



Forest Lakes Community Wildfire Protection Plan

Prepared for:

The Community of Forest Lakes

and

**The Upper Pine River Fire Protection
District**

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Durango, CO
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ACRONYM LIST

BLM	Bureau of Land Management
CSFS	Colorado State Forest Service
CWPP	Community Wildfire Protection Plan
Ecosphere	Ecosphere Environmental Services
FL	Forest Lakes
FL CWPP	Forest Lakes Community Wildfire Protection Plan
FLMD	Forest Lakes Metro District
GIS	Geographic Information System
OEM	La Plata County Office of Emergency Management
FL POA	Forest Lakes Property Owners Association
SJPL	San Juan Public Lands
Upper Pine	Upper Pine River Fire District
USFS	United State Forest Service
WUI	Wildland Urban Interface

GLOSSARY

Catastrophic Wildfire: An out of control fire that exceeds suppression efforts, which is extremely harmful, bringing physical and financial ruin to FL.

Crown Fire: A forest fire that spreads from treetop to treetop. Crown fires are very high intensity fires, kill trees, and are very difficult to suppress.

Defensible space: Defensible space is an area around a structure where fuels and vegetation are cleared or reduced to slow the spread of wildfire towards the structure.

FireWise: FireWise is an organization which seeks to keep homes, properties and lives from being damaged by wildfire. It does so through neighborhood-based, citizen-driven approaches including overseeing a Neighborhood Ambassador program, completing public education projects, encouraging and facilitating homeowners to undertake mitigation, and changing the public will so as to improve community safety.
<http://www.southwestcoloradofires.org/FireWise/default.htm>

Fuel Mitigation: Removing selected trees, shrubs, and other fuels to reduce fire danger. Used interchangeably in the FL CWPP with thinning.

Fuel: Any living or dead material that will burn. Fuels include vegetation, wood, and structures.

Ground Fire: A forest fire that stays on the ground (as opposed to a crown fire). Ground fires are low intensity, usually do not kill ponderosa pine trees, and are relatively easy to suppress.

Shaded Fuel break: A wide strip of land on which the native vegetation has been reduced, that acts as a buffer to fire spread so that fires burning into them can be more readily controlled. Shaded fuel breaks look like open, somewhat manicured parks with widely spaced trees.

Suppression: Firefighters putting out a fire.

Thinning: Removing selected trees and shrubs in an area to reduce fire danger. Thinning leaves behind some trees and shrubs, as opposed to clear cutting which removes all vegetation. Used interchangeably in the FL CWPP with fuels mitigation.

Treating a parcel: In the context of this FL CWPP, treating a lot means conducting fuels mitigation work or thinning on a particular land parcel

Wildland-Urban Interface: The geographical meeting point of two diverse systems -wildland and structures. In the WUI, structures and vegetation are sufficiently close so that a wildland fire could spread to structures or a structure fire could ignite vegetation.

Forest Lakes CWPP Approval

The Durango District of the Colorado State Forest Service has reviewed this Community Wildfire Protection Plan for Forest Lakes and approves its content and certifies that it meets or exceeds Colorado State Forest Service Community Wildfire Protection Plan standards.



Kent Grant, District Forester

7/27/2011

Date

The following entities have received a copy of the Community Wildfire Protection Plan for Forest Lakes and agree with and support its content and recommendations.



Rich Graber, Fire Chief, Upper Pine River Fire Protection District

22 July 2011

Date



Butch Knowlton, Director of Office of Emergency Management, La Plata County

Aug 26 2011

Date



Dale Kortz, Forest Lakes Metro District

8-26-2011

Date

FOREST LAKES CWPP SUMMARY

Forest Lakes is the largest subdivision in southwestern Colorado. This community is located in La Plata County, Colorado and covers 1,865 acres with 1,600 parcels and 764 structures. The subdivision has about 1,800 residents. Forest Lakes (FL) subdivision is surrounded by government and private forested parcels.

FL has been identified by both the La Plata County Community Wildfire Protection Plan (CWPP) and the Wildfire Preparedness Initiative as a high-level risk for wildfire. Some of the factors that create this high risk include:

- FL is located on a steep southern facing hillside
- The vegetation is a dense, overgrown ponderosa pine and Gambel oak forest
- Lightning strikes are common in the area
- Many of the homes in FL have wood exteriors and wood shake shingle roofs
- There are many roads in the subdivision, but only single ingress/egress.

If an uncontrollable crown fire started in FL on a typical windy, hot, summer day, it could spread across the entire subdivision in less than two hours—endangering human life and property. Recognizing this risk, the Upper Pine Fire River Protection District secured grant funds to create a Community Wildfire Protection Plan (CWPP) for FL.

This FL CWPP is a collaborative planning effort, involving:

- FL residents
- FL Metro District (FLMD)
- Upper Pine River Fire Protection District (Upper Pine)
- La Plata County Office of Emergency Management (OEM) and Geographic Information Systems (GIS) Department
- The FireWise Council of Southwest Colorado (FireWise)
- Colorado State Forest Service (CSFS)
- Ecosphere Environmental Services (Ecosphere)
- The U.S. Forest Service (USFS) and Bureau of Land Management (BLM)

Members from these organizations created the FL CWPP Planning Team, and met monthly from November to May of 2011 to create this FL CWPP. The purpose of the FL CWPP is to identify risk factors that contribute to wildfire danger and develop mitigation measures that make FL a safer place to live. This FL CWPP meets and exceeds all CSFS Minimum Standards for Developing a Community Wildfire Protection Plan, as revised November 13, 2009.

The FL CWPP Planning Team's highest priority is to protect the life and safety of FL residents and emergency responders. The highest priority projects include evacuation measures such as:

1. Reducing fuels at FL.
2. Creating evacuation scenarios for FL residents by facilitating a planning meeting with La Plata County OEM, FLMD, and Upper Pine.
3. Identifying, securing, and developing additional ingress and egress options for FL (See Ingress/Egress Map).
4. Creating a Safe Zone around Lake Simpatico (See Fuels Mitigation Map).
5. Organizing and implementing an "Evacuation Route Fuels Mitigation Project" to selectively thin vegetation 100 feet from each side of all evacuation route roads (See Fuels Mitigation Map).

Other mitigation actions in this FL CWPP include targeted multi-parcel fuels mitigation projects, increased fuel mitigation responsibility and funding for FLMD, long-term wildfire risk reduction planning with partners in the FL Wildland Urban Interface (WUI) area, and creating a fire adapted community of residents.

Implementation of this CWPP will depend on the residents of FL. Upper Pine will take the lead in organizing priority projects—pending available funding—and will need extensive volunteer support from FL residents on education efforts, as well as continued collaboration with the CWPP Planning Team.

1. INTRODUCTION

1.1 Purpose and Need

Forest Lakes (FL) is the largest subdivision in southwestern Colorado. This community is located in La Plata County, Colorado and sits between the town of Bayfield and the San Juan Mountains, east of County Road 501 as shown on the Location Map. The subdivision encompasses approximately 1,865 acres, and consists of 1,600 parcels with 764 structures and 1,800 residents. FL has been identified by both the La Plata County Community Wildfire Protection Plan (LPC CWPP) and the Wildfire Preparedness Initiative as a high-level risk for wildfire (available at: http://www.csfs.colostate.edu/pages/documents/LaPlataCounty_CWPP.pdf).

In 2010, Upper Pine River Fire Protection District (Upper Pine) was awarded grant funding to create a CWPP for FL—due to concerns over loss of life and property. Upper Pine hired Ecosphere Environmental Services (Ecosphere) to coordinate the FL CWPP Planning Team, engage the community of FL, and write the FL CWPP. Members of the FL CWPP Planning Team include representatives from the community of Forest Lakes, FLMD, Upper Pine, La Plata County OEM and GIS Department, FL P property owners, FireWise, CSFS, and USFS and BLM, which are managed collectively and referred to as San Juan Public Lands (SJPL).

The development of the FL CWPP is a necessary step in creating a safer environment for the community, and in defining and prioritizing specific fire mitigation and fuels reduction projects for implementation. It is meant to be a living document, and a plan for making FL a safer place to live.

1.2 The FL CWPP Planning Team and Process

In November of 2010, the FL CWPP Planning Team was formed. The FL CWPP Planning team met monthly from November 2010 to May 2011, to formulate the main ideas in the FL CWPP. The list of Planning Team members, the Planning Team schedule, and meeting minutes are in Appendix A.

The FL CWPP Planning Team created a strategy to involve the community of FL (Appendix B). This strategy involved a series of outreach efforts such as six small group focus meetings hosted by residents, two community-wide meetings on the draft FL CWPP, and one final public meeting on the FL CWPP. The meetings were advertised through posters, vinyl banners, the FLMD newsletter and monthly billings, FL CWPP handouts, personal invitations, public service announcements, and the local newspapers. These materials are included in Appendix C. In the spring of 2011, Upper Pine created “WUI checkpoints” and stopped residents as they entered the subdivision to invite them to a meeting and provide them with a handout describing the FL CWPP planning process.

The Planning Team also created a project website (<https://sites.google.com/site/flcwpp/>) that had information on how residents could get involved in the FL CWPP, included maps and drafts of the plan, and provided fuels mitigation information for landowners. A sample is included in Appendix C. Ecosphere maintained an email list of all the residents that expressed interest in the plan, and used the list to advertise meetings and provide status reports. Upper Pine maintained a list of cell phone numbers to provide people

with text reminders and project updates, and included FL CWPP-related material on their Facebook, Twitter, and YouTube social media outlets.



Photograph 1. Public Information Meeting about the FL CWPP



Photograph 2. Upper Pine burning piles of cleared brush from the FL Fuels Mitigation Demonstration Lot

In an effort to demonstrate to residents what a well mitigated property should look like, Upper Pine staff created a “Fuels Mitigation Demonstration Lot” on the southwest corner of East FL Drive and Pine Tree Drive (Lot 267, Unit 2), where they thinned trees, burned slash piles, and are planning a prescribed burn to reduce fuels on the forest floor . The Community Map shows these locations. The FL CWPP Planning Team posted large signs on the demonstration lot—explaining the project to the community and providing handouts on the demo lot process and the FL CWPP project. Appendix C includes copies of these materials.

2. FOREST LAKES COMMUNITY DESCRIPTION AND HISTORY

2.1 Forest Lakes Community Description

FL is a remote rural community nestled in the mountains of La Plata County, north of Bayfield, Colorado as shown on the Location Map. The community borders BLM and state lands on the north, USFS lands to the east, and private lands to the south and west as shown on the WUI Map. FL is home to about 1,800 residents with 75 percent year-round residents and the remainder residing in FL seasonally, primarily during the summer months. Many residents commute to Bayfield, Ignacio, and Durango for work, and many are retired. About half of the 1600 parcels have been built on. The average parcel size is 1 acre with some lots as small as 1/4 acre as shown on the Community Map.

FL was built in a dense ponderosa pine forest, with a Gambel oak understory. The majority of the subdivision starts at an elevation of 7,400 feet and rises on a steady, south-facing slope up to 8,900 feet at the top of the subdivision. The main arterial road is a loop comprised of various road names that were additionally designated “Loop Road” to facilitate travel, with side roads branching off the Loop Road. All the roads funnel into one main entry and exit point onto CR 501 as shown on the Community Map. None of the roads in FL are paved. They are graveled, all weather roads maintained by the FLMD.

When FL was first developed in the late 1960’s, wildfire risk was not a broad social concern. The FLMD was formed in 1975 to provide services to the new community. FLMD is a limited service Colorado Special District Governmental Entity, and provides water, sanitation, street, and park and recreational facilities for the residents of FL. Representatives from the FLMD were integral in the FL CWPP Planning Team. Currently, FL does not have an active Property Owners Association (FLPOA).

2.2 Fuels Mitigation at Forest Lakes

Fuels mitigation is not required by the FL Covenants, or by La Plata County.

Fuels mitigation, or “treating lots” involves selectively removing trees and shrubs to reduce the intensity (flame length and rate of spread) of a wildland fire. There are many education resources on the internet, to help property owners know what fuels to remove. CSFS provides guidelines for reducing excess fuel, creating defensible space around structures, and other “FireWise” practices at <http://csfs.colostate.edu/pages/wf-protection.html>. The CSFS publication, “Creating Wildfire Defensible Zones,” is currently the most used reference document to create thinning standards in Colorado and is included as Appendix D. There are several contractors in the area, which are available to help property owners conduct fuels mitigation. These contractors are listed in Appendix D.

At Forest Lakes, there is a mix of treated and untreated lots. Many property owners have done fuels mitigation work themselves, with a chainsaw and a truck. They can dispose of the resulting slash (woody debris) at the FL brush pile, and use the larger diameter wood as firewood. Others hired fuels mitigation contractors to complete the work.

There is no exact count of the number of property owners at FL that have completed fuels mitigation on their property. Some owners have conducted very limited mitigation, or are lacking on maintaining past mitigation. Approximately 20percent of the lots at Forest Lakes have been mitigated to CSFS standards, or are located in the meadow at the base of the neighborhood (FL CWPP Planning Team estimate). The other 80percent remain heavily wooded, and pose a threat to the treated lots and the entire neighborhood. Many residents at Forest Lakes are resistant to conducting fuel mitigation on their property. Some of the reasons that residents give for avoiding fuels mitigation activities include:

- They think the vegetation is “natural” and do not want to remove it
- They do not believe they are in danger of wildfire
- They cannot afford the expense
- They do not want to lose the visual screening from their neighbors and the roads

2.3 Fire History of Forest Lakes

In the late 1800's, Euro-Americans settled into southwestern Colorado and logged the ponderosa pine forest for its valuable timber to build railroads and new communities. They then grazed their livestock, which affected the grass and forb (a herbaceous flowering plant other than a grass) community and may have removed significant amounts of nutrient rich topsoil. Perhaps most importantly, they started extinguishing all wildfires, and removed fuels through logging and grazing. The current condition of the forest at FL reflects this land use history. FL sits on a south-facing slope in a ponderosa pine forest. This forest type typically experiences lightning strikes with low intensity surface fires every 5 to 20 years. These fires created a relatively open, park-like forest structure. Grasses, shrubs, and forbs grew in the interspaces between clumps of trees. One hundred years ago, the average ponderosa pine tree was bigger (larger diameter at breast height or DBH), and taller than the trees found at FL today. Frequent surface fire reduced the abundance of Gambel oak and juniper, because of their low growing branches.

This land use history created the overgrown, even-aged forest we see today at FL. The majority of the trees are about 100-120 years old, small diameter, and are growing very close to each other. This leads to intense competition for light, growing space, and nutrients, which creates a forest that is vulnerable to insect and disease outbreak. This dense forest also creates favorable conditions for a catastrophic, stand replacing crown fire. This sort of high intensity crown fire is very difficult, if not impossible for firefighters to control in extremely dry and windy conditions.

There have been over 30 small fires documented by the SJPLC since 1980 in the public lands near FL, as shown on the WUI Map. The only major fire to threaten FL was the Missionary Ridge Fire in 2002. This fire was sparked during a severe drought, and burned over 73,000 acres. It destroyed 56 homes and is the second largest wildfire in Colorado history. The Missionary Ridge Fire crested over the north ridge to FL, and could have burned the entire neighborhood if not for the excellent work of the firefighters and available water system at FL. Firefighters evacuated FL and stopped the fire on the northern boundary of the subdivision (WUI Map). After the Missionary Ridge Fire, many residents completed fuels mitigation on their property.

2.4 The Forest Lakes Wildland Urban Interface

The WUI area, in the context of a CWPP, is the area within and adjacent to the community from which a significant wildfire within that area would likely pose an imminent threat to that community. The WUI for FL, was designated by the Planning Team who took into account many factors including vegetation type and continuity, topography, slope, aspect, and values at risk. Values at risk include public and firefighter safety, homes and structures, infrastructure such as power lines and communication sites. Vegetation factors include natural or manmade fire breaks, irrigated pastures, major roadways and bare, rocky ground. The Planning Team also took into account other local fires—like the Missionary Ridge Fire—that traveled eight miles in one day.

Given these considerations, the WUI around FL is relatively large—16,853 acres for the 1,865-acre community as shown on WUI Map. The FL WUI includes over 1,200 privately owned parcels, (not including FL parcels), and a combination of Colorado State Land Board, BLM, and USFS lands. The FL WUI northern boundary is the top of the ridge that the FL neighborhood sits on, the eastern boundary extends to the border of the Grassy Mountain Burn Area and FS Road 604, the southern boundary is the top of the ridge south of Bear Creek Road, and the western is just west of Los Pinos River.

3. FIRE POLICIES AND PROGRAMS

3.1 Healthy Forest Restoration Act

The FL CWPP has been developed in response to the Healthy Forests Restoration Act of 2003 (HFRA). This legislation established incentives for communities to develop comprehensive wildfire protection plans through a collaborative process. Furthermore, this legislation directs the US Departments of Interior and Agriculture to address local community priorities in fuel reduction treatments on both federal and non-federal lands.

The HFRA emphasizes the need for federal agencies to collaborate with communities in developing hazardous fuel reduction projects with priority on treatment areas identified by communities through development of a Community Wildfire Protection Plan. Priority areas include the WUI, municipal watersheds, areas impacted by wind-throw, insect, or disease epidemics, and critical wildlife habitat that would be negatively affected by a catastrophic wildfire. In compliance with Title 1 of the HFRA, the CWPP requires agreement among local governments, fire departments, and the state agency responsible for forest management (in Colorado it is the Colorado State Forest Service). The CWPP must also be developed in consultation with interested parties and the applicable federal agency managing the land surrounding the at-risk communities.

3.2 Consolidated County Annual Operating Plan

Counties, Federal Land Management Agencies, Colorado State Forest Service, and Fire Protection Districts in SW Colorado operate under a Consolidated County Annual Operating Plan for wildfire protection. This plan provides for mutual aid to assist with the management of wildfire incidents in SW Colorado. This plan for mutual aid provides significantly enhanced initial and extended attack capabilities through the rapid convening of fire protection resources for managing a wildfire. The Consolidated County Annual Operating Plan outlines standard operating procedures and the level of participation and available resources of each party under the plan.

3.3 USFS and BLM Land and Resource Management Plan/Fire Management Plan

The San Juan National Forest and Bureau of Land Management San Juan Resource Area, Land and Resource Management Plan and associated Fire Management Plan, describes the role of fire in the native ecosystems in SW Colorado. These plans outline the strategies that the USFS and BLM will utilize to manage wildland fire and fuels on these federal lands in SW Colorado. The San Juan National Forest and San Juan Resource Area Fire Management Plan (2007) specifically describes objectives and strategies to manage fire and fuels on federal lands near communities within the WUI.

3.4 La Plata County

This FL CWPP tiers to the La Plata County CWPP approved in 2006. This plan is consistent with the goals and strategies described within the La Plata County CWPP and provides further strategic and tactical direction specific to wildfire protection and mitigation for the FL community.

As of May 2011, La Plata County does not regulate or influence fuels mitigation on private property. The Land Use Code for the county is currently being revised, and may include regulations promoting wildfire risk reduction and improved emergency response in the future. However, those regulations will likely apply just to new developments or undeveloped properties. The County Tax Code does not promote fuels mitigation, or penalize the lack thereof. The La Plata County Sheriff is responsible for evacuation and public safety.

3.5 FL Covenants

FL is divided into five management units. Each Unit has covenants which are available on the FLMD website at <http://www.flmd.com/COVENANTS/COVENANTS.htm>. The following excerpts from the management unit covenants affect fire risk factors at FL:

Table 1. Summary of FL Covenants and Proposed Changes

Unit	Revision Date	Section	Summary	FL CWPP Planning Team Recommended Changes
Unit 1 Covenants	762817 - FEB 23, 1999	VI. 4. Building Exterior and Roofing	Exterior building materials must be made of wood or wood products	Encourage less flammable building materials* Prohibit the use of wood roofing materials. Encourage the use of non-wood product exteriors.
		VI. 14. Fires and Fireplaces	No outside fires are permitted in FL	Create an exception for Upper Pine Fire to do prescribed burning
Unit 2 Covenants	752440 - AUG 28, 1998	VI. 4 Building Exterior and Roofing	Exterior building materials must be made of wood or wood products	Encourage less flammable building materials* Prohibit the use of wood roofing materials. Encourage the use of non-wood product exteriors.
		VI. 14. Fires and Fireplaces	No outside fires are permitted in FL	Create an exception for Upper Pine Fire to do prescribed burning
Unit 3 Covenants	444433 - JUN 26,	9. Fires and Fireplaces	Outside fires are discouraged, must be contained and	No outside fires are permitted in FL

Unit	Revision Date	Section	Summary	FL CWPP Planning Team Recommended Changes
	1980		monitored	Create an exception for Upper Pine Fire to do prescribed burning
		17. Roof Colors and Construction	Roofs must be constructed of cedar shake shingles or asphalt shingles	Encourage less flammable roofing materials* Prohibit the use of wood roofing materials. Encourage the use of non-wood product exteriors.
		26. Tree Removal	No tree in excess of 3 inches in diameter may be removed without written consent from the Architectural Committee	Remove. Replace with language encouraging responsible fuels mitigation.
		27. Tree and Ground Cover	May not remove trees or shrubs without written consent from the Architectural Committee	Remove. Replace with language encouraging responsible fuels mitigation.
Unit 4 Covenants**	756009 - OCT 29, 1998	VI. 4. Building Exterior and Roofing	Exterior building materials must be made of wood or wood products	Encourage less flammable building materials* Prohibit the use of wood roofing materials. Encourage the use of non-wood product exteriors.
		VI. 14. Fires and Fireplaces	No outside fires are permitted in FL	Create an exception for Upper Pine Fire to do prescribed burning
Unit 5 Covenants	456898 - JUN 10, 1981	None	None	Due to the brevity of this covenant, no objectionable language was found.

*(Appendix E or see <http://csfs.colostate.edu/pages/construction-design-materials.html>)

**See Court Order regarding Unit 4 covenants at <http://www.flmd.com/>

Currently, there is no FL POA to enforce these covenants, yet they are tied to the land and are still legally binding. When the FL POA is active again, we recommend changing covenants to require fuels mitigation, construction with FireWise materials, and banning open fires (except conducted by the fire department).

4. WILDFIRE RISK ASSESSMENT

4.1 Wildfire Hazard

After reviewing fire hazard risk factors, the FL Planning Team concluded that the wildfire hazard at FL is extremely high, due to a combination of factors addressed in this section.

4.1.1 Slope and Weather Patterns

FL is located on a south-facing slope with an average grade of 5-15 percent. This slope climbs from an elevation of 7,400 feet to 8,900 feet at the top of the subdivision. Local winds and weather tends to move from the southwest to the northeast. Winds frequently blow from the base of the slope to the top. At FL, slope, aspect, and weather patterns align to increase wildfire hazard. The likelihood of lightning strikes is also high, given the slope elevation and position in the surrounding landscape.

4.1.2 Heavy Fuel Loading

In the firefighting world, anything that burns is considered fuel. The amount and the continuity of vegetation and structural fuels at FL make it very vulnerable to wildfire.



Photograph 3. Typical Fuel Loading at FL (Notice the ladder fuels, dense trees, and the house in the background)

Because the ponderosa pine forest at FL has not burned in last century, the forest is overgrown. The forest floor is a dense layer of pine needles and vegetative debris. The dense, second-growth ponderosa pine forest has many low-growing branches. Gambel oak shrubs are prolific, which serve as ladder fuels, carrying

a fire from the forest floor up into the treetops or crowns. In many places, tree crowns are overlapping and close enough to keep the fire burning within the tree canopy. Once the ground fire transitions to a crown fire it is very difficult and dangerous for firefighters to extinguish.

The structures at FL, most of which are houses, are also considered a fuel source because they can increase the spread and intensity of the wildfire.

As part of the CWPP preparation, the Planning Team hired Dave Dallison, a fire behavior expert, to model potential fire behavior at FL. Modeling of possible fires in FL with fire behavior modeling software such as, *FlamMap* and *Farsite*, demonstrated that under severe conditions, a crown fire could burn across FL in less than two hours. The models also showed that Gambel oak increases flame length up to two times, compared to a ponderosa pine forest without Gambel oak. Dave Dallison's full presentation and resulting CWPP recommendations are available in Appendix F.

4.1.3 Limited Access and Egress

Currently, there is only one permanent access route in and out of FL, for all 1,800 residents. In case of emergency, the gate at the base of Pine Valley Drive can be opened to create a one-way emergency egress out of the subdivision. In the past, volunteers have opened up this gate.

Emergency routes are shown on the Community Map. The further a resident lives from an emergency access route, the more difficult and dangerous the evacuation could be as shown on the Evacuation Hazard Map. Even if the evacuation routes were safe to travel, traffic congestion could be a serious problem during an emergency. If a wildfire, dense smoke, or incoming emergency equipment cut off a section of the evacuation route, there would be no way to evacuate some parts of FL. This limited emergency access and egress poses a serious risk to residents' safety, and the ability of emergency management to respond to a wildfire.

4.1.4 High Density of Residents

The high density of residents in FL raises public safety issues as well as increasing the fire risk. Evacuation, as previously discussed, could be a potentially life threatening problem for the residents and a barrier to emergency response. The large number of residents also increases the chances that a human-caused fire will occur within or adjacent to the community.

4.1.5 High Structural Vulnerability

The likelihood of a structure—such as a home—catching fire is influenced by its exterior building materials. When FL was first developed, the covenants required wood siding and cedar roof shingles so that the houses would blend into the forest. These wood building materials increase the vulnerability of these homes to a wildfire—as well as wooden decks and stacks of firewood against houses. Given the fuels in the forest and the houses at FL, there is a high probability of structural loss (CWPP Planning Team assessment).

4.2 Protection Capabilities

As shown on the Community Map, FLMD maintains 130 fire hydrants spaced at regular intervals to service the neighborhoods. FLMD also has five water tanks that hold 800,000 gallons of water. Lake Simpatico holds an average of 208 acre feet (or 67 million gallons) of water, which would be utilized during a wildfire.

Upper Pine staffs two of their nine stations with 24 hour staff, with typical staffing of six or more on duty each day. Upper Pine Station # 5 is located on County Road 501 near the entrance to FL, and is staffed by a number of volunteer members who reside in the subdivision. Should a wildfire event occur in FL, Upper Pine's initial response would be from their paid staff, two Type 3 Interface Engines, and two 2,100 gallon water tenders. Volunteer members from Station # 5, as well as other stations, would also respond as personnel became available.

If the wildfire exceeds the capabilities of Upper Pine, it would be immediately managed under the Consolidated County Annual Operating Plan, with the help of surrounding counties, federal land management agencies, Colorado State Forest Service, and other Fire Protection Districts in SW Colorado.

4.3 Values at Risk

CSFS CWPP guidelines define values at risk as human and animal life, structures, property and natural resources. There are many values at risk at FL, the most important of which are the 1,800 residents, and their property. Infrastructure at FL includes the La Plata Electric power grid—both underground and overhead—fire hydrants, a network of roads, buried utilities, water tanks, the FL Community Center, real estate offices, and the mailbox stop. Locations of these assets are shown on the Community Map.

Potential impacts of a catastrophic fire at FL include burning a significant portion of the forest down and creating a charred landscape. Catastrophic fire could also cause detrimental air pollution, soil and slope erosion, and damage the road systems. A devastating fire would impact the biological diversity of plants and wildlife and degrade the overall ecosystem health.

A catastrophic fire at FL would impact the water supply for both Bayfield and Ignacio, as they have surface water treatment plants.

A major fire would decimate not only the forest and potentially the residents, it would cause significant economic loss to the county through tax revenue losses and could potentially cost tax payers millions of dollars spent in fire suppression efforts. It would also change recreational opportunities, alter the local view shed, and affect local cultural and historic resources.

5. MITIGATION ACTION PLAN

The FL CWPP planning team combined months of collaborative meetings with comments from the public, to create this prioritized list of actions to make FL a safer place to live. Each action is described, along with implementation details, and a cost estimate.

The cost estimates assumes a general labor rate of \$27/hour, which is a Federal GS-11 Step 1 wage, and an average cost of \$1,000/acre to conduct fuels mitigation. Actual cost will vary, depending on, fuel density and access, and how the mitigation work is completed. In the electronic copy of the FL CWPP, each table is inserted as a working Excel table, to allow for future cost adjustments.

5.1 High Priority Actions

Currently, there are limited emergency evacuation routes for FL. The FL CWPP Planning Team's highest priority is protecting human life and safety for both the residents of FL and emergency responders. Therefore, the FL CWPP actions with the highest priority include:

Corresponding maps: Community Map, Evacuation Hazard Map, Ingress/Egress Options Map, Fuels Mitigation Map

1. Fuels Reduction at FL- The primary goal of the CWPP is to have every lot in FL treated for wildfire mitigation. Given funding limitations, the FL CWPP Planning Team would like to see the following parcels given priority for funding assistance: 1) parcel located along the evacuation routes, 2) along County Road 501, 3) in drainages, and 4) along FL Drive. These locations correspond with targeted multi-owner thinning projects (Fuels Mitigation Map).

- Lead: FL parcel owners, possible assistance from Upper Pine and CSFS
- Maintenance: FL parcel owners
- Costs: Labor and equipment costs for fuels mitigation
- Outcome: create defensible space around houses, decrease wildfire risk for property owners

Reducing Fuels at FL Estimate			
Labor Category	Hours	Rate	Extended
Upper Pine project management time	80	\$27.00	\$2,160.00
Labor Subtotal			\$2,160.00
Directs	Cost/unit	# Units	Extended
Thinning 80% of the acres at FL*	\$1,000	1492	\$1,492,000.00
Directs Subtotal			\$1,492,000.00
BUDGET			\$1,494,160.00
* 80% is a CWPP Planning Team estimate for the amount of acres that need to be treated in FL			

2. Evacuation Planning Meeting – The FL CWPP Planning Team requests that Upper Pine, FLMD, La Plata County OEM, and the La Plata County Sheriff meet to discuss and plan evacuation strategies for FL. This meeting would also establish who is responsible for controlling the Pine Valley Drive gate to CR 501. The outcomes of this meeting should be documented in a memo format, and distributed to all parties, plus communicated to the residents of FL.

- Lead: Upper Pine
- Meeting participants: Upper Pine, FLMD, La Plata County OEM, and the La Plata County Sheriff
- Cost: Labor costs for meeting participants
- Outcome: memo describing strategies and plans for evacuating FL

Evacuation Planning Meeting and Memo Estimate			
Labor Category	Hours	Rate	Extended
4, 4 hour meetings with 4 government staff*	64	\$27.00	\$1,728.00
20 hours for one person to explain the results to FL residents	20	\$27.00	\$540.00
Labor Subtotal			\$2,268.00
Directs	Cost/unit	# Units	Extended
none, covered above			
Directs Subtotal			\$0.00
BUDGET			\$2,268.00
*staff include Upper Pine, FLMD, La Plata County OEM, and the La Plata County Sheriff			

3. Roads Committee – Upper Pine will form a committee to work on securing additional ingress/egress routes for FL. Possible options include BLM Route, Alpine Forest Drive. Route, San Juan National Forest Route, Carlson Route, and Rae Drive. Route (see Ingress/Egress Map for route alignments). The committee would be led by Upper Pine and include a representative from SJPLC, Columbine Ranger District, FLMD, La Plata County OEM, and any interested FL property owners. The FL CWPP Planning Team encourages the committee to consult with a traffic engineer to help analyze options, and model various evacuation scenarios. The traffic engineer could also analyze which roads could be connected to create loop routes, identify key roadways that could be widened to facilitate use by firefighting equipment, and assess options for widening the tight switchback at Berry Drive and Deer Ridge Drive. The information compiled by the traffic engineer would give the committee data to help facilitate road discussions with government agencies and private landowners. This is a multi-year project, and would take place at the same time as other suggested projects. The CWPP Planning Team recommends that one person spearhead this effort.

- Lead: One person from either: Upper Pine or La Plata County OEM

- Roads Committee Members: SJPLC, Columbine Ranger District, FLMD, La Plata County Sheriff, and any interested FL property owners
- Costs: Labor costs for roads committee participants, traffic engineer and resulting study, possible legal fees to ensure permanent easements, fees to purchase easements
- Outcome: Secure additional ingress/egress options for FL

Establishing Additional Ingress/Egress Roads for FL Estimate			
Labor Category	Hours	Rate	Extended
20, 4 hour meetings with 4 government staff*	320	\$27.00	\$8,640.00
Labor Subtotal			\$8,640.00
Directs	Cost/unit	# Units	Extended
Road Feasibility Study by Engineering Firm**	\$20,000	1	\$20,000.00
Time value of working with private landowners			Not estimated
Attorney Fees			Not estimated
Directs Subtotal			\$20,000.00
BUDGET			\$28,640.00
*staff include SJPLC, Columbine Ranger District, FLMD, La Plata County OEM, and volunteers			
**15-30K Estimate from Smith Engineering, personal communication on 6.16.11 with Tom Engell who's done similar studies, 970-375-7694			

4. Lake Simpatico Safe Zone – In the event that FL cannot be evacuated, people can be directed to the area around Lake Simpatico and the FL Community Center. This area can serve as a “Safe Zone” (see the Fuels Mitigation Map for placement). To create a Lake Simpatico Safe Zone, the FL CWPP Planning Team recommends removing all of the larger rocks and boulders from the common space area so it can be cleared. The FLMD would then mow the area twice yearly (or as needed) to keep the common space clear. In addition, approximately 64 acres of vegetation in the Lake Simpatico Safe Zone would need to be selectively thinned. The FLMD funding would have to be increased to cover these associated costs.

- Lead: Upper Pine and FLMD
- Maintenance: FLMD staff and equipment or FLMD hires an outside contractor
- Costs: Prep of Safe Zone (Labor costs for rock removal, equipment costs for Rock Picking Machine, equipment operator labor costs, rock disposal), Fuels Mitigation (man hours and equipment for conducting fuels mitigation), Maintenance of Safe Zone (man hours for mowing two times per year, mowing equipment, Labor and equipment costs for maintaining fuels mitigation every three years)
- Outcome: Create and maintain a Safe Zone at Lake Simpatico for FL

Creating a Safe Zone Around Lake Simpatico Estimate			
Subtotal A. First Year Safe Zone Creation			
Labor Category	Hours	Rate	Extended
Heavy Equipment Operator, 6 days	48	\$27.00	\$1,296.00
FLMD Oversight	8	\$27.00	\$216.00
Labor Subtotal			\$1,296.00
Directs	Cost/unit	# Units	Extended
Brushhog rental for 4 days*	\$100	4	\$400.00
Tractor with 5ft rock picker for 2 days*	\$495	2	\$990
Thinning 64 acres	\$1,000	64	\$64,000
Directs Subtotal			\$65,390.00
BUDGET			\$66,686.00
Subtotal B. Yearly Maintenance			
Labor Category	Hours	Rate	Extended
Heavy Equipment Operator, 2 days	16	\$27.00	\$432.00
FLMD Oversight	2	\$27.00	\$54.00
Labor Subtotal			\$432.00
Directs	Cost/unit	# Units	Extended
Brushhog rental for 2 days*	\$100	2	\$200.00
Directs Subtotal			\$200.00
BUDGET			\$632.00
*Equipment rental quotes from Southwest Ag, 970-884-4141, personal communication on 6.16.11			

5. Evacuation Route Fuels Mitigation Project – To facilitate emergency evacuation and firefighting, the FL CWPP Planning Team recommends completing an “Evacuation Route Fuels Mitigation Project.” This requires selectively thinning a 100-foot buffer from both sides of the evacuation route roads. This large fuels mitigation project would require extensive coordination and management, as it would affect 446 property owners, FLMD right of way, and cover 188 acres. Fuel mitigation needs would be assessed on a property-by-property basis. Some of the lots might not require any mitigation, and some might require extensive mitigation work to lower wildfire danger. In addition, the FL CWPP Planning Team suggests de-limbing all trees up to six feet in height, in areas where a full fuel mitigation treatment cannot be accomplished. Upper Pine will take the lead on managing and implementing this project and it will be up to the landowner to conduct maintenance on their property. A team of volunteers could be assembled to assist Upper Pine in educating residents on the need for this mitigation work.

- Lead: Upper Pine
- Volunteer Team: FireWise Ambassadors at FL, property owners, CSFS or designated forester
- Maintenance: private land owner

- Costs: Labor and equipment costs for fuels mitigation, slash disposal, time coordinating project and working with landowners
- Outcome: Reducing possible fire spread in FL and drastically improving chances of safe evacuation for the residents.

Evacuation Routes Fuels Mitigation Project			
Labor Category	Hours	Rate	Extended
Upper Pine project management time	80	\$27.00	\$2,160.00
Labor Subtotal			\$2,160.00
Directs	Cost/unit	# Units	Extended
Thinning 188 acres*	\$1,000	188	\$188,000.00
Directs Subtotal			\$188,000.00
BUDGET			\$190,160.00
*The Evacuation Route Fuels Mitigation covers thinning a 100' buffer, 466 owners, and 188 acres.			

6. Formalize the FL CWPP Planning Team – The FL CWPP Planning team recommends that the current members meet once a year (every June) to help facilitate all parties implementing this FL CWPP. This “FL CWPP Implementation Team” will be critical to making sure the goals in this FL CWPP are met over time.

- Lead: Upper Pine
- Volunteer Team: Representatives from Upper Pine, FLMD, SJPLC, CSFS, FireWise, La Plata County OEM, FireWise Ambassadors at FL, property owners, designated forester
- Costs: Labor
- Outcome: Help Upper Pine and FL residents implement the FL CWPP, identify gaps, and brainstorm collaborative assistance.

Annual CWPP Team Meeting Estimate			
Labor Category	Hours	Rate	Extended
1, 4 hour meeting with 7 government staff*	28	\$27.00	\$756.00
Labor Subtotal			\$756.00
Directs	Cost/unit	# Units	Extended
none, covered above			
Directs Subtotal			\$0.00
BUDGET			\$756.00
*Representatives from Upper Pine, FLMD, SJPLC, CSFS, FireWise, La Plata County OEM, FireWise Ambassadors at FL, property owners, designated forester			

5.2 Other Actions

Overall, the forest at FL is too dense, and overgrown from over 100 years of fire suppression. The FL CWPP Planning Team has strategized the following fuels mitigation projects to limit the spread and severity of a wildfire. These proposed projects would help protect both people and property at FL. These projects are not listed in order of priority. These projects will be completed as funding, interest, and opportunity match the FL CWPP Planning Team's goals and objectives.

Corresponding maps: Community Map, Fuels Mitigation Map, Evacuation Hazard Rating Map

5.2.1 Fuels Mitigation Projects

5.2.1.1 Multi-Property Projects

1. CR 501 Fuels Mitigation Project – County Road 501 is a likely place for a human-caused fire to start. The FL CWPP Planning Team recommends thinning 200 feet from County Road 501 to the FL lots to reduce fire danger for the entire community. This project would be headed by La Plata County, the FLMD, and Upper Pine. This project involves 28 property owners and 31 acres of various vegetative conditions (see the Fuels Mitigation Map for alignment).
 - Lead: Upper Pine, FLMD, and La Plata County
 - Volunteer Team: FireWise Ambassadors at FL, property owners, CSFS or designated forester
 - Maintenance: La Plata County would maintain their right-of-way (ROW) and the private landowners would be responsible for maintaining their property.
 - Costs: Labor and equipment costs for fuels mitigation, slash disposal, time coordinating project, and working with landowners
 - Outcome: If a fire started along CR 501, firefighters would have a better chance of extinguishing it before it could run up the slope into the rest of FL

CR 501 Fuels Mitigation Project Estimate			
Labor Category	Hours	Rate	Extended
Upper Pine project management time	10	\$27.00	\$270.00
Labor Subtotal			\$270.00
Directs	Cost/unit	# Units	Extended
Thinning 31 acres	\$1,000	31	\$31,000.00
Directs Subtotal			\$31,000.00
BUDGET			\$31,270.00

2. Toe of the Slope Fuels Mitigation Project – Since fire naturally runs uphill, the FL CWPP Planning Team recommends creating a 250-foot buffer of thinned vegetation along the toe of the slope, along FL Drive. This would help firefighters control a fire before it could run up the slope to the rest of the neighborhood. This project involves 46 property owners and 45 acres of various vegetative conditions (see the Fuels Mitigation Map for alignment).

- Lead: Upper Pine, FLMD
- Volunteer Team: FireWise Ambassador at FL, property owners, CSFS or designated forester
- Maintenance: FLMD would maintain their ROW and the private landowner would be responsible for maintaining their property
- Costs: man hours and equipment for fuels mitigation, slash disposal, time coordinating project and working with landowners
- Outcome: If a fire started at the base of FL, firefighters would have a better chance of controlling it before it ran up the slope and in to the rest of FL.

Toe of the Slope Fuels Mitigation Project Estimate			
Labor Category	Hours	Rate	Extended
Upper Pine project management time	20	\$27.00	\$540.00
Labor Subtotal			\$540.00
Directs	Cost/unit	# Units	Extended
Thinning 45 acres	\$1,000	45	\$45,000.00
Directs Subtotal			\$45,000.00
BUDGET			\$45,540.00

3. Drainage Fuels Mitigation Project – In drainages, fire rapidly spreads uphill. Thinning the major drainages at FL could help firefighters reduce the spread of wildfire (see the Fuels Mitigation Map for alignment). The FL CWPP Planning Team recommends treating a 200-foot swath in the five major drainages that run north to south in the neighborhood. This project would cross 160 property owner parcels and cover 98 acres. Slash removal on this project would be challenging, given the distance from drainage areas to roads.

- Lead: Upper Pine
- Volunteer Team: FireWise Ambassador at FL, property owners, CSFS or designated forester
- Maintenance: After the drainages are initially treated, it would be the responsibility of the owner to maintain fuels reduction on their property

- Costs: Labor and equipment costs for fuels mitigation, slash disposal, extra time for hauling slash and or chipping, time coordinating project and working with landowners
- Outcome: Reducing the likelihood of fire spreading rapidly up the drainages in FL

Drainage Fuels Mitigation Project Estimate			
Labor Category	Hours	Rate	Extended
Upper Pine project management time	20	\$27.00	\$540.00
Labor Subtotal			\$540.00
Directs	Cost/unit	# Units	Extended
Thinning 98 acres	\$1,000	98	\$98,000.00
Directs Subtotal			\$98,000.00
BUDGET			\$98,540.00

4. Unit 3 Fuels Mitigation Project – Unit 3 is the large block of undeveloped land on the northeastern side of FL (see the Fuels Mitigation Map for alignment). Once developed, this area would be the most difficult and dangerous to evacuate, given its distance from the entrance of FL (Evacuation Hazard Rating Map). It is also the most cost effective block of land to thin at FL, because there are no homes constructed in this unit. This area could be logged or even hydromowed, depending on vegetative conditions and landowner permissions. This fuels mitigation project would involve 53 property owners and 406 acres. If the scale of this project is too large, the Planning Team recommends treating a 500-foot swath of land, on the western border of Unit 3 to create a shaded fuel break. This fuel break would connect to the existing CSFS shaded fuel break, and help create a northern fuel break for the entire neighborhood.

- Lead: undecided – Upper Pine and or FLMD and property owners
- Volunteer Team: FireWise Ambassador at FL, property owners, CSFS or designated forester
- Maintenance: After the lots in Unit 3 are initially treated, it would be the responsibility of the owner to maintain fuels reduction on their property
- Costs: Labor and equipment costs for fuels mitigation and possibly logging, slash disposal, time coordinating project and working with landowners
- Outcome: Increase shaded fuel break continuity on northern boundary of FL, prepare Unit 3 for development

Unit 3 Fuels Mitigation Project Estimate			
Labor Category	Hours	Rate	Extended
Upper Pine project management time	10	\$27.00	\$270.00
Labor Subtotal			\$270.00
Directs	Cost/unit	# Units	Extended
Thinning 406 acres*	\$500	406	\$203,000.00
Directs Subtotal			\$203,000.00
BUDGET			\$203,270.00

*Thinning areas without houses may be accomplished at a lower price per acre.

5.2.1.2 Single Land Owner Projects

1. Complete Colorado State Land Shaded Fuel Break – CSFS has completed a shaded fuel break treatment across the southern boundary of the State land adjacent to the northern boundary of FL. There is approximately 6.5 acres left to treat (see the Fuels Mitigation Map). CSFS is planning to complete this fuel break, as funding allows.
 - Lead: CSFS
 - Maintenance: CSFS
 - Costs: Labor and equipment costs for logging and or mowing, slash disposal, possible pile burning
 - Outcome: Increase shaded fuel break continuity on northern boundary of FL, help prevent the spread of fire from the forested ridge on State land into the subdivision

Complete CSFS Shaded Fuel Break Estimate			
Labor Category	Hours	Rate	Extended
CSFS project management time	80	\$27.00	\$2,160.00
Labor Subtotal			\$2,160.00
Directs	Cost/unit	# Units	Extended
Thinning 6.5 acres	\$800	45	\$36,000.00
Directs Subtotal			\$36,000.00
BUDGET			\$38,160.00

*Thinning areas without houses may be accomplished at a lower price per acre.

2. Ranson's Shaded Fuel Break – The northern boundary of FL is composed of BLM, private and CSFS (see above project) land. The private land is owned by the Ranson's. The BLM has conducted fuels mitigation all around the Ranson parcel (WUI Map). If the Ranson's conducted fuels

mitigation on their property, it would create a continuous fuel break. The FL CWPP Team proposes that the BLM and Upper Pine write a letter to the Ranson's explaining why creating a 13-acre shaded fuel break on the southern boundary of their property (Fuels Mitigation Map) would help create a continuous fuel break. BLM and Upper Pine might be able to provide funding to cover some of the implementation costs.

- Lead: undecided – Upper Pine and BLM
- Maintenance: Upper Pine, BLM, and the Ranson's would need to come to agreement regarding costs of implementation and future maintenance
- Costs: Labor and equipment costs for fuels mitigation and possibly logging, slash disposal, time coordinating project
- Outcome: Increased shaded fuel break continuity on northern boundary of FL, increased forest health for Ranson's parcel, decreased likelihood that a fire would spread from FL into the Ranson's parcel

Ranson's Shaded Fuel Break Project Estimate			
Labor Category	Hours	Rate	Extended
Upper Pine project management time	20	\$27.00	\$540.00
Labor Subtotal			\$540.00
Directs	Cost/unit	# Units	Extended
Thinning 13 acres	\$1,000	13	\$13,000.00
Directs Subtotal			\$13,000.00
BUDGET			\$13,540.00

5.2.2 Increased Responsibility and Funding for Forest Lakes Metro District

1. Creating a Fuels Mitigation Fund for FLMD – The FLMD is funded by fees paid by property owners at FL. FLMD could help create a less fire prone community if their funding and responsibility was increased to cover the associated costs. Several landowners recommended adding a \$3-5/month fee to the current FLMD fees. This money would go into a general fund and cover the cost of fuels mitigation in the ROW, brush pile management, and curbside slash pickup days.
 - Lead: FLMD
 - Volunteer Team: FireWise Ambassador at FL, property owners
 - Costs: Labor costs associated with fee increase
 - Outcome: FLMD would have funds to implement the FLMD lead projects in this FL CWPP, including FLMD Common Space fuels mitigation, brush pile management, and curbside brush pickup days

Creating a Fuels Mitigation Fund for FLMD Estimate			
Labor Category	Hours	Rate	Extended
FLMD project management time	20	\$27.00	\$540.00
Labor Subtotal			\$540.00
Directs	Cost/unit	# Units	Extended
none	\$0	0	\$0.00
Directs Subtotal			\$0.00
BUDGET			\$540.00

2. FLMD Common Space Fuels Mitigation Projects – FLMD has jurisdiction over 357 acres of FL road ROWs and common areas (see gold shaded areas on Community Map). If the FLMD could create a fuels mitigation fund, it could conduct and maintain fuels mitigation along road ROWs and common areas, such as the water tank lots and the area around Lake Simpatico. Fuels mitigation in the road ROWs would also facilitate snowplowing and road maintenance. FLMD Common Space Fuels Mitigation Project would also help protect vital infrastructure at FL, including water supply and electricity.

- Lead: FLMD
- Maintenance: FLMD
- Costs: Labor and equipment costs for fuels mitigation, slash disposal, boundary survey expenses, time coordinating project and working with landowners concerning the ROW alignment
- Outcome: increases the chances of protecting vital infrastructure, such as water and electricity, in the advent of a wildfire

FLMD Common Space Fuels Mitigation Projects Estimate			
Labor Category	Hours	Rate	Extended
FLMD project management time	40	\$27.00	\$1,080.00
Labor Subtotal			\$1,080.00
Directs	Cost/unit	# Units	Extended
Thinning 357 acres	\$1,000	357	\$357,000.00
Directs Subtotal			\$357,000.00
BUDGET			\$358,080.00

3. Brush Pile Management – FLMD maintains a brush pile in the Pine River Valley for the residents of FL. If the multi-parcel fuels mitigation projects in this plan are completed, the present brush pile system would not be able to handle the additional fuel loading. The FL CWPP Planning Team recommends that FLMD and Upper Pine jointly prepare a “Brush Pile Management Plan.” This plan would define burn parameters, maximum fuel loading, weather conditions, liability, and

staffing to supervise burning and ensure the brush pile does not become a trash pile. This Brush Pile Management Plan would also analyze other options for disposal, including grinding. Currently, the brush pile is open from 7:30AM to 3:30 PM during the week 8:00 AM to 3:00 PM on Saturday. The Planning Team recommends that FLMD extend the hours from 8:00 AM to 3PM on Sunday to allow landowners to dispose of slash on the weekend, and that they create a “Thank You Sign” to post at the brush pile.

- Lead: FLMD
- Maintenance: FLMD
- Costs: Labor and equipment cost to create and implement brush pile management plan
- Outcome: make slash disposal more convenient to landowners and make brush pile management safer for FLMD

Brush Pile Management Memo and Extended Hours Estimate			
Labor Category	Hours	Rate	Extended
1, 4 hour meeting with 3 government staff*	12	\$27.00	\$324.00
FLMD writing memo	4	\$27.00	\$108.00
Extending brush pile hours	8	\$27.00	\$216.00
Labor Subtotal			\$432.00
Directs	Cost/unit	# Units	Extended
none, covered above			
Directs Subtotal			\$0.00
BUDGET			\$432.00

4. Curbside Brush Pickup Days – With increased funding the FLMD could manage a spring and fall curbside brush pickup day. This would help landowners conduct fuels mitigation on their properties—since many landowners do not have a way to haul brush to the brush pile.

- Lead: FLMD
- Volunteer Team: FireWise Ambassador at FL, property owners
- Costs: Labor, truck and trailer equipment costs
- Outcome: Facilitate fuels reduction on individual lots in FL

Curbside Brush Pickup Program Estimate			
Labor Category	Hours	Rate	Extended
FLMD advertising time	4	\$27.00	\$108.00
1 FLMD picking up slash for 2 days/year	16	\$27.00	\$432.00
Labor Subtotal			\$540.00
Directs	Cost/unit	# Units	Extended
none, covered above			
Directs Subtotal			\$0.00
BUDGET			\$540.00

5.2.3 Long-term Wildfire Risk Reduction Planning with WUI Partners

The community of FL is affected by the actions of its neighbors and the surrounding regulatory environment. The FL CWPP Planning Team recommends the following long-term planning actions:

1. La Plata County – Currently, La Plata County does not regulate fuels mitigation or conduct FireWise planning. The FL CWPP Planning Team suggests creating a team of volunteers who are interested in changing the Land Use Plan and the Tax Code, to encourage fuels mitigation, penalize lack of mitigation, and regulate driveway width and slope to facilitate emergency response.
 - Lead: Volunteer Team comprised of FireWise Ambassador at FL, property owners, and CSFS
 - Costs: Labor from volunteer team, county costs of changing codes, regulation, and hiring an inspector
 - Outcome: Encourages policy changes at the County level to create economic incentives for fuels reduction at FL and surrounding areas
 - A cost estimate was not created, because this action is spearheaded by volunteers.
2. Surrounding Private Landowners – The FL CWPP Planning Team would like to create and mail a letter to all the parcel owners in the FL WUI area, which is approximately 1,200 people, letting them know that they influence fire danger at FL and are covered under the FL CWPP.
 - Lead: Volunteer Team comprised of FireWise Ambassador at FL, property owners, and support from CSFS and Upper Pine
 - Costs: Labor from volunteer team, printing, mailing costs
 - Outcome: Encourages surrounding landowners to complete fuels mitigation projects and lets them know that they are covered under the FL CWPP umbrella
 - A cost estimate was not created, because this action is spearheaded by volunteers.

3. Surrounding Government Lands – The FL CWPP Planning Team requests that the surrounding BLM, USFS, and CSFS plan for and maintain their forest treatments within the FL WUI area (WUI Map). This includes mechanical thinning and prescribed (Rx) burning.
 - a. Lead: Government Agency, either CSFS, BLM and USF (SJPL)
 - b. Costs: Labor, planning, thinning and burning re-treatment costs.
 - c. Outcome: Wild fire mitigation treatments around FL are maintained
 - d. A cost estimate was not created, because this request is a normal part of current government jobs.

These areas include:

- Grassy Mountain Shaded Fuel Break, CSFS, 2007-Present: CSFS has completed the majority of a shaded fuel break on the FL boundary. The FL CWPP Planning team requests that this project be completed to the BLM border, that slash disposal be completed, that the area is prescribed burned, and that the CSFS plan to maintain the shaded fuel break with future Rx burns by 2017, or as needed before then.
- FL Project 1, Mechanical Thinning, SJPLC, 2003: The SJPLC completed thinning and burning slash piles in the section of the center of FL in 2003. The Planning Team requests SJPLC add the maintenance of this area to their planning horizon. The Columbine Fire Management Officer said that they will conduct reconnaissance planning in the summer of 2011 to assess what maintenance might be required (S. Legarza, personal communication, 3/28/11).
- FL Project II, Mechanical Thinning, SJPLC, 2008: This thinning and slash pile burning project was recently completed by the SJPLC. The FL CWPP Planning Team requests that this project be maintained and added to the SJPLC planning horizon.
- Grassy Mountain RX Burn, SJPLC, 1999-2000: The FL CWPP Planning Team requests that this project be maintained and added to the SJPLC planning horizon for future Rx burning. The Columbine Fire Management Officer said they will conduct reconnaissance planning in the summer of 2011 to assess what maintenance might be required (S. Legarza, personal communication, 3/28/11).
- Wickenson Mountain RX Burn, SJPLC, 1990: The FL CWPP Planning Team requests that this project be maintained and added to the SJPLC planning horizon. The Columbine Fire Management Officer said that this project retreatment is already in process. A fire line was installed in 2007 and public outreach has been completed. The SJPC is waiting for the right fire weather conditions to re-burn Wickenson Mountain (S. Legarza, personal communication, 3/28/11).
- Little Bear Mechanical Thinning Treatment 2004 and Prescribed Burn 2007, SJPLC: The FL CWPP Planning Team requests that this project be maintained and added to the

SJPLC planning horizon. The Columbine Fire Management Officer said they will conduct reconnaissance planning in the future, to assess what maintenance might be required (S. Legarza, personal communication, 3/28/11).

5.3 Education and Community Outreach

In order for things to change at FL, the residents of FL must believe that implementing fuels reduction projects are worthy of their time and investment. The following ideas for increasing education and community involvement were contributed by the FL CWPP Planning Team and FL residents. Cost estimates are not detailed for this section, because each project will be lead by volunteers.

5.3.1 FireWise Ambassador at FL

1. Create a team of FireWise Ambassador at FL – These Ambassadors would help implement the FL CWPP and increase public participation throughout the subdivision. These Ambassadors would provide leadership to volunteers at FL that are interested in helping the community with wildfire-related projects. Lead: the FireWise Coordinator and existing FireWise Ambassadors, Upper Pine and FLMD assistance
 - Costs: Volunteer labor
 - Outcome: Provide Upper Pine with the assistance they need to implement CWPP projects, increase community education and participation, distribute information about possible grant funding assistance for fuels mitigation work

5.3.2 Potential Project Ideas for FireWise Ambassadors

1. Encourage all residents to register their cell phones with reverse 9-1-1 (see Appendix C).
2. Find creative funding and/or assistance to help implement projects:
 - Help those who cannot afford fuels mitigation by organizing groups of volunteers—such as students, AmeriCorps, mandated community service, scouts
 - Research and find grant opportunities
3. Notify the FL Community about the CWPP actions by:
 - Using social media
 - Maintaining fire information at the mailboxes
 - Sending a targeted mailing to owners of lots that are endangering their neighbors. Offer funding assistance, if available

- Requesting a large Smokey Bear Forest Service sign that says Fire Risk Today is Low, Medium, or High. FLMD would install the sign, and UP would maintain the daily fire rating.
4. Organize events to raise public awareness. Ideas include:
- Organize an annual FireWise event that brings the community together.
 - Organize lectures and field trips about fire, fuels reduction, chainsaw safety, and forest health for interested people in the community.
 - Organize an educational hike to the top of Forest Lakes, led by a resident who lived through the Missionary Ridge Fire, to discuss what it was like to live in Forest Lakes through that event.
 - Organize a “Tour of Defensible Spaces” event, where people could look at properties that have been mitigated for wildfire. This will help people visualize what defensible space looks like, so they can imagine what their property will look like.
5. Reward people that have completed fuels mitigation by:
- Providing signs for individual landowners who create model defensible space, distributed by CSFS or FireWise.
 - Promoting the planting of aspen after thinning—organize an aspen sale at a reduced price in collaboration with the CSFS or local nurseries.
6. Create custom FL information about fire related topics, including:
- An informational packet that every new homeowner receives at the closing of a property that includes the importance of creating and maintaining defensible space, has contact information for additional resources, a map of the evacuation route, and information about what to do in case of a fire.
 - Create a brochure about thinning that is FL specific. Focus on how mitigation looks good and improves property values.
7. Recruit realtors into the process by providing education and training.
8. Discourage the use of fireworks in FL by passing out information before the 4th of July.
9. Change FL covenants when the opportunity arises (See Section 3.5 of the FL CWPP above).
10. Encourage a firewood business at Forest Lakes, ideas include:
- Recruit a business to buy firewood from property owners who do mitigation, and then sell the wood to Forest Lakes residents who burn wood. Perhaps help provide a lot or cleared area for the business to stage wood.

- Or, create a “wood exchange” where residents could bring their wood to stage, and other residents could take firewood in exchange for making a trip or two with their trailers full of brush to the brush pile.

5.4 Monitoring and Evaluation

The various projects recommended in this FL CWPP will be monitored and evaluated by the lead of each project. Project leads are encouraged to keep detailed project files documenting the process for each project. Upper Pine and the FireWise Ambassadors will play a primary role in most projects, and will have assistance from the multi-agency FL CWPP Implementation Team (past Planning Team).

The FL CWPP Implementation Team will create a summary every June of the tasks outlined in this CWPP. This summary report will include task completion status, lessons learned, additional resources needed, and standards used to measure success. This will help the FL CWPP Implementation Team to identify unmet needs and collaborative solutions. This will also provide support for Upper Pine and the FireWise Ambassadors.

Upper Pine will be responsible for updating this CWPP with new information and changing priorities. It is recommended that the CWPP be updated annually, if needed, when the Project Summary Report is submitted.

MAPS

The maps associated with the FL CWPP include:

	Map Description	Original Map Size	FL CWPP Hardcopy Size
Map 1	Location Map	36 x 36 inches	Reduced to 11 x 17 inches
Map 2	WUI Map	36 x 36 inches	Reduced to 11 x 17 inches
Map 3	Community Map	36 x 36 inches	Reduced to 11 x 17 inches
Map 4	Evacuation Hazard Map	36 x 36 inches	Reduced to 11 x 17 inches
Map 5	Ingress/Egress Options Map	11 x 17 inches	11 x 17 inches
Map 6	Fuels Mitigation Map	11 x 17 inches	11 x 17 inches

If you would like to view the full 36 x 36 inch FL CWPP maps, please contact:

Contact	Physical Address	Phone Number
Dale Kortz	Forest Lakes Metro District Office 271 North Mountain View Dr. #107 Bayfield, CO 81122	970-884-2925
Rich Graeber	Upper Pine River Fire Protection District Office 515 Sower Drive Bayfield, CO 81122	970- 884-9508

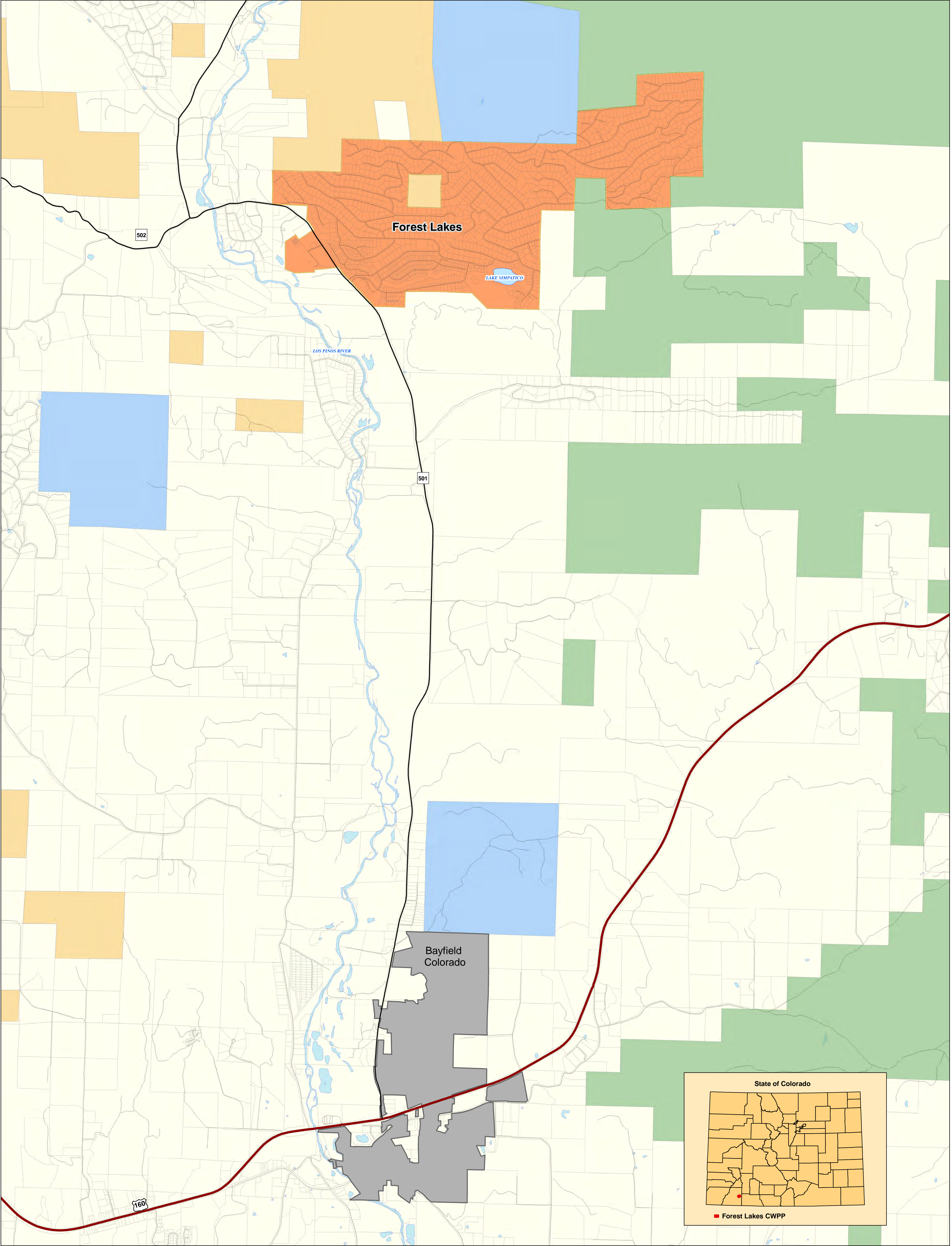
APPENDICES

Appendix A- FL CWPP Planning Team, Schedule and Meeting Minutes
Appendix B- Public Involvement Strategy
Appendix C- Public Handouts and Advertising Materials
Appendix D- Creating Wildfire Defensible Zones and Contractor List
Appendix E- FireWise Construction and Design Materials
Appendix F- Fire Behavior at Forest Lakes

Forest Lakes

Community Wildfire Protection Plan

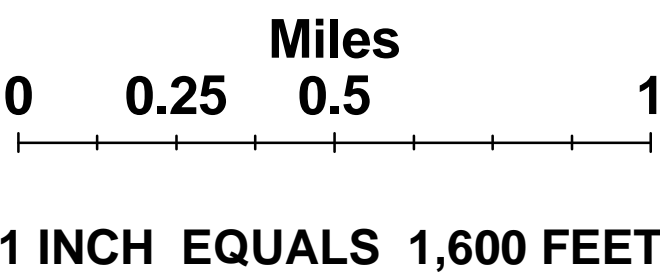
Location Map



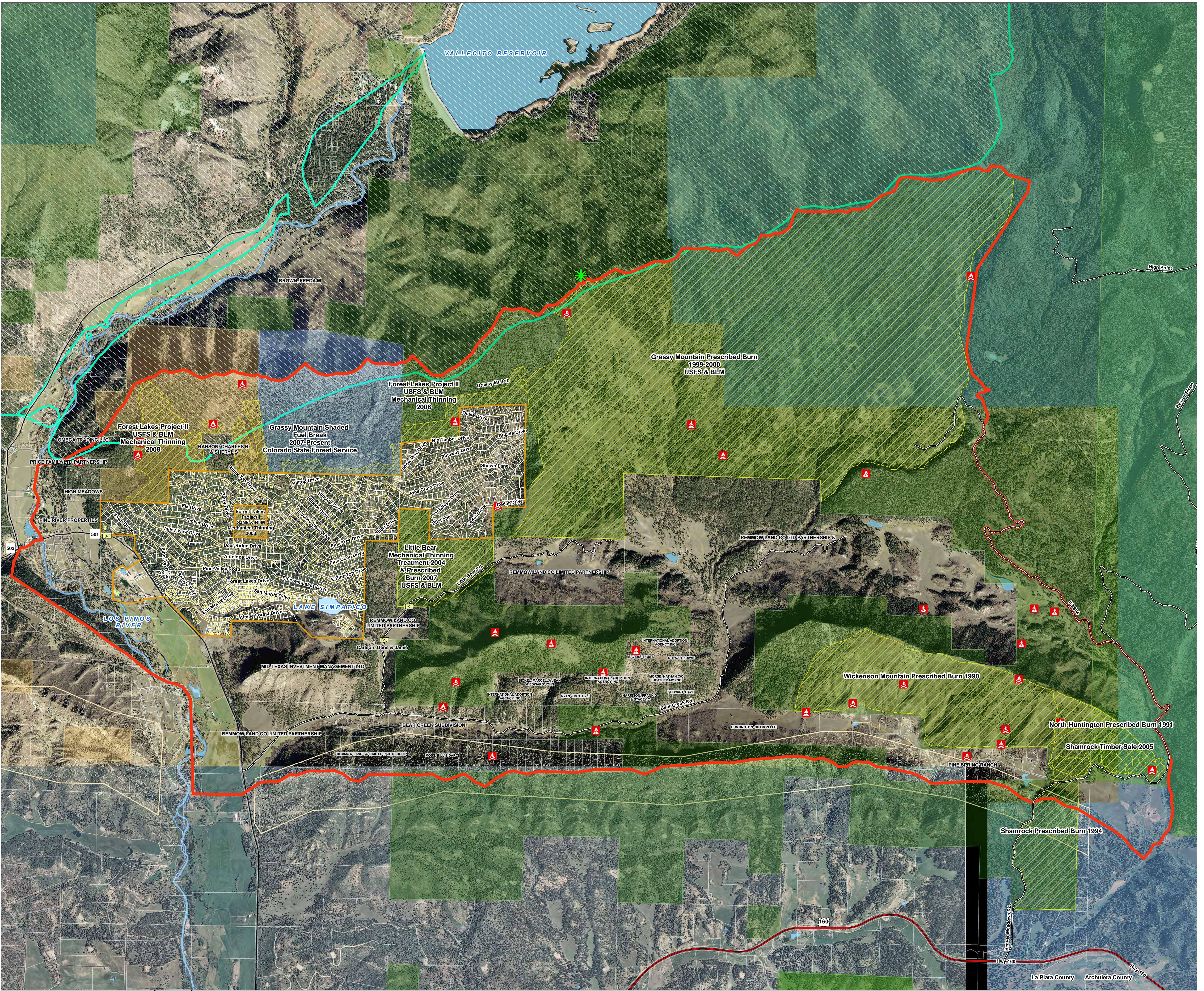
Legend

- Forest Lakes Boundary
- San Juan National Forest
- Bureau of Land Management
- State of Colorado
- Bayfield City Limits
- Highway 160
- County Roads 501 & 502

Forest Lakes CWPP Bayfield Colorado



Forest Lakes
Community Wildfire Protection Plan
Wildland Urban Interface & Past Treatment Map

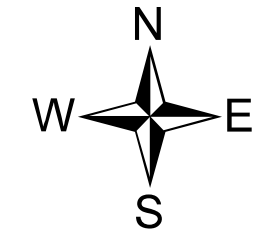


- Legend**
- Forest Lakes Wildland-Urban Interface Boundary 16,853 Acres
 - Forest Lakes Boundary 1,808 Acres
 - Past Forest Treatment Areas
 - Missionary Ridge Fire Zone 2002
 - Forest Lakes Structures
 - Fruitland Outcrop
 - Forest Service Roads
 - Dirt 2-Track or Trails

- US Forest Service (SJPL)
- Bureau of Land Management (SJPL)
- State of Colorado
- Fire Starts Recorded By SJPL 1970-2008
- Radio Towers
- Private Gates
- County Roads 501 & 502

Forest Lakes CWPP
Bayfield Colorado

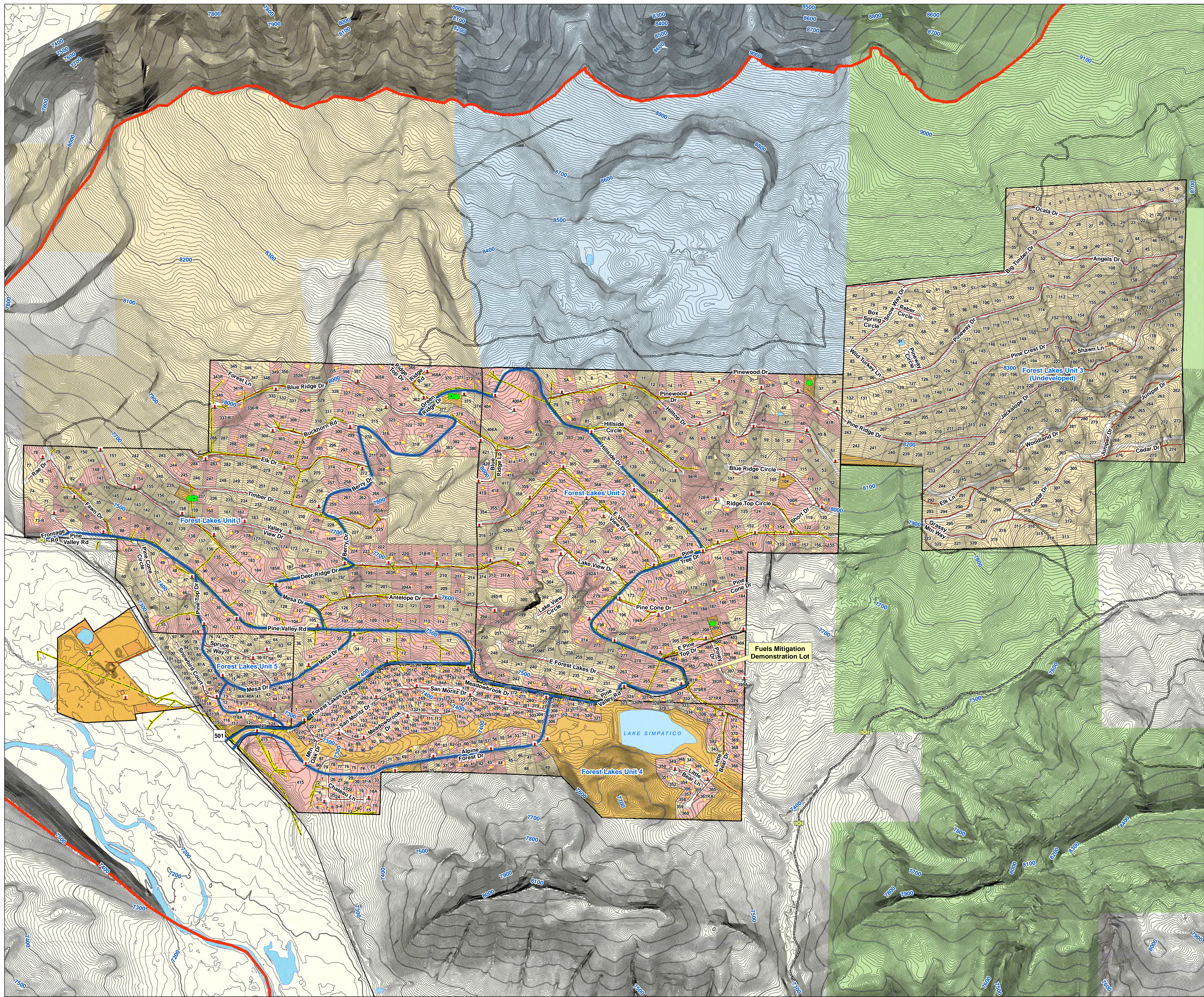
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1 INCH = 1,360 FEET



The Wildland Urban Interface (WUI) area is the area within and adjacent to the community from which a significant wildfire within that area would likely pose an imminent threat to that community.

Forest Lakes Community Wildfire Protection Plan

Forest Lakes Community Map



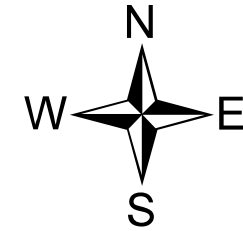
Legend

- | | | |
|-----------------------------|----------------------------------|----------------------------------|
| Wildland-Urban Interface | Forest Lakes Built Lots | US Forest Service (SJPL) |
| Evacuation Routes | Forest Lakes Vacant Lots | Bureau of Land Management (SJPL) |
| Fire Hydrant | Forest Lakes Metro District Lots | State of Colorado |
| Pump | Forest Service Roads Paved | Forest Lakes Structures |
| Tank | Dirt 2-Track or Trail | 5 Foot Contour Lines |
| Overhead Power Lines (LPEA) | | |

Forest Lakes CWPP

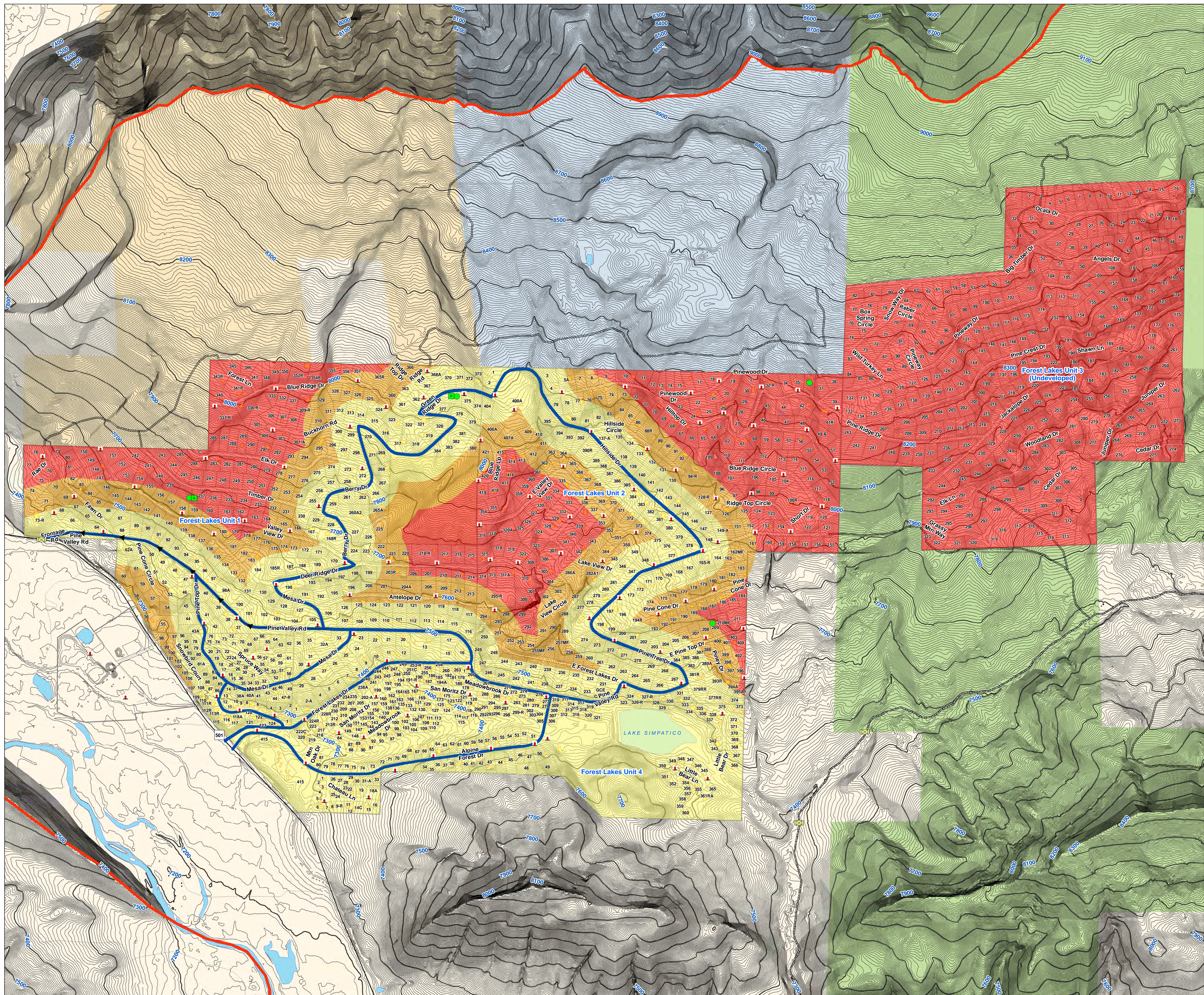
Bayfield Colorado

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Miles
1 INCH EQUALS 500 FEET



Forest Lakes Community Wildfire Protection Plan

Evacuation Hazard Rating Map



Evacuation Hazard based on distance from evacuation route

Low	400 feet from evacuation route
Medium	800 feet from evacuation route
High	1200 feet from evacuation route

Wildland-Urban Interface
Evacuation Route

Legend

US Forest Service (SJPL)	Forest Lakes Structures
Bureau of Land Management (SJPL)	Private Gates
State of Colorado	Fire Hydrant
5 Foot Contour Lines	Pump
Forest Service Roads Paved	Tank
Dirt 2-Track or Trail	

Forest Lakes CWPP

Bayfield Colorado

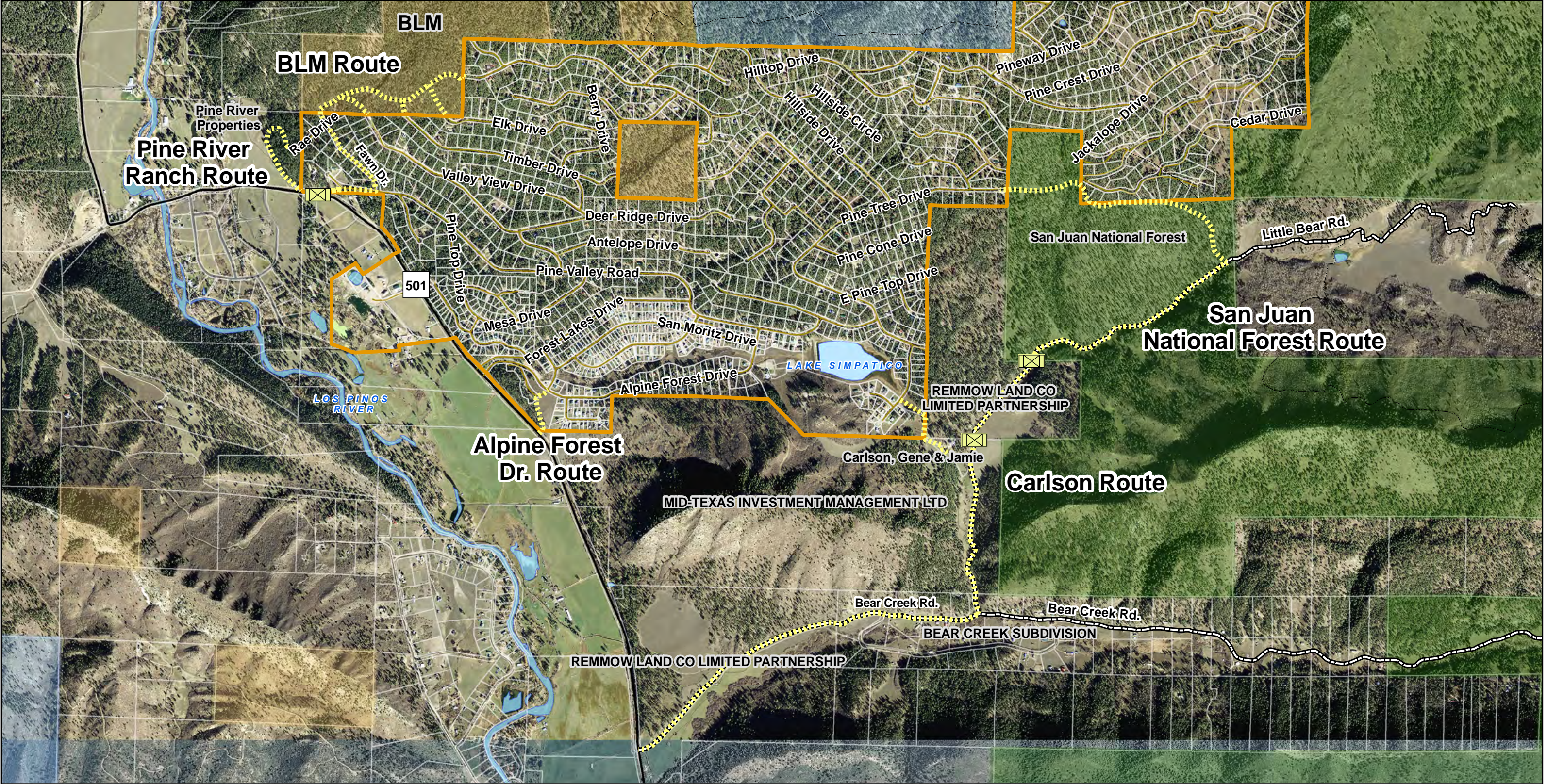
Miles
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1 INCH EQUALS 500 FEET

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LA PLATA COUNTY
GEOSPATIAL INFORMATION SYSTEMS
FLMD CWPP Evac Hazard Rating0330
D. Kirk LPC GIS | March 30, 2011

Forest Lakes Community Wildfire Protection Plan
Ingress/Egress Options



Legend

- Forest Lakes Boundary
- Ingress/Egress Options
- Forest Service Roads
- Dirt 2-Track or Trails
- County Roads 501 & 245
- US Forest Service (SJPL)
- Bureau of Land Management (SJPL)
- State of Colorado
- Private Gates

Forest Lakes CWPP
Bayfield Colorado

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LA PLATA COUNTY

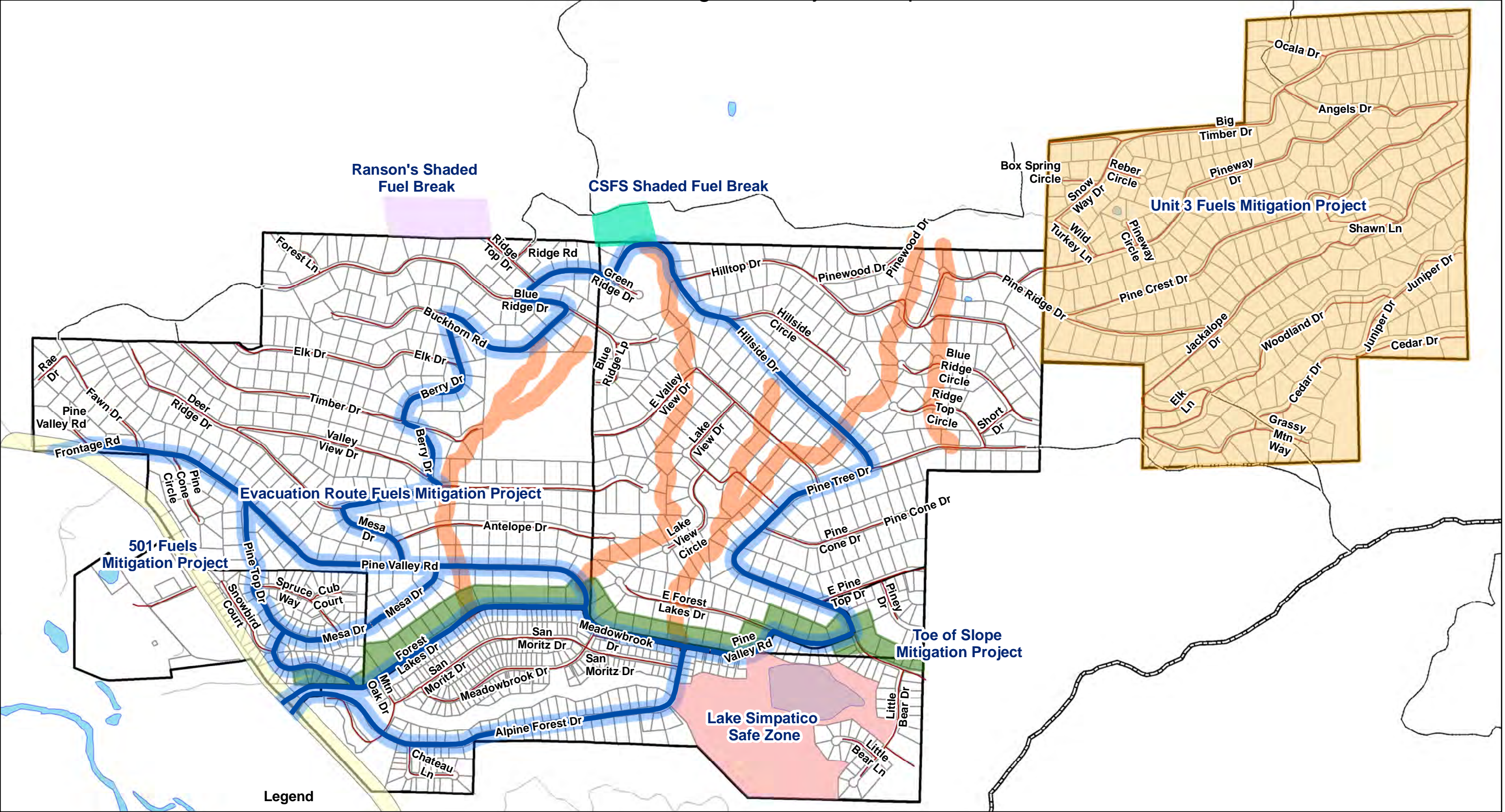
GEOGRAPHIC INFORMATION SYSTEMS

FLMD_CWPP_Ingress_Egress_Options.mxd

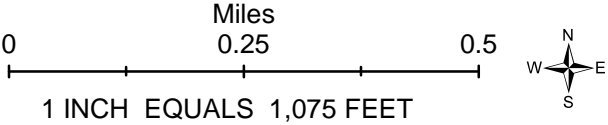
D. Kirk LPC GISMay 13, 2011

Forest Lakes Community Wildfire Protection Plan

Fuels Mitigation Projects Map



Forest Lakes CWPP
Bayfield Colorado



CWPP Planning Team Members

Name	Organization	Title
Anne Schrier	Forest Lakes Property Owner	Firewise Ambassador
Brady Leffler	Upper Pine River Fire Protection District	Deputy Chief Fire Marshal
Butch Knowlton	La Plata County	Director of the Office of Emergency Management
Casey Cook	Upper Pine Fire & Forest Lakes Metro District	Capitan Five & Forest Lakes Metro District President
Cherry Miloe	Forest Lakes Property Owner	Firewise Ambassador
Craig Goodell	US Forest Service, San Juan Public Lands Center	Fire Mitigation and Education Specialist
Dale Kortz	Forest Lakes Metropolitan District	Forest Lakes Metro District Manager
Dave Dallison	Dallison Enterprises	Fire Behavior Specialist
Glen Deason	Forest Lakes Property Owner	Concerned Property Owner
Hon Schlepfer	US Forest Service, Columbine Ranger District	Prescribed Fire Specialist
Kent Grant	Colorado State Forest Service	District Forester
Maria Irwin	Ecosphere Environmental Services	Forest Ecologist, FL CWPP Coordinator
Pam Wilson	Firewise of Southwest Colorado	Firewise Program Director
Rich Graeber	Upper Pine River Fire Protection District	Fire Chief
Sheila & Ralph Marchetta	Forest Lakes Property Owner	Concerned Property Owner
Tammy Tyner	Firewise of Southwest Colorado	Firewise CWPP Coordinator
Tim Ogden	Forest Lakes Property Owner	Concerned Property Owner
Tom McNamara	La Plata County	Emergency Management Coordinator
Travis Wright	Upper Pine River Fire Protection District	Fuel Mitigation and Prescribed Fire Specialist
Vaughn Jones	Forest Lakes Property Owner	Firewise Ambassador

Forest Lakes CWPP Planning Team Calendar

Date	Time	Location	Agenda Items
CWPP Planning Team Meetings			
11/4/10	9-10:30am	Upper Pine River Fire Protection District Office	Form planning team, define roles, CWPP process
12/7/10	9-10:30am	Upper Pine River Fire Protection District Office	Public participation plan, handouts, newsletter
1/11/11	9-10:30am	Upper Pine River Fire Protection District Office	Mitigation demo site, new website, Facebook, maps
2/8/11	9-10:30am	Upper Pine River Fire Protection District Office	Reviewing covenants, maps, insurance presentation
3/1/11	9-10:30am	Upper Pine River Fire Protection District Office	Fire Modeling Presentation, plan small group mtgs
4/5/11	6:30-8pm	Forest Lakes Community Center	Draft treatment options, plan public mtgs
5/3/11	6:30-8pm	Forest Lakes Community Center	Prioritizing treatments, deciding responsibility
Small Group Meetings			
3/14/11	7-8pm	Randy Larson's House	Introducing homeowners to CWPP process, reviewing main draft of ideas, asking for input on plan and volunteers
3/15/11	7-8pm	Tim Ogden's House	
3/16/11	7-8pm	Casey Cook's House	
3/22/11	7-8pm	Vaughn Jones' House	
3/24/11	7-8pm	Sheila & Ralph Marchetta's House	
Draft CWPP Public Meetings			
4/19/11	6:30-8:30 pm	Forest Lakes Community Center	Introducing homeowners to CWPP process, reviewing main draft of ideas, asking for input on plan and volunteers
4/27/11	6:30-8:30 pm	Forest Lakes Community Center	
Final CWPP Public Meetings			
5/25/11	6:30-8:30 pm	Forest Lakes Community Center	Presenting main ideas of the CWPP to public, asking for volunteers to help with implementation

**CWPP Team Kickoff Meeting
Meeting Summary Notes
November 4, 2010**

On November 4, 2010 the individuals listed below met from 9:00 a.m. until 10:30 a.m. at the Upper Pine River Fire Protection District offices, 515 Sower Drive, Bayfield Colorado to discuss the Forest Lakes Community Wildfire Protection Plan (CWPP).

Attendee list with title and agency represented:

Ken Grant, District Forester, Colorado State Forest Service (CSFS)
Dave Dallison, Fire Behavior Specialist, Dallison Enterprises
Pam Wilson, Program Director, Firewise of Southwest Colorado
Tammy Tyner, CWPP Coordinator, Firewise of Southwest Colorado
Dale Kortz, District Manager, Forest Lakes Metropolitan District
Anne Schrier, Firewise Ambassador, Forest Lakes Resident
Butch Knowlton, Director of the Office of Emergency Management, La Plata County
Tom McNamara, Emergency Management Coordinator, La Plata County
Casey Cook, Capitan Five & Forest Lakes Metro District President, Upper Pine Fire & Forest Lakes Metro District
Rich Graeber, Fire Chief, Upper Pine River Fire Protection District
Brady Leffler, Chief Fire Marshall, Upper Pine River Fire Protection District
Travis Wright, Fuel Mitigation Prescribed Fire Specialist, Upper Pine River Fire Protection District
Craig Goodell, Fire Mitigation & Education Specialist, USFS San Juan Public Lands Center
Maria Irwin, Forest Ecologist, Ecosphere Environmental Services
Janet Wolf, Public Participation Specialist, Ecosphere Environmental Services

Discussion Topics:

Purpose and Need for Forest Lakes CWPP – Maria Irwin discussed the purpose, need, and benefits for initiating a Forest Lakes CWPP. The purpose the CWPP is to enable a community to plan how it will reduce the risk from wildfire. Forest Lakes needs a CWPP because of it's extremely high fire danger. The benefits of the CWPP include: creating community support and buy-in for the idea of reducing wildfire danger, enhancing safety and reducing risk to human structures and residents, and qualifying for federal funding, as authorized under the Healthy Forests Restoration Act (HFRA).

Additional benefits of a CWPP mentioned by members of the team included:

- A process for the public to buy into the plan;
- A final CWPP provides an opportunity to apply for funding;
- A CWPP keeps wildlife issues in front of the public/residents of Forest Lakes;
- The plan helps with priority setting within the subdivision;
- Acknowledges that density is a concern regarding evacuation;
- The CWPP process will help identify individuals with special needs that may need assistance during an evacuation. A database of individuals with special needs can be created for priority evacuations;

- The CWPP process may motivate adjacent landowners, USFS, BLM and State of Colorado, to take care of their land;
- Provides an opportunity to look at the big picture of this subdivision and possibly revise covenants, establish additional egress routes, or address other issues as they are identified; and
- This process may motivate other communities to be firewise and write similar CWPPs.

The CWPP Team – Maria Irwin invited meeting attendees to introduce themselves, provide a summary of what they can contribute to the team, and share a short, favorite, and appropriate joke. Some specific points that came out of the introductions were:

- CWPPs are a priority for the Upper Pine River Fire District. The district is engaged and has ensured that these projects are successful by committing staff to assist with this project.
- La Plata County is very interested in supporting this project as Forest Lakes is an area of high concern regarding fire hazard;
- The northeast corner of the subdivision, also called Unit 3, is not developed and there is hope that the area can be cleared prior to any development;
- Team members have high expectations and expects this process will be a model within La Plata County for CWPP process and development;
- The subdivision has fire hydrants and in the past pamphlets about being Firewise were placed on everyone's door;
- Firewise Ambassadors can help develop the CWPP. Pam Wilson has developed a list of questions that she normally provides to homeowners to develop their own CWPP;
- The USFS/BLM has fire education materials and that this subdivision has a lot of issues that may make developing the CWPP more complex than others. In addition, it was mentioned that an important part of developing a CWPP is not just the document itself but the *process* of developing the CWPP.

The team agreed that email was an effective method of communication.

The time commitment expected from team members includes attendance at 6 monthly meetings, 4 community meetings, and miscellaneous “homework” and volunteer assignments. The group agreed to a standing meeting of the first Tuesday of each month.

Overview of CWPP Process – Maria Irwin showed the group the La Plata County CWPP which is approximately 10 pages in length and the Durango West I CWPP which is approximately 80 pages long. She expects that the Forest Lakes CWPP will be a bit longer than the Durango West I document due to the complexity of the issues in that subdivision.

Maria then directed the group to look at one of the handouts titled, “Preparing a Community Wildfire Protection Plan, A Handbook for Wildland-Urban Interface Communities”. She asked the group to turn to page 9 and note the summary and checklist. Based on the eight steps listed, this group has already accomplished steps one through three; however, Maria indicated that it would be advantageous if the group

could recruit additional residents of Forest Lakes to be on this CWPP committee to better meet the intent of the word “broad” in the statement, “...from a broad range of interested organizations and stakeholders.”

Maria asked the group to read this handbook before the next meeting in December.

To Do List between 1st and 2nd Meetings –

- a. Create Metro District address list – Maria will coordinate getting the mailing list from the Metro District;
- b. Create Forest Lakes CWPP link on website – Kent will get back to Maria on whether or not the CSFS website can host a Forest Lakes link. Other options for website access include google group (gmail accounts required); a link from the Metro District or a link from the Firewise website.
- c. Research community covenants and policies – Maria will do this with help from Dale, Casey, Kent and Pam.
- d. Read handout, Preparing a CWPP
- e. Review draft approach for increasing public involvement and be ready to comment at next meeting – several ideas were discussed related to this action item:
 - A poster can be displayed at the bulletin board at the mail stop and other locations around the Forest Lakes subdivision
 - A suggestion was made that CWPP team members that are also home owners should personally invite other residents to become team members
 - In the past the fire department has staged a truck at an area of high visibility in the subdivision and distributed hand outs to residents passing by. Chief Graeber is targeting November 13, 2010 as another opportunity to distribute information soliciting team members
 - The Metro District uses postcards to bill Forest Lakes, so bill stuffers as proposed in the Draft Community Action Plan will need to be revised.
 -

Next Meeting – The following meetings will be scheduled on the first Tuesday of each month. The next meeting date was set for December 7, 2010, at the Forest Lakes Recreation Center from 9 a.m.to 10:30 a.m. Maria will send out meeting reminders to confirm the date, time and meeting venue.

Action Item List Review:

- Coordinate with the Metro District for the mailing list – Ecosphere
- Forest Lakes website – Kent will get back to Maria with CSFS possibility. If that will not work, pursue a Google Group account - Ecosphere
- Create draft text for the team to review and finalize prior to the November 13 fire department information distribution opportunity – gist of information is to enlist new members to serve on CWPP team - Ecosphere
- Begin drafting colorful graphically interesting poster for subdivision posting opportunities – gist of poster is education based regarding what a CWPP is, what it does for the community and how to get involved – Ecosphere

- Talk to other potential Forest Lakes residents, such as past “mayors”, about joining CWPP team – team members/Forest Lakes residents (Casey, Anne, +)
- Coordinate with Metro District (Dale) to come up with text for their upcoming newsletter - Ecosphere
- Identify subdivision parcels that make good candidates for a demo project – Upper Pine River Fire Protection District
- Read “Preparing a Community Wildfire Protection Plan, A Handbook for Wildland-Urban Interface Communities – all CWPP team members;
- Review table showing community action/public involvement approach – all CWPP team members

**CWPP Team Meeting
Meeting Summary Notes
December 7, 2010**

On December 7, 2010 the individuals listed below met from 9:00 a.m. until 10:30 a.m. at the Forest Lakes Community Center, 998 Alpine Forest Drive, Bayfield, Colorado to discuss the Forest Lakes Community Wildfire Protection Plan (CWPP) creation process.

Attendee list with title and agency represented:

Anne Schrier , Firewise Ambassador, Forest Lakes Resident
Brady Leffler, Chief Fire Marshall, Upper Pine River Fire Protection District
Casey Cook, Forest Lakes Metro District Board President, Capitan Five Upper Pine Fire District
Charlie Harrington, Superintendent Forest Lakes Metropolitan District & FL property owner
Craig Goodell, Fire Mitigation & Education Specialist, USFS San Juan Public Lands Center
Dale Kortz, District Manager, Forest Lakes Metropolitan District
Glen Deason, Forest Lakes property owner
Heidi Hansen, Public Participation Specialist, Ecosphere Environmental Services
Ken Grant, District Forester, Colorado State Forest Service (CSFS)
Maria Irwin, Forest Ecologist, Ecosphere Environmental Services
Sally MacDowell, Forest Lakes property owner
Travis Wright, Fuel Mitigation Prescribed Fire Specialist, Upper Pine River Fire Protection District

Discussion Topics:

Questions About the CWPP Creation Process – Maria Irwin reviewed the steps in creating a CWPP. Steps 1 and 2, convening the decision makers and involving the agency members, have been completed. Step 3, engaging interested parties, was discussed at this meeting. Step 4 involves creating a community based map; Step 5, community risk assessment, uses the map to create priority areas; Step 6, establish community priority recommendations, will get feedback from the public; Step 7, implement the action plan; Step 8, finalize CWPP.

Additional comments about the creation process mentioned by members of the team included:

- This process can happen with monthly meetings and public meetings;
- We need to emphasize contacting people who own lots but don't live in Forest Lakes.

Updates on Items from November 2010 Meeting - Maria Irwin invited meeting attendees to comment on items from last meeting.

Handout – None were noted.

WUI Checkpoint – Meeting attendees made the following comments:

- Fire units were posted at the entrance of Forest Lakes and handed out poster and the Upper Pine River Fire District (UPRFD) checklist. Approximately 200 were passed out in 1.5 hours. This was viewed as a success in getting the word out to the residents and was 95% well received.

Response from Interested Homeowners: - Meeting attendees made the following comments:

- The handout mentions 3 ways to get involved in the process. The UPRFD has received a few calls from interested people;
- Opposition about the CWPP may come from landowners who don't live here.

Website Space – Meeting attendees made the following comments:

- The State Forest Lakes website is appropriate for landowners and we can make the website easier to access, but for the purposes of the group we may want to find a better place for the website;
- Yahoo groups may work. They are smaller, they're yours, and the entire group could access it;
- We can have links to other websites within the site. Ecosphere will coordinate the website and have it completed by the next meeting in January.
- The site should have longevity and have the capability of being used for years to come. The CWPP will be implemented over a long period of time and the website should be available for the whole time;
- We could put 'Homeowner of the Month' pictures on the website.

Forest Lakes Address List - Meeting attendees made the following comments:

- Ecosphere obtained an address list of Forest Lake residences from Dale Kortz and will start sending out flyers.

Personal Invites to Homeowners to Join the CWPP Team - Meeting attendees made the following comments:

- 9:00 a.m. will be difficult for many people since they have to work at that time. The CWPP team should look at meeting on weekends or evenings in the middle of the week. Tuesday evenings are the best because many people have church events on Wednesday evenings;
- The CWPP team is not ready for the public to come sit in on the meetings yet. Don't want to start inviting folks until we are ready;
- Neighborhoods have a local mayor. We need to bring them in early on during the process. We could have localized meetings such as 'chainsaws and beer'.

Identify Subdivision Parcels that Make Good Candidates for a Demo Project - Meeting attendees made the following comments and questions:

- The UPRFD has picked Lot 267 on the southwest corner of Forest Lakes and Pine Tree Drive as a demo lot and will start cutting brush this week. Burning will happen in Spring 2011. This parcel has no house on it. No signage was put up yet.
- Criteria to pick the demo lot included high visibility, the ability to contact the landowner, and that no structures were on the lot.
- The CWPP grant is paying for the UPRFD to work on the demo lot.
- Signage needs to be put up as soon as possible and pictures need to be taken so that we can show before, during and after of the project;
- Sign should be short and simple;
- The UPRFD tried calling the neighbors of Lot 267, owned by Carrie and Evan Morris, but not all the contact information was correct and couldn't get in touch with everybody;
- Some people may not be comfortable with burning and could disapprove of the CWPPP;
- The UPRFD chief wants to do the whole process on the demo lot which is why the understory and needles will be burnt in the spring;
- Is mulching or burning better?
- Community education is huge so people don't think they need to burn on lots that have houses;
- We will put up 2 big signs for the Fire Mitigation Demo and 1 smaller sign that describes the project in more detail with a website that people can go to for more information;

Review Draft Approach for Public Participation - Maria Irwin invited meeting attendees to comment on the table for increasing public involvement in the Forest Lakes CWPP so that the table could be finalized. Several ideas were mentioned to add to the table:

- Kids can drag parents to events and increase public awareness. An Easter egg hunt in the spring would be great timing for the CWPP.
- A community burn pile provides positive reinforcement to community members.
- For some people, emails may be hard to get. A discussion board and Facebook group will allow people to stay involved who can't come to meetings but want to stay involved.
- Want to start handing out documents and flyers door to door in early spring. This would be before May, the fire month for Firewise.
- A comprehensive mailer needs to be sent to out-of-state landowners so they are aware of what permanent residents are doing. The mailer will be reviewed at the next meeting.
- The Forest Lakes Metro District newsletter usually comes out June but will be out in January or February. We want to have the website completed before sending out a newsletter with information about the CWPP in it. It costs approximately \$1200 to send out a 2-page newsletter.
- Need bright colorful posters at the Forest Lakes mail stop.
- Make A-frames on top of mailboxes that have posters attached to them.
- At the two open house meetings, we could provide hard copies and DVDs of available material. These meetings need to be in the evenings to attract more people and in April because people typically like to burn in May.

- Smaller focus group meetings during development of the draft CWPP should be convened to get neighborhood groups together to talk about the CWPP. This would engage people early and get them involved so they have a stake in the CWPP and can help develop the draft CWPP. We need to identify social networks in order to establish these smaller focus groups. These meetings should occur in February and consist of 4 to 5 people from the key group that attend. Ecosphere and the UPRFD should send a representative.

Other Comments Made During the Meeting – Many other comments were made during the team meeting:

- Community members are going to want to know who is paying for the CWPPP. They will be paying for it one way or another. The UPRFD is looking at grants to help landowners with this cost;
- The challenge between now and March will be getting the word out to community members regarding cost, responsibility, and what the CWPPP entails;
- Allstate Insurance and other insurance companies may not insure people anymore that live in areas with high fire danger. They can raise the rates or cancel policies. This would be a good way to get community member's attention by talking about their pocket book. We should get insurance commission to come to the public meetings;
- What happens with your insurance rates when your next-door neighbor isn't good at mitigation? Insurance companies can't answer that question;
- ISO rating has been lowered in Forest Lakes. Can use the money saved in insurance to put towards fire mitigation;
- New bills regarding fire and forest health may be coming up in the legislature as a result of the Boulder fires;
- People need to be made aware that fire mitigation increases the value of their lot when done appropriately.
-

To Do List between December and January 11, 2011 meeting –

- a. Create website
- b. Create Facebook group
- c. Put up signage at the Demo Lot
- d. Talk to La Plata County for GIS layers to create a base map

Next Meeting – The following meetings will be scheduled on the first Tuesday of each month. The next meeting date was set for January 11, 2011, at the UPRFD from 9 a.m. to 10:30 a.m. Maria will send out meeting reminders to confirm the date, time and meeting venue.

Meeting Minutes
CWPP Team Meeting for Forest Lakes (FL)
9-10:30 at Upper Pine Conference Room
January 11, 2011

Attendees

The meeting began with introductions of attendees and a brief overview of the group's purpose and goals for new participants. Attendees included:

1. Maria Irwin, Ecosphere
2. Vicki Calwell, Ecosphere
3. Hon Schlapfer, USFS
4. Shelia Marchetta, FL property owner
5. Ralph Marchetta, FL property owner
6. Anne Schrier, FL property owner
7. Kent Grant, CSFS
8. Pam Wilson, Firewise
9. Craig Goodell, USFS
10. Brady Leffler, UPRFPD
11. Rich Graeber, UPRFPD

Demo Lot Update

The community has noticed the Fire Mitigation Demonstration Lot, on the southwest corner of Forest Lakes and Pine Tree Drive. Upper Pine has received roughly a dozen calls about it; some of general inquiry while some requests have been for acquiring fire wood. Several reiterated the goal of setting a standard for creating defensible space around the majority of homes in Forest Lakes.

Discussed having a two-sided brochure in a real estate-style box placed next to the sign. The brochure would contain more info, details, fire ecology, contacts/links, before and after photos, etc. Everyone readily agreed it was needed and should be done quickly. Discussion about including one at the mailboxes. Ann has the key to put up more signs/handouts/brochures at the mailbox area to encourage participation.

Also discussed having a permanent sign with information specific to the lot done, but the group agreed that for now, it's best to focus on the brochure.

Some Random Discussion Items

Upper Pine collected the ownership information around the demo lot. Inquiries out to 10 properties – ½ don't have correct ownership information.

Kent has an inventory of lots that have been marked and possibly worked on. The local logger might have the most accurate information. This information may be used for future mapping.

Additional Messaging Discussion

Educating homeowners that levels of thinning trade off with their level of risk. Not looking to clear cut. Does not have to be completed in a single effort. Can (and should) be an ongoing commitment.

Community Outreach Concepts

The State Forest Service offers consultations (for a fee) to examine a property. Ideally, they would like to have groups of neighbors collaborate, maybe have “Spurn the Burn” parties, to be most cost effective and to obtain optimal thinning design.

Website

Maria introduced the rough draft of the google site the team will use in the meantime(<http://sites.google.com/site/flcwpp/>). Group would like to get more pictures in: “before and after” shots and fires in urban interfaces. Could also link to YouTube Melody Lane video “9 Minutes, Five Homes”.

Facebook

Maria discussed the research she did to create a CWPP Facebook page, and the associated privacy issues. She said Upper Pine already has a page, which was a surprise. Rich said Upper Pine is moving to a social network information and warning system strategy, with the help of Todd Demko. Rich explained (and later showed a video on) how important this medium has become and that they are actively starting the process of migrating by the end of this week. Examples for use include notices/tweets about fire danger levels, controlled/prescribed burns, burn bans, and of course, the CWPP. Maria will meet with Todd Demko to integrate the CWPP social networking needs into the upcoming overall plan for Upper Pine.

Maps

The La Plata County GIS map effort is underway. The first location map has been created with the help of David Kirk. This next month Maria will be working with David to create additional maps, which will include creating a Hazard Ranking System. She will contact Craig and Brady about this process in the next month.

All of Forest Lakes is in Red Zone, which provides the fire department a basic assessment for tactical planning. Homeowners can contact the Upper Pine FD about how the software rated their property, but this tool is not really for a full homeowner assessment. The Red Zone information may be used for future CWPP maps.

Meeting Announcements

The next CWPP Team meeting will be February 8th, same bat time, same bat channel (February 8, 2011, from 9-10:30 at the Upper Pine Conference Room). The next Fire Council meeting is January 25, 4:30 – 7:00 @ the Public Lands Office.

Grant Opportunities

Maria opened up the discussion about the upcoming CSFS grant with a short fuse (deadline Jan 26th). Craig, Pam, Kent, and Rich all discussed possible options, but didn't identify any projects that would qualify.

Focus Groups

We discussed the small group meetings and several people suggested tapping into the homeowners at Forest Lakes who currently work for the USFS and Upper Pine. We will reach out to these people first, as potential hosts for the small group meetings. Hon and Craig will put together a list of USFS staff who live in Forest Lakes, and Brady and Rich will do the same for Upper Pine personnel. Shelia, Ralph and Anne also graciously offered to host a small group meeting. The focus, agenda, and approach to these small group meetings will be fleshed out at the next CWPP meeting, on February 8th. We would like these meetings to take place at the end of February.

Other

- Brady will research insurance regulations, and how they might affect the CWPP and individual homeowners at Forest Lakes.
- No regulations exist in County Code that would affect the CWPP. Forest Lakes has covenants, but there is no HOA to enforce it.
 - Action item: Need to get copies of the last covenants to the group. Ann to get a copy to Rich, who will have it scanned and sent out. Alternatively, Maria can talk to Dale & Lacy.
 - Rich would like to create a county wide burn permitting system. This has been in the works, but is complicated and for now doesn't affect the CWPP. Won't have a burn permit system until the Land Use Code is sorted out though.
 - The County Fire Code address driveways, but not thinning. This is being currently sorted out in the County Land Use Code Revisions. The Fire Code applies to new developments only.
- Maria will create a "Thank You" sign to post at the burn pile, as discussed during the December meeting.
- Maria and Vicki will write an article for the next Metro District newsletter about the CWPP. This text will also be useful in creating the brochure for the demo lot.
- Pam volunteered to help review and edit upcoming articles, with Maria and Vicki.

Table 1. Action Items from 1.11.11 Meeting, in order of Due Date

CWPP Team Member	Action Item	Due Date
Anne	Drop off a copy of the last Forest Lakes Covenants to Rich	Deliver a hard copy of Covenants to Upper Pine By January 28th
Rich	Scan in the Covenants and email to the CWPP team	Email the covenants to the CWPP team by February 4 th , so we have a week to review it
Everybody	Review website, provide feedback	Email Maria with comments by January 28
Brady and Rich	Put together a list of UP personnel who live in Forest Lakes	Email Maria with list by February 8 th meeting
Craig and Hon	Put together a list of USFS personnel who live in Forest Lakes	Email Maria with list by February 8 th meeting
Brady	Researching Insurance Regulations and how they might affect our CWPP and individual homeowners at Forest Lakes	Email Maria a write up by February 8 th meeting
Everybody	Review Forest Lakes Covenants	by February 8 th meeting

CWPP Team Meeting Notes

February 8, 2011 at Upper Pine Conference Room

Attendees

The meeting began with introductions of attendees and a brief overview of the group's progress within the CWPP process. Attendees included:

1. Maria Irwin, Ecosphere
2. Vicki Calwell, Ecosphere
3. Shelia Marchetta, FL property owner
4. Ralph Marchetta, FL property owner
5. Anne Schrier, FL property owner
6. Tony Schrier, FL property owner
7. Kent Grant, CSFS
8. Pam Wilson, Firewise
9. Craig Goodell, USFS
10. Brady Leffler, UPRFPD
11. Rich Graeber, UPRFPD
12. Tommy Tucker, American Family Insurance
13. Tammy Tyner, Firewise
14. Travis Wright, UPRFPD
15. Dale Kortz, FLMD
16. Casey Cook, FLMD
17. Butch Knowlton, La Plata County OEM

Monthly Progress Update

Website

<http://sites.google.com/site/flcwpp>

Maria provided an overview of the current website, some of its structural changes, others included new sections. Several people noted that Craig and the Fire Department should also be included in the home assessment section. She requested any who had not reviewed to please do so and provide any additional feedback.

Maria also discussed the option to have the website professionally designed. Due to ongoing maintenance costs, the group determined the free site would be suitable.

Maria also informed the group that she had met with Todd Demko (consultant to Upper Pine); Todd will coordinate with the team to get the CWPP process into the social media sites. The process will continue once the Upper Pine contracting process is completed.

ACTION ITEMS:

- Add names and contact information to the Resources for Homeowner section of the website (Maria; due ASAP).
- Review website and provide feedback (all; especially those who haven't done so; ASAP and before next meeting)
- Proceed with social media efforts with Todd Demko when appropriate (Maria; TBD).

Demo Lot Brochure

Maria distributed copies of the Demo Lot brochure to attendees and showed the info boxes that had been purchased. Boxes were to be installed later that day at the demo lot and the community center. Feedback on the flyer is encouraged.

ACTION ITEMS:

- Info Boxes installed (Maria and Casey; 2/8)
- Purchase 3rd Info box and send to FLMD to post (Maria ASAP)
- FLMD post 3rd Info box at mailboxes (when received from Maria)

FLMD Newsletter Text

Maria and Pam created an article about the Forest Lakes CWPP, which will appear in the next Forest Lakes Metro District Newsletter.

CWPP Process Update

Maria provides an overview of where the team is in the process of developing the CWPP. An attachment outlined the deliverables and milestones reached so far. Next steps include initial drafting of the plan.

ACTION ITEMS:

- Initial draft of the CWPP will be emailed to the team, by the next CWPP meeting on March 1st (Maria, 3/1)

Insurance Representative Discussion/Q&A

Tommy Tucker of American Family Insurance discussed insurance industry trends with the group. Most insurance representatives will assess the wildfire risk before offering a policy for a property. They typically follow the 30-ft rule. Any vegetation touching the house is a red flag; e.g., the tree coming up through the deck (although others later stated that this situation isn't necessarily a fire hazard if other mitigation has been done to keep flames from reaching it).

Mr. Tucker also stated that some insurance companies no longer offer policies for residents of Forest Lakes. His company will take those that have done mitigation, but that also requires inspection and verification. He also is currently inspecting properties and reviewing policies to determine if he needs to issue a non-renewal because of risk. From an industry trend perspective, he thinks restrictions are going to get tighter in high risk areas because of the Four-mile Canyon Fire.

Q: How is vacant land treated?

A: Vacant land is typically not inspected and generally is covered by a homeowner's liability policy. But, the vacant land owner would only be liable if he/she was negligent.

Q: Will insurance companies cancel policies when the CWPP is done and public?

A: Highly unlikely – the insurance industry sees this as a positive step and doesn't want to discourage this process.

Q: Can a neighbor's high risk property affect a person's policy or ability to obtain one?

A: Yes. Subdivisions are frequently looked at as a whole.

Another participant also noted that inspections by ill-qualified contractors are a problem. From the Q&A with Tommy and this discussion came several ideas:

- Suggestion that a workshop on proper mitigation be offered.
- We need an Insurance Industry Trends FAQ

ACTION ITEMS:

- Fire Wise Council will handle the proposed ideas regarding training insurance inspectors.
- Write up a summary of insurance implications for CWPP (Maria).

Review of Maps

Three maps were posted on the wall. Much of the rest of the meeting was spent marking them up with comments from participants. Maria will work with the La Plata Co. GIS team to revise and include other requested information (e.g., radio towers, pumping stations, hydrants, etc.)

ACTION ITEMS:

- Maria will lead coordination of info gathering to complete the maps. Once changes are completed, hard copies will be printed and delivered to participants as soon as possible.
 - Provide shape file with hydrant locations (someone from Upper Pine and FLMD)
 - ID owner of private in holding (Maria)

Next Steps/Miscellaneous

Maria will compile the first draft of the CWPP over the next month and will distribute it (in .doc format) shortly before the next meeting, which is scheduled for March 1, 9 – 10:30 a.m. There was some discussion about moving the meeting time to evening, but that will likely occur in April or May.

Maria also discussed the upcoming small group meetings, which will be held likely in mid-late March. These agenda for these meetings will be fleshed out in our next team meeting.

There was also a discussion about getting memo about the history of an emergency exit in Forest Lakes together.

ACTION ITEMS:

- Rough Draft of CWPP late February (Maria)
- List of names to invite to Small Group Meetings (Brady and Rich, Craig and Hon)
- Summary of 2nd ingress/egress road history (Craig and Casey)

Action Item Summary from 2-8-11 CWPP Team Mtg:

Who	Action Item	Due Date
All	Review website and provide feedback if you haven't yet done so http://sites.google.com/site/flcwpp/	Feb 25
All	Review 1 st rough draft of the CWPP	Will receive a rough draft by Feb 23 rd via email. Please email Maria comments or provide a marked up hardcopy by March 1, 2011 if you have any for this preliminary document.
Kent, Brady and Rich, Butch, Dale and Casey	Review new maps and comment	Maria will be delivering new maps on Feb 25 and needs marked copies with your ideas at March 1 st Meeting
FLMD staff	Post 3 rd Info Box at Mailboxes	After received
FLMD Staff	Email Maria fire hydrant shapefile	Done
Dale and Casey	Email Maria a summary of the history and efforts regarding a 2 nd ingress/egress road at Forest Lakes	Feb 21 (if possible)
Pam and Craig	Brainstorm Insurance Seminar, through Firewise	At your discretion, will be handled through Firewise
Craig	Email Maria a summary of the history and efforts regarding a 2 nd ingress/egress road at Forest Lakes	Feb 21 (if possible)
Brady and Russ	Email Maria fire hydrant shapefile	ASAP to facilitate mapping
Brady and Rich	Email Maria names of Upper Pine Fire employees that live in Forest Lakes	March 1, 2011

CWPP Team Meeting Notes

March 1, 2011, 9-10:30am at Upper Pine Conference Room

Attendees

The meeting began with introductions of attendees and a brief overview of the group's progress within the CWPP process. Attendees included:

1. Maria Irwin, Ecosphere
2. Heidi Hansen, Ecosphere
3. Paul Valdez, UPRFPD
4. Tammy Tyner, Firewise
5. Phil Campbell, FL property owner
6. John Irish, FL property owner
7. Sheila Marchetta, FL property owner
8. Ralph Marchetta, FL property owner
9. Cary Newman, FL property owner
10. Vaughn Jones, FL property owner
11. Brady Leffler, UPRFPD
12. Kent Grant, CSFS
13. Dale Kortz, FLMD
14. Casey Cook, FLMD
15. Hon Schlapfer, FL property owner
16. Craig Goodell, USFS
17. Dave Dallison, Ecosphere
18. Cate Harding, UPRFPD
19. Andy Miller, UPRFPD
20. Zach Rushing, FL property owner
21. Butch Knowlton, La Plata County OEM
22. Tom McNamara, La Plata County OEM
23. Sally MacDowell, FL property owner
24. Randy Larson, UPRFPD
25. Tim Ogden, FL property owner
26. Tim Walter, FL property owner

Monthly Progress Update

CWPP Process Update

Maria provided an overview of where the team is in the process of developing the CWPP. A monthly progress summary was posted on the wall. Maria will email a first draft of potential treatment options at Forest Lakes to the CWPP team next week. The CWPP draft will be available for public review in April, after the small group meetings provide public input. A final draft will be completed in May. Next steps include initial drafting of the plan.

ACTION ITEMS:

- Initial draft of the CWPP will be emailed to the team by the end of the month (Maria, 3/31)

Demo Lot Brochure

Maria revised the CWPP and Demo Thinning Lot handouts since the meeting on February 8, 2011. New copies were distributed to the Forest Lakes Metro District and the info boxes in Forest Lakes.

Map Review

Four maps were posted on the wall. Corrections to the maps were made as suggested at the February 8, 2011 meeting. Maria worked with Dave Kirk from the La Plata Co. GIS team to revise the maps. Maria will include the latest round of map suggestions from Craig, Dale, Kent and Butch in the next round of mapping. These revised maps will be shrunk into pdf files and posted on the website.

ACTION ITEMS:

- Maria will work with David to revise maps, and post newest map version on website.

Table A. CWPP Team Approach for Increasing Public Involvement Review

Maria provided an overview of where the team is in the process of public involvement. Most of the items in the Pre-CWPP Creation have been completed including a mailing list, Forest Lakes website, and demonstration lot. A children's event when the temperatures warm up is being developed. Maria reviewed the steps for the 'Establish Community Priorities, Recommendations, and Support' task:

- Create survey; post survey on website; people can take survey on-line.
- Small group meetings in neighborhoods. Maria passed out invitations that will be used to personally invite neighbors to the meetings.
- Two community meetings at Forest Lakes in April.
- Two public open house meetings in May.

Comments were made regarding the social media outlets that the CWPP team can use to target different audiences in a cost-effective manner. Facebook, tweeting, etc can be used to let people know about upcoming events.

Kids have embraced social networking and once you get the kids involved, they can get the parents involved. A suggestion of doing something with the high school was made and well received. Maria asked if anyone had connections with the high school from past events and a few answered that they did.

ACTION ITEMS:

- Maria asked for volunteers to get in touch with their high school connections and get a program initiated. Tammy Tyner (Firewise), Casey Cook (FLMD), and Randy Larson (UPRFPD) volunteered.
- Maria asked for volunteers to host small group meetings at their houses by the end of March and pass out invitations.

Dave Dallison – Fire Behavior Modeling Presentation

Dave Dallison, Fire Behavior Specialist, presented his fire behavior modeling at Forest Lakes. His power point presentation will be available on the website. Dave discussed the assumptions made in his fire behavior model below:

Assumptions

- Limit crown fire activity. The primary objective of potential treatments is to keep fires on the ground.
- Torching and crowing will limit direct attack options.
- Surface fires will be easier to control.
- Large scale thinning of overstory may not be practical.
- Undeveloped lots will continue to build out.

- Area will not experience bark beetle outbreak.
- Land fire data is relatively accurate.

Dave also discussed the conditions that contribute to crown fires (crown flammability, surface to crown heat transfer, crown to crown heat transfer), crown flammability (fine dead fuel moisture, live foliar moisture, foliage flammability, crown closure), and crown to crown heat transfer (crown spacing, crown level winds, steepness of slope). Dave showed the FlamMap Canopy Cover for Forest Lakes (amount of canopy cover, open space, brush, etc.). He discussed reasons for surface to crown heat transfer (surface fire intensity, vertical arrangement, steepness of slope). Dave showed the crown base height (level where branches start on tree) that allows fires to move from the surface into the crown. A low crown base height of 1-2 feet makes it easier for the fire to move into the crown. He discussed types of crown fires: passive (individual trees torching), active (dependent surface fire torches crown), and independent (fire runs through canopy independent of surface fire). Dave then went through several models of fire activity in Forest Lakes by changing wind speed.

Q: How fast could a crown fire go across Forest Lakes in severe conditions?

A: A crown fire could go across Forest Lakes in approximately 2 hours in very severe conditions.

Dave then showed models of pre- and post-treatment and the differences in fire behavior in Forest Lakes. Post-treatment reduces the size of crown fires and fires can be kept on the ground and would be smaller and more controllable. Dave also discussed the differences in flame lengths in different forest types. Gambel oak increases the flame length two times as compared to primarily ponderosa pine forests. Oak needs to be removed from neighborhoods in order to reduce flame lengths.

Dave then made several recommendations and prioritizations for the CWPP:

Recommendations

- ❖ Thin over story by separating crowns of individual or clumps of trees by 10-20feet.
- ❖ Break up horizontal continuity of Conifers and Oak, create clumpy structure
- ❖ Remove oak, juniper and other ladder fuels under the drip line of over story trees.
- ❖ Limb up or remove juniper.
- ❖ Limb up over story trees to 12' or more above the ground.
- ❖ Plant aspen or less flammable species for screening rather than maintaining more flammable species such as Oak, Juniper, or Ponderosa pine.
- ❖ Remove ladder fuels and thin oak clumps to increase crown base height within each clump.
- ❖ Remove vegetation within 20' of structures increasing clearing down slope as needed

- ❖ Maintain sufficient canopy closure to provide a shaded surface fuel condition, (approximately 50% shading of the surface) and suppress the growth of ladder fuels such as oak.

Prioritization

- ❖ Lower slope fuels are a higher priority due to spread potential to the top of the slope.
- ❖ Treatment along contour roads could improve barriers to surface fire spread, and reduce the potential for torching, and spotting across roads.
- ❖ Concentrate thinning of the overstory on groups of undeveloped lots due to ease of operations.
- ❖ Prioritize treatments along CR 501 due to increases risk from the road and spread potential uphill.
- ❖ Limbing up and treatment of surface and ladder fuels to avoid crown fire initiation may be more cost effective than thinning the over story in the short term.
- ❖ Thinning of the over story will improve individual tree vigor and reduce potential for bark beetle outbreaks and other diseases that could alter fuel profiles in the future, and reduce the potential for crown to crown fire spread in the present.
- ❖ Prioritize treatment of heavier fuels in drainages that lead from the bottom to the top of the subdivision due to the rapid rates of spread associated with the chimney effect.

Dave mentioned that this model does not include RVs, cars, or houses. Dave's presentation created a lively discussion amongst the group.

Q: How much canopy should a landowner thin on their property and how much should shade should they keep?

A: 20 feet distance between canopy should be fine.

Q: There is a lot of mistletoe in Forest Lakes. Is that a problem?

A: Yes, mistletoe increases ladder fuels.

Q: What is the history of the area?

A: Like the surrounding areas, the Forest Lakes area was probably a more open ponderosa pine forest, with a reduced gambel oak component. This forest structure was maintained by frequent, low intensity ground fires. In the early 1900s settlers began suppressing all wildfire, logging the valuable trees for lumber, and grazing livestock in the area. The current forest we see in Forest Lakes is a reflection of this history, and isn't completely natural as people assume. Most of the current trees are all around 100 years old. The northwest section of the BLM 40 acre parcel in Forest Lakes retained some old growth trees, and is a good example of what the Forest Lakes area used to look like.

Comment: There are 764 homes or structures in the Forest Lakes subdivision.

Comment: Cary Newman mentioned that 15 years ago before he purchased his lot in Forest Lakes, he looked at the area with a fire behavior mentality. In order to be successful with the

CWPP process, we need to change the property owners' mindset into fire behavior and fire/forest ecology.

Comment: When one removes trees from their lot, the other trees will look healthier.

Comments: People in Forest Lakes think that the UPRFPD will come put out any fires that start in the community. However, even though 98% of fires across the nation are suppressed successfully, the history of fire suppression for over 100 years has increased fire energy and fires will be much larger and possibly more devastating to personal property. The fires in Boulder and Texas are recent examples. The Boulder fires taught us that even when a house isn't exposed to the flaming front, it can burn down later in time when a spark lands on the deck or woodpile.

Comment: The La Plata County will be implementing a new Land Use Code that includes fire mitigation language in the next 24 months.

Q: How will fire mitigation be enforced in La Plata County?

A: Not sure. In Ventura County, an inspector looks at properties periodically. Not sure how much of a role La Plata County will have.

Comment: Treatment at Forest Lakes would be much easier to do prior to homes being built on the lots. A realtor in Pagosa told a CWPP team member that a lot sat vacant and unsold for a long time. The lot sold quickly once the trees were thinned from the lot.

Comment: If the county created a tax incentive for people to thin their lots, combined with the new Land Use Code regulations, it could really push people to thin their property.

Q: As a rule of thumb, how far away should a tree be from the house?

A: The rule of thumb is to clear all vegetation within 20 feet of a house. But, if you have one tree you really want to keep, you can treat it as part of the house and create defensible space around it. More information is contained in CSFS guidance documents, available on the Forest Lakes CWPP website, <http://sites.google.com/site/flcwpp/home/information-for-private-landowners>

Comment: In Conifer, Colorado the County regulates thinning. You cannot close on a house purchase, until the lot has been thinned to local fire department standards. The County also mandates that homeowners remove all beetle infested trees. This may have lessened the outbreak in that county. Landowners need to be educated about bark beetles. Education should include guidelines for control and slash management in order to reduce the risk of infestations in Forest Lakes.

Comment: An educational component should be incorporated into the CWPP document. This should include defensible zones for the public. The website has resource links on it for landowners so they can look this information up.

Next Steps/Miscellaneous

Maria will complete the draft document that will include a list of potential treatments as well as priority areas, signage, 2nd access egress routes. This will be available for review by the end of next week (March 11).

Maria wants volunteers to host small group meetings at their houses in Forest Lakes. She wants to have dates of the meetings set up by the end of next week (March 11). Anyone interested should contact Maria by phone or email.

Also have interested people contact Maria in order to join the email list so they can provide comments on the CWPP.

ACTION ITEMS:

- Rough Draft of CWPP early March (Maria)
- Volunteers to Host Small Group Meetings

Next CWPP Team Meeting

Will not have the usual morning meeting at Upper Pine. We're shifting to evening meetings, to make them more accessible to the community members who live in Forest Lakes. So we'll be having evening meetings the first Tuesday of the month, from 6:30 to 8pm at the Forest Lakes Community Center.

Our next meeting will be: April 5, 2011 from 6:30 to 8pm at the Forest Lakes Community Center, in Forest Lakes.

Action Items Summary from 3-1-11 CWPP Team Mtg:

Who	Action Item	Due Date
All	Volunteer to host small group meetings at homes. Set up dates for meetings.	March 11
Maria, Casey Tammy, Randy	Brainstorm events to do with high school students and contact key people about these events.	By April 5, 2011

CWPP Team Meeting Notes

April 5, 2011, 6:30-8:00 PM at Forest Lakes Community Center

Attendees

The meeting began with introductions of attendees and a brief overview of the group's progress within the CWPP process. Due to an active fire in the Lightner Creek area in Durango, many participants from local agencies were unable to attend. Attendees included:

1. Maria Irwin, Ecosphere
2. Tammy Tyner, Firewise
3. Glen Deason, FL property owner
4. Cary Newman, FL property owner
5. Vaughn Jones, FL property owner
6. Dale Kortz, FLMD
7. Casey Cook, FLMD
8. Anne & Tony Schrier, FL property owners
9. Cherry Miloe, FI property owner

Monthly Progress Update

CWPP Process Update

Maria provided an overview of where the team is in the process of developing the CWPP. Copies of the following Forest Lakes CWPP maps were provided to attendees: 1) Thinning Priorities Map, 2) Temporary Evacuation Staging Areas, and 3) Ingress/Egress Options.

ACTION ITEMS:

- Thinning Priorities Map
 - The title "501 Thinning Buffer Project" will be changed to "501 Mitigation Buffer Project."
 - The "Lower Lots Thinning Project" area will be adjusted to show actual areas that need to be thinned, as much of that area consists of grass and previously limbed/thinned timber.
 - Drainages that intersect Loop Road will be identified and prioritized.

Door-to-Door Campaign

Maria gave attendees the opportunity to mark areas on a Forest Lakes map that they were interested in covering for the upcoming Door-to-Door Campaign to invite residents to two Draft CWPP meetings in April. Maria requested that those present try to find additional volunteers for the campaign.

Draft CWPP Community Meetings: April 19 & April 27

Maria discussed the need for volunteers to host tables at the community meetings and asked for creative ideas to incorporate in the events. The following are responses from those who were present:

- Tables, maps, and FOOD!!!!
- Kids Corner – provide a fun place for kids to hang out while their parents are busy with the event

- TV
 - Bean Bags
 - Games
- We could contact Tom Edison and ask what the cost would be to fly a helicopter overhead
- Have Mike Skully (FL resident) share his experience with being denied by 4 separate insurance agencies
- Ask Tommy Tucker (insurance agent) to share his perspective regarding insurance coverage for homeowners
- Utilize personnel that were going to implement the upcoming WUI checkpoint (4-9-11) to advertise the Draft CWPP Community Meetings, instead

ACTION ITEMS:

- Tammy Tyner will bring bean bags to both community meetings
- Maria Irwin will call Kaylee Stone (970-769-7373 or 970-749-2526) and request her assistance in engaging and monitoring the children at both events.

Draft Treatment Options for the Forest Lakes CWPP

The initial objective of this portion of the meeting was to review the Draft Treatment Options document and identify and prioritize projects on the list within the categories that previously existed. However, the discussion quickly moved to identifying and prioritizing projects based on emergency and urgency, as opposed to listing the projects under existing categories. The following are some of the suggestions that were made:

- Safety & Evacuation projects should have a higher priority than Mitigation efforts
 - Increase the ability for residents to leave
 - Thin 100' along evacuation routes
 - Increase emergency access
- Categories should be labeled as priorities (Evacuation, Safety, Mitigation) with relevant projects listed underneath, as opposed to types of projects (Signage, Ingress/Egress, etc.).
- Need to be sure transformers and infrastructure are addressed
- Issue of absentee owners is still a concern
 - It was suggested that the original focus be placed on creating awareness and engaging residents who are currently living in the subdivision
 - Once the ball is rolling, the CWPP is prepared, and projects are underway, issues connected with absentee ownership can be addressed

ACTION ITEMS:

- Maria will:
 - work on changing the categories in the Draft Treatment Options document to better reflect the priorities to be addressed in the CWPP,
 - look into obtaining estimates for the projects to be completed,
 - and will send another draft out for review.

CWPP Team Meeting Notes

May 3, 2011, 6:30-8:00 PM at Forest Lakes Community Center

Attendees:

1. Hon Schlapfler, USFS
2. Pam Wilson, Firewise
3. Maria Irwin, Ecosphere
4. Cary Newman, resident and USFS
5. Kent Grant, CSFS
6. Dale Kortz, FLMD
7. Brady Leffler, Upper Pine
8. Craig Goodell, USFS
9. Tammy Tyner, Firewise
10. Cherry Miloe, Firewise Ambassador
11. Anne Dal Vera, Resident
12. Vaughn Jones, Resident
13. Christinia Marquart, Archuleta County
14. Casey Cook, Resident, UP, FLMD
15. Carolyn Cook, Resident

Preparation for the 5/25/2011 Public Meeting

Chief Graber to recruit door knocking effort for 5/25 public meeting.

Tammy handling sign for day before and day of meeting

Consider traffic alert sign, about \$50/day Brady to check

PSA in Pine River Times, Herald and Telegraph Cherry to coordinate

Digital invites

What are going to be the talking points at the 5/25 public meeting? People need to have something they can take away with them.

- Maps?
- Plan outline?
- Critical points?
- Cards telling people how to register their cell phones on reverse 911?

Discussion of the draft plan outline

beginning on page 1 entitled "First Priority"

1. "Evacuation Route" signs...

Evacuation route signs might be too confusing and point people in the wrong direction if evacuation is needed for only part of the subdivision.

Sheriff has evacuation authority. SO, UPFD and La Plata OEM need to sit down ahead of and make a plan for evacuation coordination.

Convene a committee of LPSO, LPOEM and UPFD experts to develop an evacuation coordination plan. Committee need to establish how evacuation notification will be provided and coordinated.

Would help if residents would register their cell phone for reverse 911.

2. Secure additional ingress/egress routes....

Public lands position is that no right of way through public lands could be granted unless no other feasible option exists.

Explore traffic evacuation route possibilities based on traffic study to determine feasible options based on existing right of ways.

- UPFD will take the lead.
- SJPL Columbine (Han Schlapfer) liaison regarding ROW(s) on public lands.
- FLMD involvement.
- La Plata Co. OEM involvement.

Conduct a traffic study to determine if feasible options exists. (This recommendation is #6 of the First Priorities on page 1) County needs to be involved from a public safety standpoint

- Upper Pine has \$40K grant.
- Colored or numbered evacuation routes once alternate routes are determined.

3. “Temporary Staging Areas”

Scrub “staging area” concept and include common area(s) around Lake Simpatico as a safe zone. Safe zone will need to be maintained annually probably at least twice per year. Green area prep work before mowing by removing rocks and other obstructions that could damage mowers. UPFD and FLMD to handle prep and maintenance.

4. Scratch idea about identifying possible helicopter landing areas for evacuation.

5. “Selectively thin trees and or limb up ladder fuels...100’ buffer”

Prioritize area along evacuation routes where hazards are the worst. Mitigation of infrastructure and powerlines could probably occur first.

Table 2. CWPP Team approach public involvement in the Forest Lakes CWPP

Pre-CWPP creation	Task to Increase Public Involvement	Method	Personnel	Completion Date
Fall 2010	Create address and email database for community members	Metro District address list	<ul style="list-style-type: none"> CWPP Team collects data Ecosphere hosts database 	12/1/10
	Provide electronic information source for community and CWPP Team	Create Forest Lakes CWPP website	<ul style="list-style-type: none"> Ecosphere provides text and graphics, creates, hosts, and maintains website 	1/15/11
	Spark public interest in wildfire hazard reduction	Creating demo thinning lots with before and after signage and information	<ul style="list-style-type: none"> UPFPD crew does thinning Ecosphere provides signage Ecosphere creates handouts and posts at signs, about CWPP Process and Demo Thinning Lot 	<p>Thinning completed 12/5/10</p> <p>Signage completed 12/5/10</p> <p>CWPP and Demo Thinning Lot Brochures completed 2/1/11</p>
During CWPP process	Task to Increase Public Involvement	Method	Personnel	Completion Date
Winter 2010-2011	Establish Community Priorities, Recommendations, and Support	Six small group meetings, hosted by a neighbor	<ul style="list-style-type: none"> Advertise small group meetings by: <ul style="list-style-type: none"> Paper invitations for hosts to hand to neighbors Email contacts Post on website CWPP Team provides Maria with possible meeting hosts Ecosphere 	<p>Six small group meetings were held, numbers of attendees in parenthesis</p> <p>3/14/2011 (14)</p> <p>3/15/2011 (9)</p> <p>3/16/2011</p>

			conducts meeting <ul style="list-style-type: none"> • Ecosphere provides visual materials • One member of the CWPP Planning Team attends and supports meeting 	(13) 3/22/2011 (6) 3/24/2011 (14)
		Door to Door Canvassing	<ul style="list-style-type: none"> • Ecosphere provides handout materials and language • CWPP Team, Upper Pine, and Volunteers conduct canvassing 	Five community members went canvassing, 4/16/11
		Two Draft CWPP Public Meetings	<ul style="list-style-type: none"> • Advertise public meetings by April 8th Ecosphere provides: <ul style="list-style-type: none"> ○ Posters ○ Email contacts ○ Post on website ○ Banner at mailboxes • Upper Pine Provides: <ul style="list-style-type: none"> ○ Social media invites ○ WUI checkpoint • Ecosphere conducts meeting and provides path for plan feedback • CWPP team attends and supports both meetings 	4/19/2011 (25) 4/27/2011 (4) At the Forest Lakes Community Center. Open house style meetings from 6:30 to 8:30pm.
		Solicit public comments on draft CWPP and core ideas	<ul style="list-style-type: none"> • Ask at Draft CWPP Public Meetings • Post draft on website, make 3 hardcopies 	4/19/11 to 6/3/11

			available, ask for comments <ul style="list-style-type: none"> Email draft to mailing list, ask for comments 	
After CWPP Completion	Task to Increase Public Involvement	Method	Personnel	Completion Date
Spring 2011	Present the CWPP to the community and discuss next steps	One public open house meeting	<ul style="list-style-type: none"> Advertise public meetings by May 1st <ul style="list-style-type: none"> Ecosphere provides: <ul style="list-style-type: none"> Posters Email contacts Post on website Upper Pine Provides: <ul style="list-style-type: none"> Social media invites WUI checkpoint the Saturday and Sunday before the event w/personal invite from the Fire Chief Door-to-door canvassing with Upper Pine Staff in Uniform w/personal invite from the Fire Chief Organizing and implementing BBQ CWPP Planning team provides: <ul style="list-style-type: none"> 4 Handmade Signs for BBQ Ecosphere provides visual materials for 	5/25/2011 (98!) At the Forest Lakes Community Center. Open house style meeting and free BBQ from 6:30 to 8:30pm.

			the open house <ul style="list-style-type: none"> • CWPP team attends and supports 	
		Making hard copies and electronic copies available to the community	<ul style="list-style-type: none"> • Ecosphere posts Final CWPP to website • Ecosphere provides electronic copies and or hard copies to community members 	6/15/11

Have you registered your cell or internet phone with 9-1-1?



If you live in La Plata County, you may now register up to five cell or internet phone numbers with your physical street address.

Go to The City of Durango Home Page to register
www.durangogov.org



CAN HELP MAKE A
COMMUNITY WILDFIRE
PROTECTION PLAN

Visit
<http://sites.google.com/site/flcwpp/>
or call Maria Irwin at Ecosphere for
more information: 382-7256

YOU ARE INVITED

To attend a small group meeting at your
neighbor's house:

Date: _____

Time: _____

To discuss the creation of the [Forest Lakes
Community Wildfire Protection Plan](#). Come
and find out what the plan is, why it is
important, and how it benefits you. This is
the time to give the planning team feedback
and help prioritize proposed wildfire risk
reduction treatments.

PLEASE JOIN US!

RSVP: _____



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reduction treatments.

PLEASE JOIN US!

RSVP: _____

Forest Lakes Community Wildfire Protection Plan



**CAN HELP MAKE
A COMMUNITY
WILDFIRE
PROTECTION PLAN**

Forest Lakes is creating a Community Wildfire Protection Plan or CWPP for Forest Lakes and needs your input. A CWPP is a document that identifies the specific risks that make a subdivision vulnerable to wildfire, and strategizes steps to make that community safer. Once the CWPP is completed, grant money may be available to help thin your property.

**Join the CWPP Mailing List!
Get Involved!**

**Text upfire to 94932
or call Maria at Ecosphere 382-7256**

<http://sites.google.com/site/flcwpp>

PUBLIC MEETING TO REVIEW DRAFT CWPP

**April 19th and 27th, 2011
Forest Lakes Community Center
6:30 p.m. to 8:30 p.m.**

**FREE FOOD, RAFFLE, KID'S ACTIVITIES,
FIRE TRUCKS**

**Public Meeting to Review Final CWPP—May 25th, 2011
Forest Lakes Community Center
6:30 p.m. to 8:30 p.m.**

▶ **ATTEND A MEETING**

▶ **ASK QUESTIONS**

▶ **LEARN THE FACTS**

▶ **MAKE SUGGESTIONS**

Public Service Announcement for Forest Lakes Community Wildfire Protection Plan:

April PSA

Attention Forest Lakes Residents: Please join us either Tuesday night April 19th or Wednesday night April 27th from 6:30 to 8:30pm at the Forest Lakes Community Center for a fun and informative meeting regarding the DRAFT Community Wildfire Protection Plan for Forest Lakes. For more information call Maria at 382-7256 or text “upfire” to 94932.

May PSA

Attention Forest Lakes Residents: Please join May 25th from 6:30 to 8:30pm at the Forest Lakes Community Center for a fun, open house style meeting and barbeque regarding the FINALIZED Community Wildfire Protection Plan for Forest Lakes. For more information call Maria at 382-7256 or text “upfire” to 94932.

May newspaper submission:

Pine River Times, Durango Herald, and Telegraph:

Attention Forest Lakes Residents: Please join May 25th from 6:30 to 8:30pm at the Forest Lakes Community Center for a fun, open house style meeting and barbeque regarding the Community Wildfire Protection Plan for Forest Lakes. Learn what the plan is, why it’s important to you, and about future fuels mitigation projects at Forest Lakes. There will be fire trucks, kid’s activities, and lots of information about protecting your homes from fire. For more information call Maria at 382-7256 or text “upfire” to 94932.



Forest Lakes Services Guide

Forest Lakes Metropolitan District (FLMD) - A limited service governmental entity providing Water, Sewer, Road and Recreation facilities. (970) 884-2925 Shop (970) 884-2111. Email: flmd@flmd.com Web: www.flmd.com

Upper Pine River Fire Protection District—Emergency medical and fire protection services. 911 or (970) 884-9508.

La Plata County—Sheriff, Building, Planning and other Departments including the Assessor, Treasurer, Clerk and Recorder and various other County services. (970) 382-6200. La Plata County Central Dispatch 385-2900.

San Juan Basin Health Department—Individual sewage disposal system permits and public health related services. (970) 247-5702.

La Plata Electric Association (LPEA) - Electric services for Forest Lakes. (970) 247-5786

Qwest—Telephone services for Forest Lakes. (800) 244-1111.

YOUR 2010 FOREST LAKES DRINKING WATER QUALITY REPORT IS INCLUDED and is also available online at www.flmd.com

COMMUNITY WILDFIRE PROTECTION PLAN

What is a Community Wildfire Protection Plan?

A CWPP is a document that identifies specific risks that make a subdivision vulnerable to wildfire, with strategic steps to make that community safer. Creating a CWPP is a collaborative process, involving representatives from the community of Forest Lakes, Forest Lakes Metro District, Upper Pine River Fire Protection District, La Plata County, FireWise of Southwest Colorado, Colorado State Forest Service, and the US Forest Service (collectively known as the CWPP Planning Team). The process for creating the CWPP for Forest Lakes started in November of 2010, and will finish by May of 2011.

Why does Forest Lakes need a CWPP?

The community of Forest Lakes has been identified as an area of extremely high wildfire danger, and has been a cause of concern for many years to the Upper Pine River Fire Protection District and surrounding land managers. Factors that make the community vulnerable to wildfire include access and egress issues, build-up of vegetation, and the large number of homes in the area.

How would creating a CWPP benefit Forest Lakes?

A CWPP enables a community to plan how it will reduce its wildfire risk. It will help to make Forest Lakes safer for both residents and emergency responders. Suggested actions might include recommendations for mitigation around homes and treed lots, ways to protect important infrastructure within the subdivision, changes needed to roads to make them useable by fire trucks, and educational opportunities. A CWPP would also analyze priority areas for treatment, **qualify Forest Lakes for federal grant money** to implement suggested treatments, and increase community communication.

We need your help! There are three ways you can be involved:

1. Join the CWPP Planning Team. We are actively looking for residents of Forest Lakes to be members of the CWPP Planning Team. The CWPP Planning Team will be creating the CWPP. We will meet once a month, from December to April.
2. Join the CWPP mailing list. If you are interested in contributing, but can't make the CWPP Planning Team meetings, you can stay involved through email. We will send you meeting notes, updates on the process, ways to volunteer, and ask for your input in the process
3. Attend public information meetings. We will be conducting small group meetings in a home near you in March. We will also conduct larger public informational meetings in Forest Lakes to establish community priorities and unveil the CWPP later in the spring.

To become involved, visit the Forest Lakes CWPP website, email Maria Irwin at Irwin@ecosphere-services.com, or call 382-7256.

For more information visit the Forest Lakes CWPP website at <http://sites.google.com/site/flcwpp/>

Draft CWPP Public Meetings		Location
4/19/2011	6:30-8:30 pm	Forest Lakes Community Center
4/27/2011	6:30-8:30 pm	Forest Lakes Community Center
Final CWPP Public Meetings		
5/17/2011	6:30-8:30 pm	Forest Lakes Community Center
5/25/2011	6:30-8:30 pm	Forest Lakes Community Center

Maria Irwin
Forest Ecologist
Ecosphere Environmental
Services
(p) 970.382.7256 | 776 E.
Second Ave. Durango, CO



Forest Lakes Community Wildfire Protection Plan

Fuels Mitigation Demonstration Lot Information



CAN HELP MAKE A COMMUNITY WILDFIRE PROTECTION PLAN

For more information, go to:
<http://sites.google.com/site/flcwpp>

To get involved, contact:

Maria Irwin
382-7256

irwin@ecosphere-services.com

Due to the nature of the neighborhood (dense vegetation, one road in and out, many residents), Forest Lakes has been identified as a high risk area for wildfire. Local land managers have been encouraging property owners to thin their lots for years, paying special attention to the area around the house.

The Upper Pine Fire Department (Upper Pine) received grant funding to create a Community Wildfire Protection Plan and a Fuels Reduction Demonstration Lot for the community of Forest Lakes. This lot, located at the southwest corner of East Forest Lakes Drive and Pine Tree Drive, is a work in progress and is designed to be an educational tool.

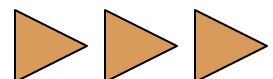
Project Timeline:

Fall 2010:

- Upper Pine talked to homeowners and selected a visible corner lot
- Upper Pine crews started cutting down chosen trees and shrubs and hand piling them
- Upper Pine crews burned slash piles

Spring 2011:

- Upper Pine crews will continue clearing brush and trees
- Upper Pine crews will conduct a prescribed burn on the demonstration lot, recycling excess leaf litter back into the soil



How to Thin Your Lot

Thinning your lot will help to reduce wildfire danger and improve forest health. It may seem tricky to know how many trees and shrubs you need to remove, and which ones to choose. There are a lot of resources to help you. Please visit our website at <http://sites.google.com/site/flcwpp/> and click on the Resources for Homeowners page for information on thinning and a directory of local contractors.

Hire a Professional

Foresters from the CWPP Team are available to come to your lot and assess or direct thinning efforts. They prefer that you gather several of your neighbors so that the forester can assess all the lots at the same time. To schedule an appointment, please call one of the following team members:

- Ken Grant, Colorado State Forest Service
(970) 247-5250
- Craig Goodell, US Forest Service
(970) 385-1207
- Travis Wright, Upper Pine Fire
(970) 884-9508



TO ALL HOMEOWNERS:

Visit the Forest Lakes CWPP website:

- Learn how to get involved
- Meeting dates, time, location
- Read the CWPP
- See maps of your neighborhood

please go to <http://sites.google.com/site/flcwpp>

If you'd like to sign up for the email list to know when the prescribed burn will happen, please contact Maria Irwin at Ecosphere Environmental Services at 382-7256 or irwin@ecosphere-services.com

THANK YOU!

Forest Lakes Community Wildfire Protection Plan



CAN HELP MAKE A COMMUNITY WILDFIRE PROTECTION PLAN

For more information, go to:
<http://sites.google.com/site/flcwpp>

To get involved, contact:

Maria Irwin
382-7256

irwin@ecosphere-services.com

What is a Community Wildfire Protection Plan?

A CWPP is a document that identifies the specific risks that make a subdivision vulnerable to wildfire, and strategizes steps to make that community safer. Creating a CWPP is a collaborative process, involving representatives from the community of Forest Lakes, the Forest Lakes Metro District, the Upper Pine River Fire Protection District, La Plata County, FireWise of Southwest Colorado, the Colorado State Forest Service, and the US Forest Service (collectively known as the CWPP Planning Team). The process for creating the CWPP for Forest Lakes started in November of 2010, and will finish by May of 2011.

Why does Forest Lakes need a CWPP?

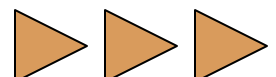
The community of Forest Lakes has been identified as an area of extremely high wildfire danger, and has been a cause of concern for many years to the Upper Pine River Fire Protection District and surrounding land managers. Factors that make the community vulnerable to wildfire include access and egress issues, build-up of vegetation, and the large number of homes in the area.

How would creating a CWPP benefit Forest Lakes?

A CWPP enables a community to plan how it will reduce its wildfire risk. It will help to make Forest Lakes safer for both residents and emergency responders. Suggested actions might include recommendations for mitigation around homes and treed lots, ways to protect important infrastructure within the subdivision, changes needed to roads to make them useable by fire trucks, and educational opportunities. A CWPP would also analyze priority areas for treatment, qualify Forest Lakes for federal grant money to implement suggested treatments, and increase community communication. Other benefits include:

- Reduce your risk from wildfire
- Restore healthier, more resilient conditions in adjoining forests
- Improved neighborhood communications
- Improved coordination and communication between emergency response agencies and the community
- Action items identified and prioritized—when money becomes available, you'll know what you can afford to work on

For Ways to Help





CAN HELP MAKE A COMMUNITY WILDFIRE PROTECTION PLAN

For more information, go to:
<http://sites.google.com/site/flcwpp>

To get involved, contact:

Maria Irwin
382-7256

irwin@ecosphere-services.com

Collaboration – A Necessary Component

Collaboration is defined as people working together to address a shared problem that not one of them could effectively resolve alone. The Healthy Forest Restoration Act, established by Congress, requires collaboration in the development of CWPPs. We need your help to:

- Define the boundaries of the community's Wildland Urban Interface (WUI)
- Identify and prioritize areas for hazardous fuel-reduction within Forest Lakes and surrounding land
- Recommend types and methods of treatments to be used
- Identify hazards in Forest Lakes

Some of the benefits of collaboration include:

- Help build trust and good working relationships among the participants
- Ensures all bases are covered in the planning process
- Ensures potential problems or roadblocks are identified and dealt with
- Ensures good use is made of available time and money
- Builds strong support for the CWPP

Potential Outcomes of the CWPP Process

1. Priority Areas for fuels reduction treatments identified.
2. Second ingress/egress road for Forest Lakes strategy.
3. Signing Evacuation Routes.
4. Barriers for Emergency Response identified.

We need your help! There are three ways you can be involved:

1. Visit our website at <https://sites.google.com/site/flcwpp/home> to learn all about the project, see the drafts of the CWPP, and learn when the next meetings are scheduled.
2. Join the CWPP mailing list. We will send you meeting notes, updates on the process, ways to volunteer, and ask for your input on the plan. Call Maria at 382-7256, email her at Irwin@ecosphere-services.com, or text upfire to 94932 to be added to our mailing list.
3. Attend a public information meeting:
 - We will have two fun and educational, open house-style public meetings to review the draft CWPP and gather public input. Please join us either April 19th or 27th, 2011, at the Forest Lakes Community Center, from 6:30 to 8:30pm. PLEASE COME AND MAKE YOUR IDEAS HEARD!
 - We will have one public meeting to present the final CWPP to the community—May 25, 2011 at Forest Lakes Community Center, from 6:30-8:30pm. Please join us to learn all about the solutions that we've dreamed up, to make Forest Lakes a safer place to live.

Thank you!

ROD RICHARDSON
DEPUTY CHIEF EMS
rrichardson@upperpinefpd.org



RANDY LARSON
DEPUTY CHIEF OPS
rlarson@upperpinefpd.org

RICHARD GRAEBER
FIRE CHIEF
rgraeber@upperpinefpd.org

515 Sower Drive Bayfield, CO 81122
Phone (970) 884-9508 FAX (970) 884-2444 www.upperpinefpd.org

Forest Lakes Homeowners:

The Upper Pine River Fire Protection District in cooperation with the Forest Lakes Metro District, Colorado State Forest Service, San Juan Public Lands and the FireWise Council worked hard to secure funding and develop a plan that will better equip and prepare the residents of Forest Lakes to survive an out of control wildfire.

As your Fire Chief and your risk manager I have a very unique and challenging role in managing the risk of your community related to fire and other unplanned events. Too often we find ourselves managing that risk after the event has started instead of being proactive and managing risk, when possible, up front. In this case, we are addressing the lack of fuel reduction in and around homes within the subdivision as an identifiable and manageable risk.

Here is the long and short of it; prior to the area being settled there were naturally occurring fires every 7-13 years. This kept ground and surface fuels (duff and brush) at bay and naturally thinned smaller trees. Now we have tons and tons of fuel per acre, which when ignited, could result in an uncontrollable release of energy (big fire) that would devastate anything and everything in its path. We can't prevent everything but we can substantially increase the odds of saving your home and at the same time lower the risk to you, the community and to your fire fighters by actively participating in a fuel reduction program.

The best part of all this, the cooperating agencies have secured grant funding to assist you and the Forest Lakes Community with this effort. Future grant funding may be available if we can show ongoing progress and a commitment from you to participate in some wildfire preparedness efforts, including fuel reduction. This is my personal invitation to you to attend the final community planning meeting on:

Wednesday, May 25, 2011 from 6:30PM to 8:30PM at the Forest Lakes Rec. Center

This is an open house forum, and all I am asking for is 20-30 minutes of your time to see what we are doing, answer questions and learn how you can participate in making the Forest Lakes Community a safer place with respect to wildfire.

To sweeten the deal, Upper Pine firefighters will be grilling some burgers and dogs between **6:30 and 7:30PM**. We will also have fire equipment and other activities so please bring the kids.

In closing please remember we are in this together and we will put as much effort into saving your home as you put into taking positive mitigation steps. Thank you and I look forward to seeing you on the 25th.



Richard W. Graeber, Fire Chief

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[CWPP Planning Team](#)
[CWPP Drafts](#)
[CWPP Maps of Forest Lakes](#)
[Demo Thinning Lot](#)
[Resources for Homeowners](#)
[Contact Us](#)
[CWPP Team Members](#)
[Upper Pine Fire River Protection District](#)
[Firewise Council of Southwest Colorado](#)
[Colorado State Forest Service](#)
[BLM/USFS San Juan Public](#)
[Lands Center](#)
[La Plata County Office of](#)
[Emergency Management](#)
[Forest Lakes Metro District](#)

Forest Lakes Community Wildfire Protection Plan

A collaborative action plan to make Forest Lakes a safer place to live

What is a Community Wildfire Protection Plan (CWPP)?

A CWPP is a document which identifies the specific risks that make a subdivision vulnerable to wildfire, and strategizes steps to make a community safer. Creating a CWPP is a collaborative process involving representatives from the community of Forest Lakes, the Forest Lakes Metro District, the Upper Pine River Fire Protection District, La Plata County, the Colorado State Forest Service, and the US Forest Service (collectively known as the CWPP Planning Team). The process for creating a CWPP for Forest Lakes started in November of 2010 and will finish by May of 2011.



Why does Forest Lakes need a CWPP?

The community of Forest Lakes has been identified as an area of extremely high wildfire danger, and has been a cause of concern for many years to the Upper Pine River Fire Protection District and surrounding land managers.

How would creating a CWPP benefit Forest Lakes?

A CWPP would help to make Forest Lakes a safer place to live by creating an action plan to reduce wildfire risk. A CWPP would also qualify Forest Lakes for federal grant money to implement suggested treatments. Other benefits include:

- Reducing your risk from wildfire and restoring healthier, more resilient conditions in adjoining forests—in other words, creating fire-adapted communities in fire-adapted ecosystems
- Improved neighborhood communications
- Improved coordination and communication between emergency response agencies and the community
- Action items identified and prioritized—when money becomes available, you'll know what you can afford to work on
- Guidelines for homeowners for creating defensible space and the reduction of structure ignitability

Only you can help create the Forest Lakes CWPP: [Click here get involved.](#)

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[Lands Center](#)

[La Plata County Office of](#)

[Emergency Management](#)

[Forest Lakes Metro District](#)

Forest Lakes Community Wildfire Protection Plan

A collaborative action plan to make Forest Lakes a safer place to live

Get Involved!

There are several ways you can get involved, and help make Forest Lakes a better place to live:

1. Join the CWPP Planning Team.

We are actively looking for residents of Forest Lakes to be members of the CWPP Planning Team. The Team will be creating the CWPP. We meet once a month, from December to May.

- a. Our next meeting is:
Tuesday, May 3, 2011 6:30-8pm

[Forest Lakes Community Center](#)
in Forest Lakes

2. **Join the CWPP mailing list.** If you are interested in contributing, but can't make the CWPP Planning Team meetings, you can stay involved through email. We will send you meeting notes, updates on the process, ways to volunteer, and ask for your input in the process. Call Maria at 382-7256, email her at lrwin@ecosphere-services.com, or text upfire to 94932 to be added to our mailing list.

Current Volunteer Opportunities:

We need volunteers to help with our April 16th Door-to-door Canvassing effort at Forest Lakes. We will be telling our neighbors about the CWPP process, how to get involved, and inviting them to the upcoming public meetings in April. Join us for a fun, community day! Please confirm you can volunteer to Maria by April 8th.

3. Attend a public information meeting:

- a. We will be conducting small group meetings in a



Help Keep Forest Lakes Green

home near you in March. Call Maria for dates and locations.

b. We will have two public meetings to review the draft CWPP and gather public input- April 19 and 27, 2011, at the [Forest Lakes Community Center](#) in Forest Lakes. PLEASE COME AND MAKE YOUR IDEAS HEARD!

c. We will have one public meeting to present the final CWPP to the community, March 25, 2011 at [Forest Lakes Community Center](#) in Forest Lakes. Please join us to learn all about this community plan and see what we've come up with.

To get involved, please contact:

[Maria Irwin | Forest Ecologist](#)
Ecosphere Environmental Services
(p) 970.382.7256 | 776 E. Second Ave.
Durango, CO 81301
flcwpp@gmail.com



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Forest Lakes Community Wildfire Protection Plan

A collaborative action plan to make Forest Lakes a safer place to live

Meeting Minutes:

- [November 2010](#)
- [December 2010](#)
- [January 2011](#)
- [February 2011](#)
- [March 2011](#)

CWPP Team Associated Documents:

- [Contact List](#)
- [Public Involvement Approach, Revised 3.9.11](#)
- [CWPP Process Summary](#)

- [Draft Potential Treatment Options](#)
- [Dave Dallison's Fire Modeling Presentation](#)

Public Handouts:

- [CWPP Handout](#)
- [Demo Lot Handout](#)

Public Meetings:

- [Small Group Meeting Agenda](#)

Remaining Forest Lakes CWPP Schedule Summary:

Event	Date	Time	Location
Last CWPP Planning Team Mtg	5/3/2011	6:30-8pm	Forest Lakes Community Center
Public Mtg to Present core ideas of CWPP to Community*	5/25/2011	6:30-8:30 pm	Forest Lakes Community Center
Review Window of Draft CWPP	5/23/11 to 6/3/11	On your own time, please plan for a minimum of 8hrs	On your computer
Final CWPP available to everybody	Goal: 6/13/11 (depending on signatures)	NA	Hardcopies will be available to pick up at UP and FLMD, electronic copies to everybody through email

*A final version of the CWPP will not be done by the public meeting, which is fine because we'll be presenting the core ideas of the plan in an open house style format for the meeting. Final CWPP's will be available electronically, and printed, to all homeowners and meeting attendees in early June.

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[Forest Lakes Metro District](#)

Forest Lakes Community Wildfire Protection Plan

A collaborative action plan to make Forest Lakes a safer place to live

The CWPP Planning Team is currently working on mapping and writing the first draft of the Forest Lake CWPP. Please check back in May 2011 for the first draft of the Forest Lakes CWPP.



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The CWPP Planning Team is working with the La Plata County GIS department to create custom maps for the Forest Lakes CWPP. The following maps are available for download, and you can view hardcopies at the Upper Pine Office. Upper Pine is open 8-5, M-F.

Base Maps:

[Location Map of Forest Lakes](#) 824 KB
[WUI and Past Treatment Map](#) 6,773 KB
[Evacuation Hazard Rating Map](#) 6,214 KB
[Forest Lakes Community Map](#) 6,637 KB

Potential Actions Recommendend in the CWPP:

[Thinning Priorities Map](#) 349 KB
[Potential Staging Areas Map](#) 1,005 KB
[Ingress/Egress Options Map](#) 997 KB
[Evacation Signs Map](#) 348KB

Satellite View of Forest Lakes





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Forest Lakes Community Wildfire Protection Plan

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Due to the nature of the neighborhood (dense vegetation, one road in and out, many residents), Forest Lakes has been identified as a high risk area for wildfire. Local land managers have been encouraging property owners to thin their lots for years, paying special attention to the area around the house.

The Upper Pine Fire Department (Upper Pine) received grant funding to create a Community Wildfire Protection Plan and a Fuels Reduction Demonstration Lot for the community of Forest Lakes. This lot is located on the southwest corner of East Forest Lakes Drive and Pine Tree Drive. This a work in progress and is designed to be an educational tool.

Project Timeline:

- Fall 2010:
 - Upper Pine talks to homeowners and selects a visible corner lot
 - Crew starting cutting down chosen trees and shrubs and hand piling them
 - Upper Pine Crew burned the piles
- Spring 2011:
 - Upper Pine crews will continue clearing brush and trees
 - Upper Pine crews will conduct a prescribed burn on the demonstration lot, recycling excess leaf litter back into the soil

If you'd like to sign up for the email list to know when the prescribed burn will happen, please contact Maria Irwin at Ecosphere Environmental Services at 382-7256 or flcwpp@gmail.com.

Click here for an [article in the Pine River Times](#) about the Forest Lakes Demo Lot and a [handout to print](#) about the demo lot.





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[Register your cell phone with reverse 911!](#)

Educate Yourself

Thinning your lot helps to reduce fire danger, and it also improves forest health. There are many online resources to help homeowners determine how to thin their lots.

Check out these helpful websites:

- [Southwest Colorado Fire Information Clearing House](#)
- [Colorado State Forest Service](#)
 - [Creating Defensible Space](#)
 - [Creating Wildfire-Defensible Zones](#)
- [CSU Extension Office Wildfire Home](#)

Watch this [video about the Melody Lane Fire](#). It burned five homes in nine minutes.

Hire a Professional

Foresters from the CWPP Team are available to come to your lot and assess or direct thinning efforts. They prefer that you gather several of your neighbors so that the forester can assess all the lots at the same time. To schedule an appointment, please call one of the following:

- Kent Grant, Colorado State Forest Service, 970-247-5250
- Craig Goodell, US Forest Service, 970-385-1207
- Travis Wright, Upper Pine Fire, 970-884-9508

Get the Work Done

You can do the thinning work necessary on your lot, or you can hire a professional to do it for you. The Colorado State Forest Service has put together a [list of contractors](#) in the area.

Protecting your home

This diagram represents a combination of various measures that can protect homes from fire.

Establish fire zones

Zone 1: Fire-resistant plants and sprinkler system. Plant trees and shrubbery far enough apart so they don't touch when mature. Keep tall, flammable trees away from house.

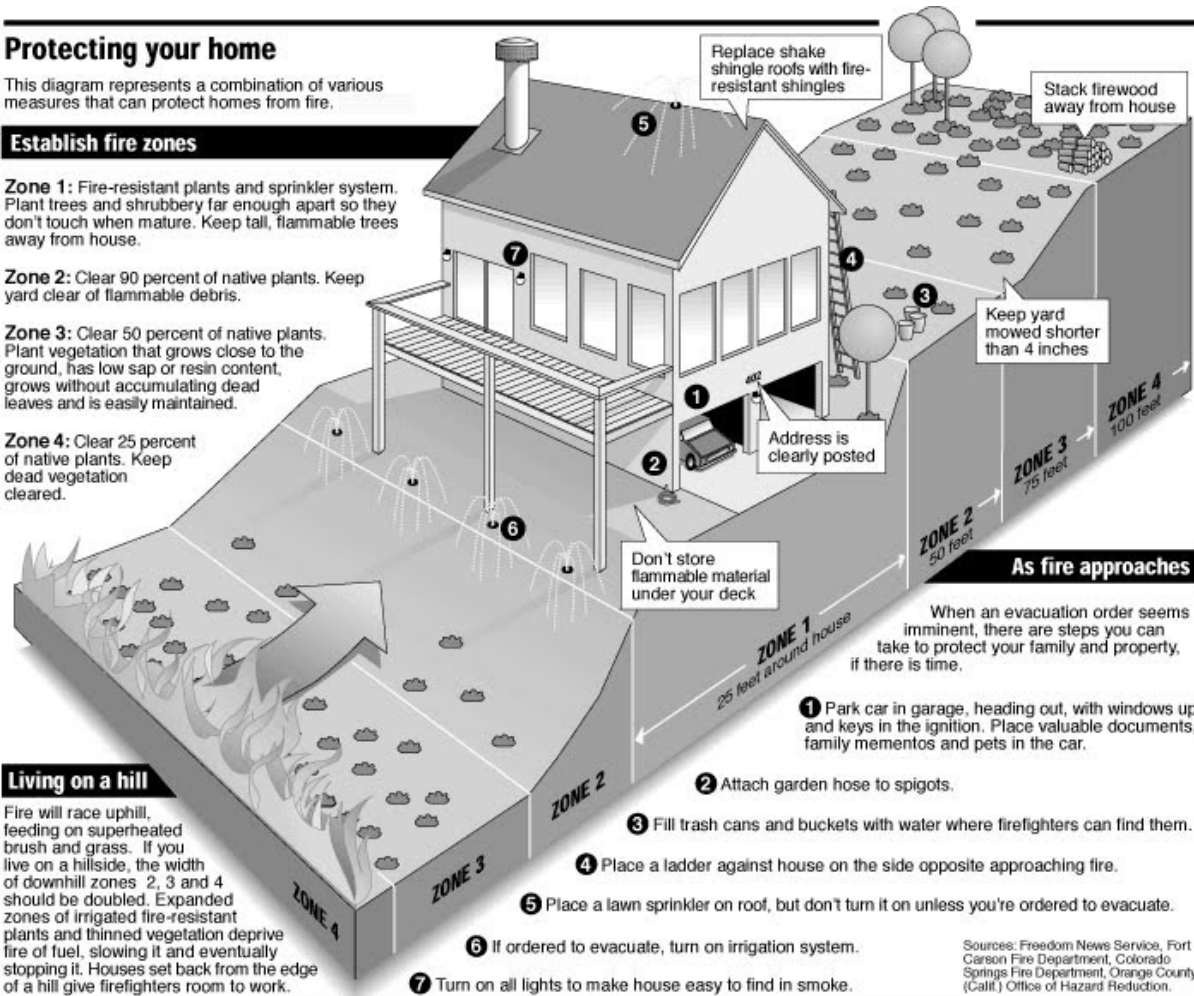
Zone 2: Clear 90 percent of native plants. Keep yard clear of flammable debris.

Zone 3: Clear 50 percent of native plants. Plant vegetation that grows close to the ground, has low sap or resin content, grows without accumulating dead leaves and is easily maintained.

Zone 4: Clear 25 percent of native plants. Keep dead vegetation cleared.

Living on a hill

Fire will race uphill, feeding on superheated brush and grass. If you live on a hillside, the width of downhill zones 2, 3 and 4 should be doubled. Expanded zones of irrigated fire-resistant plants and thinned vegetation deprive fire of fuel, slowing it and eventually stopping it. Houses set back from the edge of a hill give firefighters room to work.



The Denver Post

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Contact Us

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CWPP Coordinator
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flcwpp@gmail.com



[Upper Pine Fire Protection District](#)
(970) 884-9508

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FORESTRY

Creating Wildfire-Defensible Zones **no. 6.302**

by F.C. Dennis ¹

Quick Facts...

Wildfire will find the weakest links in the defense measures you have taken on your property.

The primary determinants of a home's ability to survive wildfire are its roofing material and the quality of the "defensible space" surrounding it.

Even small steps to protect your home and property will make them more able to withstand fire.

Consider these measures for all areas of your property, not just the immediate vicinity of the house.

Fire is capricious. It can find the weak link in your home's fire protection scheme and gain the upper hand because of a small, overlooked or seemingly inconsequential factor. While you may not be able to accomplish all measures below (and there are no guarantees), each will increase your home's, and possibly your family's, safety and survival during a wildfire.

Start with the easiest and least expensive actions. Begin your work closest to your house and move outward. Keep working on the more difficult items until you have completed your entire project.

Defensible Space

Two factors have emerged as the primary determinants of a home's ability to survive wildfire. These are the home's roofing material and the quality of the "defensible space" surrounding it.

Use fire-resistive materials (Class C or better rating), not wood or shake shingles, to roof homes in or near forests and grasslands. When your roof needs significant repairs or replacement, do so with a fire-resistant roofing material. Check with your county building department. Some counties now restrict wood roofs or require specific classifications of roofing material.

Defensible space is an area around a structure where fuels and vegetation are treated, cleared or reduced to slow the spread of wildfire towards the structure. It also reduces the chance of a structure fire moving from the building to the surrounding forest. Defensible space provides *room for firefighters to do their jobs*. Your house is more likely to withstand a wildfire if grasses, brush, trees and other common forest fuels are managed to reduce a fire's intensity.

The measure of fuel hazard refers to its continuity, both horizontal (across the ground) and vertical (from the ground up into the vegetation crown). Fuels with a high degree of both vertical and horizontal continuity are the most hazardous, particularly when they occur on slopes. Heavier fuels (brush and trees) are more hazardous (i.e. produce a more intense fire) than light fuels such as grass.

Mitigation of wildfire hazards focuses on breaking up the continuity of horizontal and vertical fuels. Additional distance between fuels is required on slopes.

Creating an effective defensible space involves developing a series of management zones in which different treatment techniques are used. See Figure 1 for a general view of the relationships among these management zones. Develop defensible space around each building on your property. Include detached garages, storage buildings, barns and other structures in your plan.

The actual design and development of your defensible space depends on several factors: size and shape of buildings, materials used in their construction, the slope of the ground on which the structures are built, surrounding topography,

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Putting Knowledge to Work

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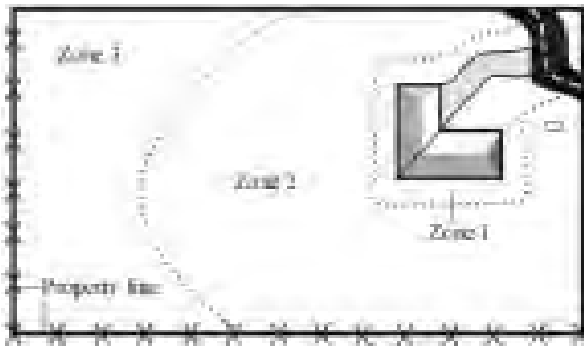


Figure 1: Forested property showing the three fire-defensible zones around a home or other structure.

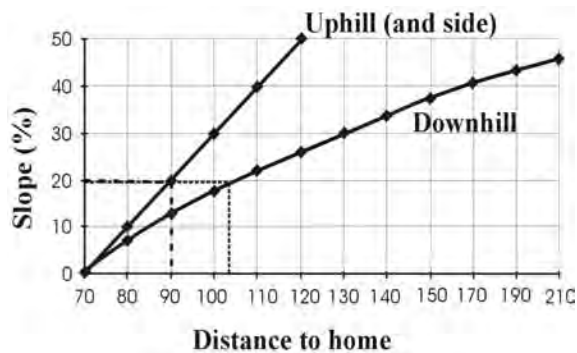


Figure 2: This chart indicates the *minimum recommended* dimensions for defensible space from the home to the outer edge of Zone 2. For example, if your home is situated on a 20 percent slope, the minimum defensible space dimensions would be 90 feet uphill and to the sides of the home and 104 feet downhill from the home.

and sizes and types of vegetation on your property. These factors all affect your design. You may want to request additional guidance from your local Colorado State Forest Service (CSFS) forester or fire department. (See the Special Recommendations section of this fact sheet for shrubs, lodgepole pine, Engelmann spruce, and aspen.)

Defensible Space Management Zones

Zone 1 is the area of maximum modification and treatment. It consists of an area of 15 feet around the structure in which all flammable vegetation is removed. This 15 feet is measured from the outside edge of the home's eaves and any attached structures, such as decks.

Zone 2 is an area of fuel reduction. It is a transitional area between Zones 1 and 3. The size of Zone 2 depends on the slope of the ground where the structure is built. Typically, the defensible space should extend *at least* 75 to 125 feet from the structure. See Figure 2 for the appropriate distance for your home's defensible space. Within this zone, the continuity and arrangement of vegetation is modified. Remove stressed, diseased, dead or dying trees and shrubs. Thin and prune the remaining larger trees and shrubs. Be sure to extend thinning along either side of your driveway all the way to your main access road. These actions help eliminate the continuous fuel surrounding a structure while enhancing homesite safety and the aesthetics of the property.

Zone 3 is an area of traditional forest management and is of no particular size. It extends from the edge of your defensible space to your property boundaries.

Prescriptions

Zone 1

The size of Zone 1 is 15 feet, measured from the edges of the structure. Within this zone, several specific treatments are recommended.

Plant nothing within 3 to 5 feet of the structure, particularly if the building is sided with wood, logs or other flammable materials. Decorative rock, for example, creates an attractive, easily maintained, nonflammable ground cover.

If the house has noncombustible siding, widely spaced foundation plantings of low growing shrubs or other "fire wise" plants are acceptable. Do not plant directly beneath windows or next to foundation vents. Be sure there are no areas of continuous grass adjacent to plantings in this area.

Frequently prune and maintain plants in this zone to ensure vigorous growth and a low growth habit. Remove dead branches, stems and leaves.

Do not store firewood or other combustible materials in this area. Enclose or screen decks with metal screening. Extend the gravel coverage under the decks. Do not use areas under decks for storage.

Ideally, remove all trees from Zone 1 to reduce fire hazards. If you do keep a tree, consider it part of the structure and extend the distance of the entire defensible space accordingly. Isolate the tree from any other surrounding trees. Prune it to at least 10 feet above the ground. Remove any branches that interfere with the roof or are within 10 feet of the chimney. Remove all "ladder fuels" from beneath the tree. Ladder fuels are vegetation with vertical continuity that allows fire to burn from ground level up into the branches and crowns of trees. Ladder fuels are potentially very hazardous but are easy to mitigate. No ladder fuels can be allowed under tree canopies. In all other areas, prune all branches of shrubs or trees up to a height of 10 feet above ground (or 1/2 the height, whichever is the least).

Zone 2

Zone 2 is an area of fuel reduction designed to reduce the intensity of any fire approaching your home. Follow these recommended management steps.

Thin trees and large shrubs so there is at least 10 feet between crowns. Crown separation is measured from the furthest branch of one tree to the nearest branch on the next tree (Figure 3). On steep slopes, allow more space between tree crowns. (See Figure 4 for *minimum recommended* spacing for trees on steep slopes.) Remove all ladder fuels from under these remaining trees. Carefully prune trees to a height of at least 10 feet.

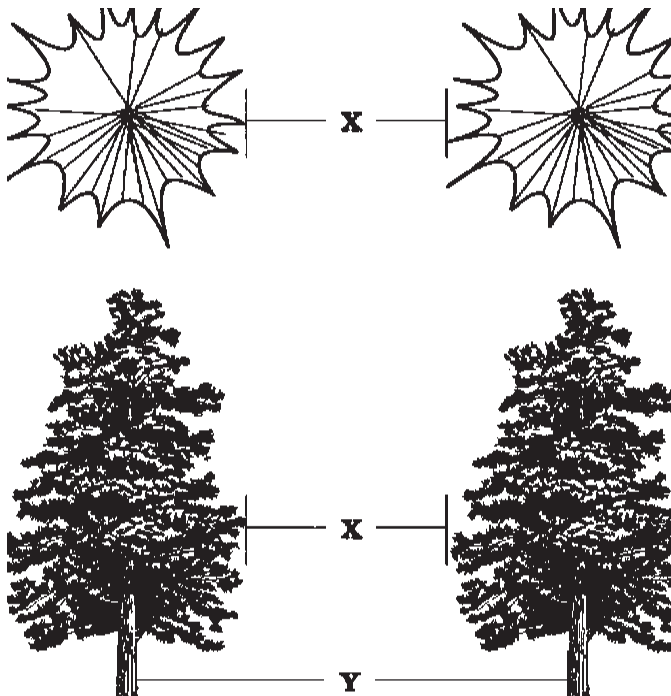


Figure 3: X = crown spacing; Y = stem spacing. Do not measure between stems for crown — measure between the edges of tree crowns.

Small clumps of 2 to 3 trees may be occasionally left in Zone 2. Leave more space between the crowns of these clumps and surrounding trees.

Because Zone 2 forms an aesthetic buffer and provides a transition between zones, it is necessary to blend the requirements for Zones 1 and 3. Thin the portions of Zone 3 adjacent to Zone 2 more heavily than the outer portions.

Isolated shrubs may remain, provided they are not under tree crowns. Prune and maintain these plants periodically to maintain vigorous growth. Remove dead stems from trees and shrubs annually. Where shrubs are the primary fuel in Zone 2, refer to the Special Recommendations section of this fact sheet.

Limit the number of dead trees (snags) retained in this area. Wildlife needs only one or two snags per acre. Be sure any snags left for wildlife cannot fall onto the house or block access roads or driveways.

Mow grasses (or remove them with a weed trimmer) as needed through the growing season to keep them low, a maximum of 6 to 8 inches. This is extremely critical in the fall when grasses dry out and cure or in the spring after the snow is gone but before the plants green up.

Stack firewood and woodpiles uphill or on the same elevation as the structure but at least 30 feet away. Clear and keep away flammable vegetation within 10 feet of these woodpiles. Do not stack wood against your house or on or under your deck, even in winter. Many homes have burned from a woodpile that ignited as the fire passed. Wildfires can burn at almost any time in Colorado.

Locate propane tanks at least 30 feet from any structures, preferably on the same elevation as the house. You don't want the LP container below your house — if it ignites, the fire would tend to burn uphill. On the other hand, if the tank is above your house and it develops a leak, LP gas will flow downhill into your home. Clear and keep away flammable vegetation within 10 feet of these tanks. Do not screen propane tanks with shrubs or vegetation.

Dispose of slash (limbs, branches and other woody debris) from your trees and shrubs through chipping or by piling and burning. Contact your local CSFS office or county sheriff's office for information about burning slash piles. If neither of these alternatives is possible, lop and scatter slash by cutting it into very small pieces and distributing it over the ground. Avoid heavy accumulations

% slope	Tree Crown Spacing	Brush and Shrub Clump Spacing
0 -10 %	10'	2 1/2 x shrub height
11 - 20%	15'	3 x shrub height
21 - 40%	20'	4 x shrub height
> 40%	30'	6 x shrub height

Figure 4: Minimum tree crown and shrub clump spacing.

Tree Diameter (in inches)	Average Stem Spacing Between Trees (in feet)
3	10
4	11
5	12
6	13
7	14
8	15
9	16
10	17
11	19
12	21
13	23
14	24
15	26
16	28
17	29
18	31
19	33
20	35
21	36
22	38
23	40
24	42

Figure 5: Minimum tree spacing for Zone 3.

of slash. Lay it close to the ground to speed decomposition. If desired, no more than two or three small, widely spaced brush piles may be left for wildlife purposes. Locate these towards the outer portions of your defensible space.

Zone 3

This zone is of no specified size. It extends from the edge of your defensible space to your property lines. A gradual transition into this zone from defensible space standards to other management objectives you may have is suggested. Typical management objectives for areas surrounding homesites or subdivisions are: provide optimum recreational opportunities; enhance aesthetics; maintain tree health and vigor; provide barriers for wind, noise, dust and visual intrusions; support limited production of firewood, fence posts and other forest commodities; or grow Christmas trees or trees for transplanting.

Specific requirements will be dictated by your objectives for your land and the kinds of trees present. See Figure 5 for the *minimum* suggested spacing between “leave” trees. Forest management in Zone 3 is an opportunity for you to increase the health and growth rate of the forest in this zone. Keep in mind that root competition for available moisture limits tree growth and ultimately the health of the forest.

A high canopy forest reduces the chance of a surface fire climbing into the tops of the trees and might be a priority for you if this zone slopes steeply. The healthiest forest is one that has multiple ages, sizes, and species of trees where adequate growing room is maintained over time. Remember to consider the hazards of ladder fuels. Multiple sizes and ages of trees might increase the fire hazard from Zone 3 into Zone 2, particularly on steep slopes.

A greater number of wildlife trees can remain in Zone 3. Make sure that dead trees pose no threat to power lines or fire access roads.

While pruning generally is not necessary in Zone 3, it may be a good idea from the standpoint of personal safety to prune trees along trails and fire access roads. Or, if you prefer the aesthetics of a well-manicured forest, you might prune the entire area. In any case, pruning helps reduce ladder fuels within the tree stand, thus enhancing wildfire safety.

Mowing is not necessary in Zone 3.

Any approved method of slash treatment is acceptable for this zone, including piling and burning, chipping or lop-and-scatter.

Special Recommendations

Tree spacing guidelines do not apply to *mature* stands of aspen trees where the recommendations for ladder fuels have been complied with. In areas of aspen regeneration and young trees, the spacing guidelines should be followed.

Brush and shrubs

Brush and shrubs are woody plants, smaller than trees, often formed by a number of vertical or semi-upright branches arising close to the ground. Brush is smaller than shrubs and can be either woody or herbaceous vegetation.

On nearly level ground, minimum spacing recommendations between clumps of brush and/or shrubs is 2 1/2 times the height of the vegetation. Maximum diameter of clumps should be 2 times the height of the vegetation. As with tree crown spacing, all measurements are made from the edges of vegetation crowns (Figure 3).

For example: For shrubs 6 feet high, spacing between shrub clumps should be 15 feet or more apart (measured from the edges of the crowns of vegetation clumps). The diameter of shrub clumps should not exceed 12 feet (measured from the edges of the crowns). Branches should be pruned to a height of 3 feet.

Grasses

Keep dead, dry or curing grasses mowed to less than 6 inches. Defensible space size where grass is the predominant fuel can be reduced (Figure 5) when applying this practice.

Windthrow

In Colorado, certain locations and tree species, including lodgepole pine and Engelmann spruce, are especially susceptible to damage and uprooting by high winds (windthrow). If you see evidence of this problem in or near your forest, or have these tree species, consider the following adjustments to the defensible space guidelines. It is highly recommended that you contact a professional forester to help design your defensible space.

Adjustments: If your trees or homesite are susceptible to windthrow and the trees have never been thinned, use a stem spacing of diameter plus five instead of the guides listed in the Zone 3 section. Over time (every 3 to 5 years) *gradually* remove additional trees. The time between cutting cycles allows trees to “firm up” by expanding their root systems. Continue this periodic thinning until the desired spacing is reached.

Also consider leaving small clumps of trees and creating small openings on their lee side (opposite of the predominant wind direction). Again, a professional forester can help you design the best situation for your specific homesite and tree species. Remember, with species such as lodgepole pine and Engelmann spruce, the likelihood of a wildfire running through the tree tops or crowns (crowning) is closely related to the overabundance of fuels on the forest floor. Be sure to remove downed logs, branches and *excess* brush and needle buildup.

Maintaining Your Defensible Space

Your home is located in a forest that is dynamic, always changing. Trees and shrubs continue to grow, plants die or are damaged, new plants begin to grow, and plants drop their leaves and needles. Like other parts of your home, defensible space requires maintenance. Use the following checklist each year to determine if additional work or maintenance is necessary.

% slope	D-space size (uphill, downhill, sidehill)
0 - 20 %	30'
21 - 40%	50'
> 40%	70'

Figure 6: Minimum defensible space size for grass fuels.

Defensible Space and FireWise Annual Checklist

- ☐ Trees and shrubs are properly thinned and pruned within the defensible space. Slash from the thinning is disposed of.
- ☐ Roof and gutters are clear of debris.
- ☐ Branches overhanging the roof and chimney are removed.
- ☐ Chimney screens are in place and in good condition.
- ☐ Grass and weeds are mowed to a low height.
- ☐ An outdoor water supply is available, complete with a hose and nozzle that can reach all parts of the house.
- ☐ Fire extinguishers are checked and in working condition.
- ☐ The driveway is wide enough. The clearance of trees and branches is adequate for fire and emergency equipment. (Check with your local fire department.)
- ☐ Road signs and your name and house number are posted and easily visible.
- ☐ There is an easily accessible tool storage area with rakes, hoes, axes and shovels for use in case of fire.
- ☐ You have practiced family fire drills and your fire evacuation plan.
- ☐ Your escape routes, meeting points and other details are known and understood by all family members.
- ☐ Attic, roof, eaves and foundation vents are screened and in good condition.



FIREWISE is a multi-agency program that encourages the development of defensible space and the prevention of catastrophic wildfire.

Stilt foundations and decks are enclosed, screened or walled up.

- ☐ Trash and debris accumulations are removed from the defensible space.
- ☐ A checklist for fire safety needs inside the home also has been completed.

This is available from your local fire department.

References

Colorado State Forest Service, Colorado State University, Fort Collins, CO 80523-5060; (970) 491-6303:

- *FireWise Construction — Design and Materials*
- Home Fire Protection in the Wildland Urban Interface
- Wildfire Protection in the Wildland Urban Interface
- *Landowner Guide to Thinning*

Colorado State University Cooperative Extension, 115 General Services Bldg., Fort Collins, CO 80523-4061; (970) 491-6198; E-mail: resourcecenter@ucm.colostate.edu:

- 6.303, *Fire-Resistant Landscaping*
- 6.304, *Forest Home Fire Safety*
- 6.305, *FireWise Plant Materials*
- 6.306, *Grass Seed Mixes to Reduce Wildfire Hazard*
- 7.205, *Pruning Evergreens*
- 7.206, *Pruning Shrubs*
- 7.207, *Pruning Deciduous Trees*

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FOREST
SERVICE

This fact sheet was produced in cooperation with the Colorado State Forest Service.

¹Wildfire Hazard Mitigation Coordinator,
Colorado State Forest Service.

Colorado State University, U.S. Department of Agriculture, and Colorado counties cooperating. Cooperative Extension programs are available to all without discrimination. No endorsement of products mentioned is intended nor is criticism implied of products not mentioned.

WMPA

Wildfire Mitigation Professionals Association

WMPA is an association of local wildfire mitigation professionals dedicated to:

- Providing competent wildfire mitigation services
- Restoring local forests
- Promoting community growth, viability, and sustainability
- Supporting the utilization of forest products

WMPA values include:

- To perform our work safely with honesty and integrity
- To perform our work as stewards of the land and forests
- To work closely with the Colorado State Forest Service, United States Forests Service, Bureau of Land Management, Firewise Council of Southwest Colorado, and other key organizations
- To maintain the highest quality standards for the performance of wildfire mitigation services
- We value the loyalty of our customers and our employees
- We value the professional relationships amongst our member businesses
- We value open and honest communication with members, customers, and partner organizations
- We value supporting local businesses and the local economy

***Do you need a competent wildfire mitigation contractor,
but don't know who to call?***

Place your trust in the hands of WMPA...call one of the professionals below!

Contractor List - Wildfire Mitigation Professionals Association (WMPA)			
Company/Business	Email	Phone	Contact Name
Affordable Fellers	hans@affordablefellers.com	970-749-8213	Hans Hartman
Brush Hogs	flory@netscape.com	970-769-1555	Troy Flory
Fire Ready	durango@fireready.com	970-759-9380	Dan MacVeigh
Fire Smart	firesmartdurango@gmail.com	970-759-3707	Jon Westrup
M&M Enterprises	senior@mandmdurango.com	970-759-8945	Mike Kane
Tyner Forest Restoration	rttyner@q.com	970-749-0607	Ron Tyner

SOUTHWEST COLORADO FORESTRY CONTRACTOR / PURCHASER / SERVICE PROVIDER LIST

The Colorado State Forest Service provides this list as a service only. The Colorado State Forest Service makes no implied or actual endorsements, recommendations, certifications as to the performance of any businesses or individuals listed in our directory. Landowners and users of this directory are encouraged to request references documentation of all applicable licenses and/or insurance coverages prior to entering into agreements with the businesses and individuals listed. Listings are by county according to the physical location of the business. Most contractors have an interest in working in adjacent and multiple counties.

Colorado State Forest Service
Durango District
FLC # 7233
1000 Rim Drive
Durango, Colorado 81301

COUNTY	COMPANY	FIRST NAME	LAST NAME	ADDRESS	CITY	STATE	ZIP	PHONE #	OTHER PH # / FAX #	SAWTIMBER PURCHASERS	FIREWOOD PURCHASERS	FORESTRY SERVICE CONTRACTORS	DEFENSIBLE SPACE CONSTRUCTION	NATURAL RESOURCE CONSULTANTS	BARK BEETLE PREVENTIVE SPRAYING	COMMENTS
Archuleta		John	Feazel	P.O. Box 4554	Pagosa Springs	CO	81147	970-731-5326				X	X			Trim & plant
Archuleta		Mike	Sexton	P.O. Box 2042	Pagosa Springs	CO	81147	970-731-2196		X	X	X	X			Firewood Processor
Archuleta		Sevedeo	Martinez	P. O. Box 3353	Pagosa Springs	CO	81147	970-264-4701	970-903-0841 (cell)		X		X			
Archuleta		Randy	Zimmer	P. O. Box 1126	Pagosa Springs	CO	81147	970-264-4277				X		X		
Archuleta	Arborillogical West, Inc.	Chris	Pierce	P.O. Box 4699	Pagosa Springs	CO	81157	970-731-3846	970-385-8117 (pager)			X	X	X		
Archuleta	Fire Ready of Pagosa Springs	Dan & Sheri	MacVeigh	P.O. Box 4303	Pagosa Springs	CO	81147	970-731-2652	970-759-9380			X	X	X	X	Chipper
Archuleta	Billy Goat Fire Mitigation	Billy	Morrison	23 Ranchland Drive	Pagosa Springs	CO	81147	970-731-0413				X	X			Thinning, mastication, tree planting
Archuleta	Lob Lolly Logging and Lumber	Steve	Wright	12577 Hwy 151	Pagosa Springs	CO	81147	970-883-5454		X		X				Sawmill
Archuleta	Noble Enterprise	Jerome	Nobles	P. O. Box 5331	Pagosa Springs	CO	81147	970-946-7661			X	X	X			
Archuleta	Pagosa Fence Company	Charles	Cloward	P. O. Box 1761	Pagosa Springs	CO	81147	970-731-3177	970-799-3075 (cell)			X	X			Chipper, skidloader
Archuleta	Paragon Consulting	Scott	Wagner	P.O. Box 4703	Pagosa Springs	CO	81157	970-731-0644	970-759-4158 (cell)					X		
Archuleta	Pride Lumber	Bob	Riepel	P.O. Box 1714	Arboles	CO	81121	970-883-5349		X						Sawmill
Archuleta	Safe Zone	Josh	Schmidt	P. O. Box 204	Pagosa Springs	CO	81147	970-946-7463	safezonellc@gmail.com			X	X			
Archuleta	San Juan Fire Mitigation	Kevin	Neel	31 Cactus Drive	Pagosa Springs	CO	81147	970-731-5227	970-946-493(cell)		X	X	X			Trmng, Plntng. Chipper, Skidloader
Archuleta	Star D Chipping Service	Randall	Davis	P.O. Box 837	Pagosa Springs	CO	81147	970-264-2833					X			Chipper
Archuleta	Treecology	Craig	Taylor	190 Luxury Place #4	Pagosa Springs	CO	81147	970-731-9634							X	Other tree spraying/fertilization
Archuleta	Triangle Custom Cutting	Rick, Toby, J	Lafferty	P.O. Box 4488	Pagosa Springs	CO	81147	970-731-3323	970-731-3320 (fax)	X						Sawmill
Dolores		John	Coleman	06951 County Line Road	Dove Creek	CO	81324	970-677-2245	970-690-0599(cell)	X	X					Port 20' bandsaw mill, low impact logging
La Plata		Richard	Engstrom	38056 Hwy 160	Bayfield	CO	81122	970-884-5207		X						Pole peeler
La Plata		Joe	Lobato	432 Waters Way	Durango	CO	81301	970-247-3496			X	X	X			
La Plata		Dan	Martin	12102 CR 250	Durango	CO	81301	970-385-1989				X	X			Chipper
La Plata		Eric	Piper	330 Bear Creek Circle	Bayfield	CO	81122	970-844-0758		X		X	X			Sawmill
La Plata		Jeff	Sonheim	P.O. Box 2525	Durango	CO	81302	970-382-2539				X	X			Erosion control
La Plata		Henry	Taylor Jr.	P.O. Box 732	Ignacio	CO	81137	970-563-4060				X	X			
La Plata	Affordable Fellers, LLC	Hans	Hartman	1167 E. 4th Avenue	Durango	CO	81301	970-375-9505	970-749-8213 (cell)	X		X	X			
La Plata	Aqua-Hab	Corey Sue	Derfus	11601 Hwy 550	Durango	CO	81303	970-259-2623	970-749-2620 (cell)					X		Aquatic system consulting
La Plata	Brush Hogs	Troy & Dana	Flory	P. O. Box 2891	Durango	CO	81302	970-769-1555	970-375-2136 (fax)			X	X			T250 skidloader/Fecon head
La Plata	Care Tree & Pest Control Specialists	Dennis	Howell	P.O. Box 208	Hesperus	CO	81326	970-247-1327							X	Insecticidal applications
La Plata	CH Property Service, LLC	Chip	Huntoon	P. O. Box 753	Durango	CO	81302	970-946-8041	970-259-9181 (Fax)		X	X	X			Erosion control, skid steer, chipper
La Plata	Doc Ricketts Tree Service	Lenny	Ricketts	P. O. Box 4019	Durango	CO	81302	970-259-6269				X	X			
La Plata	Ecosphere Environmental Services	Maria	Irwin	2243 Main Avenue, Suite 4	Durango	CO	81301	970-382-7256						X		
La Plata	Fire Smart	Jon	Westrup	458 E. 3rd Avenue	Durango	CO	81301	970-759-3707				X	X			Chipper
La Plata	Forest Scapes	Aaron	Gebhard	740 E. 7th Avenue	Durango	CO	81301	970-769-4026				X	X			Hazard tree removal
La Plata	Heartwood West Tree Experts	Tom	Eskew	1421 East Second Avenue	Durango	CO	81301	970-247-4827				X	X			70 ft. lift, log truck, chipper, certified arborist

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La Plata	Hinkley Forestry Services	Don	Hinkley	1113 County Road 126	Hesperus	CO	81301	970-588-3409		X		X	X			Roller chopper
La Plata	Horse Logging and Farming Coop	Keith	Fox	1030 CR 525	Bayfield	CO	81122	970-884-0627			X	X	X			Horse logger
La Plata	James Ranch Landscaping	Walter	Gabert	P.O. Box 2763	Durango	CO	81302	970-259-0301	970-259-0307 (fax)			X	X	X		Erosion control revegetation
La Plata	Jones Environmental Consulting	Gary & Cathy	Jones	139 Ryler Drive	Durango	CO	81301	970-247-4648						X		
La Plata	Klatt & Son Tree Service	Danny	Klatt	681 County Road 220	Durango	CO	81303	720-289-1963				X	X			Specialize in tech removals/trimming
La Plata	Lorax Forest Care	Eric	Husted	P.O.Box 1222	Bayfield	CO	81122	970-884-7047		X	X	X	X			Horse logger, port sawmill
La Plata	M & M Enterprises, Inc.	Michael	Kane	105 St. Andrews Circle	Durango	CO	81301	970-259-7078	970-759-8945 (cell)			X	X		X	Chipper/Tree remvl/plntng, mlchg
La Plata	Natural Resource Consultant	Bob	Newlin	209 Hillcrest Drive	Durango	CO	81301	970-259-4824						X		
La Plata	Rhea Environmental Consulting	Barry	Rhea	P.O.Box 1264	Mancos	CO	81328	970-533-7347						X		
La Plata	Rocky J4 Oil Field Service	Jimmy	Covey	2670 Hwy 151	Ignacio	CO	81137	970-563-0186	970-759-3477 (cell)			X	X			Chipper
La Plata	Rocky Mountain Fire Mit & Tree Svc	Chasen	Kelley		Bayfield	CO	81122	505-609-4203	rockymt.fire@gmail.com			X	X			Hazard tree, tree trimming, fecon, chipper
La Plata	San Juan Structures Inc.	Rick	Roberts	PO Box 1923	Durango	CO	81302	970-259-1589	970-749-1589	X						
La Plata	Scapegoat Landscaping & Tree Service	Kynan	Kelly	786 E. 6th Avenue	Durango	CO	81301	970-903-4236				X	X			scapegoatlandscaping@yahoo.com
La Plata	Silverton Mountain Construction	Peter	Eastwood	47 Buddy Lane	Durango	CO	81303	970-749-0170	970-259-5452			X	X			silver_mtnllc@q.com
La Plata	Stan's Forest Care	Stan	Fleming	404 E. Valley View Drive	Bayfield	CO	81122	970-769-8843				X				Tree planting/erosion control
La Plata	Stateline Firewood	Tom	Ross	1923 Hwy 550 South	Durango	CO	81303	970-259-1853		X	X	X	X			
La Plata	Tyner Forest Restoration LLC	Ron	Tyner	120 County Road 236	Durango	CO	81301	970-749-0607	rttyner@q.com			X	X			Fecon chipper/mulchers
La Plata	USA Builders	Bob	Ewing	77 Roach Ranch Road	Durango	CO	81301	970-259-2079	970-749-8616			X				
La Plata	Woodsong Tree Care	O.	Gassaway	362 Sierra Circle	Durango	CO	81301	970-799-8889								Tech tree care, tree planting, Cert arborist
Montezuma		Allen	Farnsworth	10150 Road 40.9	Mancos	CO	81328	970-533-9735								
Montezuma		Don	Foth	P.O.Box 1461	Cortez	CO	81321	970-564-1401	970-749-3493 (cell)					X		
Montezuma		Dane D.	Hately	20965 County Road 22	Lewis	CO	81327	970-560-0037	dnthately@aol.com	X	X	X				Thinning, right of way clearance
Montezuma		Steve	Kelly	14115 County Road 21.3	Cortez	CO	81321	970-564-1463						X		Fire mitigation planning
Montezuma		Jay	McCabe	408 N. Sligo Street	Cortez	CO	81321	970-565-3647				X	X			Hydro-Ax
Montezuma		Jshoke	Wright	14506 Road 33	Mancos	CO	81328	970-799-4268		X	X	X				Logging equipment
Montezuma	American Fire Protection & Tree Srv	Clint	Simmons	20908 CR 22	Lewis	CO	81327	970-882-4980	970-560-0093 (cell)		X	X	X			Skidsteer, tree shear
Montezuma	Animas Valley Arborist	David	Temple	18501 Road J	Cortez	CO	81321	970-565-6700					X		X	Chipper
Montezuma	Aspen Wallwood	Mary Ann	Findley	P.O.Box 613	Dolores	CO	81323	970-882-7366		X						Aspen panelling, sawmill
Montezuma	Bill F. Ragland & Sons Logging	Bill & Doug	Ragland	PO Box 1230	Dolores	CO	81323	970-882-2350		X		X				Timbco feller-buncher
Montezuma	Crosscut Logging	Craig	Muzzy	12388 CR 23	Cortez	CO	81321	970-565-6286		X		X				
Montezuma	Dead Pinon Ranch	William	Hendrickson	11749 County Road 331/4	Mancos	CO	81328	970-565-8907			X					
Montezuma	Four Corners Clearcutters	Dave	Harrison	28020 County Road P	Dolores	CO	81323	970-882-1441				X	X			
Montezuma	G&G Resources	C. Dexter	Gill	P.O.Box 126	Lewis	CO	81327	970-882-2360	970-739-3174 (cell)					X		dexbarbgill@yahoo.com
Montezuma	K & N Fuels Management	Myron	Baker	27735 County Road M	Dolores	CO	81323	970-565-2632	970-560-0999 (cell)			X	X			

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Montezuma	Lone Cone Lumber	Norman	Butler	P.O.Box 1414	Dolores	CO	81323	970-882-4848		X						Sawmill
Montezuma	Ott Sawmill	Woody	Ott	45933 Hwy 160	Mancos	CO	81328	970-533-7997		X		X				Sawmill
Montezuma	Potco	Jimmy	Potts	4137 CR H	Mancos	CO	81328	970-533-7106			X	X				
Montezuma	Short Forestry LLC	Short	Bruce	P. O. Box 477	Dolores	CO	81323	970-676-0010	303-819-6901 (cell)					X		stumpjumper@bresnan.net
Montezuma	Spruce Wood Products, Co	Ken	Stiles	22538 CountyRoad M	Cortez	CO	81321	970-564-1396	970-739-6187	X	X	X	X			18" chipper
Montezuma	Stonertop Lumber	Harold	Ragland	P.O.Box 269	Dolores	CO	81323	970-882-2350		X						Sawmill
Montezuma	Swift Creek Brush Cutters	Chris	Swift	13366 County Road 105	Mancos	CO	81328	970-533-9797	970-799-3176 (cell)			X	X			Skdstr w/Fecon head/land clearing
Montezuma	Walt Mathies Logging	Walter	Mathies	24845 County Road M	Cortez	CO	81321	970-565-7725	970-570-7870 (cell)	X	X	X				
Montezuma	Walt's Wood Products	Walter	Mathies	24845 County Road M	Cortez	CO	81321	970-565-7725		X		X				Sawmill
Montezuma	West Fork Lumber	Ken	Stocks	18681 CR 23.5	Dolores	CO	81323	970-882-7842		X						Sawmill
Montezuma	Western Excelsior	Norman	Bircher	901 Grande Ave	Mancos	CO	81323	970-533-7412		X						Excelsior mill
Other		Ben	Griffith					505-331-1786		X		X	X			Chainsaws, tree thinning
Other	Cordova Logging, Inc.	Leroy	Cordova	P. O. Box 9	Gallina	NM	87017	505-470-5432	505-638-9190	X		X				Logging & Road Building
Other	Aquatic & Wetland Company	Greg	Everett	9999 Weld County Road 25	Fort Lupton	CO	80621	303-442-4766	303-434-7159				X			Wetlands, fisheries
Other	Brandt Logging Inc.	Perry	Brandt	PO Box 126	Lazear	CO	81420	970-872-3087	970-872-2087 (fax)	X		X				
Other	Bushwacker LLC.	George	Fletcher	16150 Hwy. 115	Florence	CO	81226	719-784-4952	719-369-0789			X	X		X	
Other	Delta Timber Company	Eric	Sorenson	519 Hwy. 92	Delta	CO	81416	970-874-0849		X						Aspen Sawmill
Other	Ebberts Construction	Ron	Ebberts	9133 Hwy 141	Egnar	CO	81325	970-677-2476				X	X			Hydro-Ax
Other	Eliud Salazar Enterprises	Eliud	Salazar	PO Box 37	Canones	NM	87516	505-638-5619	505-929-0381	X	X	X	X			
Other	Enviro-Forest Services, Inc.	Berk	Achenbach	18960 Emigrant Trl E, Unt D	Monument	CO	80132	719-487-7482	719-487-7483 Fax			X	X	X		Tree Chipper, Tree Shear, ASV
Other	Enviro Land Management	Dave	Dodd	767 Valley Court	Grand Junction	CO	81505	970-242-4356		X	X	X	X	X		Hydro-Ax, Grinder, Log Equip
Other	Environmental Forestry Services, LLC	George	Hawes	P. O. box 1182	Silverthorne	CO	80498	970-531-5883				X	X		X	Exctr w/process Head, skidsteer, chpr
Other	ESCO Associates Inc.	David	Buckner	5360 Manhattan Circle, Suite 200	Boulder	CO	80303	303-499-4277	david@escoassoc.com					X		www.esco-associates.com
Other	Fire Ready of Glenwood Springs	Richard	Edwards	823 Pitkin Ave.	Glenwood Springs	CO	81601	970-945-8243	970-309-5500		X	X	X	X		
Other	Forest Reserve Company	Sheila	Stalder	PO Box 487	Santa Fe	NM	87504	505-983-8992	505-986-0798			X				
Other	Fire Shield	Casey	Christensen	PO Box 272	Wetmore	CO	81253	719-429-6181				X	X			
Other	Forest Stewardship Concepts, Ltd.	Webb	Jim	0600 County Road 27A	Monte Vista	CO	81144	719-852-2690						X		
Other	Forest Trust	Henry	Carey	P.O.Box 519	Santa Fe	NM	87504	505-983-8992	505-986-0798 (fax)					X		
Other	Forest Trust	Steve	Harrington	(address, etc. as above)	Santa Fe	NM	87504	505-983-8992	505-986-0798 (fax)					X		
Other	Forestry Services of Chama	Gary	Harris	Route 1, Box 56	Chama	NM	87520	575-756-2422						X		
Other	Hurd Brothers Logging	Andrew	Hurd	P.O.Box 745	Chama	NM	87520	505-756-2125		X		X	X			
Other	Intermountain Resources LLC.	Chris	Meyers	P.O.Box 670	Montrose	CO	81402	970-249-0812	970-209-2056 (cell)	X		X		X		Sawmill
Other	Johnson Brothers Contracting	Brent	Duroo	7610 19th Street Road	Greeley	CO	80634	509-991-5177	509-378-8019			X	X			feeller bunchers, skidders, tree chippers
Other	J.T. Timber Falling	Jim	Trumble	P.O. Box 454	Del Norte	CO	81132	719-588-2751	719-657-4680 (fax)			X	X			Feller-Buncher w/Mulching Head

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Other	Leonard Jensen Logging	Leonard	Jensen	P.O.Box 945	Chama	NM	87520	505-756-2348		X		X	X			
Other	Morrison & Company	Harry	Morrison	51 Raven Ridge Rd	Santa Fe	NM	87505	505-983-2064						X		
Other	Mountain Fuelwood	Jim	Young	18213 B Road	Delta	CO	81416	970-874-2882	970-250-5591 (cell)	X	X	X				
Other	New Mexico Tree Professionals	Steve	Thomas	1325 Gabaldon Street NW	Albuquerque	NM	87104	505-247-1682	405-356-2403(fax)		X	X				Stump grinder, chipper, trucks
Other	Quality Wood Products	Harry	Morrison	P.O.Box 98	Chama	NM	87520	505-983-2064		X				X		Sawmill
Other	Raven West	Leonard	Jones	P.O. Box 2495	Farmington	NM	87401	505-632-3132	505-330-7954 (cell)			X	X			Hydro-Ax, Land Clearing
Other	Rue Logging	Brian C.	Rue	P.O.Box 155	South Fork	CO	81154	719-873-5862		X		X				Hydro-Ax
Other	Rue Logging	Michael	Rue	10137 West CR 7N	Del Norte	CO	81132	719-657-2407		X		X				
Other	Ray Lumber	Jimmy	Ray	13758 6900 Road	Montrose	CO	81401	970-249-7839	970-209-2059	X						
Other	Rocky Mountain Timber Products Inc.	Cassandra	Doyon	20662 W. Hwy. 160	Del Norte	CO	81132	719-657-2846	doyonlog@msn.com	X		X				Sawmill
Other	SEC, Inc. (SW Environ. Consultants)	Wrobley	Ray	20 Stutz Bearcat Drive #6	Sedona	AZ	86336	800-264-7787	928-282-0731 (fax)					X		
Other	Southwest Soils	Chip	Scroggs	58521 Amber Road	Montrose	CO	81425	970-323-6300	970-209-7111		X					Bark, Mulch, and Wood Chips
Other	Sunrise, Inc.	Jonathan	Greenspan	P. O. Box 83	Telluride	CO	81435	970-728-0134	970-369-4854 (Fax)			X		X	X	Chippr/Grindr/Tree removal /plantg
Other	T & C Land Sevicees	Tom	Miller	9125 N. Clydesdale Rd	Castle Rock	CO	80104	303-644-5189			X	X	X	X		Horse Logger, Chipper
Other	Timber Scapes	Brad	Crawford	38568 WCR 13	Fort Collins	CO	80524	970-224-3005	970-224-1783 (fax)	X	X	X	X			Thinning, Chipping, etc.
Other	Tree Top	Travis	Steffens	1992 N. Fair Road	Monte Vista	CO	81144	719-589-0102		X	X	X	X		X	Hydro Ax, Fuels Treatments
Other	Treemendous Resources Consulting	Randy	Harrison	P.O.Box 670	Montrose	CO	81402	970-323-0396	970-249-0812					X		
Other	W.H. Moore Cash Lumber LLC.	William	Moore	PO Box 3706 Fairview Station	Espanola	NM	87533	505-753-5717	505-927-0516 (cell)	X						
Other		Johnny N.	Lee	4315 N. Foster Drive	Baton Rouge	LA	70805	leesconcrete@hotmail.com				X				Portable Sawmill



Construction design & materials

Make Your House *Firewise*

Your house may be vulnerable to a wildfire because of its design, construction and/or location. When preparing to build, buy or remodel, know what to look for in a **FireWise** home. A few modifications to your construction plans can reduce the chance of your house catching fire, or resist further damage if it does catch fire. Don't let your house become more fuel for a wildfire.

If you are building a new house, evaluate your building site.

- ❑ Choose a site away from heavily vegetated areas.



Probably not a wise location for a home.

- ❑ Build on the most level portion of the property.
- ❑ Avoid ridge tops, canyons and areas between high points on a ridge. These are extremely hazardous locations for houses and fire-fighters because they become natural chimneys, increasing the intensity of the fire.



This location would become a natural chimney during a wildfire.

- ❑ Set your structure a minimum of 30 feet back from the ridges or cliffs; increase the distance if the home will be higher than one story.

Building Materials

Use fire-resistive or non-combustible construction materials, combined with design techniques to prevent or slow the penetration of fire beyond your home's exterior. Whenever possible, use brick, rock or stucco – they resist fire much better than wood. If you decide on a wood exterior, it is **especially** important that you follow the **FireWise** practices in this notebook.

Your Roof

Your roof has the largest surface area of your structure and is the most vulnerable part of your house. It can easily catch fire from a wildfire's wind-blown sparks.

Use class A or B roofing materials, such as asphalt shingles, slate or clay tile, or metal.

Siding/walls

- ❑ Use fire-resistive or non-combustible construction materials whenever possible. Use a minimum of a Class III flame-spread rated siding material – stone, brick and stucco are best. Walls should be constructed of fire-resistive materials from the ground to the roof overhang.



- ❑ Roof eaves extending beyond exterior walls are also susceptible to flame exposure. Limit them in length and box or enclose them with fire-resistive materials.

Foundation

A building's foundation comes in contact with a spreading wildfire before other areas of the structure.

Enclose foundations with concrete block, cement walls, or other fire-resistive building materials.

Windows

Windows are often overlooked as fire hazards, but can be serious risks. The heat from a wildfire may be enough to ignite the furnishings inside your house through the windows.

- ❑ Minimize the size and number of windows on the downhill side of the house or the side that would most likely be exposed to a wildfire.
- ❑ Consider both size and materials for windows and sliding glass doors. Multi-paned glass provides insulation from trapped air and gives more protection from radiant heat than single-paned glass. It also reduce breakage potential from wind-blown debris.

Other Areas

- ❑ Cover exterior attic, soffit and underfloor vents with metal wire mesh (no larger than 1/8 of an inch) to prevent sparks from entering your home through vents.

- ❑ Install eave and soffit vents closer to the roof line than the walls.
- ❑ Design decks so that they are not located at the top of a hill directly in the line of a fire moving up slope.

- ❑ Enclose the undersides of balconies and decks on slopes with fire-resistive materials. If not enclosed, these areas can trap flames and burning embers that can ignite your home.



- ❑ Use weed-barrier fabric under deck and balcony areas to keep them free of vegetation.



- ❑ Cover chimneys and stovepipes with a non-flammable screen (mesh no larger than 1/2 inch).



FOREST LAKES CWPP

Fire Behavior
Modeling

And Recommendations

David Dallison Fire Behavior Analyst

Assumptions

- ▣ Primary objective is to limit crown fire activity
- ▣ Torching and crowning will limit direct attack options
- ▣ Surface fires will be much easier to control
- ▣ Large scale thinning of the overstory may not be practical
- ▣ The undeveloped lots will continue to build out
- ▣ The area will not experience a bark beetle outbreak
- ▣ Landfire data is relatively accurate

Conditions Contributing to Crown Fires

- ▣ Crown flammability
- ▣ Surface to crown heat transfer
- ▣ Crown to crown heat transfer



Crown Flammability

- ▣ Fine dead fuel moisture
- ▣ Live foliar moisture
- ▣ Foliage flammability
- ▣ Crown closure (“compactness”)
 - >75% will improve heat transfer mechanisms of convection and radiation
 - less closure allows heat to be lost

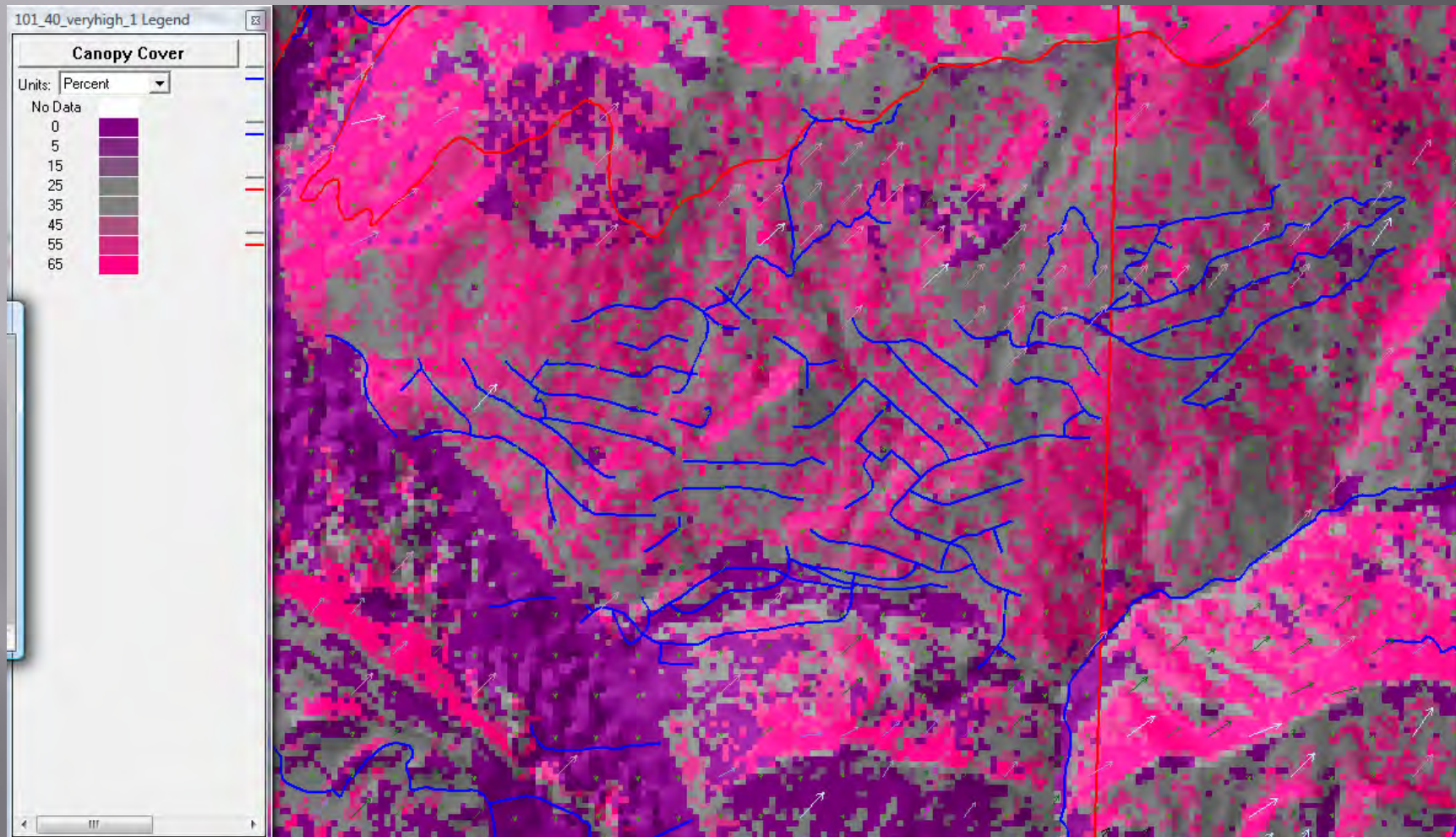


Crown to Crown Heat Transfer

- ▣ Crown spacing (20' or less)
- ▣ Crown level winds (20 mph or greater 20 ft. above the surrounding vegetation)
- ▣ Steepness of slope (similar in crown fuels to its effect on surface fuels)



Flammap Canopy Cover

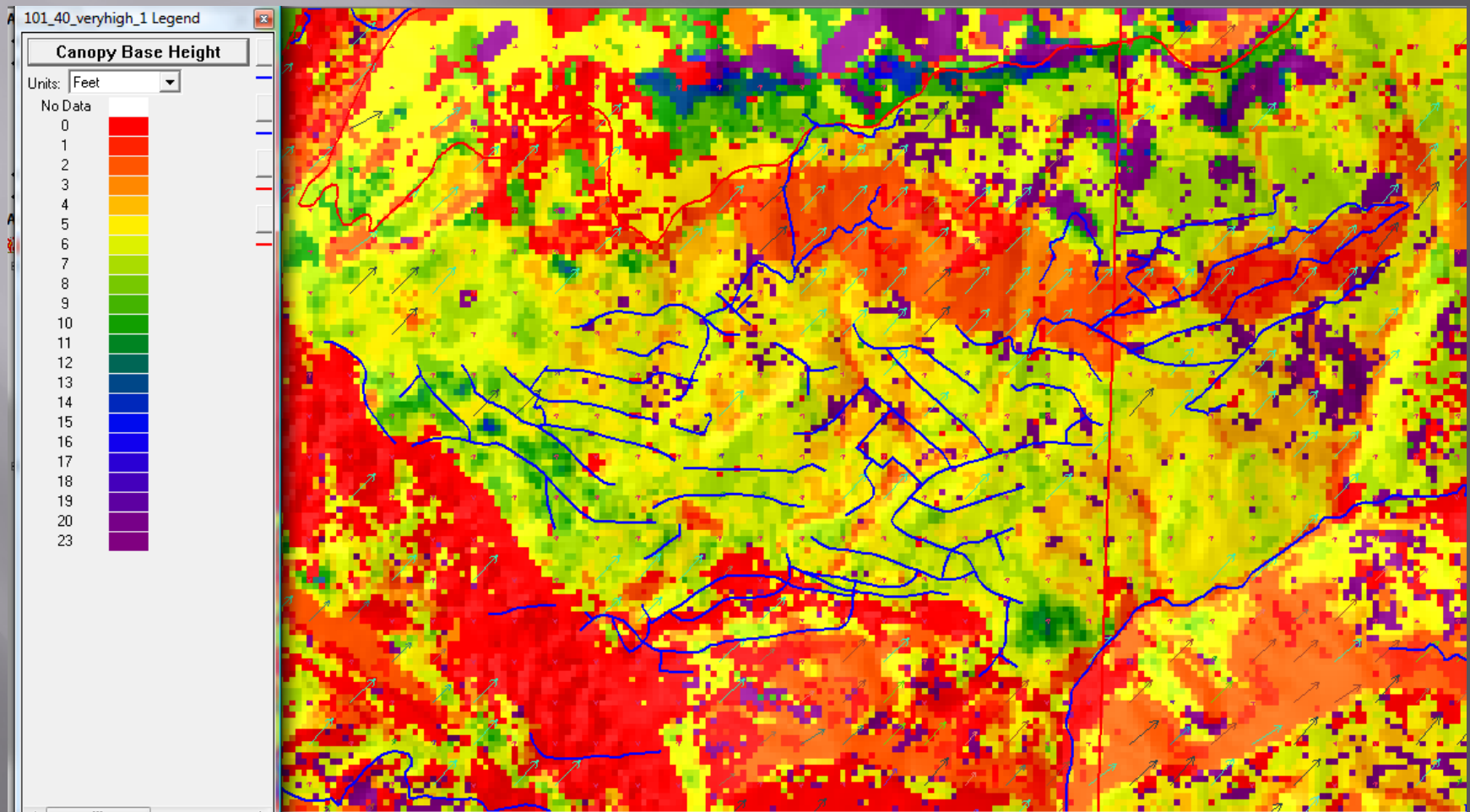


Surface to Crown Heat Transfer

- ▣ Surface fire intensity
- ▣ Vertical arrangement
- ▣ Steepness of slope

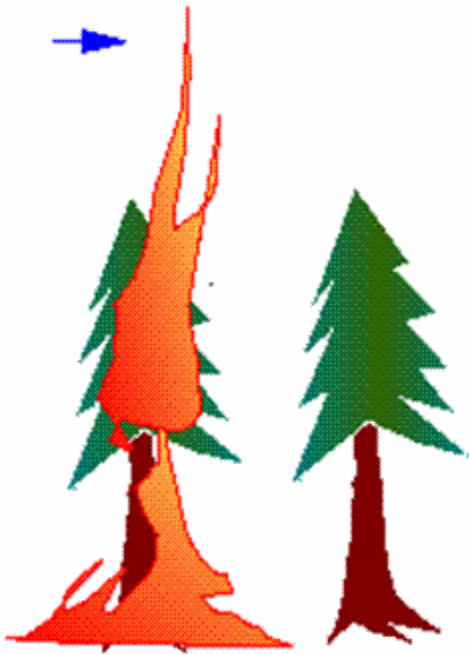


Crown Base Height



Types of Crown Fire (wind driven)

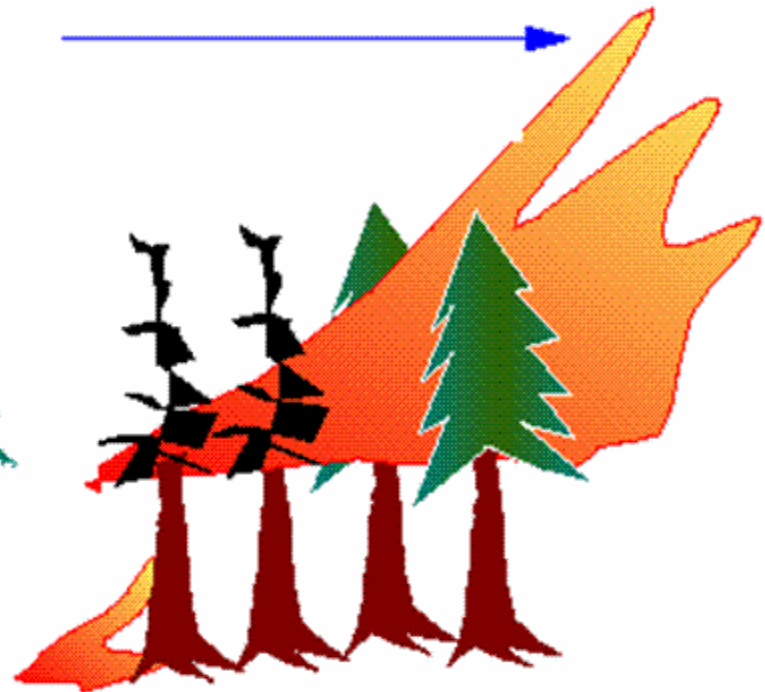
Passive
(torching)



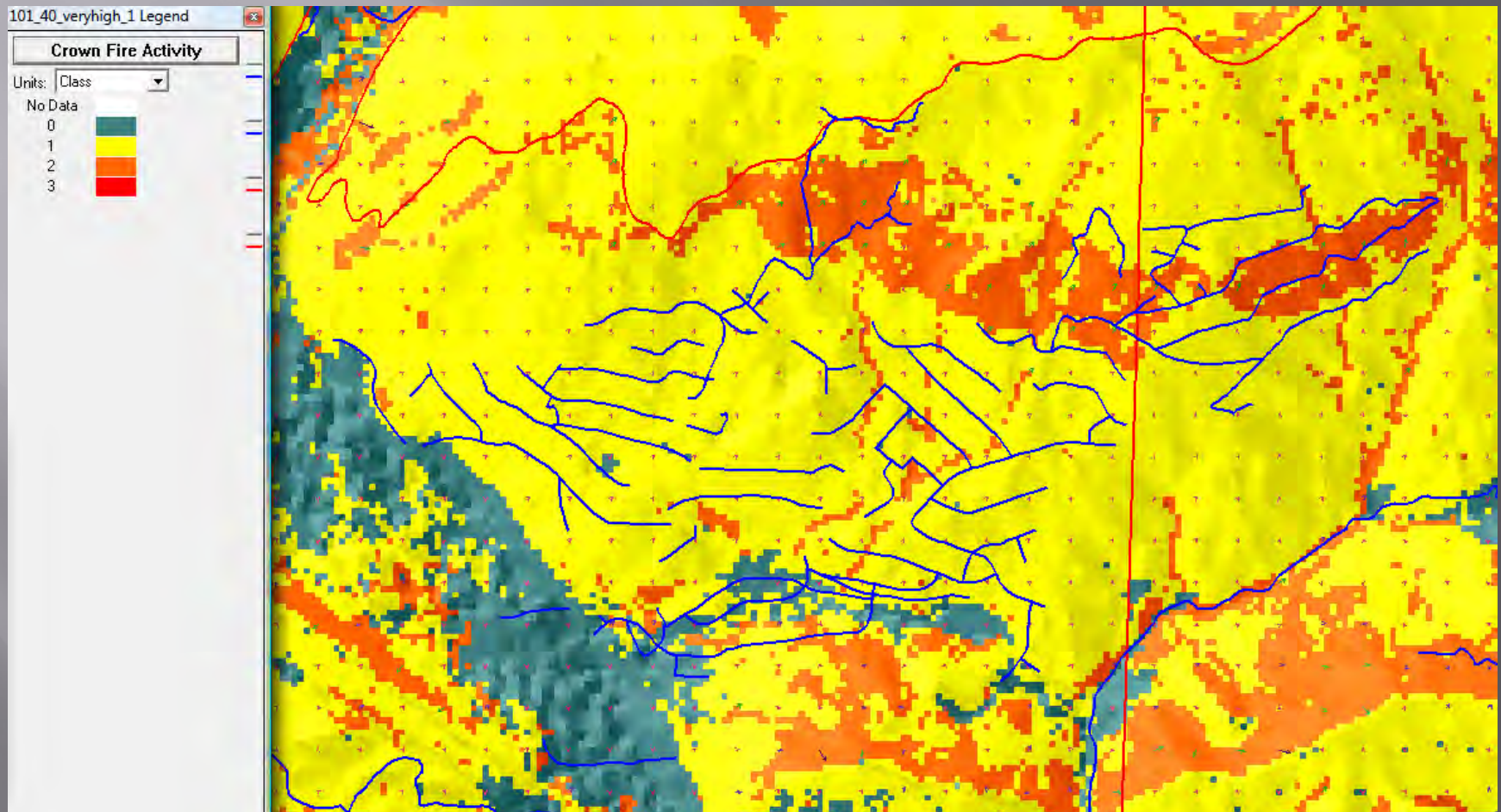
Active
(dependent)



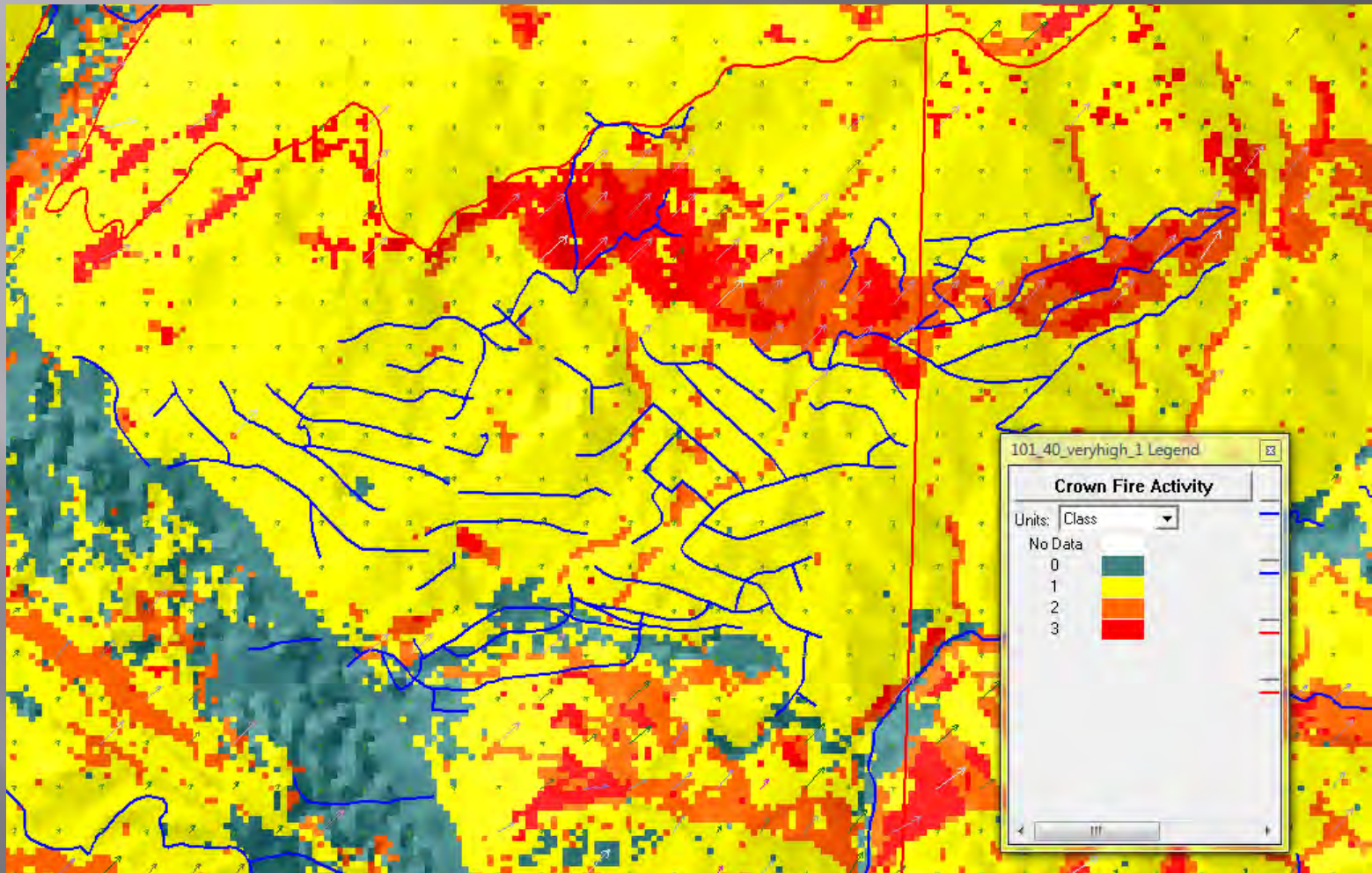
Independent
(very rare)



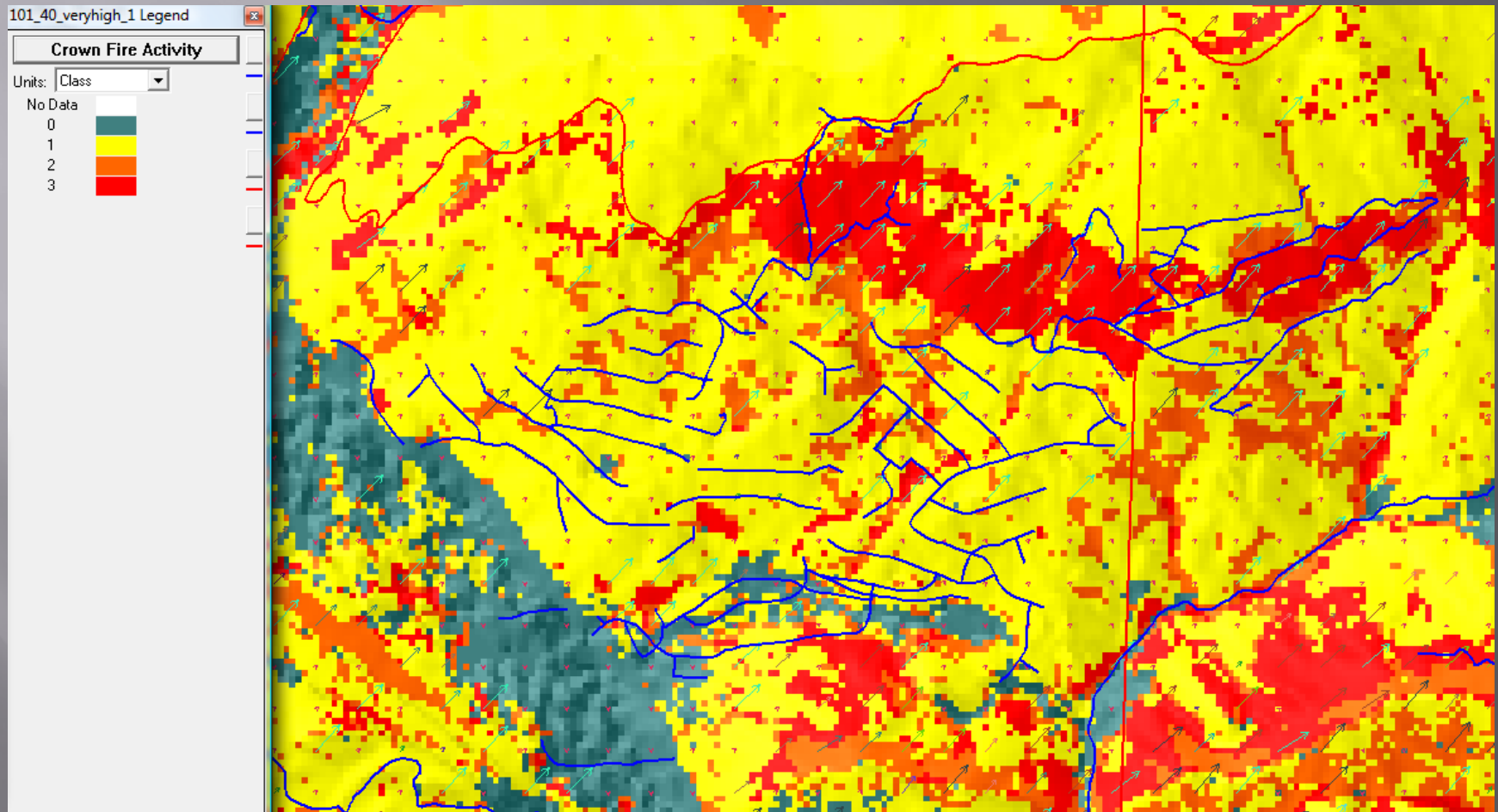
Crown fire activity 5mph 20'wind 80 deg F dry fuels



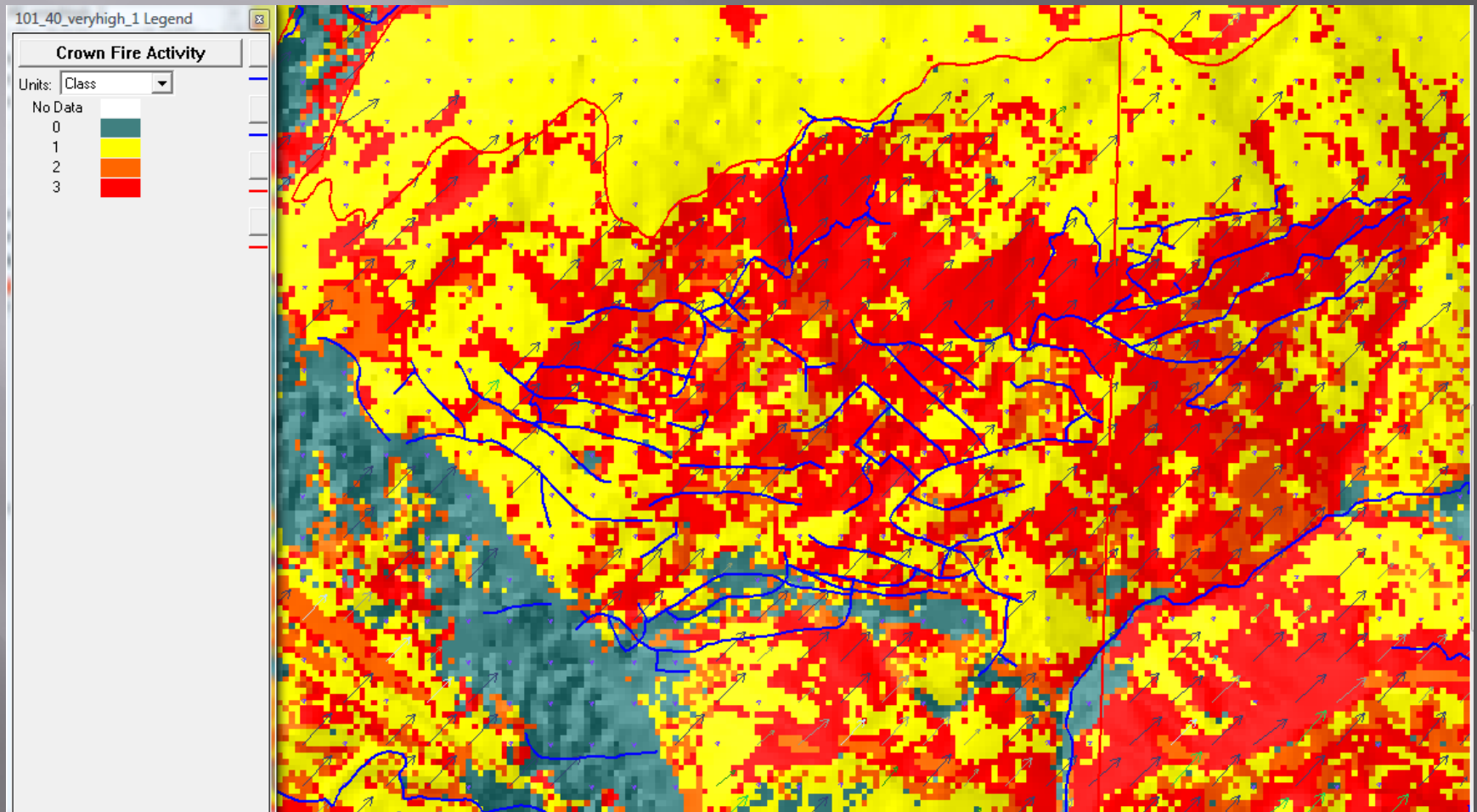
Crown fire activity 15mph 20'wind 80 deg F dry fuels



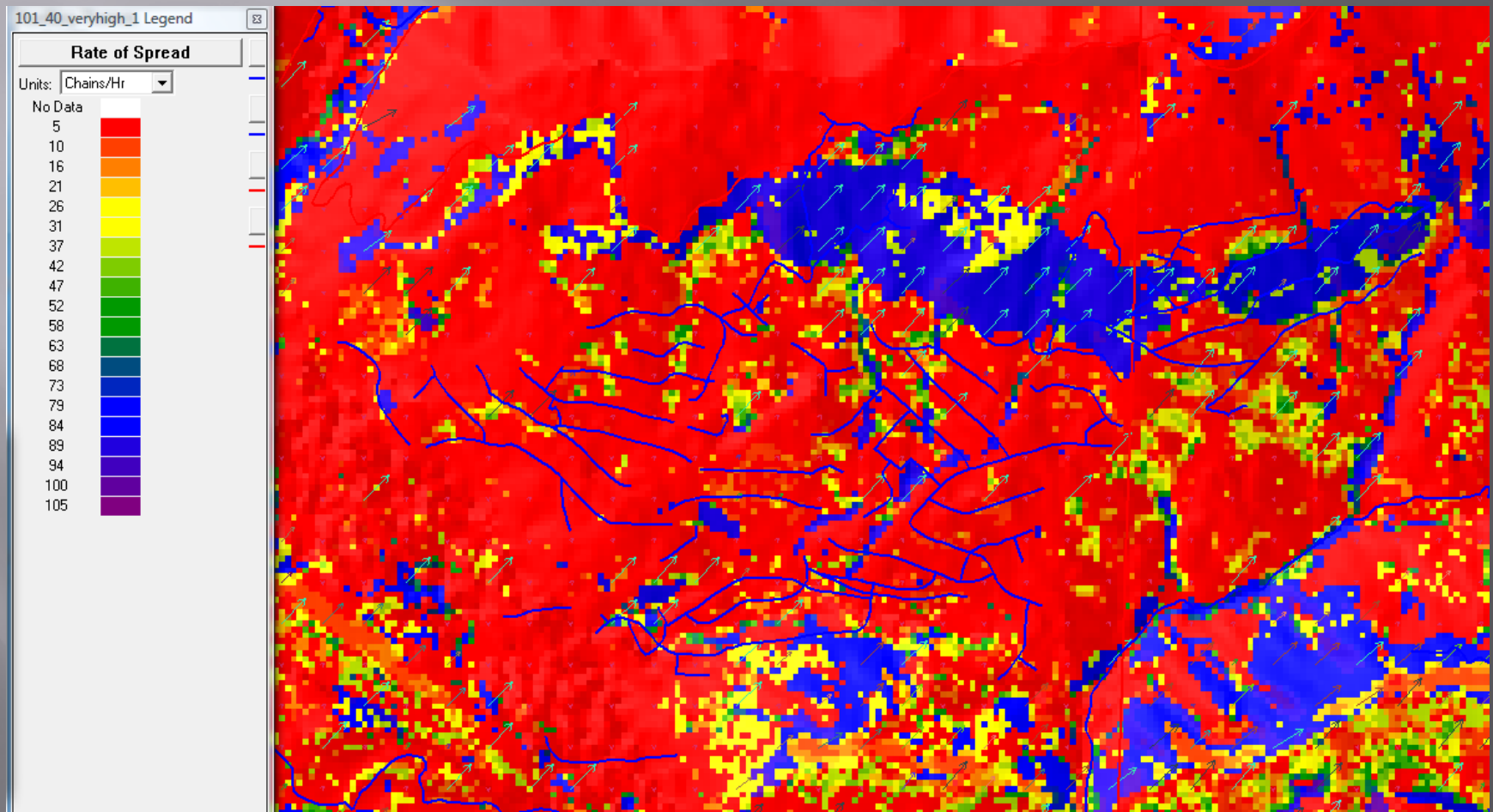
Crown fire activity 25mph 20'wind 80 deg F dry fuels



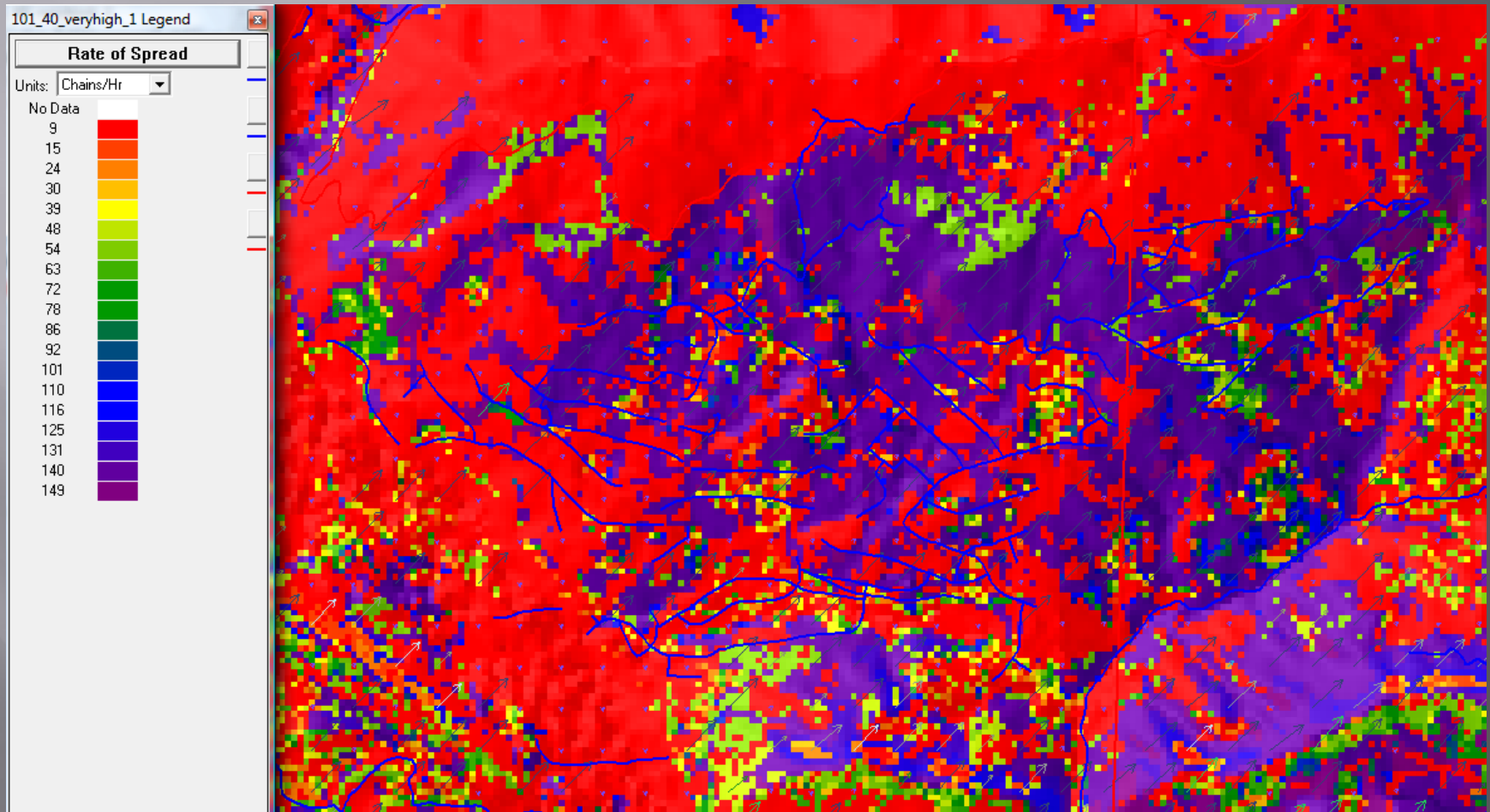
Crown fire activity 35mph 20'wind 80 deg F dry fuels



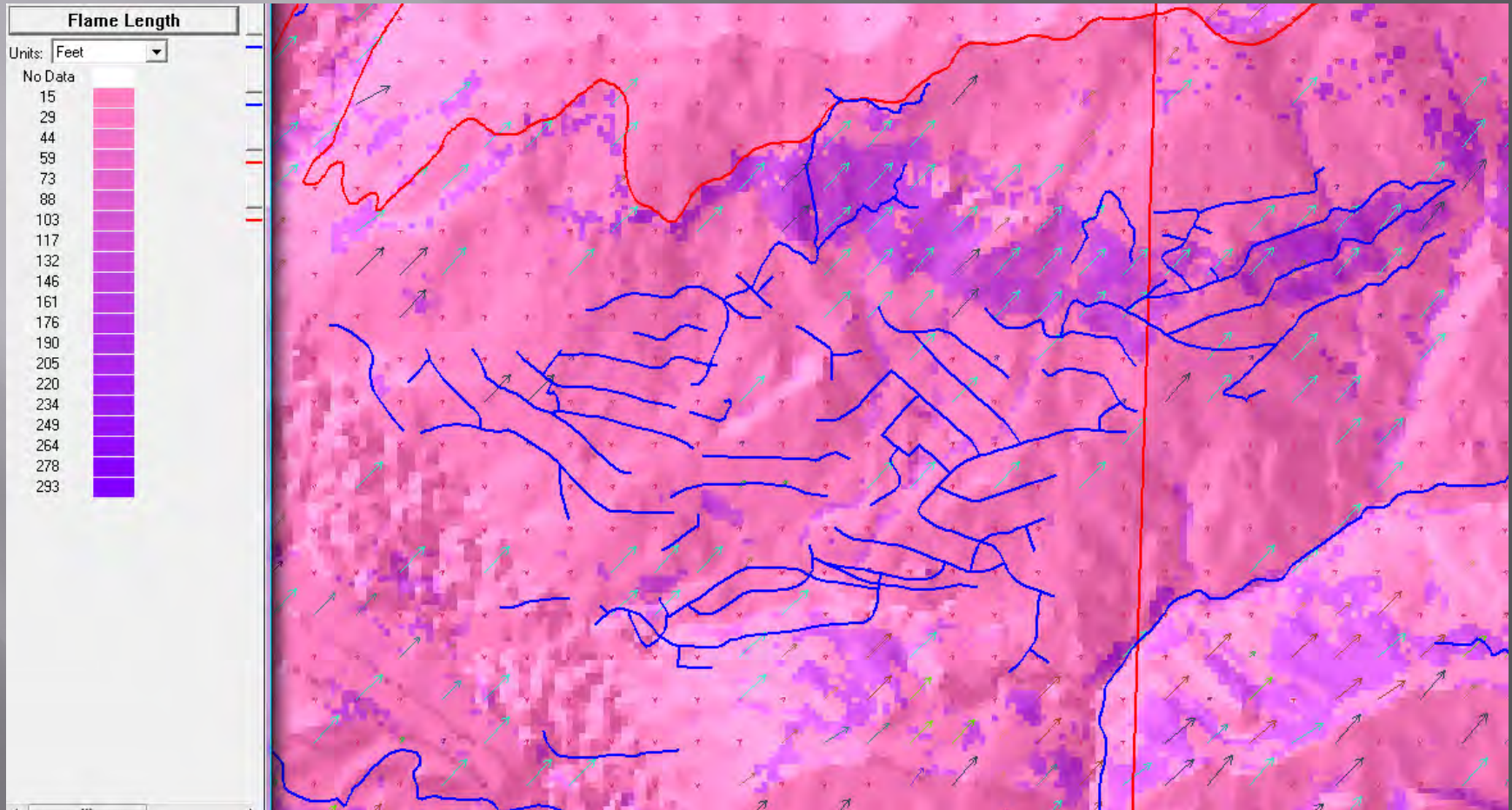
Rate of spread 25mph wind



Rate of spread 35 mph wind

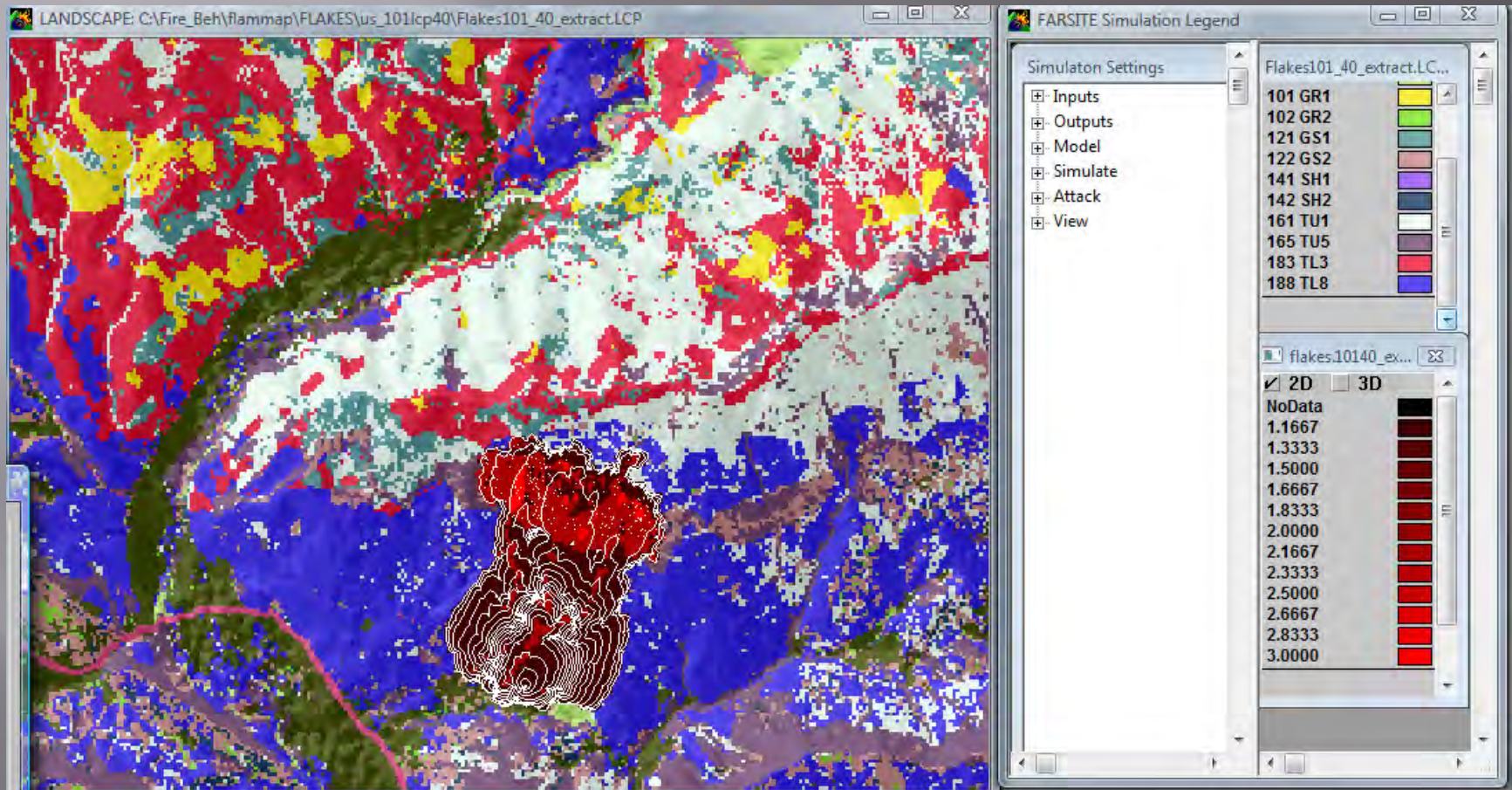


Flame length 25mph wind

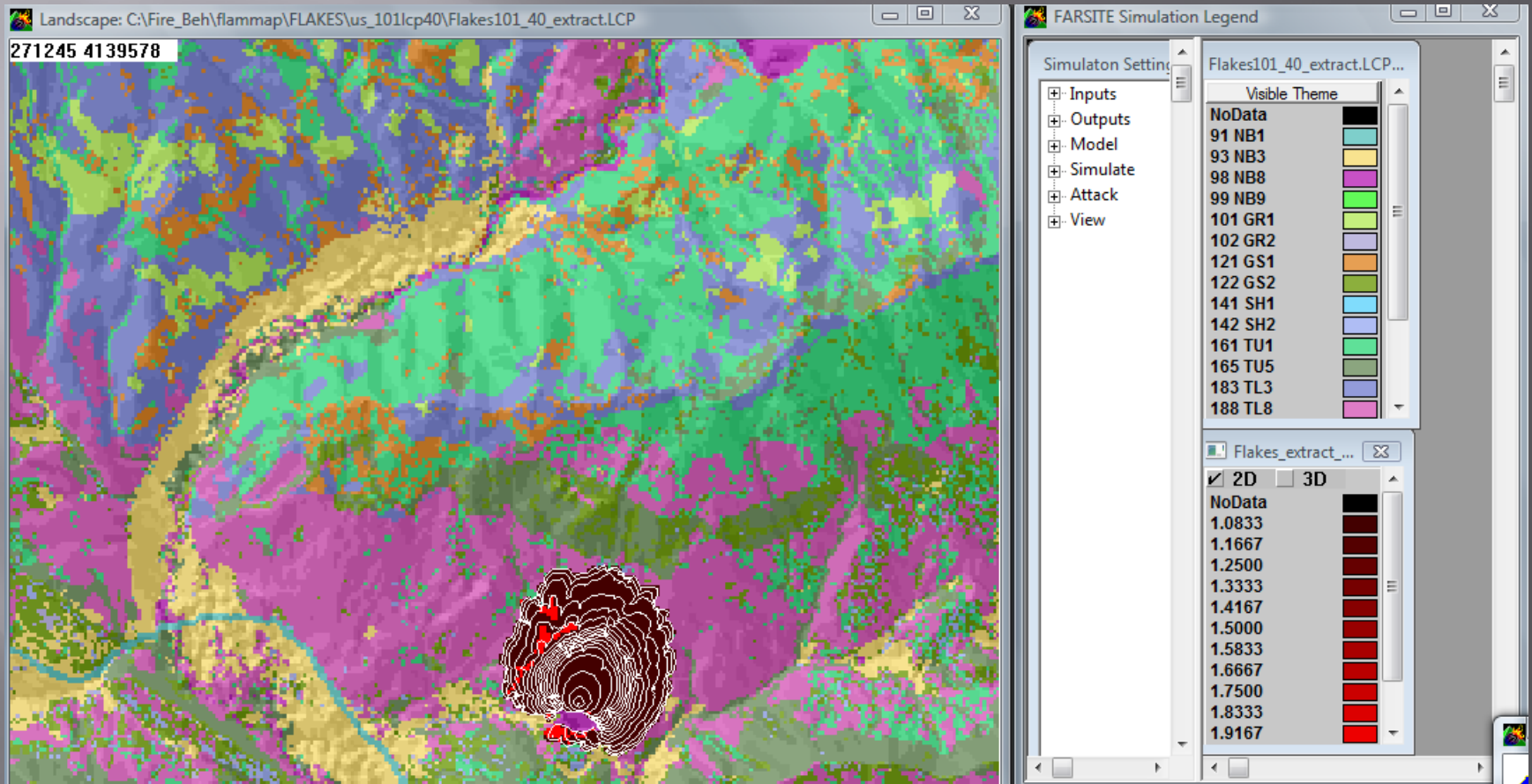


Farsite crown no crown

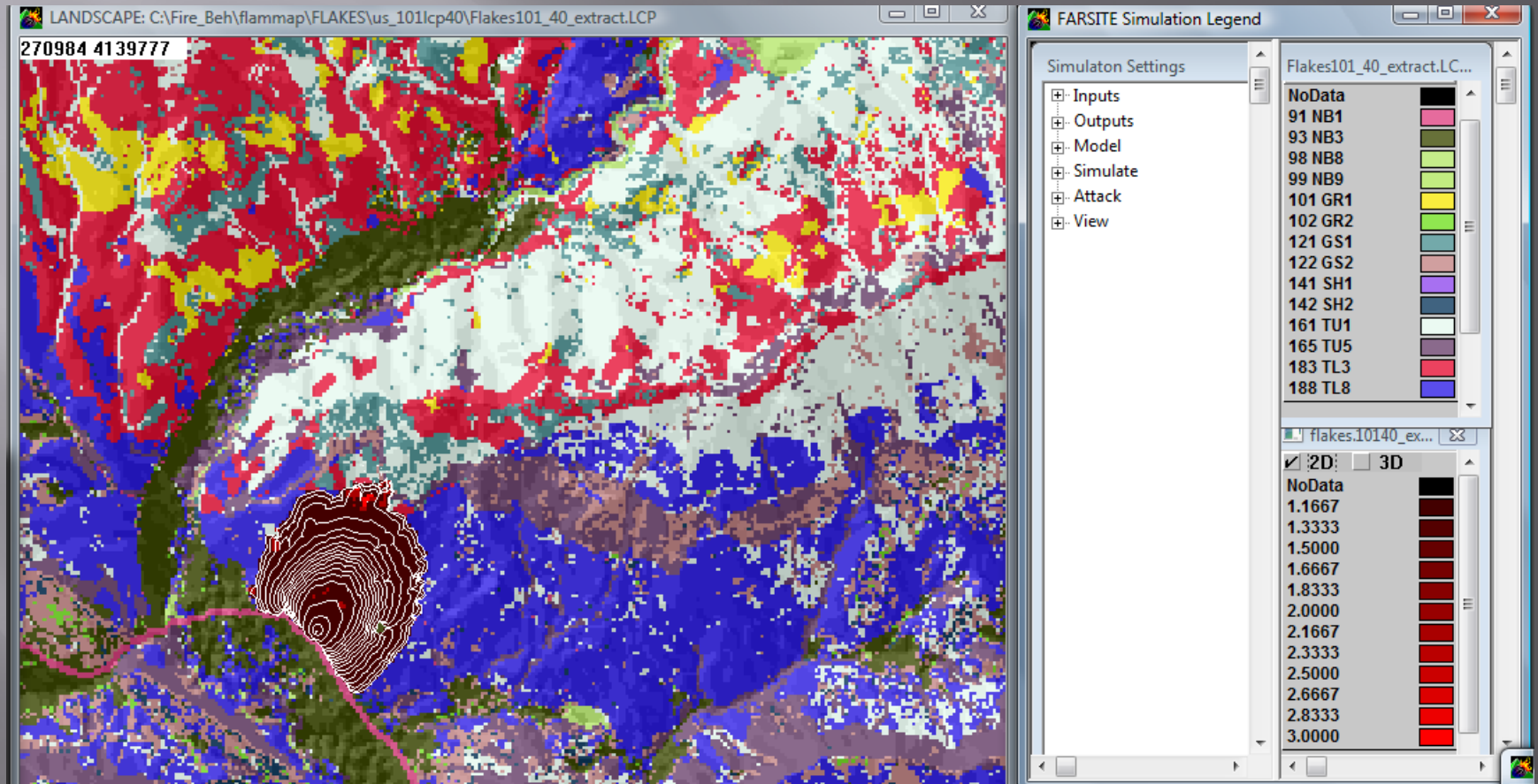
2 burning periods 20mph wind



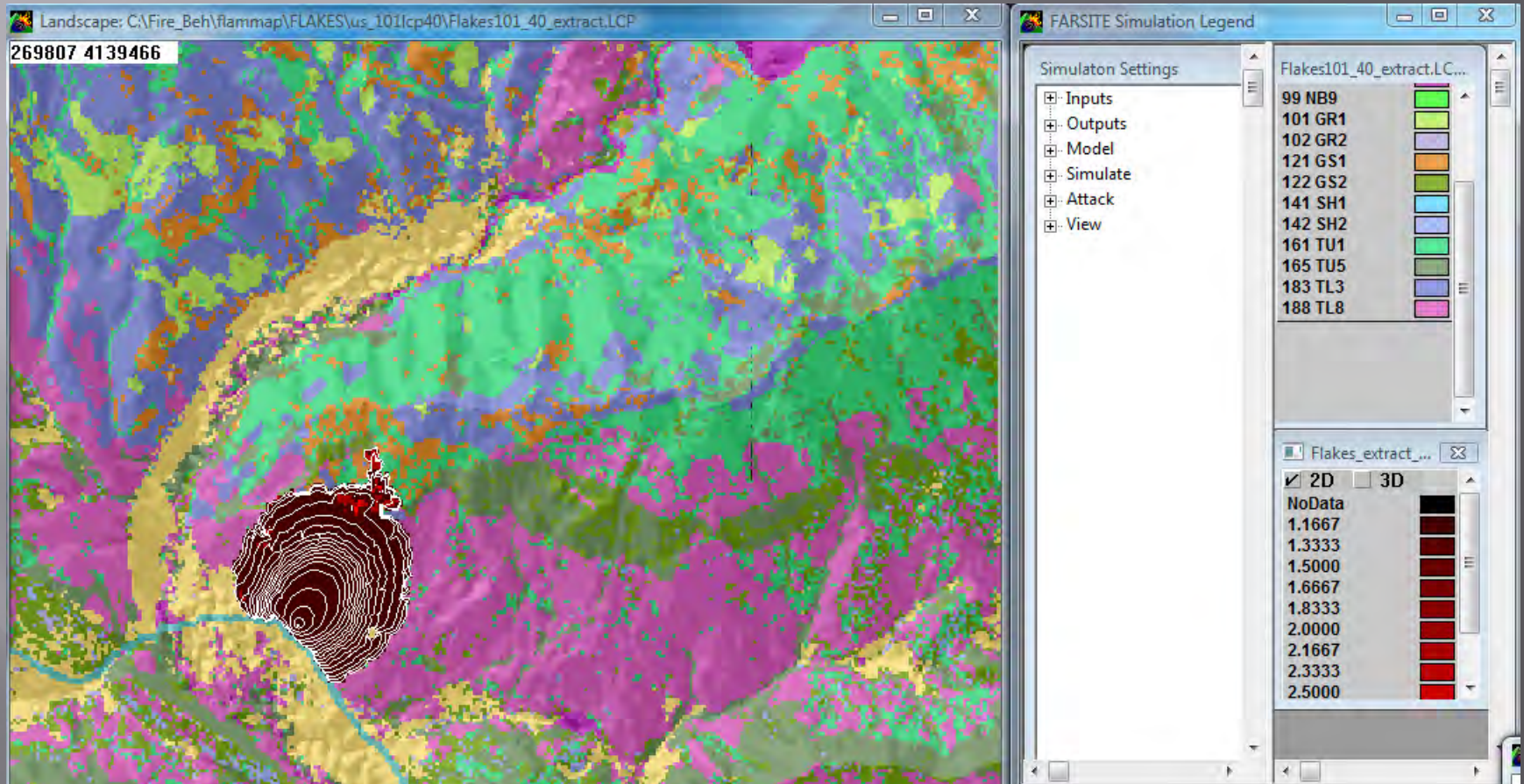
Crownfire Activity Post Treatment



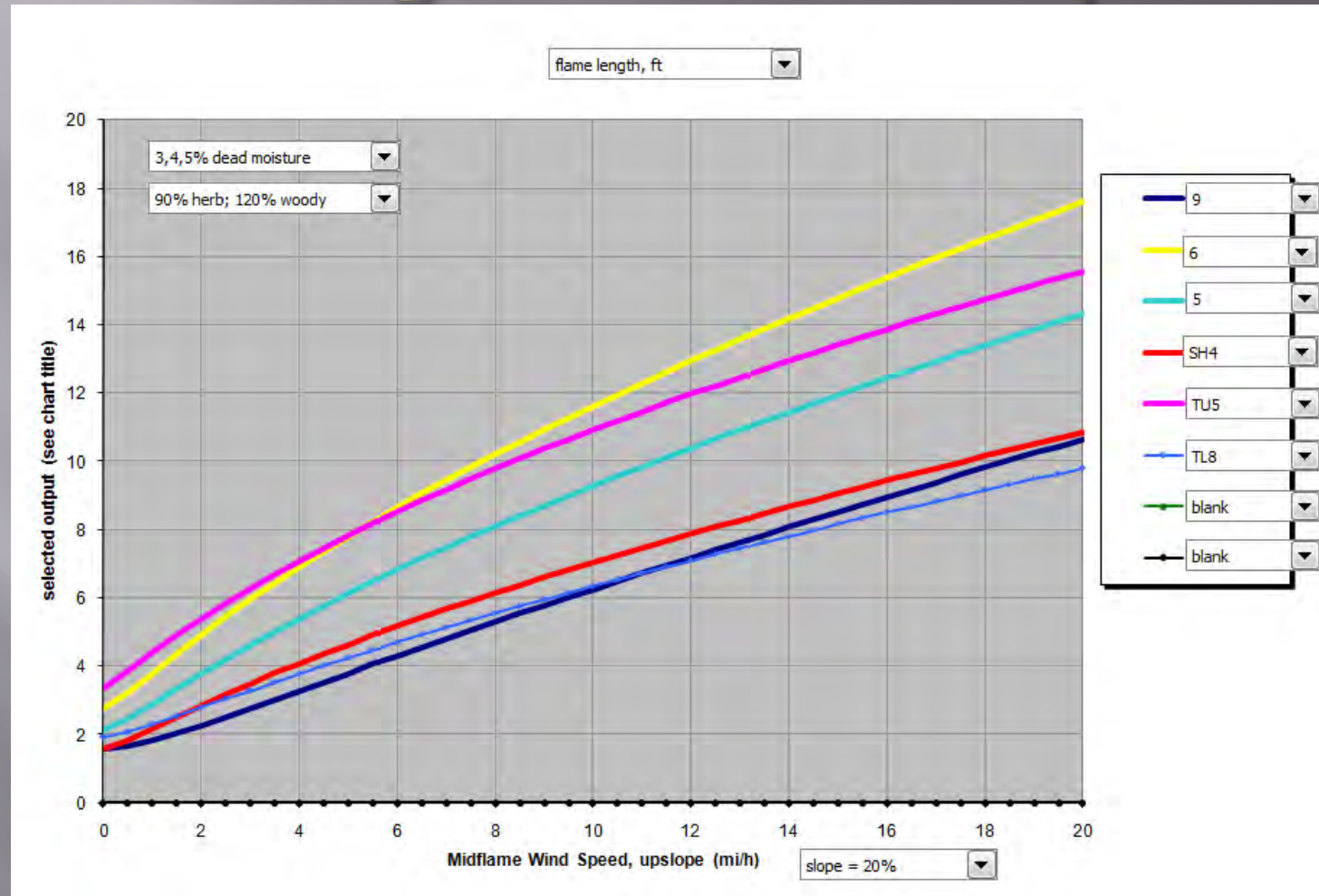
Crown fire activity 20mph wind



Crownfire Activity Post Treatment



Flame length model comparison



Recommendations

- ▣ Thin over story by separating crowns of individual or clumps of trees by 10-20'
- ▣ Break up horizontal continuity of Conifers and Oak, create clumpy structure
- ▣ Remove oak, juniper and other ladder fuels under the drip line of over story trees.
- ▣ Limb up or remove juniper.
- ▣ Limb up over story trees to 12' or more above the ground.
- ▣ Plant aspen for screening

Recommendations

- ▣ Remove ladder fuels and thin oak clumps to increase crown base height within each clump.
- ▣ Remove vegetation within 20' of structures increasing clearing down slope as needed.
- ▣ Maintain sufficient canopy closure to provide a shaded surface fuel condition, (approximately 50% shading of the surface) and suppress the growth of ladder fuels such as Oak.

Prioritization

- ▣ Lower slope fuels are a higher priority due to spread potential to the top of the slope.
- ▣ Treatment along contour roads could improve barriers to surface fire spread, and reduce the potential for torching and spotting across roads.
- ▣ Concentrate thinning of the over story on groups of undeveloped lots due to ease of operations.
- ▣ Prioritize treatments along CR 501 due to increases risk from the road and spread potential uphill.
- ▣ Limbing up and treatment of surface and ladder fuels to avoid crown fire initiation may be more cost effective in the short term.

Prioritization

- ▣ Thinning of the over story will improve individual tree vigor and reduce potential for bark beetle outbreaks and other diseases that could alter fuel profiles in the future, and reduce the potential for crown to crown fire spread in the present.
- ▣ Prioritize treatment of heavier fuels in drainages that lead from the bottom to the top of the subdivision due to the rapid rates of spread associated with the chimney effect.

Maria Irwin
Ecosphere Environmental Services
776 E 2nd ave
Durango Colorado 81301

David Dallison
Fire Behavior Analyst
2/23/2011

Dear Maria,

The following are draft recommendations for fuels treatments to mitigate predicted fire behavior in the Forest Lakes Subdivision, La Plata County Colorado. These recommendations and priorities are based on fire behavior modeling done with Flammap, and Farsite fire behavior models using landfire data, and personal observations. I have displayed some of the outputs from the model runs I developed in a powerpoint presentation. Models are only as good as the data inputs, I feel the results are reasonable based on 14 years as a fire behavior analyst, however improved base data would improve the accuracy, but would not alter the conclusions presented here. These recommendations may change based on input from the rest of the CWPP committee. Individual lots or groups of lots should be assessed on the ground with the finalized recommendations in mind to determine actual treatment needs.

Recommendations

- ▣ Thin over story by separating crowns of individual or clumps of trees by 10-20'
- ▣ Break up horizontal continuity of Conifers and Oak, create clumpy structure
- ▣ Remove oak, juniper and other ladder fuels under the drip line of over story trees.
- ▣ Limb up or remove juniper.
- ▣ Limb up over story trees to 12' or more above the ground.
- ▣ Plant aspen or less flammable species for screening rather than maintaining more flammable species such as Oak, Juniper, or Ponderosa pine.
- ▣ Remove ladder fuels and thin oak clumps to increase crown base height within each clump.
- ▣ Remove vegetation within 20' of structures increasing clearing down slope as needed
- ▣ Maintain sufficient canopy closure to provide a shaded surface fuel condition, (approximately 50% shading of the surface) and suppress the growth of ladder fuels such as Oak.

Prioritization

- ▣ Lower slope fuels are a higher priority due to spread potential to the top of the slope.
- ▣ Treatment along contour roads could improve barriers to surface fire spread, and reduce the potential for torching, and spotting across roads.

- ▣ Concentrate thinning of the over story on groups of undeveloped lots due to ease of operations.
- ▣ Prioritize treatments along CR 501 due to increases risk from the road and spread potential uphill.
- ▣ Limbing up and treatment of surface and ladder fuels to avoid crown fire initiation may be more cost effective than thinning the over story in the short term.
- ▣ Thinning of the over story will improve individual tree vigor and reduce potential for bark beetle outbreaks and other diseases that could alter fuel profiles in the future, and reduce the potential for crown to crown fire spread in the present.
- ▣ Prioritize treatment of heavier fuels in drainages that lead from the bottom to the top of the subdivision due to the rapid rates of spread associated with the chimney effect.

Sincerely,

/S/ David Dallison

David Dallison

FBAN