensible space and wildfire hazard mitigation. The information in this report should be incorporated into that presentation for the education of homeowners countywide. This could be done through informational gatherings sponsored by the fire department, homeowners associations or neighborhood groups such as local festivals, school events, at times of extreme fire danger, and other times of heightened awareness concerning wildfire. It is far easier to bring the information to citizens than to bring citizens to the information, making this an especially powerful resource.	County, CAL FIRE, FPD

Table A6. Water Supply Recommendations

WATER SUPPLY	
Action Item	Implementation Lead
Areas with no water or inadequate water supply should be evaluated to improve existing hydrants, establish a stored water supply, or use firefighting resources.	County, FPD
Install dry hydrants on applicable streams and ponds in areas that currently lack hydrants.	Communities, FPD
Continue to map the location of water sources and their volumes. Make this information available for use by emergency personnel in and out of the district.	County, FPD
Make sure cisterns are well marked with their capacity and are kept clear of vegetation.	County, FPD
Conduct annual testing for fire hydrant function and capacity.	County, FPD
FPD trainings should focus on drafting operations frequently throughout the spring and summer to ensure apparatus can fill in the event of a wildfire.	FPD

HOME CONSTRUCTION

General Home Construction Considerations:

- Enclose under decks so firebrands do not fly underneath and collect.
- Use glass skylights; plastic will melt and allow embers into the home.
- Enclose eaves, fascias, soffits and vents. ‘Box’ eaves, fascias, soffits and vents, or enclose them with metal screens.
- Use non-flammable fencing if attached to the house, such as metal.
- Cover openings with 1/8” metal screen to block fire brands and embers from collecting under the home or deck.
- The roof is one of the most important elements of the home. Use rated roofing material.

Building Materials:

Use rated roofing material. Roofing material with a Class A, B or C rating is fire resistant and will help keep the flame from spreading. Examples include:

- Composition shingle
- Metal
- Clay
- Cement tile

Use fire-resistant building materials on exterior walls. Examples include:

- Cement, plaster, stucco or masonry (concrete, stone, brick or block) are all great fire-resistant building materials.
- While vinyl is difficult to ignite, it can fall away or melt when exposed to extreme heat.
- Use double-paned or tempered glass. Double-pane glass can help reduce the risk of fracture or collapse during an extreme wildfire. Tempered glass is the most effective.
- Protect overhangs and other attachments.
- Remove all vegetation and other fuels from around overhangs and other attachments (room additions, bay windows, decks, porches, carports and fences).
- Box in the undersides of overhangs, decks and balconies with noncombustible or fire-resistant materials.
- Fences constructed of flammable materials should not be attached directly to the house.
- Anything attached to the house (decks, porches, fences and outbuildings) should be considered part of the house. These act as fuel bridges, particularly if constructed from flammable materials.
- If a wood fence is attached to the house, separate the fence from the house with a masonry or metal barrier.
- Decks and elevated porches should be kept free of combustible materials and debris.
- Elevated wooden decks should not be located at the top of a hill. Consider a terrace.

HOME ADDRESSING

Most homes within the county lack reflective addressing that is easily visible from the road. Further, some home addressing is made of combustible materials and is not uniform within communities, let alone the county. Visible addressing is vital for fire and medical responders to determine the location and number of structures within a community. Often, addressing is not easily visible during the darkness of night or during smoky conditions. A good standard to follow for addressing is to use metal markers four inch white text on a green background. These should be placed three to five feet above ground. Examples of addressing found in Placer County are shown below.



LANDSCAPING / FUELS

DEFENSIBLE SPACE

Construction type, condition, age, fuel loading of the area, and building position are contributing factors that make homes more or less susceptible to ignition under even moderate burning conditions. As mentioned previously, creating defensible space is the most important action an individual can do to protect his or her home. This is especially important for homes with wood roofs and homes located near any other topographic feature that contributes to fire intensity, such as chimneys and saddles. These recommendations are intended to give homeowners enough information to immediately begin making their home Firewise or to improve existing home fire mitigation efforts. Defensible space needs to be maintained throughout the year. Because of differences in vegetation, topography, and construction materials, it is suggested that a trained individual be consulted before embarking on a defensible space project.

Because of the fire ecology of the vegetation and topography, an aggressive program of evaluating and implementing defensible space for all homes combined with adequate home construction, will do more to limit fire-related property damage than any other single recommendation in this report.

Many homes and structures exist outside of the defined CWPP community boundaries in the study area. Extended defensible space is recommended for all homes not within identified communities that are located in dangerous topography (above ravines and natural chimneys, midslope on steep slopes, on ridge tops or summits) and/or with heavy vegetation loads near or below the home.

The following document is directly from the CAL FIRE State Board of Forestry and Fire Protection, and as a result, some terminology may differ from the main CWPP document. A fire department representative should be consulted before embarking on defensible space work or a fuels reduction project.

General Guidelines for Creating Defensible Space

State Board of Forestry and Fire Protection (BOF)
California Department of Forestry and Fire Protection

Adopted by BOF on February 8, 2006
Approved by Office of Administrative Law on May 8th, 2006



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A. Purpose of Guidelines

Recent changes to Public Resources Code (PRC) 4291 expand the defensible space clearance requirement maintained around buildings and structures from 30 feet to a distance of 100 feet. These guidelines are intended to provide property owners with examples of fuel modification measures that can be used to create an area around buildings or structures to create defensible space. A defensible space perimeter around buildings and structures provide firefighters a working environment that allows them to protect buildings and structures from encroaching wildfires as well as minimizing the chance that a structure fire will escape to the surrounding wildland. These guidelines apply to any person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material, and located within a State Responsibility Area.



Effective defensible space

The vegetation surrounding a building or structure is fuel for a fire. Even the building or structure itself is considered fuel. Research and experience have shown that fuel reduction around a building or structure increases the probability of it surviving a wildfire. Good defensible space allows firefighters to protect and save buildings or structures safely without facing unacceptable risk to their lives. Fuel reduction through vegetation management is the key to creating good defensible space.

Terrain, climate conditions and vegetation interact to affect fire behavior and fuel reduction standards. The diversity of California's geography also influences fire behavior and fuel reduction standards as well. While fuel reduction standards will vary throughout the State, there are some common practices that guide fuel modification treatments to ensure creation of adequate defensible space:

- Properties with greater fire hazards will require more clearing. Clearing requirements will be greater for those lands with steeper terrain, larger and denser fuels, fuels that are highly volatile, and in locations subject to frequent fires.
- Creation of defensible space through vegetation management usually means reducing the amount of fuel around the building or structure, providing separation between fuels, and or reshaping retained fuels by trimming. Defensible space can be created removing dead vegetation, separating fuels, and pruning lower limbs.
- In all cases, fuel reduction means arranging the tree, shrubs and other fuels sources in a way that makes it difficult for fire to transfer from one fuel source to another. It does not mean cutting down all trees and shrubs, or creating a bare ring of earth across the property.
- A homeowner's clearing responsibility is limited to 100 feet away from his or her building or structure or to the property line, whichever ever is less, and limited to their land. While individual property owners are not required to clear beyond 100 feet, groups of property owners are encouraged to extend clearances beyond the 100 foot requirement in order to create community-wide defensible spaces.
- Homeowners who do fuel reduction activities that remove or dispose of vegetation are required to comply with all federal, state or local environmental protection laws and obtain permits when necessary. Environmental protection laws include, but are not limited to, threatened and endangered species, water quality, air quality, and cultural/archeological resources. For example, trees removed for fuel reduction that are used for commercial purposes require permits from the

California Department of Forestry and Fire Protection. Also, many counties and towns require tree removal permits when cutting trees over a specified size. Contact your local resource or planning agency officials to ensure compliance.

The methods used to manage fuel can be important in the safe creation of defensible space. Care should be taken with the use of equipment when creating your defensible space zone. Internal combustion engines must have an approved spark arresters and metal cutting blades (lawn mowers or weed trimmers) should be used with caution to prevent starting fires during periods of high fire danger. A metal blade striking a rock can create a spark and start a fire, a common cause of fires during summertime.

Vegetation removal can also cause soil disturbance, soil erosion, regrowth of new vegetation, and introduce non-native invasive plants. Always keep soil disturbance to a minimum, especially on steep slopes. Erosion control techniques such as minimizing use of heavy equipment, avoiding stream or gully crossings, using mobile equipment during dry conditions, and covering exposed disturbed soil areas will help reduce soil erosion and plant regrowth.

Areas near water (riparian areas), such as streams or ponds, are a particular concern for protection of water quality. To help protect water quality in riparian areas, avoid removing vegetation associated with water, avoid using heavy equipment, and do not clear vegetation to bare mineral soil.

B. Definitions

Defensible space: The area within the perimeter of a parcel where basic wildfire protection practices are implemented, providing the key point of defense from an approaching wildfire or escaping structure fire. 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.

Aerial fuels: All live and dead vegetation in the forest canopy or above surface fuels, including tree branches, twigs and cones, snags, moss, and high brush. Examples include trees and large bushes.

Building or structure: Any structure used for support or shelter of any use or occupancy.

Flammable and combustible vegetation: Fuel as defined in these guidelines.

Fuel Vegetative material, live or dead, which is combustible during normal summer weather. For the purposes of these guidelines, it does not include fences, decks, woodpiles, trash, etc.

Homeowner: Any person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material, and located within a State Responsibility Area.

Ladder Fuels: Fuels that can carry a fire vertically between or within a fuel type.

Reduced Fuel Zone: The area that extends out from 30 to 100 feet away from the building or structure (or to the property line, whichever is nearer to the building or structure).

Surface fuels: Loose surface litter on the soil surface, normally consisting of fallen leaves or needles, twigs, bark, cones, and small branches that have not yet decayed enough to lose their identity; also grasses, forbs, low and medium shrubs, tree seedlings, heavier branches and downed logs.

C. Fuel Treatment Guidelines

The following fuel treatment guidelines comply with the requirements of 14 CCR 1299 and PRC 4291. **All persons using these guidelines to comply with CCR 1299 and PRC 4291 shall implement General Guidelines 1., 2., 3., and either 4a or 4b., as described below.**

General Guidelines:

1. Maintain a firebreak by removing and clearing away all flammable vegetation and other combustible growth within 30 feet of each building or structure, with certain exceptions pursuant to PRC §4291 (a). Single specimens of trees or other vegetation may be retained provided they are well-spaced, well-pruned, and create a condition that avoids spread of fire to other vegetation or to a building or structure.
2. Dead and dying woody surface fuels and aerial fuels within the Reduced Fuel Zone shall be removed. Loose surface litter, normally consisting of fallen leaves or needles, twigs, bark, cones, and small branches, shall be permitted to a depth of 3 inches. This guideline is primarily intended to eliminate trees, bushes, shrubs and surface debris that are completely dead or with substantial amounts of dead branches or leaves/needles that would readily burn.
3. Down logs or stumps anywhere within 100 feet from the building or structure, when embedded in the soil, may be retained when isolated from other vegetation. Occasional (approximately one per acre) standing dead trees (snags) that are well-space from other vegetation and which will not fall on buildings or structures or on roadways/driveways may be retained.
4. Within the Reduced Fuel Zone, one of the following fuel treatments (4a. or 4b.) shall be implemented. Properties with greater fire hazards will require greater clearing treatments. Combinations of the methods may be acceptable under §1299(c) as long as the intent of these guidelines is met.

4 a. Reduced Fuel Zone: Fuel Separation

In conjunction with General Guidelines 1., 2., and 3., above, minimum clearance between fuels surrounding each building or structure will range from 4 feet to 40 feet in all directions, both horizontally and vertically.

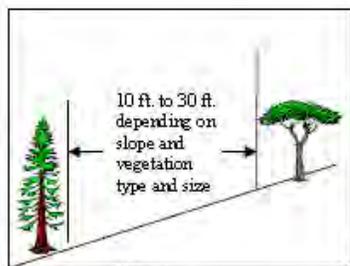
Clearance distances between vegetation will depend on the slope, vegetation size, vegetation type (brush, grass, trees), and other fuel characteristics (fuel compaction, chemical content etc.). Properties with greater fire hazards will require greater separation between fuels. For example, properties on steep slopes having large sized vegetation will require greater spacing between individual trees and bushes (see Plant Spacing Guidelines and Case Examples below). Groups of vegetation (numerous plants growing together less than 10 feet in total foliage width) may be treated as a single plant. For example, three individual manzanita plants growing together with a total foliage width of eight feet can be "grouped" and considered as one plant and spaced according to the Plant Spacing Guidelines in this document.



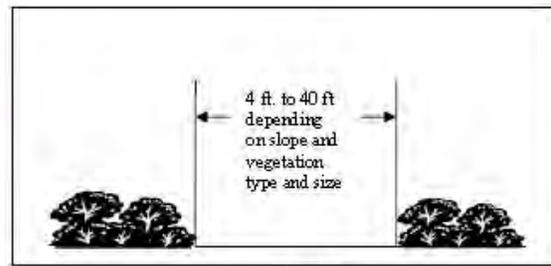
Grass generally should not exceed 4 inches in height. However, homeowners may keep grass and other forbs less than 18 inches in height above the ground when these grasses are isolated from other fuels or where necessary to stabilize the soil and prevent erosion.

Clearance requirements include:

- Horizontal clearance between aerial fuels, such as the outside edge of the tree crowns or high brush. Horizontal clearance helps stop the spread of fire from one fuel to the next.



Trees



Shrubs

Horizontal clearance between aerial fuels

- Vertical clearance between lower limbs of aerial fuels and the nearest surface fuels and grass/weeds. Vertical clearance removes *ladder fuels* and helps prevent a fire from moving from the shorter fuels to the taller fuels.



Vertical clearance between aerial fuels



*Effective vertical and horizontal fuel separation
Photo Courtesy
Pumas Fire Safe Council.*

Plant Spacing Guidelines		
Guidelines are designed to break the continuity of fuels and be used as a "rule of thumb" for achieving compliance with Regulation 14 CCR 1299.		
Trees	Minimum horizontal space from edge of one tree canopy to the edge of the next	
	Slope	Spacing
	0% to 20 %	10 feet
	20% to 40%	20 feet
	Greater than 40%	30 feet
Shrubs	Minimum horizontal space between edges of shrub	
	Slope	Spacing
	0% to 20 %	2 times the height of the shrub
	20% to 40%	4 times the height of the shrub
	Greater than 40%	6 times the height of the shrub
Vertical Space	Minimum vertical space between top of shrub and bottom of lower tree branches: 3 times the height of the shrub	

Adapted from: Gilmer, M. 1994. California Wildfire Landscaping

Case Example of Fuel Separation: Sierra Nevada conifer forests

Conifer forests intermixed with rural housing present a hazardous fire situation. Dense vegetation, long fire seasons, and ample ignition sources related to human access and lightning, makes this home vulnerable to wildfires. This home is located on gentle slopes (less than 20%), and is surrounded by large mature tree overstory and intermixed small to medium size brush (three to four feet in height).



Application of the guideline under 4a. would result in horizontal spacing between large tree branches of 10 feet; removal of many of the smaller trees to create vertical space between large trees and smaller trees and horizontal spacing between brush of six to eight feet (calculated by using 2 times the height of brush).

Case Example of Fuel Separation: Southern California chaparral

Mature, dense and continuous chaparral brush fields on steep slopes found in Southern California represents one of the most hazardous fuel situations in the United States. Chaparral grows in an unbroken sea of dense vegetation creating a fuel-rich path which spreads fire rapidly. Chaparral shrubs burn hot and produce tall flames. From the flames come burning embers which can ignite homes and plants. (Gilmer, 1994). All these factors results in a setting where aggressive defensible space clearing requirements are necessary.



Steep slopes (greater than 40%) and tall, old brush (greater than 7 feet tall), need significant modification. These settings require aggressive clearing to create defensible space, and would require maximum spacing. Application of the guidelines would result in 42 feet horizontal spacing (calculated as 6 times the height of the brush) between retained groups of chaparral.

Case Example of Fuel Separation: Oak Woodlands

Oak woodlands, the combination of oak trees and other hardwood tree species with a continuous grass ground cover, are found on more than 10 million acres in California. Wildfire in this setting is very common, with fire behavior dominated by rapid spread through burning grass.



Given a setting of moderate slopes (between 20% and 40%), wide spacing between trees, and continuous dense grass, treatment of the grass is the primary fuel reduction concern. Property owners using these guidelines would cut grass to a maximum 4 inches in height, remove the clippings, and consider creating 20 feet spacing between trees.

4b. Reduced Fuel Zone: Defensible Space with Continuous Tree Canopy

To achieve defensible space while retaining a stand of larger trees with a continuous tree canopy apply the following treatments:

- Generally, remove all surface fuels greater than 4 inches in height. Single specimens of trees or other vegetation may be retained provided they are well-spaced, well-pruned, and create a condition that avoids spread of fire to other vegetation or to a building or structure.
- Remove lower limbs of trees ("prune") to at least 6 feet up to 15 feet (or the lower 1/3 branches for small trees). Properties with greater fire hazards, such as steeper slopes or more severe fire danger, will require pruning heights in the upper end of this range.

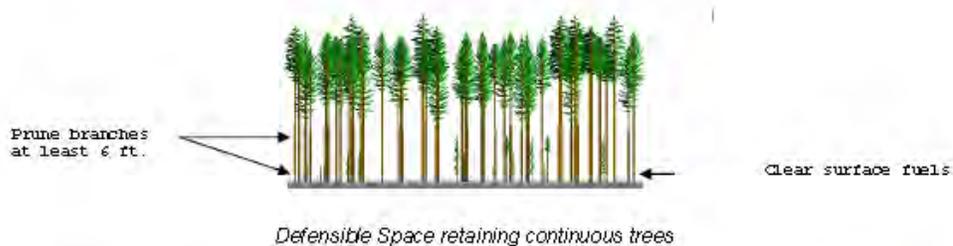


Photo Courtesy Plumas Fire Safe Council.



Defensible space with continuous tree canopy by clearing understory and pruning

Authority cited: Section 4102, 4291, 4125-4128.5, Public Resource Code. Reference: 4291, Public Resource Code; 14 CCR 1299 (d).

FUEL BREAKS

One of the most effective forms of landscape scale fuels modification is the fuel break (sometimes referred to as a “shaded fuel break”). A fuel break is an easily accessible strip of land of varying width, depending on fuel and terrain, in which fuel density is reduced, thus improving fire control opportunities. Vegetation is thinned to remove diseased, fire-weakened, and most standing dead trees. Thinning should select for the more fire-resistant species. Ladder fuels, such as low limbs and heavy regeneration are removed from the remaining stand. Brush, dead and down materials, logging slash, and other heavy ground fuels are removed to create an open park-like appearance. The use of fuel breaks under normal burning conditions can limit uncontrolled spread of fires and aid firefighters in slowing the spread rate. However, under extreme burning conditions where spotting occurs for miles ahead of the main fire and probability of ignition is high, even the best fuel breaks are not effective. Factors to be considered when determining the need for fuel breaks in mountain subdivisions include:

- The presence and density of hazardous fuels
- Slope
- Other hazardous topographic features
- Crowning potential
- Ignition sources

Increasing slope causes fires to move from the surface fuels to crowns more easily, due to preheating. A slope of 30 percent causes the fire spread rate to double, compared to the same fuels and conditions on flat ground. Chimneys, saddles, and deep ravines are all known to accelerate fire spread and influence intensity. Communities with homes located on or above such features, as well as homes located on summits and ridge-tops, would be good candidates for fuel breaks.

Crown fire activity values for the study area were generated by the FlamMap model and classified into three standard ranges (surface fire only, passive crown fire, and active crown fire). In areas where crown fire activity is likely, fuel breaks should be considered. If there are known likely ignition sources (such as railroads and recreation areas that allow campfires) in areas where there is a threat of fire being channeled into communities, fuel breaks should be considered. Fuel breaks should also be considered, where appropriate, to help protect critical infrastructure and ecosystem values.

Fuel breaks should always be connected to a good anchor point like a rock outcropping, river, lake, or road. The classic location for fuel breaks is along the tops of ridges, in order to stop fires from backing down the other side or spotting into the next drainage. This is sometimes not practical from a WUI standpoint, because the structures that firefighters are trying to protect are usually located at the tops of ridges or midslope. Midslope positioning is considered the least desirable for fuel breaks, but it may be easiest to achieve as an extension either of defensible space work or of existing roads and escape routes.

One tactic would be to create fuel breaks on slopes below homes that are located either midslope or on ridge tops so that the area of continuous fuels between the defensible space of homes and the fuel break is less than ten acres. Another tactic that is commonly used is positioning fuel breaks along the bottom of slopes. In most of the study area, this would require the cooperation of many individual landowners. In some areas, the only way

to separate residences from fuels is to locate the fuel break midslope above homes. This would provide some protection from backing fires and rolling materials. Where possible, it would make sense to locate fuel breaks midslope below homes, to break the continuity of fuels into the smaller units mentioned above. Even though this position is considered the least desirable from a fire suppression point of view, it would be the most effective approach in some portions of the study area.

Fuel breaks are often easiest to locate along existing roads. The minimum recommended fuel break width is usually 200 feet. As spread rate and intensity increases with slope angle, the size of the fuel break should be increased, with an emphasis on the downhill side of the roadbed or centerline employed. The formulas for slope angles of 30 percent and greater are as follows: below road distance = $100' + (1.5 \times \text{slope } \%)$, above road distance = $100' - \text{slope } \%$ (see Table A7). Fuel breaks that pass through hazardous topographic features should have these distances increased by 50 percent. Because fuel breaks can have an undesirable effect on the aesthetics of the area, crown separation should be emphasized over stand density levels, because isolating groupings rather than cutting for precise stem spacing will help to mitigate the visual impact of the fuel break. Irregular cutting patterns that reduce canopy and leave behind islands with wide openings are effective in shrub models. This is sometimes referred to as a mosaic cut.

It is also important to note that fuel breaks must be maintained to be effective. Thinning usually accelerates the process of regenerative growth. The effectiveness of the fuel break may be lost in as little as three to four years if ladder fuels and regeneration are not controlled. Fuel breaks should not be constructed without a maintenance plan.

One of the most difficult issues in establishing and maintaining fuel breaks is securing cooperation and participation of landowners. Ownership maps of the area indicate that implementation of fuels-reduction projects recommended here may require the approval of public land management agencies as well as private landowners.

Table A7. Recommended Treatment Distances for Midslope Roads

% Slope	Distance Above Road	Distance Below Road
30	70 feet	145 feet
35	65 feet	153 feet
40	60 feet	160 feet
45	55 feet	168 feet
50	50 feet	175 feet

PREPAREDNESS PLANNING

In order to reduce potential conflicts between evacuating citizens and incoming responders, it is desirable to have nearby meeting points and evacuation centers for citizens and staging areas for fire resources. This is especially important in communities with a single access and a high population density. Evacuation centers should include heated buildings with facilities large enough to handle the population, where available. A preplanned evacuation center should be identified in one or all of the major towns so that study area residents will know where to go, and that so planning can begin ahead of time. Schools and churches are usually ideal for this purpose. Meeting points for individual communities should be located near the community and known to all area residents. They should also be located away from flammable vegetation, and out of the way of incoming resources.

Fire staging areas should contain large safety zones, a good view in the direction of the fire, easy access and turnarounds for large apparatus, a significant fuel break between the fire and the escape route, topography conducive to radio communications, and access to water. Large irrigated meadows may make good safety zones for firefighting forces. Local responders are encouraged to preplan the use of potential staging areas with property owners.

EVACUATION

Life safety is the number one priority in any wildland fire situation. This being the case, evacuation is often one of the most difficult, but important, areas to address. Many roads leading into and throughout communities in the study area are one way in and out, narrow, poorly maintained, and/or blocked by low hanging archways or gates. Panicked residents and chaotic conditions will further hinder evacuation effectiveness and timeliness. Widening roadways, improving road maintenance and reducing impediments to travel such as gates and archways will speed the overall evacuation process and aid in the ingress of firefighters. Escape routes should be properly signed so that they are visible in smoky conditions. Evacuation centers should be predetermined so that residents know where they are going and how they will get there. Communities should stage mock evacuation scenarios annually or bi-annually so that residents know what to do in the event of an approaching wildfire. Communities should also work to develop a way to contact all of community residents, in case many residents chose not to go to the evacuation center. This list could be a phone and/or email list, which will allow community members to find out information about one another and on the status of their evacuation.

For more information on evacuation planning, please visit:

<http://www.ready.gov/america/beinformed/wildfires.html>

PERSONAL PREPAREDNESS

The one thing you cannot plan for is *where you will be* when a disaster hits –

Evacuation Plan - Home, Vehicle and Work

Where to meet

Gas, water, electrical shut offs

List of items to take - supplies

Computers - backups (off-site)

Documents, records, computer files

Plastic to cover areas to protect from fire sprinkler damage

How/where to transport hospitalized (patients), boarders, etc.

Communication plan

Who to call

Family phone tree, including contact(s) in distant location

Emergency Supply Examples:

Water (recommended three days @ one gal/person/day)

Shoes

Rx meds

Rx glasses

Flashlight/batteries

Candles/matches

Blanket

Portable Radio

Mirror

First aid kit

Fire extinguisher

Food

Camp stove for cooking, fuel

Pots/pans

Can opener (not electric!)

Bleach to disinfect drinking water

Toilet paper

Trash bags

Immunization/Health Records

US Hotel Directory - Pet Friendly

GUIDELINES FOR HORSES AND OTHER LIVESTOCK

- Create neighborhood programs and evacuation plans.
- Keep halters/ropes ready for each horse that includes: the horse's name, your name/phone number and a separate emergency contact number.
- Keep a reserve supply of horse feed and water on hand. Be prepared to be self-sufficient for at least 72 hours.
- Survey your property to find the best location to confine your animals in each type of disaster. Check for alternate water sources in case power is lost and pumps and automatic waterers are not working after the disaster. Do not rely on automatic waterers during a disaster.
- If you have a well, do you have a generator?
- If you think you might need to evacuate your horses from your property, determine several locations (evacuation sites) the animals could be taken, several routes to these locations, and the entry requirements for each. Make arrangements in advance with the owners/operators to accept your horses, and be sure to contact them before taking the horses there. Locations that could be used for evacuation are private stables, racetracks, fair grounds, rodeo grounds, equestrian centers, private farms, and humane societies.
- Permanently identify each horse by tattoo, microchip, brand, tag, photographs (ideally, 4 views—front, rear, left and right side), and/or drawing. Record its age, sex, breed, and color with your record of this identification. Keep this information with your important papers. Also consider visible ID markers during an evacuation, e.g., paint or etch hooves, use neckbands, or paint your telephone number (cell phone?) on side of animal.
- Be sure your horses' vaccination and medical records are written and up-to-date. Check with your veterinarian as to what immunizations are advisable. Have documentation of any medicines with dosing instructions, special feeding instructions, and the name and phone number of the veterinarian who dispensed the drug.
- Place a permanent tag with your name and phone number and the horse's name on each animal's halter.
- Have a First Aid Kit (check with your veterinarian)
 - Leg wraps, track bandage, tape (do NOT use elastic bandages!)
 - Vet wrap
 - Kling or roll gauze, gauze squares
 - Cotton
 - Soap
 - Antiseptic
 - Bandage scissors
 - Two pieces of garden hose
- Prepare an emergency kit consisting of:
 - First aid kit, water bucket, leg wraps/quilts, fire resistant non-nylon leads and halters, portable radio and extra batteries, flashlight and extra batteries, sharp knife, wire cutters, rake/shovel, emergency phone numbers/contact list. Consider "special needs" pets.
- Have trailers, vans, towing vehicles maintained (including tires), full of gas, and ready to move at all times. Accustom your horse to loading and traveling.

PUBLIC EDUCATION

There is likely to be a varied understanding among property owners of the hazards associated with the threat of a wildfire. An approach to wildfire education that emphasizes safety and hazard mitigation on an individual property level should be undertaken, in addition to fire department efforts at risk reduction.

Use these web sites for a list of public education materials, and for general homeowner education:

http://www.fire.ca.gov/communications/communications_firesafety.php

<http://www.safeco.com/safeco/about/giving/firefree.org>

<http://fs.fed.us/fire/nwfire/docs/livingwithfire.pdf>

<http://www.firewise.org>

<http://www.blm.gov/nifc/st/en/prog/fire.1.html>

READY, SET, GO! PROGRAM

The Ready, Set, Go! Program utilizes firefighters to teach individuals who live in high risk wildfire areas and the wildland-urban-interface (WUI) how to best prepare themselves and their properties against fire threats. Ready, Set, Go! works in complimentary and collaborative fashion with Firewise and other existing wildland fire public education efforts. It amplifies their messages to individuals to better achieve the common goal we all share of fire-adapted communities. The RSG program provides the implementation guidance; background knowledge; and presentation tools to assist fire departments in delivering the program message:

Ready – Preparing for the Fire Threat: Be Ready, Be [Firewise](http://www.firewise.org). Take personal responsibility and prepare long before the threat of a wildfire so your home is ready in case of a fire. Create defensible space by clearing brush away from your home. Use fire-resistant landscaping and harden your home with fire-safe construction measures. Assemble emergency supplies and belongings in a safe spot. Make sure all residents residing within the home are on the same page, plan escape routes. For more information about how to be **Ready** for wildland fires, go to [Firewise.org](http://www.firewise.org).

Set – Situational Awareness When a Fire Starts: Pack your vehicle with your emergency items. Stay aware of the latest news from local media and your local fire department for updated information on the fire.

Go – Leave early! Following your Action Plan makes you prepared and firefighters are now able to best maneuver the wildfire and ensuring you and your family's safety.

All homeowners and communities should become familiar with the Ready, Set, Go! program. For more information and to download the free information guide and checklist, please visit:

http://www.readyforwildfire.org/docs/files/File/Ready%20Set%20Go%20Plan%2009_CALFIRE_sm.pdf

APPENDIX B: COLLABORATION

THE NEED FOR A CWPP

In response to the Healthy Forests Restoration Act (HFRA), and in an effort to create incentives, Congress directed interface communities to prepare a Community Wildfire Protection Plan (CWPP). Once completed, a CWPP provides statutory incentives for the federal agencies to consider the priorities of local communities as they develop and implement forest management and hazardous fuel reduction projects. CWPPs can take a variety of forms based on the needs of the people involved in their development. CWPPs may address issues such as wildfire response, hazard mitigation, community preparedness, structure protection, or all of the above. The minimum requirements for a CWPP specify that collaboration between local and state government representatives, in consultation with federal agencies and other interested parties. The plan must exhibit diverse collaboration with an emphasis on involvement of community members/representatives. This appendix describes and documents the process used to collaborate between the core planning group, stakeholders, and community representatives during the development of this plan.

INTER-AGENCY COLLABORATION

Roles and Responsibilities

To be successful, wildfire mitigation in the interface must be a community-based, collaborative effort. Stakeholders and individual fire departments and fire protection districts will have the greatest responsibility for implementing the recommended mitigation projects, including individual and linked defensible space projects. CAL FIRE, the PCRCD, and the USFS are valuable participants in larger fuels reductions projects throughout the area.

Most of the recommendations in this report affect private land or access roads to private land. There are also mitigation recommendations for individual structures, which are the responsibility of the homeowner. Homeowners should, however, consult a local fire or forestry representative to help them implement these recommendations. The best defensible space will be created with oversight and expert advice from the fire department and/or government forestry personnel. One-on-one dialog will continue to build the relationship with community members. This level of involvement will allow agencies to keep track of the progress and update this plan to reflect the latest modifications at the community level.

THE COLLABORATIVE PROCESS

Strategic Planning

The initial stakeholder “kickoff” meeting, held March 22, 2012 in Auburn, brought together CWPP “Core Team” members. This core team included regular members of the Placer County Fire Alliance (PCFA), a group comprised of members from a variety of agencies and organizations within Placer County. Discussion focused on the scope of the project, desired outcomes, and agency participation. The meeting covered introductions, methodology, stakeholder goals, project management, mapping data, and a regional map review. The group helped delineate and define the study area’s community boundaries, areas of special interest and critical infrastructure that would be targeted for assessment. During monthly conference calls, Anchor Point updated members of the PCFA on the progress of the CWPP, collaborated on individual portions of the document, and solicited feedback from stakeholders. These calls were held the third Thursday of each month.

Field tours of the individual FSCs took place during the week of March 19-23, 2012. During these tours, Anchor Point personnel drove through each of the four FSCs, gathering field data on homes, communities, infrastructure, and physical elements of the terrain, such as vegetation and topographic features. This data was incorporated into each community and FSC write-up with the help of local stakeholders.

COMMUNITY OUTREACH

The success of any CWPP is dependent upon community involvement for both strategic input and long-term ownership and implementation. A plan that accurately reflects the community's interests, concerns and priorities will have greater legitimacy and long-term success. The outreach strategy this CWPP employed was a multi-tiered approach that engaged public agencies, interested parties and local organizations in order to raise public awareness and generate public input.

Development of the Placer County CWPP was conducted through an online project collaboration tool known as Basecamp. Basecamp provided a homogeneous means for the sharing of information, data files, mapping, and imagery resources within the core team and provided an open forum for project communications amongst a diverse team of local representatives, fire authorities, forest management, and plan coordinators. Use of the Basecamp tool promoted on-time and on-scale project management and team collaboration in the final development of the CWPP.

Resident surveys were made available via an online link for each of the four FSCs. These surveys were made available to the public and were launched on April 6, 2012 and remained available until July 6. Each survey consisted of 25 questions inquiring on topics such as, but not limited to; important values for the area, concerns for wildfire risk, concerns on wildfire damage to various resources, overall feeling of safety, evacuation awareness, wildfire awareness, preferences on fuel treatments and defensible space, and overall concerns in addressing a wildfire occurrence.

Here are the results for each FSC:

- Auburn FSC – 21 completed surveys
- Foresthill/Iowa Hill FSC – 42 completed surveys
- Lincoln FSC – 2 completed surveys
- Placer Sierra FSC – 13 completed surveys

Results were used in the development of this plan, particularly to inform the values at risk section, and are detailed on the following pages. In addition to answered questions taken directly from the survey, the following were listed as further concerns that residents had.

Auburn FSC:

- Response times during a wildland fire call
- Effects of cutbacks at the local and state level, and the ability to maintain fire coverage
- Neighbors mowing and removing dry vegetation in and around their structures to meet the required defensible space of 100 ft.
- Need for weed and brush management along the Union Pacific railroad access
- Consider using prison crews to perform fuels reduction work
- Concern about the costs associated with wildfire risk reduction, including new taxes
- Need to do more work to remove fuels in and around communities, especially those with one way in and out access
- Consider mandatory inspection programs for residential dwellings in the greater Auburn area.
- Need for a weed abatement program.

Foresthil/Iowa Hill FSC:

- Problems during an evacuation due to the capacity of escape routes. Desire for a system to prioritize evacuees, including the elderly and those with livestock
- Concern that the only way out of town could be blocked or slowed, and that safety zones are not adequate for the number of residents
- Difficulty obtaining fire permits
- Uninhabited lots around homes that pose a fire hazard
- Infrastructure issues within the area, including Sugarpine Reservoir, communication towers, Iowa Hill landline tower, Baker Ranch water, PCWA water and hydro electric system on the Middle Fork American River.
- Concern about wildfire impacts to the watersheds on the Western Slope.
- Need for a class for homeowners who choose to “Shelter in Place”.
- Forced mitigation might be a burden for older people on fixed incomes
- Concern about the costs associated with wildfire risk reduction, including new taxes
- The district does not have enough firefighters to take on a large fire
- Irresponsible homeowners who do not clear their property or just pile in their backyards beyond 100 feet affect those around them
- Concern that firefighters might not respond to certain areas in the district
- Need for a program to help seniors with brush clearing and defensible space work
- Need for more enforcement action to remove hazardous fuels.
- Desire to see testing of the water supply system under simulated wildfire conditions.
- Want a plan to evacuate the disabled and shut-ins

Lincoln FSC:

- No responses.

Placer Sierra FSC:

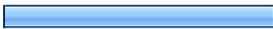
- Short amount of time to burn debris that has been cleared to create defensible space
- Need for forest fuel reduction, and the need to enforce the current defensible space and the residential fire sprinkler protection code requirements
- Need for additional maintenance on public lands, especially highway rights-of-way and Auburn State Recreation Area
- Lack of communication to residents about and during a fire.
- A need for additional (number and quality) ‘fire-breaks’ throughout communities
- Large amount of brush and ladder fuels in medium to large acreage private parcels
- Concern about response time of appropriate aircraft for fire suppression efforts
- Pet and livestock safety and emergency housing arrangements
- Problems with neighbors reluctant/unwilling to clear hazardous brush and slash
- Concern about the costs associated with wildfire risk reduction, including new taxes
- Unpermitted campfires and other unsafe activities on both public and private lands.
- Neighborhood-level prevention efforts should emphasize roadside vegetation control to ensure emergency ingress and egress. Everything else should be left to individual property owners
- Need for more mitigation on public lands
- Find ways to fund chipper or pick-up programs to assist residents after they have cut, so that they will chip instead of burn the remaining debris
- Lack of publicly-funded ‘piped’ water supply, with hydrants, in most rural areas of Placer County
- Elderly or disabled persons who cannot address wildfire issues

The graphics on the following pages provide a visual summary of the respondents’ answers to the posted surveys. Unfortunately, the low number of respondents to each FSC survey does not yield statistically-significant results. Double click on the image below the FSC title to access the complete results for each survey.

GREATER AUBURN AREA FSC

Greater Auburn FSC Public Survey

1. What type of resident are you? Check all that apply.

		Response Percent	Response Count
Full-time resident		90.9%	20
Seasonal resident - spring, summer, fall		0.0%	0
Seasonal resident - winter		0.0%	0
Homeowner		40.9%	9
Owner of undeveloped lot(s)		9.1%	2
Home renter		4.5%	1
Business owner		13.6%	3
answered question			22
skipped question			17

2. What area (community, neighborhood, or subdivision) do you reside in?

	Response Count
	22
answered question	22
skipped question	17

3. What do you value most about living in your area? Rate each from low value = 1 to high value = 5

	1	2	3	4	5	Rating Average	Response Count
Recreation Opportunities	4.5% (1)	4.5% (1)	27.3% (6)	27.3% (6)	36.4% (8)	3.86	22
Maintaining Property Values	0.0% (0)	0.0% (0)	22.7% (5)	27.3% (6)	50.0% (11)	4.27	22
Wildlife	0.0% (0)	0.0% (0)	19.0% (4)	14.3% (3)	66.7% (14)	4.48	21
Views / Natural Beauty	0.0% (0)	4.5% (1)	9.1% (2)	13.6% (3)	72.7% (16)	4.55	22
Access to Public Lands	4.8% (1)	9.5% (2)	23.8% (5)	14.3% (3)	47.6% (10)	3.90	21
Clean Water and Air	0.0% (0)	0.0% (0)	14.3% (3)	19.0% (4)	66.7% (14)	4.52	21
Economic Opportunities	9.1% (2)	13.6% (3)	18.2% (4)	22.7% (5)	36.4% (8)	3.64	22
					answered question		22
					skipped question		17

4. What are your concerns about wildland fire threatening your home? Rate from low = 1 to high = 5.

						Rating Average	Response Count
Damage to Your Home	4.3% (1)	13.0% (3)	17.4% (4)	13.0% (3)	52.2% (12)	3.96	23
Personal Safety and the Safety of Family Members	4.3% (1)	13.0% (3)	13.0% (3)	13.0% (3)	56.5% (13)	4.04	23
Loss of Life	0.0% (0)	13.6% (3)	13.6% (3)	4.5% (1)	68.2% (15)	4.27	22
Economic Disruption	9.5% (2)	9.5% (2)	28.6% (6)	28.6% (6)	23.8% (5)	3.48	21
Damage to the Land and Wildlife	0.0% (0)	8.7% (2)	17.4% (4)	34.8% (8)	39.1% (9)	4.04	23
Damage to the Watershed or Water Supply	0.0% (0)	13.6% (3)	13.6% (3)	45.5% (10)	27.3% (6)	3.86	22
Post-fire Erosion (or Landslides)	4.8% (1)	14.3% (3)	33.3% (7)	28.6% (6)	19.0% (4)	3.43	21
Smoke Impacts	9.5% (2)	14.3% (3)	33.3% (7)	28.6% (6)	14.3% (3)	3.24	21
Property Value Loss	0.0% (0)	13.6% (3)	22.7% (5)	27.3% (6)	36.4% (8)	3.86	22
Loss of Insurability	0.0% (0)	13.6% (3)	27.3% (6)	18.2% (4)	40.9% (9)	3.86	22
answered question							23
skipped question							16

5. Are there any other concerns you have? Please describe and rate from 1-5.

	Response Count
	8
answered question	8
skipped question	31

6. How safe do you feel from wildland fire?

		Response Percent	Response Count
Very Safe		13.6%	3
Reasonably Safe		59.1%	13
Concerned		27.3%	6
Not Safe		0.0%	0
No Opinion		0.0%	0
answered question			22
skipped question			17

7. Have you ever been in Placer County when there has been a wildfire in the vicinity?

		Response Percent	Response Count
Yes		81.8%	18
No		18.2%	4
answered question			22
skipped question			17

8. If you were required to evacuate would you know which route(s) to use?

		Response Percent	Response Count
Yes		72.7%	16
No		27.3%	6
answered question			22
skipped question			17

9. How likely are you to leave your home if it is imminently threatened by a wildland fire?

	Will Leave	More Likely to Leave	More Likely to Stay	Will not Leave	Rating Average	Response Count
	13.6% (3)	45.5% (10)	31.8% (7)	9.1% (2)	2.36	22
answered question						22
skipped question						17

10. Do you have a prearranged meeting place for family members in the event of an evacuation?

		Response Percent	Response Count
Yes		54.5%	12
No		45.5%	10
answered question			22
skipped question			17

11. How likely are you to attend public meetings regarding wildfire safety and pre-planning?

		Response Percent	Response Count
Definitely		22.7%	5
Probably		59.1%	13
Probably Not		18.2%	4
Definitely Not		0.0%	0
answered question			22
skipped question			17

12. If you are interested in attending public meetings concerning fire mitigation and planning, what meeting times would be convenient? (please check all that apply)

		Response Percent	Response Count
Weekday Mornings		19.0%	4
Weekday Afternoons		4.8%	1
Weekday Evenings (after 6:00 PM)		81.0%	17
Saturday Morning		19.0%	4
Saturday Afternoon		14.3%	3
Saturday Evening		4.8%	1
Sunday Morning		9.5%	2
Sunday Afternoon		4.8%	1
Sunday Evening		4.8%	1
answered question			21
skipped question			18

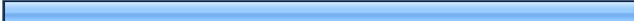
13. Would you be interested in attending an event where you could see examples of defensible space work and thinning? If you are interested, check all that apply.

		Response Percent	Response Count
Weekday Mornings	<input type="checkbox"/>	11.8%	2
Weekday Afternoons	<input type="checkbox"/>	5.9%	1
Weekday Evenings (after 6:00 PM)	<input checked="" type="checkbox"/>	64.7%	11
Saturday Morning	<input checked="" type="checkbox"/>	41.2%	7
Saturday Afternoon	<input checked="" type="checkbox"/>	23.5%	4
Saturday Evening	<input type="checkbox"/>	11.8%	2
Sunday Morning	<input type="checkbox"/>	11.8%	2
Sunday Afternoon	<input type="checkbox"/>	5.9%	1
Sunday Evening	<input type="checkbox"/>	5.9%	1
answered question			17
skipped question			22

14. Rate your comfort level with the following activities. Rate from low = 1 to high = 5.

	1	2	3	4	5	Rating Average	Response Count
Cutting and/or chipping hazardous fuels (trees, limbs, brush and tall grasses) within 100 feet of my home.	4.5% (1)	0.0% (0)	13.6% (3)	9.1% (2)	72.7% (16)	4.45	22
Using prescribed burns to reduce hazardous fuels on adjacent public lands	20.0% (4)	10.0% (2)	5.0% (1)	20.0% (4)	45.0% (9)	3.60	20
Working collaboratively with other homeowners and large landowners to create shaded fuel breaks to stop or slow large wildfires before they reach my home.	4.8% (1)	14.3% (3)	9.5% (2)	23.8% (5)	47.6% (10)	3.95	21
Cutting and chipping hazardous fuels around homes and on adjacent public lands.	4.5% (1)	4.5% (1)	0.0% (0)	22.7% (5)	68.2% (15)	4.45	22
Using prescribed burns (pile burning and field burning) to reduce hazardous fuels on my property and adjacent private property.	14.3% (3)	4.8% (1)	9.5% (2)	14.3% (3)	57.1% (12)	3.95	21
					answered question		22
					skipped question		17

15. Which of the following mitigation actions do you do each spring to prepare for wildland fire season? Check all that apply.

		Response Percent	Response Count
Move firewood and other debris away from my home to a spot up slope and downwind		63.6%	14
Cut grass, shrubs and weeds around my house		100.0%	22
Remove (or rake away) leaves on the ground and roof , and in the gutters		95.5%	21
Repair or install screens to block sparks from blowing in and under my home, eave vents and outbuildings		50.0%	11
Remove flammable objects (including firewood, brush and other materials) from under wooden decks and other wood attachments.		63.6%	14
		answered question	22
		skipped question	17

16. Would you want a fire inspection done for your property or have you ever had one in the past? (Check all applicable)

		Response Percent	Response Count
I would like a fire inspection done on my property by the fire department		27.3%	6
I would feel comfortable doing my own fire inspection, if a checklist were provided		59.1%	13
I am unfamiliar with the fire inspection process		4.5%	1
I don't need a fire inspection on my property		31.8%	7
		answered question	22
		skipped question	17

17. Under which of the following conditions would you be willing to do mitigation work on your property? (Please check all that apply.)

		Response Percent	Response Count
I would do mitigation work regardless of what anyone else does		86.4%	19
Only if the work would be fully funded by government or private agencies		0.0%	0
Only if the work would be cost shared with government or private agencies		0.0%	0
Only if other landowners and managers, such as state, county, or local government agencies are doing work on their land		4.5%	1
Only if I can be convinced the work will improve the survivability of my home		13.6%	3
Under no circumstances		4.5%	1
Other, please specify		13.6%	3
answered question			22
skipped question			17

18. In general, what scale of projects are you most likely to support to protect your community if there was a wildfire?

		Response Percent	Response Count
Landscape scale projects away from the community, focused on ridge lines to protect multiple communities.		4.5%	1
Individual defensible space projects.		50.0%	11
Smaller projects focused on individual community protection, not just individual homes.		22.7%	5
I don't feel that I'm in a position to answer that question without further information.		13.6%	3
Enter an answer		0.0%	0
Other, please specify		9.1%	2
answered question			22
skipped question			17

19. Would you utilize a community-sponsored slash (woody debris) pick-up program, if one were made available?

		Response Percent	Response Count
Yes		86.4%	19
No		13.6%	3
answered question			22
skipped question			17

20. Would you be willing to pay for a community chipping program, and if so, how much?

		Response Percent	Response Count
Only if it were free		31.8%	7
If I was only responsible for \$50/day or less		22.7%	5
If I was only responsible for \$100/day or less		13.6%	3
I'm not overly concerned about the price.		13.6%	3
Other, please specify		18.2%	4
answered question			22
skipped question			17

21. Please rate how you feel about the following statement. "I believe firefighters in the area (Placer County, CAL FIRE, city departments) are well equipped to deal with a wildland fire and capable of mounting an effective response".

		Response Percent	Response Count
Strongly Agree		33.3%	7
Somewhat Agree		42.9%	9
Somewhat Disagree		0.0%	0
Strongly Disagree		0.0%	0
No Opinion		19.0%	4
Other, please specify		4.8%	1
answered question			21
skipped question			18

22. What is your knowledge and experience level concerning wildfire? (Please check all that apply.)

		Response Percent	Response Count
Current or former professional wildland firefighter		14.3%	3
Current or former volunteer firefighter		0.0%	0
A wildland fire has threatened my home or community		52.4%	11
A wildland fire has never threatened my home or community		23.8%	5
I am very knowledgeable regarding wildland fire issues		9.5%	2
I have some familiarity with wildland fire issues		38.1%	8
I have little or no familiarity with wildland fire issues		14.3%	3
I have been affected by wildfire in the past, including property loss or damage		28.6%	6
answered question			21
skipped question			18

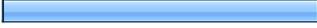
23. What other concerns/input do you have related to the Fire Safe Council or wildland fire issues that were not addressed by the above questions?

	Response Count
	5
answered question	5
skipped question	34

24. Would you be willing to help organize educational and planning meetings regarding fire in your community?

		Response Percent	Response Count
Yes		38.1%	8
No		61.9%	13
answered question			21
skipped question			18

25. Would you join a volunteer organization that focuses on annual activities that remove hazardous fuels and manages mitigation activities in your town or neighborhoods?

		Response Percent	Response Count
Yes		52.4%	11
No		47.6%	10
answered question			21
skipped question			18

26. (Optional) Please give us your name and contact information if you are interested in staying involved in wildfire mitigation in the future.

	Response Percent	Response Count
answered question		0
skipped question		39

FORESTHILL / IOWA HILL FSC

Foresthill/Iowa Hill Divide Community Wildfire Protection Plan Survey for Residents

1. What type of resident are you? Check all that apply.

		Response Percent	Response Count
Full-time resident		97.6%	41
Seasonal resident - spring, summer, fall	<input type="checkbox"/>	2.4%	1
Seasonal resident - winter		0.0%	0
Homeowner		33.3%	14
Owner of undeveloped lot(s)	<input type="checkbox"/>	4.8%	2
Home renter		0.0%	0
Business owner	<input type="checkbox"/>	4.8%	2
answered question			42
skipped question			23

2. What area (community, neighborhood, or subdivision) do you reside in?

	Response Count
	41
answered question	41
skipped question	24

3. What do you value most about living in your area? Rate each from low value = 1 to high value = 5

	1	2	3	4	5	Rating Average	Response Count
Recreation Opportunities	4.8% (2)	11.9% (5)	21.4% (9)	35.7% (15)	26.2% (11)	3.67	42
Maintaining Property Values	9.5% (4)	4.8% (2)	19.0% (8)	26.2% (11)	40.5% (17)	3.83	42
Wildlife	2.4% (1)	0.0% (0)	9.5% (4)	38.1% (16)	50.0% (21)	4.33	42
Views / Natural Beauty	2.4% (1)	0.0% (0)	2.4% (1)	33.3% (14)	61.9% (26)	4.52	42
Access to Public Lands	2.4% (1)	12.2% (5)	14.6% (6)	31.7% (13)	39.0% (16)	3.93	41
Clean Water and Air	2.4% (1)	0.0% (0)	2.4% (1)	19.0% (8)	76.2% (32)	4.67	42
Economic Opportunities	25.0% (10)	27.5% (11)	30.0% (12)	10.0% (4)	7.5% (3)	2.48	40
Family and Friends	7.1% (3)	9.5% (4)	14.3% (6)	35.7% (15)	33.3% (14)	3.79	42
Small Town Atmosphere	4.8% (2)	2.4% (1)	16.7% (7)	26.2% (11)	50.0% (21)	4.14	42
Sense of Security / Lack of Crime	7.1% (3)	2.4% (1)	11.9% (5)	33.3% (14)	45.2% (19)	4.07	42
	37.5% (6)	0.0% (0)	25.0% (4)	6.3% (1)	31.3% (5)	2.94	16
						answered question	42
						skipped question	23

4. What are your concerns about wildland fire threatening your home? Rate from low = 1 to high = 5.

						Rating Average	Response Count
Damage to Your Home	2.4% (1)	0.0% (0)	4.9% (2)	31.7% (13)	61.0% (25)	4.49	41
Personal Safety and the Safety of Family Members	2.4% (1)	0.0% (0)	2.4% (1)	14.6% (6)	80.5% (33)	4.71	41
Loss of Life	2.4% (1)	4.9% (2)	4.9% (2)	12.2% (5)	75.6% (31)	4.54	41
Economic Disruption	5.0% (2)	7.5% (3)	25.0% (10)	27.5% (11)	35.0% (14)	3.80	40
Damage to the Land and Wildlife	2.5% (1)	5.0% (2)	10.0% (4)	32.5% (13)	50.0% (20)	4.23	40
Damage to the Watershed or Water Supply	2.5% (1)	5.0% (2)	10.0% (4)	30.0% (12)	52.5% (21)	4.25	40
Post-fire Erosion (or Landslides)	2.5% (1)	7.5% (3)	27.5% (11)	20.0% (8)	42.5% (17)	3.93	40
Smoke Impacts	5.0% (2)	7.5% (3)	32.5% (13)	22.5% (9)	32.5% (13)	3.70	40
Property Value Loss	2.4% (1)	7.3% (3)	19.5% (8)	19.5% (8)	51.2% (21)	4.10	41
Loss of Insurability	2.4% (1)	4.9% (2)	22.0% (9)	12.2% (5)	58.5% (24)	4.20	41
					answered question		42
					skipped question		23

5. Are there any other concerns you have? Please describe and rate from 1-5.

	Response Count
	12
answered question	12
skipped question	53

6. How safe do you feel from wildland fire?

	Response Percent	Response Count
Very Safe 	2.4%	1
Reasonably Safe 	39.0%	16
Concerned 	48.8%	20
Not Safe 	9.8%	4
No Opinion	0.0%	0
answered question		41
skipped question		24

7. Have you ever been in Placer County when there has been a wildfire in the vicinity?

	Response Percent	Response Count
Yes 	87.8%	36
No 	12.2%	5
answered question		41
skipped question		24

8. If you were required to evacuate would you know which route(s) to use?

		Response Percent	Response Count
Yes		87.8%	36
No		12.2%	5
answered question			41
skipped question			24

9. How likely are you to leave your home if it is imminently threatened by a wildland fire?

	Will Leave	More Likely to Leave	More Likely to Stay	Will not Leave	Rating Average	Response Count
	36.6% (15)	39.0% (16)	22.0% (9)	2.4% (1)	1.90	41
answered question						41
skipped question						24

10. Do you have a prearranged meeting place for family members in the event of an evacuation?

		Response Percent	Response Count
Yes		56.1%	23
No		43.9%	18
answered question			41
skipped question			24

11. How likely are you to attend public meetings regarding wildfire safety and pre-planning?

		Response Percent	Response Count
Definitely		22.0%	9
Probably		58.5%	24
Probably Not		19.5%	8
Definitely Not		0.0%	0
answered question			41
skipped question			24

12. If you are interested in attending public meetings concerning fire mitigation and planning, what meeting times would be convenient? (please check all that apply)

		Response Percent	Response Count
Weekday Mornings		21.1%	8
Weekday Afternoons		21.1%	8
Weekday Evenings (after 6:00 PM)		65.8%	25
Saturday Morning		26.3%	10
Saturday Afternoon		39.5%	15
Saturday Evening		15.8%	6
Sunday Morning		13.2%	5
Sunday Afternoon		7.9%	3
Sunday Evening		5.3%	2
answered question			38
skipped question			27

13. Would you be interested in attending an event where you could see examples of defensible space work and thinning? If you are interested, check all that apply.

		Response Percent	Response Count
Weekday Mornings	<input type="checkbox"/>	26.7%	8
Weekday Afternoons	<input type="checkbox"/>	26.7%	8
Weekday Evenings (after 6:00 PM)	<input type="checkbox"/>	26.7%	8
Saturday Morning	<input type="checkbox"/>	50.0%	15
Saturday Afternoon	<input type="checkbox"/>	50.0%	15
Saturday Evening	<input type="checkbox"/>	13.3%	4
Sunday Morning	<input type="checkbox"/>	16.7%	5
Sunday Afternoon	<input type="checkbox"/>	10.0%	3
Sunday Evening	<input type="checkbox"/>	3.3%	1
answered question			30
skipped question			35

APPENDIX B

14. Rate your comfort level with the following activities. Rate from low = 1 to high = 5.

	1	2	3	4	5	Rating Average	Response Count
Cutting and chipping hazardous fuels (trees, limbs, brush and tall grasses) within 100 feet of my home.	2.4% (1)	0.0% (0)	12.2% (5)	17.1% (7)	68.3% (28)	4.49	41
Using prescribed burns to reduce hazardous fuels on adjacent federal lands (US Forest Service and BLM).	9.8% (4)	9.8% (4)	9.8% (4)	14.6% (6)	56.1% (23)	3.98	41
Working collaboratively with other homeowners and large landowners to create shaded fuel breaks to stop or slow large wildfires before they reach my home.	2.4% (1)	2.4% (1)	17.1% (7)	17.1% (7)	61.0% (25)	4.32	41
Cutting and chipping hazardous fuels on around homes and on adjacent federal lands.	4.9% (2)	4.9% (2)	7.3% (3)	22.0% (9)	61.0% (25)	4.29	41
Using prescribed burns to reduce hazardous fuels on my property and adjacent private property.	9.8% (4)	4.9% (2)	4.9% (2)	31.7% (13)	48.8% (20)	4.05	41
					answered question		41
					skipped question		24

15. Which of the following mitigation actions do you do each spring to prepare for wildland fire season? Check all that apply.

		Response Percent	Response Count
Move firewood away from my home to a spot up slope and downwind		52.5%	21
Cut grass, shrubs and weeds around my house		92.5%	37
Remove (or rake away) pine needles on the ground and roof , and in the gutters		100.0%	40
Repair or install screens to block sparks from blowing in and under my home, eave vents and outbuildings		55.0%	22
Remove flammable objects (including firewood, brush and other materials) from under my wooden decks.		77.5%	31
answered question			40
skipped question			25

16. Under which of the following conditions would you be willing to do mitigation work on your property? (Please check all that apply.)

		Response Percent	Response Count
I would do mitigation work regardless of what anyone else does		92.7%	38
Only if the work would be fully funded by government or private agencies		2.4%	1
Only if the work would be cost shared with government or private agencies		7.3%	3
Only if other landowners and managers, such as open space or local government agencies, are doing work on their land		9.8%	4
Only if I can be convinced the work will improve the survivability of my home		0.0%	0
Under no circumstances		2.4%	1
Other, please specify		7.3%	3
answered question			41
skipped question			24

17. Would you utilize a community-sponsored slash (woody debris) pick-up program, if one were made available?

		Response Percent	Response Count
Yes		80.0%	32
No		20.0%	8
answered question			40
skipped question			25

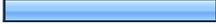
18. Would you be willing to pay for a community chipping program, and if so, how much?

		Response Percent	Response Count
Only if it were free		25.0%	10
If I was only responsible for \$50/day or less		25.0%	10
If I was only responsible for \$100/day or less		0.0%	0
I'm not overly concerned about the price.		17.5%	7
Other, please specify		32.5%	13
answered question			40
skipped question			25

19. Please rate how you feel about the following statement. "I believe firefighters in the area (Foresthill, USFS, CAL FIRE, Placer County Fire - Iowa Hill) are well equipped to deal with a wildland fire and capable of mounting an effective response".

		Response Percent	Response Count
Strongly Agree		36.6%	15
Somewhat Agree		43.9%	18
Somewhat Disagree		4.9%	2
Strongly Disagree		0.0%	0
No Opinion		4.9%	2
Other, please specify		9.8%	4
answered question			41
skipped question			24

20. What are your knowledge and experience levels concerning wildfire? (Please check all that apply.)

		Response Percent	Response Count
Current or former professional wildland firefighter		12.2%	5
Current or former volunteer firefighter		12.2%	5
A wildland fire has threatened my home or community		31.7%	13
A wildland fire has never threatened my home or community		7.3%	3
I am very knowledgeable regarding wildland fire issues		31.7%	13
I have some familiarity with wildland fire issues		53.7%	22
I have little or no familiarity with wildland fire issues		7.3%	3
answered question			41
skipped question			24

21. What other concerns/input do you have related to the fire safe council or wildland fire issues that were not addressed by the above questions?

	Response Count
	8
answered question	8
skipped question	57

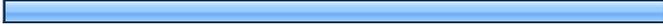
22. Would you be willing to help organize educational and planning meetings regarding fire in your community?

		Response Percent	Response Count
Yes		34.2%	13
No		65.8%	25
answered question			38
skipped question			27

23. Would you join a volunteer organization that focuses on annual activities that remove hazardous fuels and manages mitigation activities in your town or neighborhoods?

		Response Percent	Response Count
Yes		44.7%	17
No		55.3%	21
answered question			38
skipped question			27

24. Please give us your name and contact information if you are interested in staying involved in wildfire mitigation in the future.

		Response Percent	Response Count
Name		100.0%	18
Phone number		83.3%	15
E-mail address		100.0%	18
		answered question	18
		skipped question	47

PLACER-SIERRA FSC

Placer Sierra FSC Public Survey

1. What type of resident are you? Check all that apply.

		Response Percent	Response Count
Full-time resident		92.9%	13
Seasonal resident - spring, summer, fall		7.1%	1
Seasonal resident - winter		0.0%	0
Homeowner		50.0%	7
Owner of undeveloped lot(s)		7.1%	1
Home renter		7.1%	1
Business owner		7.1%	1
Other, please specify		0.0%	0
answered question			14
skipped question			5

2. What area (community, neighborhood, or subdivision) do you reside in?

	Response Count
	13
answered question	13
skipped question	6

3. What do you value most about living in your area? Rate each from low value = 1 to high value = 5

	1	2	3	4	5	Rating Average	Response Count
Recreation Opportunities	7.1% (1)	0.0% (0)	0.0% (0)	35.7% (5)	57.1% (8)	4.36	14
Maintaining Property Values	0.0% (0)	7.1% (1)	42.9% (6)	21.4% (3)	28.6% (4)	3.71	14
Wildlife	0.0% (0)	0.0% (0)	14.3% (2)	42.9% (6)	42.9% (6)	4.29	14
Views / Natural Beauty	0.0% (0)	0.0% (0)	0.0% (0)	21.4% (3)	78.6% (11)	4.79	14
Access to Public Lands	7.1% (1)	14.3% (2)	7.1% (1)	35.7% (5)	35.7% (5)	3.79	14
Clean Water and Air	0.0% (0)	7.1% (1)	0.0% (0)	14.3% (2)	78.6% (11)	4.64	14
Economic Opportunities	21.4% (3)	14.3% (2)	21.4% (3)	35.7% (5)	7.1% (1)	2.93	14
Places of Historical or Cultural Significance	7.7% (1)	7.7% (1)	23.1% (3)	30.8% (4)	30.8% (4)	3.69	13
answered question							14
skipped question							5

4. What are your concerns about wildland fire threatening your home? Rate from low = 1 to high = 5.

						Rating Average	Response Count
Damage to Your Home	7.1% (1)	0.0% (0)	21.4% (3)	21.4% (3)	50.0% (7)	4.07	14
Personal Safety and the Safety of Family Members	0.0% (0)	7.1% (1)	14.3% (2)	0.0% (0)	78.6% (11)	4.50	14
Loss of Life	0.0% (0)	7.1% (1)	14.3% (2)	0.0% (0)	78.6% (11)	4.50	14
Economic Disruption	21.4% (3)	7.1% (1)	35.7% (5)	14.3% (2)	21.4% (3)	3.07	14
Damage to the Land and Wildlife	0.0% (0)	0.0% (0)	35.7% (5)	14.3% (2)	50.0% (7)	4.14	14
Damage to the Watershed or Water Supply	7.1% (1)	0.0% (0)	7.1% (1)	42.9% (6)	42.9% (6)	4.14	14
Post-fire Erosion (or Landslides)	7.1% (1)	7.1% (1)	14.3% (2)	28.6% (4)	42.9% (6)	3.93	14
Smoke Impacts	14.3% (2)	7.1% (1)	42.9% (6)	14.3% (2)	21.4% (3)	3.21	14
Property Value Loss	7.1% (1)	14.3% (2)	28.6% (4)	14.3% (2)	35.7% (5)	3.57	14
Loss of Insurability	21.4% (3)	0.0% (0)	14.3% (2)	21.4% (3)	42.9% (6)	3.64	14
answered question							14
skipped question							5

5. Are there any other concerns you have? Please describe and rate from 1-5.

	Response Count
	6
answered question	6
skipped question	13

6. How safe do you feel from wildland fire?

		Response Percent	Response Count
Very Safe		0.0%	0
Reasonably Safe		50.0%	7
Concerned		42.9%	6
Not Safe		7.1%	1
No Opinion		0.0%	0
answered question			14
skipped question			5

7. Have you ever been in Placer County when there has been a wildfire in the vicinity?

		Response Percent	Response Count
Yes		92.9%	13
No		7.1%	1
answered question			14
skipped question			5

8. If, in the future, you were required to evacuate would you know which route(s) to use?

		Response Percent	Response Count
Yes		71.4%	10
No		28.6%	4
answered question			14
skipped question			5

9. How likely are you to leave your home if it is imminently threatened by a wildland fire?

	Will Leave	More Likely to Leave	More Likely to Stay	Will not Leave	Rating Average	Response Count
	50.0% (7)	21.4% (3)	14.3% (2)	14.3% (2)	1.93	14
answered question						14
skipped question						5

10. Do you have a prearranged meeting place for family members in the event of an evacuation?

		Response Percent	Response Count
Yes		21.4%	3
No		78.6%	11
answered question			14
skipped question			5

11. How likely are you to attend public meetings regarding wildfire safety and pre-planning?

		Response Percent	Response Count
Definitely		35.7%	5
Probably		50.0%	7
Probably Not		14.3%	2
Definitely Not		0.0%	0
answered question			14
skipped question			5

12. If you are interested in attending public meetings concerning fire mitigation and planning, what meeting times would be convenient? (please check all that apply)

		Response Percent	Response Count
Weekday Mornings		42.9%	6
Weekday Afternoons		50.0%	7
Weekday Evenings (after 6:00 PM)		78.6%	11
Saturday Morning		21.4%	3
Saturday Afternoon		35.7%	5
Saturday Evening		7.1%	1
Sunday Morning		21.4%	3
Sunday Afternoon		28.6%	4
Sunday Evening		7.1%	1
answered question			14
skipped question			5

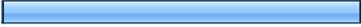
13. Would you be interested in attending an event where you could see examples of defensible space work and thinning? If you are interested, check all that apply.

		Response Percent	Response Count
Weekday Mornings	<input type="checkbox"/>	20.0%	2
Weekday Afternoons	<input type="checkbox"/>	30.0%	3
Weekday Evenings (after 6:00 PM)	<input type="checkbox"/>	40.0%	4
Saturday Morning	<input type="checkbox"/>	40.0%	4
Saturday Afternoon	<input type="checkbox"/>	40.0%	4
Saturday Evening	<input type="checkbox"/>	0.0%	0
Sunday Morning	<input type="checkbox"/>	20.0%	2
Sunday Afternoon	<input type="checkbox"/>	30.0%	3
Sunday Evening	<input type="checkbox"/>	0.0%	0
answered question			10
skipped question			9

14. Rate your comfort level with the following activities. Rate from low = 1 to high = 5.

	1	2	3	4	5	Rating Average	Response Count
Cutting and chipping hazardous fuels (trees, limbs, brush and tall grasses) within 100 feet of my home.	0.0% (0)	0.0% (0)	7.7% (1)	7.7% (1)	84.6% (11)	4.77	13
Using prescribed burns to reduce hazardous fuels on adjacent federal lands (US Forest Service and BLM).	15.4% (2)	7.7% (1)	30.8% (4)	30.8% (4)	15.4% (2)	3.23	13
Working collaboratively with other homeowners and large landowners to create shaded fuel breaks to stop or slow large wildfires before they reach my home.	7.7% (1)	0.0% (0)	0.0% (0)	30.8% (4)	61.5% (8)	4.38	13
Cutting and chipping hazardous fuels around homes and on adjacent federal lands.	0.0% (0)	0.0% (0)	0.0% (0)	30.8% (4)	69.2% (9)	4.69	13
Using prescribed burns to reduce hazardous fuels on my property and adjacent private property.	30.8% (4)	7.7% (1)	23.1% (3)	15.4% (2)	23.1% (3)	2.92	13
answered question							13
skipped question							6

15. Which of the following mitigation actions do you do each spring to prepare for wildland fire season? Check all that apply.

		Response Percent	Response Count
Move firewood away from my home to a spot up slope and downwind		23.1%	3
Cut grass, shrubs and weeds around my house		84.6%	11
Remove (or rake away) pine needles on the ground and roof , and in the gutters		84.6%	11
Repair or install screens to block sparks from blowing in and under my home, eave vents and outbuildings		30.8%	4
Remove flammable objects (including firewood, brush and other materials) from under my wooden decks.		53.8%	7
answered question			13
skipped question			6

16. Under which of the following conditions would you be willing to do mitigation work on your property? (Please check all that apply.)

		Response Percent	Response Count
I would do mitigation work regardless of what anyone else does		92.3%	12
Only if the work would be fully funded by government or private agencies		0.0%	0
Only if the work would be cost shared with government or private agencies		0.0%	0
Only if other landowners and managers, such as open space or local government agencies, are doing work on their land adjacent or near mine		0.0%	0
Only if I can be convinced the work will improve the survivability of my home		0.0%	0
Under no circumstances		0.0%	0
Other, please specify		7.7%	1
answered question			13
skipped question			6

17. In general, what scale of projects are you most likely to support to protect your community if there was a wildfire?

		Response Percent	Response Count
Landscape scale projects away from the community, focused on ridge lines to protect multiple communities.		15.4%	2
Individual defensible space projects.		7.7%	1
Smaller projects focused on individual community protection, not just individual homes.		46.2%	6
I don't feel that I'm in a position to answer that question without further information.		7.7%	1
Other, please specify		23.1%	3
answered question			13
skipped question			6

18. Would you utilize a community-sponsored slash (woody debris) pick-up program, if one were made available?

		Response Percent	Response Count
Yes		92.3%	12
No		7.7%	1
answered question			13
skipped question			6

19. Would you be willing to pay for a community chipping or slash pick-up program, and if so, how much?

		Response Percent	Response Count
Only if it were free		15.4%	2
If the cost was \$50/day or less		38.5%	5
If the cost was \$100/day or less		15.4%	2
I'm not overly concerned about the price.		7.7%	1
Other, please specify		23.1%	3
answered question			13
skipped question			6

20. Please rate how you feel about the following statement. "I believe firefighters in the area (Placer County, USFS, CAL FIRE) are well equipped to deal with a wildland fire and capable of mounting an effective response".

		Response Percent	Response Count
Strongly Agree		23.1%	3
Somewhat Agree		46.2%	6
Somewhat Disagree		7.7%	1
Strongly Disagree		0.0%	0
No Opinion		15.4%	2
Other, please specify		7.7%	1
answered question			13
skipped question			6

21. What are your knowledge and experience levels concerning wildfire? (Please check all that apply.)

		Response Percent	Response Count
Current or former professional wildland firefighter		15.4%	2
Current or former volunteer firefighter		7.7%	1
A wildland fire has threatened my home or community		30.8%	4
A wildland fire has never threatened my home or community		15.4%	2
I am very knowledgeable regarding wildland fire issues		46.2%	6
I have some familiarity with wildland fire issues		15.4%	2
I have little or no familiarity with wildland fire issues		7.7%	1
answered question			13
skipped question			6

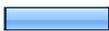
22. What other concerns/input do you have related to the fire safe council or wildland fire issues that were not addressed by the above questions?

	Response Count
	8
answered question	8
skipped question	11

23. Would you be willing to help organize educational and planning meetings regarding fire in your community?

		Response Percent	Response Count
Yes		53.8%	7
No		46.2%	6
answered question			13
skipped question			6

24. Would you join a volunteer organization that focuses on annual activities that remove hazardous fuels and manages mitigation activities in your town or neighborhoods?

		Response Percent	Response Count
Yes		84.6%	11
No		15.4%	2
answered question			13
skipped question			6

25. Please give us your name and contact information if you are interested in staying involved in wildfire mitigation in the future.

		Response Percent	Response Count
Name		100.0%	7
Phone number		85.7%	6
E-mail address		100.0%	7
answered question			7
skipped question			12

GREATER LINCOLN FSC

There were only two completed responses to the Greater Lincoln FSC public survey. From these two completed surveys, many questions were skipped. The responses have been included, but it should be noted that no conclusions and decisions should be made with only two surveys.

Greater Lincoln FSC Public Survey

1. What type of resident are you? Check all that apply.

	Response Percent	Response Count
Full-time resident	100.0%	2
Seasonal resident - spring, summer, fall	0.0%	0
Seasonal resident - winter	0.0%	0
Homeowner	50.0%	1
Owner of undeveloped lot(s)	0.0%	0
Home renter	0.0%	0
Business owner	0.0%	0
answered question		2
skipped question		3

2. What area (community, neighborhood, or subdivision) do you reside in?

	Response Count
	2
answered question	2
skipped question	3

3. What do you value most about living in your area? Rate each from low value = 1 to high value = 5

	1	2	3	4	5	Rating Average	Response Count
Recreation Opportunities	0.0% (0)	0.0% (0)	0.0% (0)	50.0% (1)	50.0% (1)	4.50	2
Maintaining Property Values	0.0% (0)	0.0% (0)	50.0% (1)	0.0% (0)	50.0% (1)	4.00	2
Wildlife	0.0% (0)	0.0% (0)	0.0% (0)	50.0% (1)	50.0% (1)	4.50	2
Views / Natural Beauty	0.0% (0)	0.0% (0)	0.0% (0)	50.0% (1)	50.0% (1)	4.50	2
Access to Public Lands	0.0% (0)	50.0% (1)	0.0% (0)	0.0% (0)	50.0% (1)	3.50	2
Clean Water and Air	0.0% (0)	0.0% (0)	50.0% (1)	0.0% (0)	50.0% (1)	4.00	2
Economic Opportunities	0.0% (0)	0.0% (0)	50.0% (1)	0.0% (0)	50.0% (1)	4.00	2
answered question							2
skipped question							3

4. What are your concerns about wildland fire threatening your home? Rate from low = 1 to high = 5.

						Rating Average	Response Count
Damage to Your Home	0.0% (0)	0.0% (0)	0.0% (0)	50.0% (1)	50.0% (1)	4.50	2
Personal Safety and the Safety of Family Members	0.0% (0)	0.0% (0)	0.0% (0)	50.0% (1)	50.0% (1)	4.50	2
Loss of Life	0.0% (0)	0.0% (0)	50.0% (1)	0.0% (0)	50.0% (1)	4.00	2
Economic Disruption	0.0% (0)	0.0% (0)	100.0% (2)	0.0% (0)	0.0% (0)	3.00	2
Damage to the Land and Wildlife	0.0% (0)	0.0% (0)	50.0% (1)	50.0% (1)	0.0% (0)	3.50	2
Damage to the Watershed or Water Supply	0.0% (0)	0.0% (0)	50.0% (1)	50.0% (1)	0.0% (0)	3.50	2
Post-fire Erosion (or Landslides)	0.0% (0)	0.0% (0)	50.0% (1)	0.0% (0)	50.0% (1)	4.00	2
Smoke Impacts	0.0% (0)	0.0% (0)	100.0% (2)	0.0% (0)	0.0% (0)	3.00	2
Property Value Loss	0.0% (0)	0.0% (0)	0.0% (0)	50.0% (1)	50.0% (1)	4.50	2
Loss of Insurability	0.0% (0)	0.0% (0)	50.0% (1)	0.0% (0)	50.0% (1)	4.00	2
answered question							2
skipped question							3

5. Are there any other concerns you have? Please describe and rate from 1-5.

	Response Count
	0
answered question	0
skipped question	5

6. How safe do you feel from wildland fire?

		Response Percent	Response Count
Very Safe		0.0%	0
Reasonably Safe		50.0%	1
Concerned		50.0%	1
Not Safe		0.0%	0
No Opinion		0.0%	0
answered question			2
skipped question			3

7. Have you ever been in Placer County when there has been a wildfire in the vicinity?

		Response Percent	Response Count
Yes		100.0%	2
No		0.0%	0
answered question			2
skipped question			3

8. If you were required to evacuate, would you know which route(s) to use?

		Response Percent	Response Count
Yes		100.0%	2
No		0.0%	0
answered question			2
skipped question			3

9. Do you have an alternative evacuation route?

		Response Percent	Response Count
Yes		100.0%	2
No		0.0%	0
answered question			2
skipped question			3

10. How likely are you to leave your home if it is imminently threatened by a wildland fire?

	Will Leave	More Likely to Leave	More Likely to Stay	Will not Leave	Rating Average	Response Count
	0.0% (0)	0.0% (0)	100.0% (2)	0.0% (0)	3.00	2
answered question						2
skipped question						3

11. Do you have a prearranged meeting place for family members in the event of an evacuation?

		Response Percent	Response Count
Yes		50.0%	1
No		50.0%	1
answered question			2
skipped question			3

12. How likely are you to attend public meetings regarding wildfire safety and pre-planning?

		Response Percent	Response Count
Definitely		50.0%	1
Probably		50.0%	1
Probably Not		0.0%	0
Definitely Not		0.0%	0
answered question			2
skipped question			3

13. If you are interested in attending public meetings concerning fire mitigation and planning, what meeting times would be convenient? (please check all that apply)

		Response Percent	Response Count
Weekday Mornings		50.0%	1
Weekday Afternoons		50.0%	1
Weekday Evenings (after 6:00 PM)		100.0%	2
Saturday Morning		50.0%	1
Saturday Afternoon		50.0%	1
Saturday Evening		50.0%	1
Sunday Morning		50.0%	1
Sunday Afternoon		50.0%	1
Sunday Evening		50.0%	1
answered question			2
skipped question			3

12. How likely are you to attend public meetings regarding wildfire safety and pre-planning?

		Response Percent	Response Count
Definitely		50.0%	1
Probably		50.0%	1
Probably Not		0.0%	0
Definitely Not		0.0%	0
answered question			2
skipped question			3

13. If you are interested in attending public meetings concerning fire mitigation and planning, what meeting times would be convenient? (please check all that apply)

		Response Percent	Response Count
Weekday Mornings		50.0%	1
Weekday Afternoons		50.0%	1
Weekday Evenings (after 6:00 PM)		100.0%	2
Saturday Morning		50.0%	1
Saturday Afternoon		50.0%	1
Saturday Evening		50.0%	1
Sunday Morning		50.0%	1
Sunday Afternoon		50.0%	1
Sunday Evening		50.0%	1
answered question			2
skipped question			3

14. Would you be interested in attending an event where you could see examples of defensible space work and thinning? If you are interested, check all that apply.

		Response Percent	Response Count
Weekday Mornings		0.0%	0
Weekday Afternoons		0.0%	0
Weekday Evenings (after 6:00 PM)		100.0%	1
Saturday Morning		0.0%	0
Saturday Afternoon		0.0%	0
Saturday Evening		0.0%	0
Sunday Morning		0.0%	0
Sunday Afternoon		0.0%	0
Sunday Evening		0.0%	0
		answered question	1
		skipped question	4

15. Rate your comfort level with the following activities. Rate from low = 1 to high = 5.

	1	2	3	4	5	Rating Average	Response Count
Cutting and chipping hazardous fuels (trees, limbs, brush and tall grasses) within 100 feet of my home.	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	100.0% (2)	5.00	2
Using prescribed burns to reduce hazardous fuels on adjacent public lands	0.0% (0)	0.0% (0)	0.0% (0)	50.0% (1)	50.0% (1)	4.50	2
Working collaboratively with other homeowners and large landowners to create fuel breaks to stop or slow large wildfires before they reach my home.	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	100.0% (2)	5.00	2
Cutting and chipping hazardous fuels on around homes and on adjacent federal lands.	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	100.0% (2)	5.00	2
Using prescribed burns (including pile, field and ditch burning) to reduce hazardous fuels on my property and adjacent private property.	0.0% (0)	0.0% (0)	0.0% (0)	50.0% (1)	50.0% (1)	4.50	2
answered question							2
skipped question							3

16. Which of the following mitigation actions do you do each spring to prepare for wildland fire season? Check all that apply.

		Response Percent	Response Count
Move firewood and other debris away from my home		100.0%	2
Cut grass, shrubs and weeds around my house		100.0%	2
Remove (or rake away) leaves on the ground and roof , and in the gutters		100.0%	2
Repair or install screens to block sparks from blowing in and under my home, eave vents and outbuildings		50.0%	1
Remove flammable objects (including firewood, brush and other materials) from under my wooden decks.		100.0%	2
Mow and cut vegetation around my property boundary or near roads (including disking)		100.0%	2
		answered question	2
		skipped question	3

17. Under which of the following conditions would you be willing to do mitigation work on your property? (Please check all that apply.)

	Response Percent	Response Count
I would do mitigation work regardless of what anyone else does	100.0%	2
Only if the work would be fully funded by government or private agencies	0.0%	0
Only if the work would be cost shared with government or private agencies	0.0%	0
Only if other landowners and managers, such as open space or local government agencies, are doing work on their land	0.0%	0
Only if I can be convinced the work will improve the survivability of my home	0.0%	0
Under no circumstances	0.0%	0
Other, please specify	0.0%	0
	answered question	2
	skipped question	3

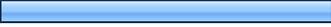
18. In general, what scale of projects are you most likely to support to protect your community if there was a wildfire?

		Response Percent	Response Count
Large (landscape-scale) projects away from the community, focused on ridge lines to protect multiple communities.		0.0%	0
Individual defensible space projects.		0.0%	0
Smaller projects focused on individual community protection, not just individual homes.		100.0%	2
I don't feel that I'm in a position to answer that question without further information.		0.0%	0
Other, please specify		0.0%	0
answered question			2
skipped question			3

19. Would you utilize a community-sponsored slash (woody debris) pick-up program, if one were made available?

		Response Percent	Response Count
Yes		100.0%	2
No		0.0%	0
answered question			2
skipped question			3

20. Would you be willing to pay for a community chipping program, and if so, how much?

		Response Percent	Response Count
Only if it were free		50.0%	1
If I was only responsible for \$50/day or less		0.0%	0
If I was only responsible for \$100/day or less		0.0%	0
I'm not overly concerned about the price.		50.0%	1
Other, please specify		0.0%	0
answered question			2
skipped question			3

21. Please rate how you feel about the following statement. "I believe firefighters in the area (Placer County, CAL FIRE, local departments) are well equipped to deal with a wildland fire and capable of mounting an effective response".

		Response Percent	Response Count
Strongly Agree		50.0%	1
Somewhat Agree		50.0%	1
Somewhat Disagree		0.0%	0
Strongly Disagree		0.0%	0
No Opinion		0.0%	0
Other, please specify		0.0%	0
answered question			2
skipped question			3

22. What are your knowledge and experience levels concerning wildfire? (Please check all that apply.)

		Response Percent	Response Count
Current or former professional wildland firefighter		0.0%	0
Current or former volunteer firefighter		100.0%	2
A wildland fire has threatened my home or community		100.0%	2
A wildland fire has never threatened my home or community		0.0%	0
I am very knowledgeable regarding wildland fire issues		100.0%	2
I have some familiarity with wildland fire issues		0.0%	0
I have little or no familiarity with wildland fire issues		0.0%	0
answered question			2
skipped question			3

23. What other concerns/input do you have related to the Fire Safe Council or wildland fire issues that were not addressed by the above questions?

	Response Count
	0
answered question	0
skipped question	5

24. Would you be willing to help organize educational and planning meetings regarding fire in your community?

		Response Percent	Response Count
Yes		100.0%	2
No		0.0%	0
answered question			2
skipped question			3

25. Would you join a volunteer organization that focuses on annual activities that remove hazardous fuels and manages mitigation activities in your town or neighborhoods?

		Response Percent	Response Count
Yes		100.0%	1
No		0.0%	0
answered question			1
skipped question			4

26. (Optional) Please give us your name and contact information if you are interested in staying involved in wildfire mitigation in the future.

	Response Percent	Response Count
answered question		0
skipped question		5

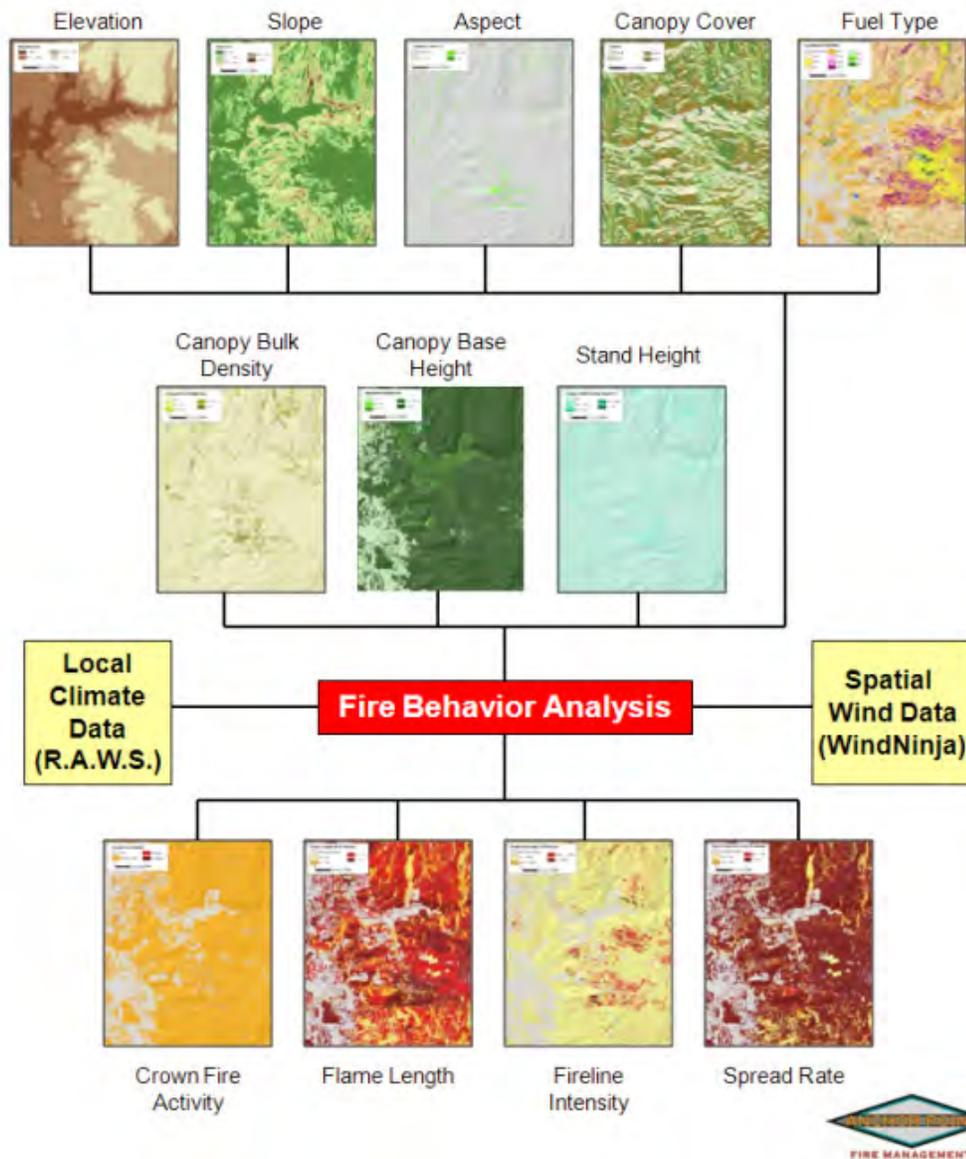
APPENDIX C: FIRE BEHAVIOR REFERENCE

FIRE BEHAVIOR POTENTIAL ANALYSIS METHODOLOGY

Purpose

The purpose of this document is to describe the methodology used to evaluate the threat represented by physical hazards such as fuels, weather and topography to values at risk in the study area, by modeling their effects on potential fire behavior potential.

Figure 1. Flow chart



The fire behavior potential analysis graphically reports the probable range of spread rate, flame length, and crown fire potential for the analysis area, based upon a set of inputs significant to fire behavior. The model inputs include aspect, slope, elevation, canopy cover, fuel type, canopy bulk density, canopy base height, stand height, and climate data. The model outputs are determined using FlamMap, which combines surface fire predictions with the potential for crown fire development.¹

Modeling Limitations and Discussion

This evaluation is a prediction of likely fire behavior, given a standardized set of conditions and a single point source ignition at every point. It does not consider cumulative impacts of increased fire intensity over time and space. The model does not calculate the probability that a wildfire will occur. It assumes an ignition occurrence for every 30m x 30m cell. These calculations may under-predict compared to observed fire behavior.

Weather conditions are extremely variable and all possible combinations cannot be accounted for. These outputs are best used for pre-planning and not as a stand-alone product for tactical planning. Whenever possible, fire behavior calculations should be done with actual weather observations during the fire. The most current burn indices (BI) should also be calculated and distributed during the fire season to be used as a guideline for fire behavior potential.

Anchor Point's fire behavior modeling process for surface fire draws heavily from the BEHAVE fire behavior prediction and fuel modeling system.² BEHAVE is a nationally-recognized set of calculations used to estimate a surface fire's intensity and rate of spread given certain topographical, fuels, and weather conditions. The BEHAVE modeling system has been used for a variety of applications, including predictions of current fires, prescribed fire planning, fuel hazard assessment, initial attack dispatch, and fire prevention planning and training. Predictions of wildland surface fire behavior are made for a single point in time and space, given user-defined fuels, weather, and topography. Requested values depend on the modeling choices made by the user.

Assumptions of BEHAVE:

- Fire is predicted at the flaming front (fire behavior is not modeled for the time after the flaming front of the fire has passed)
- Fire is free burning (uncontrolled by suppression efforts)
- Behavior is heavily weighted towards the fine fuels (grasses and small-diameter wood)
- Fuels are continuous and uniform
- Fires are considered to be surface fires (crown fire activity is modeled separately)

BEHAVE makes calculations at a single point. In order to make calculations for an entire landscape (important for pre-planning the effects of a wildfire at the community, district, or county scale), fire behavior is modeled using FlamMap which models surface fire predictions and the potential for crown fire development.³

¹ Mark Finney, Stuart Brittain and Rob Seli. The Joint Fire Sciences Program of the Rocky Mountain Research Station (USDA Forest Service, Missoula, Montana), the Bureau of Land Management and Systems for Environmental Management (Missoula, Montana).

² Patricia L. Andrews, producer and designer, Collin D. Bevins, programmer and designer, The Joint Fire Sciences Program of the Rocky Mountain Research Station (USDA Forest Service, Missoula, Montana) and Systems for Environmental Management (Missoula, Montana)

³ Van Wagner, C.E. 1977. Conditions for the start and spread of a crown fire. Canadian Journal of Forest Research. 7: 23-24.

Assumptions of FlamMap:

- Each calculation in a given area is independent of calculations in any other area. Fire is not modeled dynamically across the landscape but statically as a series of individual calculations.
- Weather inputs such as wind and fuel moistures do not change over time
- Fire behavior modeling calculations are performed in a series of uniform squares (or “pixels”) across the landscape. These pixels determine the level of detail and nothing smaller than a pixel (30m x 30m in this case) is included in the modeling.

Crown fire activity, rate of spread, and flame length are derived from the fire behavior predictions. A limitation of FlamMap is that crown fire is not calculated for shrub models. The best method of determining the probability of crown fire in shrubs is to look at the flame length outputs and assume that if the flame length is greater than ½ the height of the plant, it will likely torch and/or crown.

Anchor Point used FlamMap 3.0 to evaluate the potential fire conditions in the fire behavior study area.

FlamMap Inputs

The major factors influencing fire behavior are fuels (type and coverage), topography (aspect, slope and elevation) and weather (wind and fuel moisture). The following pages contain a brief explanation of each.

Four separate model runs of FlamMap were used to better capture the widely-varying weather conditions present in different regions of the study area. The runs for weather zones 3 and 4 were combined and presented separately for the Foresthill/Iowa Hill and Placer Sierra FSCs. The following table lists the four regions that were modeled separately in FlamMap.

Sub-Area	Acres	Square Miles
Weather Zone 1 (Greater Lincoln FSC)	127,019	146.0
Weather Zone 2 (Greater Auburn FSC)	58,000	90.6
Weather Zone 3 (Placer Sierra/FhIH FSCs “Down-hill”)	112,772	176.2
Weather Zone 4 (Placer Sierra/FhIH FSCs “Uphill”)	77,315	120.8
Total	375,106	533.6

The regions were further broken down into grid cells 30m x 30m, for each of which fire behavior was predicted based on input fuel, topography and weather information. Landfire Rapid Refresh data (modified 1.10, see below for modification descriptions) were used for both fuel inputs (surface fuel model (see below), canopy closure, canopy base height, canopy bulk density and stand height) and topographic information (elevation, aspect and slope).⁴

⁴ <http://www.landfire.gov>

The fuel inputs above were altered after examination of fire behavior outputs and feedback from stakeholders (part of Anchor Point’s standard fire behavior modeling methodology).

Changes to fuel inputs were as follows:

Greater Lincoln FSC and Greater Auburn FSC: All fuel model 145 and fuel model 147 were set to fuel model 122. fuel model 147 was re-introduced using the chapparal category in FRAP surface fuels as a mask. Canopy cover in the masked areas was set to 0 to avoid crowning in a shrub model (as stated above, one of the assumptions built-in to FlamMap) Polygons for completed PCRCO and CAL FIRE treatments were also used as masks, inside of which, canopy base height values were set to 2.0m.

Foresthill/Iowa Hill and Placer Sierra: similar adjustment to those of the Greater Lincoln and Greater Auburn areas EXCEPT that the fuel model 145/147 to fuel model 122 conversion was NOT done for Foresthill/Iowa Hill or Placer Sierra.

Weather

The FlamMap model uses reference weather and fuel moisture information summarized from a Remote Automated Weather Station (RAWS) site. Multiple RAWS were used to capture the climate for the project area because of large differences in weather at different locations in the study area.

Seed Orchard RAWS Information (041908)

Latitude (dd.ddddd)	39.091° N
Longitude (dd.ddddd)	120.731° W
Elevation (ft.)	4,355
Years and dates used	2001-2011, (May 1-Oct 31)

Secret Town RAWS Information (041808)

Latitude (dd.ddddd)	39.184° N
Longitude (dd.ddddd)	120.882° W
Elevation (ft.)	2,720
Years and dates used	1998-2011, (May 1-Oct 31)

Pilot Hill RAWS Information (042609)

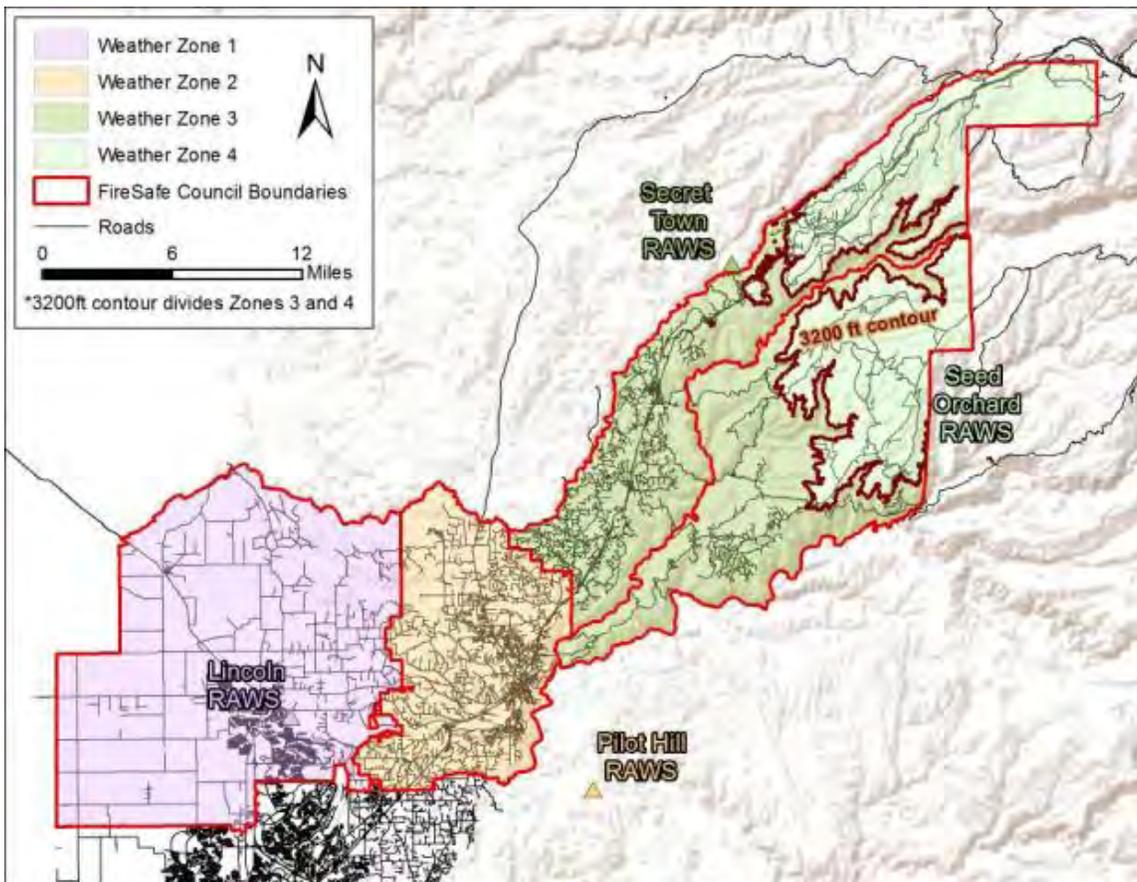
Latitude (dd.ddddd)	38.832° N
Longitude (dd.ddddd)	121.010° W
Elevation (ft.)	1,250
Years and dates used	1994-2011, (May 1-Oct 31)

Lincoln RAWS Information (041907)

Latitude (dd.ddddd)	38.882° N
Longitude (dd.ddddd)	121.268° W
Elevation (ft.)	200
Years and dates used	1998-2011, (May 1-Oct 31)

Using data from a RAWS that is greater than 2,000 ft above or below the area of interest is not recommended because fuel moistures are significantly different. In order to compensate for this issue in Foresthill and Placer Sierra, the Secret Town RAWS was used for elevations below 3,200 ft and Pilot Hill RAWS was used for elevations above 3,200 ft.

Figure 2. RAWS sites by FSC



The moderate condition class (16th to 89th percentile, sorted by Spread Component) was calculated to produce parameters necessary for FlamMap to run (1 hour, 10 hour, and 100 hour, live herbaceous and live woody fuel moisture and 20-foot wind speed) using Fire Family Plus. This weather condition class most closely represents an average fire season day.

A second set of weather conditions were calculated to capture a high fire day (in terms of fuel moistures and wind speed). Values in the data set that were in the 90th percentile (sorted by Spread Component) or greater were used to calculate the high condition class.

Winds

Wind speeds in RAWS data sets consist of 10-minute averages. During this 10-minute average, conditions are likely to be experienced that may exhibit substantially faster wind speeds than those represented by the 10-minute average. These faster wind speeds could have a profound impact on the ability of a fire to transition from a surface fire to a crown fire.

Probable maximum momentary gust wind speeds from the NOAA Wind Conversion Chart were used to adjust windspeeds in the high model runs.

Upslope winds were used instead of directional winds because aligning slope and wind will give the worst case results, yielding a more conservative analysis. Directional winds would favor one aspect over another and would show lower fire behavior on the leeward aspects. This is only the case under the given wind direction and would not account for other possible wind directions.

Fuel Moisture

Fuel moisture content is among the most important fuel characteristics affecting fire behavior. It determines how much fuel is available for burning, and ultimately, how much is consumed. Moisture absorbs heat released during combustion, making less heat available to preheat fuel particles to ignition. By raising a fuel's heat capacity, fuel moisture content influences ignition.

Dead Fuel Moisture

Dead fuel moisture responds solely to ambient environmental conditions and is critical in determining fire potential. Dead fuel moistures are classed by timelag. A fuel's timelag is proportional to its diameter and is loosely defined as the time it takes a fuel particle to reach two-thirds of its way to equilibrium with its local environment. Dead fuels in the National Fire Danger Rating System (NFDRS) fall into four classes: 1, 10, 100, and 1,000 hour.

Live Fuel Moisture

Live fuel moisture is the amount of water in a fuel, expressed as a percent of the oven-dry weight of that fuel. Fuel moisture between 300% and 30% is considered live. Anything below 30% is considered dead fuel. Fuel moistures can exceed 100% because the living cells can expand beyond their normal size to hold more water when available. The two categories used are Herbaceous and Woody.

The following values, derived from Fire Family Plus, were used as weather/fuel moisture inputs in FlamMap:

MODERATE WEATHER CONDITIONS				
Input	Lincoln	Pilot Hill	Secret Town	Seed Orchard
20 ft Wind Speed Upslope	5	5	4	4
1-hr fuel moisture	5	5	4	4
10-hr fuel moisture	6	6	4	6
100-hr fuel moisture	10	11	8	7
Herbaceous Fuel Moisture	30	36	30	30
Woody Fuel Moisture	82	96	75	75

HIGH WEATHER CONDITIONS				
Input	Lincoln	Pilot Hill	Secret Town	Seed Orchard
20 ft Wind Speed Upslope	21	21	18	18
1-hr fuel moisture	4	3	3	4
10-hr fuel moisture	5	4	3	5
100-hr fuel moisture	9	8	7	6
Herbaceous Fuel Moisture	30	30	30	30
Woody Fuel Moisture	74	70	65	65

Fuels

In the context of fire behavior modeling, “fuel models” are a set of numbers that describe fuels in terms that the fire behavior modeling equations can use directly. There are seven characteristics used to categorize fuel models:

- Fuel Loading
- Size and Shape
- Compactness
- Horizontal Continuity
- Vertical Arrangement
- Moisture Content
- Chemical Content

Each of the major fuel types present in the study area is described below, in terms of the characteristics that coincide with that fuel model. Unless otherwise noted, fuel model descriptions are taken from Scott and Burgan’s *Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel’s Surface Fire Spread Model*, a national standard guide to fuel modeling.⁵ **For specific information about the fuel models’ affects on the landscape, see the main report.**

In *Standard Fire Behavior Fuel Models*, Scott and Burgan describe 40 fuel models in the following six groups: Non-Burnable (NB), Grass (GR), Grass/Shrub (GS), Shrub (SH), Timber Understory (TU) and Timber Litter (TL).

Grass Fuel Type Models (GR)

The primary carrier of fire in the GR fuel models is grass. Grass fuels can vary from heavily grazed grass stubble or sparse natural grass to dense grass more than 6 feet tall. Fire behavior varies from moderate spread rate and low flame length in the sparse grass to extreme spread rate and flame length in the tall grass models.

All GR fuel models are dynamic, meaning that their live herbaceous fuel load shifts from live to dead as a function of live herbaceous moisture content. The effect of live herbaceous moisture content on spread rate and intensity is strong.

Grass-Shrub Fuel Type Models (GS)

The primary carrier of fire in the GS fuel models is grass and shrubs combined; both components are important in determining fire behavior.

All GS fuel models are dynamic, meaning that their live herbaceous fuel load shifts from live to dead as a function of live herbaceous moisture content. The effect of live herbaceous moisture content on spread rate and intensity is strong and depends on the relative amount of grass and shrub load in the fuel model.

⁵ Scott, J.H. and R. Burgan. 2005. *Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel’s Surface Fire Spread Model*, United States Department of Agriculture Forest Service, RMRS-GTR-153.

Shrub Fuel Type Models (SH)

The primary carrier of fire in the SH fuel models is live and dead shrub twigs and foliage in combination with dead and down shrub litter. A small amount of herbaceous fuel may be present, especially in SH1 and SH9, which are dynamic models (their live herbaceous fuel load shifts from live to dead as a function of live herbaceous moisture content). The effect of live herbaceous moisture content on spread rate and flame length can be strong in those dynamic SH models.

Timber-Understory Fuel Type Models (TU)

The primary carrier of fire in the TU fuel models is forest litter in combination with herbaceous or shrub fuels. TU1 and TU3 contain live herbaceous load and are dynamic, meaning that their live herbaceous fuel load is allocated between live and dead as a function of live herbaceous moisture content. The effect of live herbaceous moisture content on spread rate and intensity is strong and depends on the relative amount of grass and shrub load in the fuel model.

Timber Litter Fuel Type Models (TL)

The primary carrier of fire in the TL fuel models is dead and down woody fuel. Live fuel, if present, has little effect on fire behavior.

Slash-Blowdown Fuel Type Models (SB)

The primary carrier of fire in the SB fuel models is activity fuel or blowdown. Forested areas with heavy mortality may be modeled with SB fuel models.

FIRE BEHAVIOR OUTPUTS

Rate of Spread

Spread rate values are generated by FlamMap and are classified into four categories based on standard ranges: 0-40.0 ch/h (chains/hour), 40.1-80.0 ch/h, 80.1-120.0 ch/h, and greater than 120.0 ch/h. A chain is a logging measurement that is equal to 66 feet. One mile equals 80 chains. 1 ch/h equals approximately 1 foot/minute or 80 chains per hour equals 1 mile per hour.

*It should be noted that a high rate of spread is not necessarily severe. Fire will move very quickly across grass fields but will not burn very hot and does not cause any major damage to the soil.

Flame Length

Flame length values are generated by the FlamMap model and classified in four categories based on standard ranges: 0.1-4.0 feet, 4.1-8.0 feet, 8.1-11.0 feet and greater than 11.0 feet.

These ranges use flame lengths which are meaningful to firefighters. The flame lengths are a direct measure of how intense the fire is burning. Flame lengths of four feet and less are deemed low enough intensity to be suitable for direct attack by hand crews, and therefore represent the best chances of direct extinguishment and control. Flame lengths of less than eight feet are suitable for direct attack by equipment such as bulldozers and tractor plows. Flame lengths of eight to 11 feet are usually attacked by indirect methods and aircraft. In conditions where flame lengths exceed 11 feet, the most effective tactics are fuel consumption ahead of the fire by burnouts or mechanical methods.

Crown Fire

Crown fire activity values are generated by the FlamMap model and classified into four categories based on standard ranges: Active, Torching, Surface and Non-combustible. In the surface fire category, little or no tree torching will be expected. During passive crown fire activity, isolated torching of trees or groups of trees will be observed and canopy runs will be limited to short distances. During active crown fire activity, sustained runs through the canopy will be observed that may be independent of surface fire activity.

GREATER AUBURN AREA FSC OUTPUTS

Figure 3. Fuel models

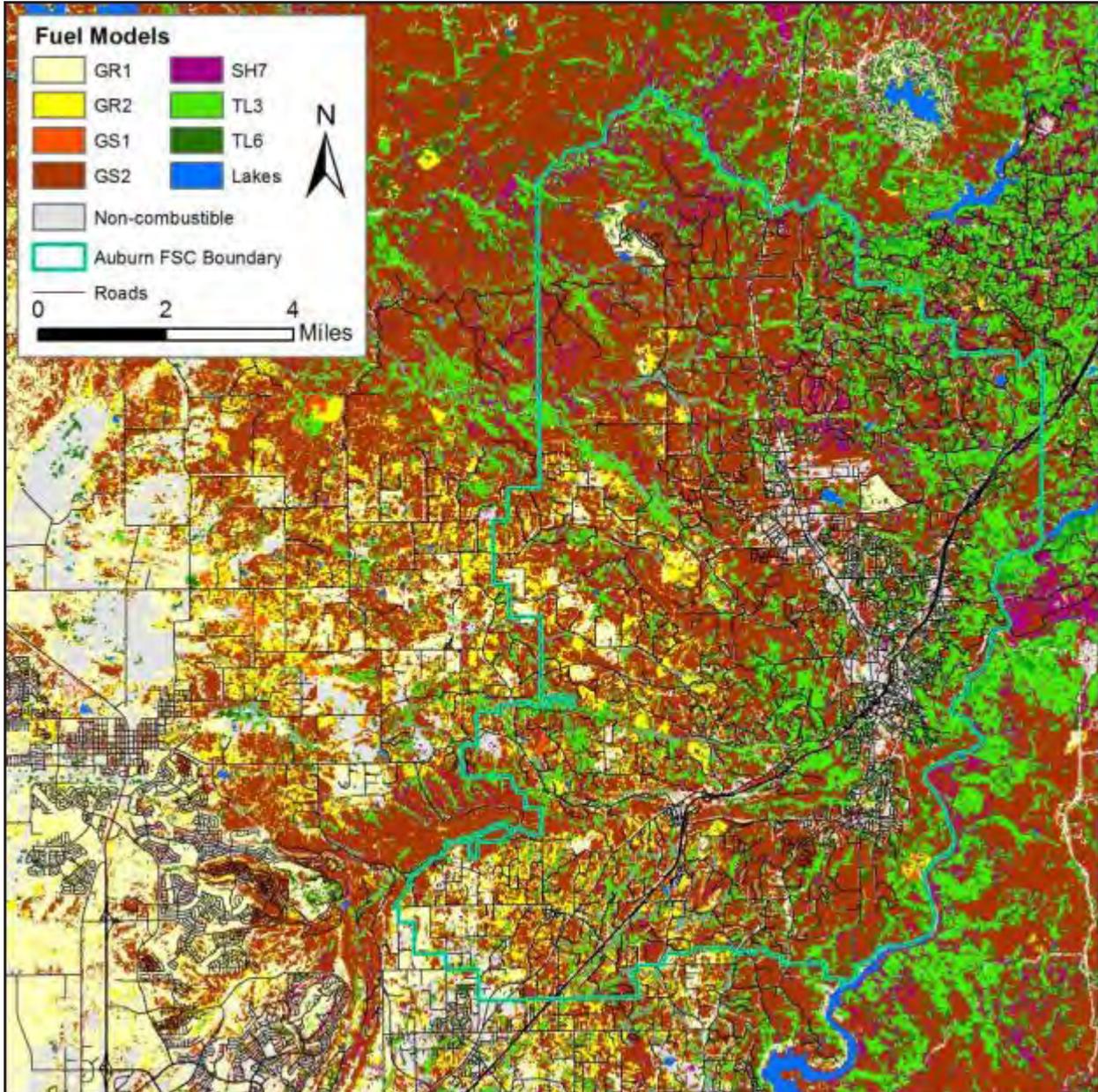


Figure 4. Predicted flame lengths under moderate weather conditions.

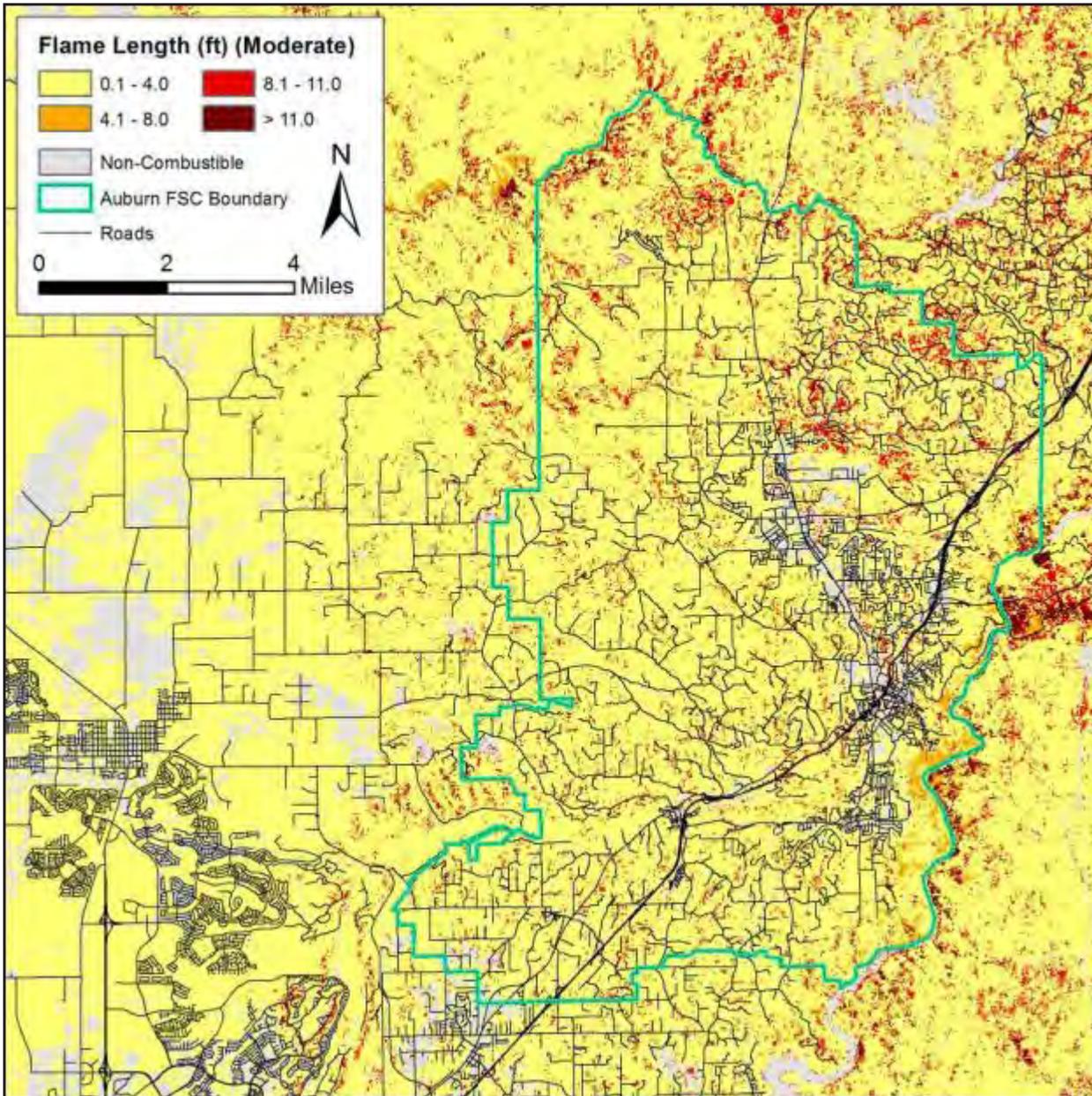


Figure 5. Predicted flame lengths under high weather conditions.

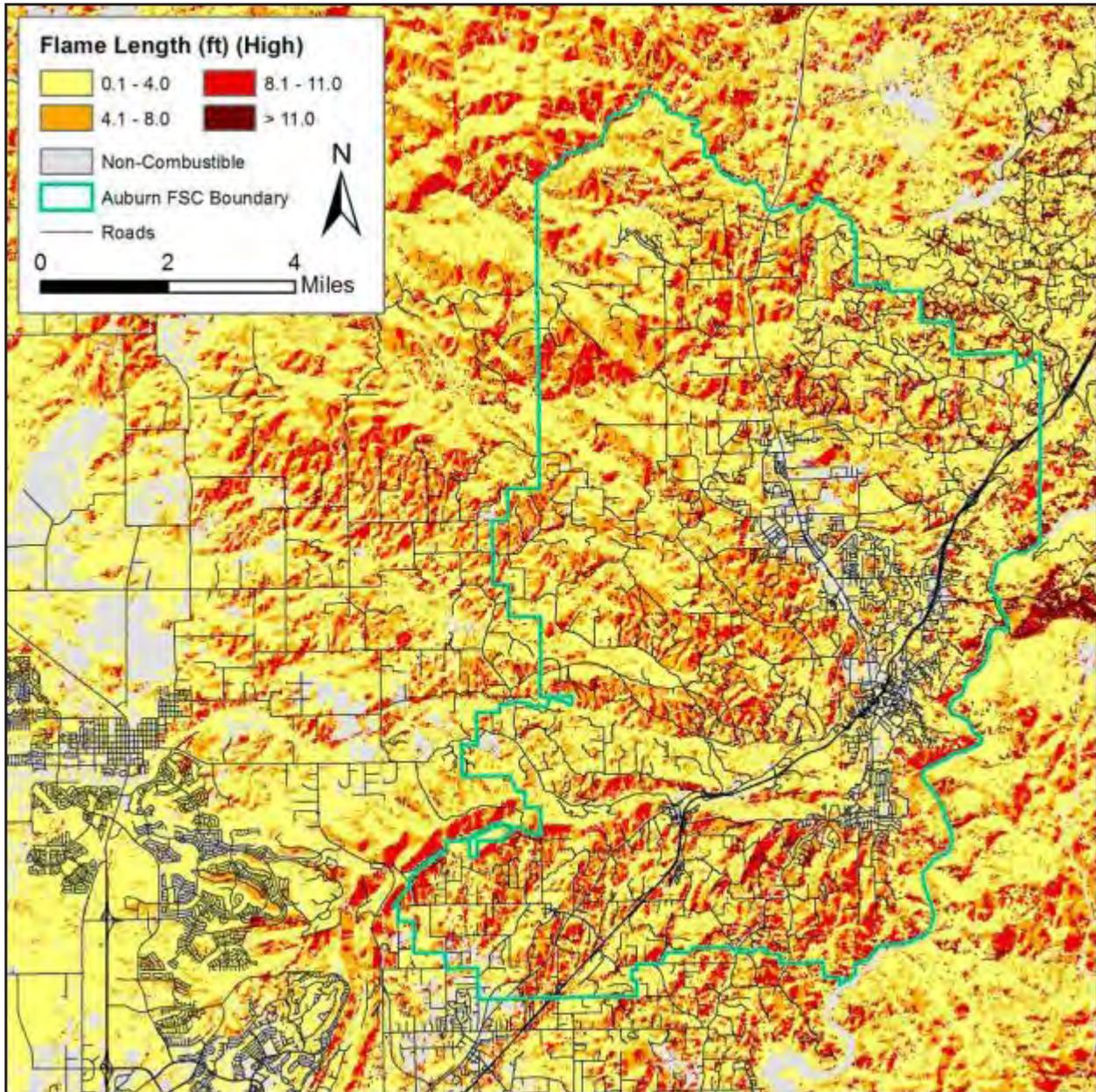


Figure 6. Predicted rate of spread under moderate weather conditions.

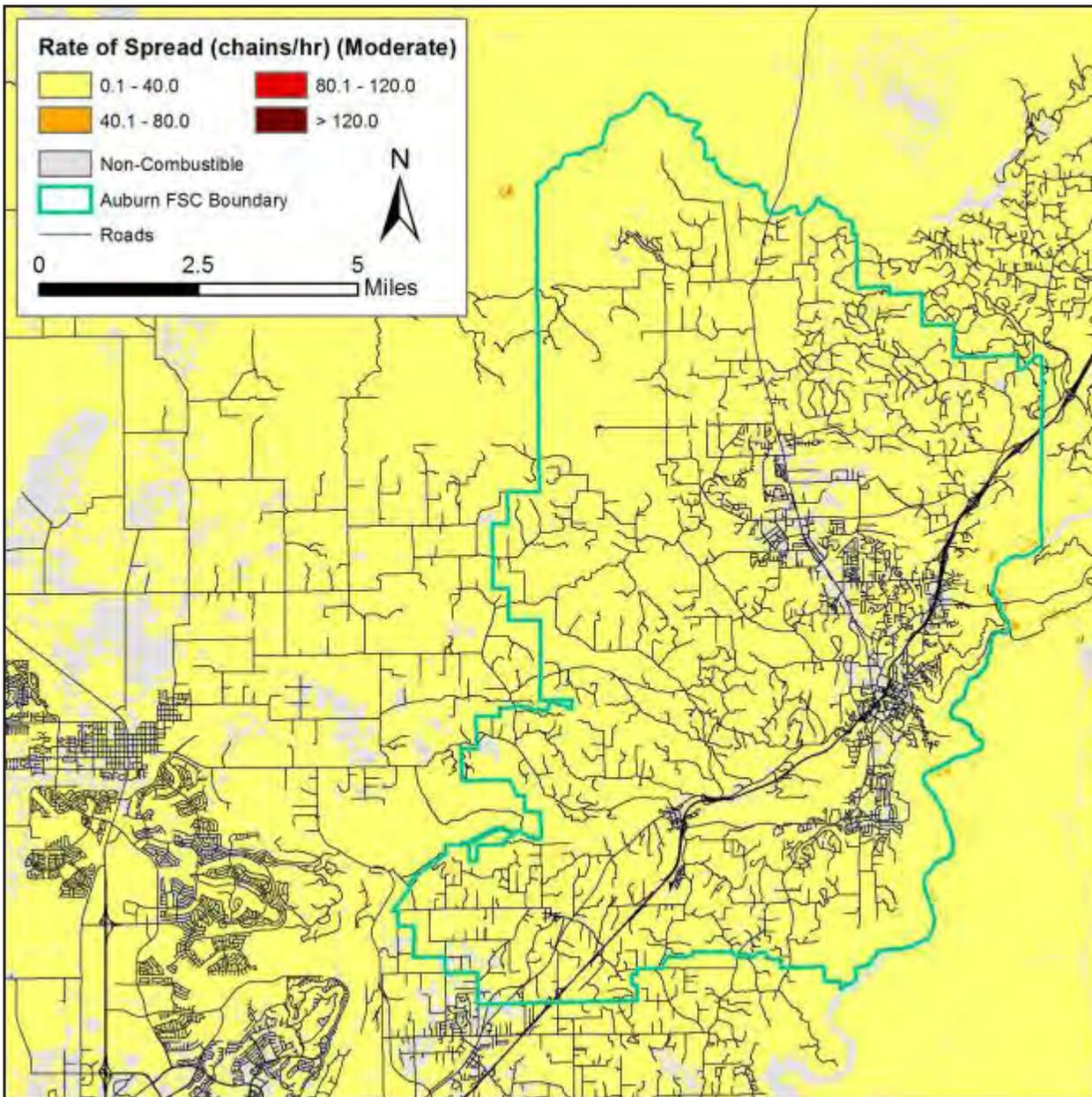


Figure 7. Predicted rate of spread under high weather conditions.

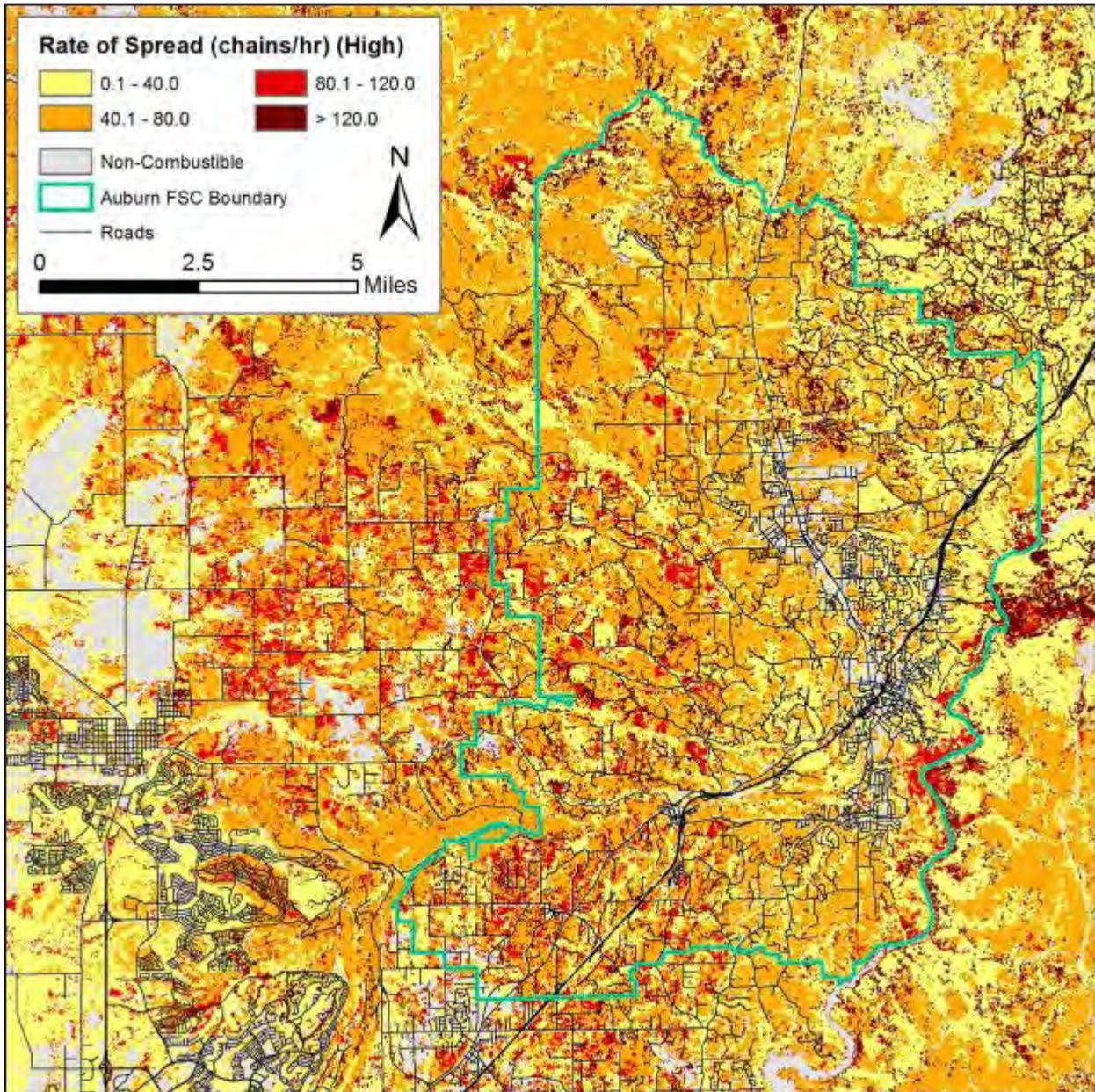


Figure 8. Predicted crown fire activity under moderate weather conditions

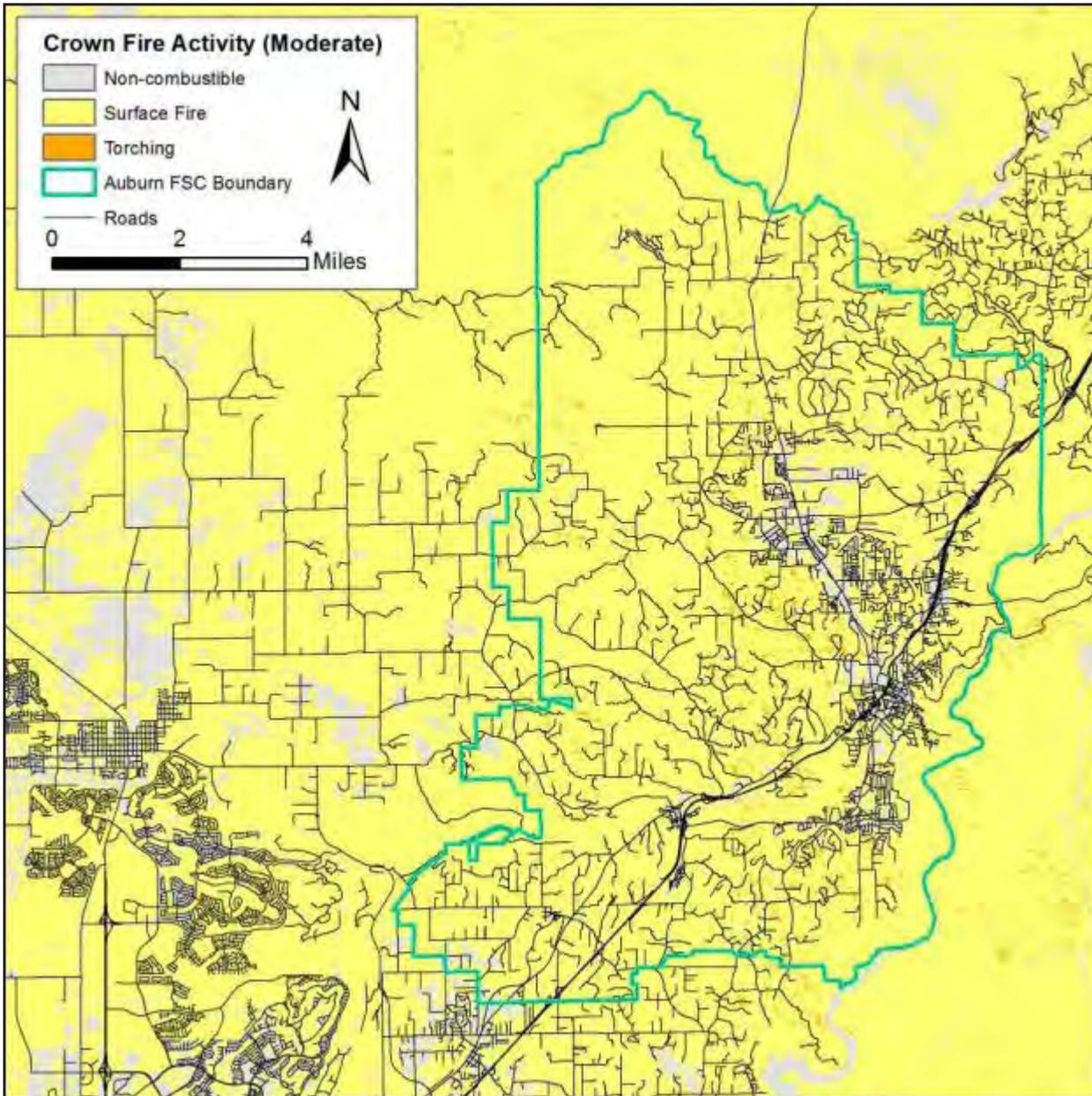
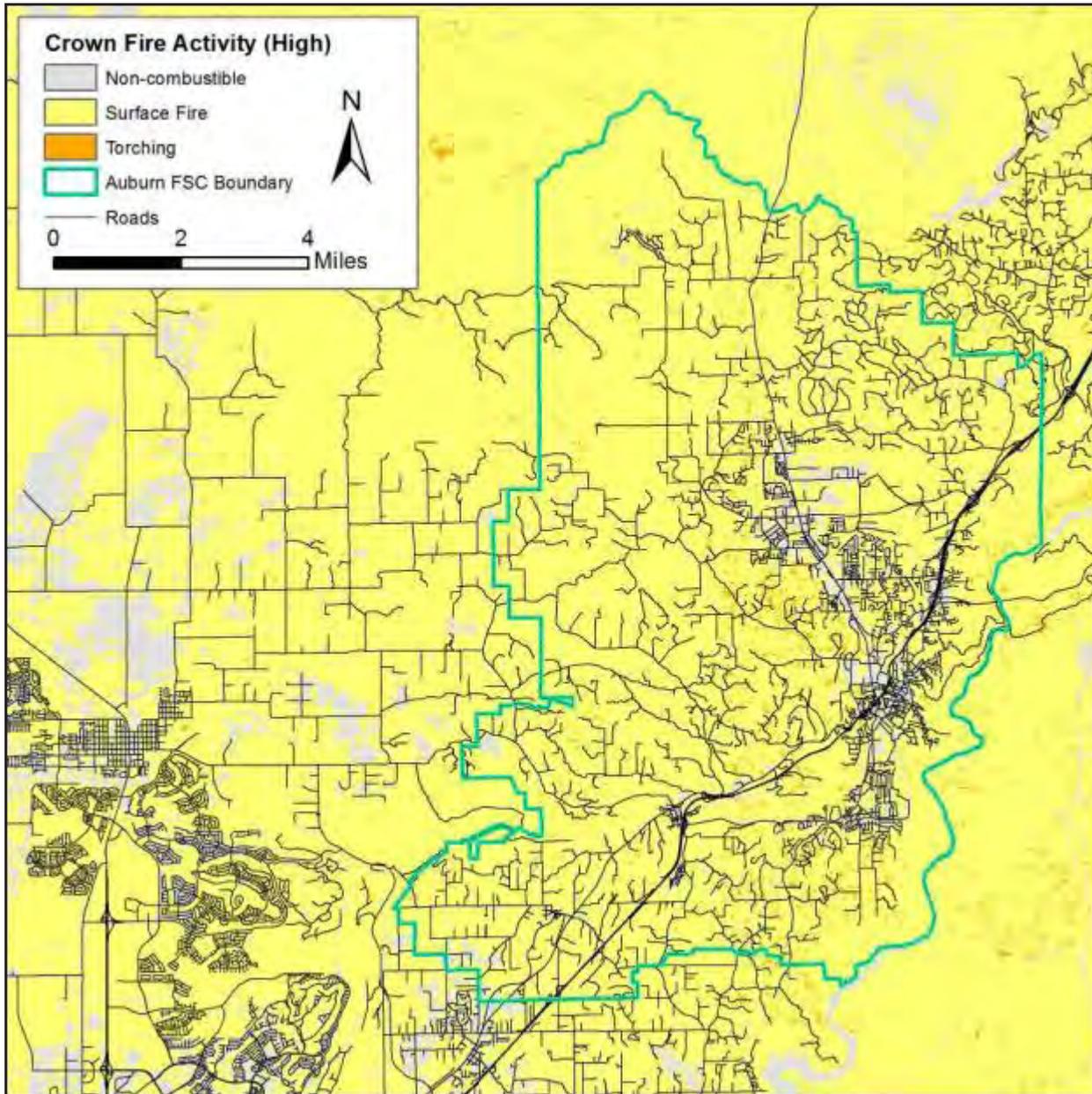


Figure 9. Predicted crown fire activity under high weather conditions



FORESTHILL/IOWA HILL FSC OUTPUTS

Figure 10. Fuel models

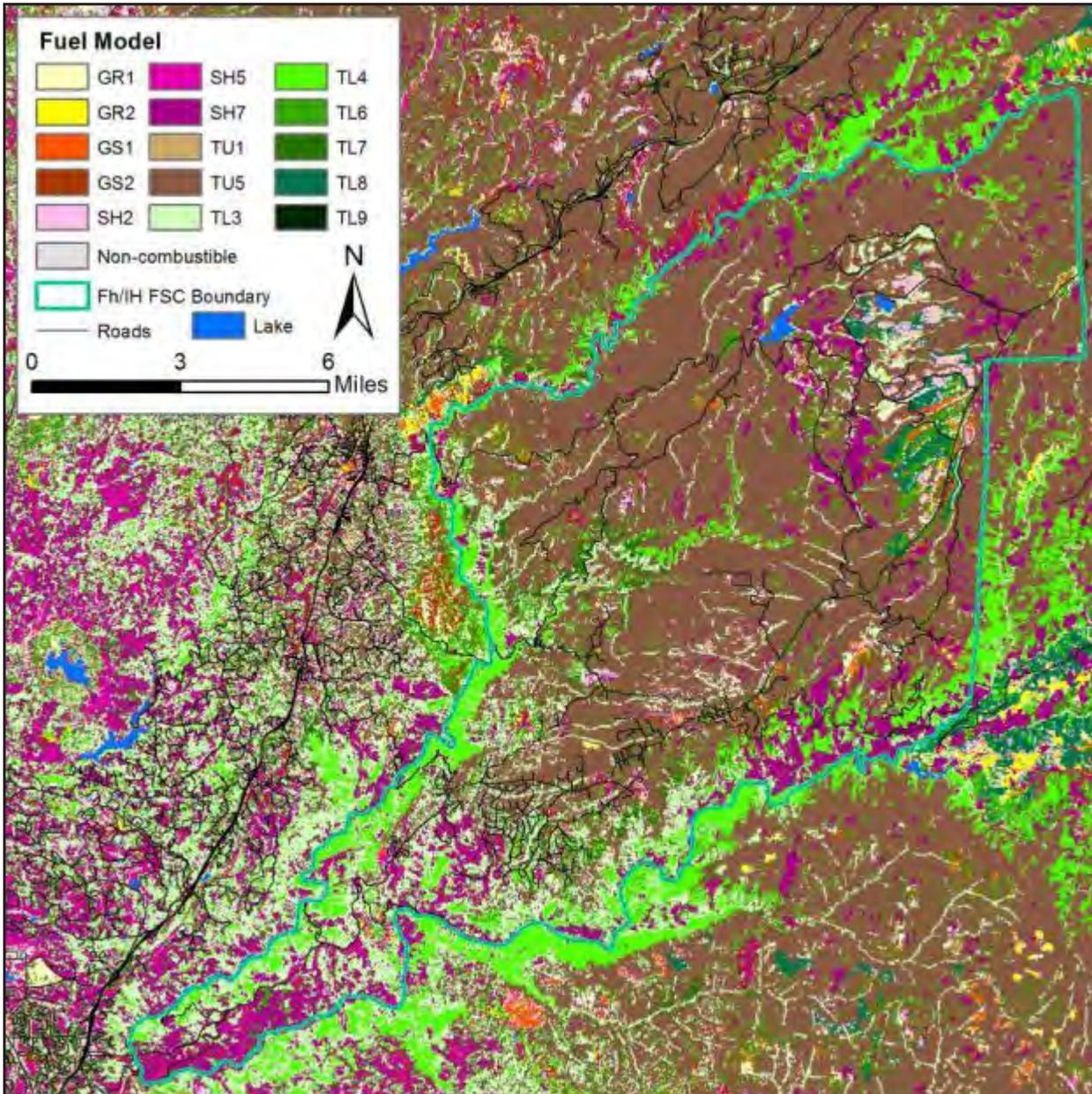


Figure 11. Predicted flame lengths under moderate weather conditions.

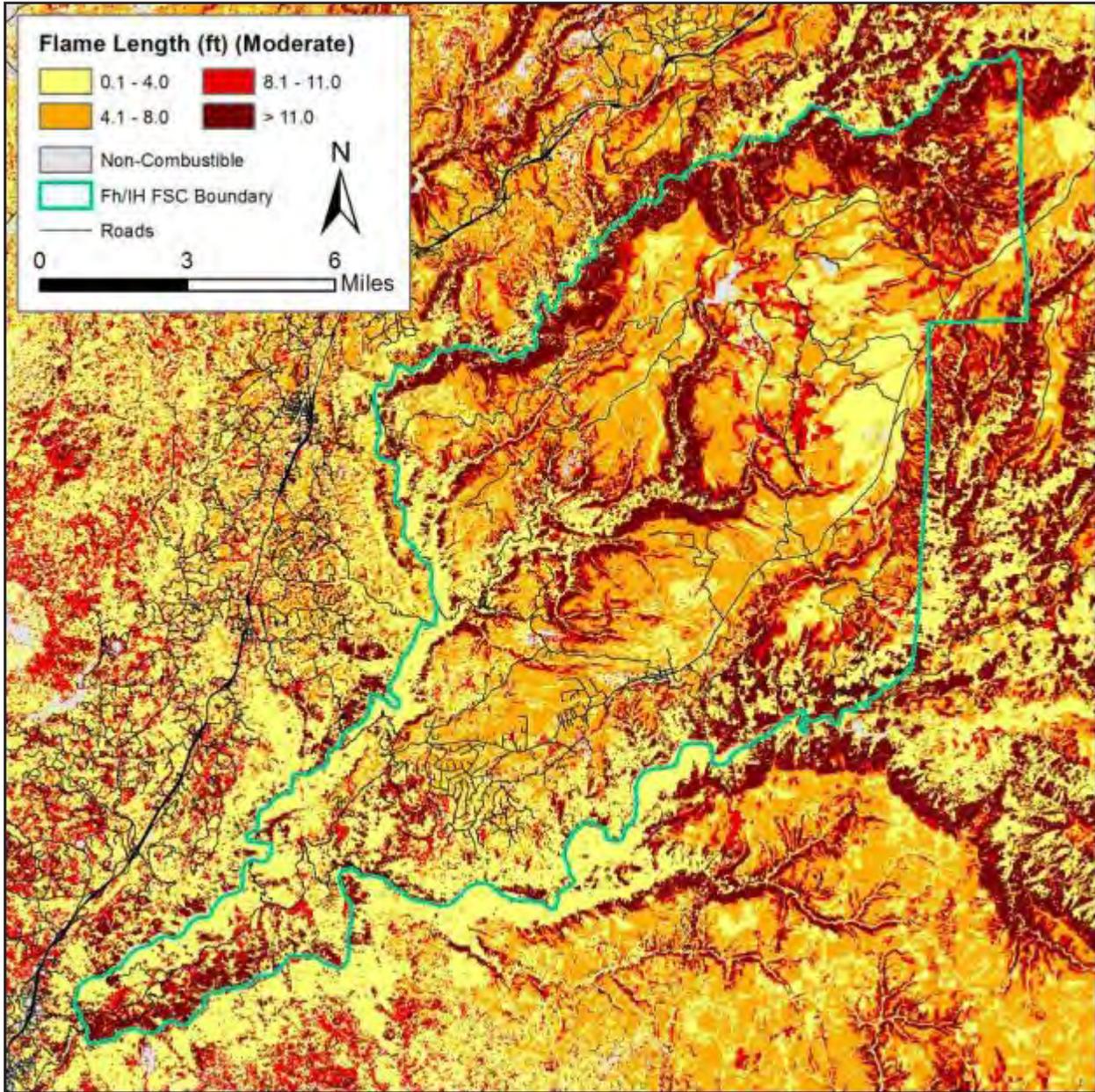


Figure 12. Predicted flame lengths under high weather conditions.

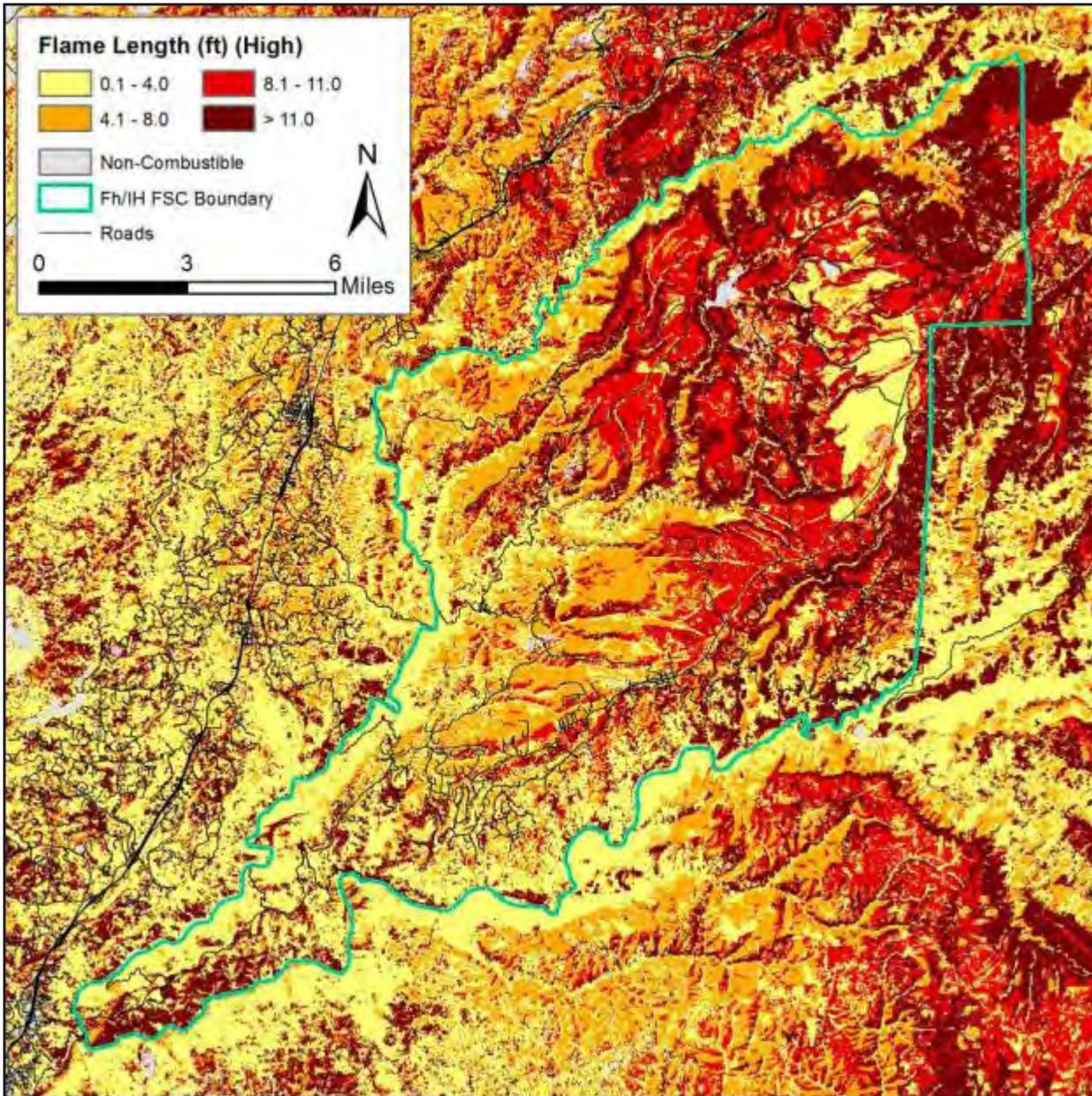


Figure 13. Predicted rate of spread under moderate weather conditions.

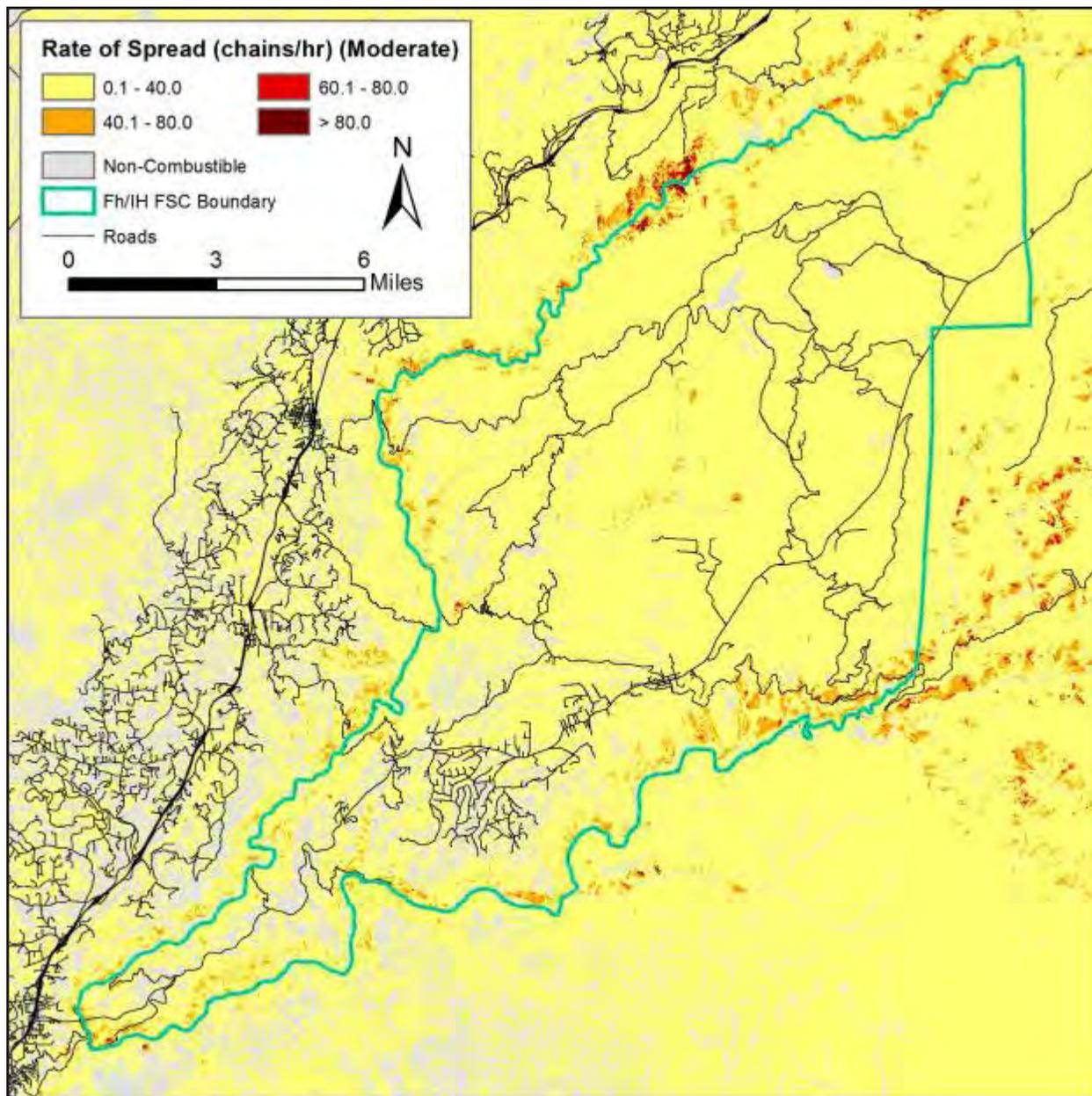


Figure 14. Predicted rate of spread under high weather conditions.

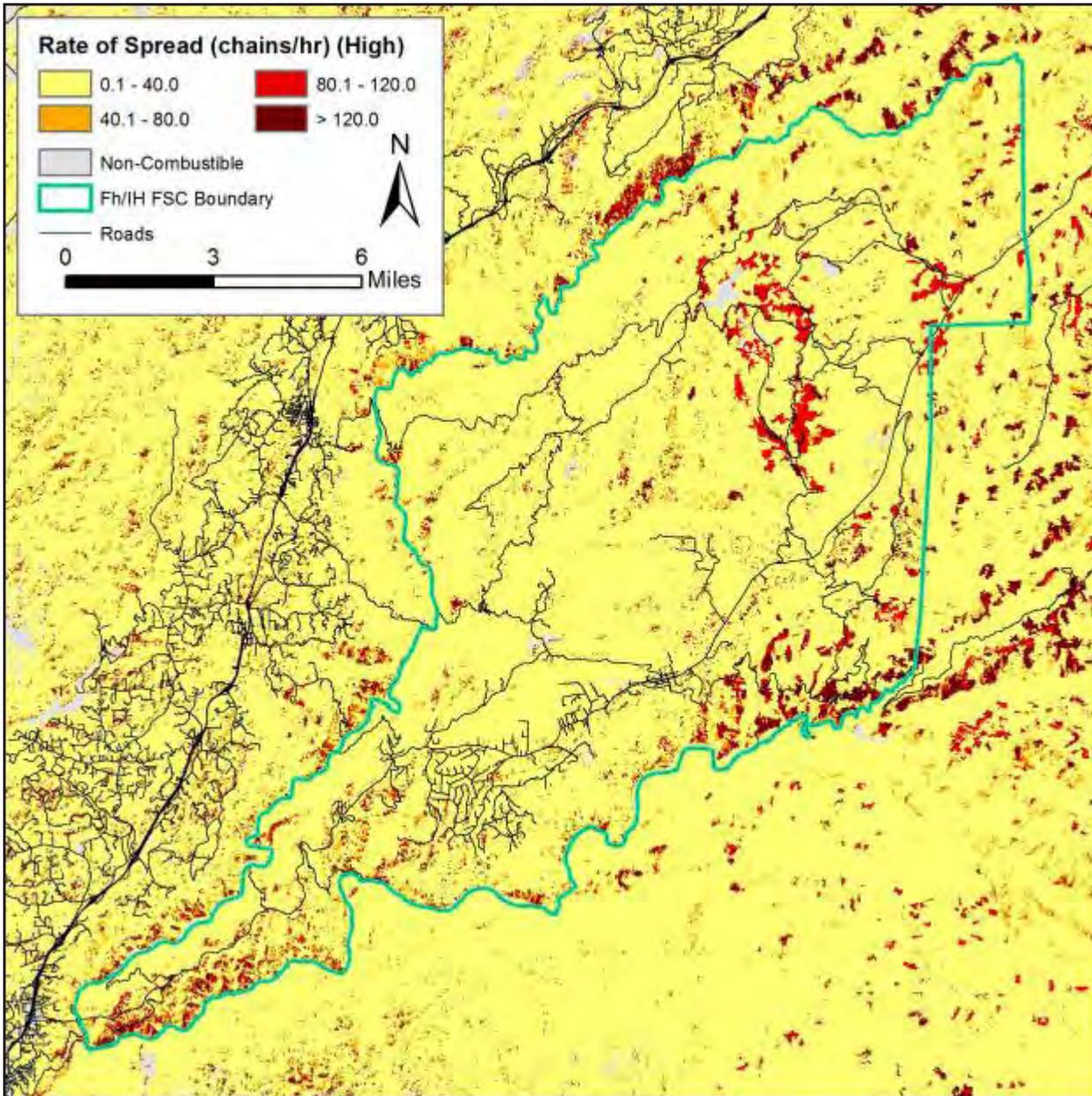


Figure 15. Predicted crown fire activity under moderate weather conditions

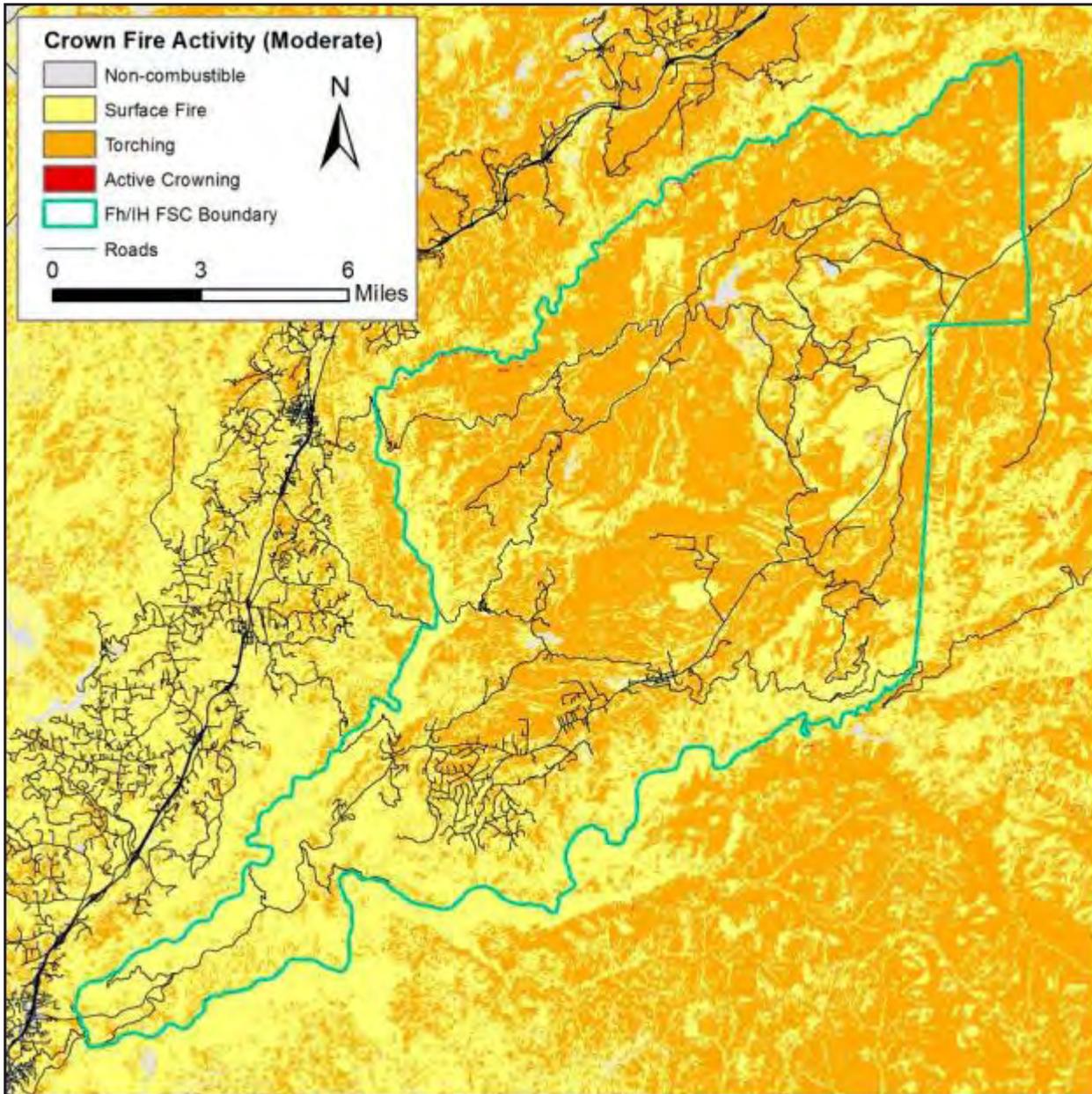
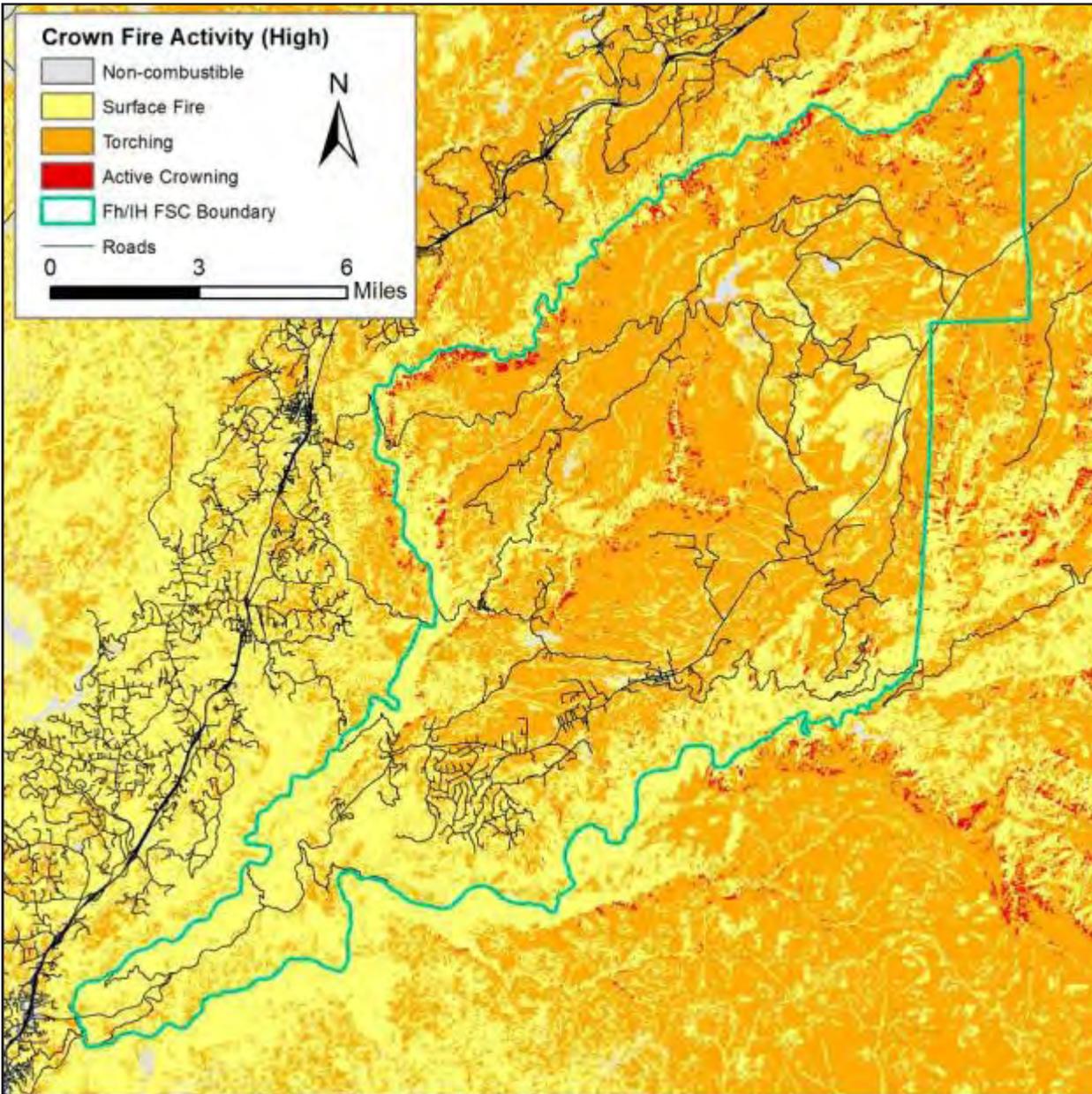


Figure 16. Predicted crown fire activity under high weather conditions



GREATER LINCOLN FSC OUTPUTS

Figure 17. Fuel models

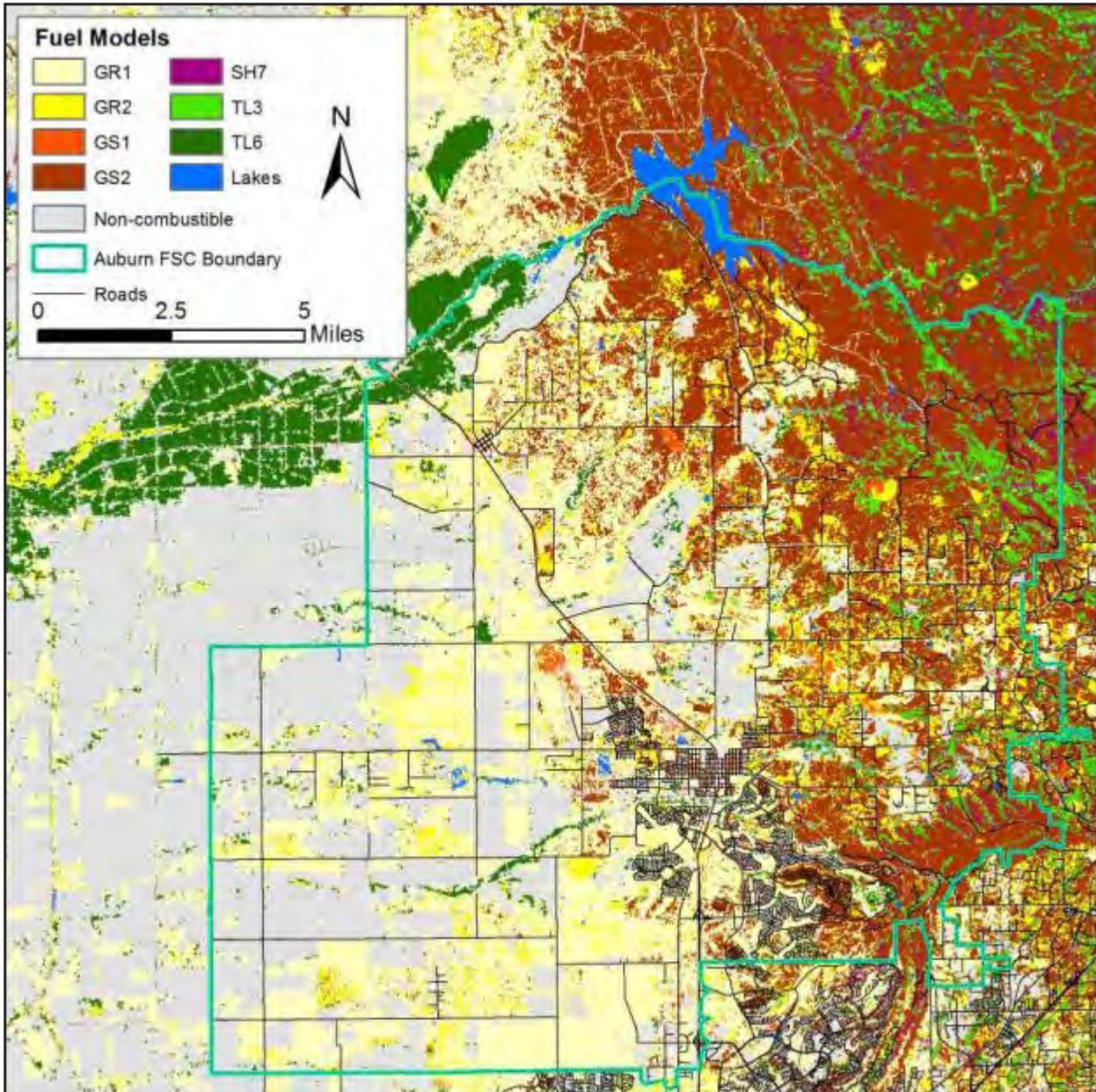


Figure 18. Predicted flame lengths under moderate weather conditions

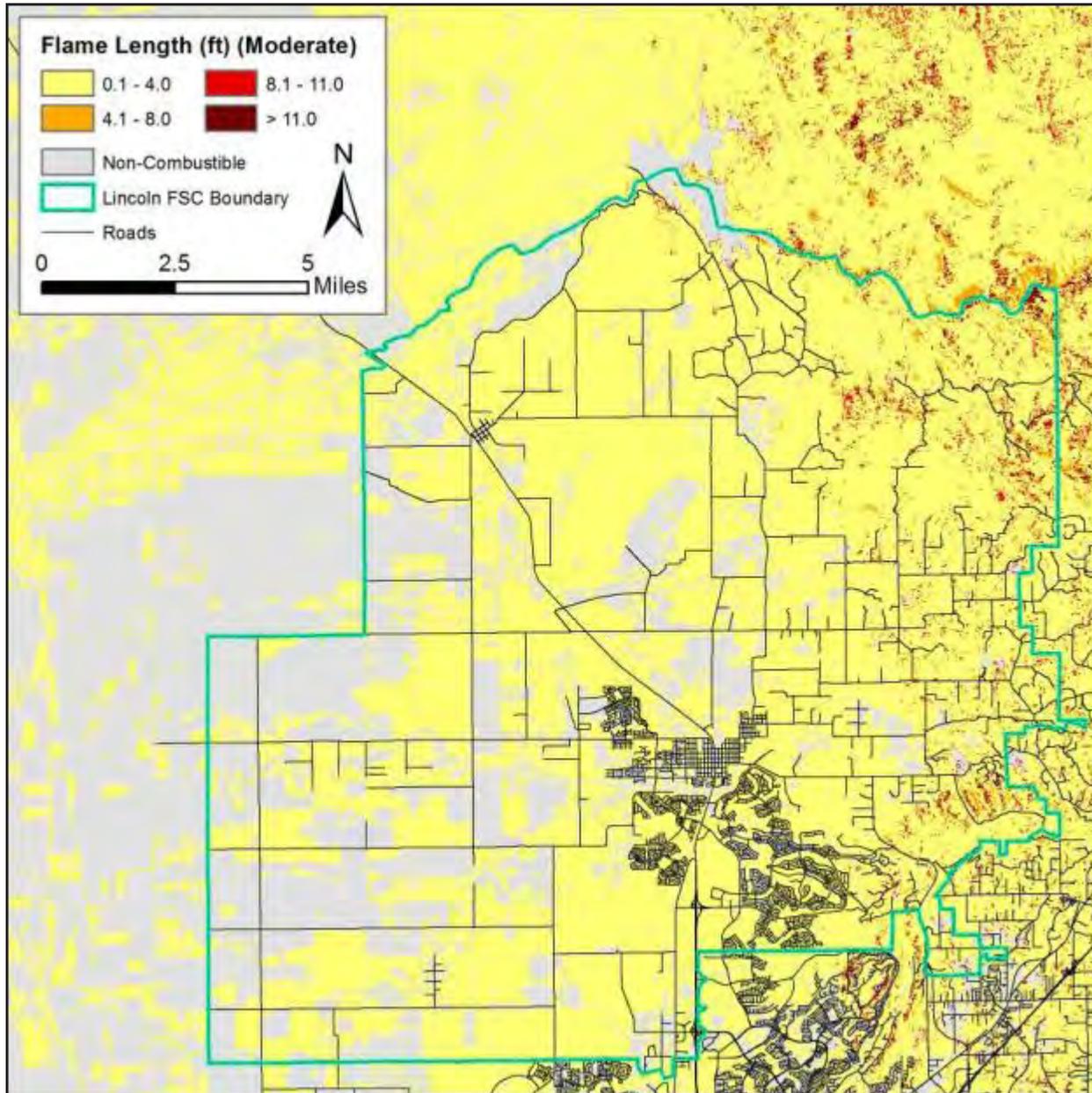


Figure 19. Predicted flame lengths under high weather conditions.

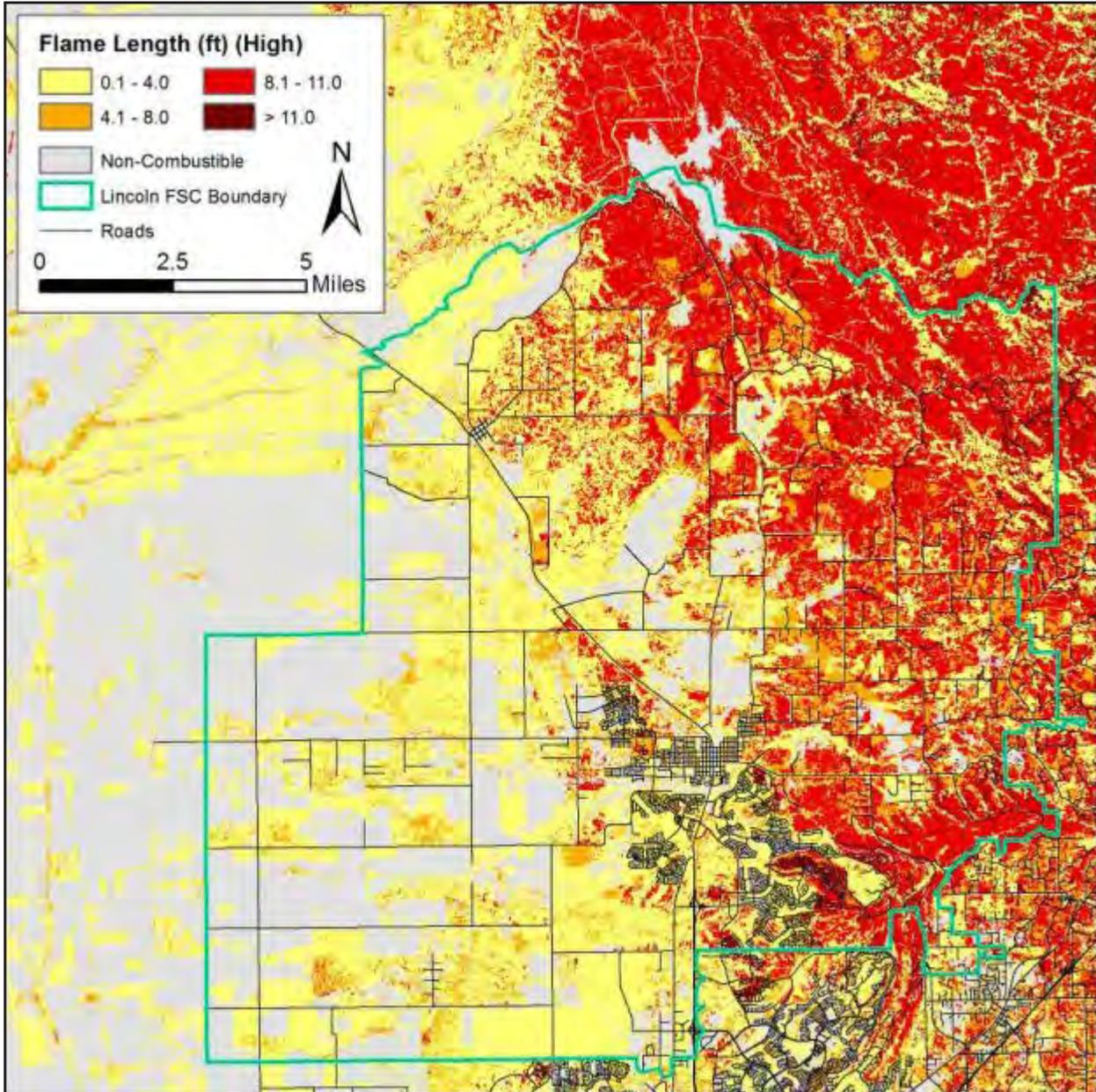


Figure 20. Predicted rate of spread under moderate weather conditions

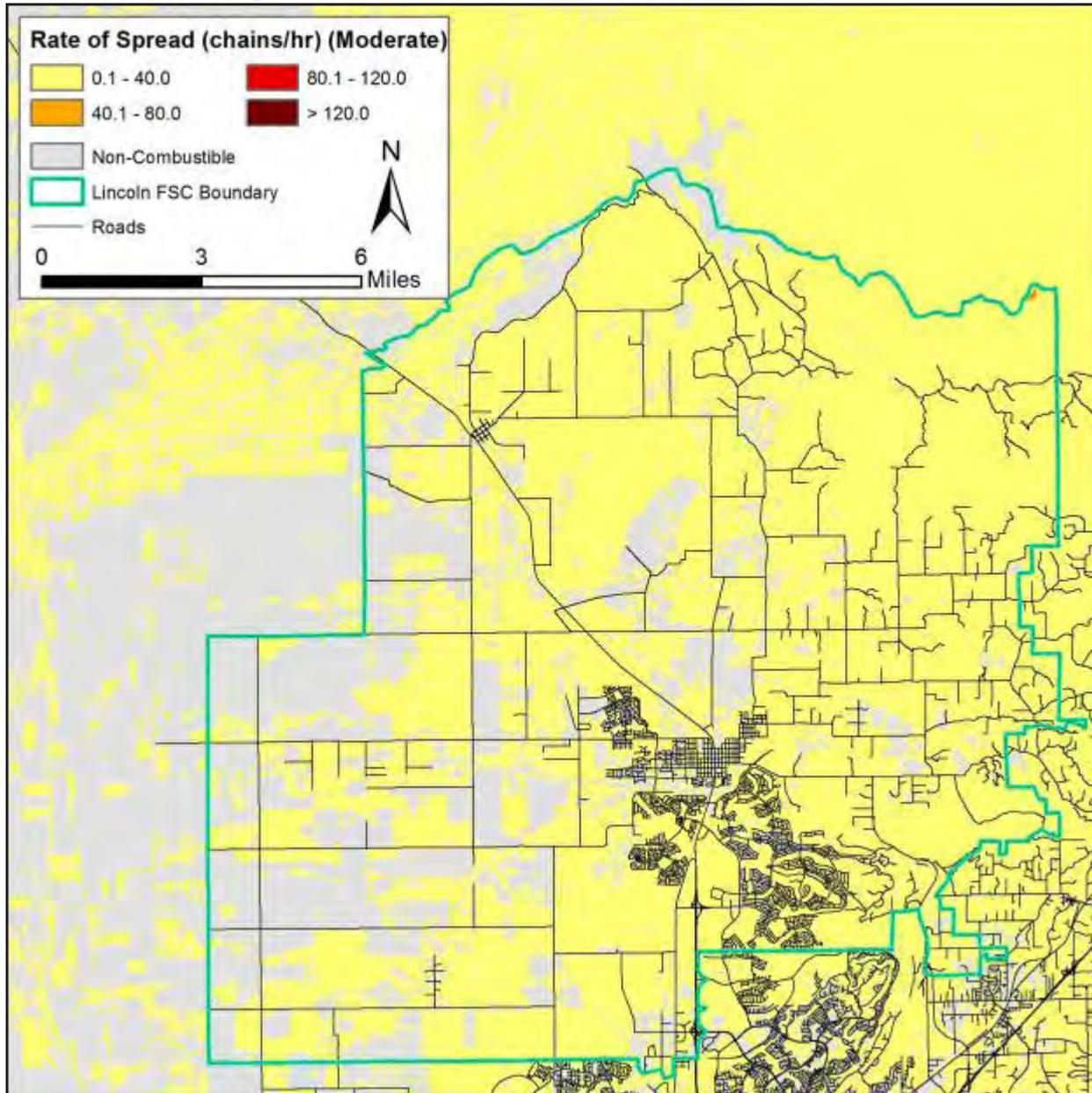


Figure 21. Predicted rate of spread under high weather conditions

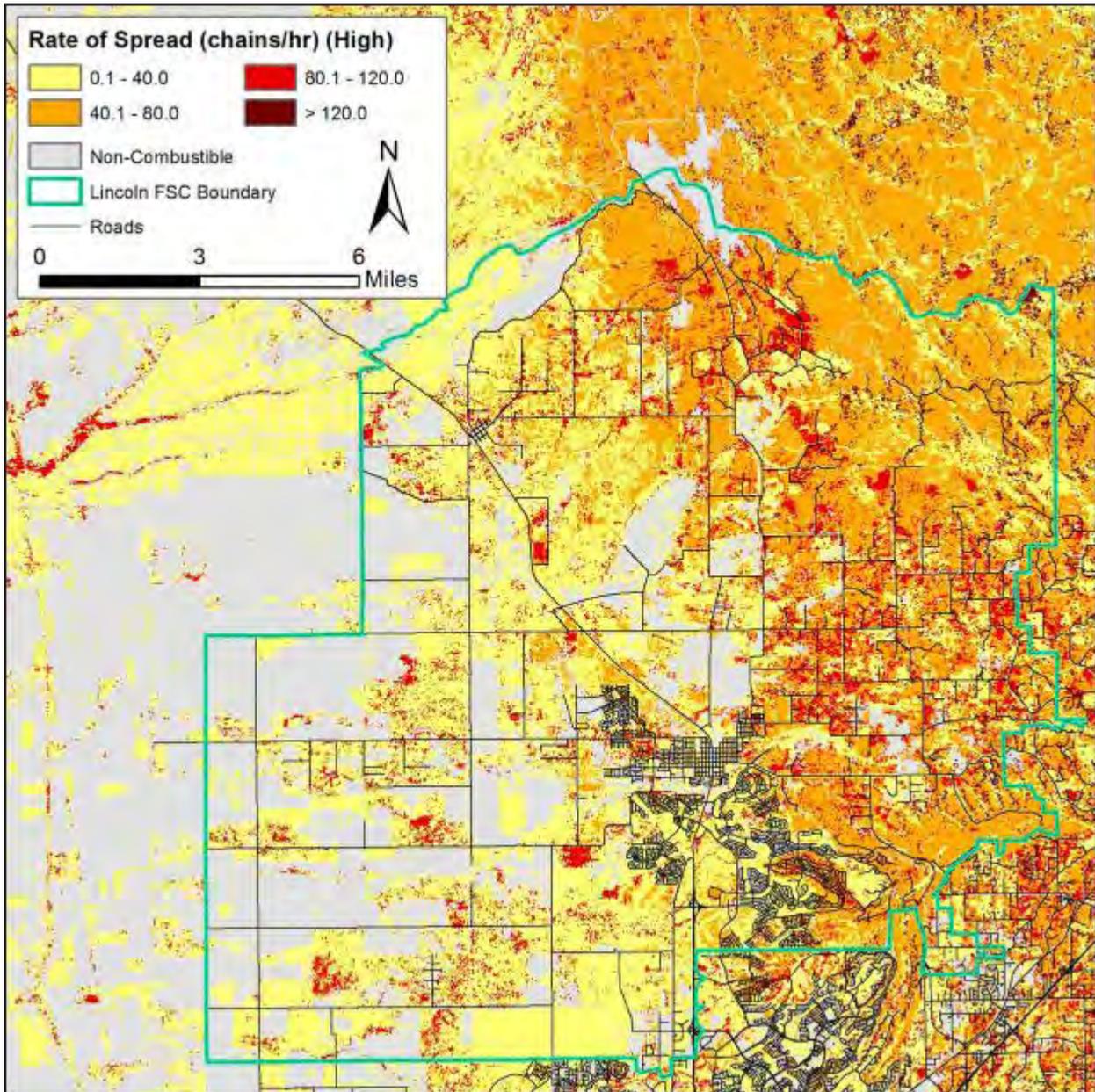
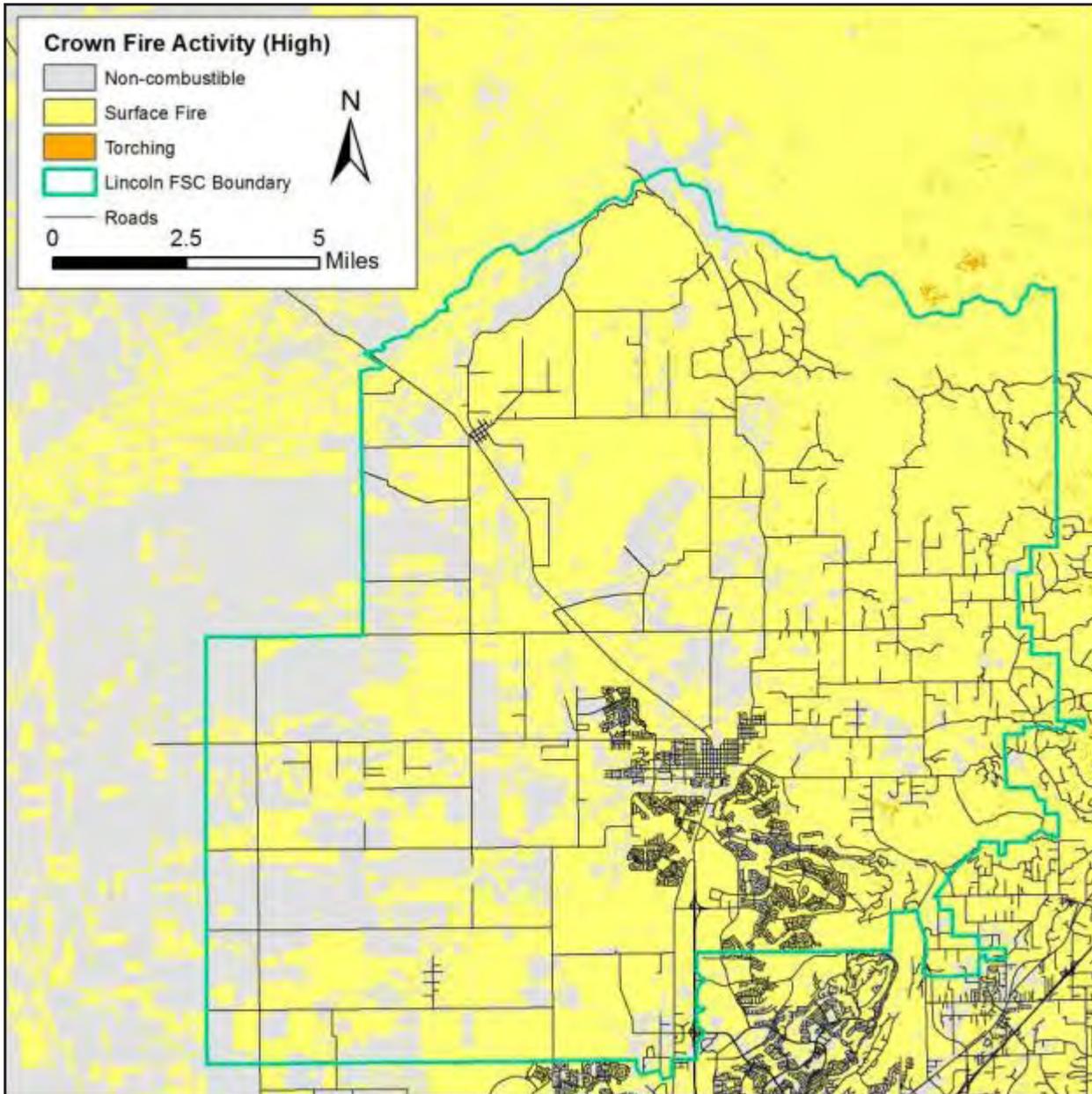


Figure 23. Predicted crown fire activity under high weather conditions



PLACER SIERRA FSC OUTPUTS

Figure 24. Fuel models

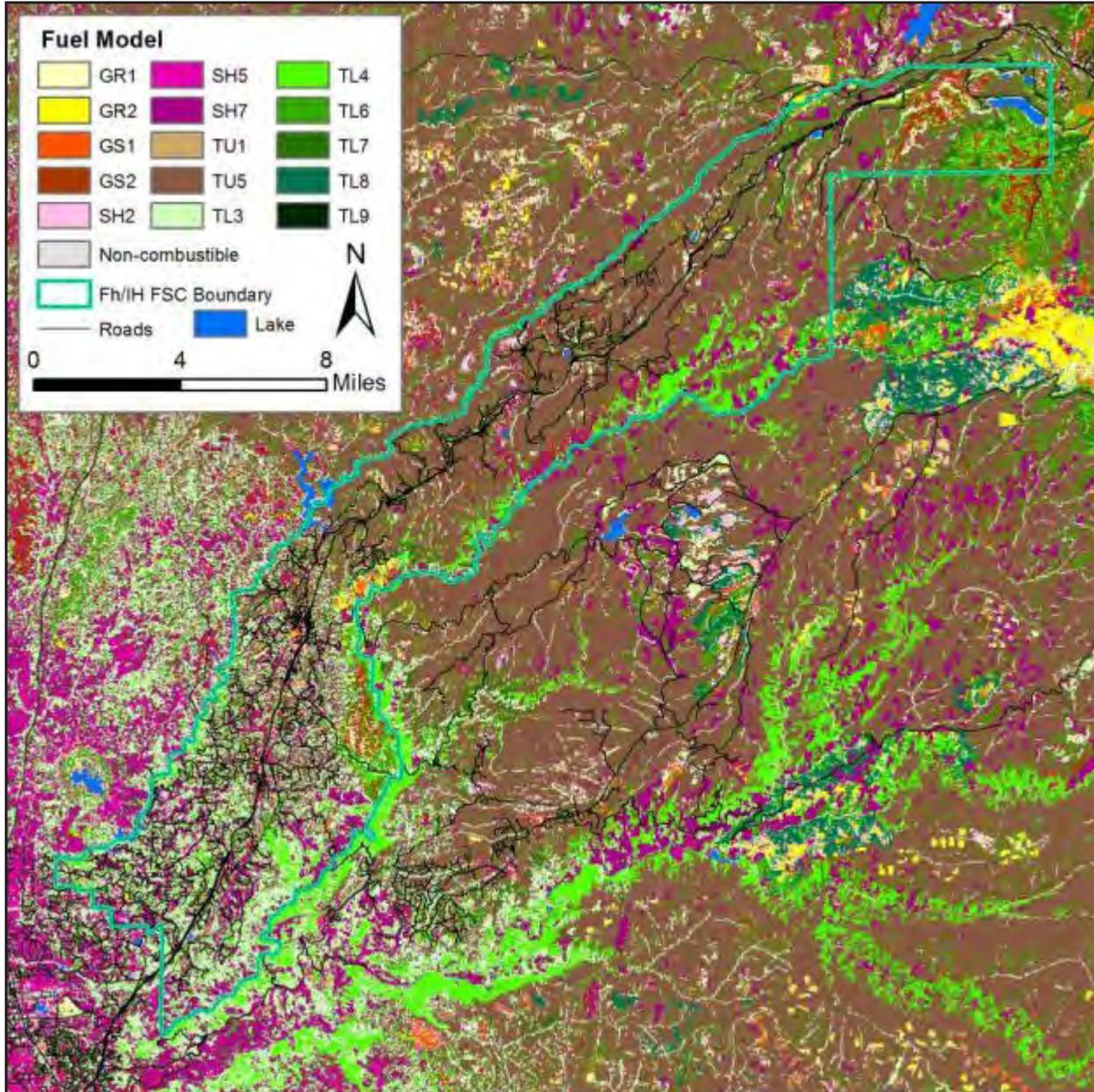


Figure 25. Predicted flame lengths under moderate weather conditions

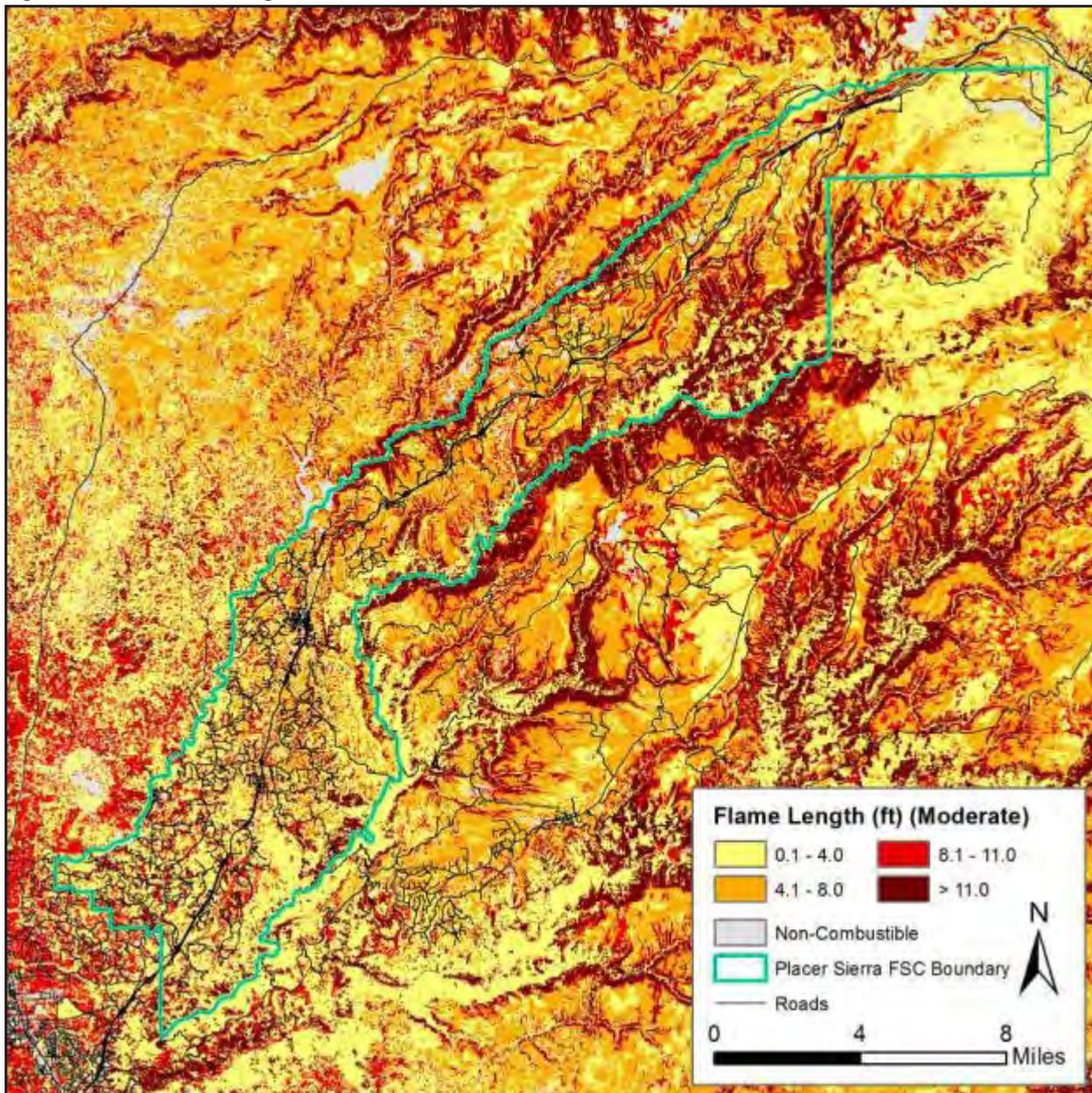


Figure 26. Predicted flame lengths under high weather conditions.

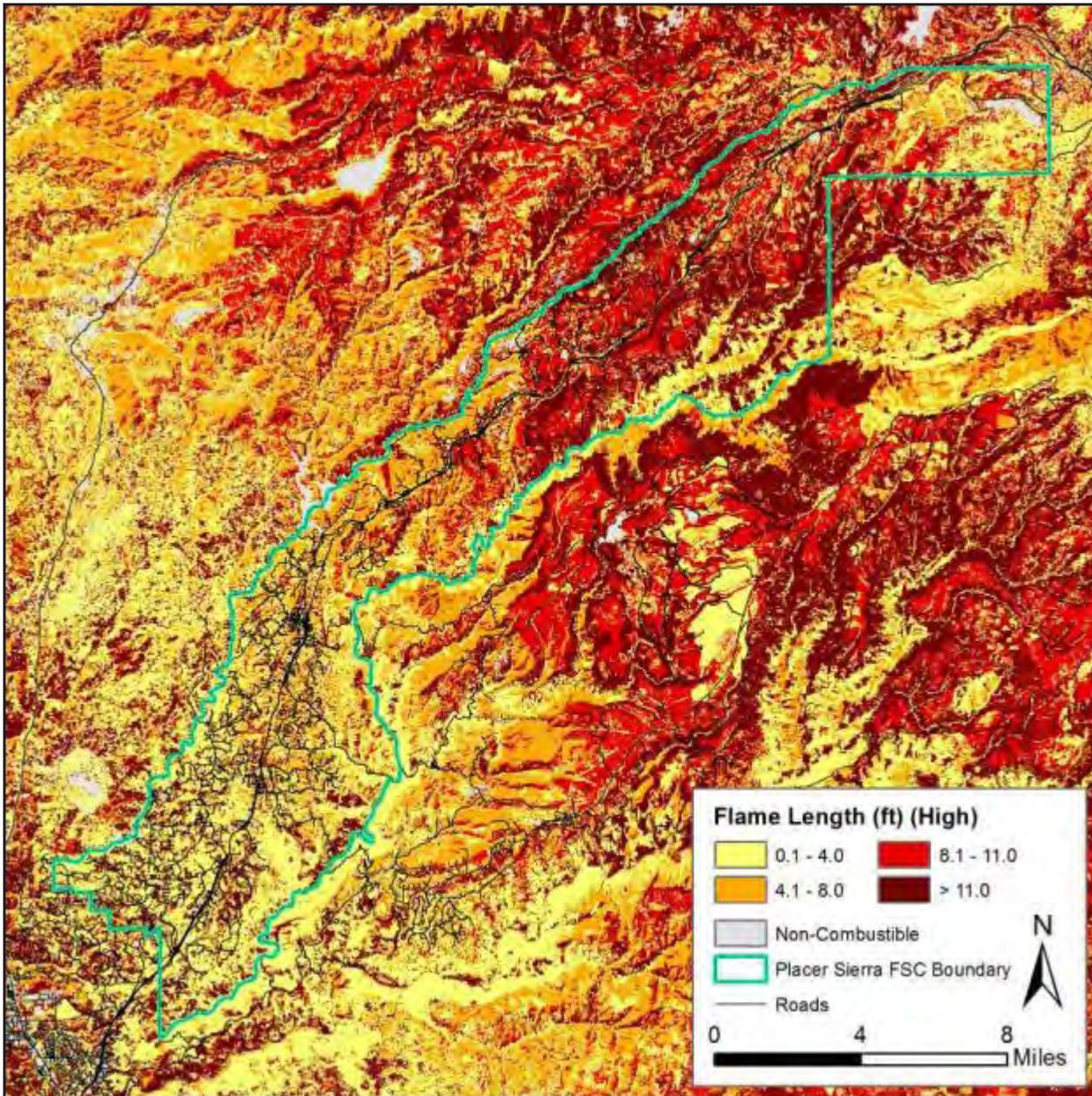


Figure 27. Predicted rate of spread under moderate weather conditions

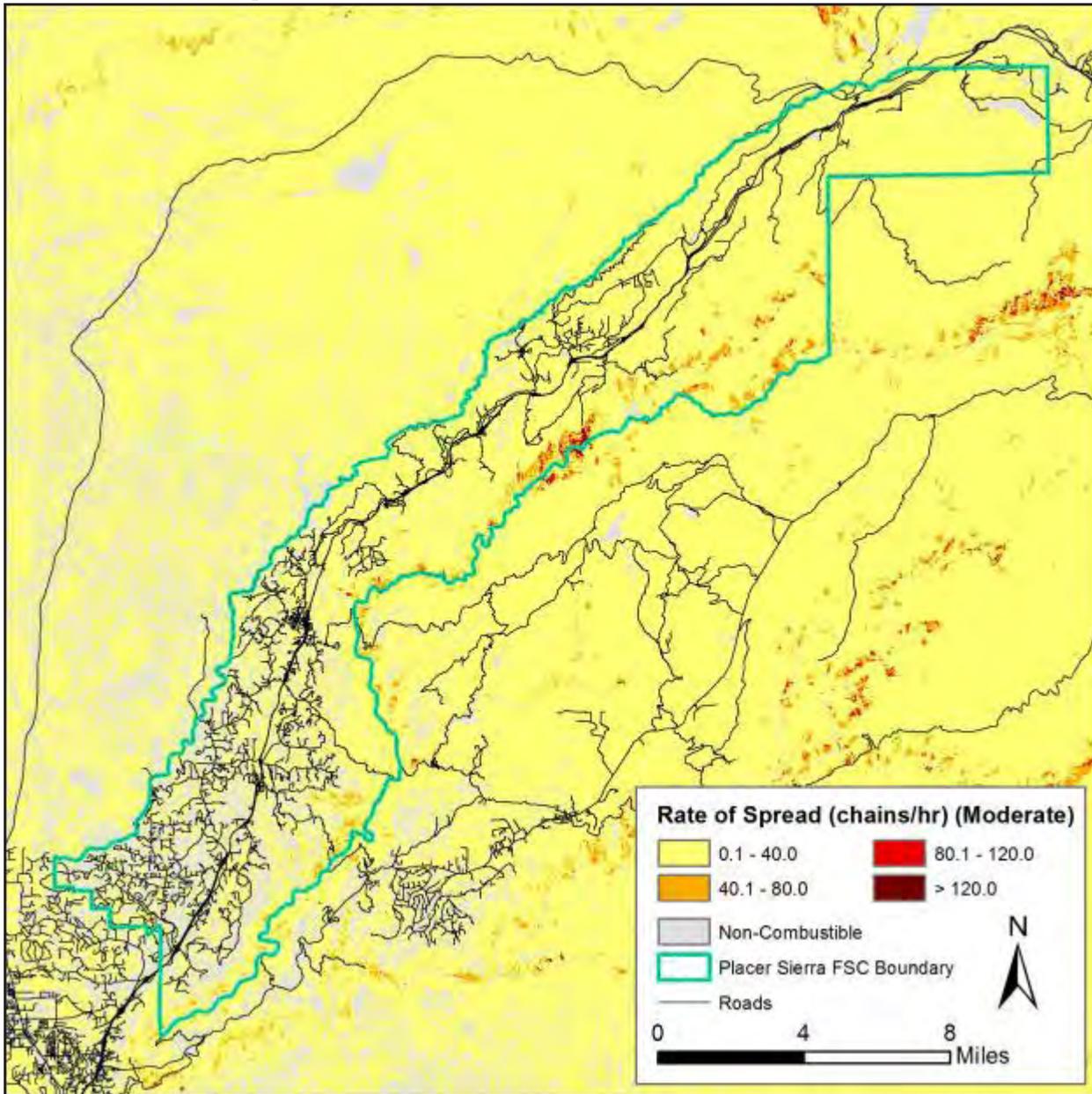


Figure 28. Predicted rate of spread under high weather conditions

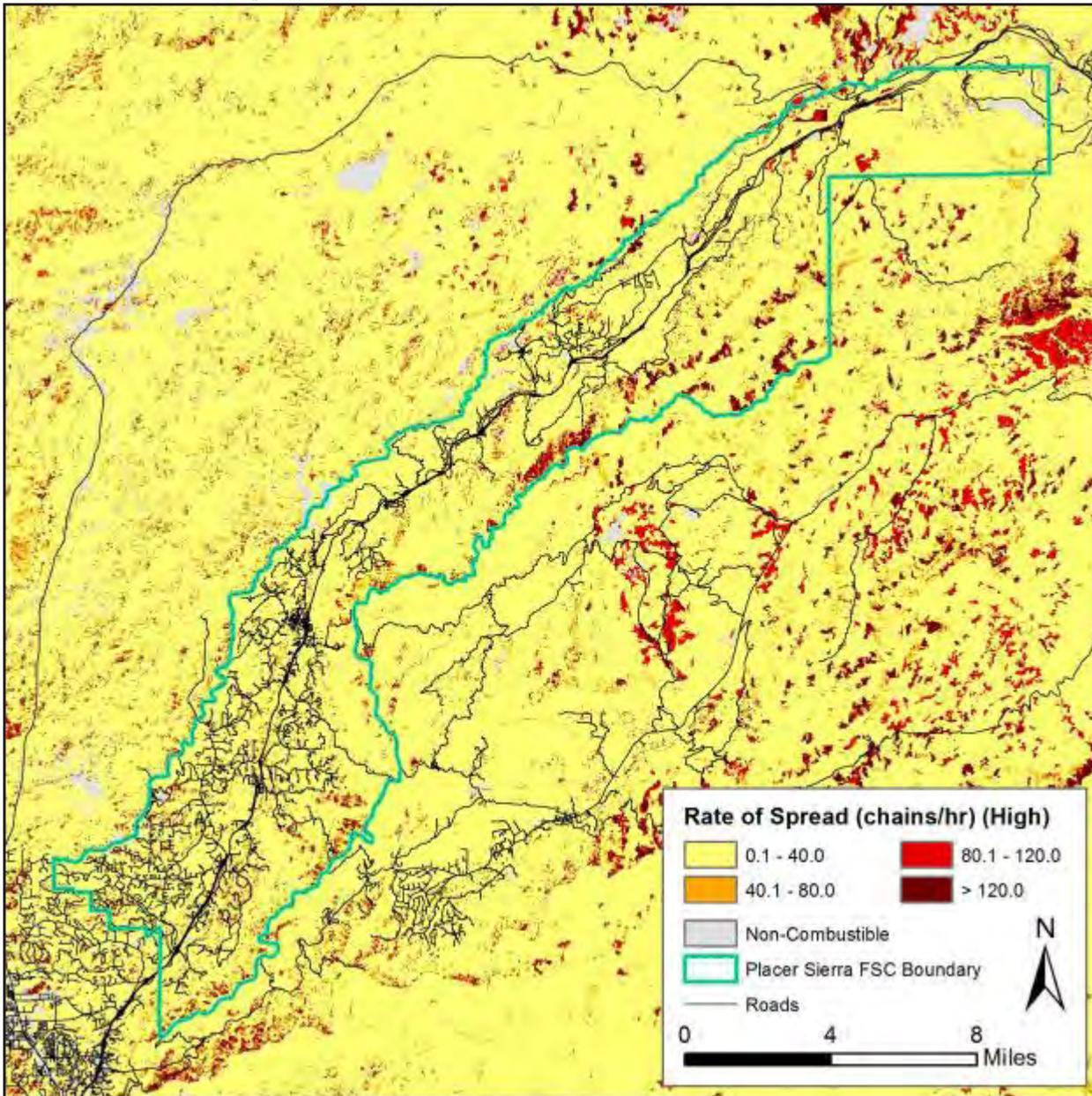


Figure 29. Predicted crown fire activity under moderate weather conditions

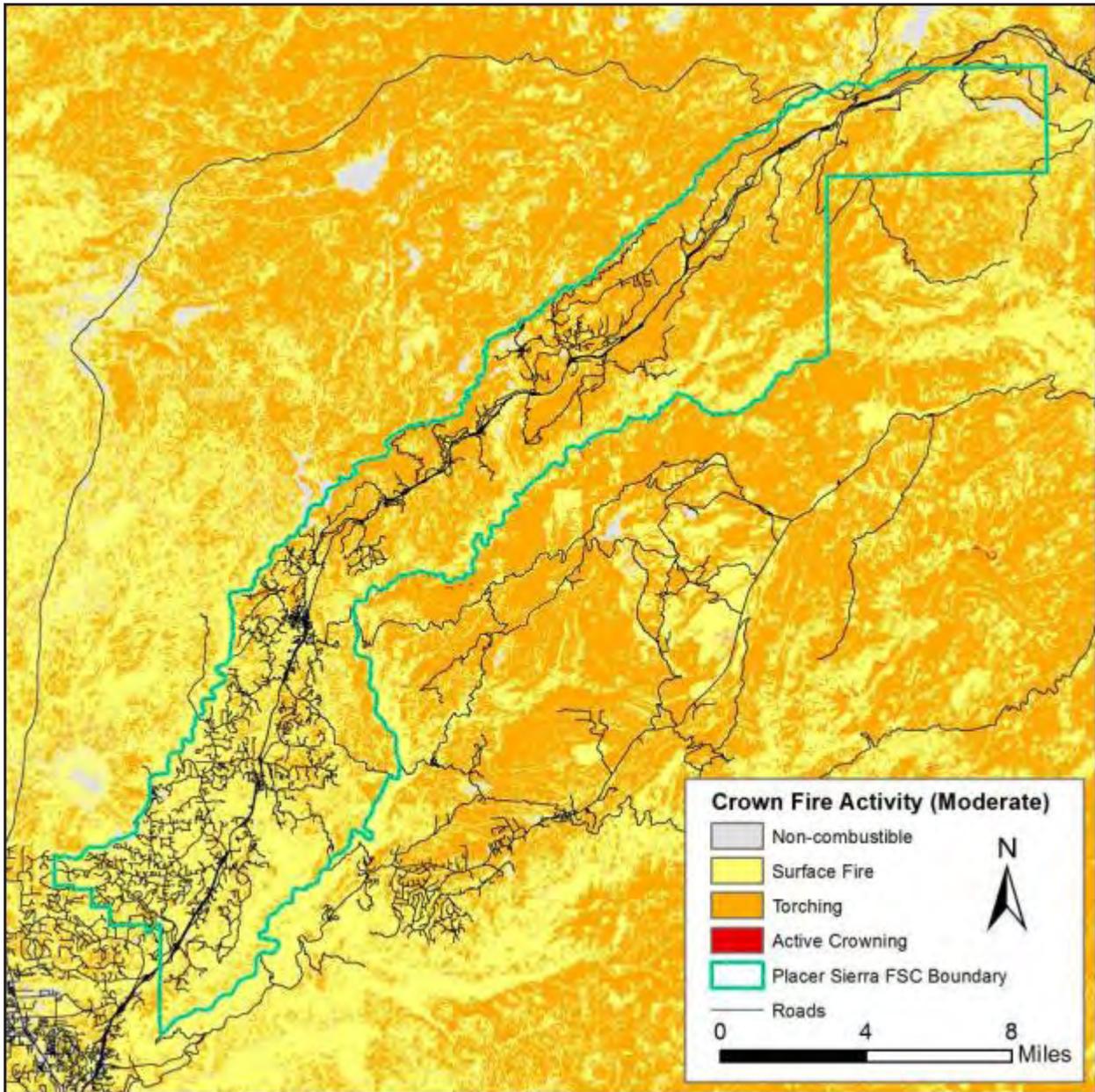
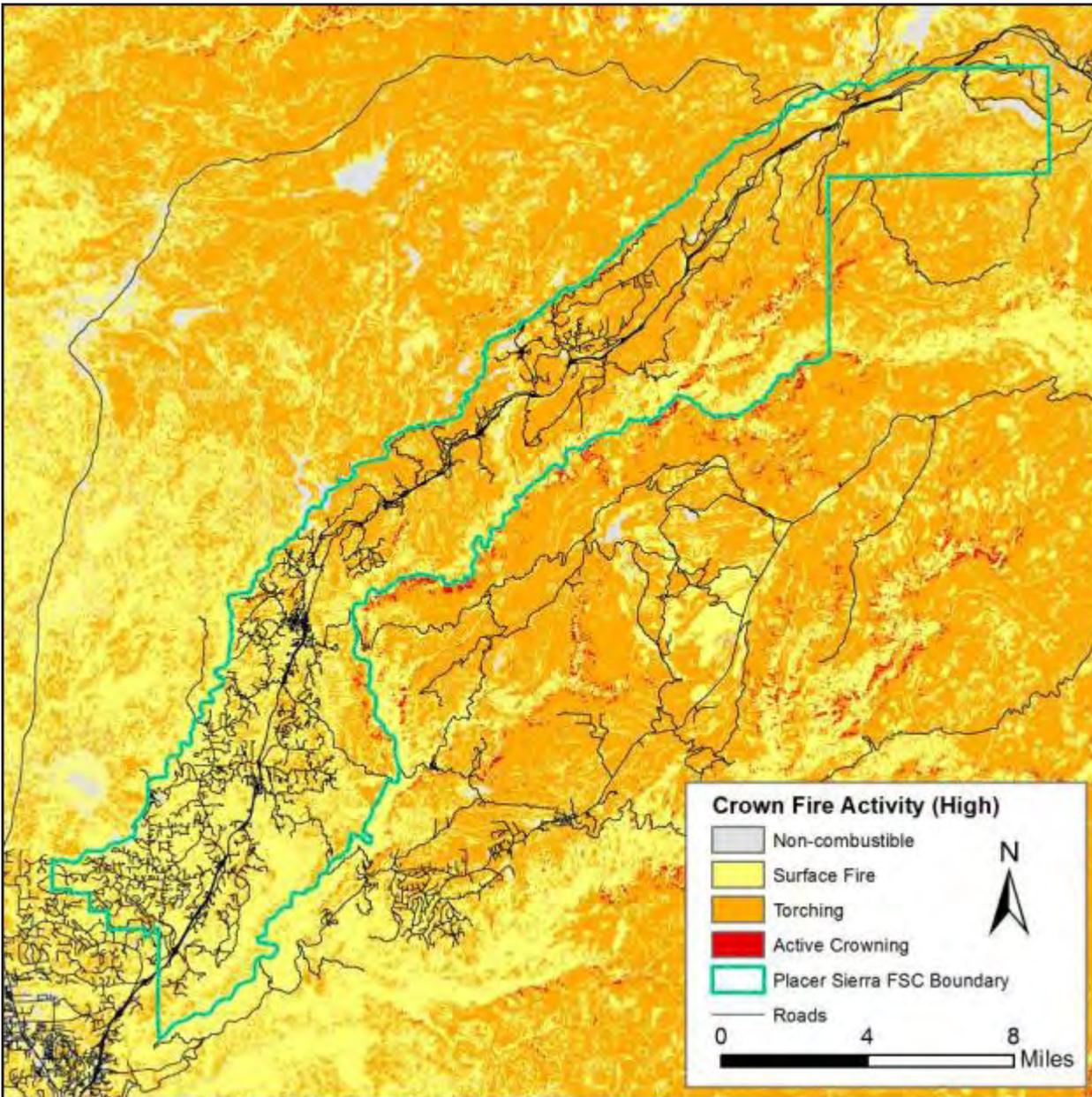


Figure 30. Predicted crown fire activity under high weather conditions



APPENDIX D: ADDITIONAL INFORMATION

FIRE HAZARD SEVERITY ZONES (FHSZ)

Introduction / Background

PRC 4201-4204 and Govt. Code 51175-89 direct CAL FIRE to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), define the application of various mitigation strategies to reduce risk associated with wildland fires. State Responsibility Area (SRA) was originally mapped in 1985 and has not been updated since, except with respect to changes in SRA boundaries. Local Responsibility Areas (LRA) were originally mapped in 1996, and have also not been updated since, although many local governments have made similar designations under their own authority. Current FHSZ data is available for 1985 SRA, 2007 SRA and LRA.

CAL FIRE wishes to remap both SRA and LRA areas to provide updated map zones, based on new data, science, and technology that will create more accurate zone designations such that mitigation strategies are implemented in areas where hazards warrant these investments. The zones will provide specific designation for application of defensible space and building standards consistent with known mechanisms of fire risk to people, property, and natural resources.

Project Description

The project will be driven by Geographic Information System (GIS) data in conjunction with modeling techniques designed to describe potential fire behavior and fire probability. Areas will be mapped in Moderate, High and Very High Categories. The project will run along two concurrent tracks: one designed to develop and refine the model itself regarding its scientific rigor, spatial accuracy, and data delivery mechanisms designed to facilitate end use by a wide variety of clients. The other track will focus on the roll-out and implementation process whereby local CAL FIRE units and local fire agencies review/comment and adjust the zones to conform to local knowledge not captured in the draft model.

Finally, the maps will follow established adoption processes required by state statute, and be made available by Jan 1, 2008, consistent with implementation of new WUI building codes that have been adopted by the California Building Standards Commission.

Model Development

The basic elements of the Fire Hazard Zone model will be built from existing data and hazard constructs developed by CAL FIRE's Fire and Resource Assessment Program (FRAP) used to develop Fire Threat and Communities at Risk listing in the Federal Register pursuant to the National Fire Plan (see http://frap.cdf.ca.gov/projects/wui/525_CA_wui_analysis.pdf for details). The model will work from these products as starting points, and refine characterization of the zones to directly attempt to characterize fire exposure mechanisms that cause ignitions to structures. These basic constructs follow classical quantitative risk assessment whereby probabilities of fire behaviors define the hazard component of risk analysis. FRAP is partnering with researchers at UC Berkeley and the private sector to develop this model and it promises to use innovative techniques to meet the objectives and usage of the data.

Specific model components will focus on characterizing potential fire behavior arising for vegetation fuels that are by nature dynamic. Since many of the applications of the zones involve permanent engineering mitigations associated with structure construction, it is desirable that the nature of the zone reflect changes in fire behavior/exposure relative to the length of time the structure will be in place. While obviously significant land-use changes will need to be captured through period maintenance routines, basic vegetation dynamics and maximal hazard levels will be used to develop the model such that mitigations match potential exposure over the horizon of the mitigation design.

The model will also incorporate a measure of fire probability predicated on frequency of fire weather, ignition patterns, expected rate-of spread, and/or past fire history similar to techniques uses to calculate fire rotation as used in the development of fire threat. A detailed description can be found at http://frap.cdf.ca.gov/assessment2003/Chapter3_Quality/wildfire.html.

Finally, the model will characterize flying ember (brand) production from vegetation fuels, and zoning hazard based on the area of influence that those brands are likely to land and cause potential ignitions. This functional mechanism of hazard is the principal driver of hazard in densely developed areas. A related concern in already built-out areas is the relative density of vegetative fuels that can serve as receptive sites for new spot fires to initiate within the urban core, and then spread to adjacent structures. The project will explore techniques to model accurately both the brand production/reception element, as well as fire spread potential in urbanized areas.

For more information on FRAP and FHSZs, please visit <http://frap.cdf.ca.gov>.

For more information on hazard mapping and associated building codes, please see http://www.fire.ca.gov/fire_protection/fire_protection_prevention_planning_wildland.php.

Figure 1. Fire Hazard Severity Zones in SRA for Placer County.

Please see http://frap.cdf.ca.gov/webdata/maps/placer/hfszl_map_31.jpg for More Information.

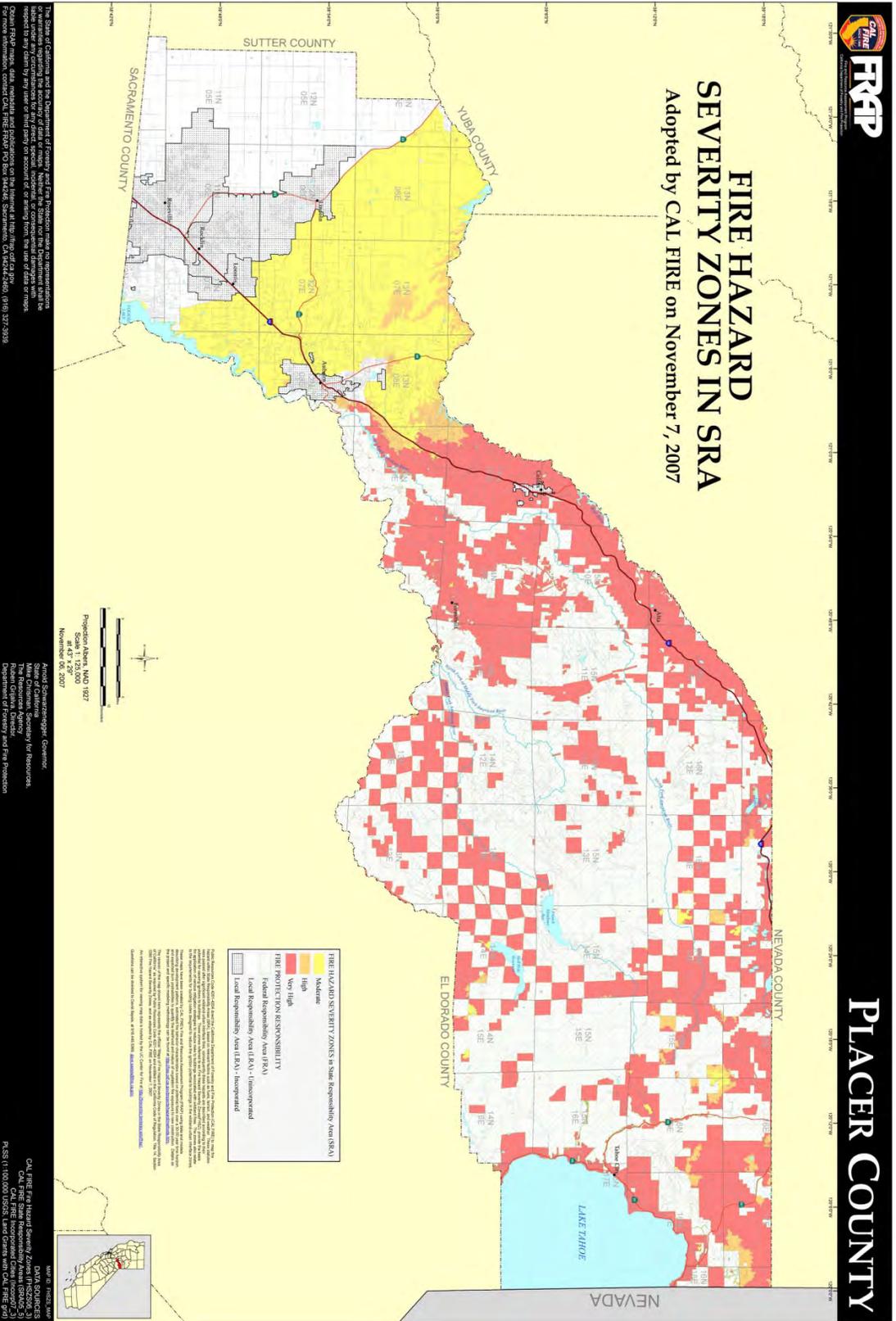


Figure 2. Fire Hazard Severity Zones in LRA for Placer County.

Please see http://frap.cdf.ca.gov/webdata/maps/placer/fhszl_map_31.jpg for More Information.



AMERICAN RIVER CANYON SHADED FUEL BREAK



“Project Canyon Safe”

Updated 2011

American River Canyon Shaded Fuel Break

The American River Canyon Shaded Fuel Break consists of approximately 300 acres of public and private lands within and adjacent to the City of Auburn. The project area is considered a “very high” risk area because of the proximity of residential, commercial, and recreational development and is within the Wildland Urban Interface and is designated in Very High and High Fire Hazard Severity Zones.

The prescription used for this project is known as the American River Canyon Shaded Fuel Break prescription. It is used in the City of Auburn, Auburn State Recreation Area (ASRA), Cal Fire areas of responsibility, and on U. S. Bureau of Reclamation project lands. This prescription was developed by Cal Fire, U. S. Bureau of Reclamation, California State Parks, and Auburn City Fire Department. It is approved and recognized by the Bureau of Land Management and United States Forest Service.

The intent of the Shaded Fuel Break is to provide protection through removal of flammable fuels consumed in a wildfire as so to lessen fire intensity in an attempt to allow fire resources to utilize such a location to increase the probability of success during fire suppression activities. The Shaded Fuel Break is a carefully planned thinning of dense vegetation in an area approximately 300 feet wide where fire does not easily move from the ground into the overhead tree canopy. Fuel break width will be dependant upon the fuels and topography in any given area. Vegetation will be removed by hand methods; cutting and sawing, stacked and chipped, with chipped materials left on site for natural decomposition. Minimal machinery will be used as so not to disturb ground and watershed attributes of the area. Cut materials on hillsides will be carried down to chipper locations in lesser accessible areas or left on site for “pile burning” applications. Fuels consist of Oak, Conifer, Pine, Manzanita, Buck brush, Poison Oak, Ceanothus, Scotch Broom, Blackberry, and annual grasses. The proposed project area will be accessed by way of city standard streets, un-improved access roads, and improved trails in the ASRA as used for hiking, biking, and horseback riding.

The purpose of the Shaded Fuel Break is to minimize destruction to the City of Auburn from wildfire and to protect and enhance natural resources; watershed and habitat of the pristine American River Canyon and Auburn State Recreation Area. The goal is to treat these lands using the prescribed fuels application with the desired outcome of manageable lands for future fire prevention projects.

“Project Canyon Safe”

“Project Canyon Safe” was first initiated on May 22, 2010 by way of a “community” event involving over 110 individuals; citizen volunteers, agency personnel, and private contractors, performing fuels reduction work on the American River Canyon Shaded Fuel Break in the Robie Point area. After a day of fuels reduction, nine (9) acres were treated, three (3) chippers were operated through donated contractor time and personnel, and 158 tons of fuels were chipped and scattered in the project area. This initial event proved that community participation can make a difference in reducing our threat of wildfire.

“Project Canyon Safe” continues forward with the collaboration of organized neighborhoods, federal, state, and local government agencies, and the Greater Auburn Area Fire Safe Council. The focus is on the accomplishment of fuels reduction and sustainability of the American River Canyon Shaded Fuel Break.

Through neighborhood work events or raising funds to contract for work performed, the community is committed to continue a collaborative effort in reducing our threat of wildfire to the Auburn area.

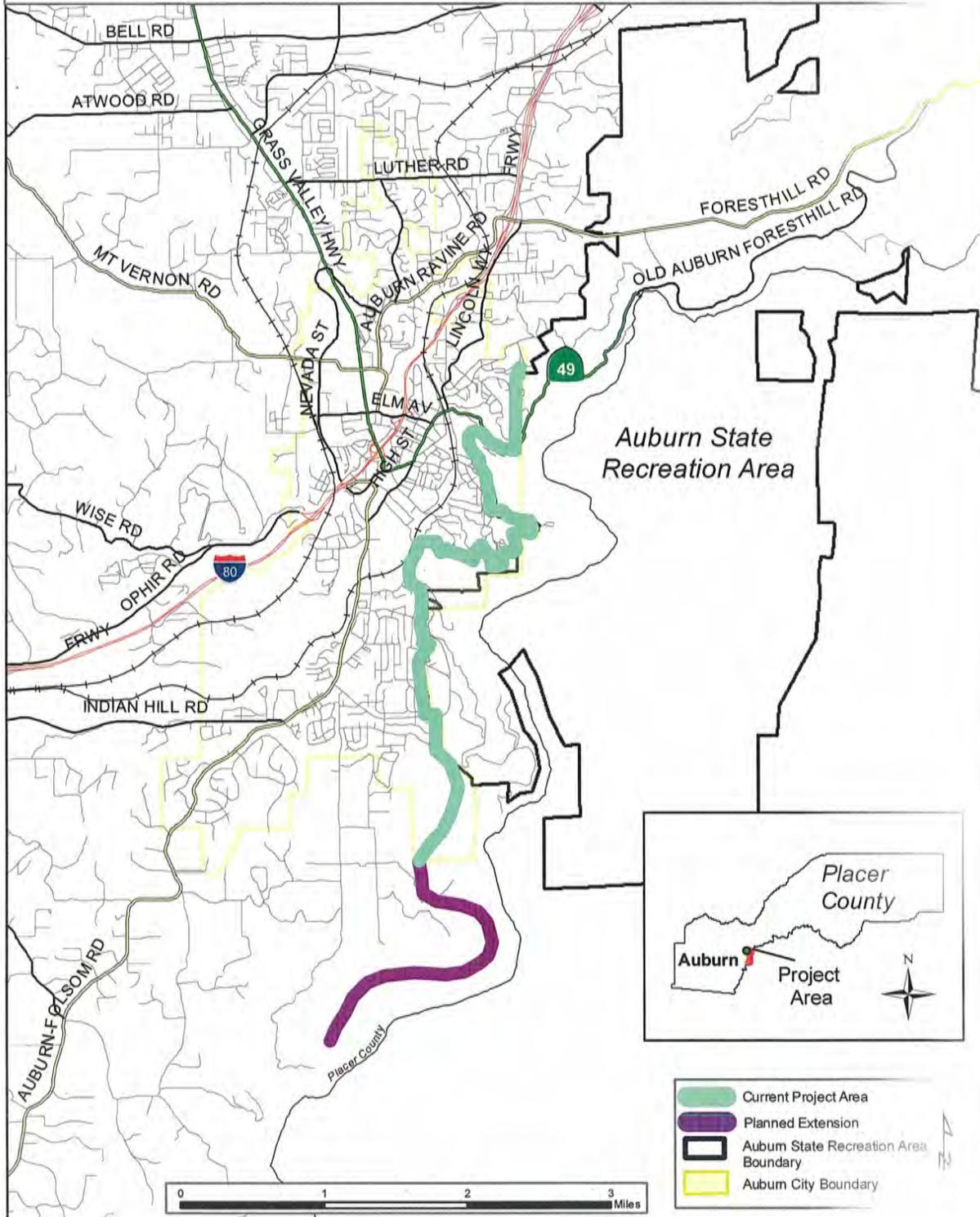
This documentation serves as an overview of project areas, status, and needs to continue the vitality of project areas and will identify the “work in progress”.

The Greater Auburn Area Fire Safe Council Mission Statement

Our Mission Statement:

The purpose of the GAAFSC is to: (1) Educate the public regarding the dangers associated with living in a Wildland Urban Interface Area and assist in identifying high-risk areas; (2) Provide a Community Fire Safe Plan (“the plan”) for those areas covered by the Council; (3) Cooperate with all related public and government agencies to implement the Plan; and (4) Promote fuel reduction programs and projects which will provide a safer environment in the event of wildfires which may threaten the area.

Auburn Shaded Fuel Break Project



American River Canyon Shaded Fuel Break “Project Canyon Safe”

Listing of Identified Project Areas

Aeolia Heights

Aeolia Drive Olive Orchard and Hwy 49

Borland to Robie Point

Robie Point Area

Robie Point to Marina Area

Marina Area to Gold Area

Virginia Street- Zehms Property

Gold & Virginia Street- Davenport Property

Gold Street to Portland Ave.

Portland Ave.

Riverview Area

Canyon View Community Center

Placer County Water Agency (PCWA)

Montecillo Area

Maidu to Blackstone Ct.

Blackstone Ct.

Blackstone to Canyon Rim Estates

Canyon Rim Estates

**American River Canyon Shaded Fuel Break
"Project Canyon Safe"
Listing of Identified Project Areas**

Updated Status 2011

Location	Status	Approx. Acres Treated
Aeolia Heights	1 work party by neighborhood 100K grant, work by CCC, SFB	2 8
Aeolia Dr., Olive Orchard, to Hwy 49	Chamberlain Prop- defensible space behind homes Olive Orchard- defensible space along prop lines and roadway Submitted for Prop 40 Funds (tie into CCC project, olive orchard to hwy 49)	2 2
Borland to Robie Point	Significant SFB implementation	25
Robie Point Area	May 2010 Project Canyon Safe SFB and clean-up	9
Robie Point to Marina	No work performed- weed abatement on a couple of vacant parcels adjoining SFB area	
Marina to Gold Drainage	CDC Crews some work on lower Marina	2
Virginia St (Zehms)	Defensible Space & SFB through weed abatement program	3
Gold & Virginia (Davenport)	CDC Crews, SFB implement and maintenance Submitted for Prop 40 funds	6
Gold to Portland	July 2011 Project Canyon Safe end of Gold St to Overlook	4
Portland Ave.	No work performed	
Riverview Area	Homeowners maintained SFB on private properties- look at grazing possibility	10
Canyon View Community Center	Minimal weed abatement by ARD- In process of BOR/AFD project using CDC crews	
Placer Co. Water Agency	Weed abatement by PCWA- In process of BOR/AFD project using CDC crews	

**American River Canyon Shaded Fuel Break
“Project Canyon Safe”
Listing of Identified Project Areas**

Updated Status 2011

Location	Status	Approx. Acres Treated
Montecello	Significant progress 90% complete- SFB and weed abatement	5
Maidu to Blackstone	No work performed. No assignment of contact or neighborhood organization	
Blackstone Ct.	Fuel reduction, removal of former fire remnants	5
Blackstone to Canyon Rim	CDC Crews SFB, implement and maintenance	6
Canyon Rim Estates	HOA maintained SFB and weed abatement on open lots	10

**Homeowner Associations
Open Space Areas
Listing of Identified Project Areas**

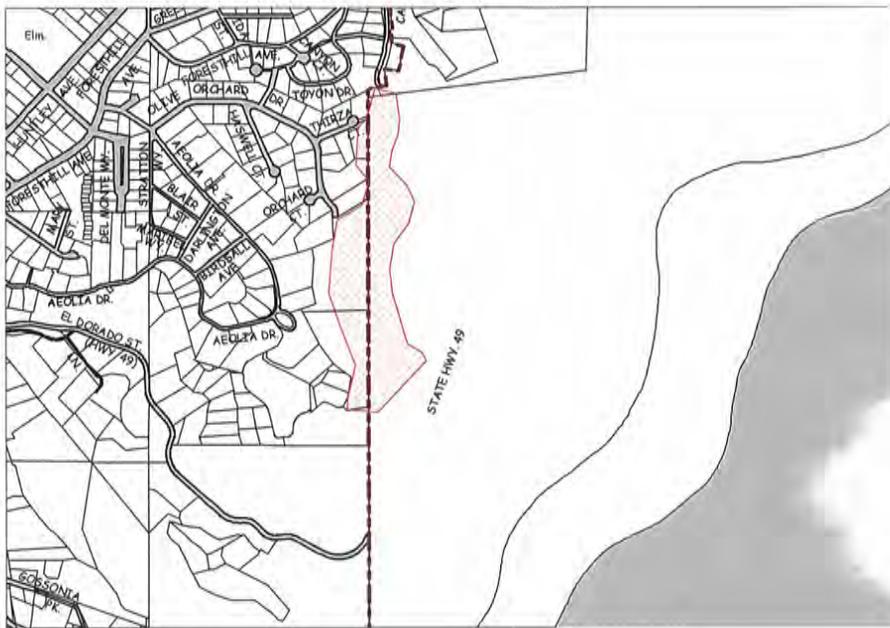
Updated Status 2011

Location	Status	Approx. Acres Treated
Grayhorse	Maintain SFB and defensible space around property lines	5
Cobblestone	Weed abatement in common areas, no open space	1
Granite Bay Vista	Weed abatement in common areas, no open space	.5
Auburn Bluffs	Weed abatement on vacant parcels	3
Grand Oaks	Maintain SFB and defensible space around property lines	7
South Ridge	Implement SFB and Defensible space (2011 grant funded)	10
Lancaster Property (Dairy Rd)	Weed abatement on vacant parcel	2
Canyon Creek Subdivision	Weed abatement- Forced Abatement- non-developed subdivision	5
Mt. Vernon Park	Weed abatement- Maintained by ARD	2

**General Area Projects
Listing of Funding Sources-Opportunities**

Updated Status 2011

Source	Description/Other	Amount
Prop 84	Grant for Aeolia Heights work by CCC	\$100,000
Canyon Rim/Eagles Nest/Blackstone	Cal Fire funded crew days	12 days
Virginia/Gold	Cal Fire funded crews days	8 days
Marina	Cal Fire funded crew days by State Parks	4 days



Aeolia Heights Area
Approximately 16 Acres
Private & Public Lands

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

Aeolia Heights Area

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

Yes-

Contact Person(s) for Project Area(s):

Kevin Hanley, Jeff Michaels

Recent Events/Status:

Two community work day parties have occurred. Approximately 2 acres treated. Primary treatment consists of Scotch Broom removal, prep for prescription treatment and utilizing the Placer County Chipper program. The Dawson parcel has been treated by the property owner; consisting of mechanical treatment of fire break using dozer equipment. 2010- Grant with CCC, applied SFB to approximately 8 acres. In process of developing maintenance program.

Desired Outcomes:

Achieve the application of the Shaded Fuel Break Prescription to the entire project area. Treat project area to a state where local community members can maintain the integrity through routine work events with minimal expenses.

Estimated Time to Reach Sustainable Maintenance Status:

Desired levels reached, need to maintain

Other Information:

A grant application has been submitted by the California Conservation Corp sponsored by the Auburn Fire Department. This grant would cover the entire costs associated with the CCC treating all the public lands within the project area with the Shaded Fuel Break Application. If this occurs, the project desirable outcome will be achieved in less time. Should know grant status on October 2010.

Completed 2011

Project Needs:

Sustained funding source for project implementation and future maintenance.



Aeolia Drive Olive Orchard & Engle/Smith Parcel
Approximately 20 Acres
Private Lands

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

Aeolia Drive Olive Orchard & Engle/Smith Properties

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

No- All private parcels

Contact Person(s) for Project Area(s):

Currently- Auburn Fire Department

Recent Events/Status:

The olive orchard property owner was processed through the City of Auburn Weed Abatement program. The Fire department and property owner have been working together to establish the needs of fuels reduction, a plan of action, and a time table. Several of the neighboring property owners have conducted fuels work on the adjacent property through permission from the property owner. As an initial treatment, fuels have been removed and chipped along the roadway (Aeolia). Engle/Smith- have been notified through various mediums; mail and phone, to make contact with fire to establish a plan. Possible use of Cal Fire crews on Olive orchard property.

Desired Outcomes:

Application of the Shaded Fuel Break Prescription to a majority of the project areas: specifically along Aeolia, Hwy 49 and neighboring properties. Reduce the fuel loading in the project area.

Estimated Time to Reach Sustainable Maintenance Status:

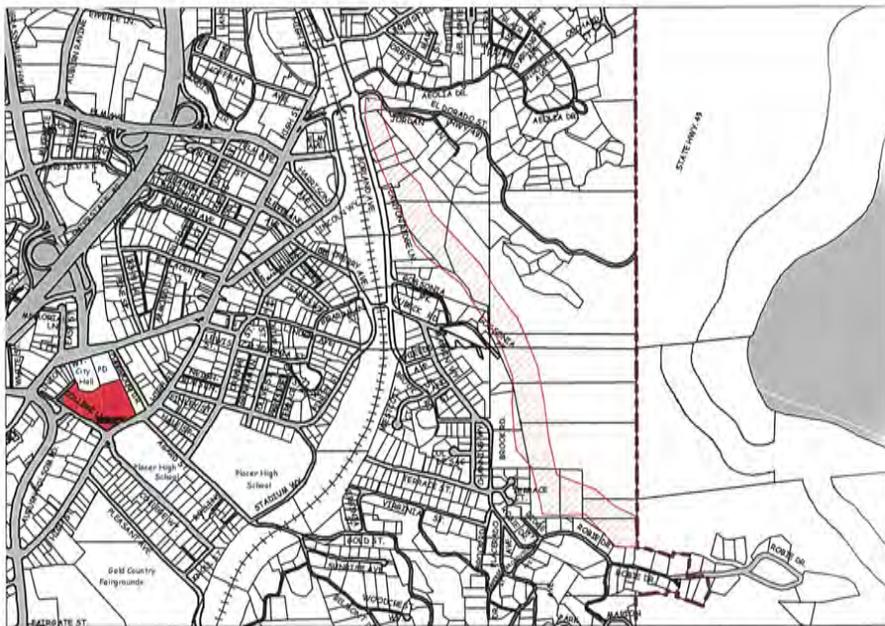
Undetermined at this time

Other Information:

Fire continues to pursue all the property owners in developing a plan of action.

Project Needs:

Established plans for fuel reduction



Borland to Robie Point Area
Approximately 35 Acres
Private & Public Lands

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

Borland to Robie Point

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

Yes-

Contact Person(s) for Project Area(s):

Henry Batsel

Recent Events/Status:

Significant progress has been made to the project area over the last year. The project has focused on the removal of brush fuels primarily. Next phase will focus on tree removal for thinning of crown canopy.

Desired Outcomes:

Achieve the application of the Shaded Fuel Break Prescription to the entire project area. Treat project area to a state where local community members can maintain the integrity through routine work events with minimal expenses.

Estimated Time to Reach Sustainable Maintenance Status:

Need info

Other Information:

Researching the feasibility of using goats for maintenance of project area. Actively pursuing additional funding sources.

Project Needs:

Sustained funding source for project implementation and future maintenance.



Robie Point Area
Approximately 10 Acres
Public Land

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

Robie Point Area

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

No- Initial MOU used for project authorization

Contact Person(s) for Project Area(s):

Greater Auburn Area Fire Safe Council, Kevin Hanley

Recent Events/Status:

May 22, 2010 initial "Project Canyon Safe" event. Within a 7 hour period, 9 acres were treated by 114 volunteer individuals, 158 tons were chipped by private contractors donating their time and resources, no injuries occurred, and monetary donations were made to continue the support of the American River Canyon Shaded Fuel Break. No additional work performed since May 22, 2010.

Desired Outcomes:

Achieve the application of the Shaded Fuel Break Prescription to the entire project area. Treat project area to a state where local community members can maintain the integrity through routine work events with minimal expenses.

Estimated Time to Reach Sustainable Maintenance Status:

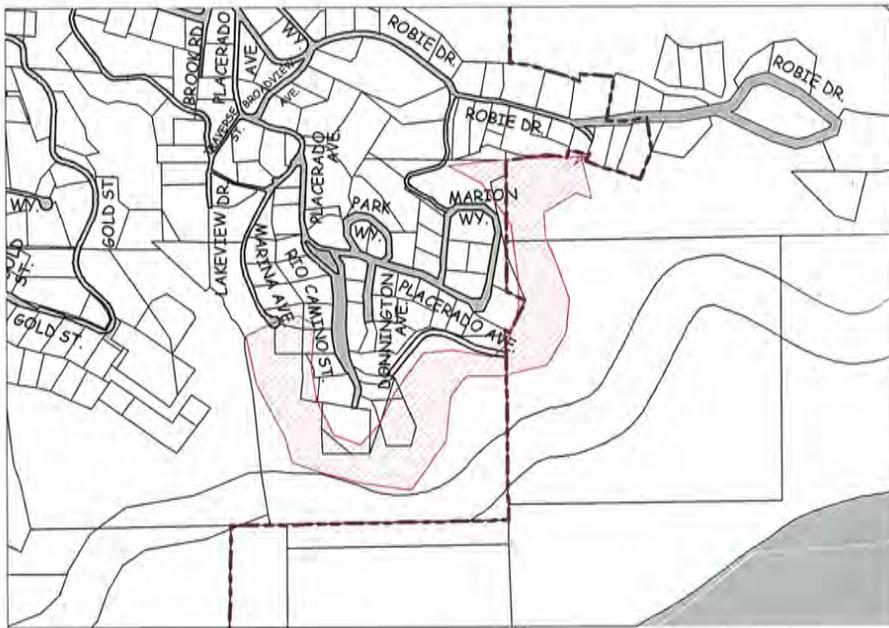
Area reached sustainable maintenance status on May 22, 2010.

Other Information:

Project Needs:

Continued community events in the project area to maintain level of integrity of treatment.

Sustained funding source for project implementation and future maintenance.



Robie Point to Marina Area
Approximately 15 Acres
Public Lands

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

Robie Pint to Marina

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

No

Contact Person(s) for Project Area(s):

None assigned. Auburn Fire

Recent Events/Status:

No activities have occurred in this project area. Several years since any treatment occurred by Cal Fire/BOR.

Desired Outcomes:

Achieve the application of the Shaded Fuel Break Prescription to the entire project area. Treat project area to a state where local community members can maintain the integrity through routine work events with minimal expenses.

Estimated Time to Reach Sustainable Maintenance Status:

Unknown at this time.

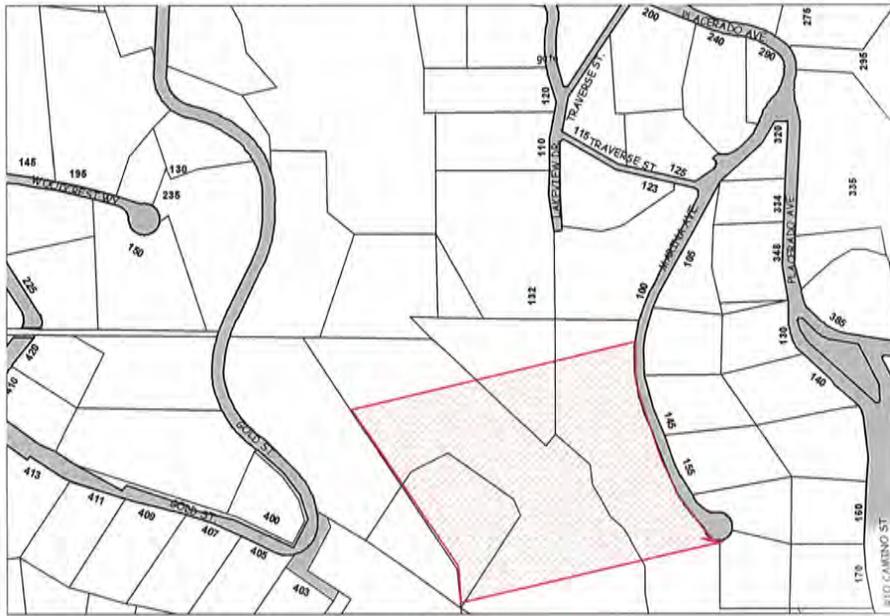
Other Information:

A grant application has been submitted for fuels treatment that includes this project area through the Sierra Nevada Conservancy. March of 2011 not funded, January 2012 re-submitted.

Project Needs:

Designated individuals and community support to coordinate treatment events in the project area.

Sustained funding source for project implementation and future maintenance.



Marina Area to Gold
Approximately 4 Acres
Public Lands- Border to Private Lands

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

Marina Area

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

Yes

Contact Person(s) for Project Area(s):

Bob Snyder

Recent Events/Status:

Application submitted. Reviewed the project location and overall objectives; short term and long term for the area (Marina/Gold canyon) with representative, Fire, and State Parks.

Next phase will be to mark trees for removal; flag areas.

Work done by property owners and some Cal Fire crews

Work this area in to the Davenport property

Desired Outcomes:

Achieve the application of the Shaded Fuel Break Prescription to the entire project area.

Treat project area to a state where local community members can maintain the integrity through routine work events with minimal expenses.

Estimated Time to Reach Sustainable Maintenance Status:

Need to assess

Other Information:

A grant application has been submitted for fuels treatment that includes this project area through the Sierra Nevada Conservancy. March of 2011 not funded, January 2012 re-submitted.

Project Needs:

Sustained funding source for project implementation and future maintenance.



Virginia Street- Zehms Property
Approximately 2.5 Acres
Private Land

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

Virginia Street- Zehms Property

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription and Defensible Space requirements to properties within 100 feet of the property line.

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

No-All private property.

Contact Person(s) for Project Area(s):

John Zehms

Recent Events/Status:

Complete treatment to the project area occurred in July. This has been the first in many years. The property owner has been requested by the fire department to continue to enhance this area over the next couple of years; more reduction of fuels, specifically trees.

Treated in 2011 again.

Desired Outcomes:

Achieve the application of the Shaded Fuel Break Prescription to the entire project area. Treat project area to a state where local community members can maintain the integrity through routine work events with minimal expenses.

And provide and maintain defensible space to those areas adjoining neighboring properties.

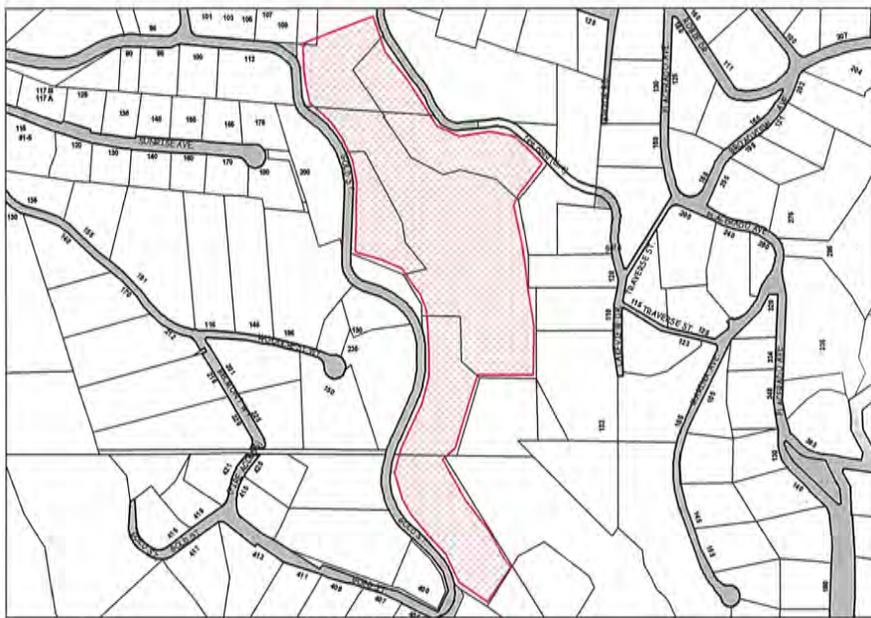
Estimated Time to Reach Sustainable Maintenance Status:

At that state now, will need maintenance next year prior to June.

Other Information:

Project Needs:

Additional fuel removal under the direction of the fire department.



Gold & Virginia Street- Davenport Property
Approximately 9 Acres
Private Property

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

Gold & Virginia Street- Davenport Property

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

No- All on private property. Cal Fire Form 719 completed.

Contact Person(s) for Project Area(s):

Whitley Davenport

Recent Events/Status:

Whitley Davenport has conduct some fuels reduction primarily just off the street areas of Gold & Virginia.

This project area will be treated by Cal Fire Crews through a special program offered to Auburn Fire through Cal Fire. Work is expected to commence Fall of 2010. The last several months have been spent completing the required paperwork to secure the resources for the project.

Good work completed in 2011.

More to be performed in 2011/2012.

Desired Outcomes:

Achieve the application of the Shaded Fuel Break Prescription to the entire project area.

Treat project area to a state where local community members can maintain the integrity through routine work events with minimal expenses.

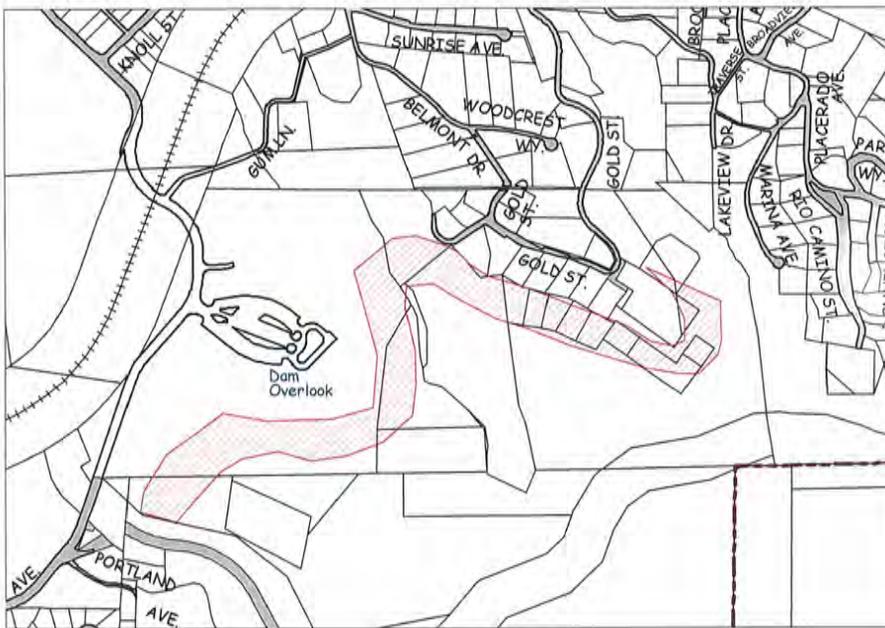
Estimated Time to Reach Sustainable Maintenance Status:

Estimated 12-18 months with Cal Fire Crew work

Other Information:

Project Needs:

Oversight from Fire Department coordinator. Funding for future work.



Gold Street to Portland Avenue
Approximately 30 Acres
Public Lands

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

Gold Street to Portland Ave.

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

No-

Contact Person(s) for Project Area(s):

None at this time- Fire Department

Recent Events/Status:

Project Canyon Safe 2011 cleared approximately 4.5 acres in the Gold/Overlook section.

Desired Outcomes:

Achieve the application of the Shaded Fuel Break Prescription to the entire project area. Treat project area to a state where local community members can maintain the integrity through routine work events with minimal expenses.

Estimated Time to Reach Sustainable Maintenance Status:

Need to establish

Other Information:

A grant application has been submitted for fuels treatment that includes this project area through the Sierra Nevada Conservancy. March of 2011 not funded, January 2012 re-submit.

Project Needs:

Designated individuals and community support to coordinate treatment events in the project area.
Sustained funding source for future work.



Portland Avenue
Approximately 5 Acres
Private & Public Lands

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

Portland Ave.

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

Yes

Contact Person(s) for Project Area(s):

None

Recent Events/Status:

Recent application completed. Initial application is focused on brush removal. Tree removal will be coordinated with fire department personnel.

Former contact person is no longer contact

Minimal work completed

Need plan of action and responsible contacts

Desired Outcomes:

Achieve the application of the Shaded Fuel Break Prescription to the entire project area.

Treat project area to a state where local community members can maintain the integrity through routine work events with minimal expenses.

Estimated Time to Reach Sustainable Maintenance Status:

Other Information:

Project Needs:

Oversight from Fire Department coordinator and sustained funding source for project implementation and future maintenance.



Riverview Area
Approximately 15 Acres
Private & Public Lands

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

Riverview

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

No-

Contact Person(s) for Project Area(s):

Mark Bryant

Recent Events/Status:

Past Prop 40 funding has been applied to the project area. The property owners have sustained the integrity of the project in areas above the canal.
Looking into grazing animals as a maintenance plan.

Desired Outcomes:

Achieve the application of the Shaded Fuel Break Prescription to the entire project area.
Treat project area to a state where local community members can maintain the integrity through routine work events with minimal expenses.
Treat areas below the canal.

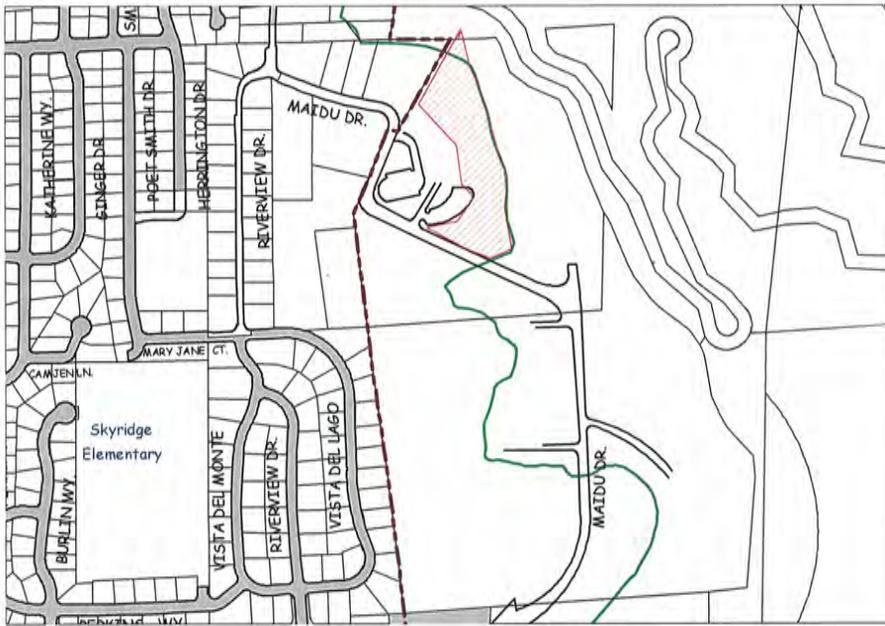
Estimated Time to Reach Sustainable Maintenance Status:

A majority of the project is at this state currently.

Other Information:

Project Needs:

A developed plan of action. Funding sources.
Sustained funding source for project implementation and future maintenance.



Canyon View Community Center
Approximately 5 Acres
Public Lands

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:
Canyon View Community Center

Fuel Management Application Type:
American River Canyon Shaded Fuel Break Prescription
Defensible Space, Vegetation Control

Auburn Fire/U. S. Bureau of Reclamation Application Completed:
No-

Contact Person(s) for Project Area(s):
ARD, Riverview and PCWA

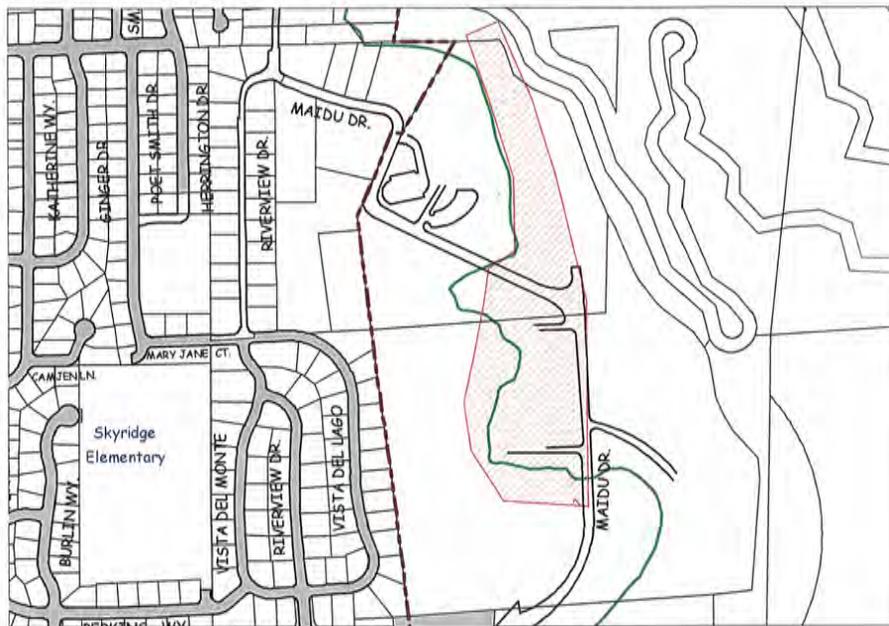
Recent Events/Status:
Minimal work completed by ARD to maintain weed growth around structures and parking area.

Desired Outcomes:
Tie this area into the project connecting Riverview and Montceillo. Keep defensible space and Shaded Fuel Break areas maintained. Provide additional fuel reduction due to use and traffic (vehicle and foot).

Estimated Time to Reach Sustainable Maintenance Status:

Other Information:

Project Needs:
Plan development and collaboration with parties involved. Identified funding source.



Placer County Water Agency Facility & Access Road
Approximately 9 Acres
Public Lands

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

PCWA and access road

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription
Defensible Space, Vegetation Control

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

No-

Contact Person(s) for Project Area(s):

Mike Nichol

Recent Events/Status:

Program has been reviewed with PCWA and AFD. Areas have been identified to tie in and enhance existing projects.

Desired Outcomes:

Maintain vegetation management around PCWA facility; Shaded Fuel Break and Defensible Space.
Evaluate vegetation Management on BOR/PCWA access roads in the area below Riverview.

Estimated Time to Reach Sustainable Maintenance Status:

On going

Other Information:

Project Needs:



Monteceillo Area
Approximately 12 Acres
Public Lands

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

Monticeillo

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription.

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

Yes-

Contact Person(s) for Project Area(s):

Rod Gross

Recent Events/Status:

A number of work days have occurred. As much as 3-4 acres have been treated using the SFB prescription. Work continues.

Desired Outcomes:

Achieve the application of the Shaded Fuel Break Prescription to the entire project area. Treat project area to a state where local community members can maintain the integrity through routine work events with minimal expenses.

Estimated Time to Reach Sustainable Maintenance Status:

Approximately 1 year from start- July/August of 2011

Other Information:

Project Needs:

Continued funding source to sustain future project needs.



Maidu to Blackstone Court
Approximately 11 Acres
Public Lands

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

Maidu to Blackstone Ct.

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

No-

Contact Person(s) for Project Area(s):

None Identified

Recent Events/Status:

Treatment occurred several years ago through Cal Fire/BOR contract. No work performed since initial.

Desired Outcomes:

Achieve the application of the Shaded Fuel Break Prescription to the entire project area. Treat project area to a state where local community members can maintain the integrity through routine work events with minimal expenses.

Estimated Time to Reach Sustainable Maintenance Status:

Other Information:

Project Needs:

Community organization to address project needs. Contact. Funding sources for project work.



Blackstone Court- Smith/Feit/Ganz Properties
Approximately 6 Acres
Private Lands

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

Blackstone Ct

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription
Defensible Space

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

No- all private properties

Contact Person(s) for Project Area(s):

Smith/Feit/Ganz

Recent Events/Status:

Property owners have continued to sustain SFB project over the last several years. Have been assisted with Prop 40 grant funding.
2011- Additional work completed by Cal Fire and property owner Ganz

Desired Outcomes:

Achieve the application of the Shaded Fuel Break Prescription to the entire project area. Treat project area to a state where local community members can maintain the integrity through routine work events with minimal expenses.

Estimated Time to Reach Sustainable Maintenance Status:

Areas have sustained project integrity and continue to do so by property owners.

Other Information:

Project Needs:

Continued funding sources.



Canyon Rim Estates
Approximately 85 Acres
Private Land

Not to Scale, Project Shown as Approximate Locations

American River Canyon Shaded Fuel Break

Project/Area Name:

Canyon Rim Estates

Fuel Management Application Type:

American River Canyon Shaded Fuel Break Prescription
Defensible Space

Auburn Fire/U. S. Bureau of Reclamation Application Completed:

No-All private lands

Contact Person(s) for Project Area(s):

Kim McClintock; Canyon Rim Estates

Recent Events/Status:

This project was a condition of approval for development. The initial application of the project was performed in 2004-2006. It includes all open space areas to receive the Shaded Fuel Break application and homes to have 100-200 feet of defensible into the Shaded Fuel Break areas.

2011- Significant work by property owner and Cal Fire crews.

Desired Outcomes:

Achieve the application of the Shaded Fuel Break Prescription to the entire project area. Treat project area to a state where local community members can maintain the integrity through routine work events with minimal expenses.

And the application of defensible space to all residential development.

The establishment of a Homeowners Association (HOA) is required to provide funding for ongoing project maintenance and sustainability.

Estimated Time to Reach Sustainable Maintenance Status:

Project has achieved this status at various times. The project has not achieved build out as of this date.

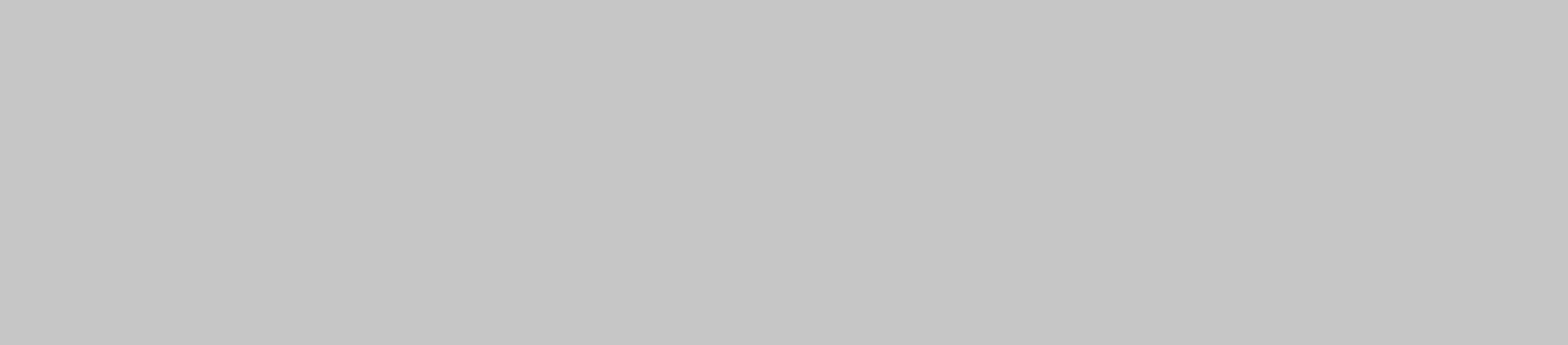
Other Information:

The developer, Canyon Rim Estates still remains responsible for project sustainability.

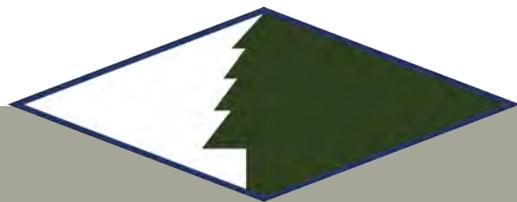
The fire department annual evaluates the needs of the project area and requests the developer/owner to apply treatment.

Project Needs:

The establishment and funding by the HOA.







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