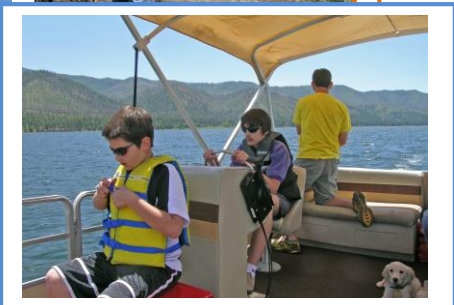
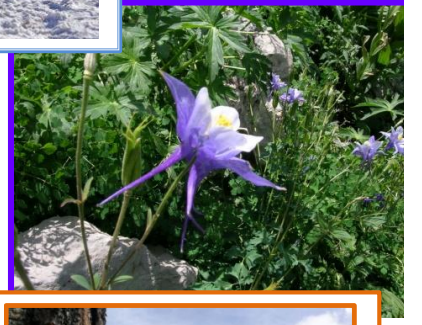
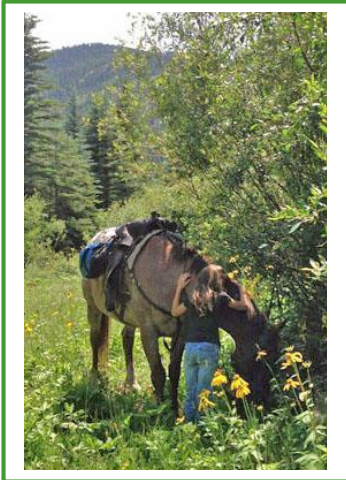


# VALLECITO COMMUNITY WILDFIRE PROTECTION PLAN

NOVEMBER 2014



Prepared by:

Vallecito CWPP Team

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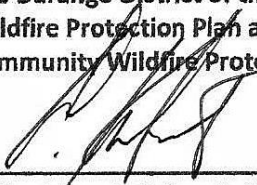
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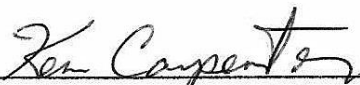
**CWPP Signatures of Approval**

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

  
\_\_\_\_\_  
D. Kent Grant, Colorado State Forest Service

12/5/14

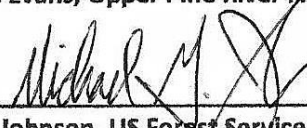
The following entities have reviewed this Community Wildfire Protection Plan and agree with the content and recommendations.

  
\_\_\_\_\_  
Ken Carpenter, Vallecito Lake Council /  
Vallecito HomeOwners Association


12-11-2014  
Date

  
\_\_\_\_\_  
Bruce Evans, Upper Pine River Fire Protection District


12/5/2014  
Date

  
\_\_\_\_\_  
Mike Johnson, US Forest Service

12/5/2014  
Date

  
\_\_\_\_\_  
Chris Barth, US Bureau of Land Management

12/5/2014  
Date

  
\_\_\_\_\_  
Brent Rhees, US Bureau of Reclamation

12/2/14  
Date

  
\_\_\_\_\_  
Brian Sheffield, Pine River Irrigation District

11/20/14  
Date

  
\_\_\_\_\_  
Butch Knowlton, La Plata County Office  
of Emergency Management

Dec 5 2014  
Date



## List of Acronyms

AOP: Annual Operating Plan  
BLM: US Bureau of Land Management  
CG: Campground  
CO-WRAP: Colorado Wildfire Risk Assessment Portal (see references p.67 and map p. 45)  
CSFS: Colorado State Forest Service (see references p. 67, 68)  
CWPP: Community Wildfire Protection Plan (see references p. 67)  
DOLA: Department of Local Affairs (Colorado)  
DFPC: Division of Fire Prevention and Control  
EFF: (Colorado) Emergency Fire Fund  
FAC: Fire Adapted Community (see references p. 67)  
GIS: Graphical Information System  
HFRA: Healthy Forests Restoration Act of 2003 (see references p. 68)  
HIZ: Home Ignition Zone  
HOA: Home Owners Association  
LPC: La Plata County  
NFFL: National Forest Fuel Laboratory  
PRID: Pine River Irrigation District  
RMP: Resource Management Plan  
UPRFPD: Upper Pine River Fire Protection District  
USBR: United States Bureau of Reclamation  
USFS: United States Forest Service  
VCWPP: Vallecito Community Wildfire Protection Plan  
VLC: Vallecito Lake Council  
VSCA: Vallecito Sporting and Conservation Association  
VSL: Vallecito Service League  
WFMP: Wildland Fire Management Plan  
WUI: Wildland-Urban Interface

## **Executive Summary**

### **Purpose:**

Community Wildfire Protection Plans (CWPPs) are authorized by the Healthy Forests Restoration Act (HFRA) of 2003. HFRA places renewed emphasis on local community wildfire protection and response planning by extending a variety of benefits to communities with a CWPP in place. Among the benefits are the abilities to participate in establishment of fuels treatment priorities for both federal and non-federal lands surrounding communities, establishment of a local definition and boundary for the Wildland-Urban Interface (WUI) and enhanced opportunities for cost-sharing of community-based fuels treatments.

This CWPP is designed to serve as a blueprint for reducing fire danger, especially wildfires, for the entire Vallecito community. The area covered by this plan is defined as the Vallecito Reservoir residential and business community plus the surrounding forest land and watersheds (see WUI map p. 8). This includes USBR, USFS land, and some BLM and State land, and the reservoir managed by the Pine River Irrigation District, but excludes the Weminuche Wilderness as there are no practical treatments the community can do in that protected area.

Because we are a relatively large community, the primary methods we plan to use to reduce dangers include communication and educational tools; establishment of a community-wide FireWise network to include enlistment of community FireWise ambassadors; creation and prioritization of specific fuel reduction projects; evacuation plans; and encouragement and support of individual efforts at fuel reduction. We wish to protect not only our community (people, pets, structures, etc.) but also the encompassing watersheds and infrastructure, up to (and overlapping sometimes) the defined areas of neighboring CWPPs.

### **Collaborations:**

Participating in these efforts and assisting community residents will be a number of federal, state, and local agencies: UPRFPD, USFS, USBR, BLM, CSFS, LPC, as well as FireWise area representatives. We will contact all organized groups at Vallecito: VLC/HOA, VSL, VSCA, RV Parks, Chamber of Commerce, Community Events Center, Vallecito Church, local water systems and local HOAs. Since many of our residents are “summer only” it is important to focus special efforts on the summer months.

### **Benefits:**

By creating this plan, we hope to bring greater awareness and buy-in to our community, and assist with fire risk mitigation strategies and resources (slash removal, reflective signs, shared knowledge of resources, etc.). This CWPP should help document our readiness to improve our self-assistance, rally the community toward fire prevention, identify specific project goals and priorities, and help us position ourselves to apply for and hopefully secure grants and other funding sources. These would enable us to help finance projects which might otherwise be very difficult to complete.

### **Organization of Plan:**

This CWPP follows very closely the CWPP Final Framework template (Rev. 3/10/13) suggested by the Colorado State Forest Service. We are indebted to their excellent guidance and direction.

## 1. Vallecito Community Overview and Recent History

### 1.1 General Description of Community

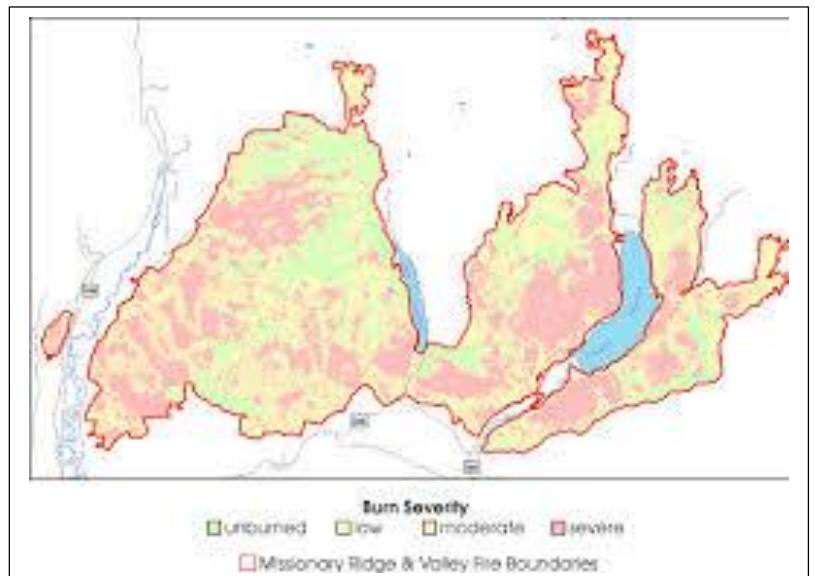
Vallecito is an unincorporated community located in the San Juan Mountains of Southwest Colorado, approximately 15 miles north of Bayfield, Colorado. The community has grown up around the Vallecito Reservoir, which was completed in 1941. A small population of year round residents is clustered in three areas: the Vallecito estates area in the southwest end of the reservoir, the business district on the northwest area of the reservoir, and the area directly north of the reservoir bordered by County Road 500 and Middle Mountain. The business district includes several restaurants, two general stores, two RV parks and several rental cabins/lodges. Due to the reservoir and the adjacent Weminuche Wilderness, Vallecito is a tourist destination and many residents are seasonal (summer) only. The community is surrounded by National Forest System lands and the Weminuche Wilderness area; only one route exists for ingress/egress - County Road 501 (see map p. 26). Vallecito encompasses Range 36 and Range 37N and Township 6 and Township 7 W; the elevation ranges from about 6000 to 8500 feet above sea level.

### 1.2 Fire History

Major Fires Impacting Vallecito		
Fire	Year	Acres Burned
Missionary Ridge	2002	73,121
Bear Creek	2003	1,869
Red Creek	2010	32.8
Little Sand	2012	24,931
Vallecito Fire	2012	1,400
West Fork Complex	2013	109,615

At least six major fires have impacted the Vallecito community in the past 20 years (see table at left). The Little Sand and West Fork Complex fires were not a direct threat, but smoke sometimes hung heavy, travel was impacted, and local businesses suffered from diminished tourism when travel plans were changed or canceled. Of these fires only the Missionary Ridge Fire was determined to be human caused, so more than 83% were lightning caused.<sup>1</sup>

The Missionary Ridge Fire and concurrent Valley Fire in Durango brought the destruction of 28 structures in Vallecito as well as 28 structures in Durango; some Vallecito residents were evacuated for as long as 18 days. The Red Creek Fire (just north of CR 240, Florida Road) was the first larger fire to occur within the old Missionary Ridge burn area. The 2012 Vallecito Fire, also in the old burn area, threatened sufficiently to cause triage of the Ho-Hum and Hummingbird Lane properties, and place those areas on pre-evacuation status.



<sup>1</sup> Acreages from USFS chart



Other fire examples include the Black Ridge Fire (1994) that burned over 10,000 acres in piñon/juniper and the Sambrito 2 Fire (2011) that burned 500 acres of piñon/juniper and ponderosa pine. Small lightning-caused fires occur every year on National Forest System lands surrounding Vallecito but are generally confined to 0.1 acre or less. Most fires go unreported; evidence exists to indicate numerous fire starts in the Weminuche Wilderness. However, many of these fires are suspected to either burn themselves out or be extinguished by rain that accompanies the lightning.

In a Vallecito fire history spreadsheet prepared by the USFS, 198 minor fires (less than 10 acres, mostly 0.1 acres) were reported between 1970 and 2012; of these 165 were found to be lightning caused.

### **1.3 Community Response Actions**

When the October 2012 Vallecito Fire broke out (1400 acres), it served as a wake-up call to a number of Vallecito residents, prompted by the fire district and the USFS in a community briefing. We had been lulled into thinking we *had already had our fire*. Not so. Fire was and will remain a threat to our community for the foreseeable future. Realizing we needed to be proactive and work to mitigate the threat, we discovered we were considerably behind the curve of communities in La Plata County who had completed or were working on a CWPP for their community. It was clear to some of us that Vallecito was in need of a FireWise program and a CWPP.

When FireWise offered their FireWise Ambassador orientation program December 4, 2012, at Vallecito, more than a dozen Vallecito residents participated and most subsequently took the lead in initiating a local effort to become more prepared, as a community, to respond to the threat of wildfire. At least one representative from Vallecito has attended every FireWise Council meeting since November 2012; these are educational meetings for a three-county area: Montezuma, La Plata, and Archuleta. These meetings are held every two months and have proved to be an excellent educational and practical resource for Vallecito.

#### **1.3.1 Gridding and Ambassadors**

One of our first tasks was to decide the area of interest; we chose the entire community of Vallecito, a challenging decision due to the size of the community – much more territory than simply a homeowners group or a subdivision. However, unless we selected a **contiguous area** we felt we would not be successful in mitigation efforts; we needed to define the boundaries beyond the structures that comprise Vallecito. The effectiveness of the Vallecito CWPP is enhanced by establishing a contiguous plan to our neighboring WUI areas of Forest Lakes, Enchanted Forest and Coolwater Ranch.

Next we gridded the community into definable geographic sections and recruited a “neighborhood ambassador” (whether or not the person completed the FireWise Ambassador training) to be responsible for each portion of the grid -- a “divide to conquer” strategy. Our first community ambassador meeting was held in January 2013; meetings have continued approximately every two month and generally have lagged the three-county FireWise Council meetings by a week. Currently we have twenty-one separate grid sections, each with an ambassador (see Appendix B). Anyone willing to help with this program would be most welcome.

The neighborhood ambassadors are responsible for communication with their respective grid sector. Their tasks are to create a list of residents (both full-time and part-time), a telephone tree, a list of residents wishing a risk assessment on their property, assist in distributing FireWise educational

materials, and monitor and encourage fire mitigation within their sector. Many ambassadors have sent letters and/or emails to their sector residents or made personal visits to spread the word about the FireWise program and CWPP for Vallecito.

Marilyn Lang, local realtor, gave us specific instructions on how to access the La Plata County GIS system. Steve Walb emailed this information and a sample access sequence and “how-to” list to all neighborhood ambassadors, thus allowing them to determine all property addresses within their sector and assist them in collecting necessary information.

### **1.3.2 HIZ and CWPP Workshop Participation**

FireWise hosted a CWPP Workshop in Durango in March 2013; Steve Walb and Marilyn McCord attended from Vallecito. This workshop was a “how to” session; it included a history of CWPPs, benefits, the necessary collaboration component, potential grant funding to assist a community, and specific steps for completing a CWPP. The CWPP framework was presented in detail by several different individuals who had either worked on the framework or helped create a CWPP for their community. We left with a much better idea of the task we had chosen to undertake and prepared to bring that knowledge back to our community.

The FireWise Program also put on several two-day Home Ignition Zone (HIZ) Workshops in May 2013 to help educate community members and to improve their knowledge of wildland fire behavior, home and community risk mitigation and preparation/protection strategies for wildfire in the wildland/urban interface. Vallecito participants in the Bayfield and Mancos workshops included Steve Bjerke, Missy Carter, Bob Croll, Marilyn McCord, Tom Molinelli, and Barbara Wagner. These intensive sessions were led by Rich Graeber, former Chief for the UPRFPD, assisted by Chris Barth, BLM.

Topics covered in the HIZ workshop included wildfire behavior; wildfire hazards in the Home Ignition Zone; extending FireWise principles community-wide; and two actual site visits to local properties where students identified wildfire hazards in those specific home ignition zones, assessed the risk of wildfire to those properties, and recommended remedial actions for the homeowners to take to improve their fire survival potential. Workshop participants gained significant understanding of basic wildfire prevention/mitigation concepts and the skills necessary to help Vallecito become more “FireWise.”

### **1.3.3 Risk Assessments**

UPRFPD staff Brian Crowley has been loaned to us, is a Vallecito resident, and has taken the lead on doing personal property risk assessments for Vallecito. He has recruited additional assessment help (such as attendees at the HIZ workshop, especially Steve Bjerke and Missy Carter) and is keeping a database of assessments, both those requested and those completed. As of mid-September 2014, 58 of 82 properties requested have received a risk assessment with subsequent suggestions for improving the defensibility of that property.

### **1.3.4 Mitigation Efforts**

Each neighborhood ambassador meeting is an opportunity to share successes within an ambassador’s sector. Over summers 2013 and 2014 there were numerous stories of individuals doing tree limbing/thinning, chipping, raking, moving fire wood away from structures, screening of decks, etc. The sound of chainsaws is now one of the salient sounds of summer. Some residents spoke of striking a deal

with their waste management company to pick up extra bags of pine needles; others spoke of forty or more trips to the Bayfield Convenience Center (dump) to dispose of needles and slash. In summer 2014 UPRFPD and PRID partnered to create a place below the dam for the community to bring slash, a much needed and much appreciated solution to a pressing need. A Kickstarter grant awarded summer 2014 will provide two weeks of an air curtain burner in the future.

In 2013 and 2014, FireWise sponsored a chipper rebate program which they hope to continue in future years, pending funding. The program is open to all county residents, not just FireWise Ambassadors. It does not cover the purchase of a chipper or use of a brush hog for mitigation purposes at this time. The program generally runs from May 1 – Oct. 31 or unless funds are expended sooner. Information on the program particulars can be found on the FireWise website at: [www.southwestcoloradofires.org](http://www.southwestcoloradofires.org). Seventy-one La Plata County residents participated in 2013, including several Vallecito residents; others took advantage of the program in 2014.

### **1.3.5 Field Trips**

In August 2013, we had a field trip to better understand the fire issues at the north end of the community. Participants included Pam Wilson, Melody Walters, Kent Grant, Marilyn McCord, Roy Vreeland and Anthony Cabales. We drove several narrow/one-way streets (such as Faith Lane), looked for inadequate turn-arounds (such as Powell's at the north end of Black Bear Lane), looked for overhanging brush (Reindeer Road, also with a locked gate) and stacked slash, noted several mitigation projects in progress, and identified two potential ford-the-river locations to allow additional egress if north end residents get cut-off by fire (an extremely dangerous prospect); or, alternatively, allow east of the river residents to exit on the west roads. A subsequent field trip looked at mitigation options for the proposed CR 501/500 intersection demo area; that planned mitigation was completed summer 2014.

### **1.3.6 FaceBook Page**

The CWPP FireWise Facebook™ page for Vallecito was created out of necessity. In an area that relies heavily on local information rather than news from Durango, which is 45 minutes away, or that of Bayfield, which is 30 minutes away, timely and accurate information on impending danger or ways to prevent and mitigate that danger via an easily accessible resource was needed for the area when it came to fire safety and education.

In today's world of communication, and with better connectivity in remote regions via smart phones, tablets and laptops, Facebook™, with billions of users worldwide, was the most reliable way to gather the masses of information and spread it to the community. That connection, coupled with emails, is providing the ambassadors and residents a way to share critical information on the Vallecito Valley for FireWise.

The page, created in March 2013 by resident Lisa Bourque, shares tips and contact info; event information; mitigation tools; current warnings; info from FireWise, UPRFPD and any other source that might have critical information for Vallecito residents to be aware of. Emails were sent notifying residents of this page and suggesting they "LIKE" it to get automatic updates. Residents have expressed appreciation for this effort and have used it to access links to relevant fire information such as Red Flag (no burn) days, newspaper articles and photos, updates on any current fires, etc. <https://www.facebook.com/pages/Firewise-of-Vallecito-Lake-Colorado/222652594545704>.

### 1.3.7 Presentation at 2013 Vallecito Lake Council/Homeowners' Meeting

The program at the August 2013 VLC/Homeowners' Meeting was totally devoted to FireWise. Steve Walb put together a PowerPoint presentation to share with the Vallecito community what the FireWise Team had been doing, the benefits of a CWPP, plans, goals, etc. The meeting was attended by about 35-40 homeowners, along with several FireWise and County officials.

The purpose for the FireWise presentation was two-fold:

- (1) Alert the community to the need for wildfire mitigation despite the effects of the Missionary Ridge Fire of 2002, and
- (2) Inform of the FireWise organization and its objectives in the county and local community.

We presented our year-one objectives:

- Mitigate our properties and encourage others to do so
  - We showed what mitigation of properties looks like with before/after picture examples
- We announced our assembled Ambassador team and areas of coverage
- Residents prepare a personal formal evacuation plan:
  - Written list of valuable possessions/important documents, evacuation route, reverse 911 registration, etc.
- Residents assemble a "go bag" for emergency supply of personal effects needed to support a 3-5 day evacuation.



At this meeting we also informed the HOA/VLC of the direction and motives of insurance companies in bringing their attention to this community with respect to loss risk assessments due to area and state fires. Many did not know that insurance companies now make regular physical visits to homes to inspect for potential fire hazards on the property.

We announced the opportunity for homeowners to accept the offer from Upper Pine River Fire Protection District to invite UPRFPD personnel to their properties to give them free advice in the form of a written assessment about their perspective on what they saw that might lessen the risk of wildfire hazards on their property, i.e., clearing brush, thinning trees, re-locating firewood stacks, etc.

We identified for the community the "values at risk" which are many of the physical areas here at the lake which attract people to it, or possess valued infrastructure for the residents (see infrastructure map p. 44). Examples of these values at risk are identified elsewhere in this CWPP (p. 26-28).

A directional path of FireWise priority projects was presented, most of which had come directly from the residents of the community at earlier meetings in which residents shared their concerns. Those projects are as follows (not in priority order):

- (1) Develop alternate routes of emergency exits from the valley since it suffers from only a single access route,
- (2) Mitigate critical access/evacuation routes like CR 500 and improve street access, signage and turn-outs for fire suppression equipment,

(3) Create new areas of emergency water supply access for fire suppression at strategic locations around the valley (dry hydrants). Lastly, we invited the attendees to become actively engaged in the local Vallecito FireWise effort by volunteering their time and talents to promote the project in their neighborhoods and community. Several people stepped forward to work with the community event of slash disposal which followed eight days after this meeting.

Melody Walters brought handouts and took photos of the well-attended event. We collected several additional email addresses for our distribution list.

### **1.3.8 Other Presentations**

Several presentations were made at regular Vallecito Service League (VSL) meetings on the progress of the VCWPP. The brochures *Embers Aware* and *Creating Wildfire-Defensible Zones* (see references p. 67) were distributed to members in attendance; copies of both brochures were also distributed at the Vallecito Community Church.

An additional VCWPP presentation was made to the general Vallecito community on June 19, 2014, at the Community Events Center, using a PowerPoint program followed by questions and answers. Many agency representatives also attended and provided their expertise. Handouts were again available. A community comment period was set from June 19 to July 31, 2014, to solicit input on the VCWPP. Draft copies and other materials were placed at the Country Market and the General Store.

The La Plata County FireWise Coordinator Melody Walters and several local residents hosted a FireWise booth at the annual Vallecito Arts & Crafts Fair on July 6, 2013. Educational materials were distributed to individuals and some materials were taken in bulk to distribute to various local homeowner association meetings.

FireWise member Marilyn McCord staffed a FireWise booth for UPRFPD's Fire Prevention Week event in October 2013. Many children stopped by the booth (along with many of their parents) following their nearby soccer games. In addition about a half dozen adults picked up FireWise materials and asked several questions regarding the program.

### **1.3.9 Emergency Notification System and Other Efforts**

Neighborhood Ambassador meetings stressed three main goals for summers 2012 - 2014:

- (1) Getting everyone to register cell and internet phones with La Plata County's emergency notification system,
- (2) Preparing a GO BAG (ready packed items in case of short evacuation notice), and
- (3) Beginning mitigation efforts on their own property even if it is something very simple such as raking pine needles. The idea was to BEGIN!

How to register cell phones with La Plata County Emergency Notification System:

"Google" La Plata County Reverse 911, or go to:

[http://co.laplata.co.us/emergency/2012/07/have\\_you\\_registered\\_your\\_cell\\_or\\_internet\\_phone\\_9\\_1\\_1](http://co.laplata.co.us/emergency/2012/07/have_you_registered_your_cell_or_internet_phone_9_1_1)

and follow the prompts. It may take a few minutes for the form to come up. All land lines are automatically entered into this program. In the event of an emergency, the authorities can target very specific sub-areas with the emergency notification system, leaving emergency notifications as necessary. (Note: LPC plans to change to a Code Red notification system in early 2015; watch for updates.)

At the Vallecito Community Clean-Up day in August 2013, we rented a chipper and arranged for volunteers (several neighborhood ambassadors, UPRFPD personnel, etc.) to help not only with other trash disposal but also with disposing of potential fuels from mitigation efforts. Due to drought and subsequent burn bans and the fact that many residents are summer residents only and hence cannot wait until fall and winter when burning conditions are better, disposal of slash, pine needles, etc., had become an issue for many residents. The response from the Vallecito community regarding this opportunity to dispose of potential fuels was strong. The volume of slash was more than expected, indicating that many residents were making the effort to reduce their fire risk. The Clean-Up day was held again in August 2014 with slash being taken to a site below the dam for later disposal by UPRFPD.

## 2. CWPP Area/WUI Description

**2.1 Boundaries** [NOTE: Granite Peaks Ranch was not included in this description because it is not in La Plata County. However, there is no other access to Granite Peaks other than Vallecito; the acreage data does include Granite Peaks plus a small parcel further north without buildings.]

The WUI boundary for the Vallecito area begins on the south end at the junction of CR 240 and CR 501. It follows a ridge on the west side of CR 501 to the Ninth Parallel where it goes directly east to the Weminuche Wilderness boundary. At that point, it continues along the Wilderness boundary southeast and then north until it reaches the South Bear Creek drainage just east of the Vallecito Creek Trailhead. The WUI boundary follows the drainage up to an unnamed peak east of the trailhead; at the peak it heads to the southeast along a ridge and then along the drainage until it hits the La Plata/Hinsdale County line. From there it travels south, then east for a short distance, staying above the private land, until it hits the Weminuche Wilderness boundary. It then continues along the Wilderness boundary until it runs into the Piedra Special Management Area boundary, where it follows that boundary south, then east to the La Plata/Archuleta County line, south along the county line, then west and southwest to the southernmost point of the Piedra Special Management Area. From there it travels southwest along the ridge known as Grassy Mountain back to the junction of CR 240 and CR 501. The total Vallecito WUI acreage is 28,138 with a breakdown as follows:

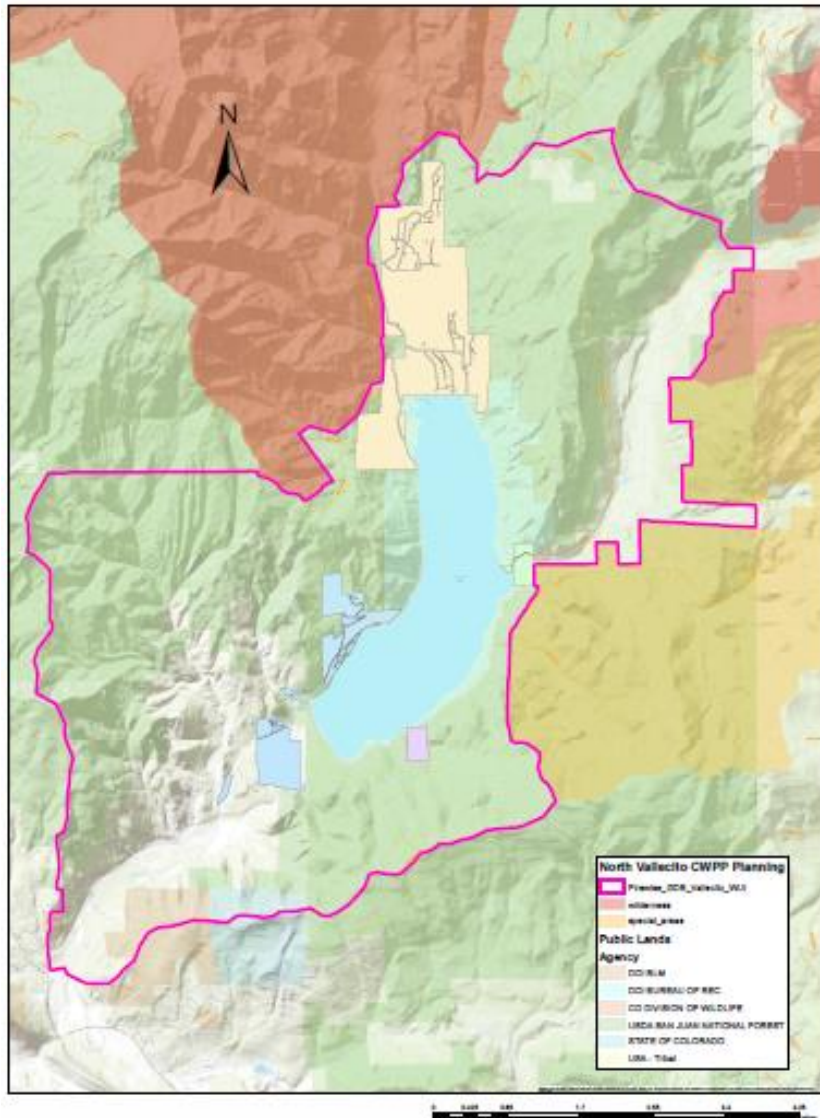
8,828	– Private Ownership (Agricultural, Commercial, Private-exempt, Residential, Vacant, Utility)
15,181	– San Juan National Forest
363	– Bureau of Land Management
3,564	– Bureau of Reclamation
<u>202</u>	– State

**TOTAL: 28,138 acres**



## 2.2 WUI Map

Note: Map does NOT include Granite Peaks Ranch, which is a part of the WUI, but outside LPC.



## 2.3 Private Land

The amount of private land within the WUI is 8,828 acres, just over 31% of the 28,138 acre WUI. The 139-acre Coolwater / Los Pinos subdivisions, which have their own CWPP in place, are totally within the Vallecito WUI area and their WUI includes 779 acres of private land. The Pine River Irrigation District property comprises 45 acres. Land uses are generally residential, some agricultural (pasture and hay production), a tree farm, two RV Parks, and non-industrial small business including a marina, several restaurants (the number varies with the year – generally 3-4) and several lodges and cabins. [For a list of Vallecito subdivisions, see Appendix C, p. 57.]

## 2.4 Public Land

By far the largest portion of public land within the WUI is part of the San Juan National Forest with over 15,000 acres, some of which was burned during the Missionary Ridge Fire in 2002 or the Bear Creek Fire in 2003. The US Bureau of Reclamation acreage amounts to 3564 acres, which includes the area of Vallecito Reservoir. BLM and State lands are on the south end of the WUI in the Grassy Mountain area. There are five USFS Campgrounds within the WUI (including the largest CG in the San Juans, Vallecito CG) and several hiking trails.



The Vallecito Reservoir and the adjacent lands are popular for boating, fishing, hiking, bird watching, and winter cross-country skiing/ice skating/snowshoeing, ice fishing, and other outdoor activities. The trout population in the Upper Pine River and in the creeks are critical to the fisheries in the reservoir; the steep drainages on both sides of the reservoir affect the health of the entire watershed.

The Community Events Center hosts many community meetings/dinners as well as weddings and family reunions. There is a handicap accessible park with trail, picnic facilities and an accessible vault toilet at the north end of the reservoir, with other vault toilets at several other points. Additionally, the proximity of the Weminuche Wilderness attracts backpackers, hikers, campers and hunters in season – we are definitely a recreation destination.

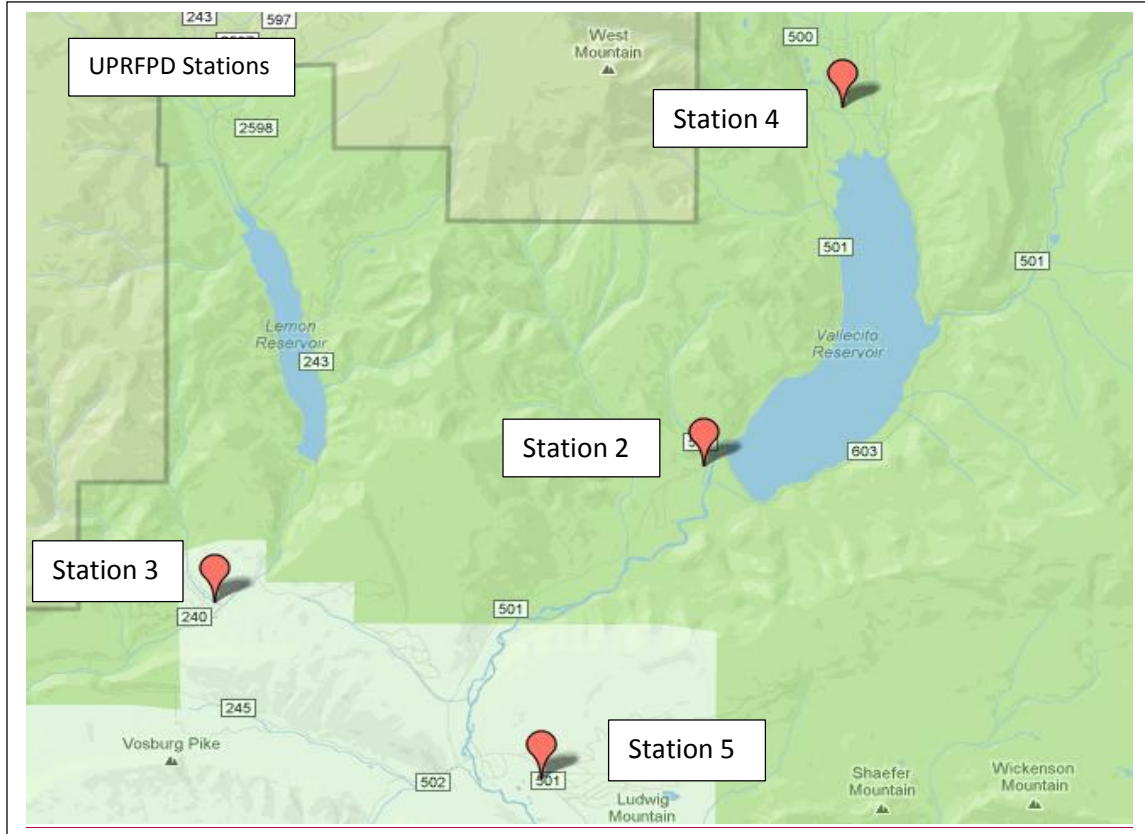
## 2.5 Fire Protection District

The Upper Pine River Fire Protection District is an all hazards fire district providing wildland and structural fire response, EMS and ambulance transportation, technical rescue and hazardous materials response. The Vallecito CWPP boundary area is served by the Upper Pine River Fire stations 2 and 4 which are encompassed within the WUI. Station 4 is located at the top end of Vallecito Lake and houses a type 2 engine, tactical tender and light rescue truck. It is a resident station with two firefighter EMTs. Station 2 is staffed with three career firefighters and houses a transport ambulance, type 1 engine, tactical tender, and type III engine. Station 5 and station 3 lay just outside the Vallecito WUI area. Station 5 has a paramedic unit, type 6 engine, support tender, and type 2 engine and is staffed with two career personnel. Station 3 has a type 6 engine, tactical tender, and type 2 engine and is manned by a single resident and paid part-time volunteers. The UPRFPD maintains a season type III engine and a 10-12 person fuels crew from March 1-October 31<sup>st</sup>.

Mutual Aid Agreements between the other three Fire Protection Districts within LPC and La Plata County as well as USFS/BLM provide additional local resources when needed.

### Upper Pine River Fire Protection District Fire Stations

Station 2	13100 County Road 501, Bayfield CO 81122
Station 3	13407 County Road 240, Durango CO 81301
Station 4	80 West Vallecito Creek Road, Bayfield CO 81122
Station 5	6891 County Road 501, Bayfield CO 81122



Other wildland fire resources are available through Durango Interagency Dispatch Center. Wildland fire resources include engines and crews from the US Forest Service, Bureau of Land Management, Mesa Verde National Park, Colorado State Forest Service, Bureau of Indian Affairs and the Southern Ute and Ute Mountain Ute Tribes. An air tanker base is located at Durango-La Plata Regional Airport and additional aerial wildfire support can be provided by the Mesa Verde National Park initial attack helicopter at Hesperus, the Ute Mountain Ute initial attack helicopter at Towaoc and the Colorado State Forest Service Single Engine Air Tanker at Cortez. (See also section 3.2 and section 8.1.1 on p. 28.)

### 3. Relevant Fire Policies and Programs

#### 3.1 HFRA

The Vallecito Community Wildfire Protection Plan (VCWPP) has been developed in response to the Healthy Forests Restoration Act of 2003 (HFRA). This legislation established unprecedented incentives for communities to develop comprehensive wildfire protection plans in a collaborative, inclusive process. Furthermore, this legislation directs the 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 and places priority on treatment areas identified by communities themselves through development of a CWPP. Priority areas include the wildland-urban interface (WUI), municipal watersheds, areas impacted by windthrow or insect or disease epidemics, and critical wildlife habitat that would be negatively impacted by a catastrophic wildfire. In compliance with Title 1 of the HFRA, the CWPP requires agreement among local government, local fire departments, and the state

agency responsible for forest management (in Colorado, the Colorado State Forest Service [District Forester]). The CWPP must also be developed in consultation with interested parties and the applicable federal agency managing the land surrounding the at-risk communities. (See references p. 67)

[LPC suggests a Map of treatments from USFS, would be helpful—this is to be included in an update to this CWPP when such a map is available.]

### **3.2 County Annual Operating Plan**

This Vallecito Community Wildfire Protection Plan tiers to the La Plata County CWPP approved in May 2006. This plan is consistent with the goals and strategies described within the LPC CWPP and provides further strategic and tactical direction specific to wildfire protection and mitigation for the Vallecito Community.

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

The San Juan National Forest and San Juan Resource Area Land and Resource Management Plan and associated Fire Management Plan describe 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 (2013) specifically describes objectives and strategies to manage fire and fuels on federal lands near communities within the wildland-urban interface.

Wildland fires occurring on National Forest System lands and BLM-managed lands (and Tribal lands in La Plata County) are managed with policies that may involve full suppression, point suppression, confinement or containment strategies. Note that HFRA directs the USFS and BLM to give special consideration to prioritized project areas and methods of treatment identified in a CWPP.

### **3.4 USBR Fire Management Plan**

USBR policy requires that all burnable lands under USBR jurisdiction have an approved Wildland Fire Management Plan (WFMP) in place by the end of Fiscal Year 2018. The Western Colorado Area Office is in the process of developing its WFMP, which will include the Vallecito Reservoir Area. That plan will be coordinated with adjacent agencies and stakeholders, and will tie to existing fire management plans including CWPPs. USBR's initial assessment of the Vallecito Reservoir Area has identified many of the same values at risk and situations needing coordinated mitigation efforts.

As per the USBR's 1996 Vallecito Reservoir RMP:

#### Section 4.6.3 Plan Actions - Fire Management

"Fire management would be based on a policy of full suppression on all project lands."

#### Section 3.85 Fire Protection

"Two firehouses serve the Vallecito area: one is located near Sawmill Point and the other on the north end. They are volunteer fire departments of the Upper Pine River Fire District. The USFS responds to fires on USBR lands under a policy of full suppression." (Note: Also see section 2.5 above for UPRFPD information on firehouses, etc.)

Subject to appropriations from Congress, USBR is willing to provide long-term support for the Vallecito CWPP by providing land areas for slash disposal, potential emergency “safe areas” within the reservoir drawdown zone (though access points and mud may be issues to resolve), and potential water drafting locations. In the future there may be the potential for USBR funding for wildfire risk mitigation at Vallecito Reservoir, subject to appropriations from Congress. All activities on Reclamation land are subject to applicable federal laws and regulations, including public involvement and environmental reviews.

### **3.5 Local HOA Plans of Relevance**

Although there are several HOAs within the WUI, we are not aware of any HOA Plans which would impact this CWPP.

## **4. Partners and Committees**

### **4.1 Ambassadors**

See Appendix B for a spreadsheet of the Vallecito Ambassadors and their respective grid sectors.

### **4.2 Core CWPP Team**

The Core CWPP team has been as follows: Steve Walb, Vallecito resident and neighborhood ambassador coordinator/contact; Marilyn McCord, Vallecito resident and local co-coordinator/contact; Pam Wilson, FireWise of Southwest Colorado Executive Director; Melody Walters, La Plata County FireWise coordinator; Kent Grant, Colorado State Forest Service; Chief Bruce Evans, Anthony Cabales and Roy Vreeland, Upper Pine River Fire Protection District; Brian Crowley, Vallecito resident and UPRFPD; Chris Tipton, US Forest Service, Columbine District; Cary Newman, USFS; Butch Knowlton, La Plata County Emergency Management; Chris Barth, BLM; Mike Canterbury, Pine River Irrigation District representing US Bureau of Reclamation; Barbara Wagner, Vallecito resident; Lisa Bourque, Vallecito resident and FaceBook™ coordinator; Gail Rush, Vallecito resident; Travis Leonard, Vallecito resident and Leonard & Sons Excavation; Justin McCarty, Vallecito resident and McCarty Excavation; Russell Brown and Leslie Jackson, Vallecito residents; and Steve Bjerke, Vallecito resident. Several others have participated in some of the planning and meetings.

## **5. Planning Process**

### **5.1 Collaborations**

Communications have been conducted via meetings, emails, phone calls, visiting the Chamber of Commerce website, visiting the La Plata County website, reading the 1996 Resource Management Plan produced by the USBR (Bureau of Reclamation), talking with Bayfield Post Office personnel, and using the FireWise of Vallecito Lake Colorado FaceBook™ Page.

“Community plans and priorities have an important role in shaping management on federal and non-federal lands.” [Quote from FireWise publication, Your CWPP: Getting Started.] Since over 68% of our WUI is federal or state land, it is important that we create a plan, set priorities and emphasize cross-boundary actions.

## **5.2 Leadership**

Steve Walb, Marilyn McCord, Pam Wilson, Melody Walters have assumed primary leadership ; the CWPP writing team is being led by Marilyn with local resident team members Steve Walb, Barbara Wagner, Lisa Bourque, Gail Rush, and Leslie Jackson, and FireWise CWPP coordinator Shannon Manfredi. Assistance comes from the agency personnel listed in Description of the Core CWPP Team (4.2 above).

## **5.3 Meetings**

Ambassador meetings were held roughly every two months beginning January 2013. Meetings to address VCWPP issues were held at Vallecito monthly April to December 2013; various agency personnel participated along with Vallecito residents. (UPRFPD has recorded meeting attendance under the Ready Set Go system with International Association of Fire Chiefs. See Appendix D for meeting notes.)

## **6. Vallecito Community**

### **6.1 Characteristics**

Vallecito Reservoir anchors the Vallecito community. From our Chamber of Commerce website: “Sheltered in a secluded mountain valley 8,000 feet above sea level, Vallecito Lake is one of the largest and most beautiful bodies of water in Colorado. Vallecito, Spanish for ‘Little Valley,’ and ancestral home to many of Colorado’s Ute Indians, became the name of the sparkling waters of the lake it surrounded. Located in the Southwestern part of the state just 18 miles from Durango, Vallecito provides a perfect base for enjoying the Four Corners area and its many wonders.”

The San Juan Mountains provide great hiking trails and camping opportunities amidst an overstory dominated by ponderosa pine, Douglas fir, white fir, and quaking aspen. Some areas within the mixed coniferous forest include young saplings that typically occur in the lower portion of the overstory with Gambel’s oak, mountain snowberry, and Oregon grape.

Besides the mixed coniferous forest, the area has grasslands, wetlands, riparian areas and disturbed areas (notably the Missionary Ridge Fire area). The understory consists of various forb, grass, and grass-like species which include western yarrow, meadowrue, pussytoes, junegrass, smooth brome, bluegrass, and sedge. Wildflowers are abundant in season.

Wildlife are plentiful. The lake is home to rainbow trout, brown trout, kokanee salmon, northern pike, small mouth bass, and walleye. The north shore has been designated winter habitat for bald eagles. Several pairs of nesting osprey make the lake their home. Black bear, raccoon, beaver, muskrat, bobcat, coyote, marten, deer, elk, mountain lions, and occasional moose, mountain goats, and bighorn sheep can be seen and river otters are making a comeback in the area. There are many birds including numerous waterfowl, especially Canada goose.

### **6.2 Population**

According to our local post office (Bayfield USPS), in 2013 they delivered to 572 residences during “low season” (winter) and to 768 residences during “high season” (summer). Summer tourists swell these numbers considerably as guests come for periods of days to several months and stay in their own summer cabins, one of the lodges, rental cabins, the RV parks, or five USFS campgrounds. Blue Spruce



RV Park has 11 cabins, 6 permanent summer residents, and 113 RV sites; Five Branches Camper Park's 27 acres has 6 cottages as well as many RV sites and tent sites; Vallecito Resort has 150 large, full hookup sites, plus 12 cabins. The Vallecito Campground has 79 sites, is one of the largest in the forest, and provides access to the Weminuche Wilderness including the popular Vallecito Creek Trail. Pine Point Campground has 30 sites; Middle Mountain Campground has 24 sites with southern exposure and easy access to water; Graham Creek Campground has 25 sites; North Canyon has 21 sites; and Old Timers area is day-use only with ten picnic sites. With all the available lodging, the summer population at risk can become quite high.

### **6.3 Road Systems**

County Road 501 enters the Vallecito Community from the south (access it from either US 160 to the south or County Road 240 from the west) and proceeds around the north side of the reservoir. County Road 500 continues north for 2.7 miles and dead-ends at the Vallecito Campground. When County Road 501 turns east then back south, it meets County Road 501A (officially known as Forest Access Road 603) which goes around the east side of the reservoir completing a loop around the lake. The Vallecito community is comprised of many little dead-end roads off dead-end roads off dead-end roads. A possible emergency exit on the east side of the dam drops south through Ken Carpenter's tree farm. Once you get below the dam the only egress is via County Road 501 – only one way out. This proved problematic during the 2002 Missionary Ridge Fire; there was so much traffic stacked up that County Road 501, the ONLY way out, was closed for a time until traffic got unstacked. (See maps p. 26, 47-50.)

Adjacent properties are the Weminuche Wilderness, San Juan National Forest, and a subdivision, Coolwater Estates, on the south. (Note: Coolwater and Los Pinos Subdivisions are completely within the Vallecito CWPP WUI so their CWPP WUI totally overlaps. Also see Public Lands map p. 43.)

### **6.4 Land Uses**

The Vallecito community centers around Vallecito Reservoir, the dam being built in 1939-41 to provide irrigation water to farmers downstream. However, recreation also plays a large role in the community due to the lake (boating and fishing – ice fishing in the winter, some jet skiing and water skiing), access to the San Juan Mountains (hiking, camping and seasonal hunting), the proximity of the Weminuche Wilderness (the largest wilderness area in Colorado at 499,771 acres), and having a number of facilities (vacation homes, RV Parks, cabins, lodges & stables, five (5) USFS campgrounds, picnic areas, a boat dock, a Community Events Center which can be rented for weddings/ family reunions/meetings, etc.) which accommodate guests. Commercial uses besides the lodging include three or four (3-4) restaurants, one with a gas pump. When there is sufficient snow the Vallecito Nordic Club grooms 10 km of cross-country trail on the east side of the Reservoir; this becomes a real family affair, with children and dogs, for many folks in the area to cross-country ski and snowshoe in the winter.

## **7. Wildfire Risk Assessment**

### **7.1 Fire Hazard**

After reviewing fire hazard risk factors, the Vallecito CWPP planning team concluded that the wildfire hazard at Vallecito is extremely high, due to a combination of factors addressed in this section.

#### **7.1.1 Vegetation/Types of Fuels**

**Introduction:** Natural vegetation in the Vallecito area is comprised of aspen, mixed conifer, ponderosa pine, and at higher elevations spruce-fir, with riparian vegetation along the lake shore and streams. There are also scattered areas of mountain shrub, mountain grass, and meadow. Please see accompanying map of vegetation and surface fuels taken from the Colorado Wildfire Risk Assessment Portal (CO-WRAP, map p. 45, references p. 67). Because of the Missionary Ridge Fire of 2002, successional stages have been set back in many areas and other vegetation than that shown on pre-fire vegetative type maps now dominates. (See burn severity map, p. 46)

Fire danger is especially high where surviving conifer stands are dense since these can support destructive crown fires that are difficult to suppress and control as was demonstrated by the Missionary Ridge Fire. Where conifer stands are more open, fires are more likely to remain on the surface where they typically do less damage and are more easily controlled, although torching of individual and small clumps of conifers can still occur. Opening of the stands to create greater distances between tree crowns and removal of ladder fuels from beneath and immediately surrounding residual trees can help lower the likelihood of a crown fire. Prescribed broadcast burning can also be used to lower wildfire risk by consuming some of the fuels that would otherwise be available to a wildfire. Shrublands, particularly Gambel oak, also represent a high fire hazard that can be mitigated by clumping, mastication, and the use of prescribed fire.

Slope also increases fire hazard since fires on slopes preheat the fuels above them. Often, winds during the burning period are upslope/up valley, which further fans a fire uphill. Those hillsides that face into the predominant wind direction, which is generally from the southwest in southwest Colorado, are especially at risk since these hillsides tend to be drier and more prone to wildfire, and since the predominant winds will readily push a fire uphill. It should be noted that during a significant wildfire the fire itself can create its own weather, resulting in winds that can come from varying directions (a significant factor in 2002 Missionary Ridge Fire). In addition, thunderstorms can cause shifting and erratic winds that can also push a fire in multiple directions. The Pine River Valley, with its varied topography, also influences wind direction and behavior and can have an impact on fire behavior.

Other important factors regarding an area's wildfire hazard include projected flame lengths, rates of spread, ground fuels, and crowning potential (please see accompanying modeling maps of the Vallecito Area for these factors – Appendix A, p. 51-53).

### **7.1.2 Typical Fire Behavior/Risk by Vegetative Type**

**Aspen:** Clones of aspen (*Populus tremuloides*) are commonly thought of as fire resistant. They can be a barrier to a wildfire, except when understory vegetation is cured or otherwise very dry, which can allow a fire to burn through the clone and kill the stems. As a result of the Missionary Ridge Fire, aspen, which commonly reforests burned areas when there is an existing aspen component or a nearby seed source, is growing back into many severely burned areas. This should make these areas more fire resistant in the future, especially after down fire-killed conifers decompose and surface fuel loadings are lower.

**Expected Fire Behavior:** Low intensity – short duration; flames 5 feet high, higher flareups rare; duration of highest flames brief; fire spread slow to fast, 1-40 acres per hour; spotting generally rare, short range.

**Mixed Conifer:** The mixed conifer type is where a mixture of mid-elevation tree species occupy 50% or more of the vegetative cover. The mixed conifer type is divided into two categories: warm/dry and

cool/moist. The warm/dry generally has a higher component of ponderosa pine (*Pinus ponderosa*) and Rocky Mountain juniper (*Juniperus scopulorum*), in addition to other conifer including Douglas-fir (*Pseudotsuga menziesii*), white fir (*Abies concolor*), and blue spruce (*Picea pungens*). The cool/moist typically has fewer ponderosa pine and juniper and more white fir, subalpine fir (*Abies asiocarpa*), Douglas-fir, blue and Engelmann spruce (*Picea pungens*, *Picea Engelmannii*), and southwestern white pine (*Pinus strobiformis*). Although not a conifer, aspen can be a component of both mixed conifer classifications. In general, the warm/dry often occurs at the lower elevational range of the mixed conifer type, and on the warmer and drier south and west facing aspects at higher elevations. The cool/moist occurs at the higher elevational range of the type, or on the cooler and more shaded east and north facing aspects at lower elevations. The warm/dry tends to have a more frequent fire return interval sometimes approaching that of the ponderosa pine type. The cool/moist tends to have a less frequent fire return interval sometimes approaching that of the spruce-fir type.

Expected Fire Behavior: Crown Cover <35%: Low intensity – short duration; flames 5 feet high, higher flareups rare; duration of highest flames brief; fire spread slow to fast, 1-40 acres per hour; spotting generally rare, short range. Crown Cover 35% to 55%: Moderate intensity – longer duration; intermittent flareups occurring to many feet above tree tops; short and medium range spotting common; behavior between flareups similar to <35% crown cover. Crown Cover >55%: High intensity – long duration; flareups higher than trees frequent to continuous; spread up to several hundred acres per hour; fire front impassable; spotting of several hundred yards common, possible to a mile or more.

**Ponderosa Pine:** The ponderosa pine type is where ponderosa pine occupy 50% or more of the tree cover. It is considered a fire-adapted vegetative type where fire has traditionally played a significant role in “managing” vegetation. Fire intervals are characteristically frequent, averaging from 5 to 20 years in many areas. This fire frequency traditionally kept the pine forest more open and the brush low. With aggressive fire suppression beginning in the early 1900’s and the lack of other forest management treatments, many of the pine stands have become overly dense, accompanied by an ever increasing dead and living ladder fuels component accumulating beneath their crowns. Much of the second growth ponderosa pine is around 100 years or so in age, but the larger, old growth “yellowbark” pine are 200 years old or more. Where forest management treatments have occurred, stands are generally between 60 and 120 square feet of basal area per acre, but are often considerably higher where no treatment has occurred.

Although ponderosa pine is regarded as a “fire adapted” species because of its thick insulating bark and higher crowns that often allow it to survive fire, it is much more vulnerable when growing in dense stands that can support crown fire, where there are tall ladder fuels beneath or near the tree crowns, and where there are enough surface fuels beneath the crowns to generate significant heat as the fire moves through the stand on the ground, thus scorching (desiccating but not actually burning) the crowns. Very hot surface fires under dry soil conditions can also damage pine root systems, which can result in tree mortality even though other portions of the tree were not impacted. This happened to some very large, old specimens on the southeast corner of Vallecito Reservoir during the Missionary Ridge Fire. Although these majestic trees had apparently survived the fire, in the months that followed many slowly began to decline and die, sometimes accelerated by bark beetle infestation, due to severe heat damage to their root systems.

Expected Fire Behavior: Crown Cover <35%: Low intensity – short duration; flames 5 feet high, higher flareups rare; duration of highest flames brief; fire spread slow to fast, 1-4- acres per hour; spotting generally rare, short range. Crown Cover 35% to 55%: Moderate intensity – longer duration;

intermittent flareups occurring to many feet above tree tops; short and medium range spotting common; behavior between flareups similar to <35% crown cover. Crown Cover >55%: High intensity – long duration; flareups higher than trees frequent to continuous; spread up to several hundred acres per hour; fire front impassable; spotting of several hundred yards common, possible to a mile or more.

**Spruce-Fir:** The spruce-fir type is Engelmann spruce (*Picea engelmannii*) and subalpine fir (*Abies lasiocarpa*, often corkbark fir in SW Colorado, var. *arizonica*) occupy 50% or more of the tree cover. Other species may occur within the ecosystem, particularly aspen. A variety of shrubs and forbs are found in the understory. Due to the high country's typically wetter and cooler conditions, the fire frequency in the high elevation spruce-fir is typically very long (>200 years). Often centuries can pass without a significant wildfire, but when one finally occurs during an extremely dry year, it can result in a stand replacement event. Since fire is less of a vegetation management factor in the spruce-fir type, forest insects such as the spruce beetle are thought to be the primary natural regulator of this forest type. There is an ongoing spruce beetle epidemic occurring in the San Juan Mountains that has heavily impacted much of the Weminuche Wilderness Area and the US Highway 160 corridor over Wolf Creek Pass. Aerial detection surveys show that the beetle epidemic is working its way west, infesting spruce in the high country above the Pine River Valley and its subdrainages in the Vallecito area.

Expected Fire Behavior: Crown Cover <35%: Low intensity – short duration; flames 5 feet high, higher flareups rare; duration of highest flames brief; fire spread slow to fast, 1-40 acres per hour; spotting generally rare, short range. Crown Cover 35% to 55%: Moderate intensity – longer duration; intermittent flareups occurring to many feet above tree tops; short and medium range spotting common; behavior between flareups similar to <35% crown cover. Crown Cover >55%: High intensity – long duration; flareups higher than trees frequent to continuous; spread up to several hundred acres per hour; fire front impassable; spotting of several hundred yards common, possible to a mile or more.

**Riparian:** Riparian is vegetation in areas immediately adjacent to aquatic ecosystems which support terrestrial vegetation. It consists of plant species that require more moisture and is typically found where there is a shallow water table. In the Vallecito area it is commonly comprised of narrowleaf cottonwood (*Populus agustifolia*), boxelder (*Acer negundo*), blue spruce (*Picea pungens*), hawthorn (*Crataegus spp.*), thinleaf alder (*Alnus incana*), water birch (*Betula occidentalis*), chokecherry (*Prunus virginiana*), woods rose (*Rosa woodsii*), redosier dogwood (*Cornus stolonifera*) and a variety of streamside shrub willows (*Salix spp.*).

Expected Fire Behavior: Low intensity – short duration; flames 5 feet high, higher flareups rare; duration of highest flames brief; fire spread slow to fast, 1-40 acres per hour; spotting generally rare, short range.

**Mountain Shrub:** The mountain shrub type is characterized by Gambel oak (*Quercus gambelii*) and other shrubs such as snowberry (*Symphoricarpos albus*), mountain mahogany (*Cercocarpus montanus*), chokecherry (*Prunus virginiana*), serviceberry (*Amelanchier alnifolia*), Rocky Mountain maple (*Acer glabrum*), antelope bitterbrush (*Purshia tridentata*), and other species.

Gambel oak, also known as oakbrush or scrub oak, occurs in its own woodland stands and intermixed within stands of trees, particularly ponderosa pine. When the live fuel moisture is especially low, Gambel oak can burn very aggressively, especially when the fire is fanned by wind. When beneath the crowns of overtopping conifer trees, it will readily carry fire from the ground up into the tops of the trees. Other varieties of shrubs may not pose the same degree of fire hazard as does Gambel oak, but can still readily burn and act as ladder fuels.

Where Gambel oak was a significant component of areas severely burned during the Missionary Ridge Fire, it often has prolifically sprouted back from its root system and now dominates. Hence, some heavily burned areas that had been ponderosa pine or mixed conifer with an oak understory are now shrubland ecosystems and will continue to be until if and when conifers regenerate from seed, or seedlings are planted, and the area slowly transforms back into forest.

Expected Fire Behavior: High intensity – medium duration; flames 5-20 feet high, of brief duration; fire spread usually fast, at least 40 acres per hour; short range spotting common from blowing leaves. Dense to moderately dense flammable vegetation over 2 feet tall, including Gambel oak, conifer reproduction, abundant litter and/or herbaceous fuel; scattered conifer stand may be present (<35% conifer crown cover).

**Mountain Grassland:** The mountain grassland type is comprised of areas predominantly occupied by various species of native and introduced grasses and forbs. Species composition varies with elevation, aspect, soils, etc. It typically occupies the open areas occurring above the river bottoms and other sites with higher moisture. Shrubs may be present in considerable quantities, but do not occupy more than 20% of the vegetative cover, although groupings of shrubs occupying more than 20% may occur in patches of 5 acres or less. Fire typically quickly burns through grasslands, especially when it is cured or very dry. Although these fires can move quickly, they are generally the easiest to extinguish and least resistant to control, but high, shifting winds can complicate suppression efforts.

Expected Fire Behavior: Low intensity – short duration; flames 5 feet high, higher flareups rare; duration of highest flames brief; fire spread slow to fast, 1-40 acres per hour; spotting generally rare, short range.

**Meadow:** Meadows are open areas characterized by relatively low growing vegetation such as grasses, sedges, forbs, and small shrubs (i.e., cinquefoil [Potentilla], willow, etc.) that require more moisture than many of the species found in the mountain grass type. Meadows typically occur in stream and valley bottoms and other low spots where surface or subsurface moisture is common. Irrigated areas are also commonly classified as meadows for fire hazard rating purposes. Meadows are generally resistant to fire, and larger ones are often considered a potential barrier to fire, but they can burn when vegetation is cured or especially dry, but typically offer limited resistance to control due to small fuel size.

Expected Fire Behavior: Low intensity – short duration; flames 5 feet high, higher flareups rare; duration of highest flames brief; fire spread slow to fast, 1-40 acres per hour; spotting generally rare, short range.

**Missionary Ridge Fire Area:** Much of the area surrounding Vallecito Reservoir was impacted to some extent by the Missionary Ridge Fire of 2002. The current condition of woody vegetation within the fire perimeter varies depending upon the burning intensity experienced at specific locations. In some places, aspen are prolifically sprouting back where mixed conifer stands were severely burned by a crown fire. In other instances where a low-intensity surface fire backed down the hillside at night, many to most of the conifers still remain. Where conifer stands were severely burned and fire-killed trees were not cut and salvaged, the dead trees will continue to fall upon the forest floor over time, steadily increasing the fuel available to support future surface fires. Although burned areas are usually considered to represent a lower wildfire hazard, within recent years wildfires occurring within the Missionary Ridge burn area have had higher than anticipated fire behavior and resistance to control due to this accumulation of down woody vegetation. This situation can be expected to continue in the foreseeable future unless fuel treatments are implemented in these areas. Because some of the private

property in the Vallecito area directly adjoins the Weminuche Wilderness Area where mechanical treatments are generally not allowed, prescribed fires, wildfires managed for resource benefits, and/or other wildfires are the only likely means of treating the jackpot of surface fuels building within the wilderness area.

**7.1.3 Fuel Models**

The major Fuel Models present across the Vallecito CWPP area by cover type are:

Cover Type	NFFL Model (Anderson, 1982)	Standard Fire Behavior Models (Scott and Burgan, 2005)
Aspen	5	TU1
Mixed Conifer	8, 9	TL8, TU1
Ponderosa Pine	8, 9	TL8, TU1
Spruce-Fir	5, 10	TU1, TU5
Riparian	N/A	SH3
Mountain Shrub / regenerating Aspen	5	SH2
Mountain Grassland / Meadow	1	GR2

Fire behavior, including fire intensity, duration and common flame lengths are summarized below for the Fuel Models present in the Vallecito CWPP area. The models are listed by cover type by NFFL model and the comparable Standard Fire Behavior model.

**Aspen NFFL 5 / Standard Fire Behavior TU1:**

Fire is carried by the understory herbaceous layer or leaf litter. Dead logs on the ground will often be totally consumed. Spread rates and flame lengths are low, less than 100 feet/hour and one to two feet respectively at winds of 10 mph eye level.



*Models 5 / TU1*



**Mixed Conifer with litter and short herbaceous understory; NFFL 8 / Standard Fire Behavior TL8:**

This model is for clumpy to closed mixed conifer overstory with moderate needle litter and light herbaceous understory. Spread rate is moderate (500 to 1200 feet/hour) and flame length two to three feet at 10 mph eye level wind speeds. Concentrations of fuels coupled with low fuel moisture, low humidity, high temperatures and moderate to high winds can increase spread rates and intensities and move fire into the tree crowns.



*Mixed Conifer Models 8 / TL8*

**Mixed Conifer with shrub and small tree understory; NFFL 9 / Standard Fire Behavior TU1:**

This model is for the closed canopy mixed conifer cover type with moderate downed woody fuels and shrub components. Flame lengths are two feet and spread rates are 300 to 600 feet/hour. Interlocking tree crowns and the presence of concentrations of fuels coupled with low fuel moisture, low humidity, high temperatures and moderate to high winds can increase spread rates and intensities and move fire into the tree crowns.



*Mixed Conifer Models 9 / TU1*

**Ponderosa Pine with litter and grass understory; NFFL 8 / Standard Fire Behavior TL8:**

This model is for clumpy to closed ponderosa pine overstory with moderate needle litter and light herbaceous understory. Spread rate is moderate (500 to 1200 feet/hour) and flame length two to four feet at 10 mph eye level wind speeds. It is similar to the Mixed Conifer fuel model but is not as susceptible to torching due to fewer ladder fuels.



*Ponderosa Pine Models 8 / TL8*



**Ponderosa Pine with shrub understory; NFFL 9 / Standard Fire Behavior TU1:**

This model is for clumpy to closed ponderosa pine overstory with moderate needle litter and herbaceous understory. Spread rate is moderate (600 to 1200 feet/hour) and flame length 3 to 6 feet at 10 mph eye level wind speeds. It is similar to the Mixed Conifer NFFL 9/ Standard Fire Behavior TU1 fuel model but is not as susceptible to torching and crown fire due to fewer ladder fuels.



*Ponderosa Pine Models 9 / TU1*

**Spruce-Fir with grass and scattered shrub understory; NFFL Model 5 / Standard Fire Behavior TU1:**

Fires are carried by the grass, shrub and small tree understory. Rates of spread and flame lengths are normally low. Ladder fuels can present opportunities for individual tree and group torching but crown fires are only likely with low fuel moisture, low humidity, high temperatures and moderate to high winds.



*Spruce-Fir Models 5 / TU1*

**Spruce-Fir with moderate herbaceous and down woody understory; NFFL Model 10 / Standard Fire Behavior TU5:**

The primary fire carrier is a moderate to heavy litter, shrub and small tree understory. Ladder fuels are commonplace so the presence of concentrations of fuels coupled with low fuel moisture, low humidity, high temperatures and moderate to high winds can increase spread rates and intensities and move fire into the tree crowns. Rate of spread ranges from 500 to 2000 feet/hour and flame heights from 3 to 7 feet. Fire movement is highly dependent on fuel moisture, wind and topography.



*Spruce-Fir Models 10 / TU5*



**Riparian – Moderate Load Broadleaf Litter Standard Fire Behavior SH3:**

Fires are carried by the broadleaf litter and small branch components. Spread rate and flame length are both low. Intensity is low but duration can be moderate due to the low spread rate. Fuels are normally receptive only in late spring before green-up or in the autumn during leaf-fall.



*Riparian SH3/ Model TL2*

**Mountain Shrub and Regenerating Aspen NFFL 5 / Standard Fire Behavior SH2:**

This model is the Gambel oak cover type. Fires carry through the shrub layer as well as the cured litter and dead woody material on the ground surface with moderate (greater than 8 miles/hour eye-level) winds and live fuel moisture less than 110% (see p. 53). Lighter winds and openings in the canopy will drop the fire to the surface. Intensity and duration is low to moderate. A complicating factor for this fuel model is the level of standing and down dead wood present due to vegetation killed in the Missionary Ridge Fire. Down woody fuels exceed 25 tons per acre in some locations and loads in excess of 10 tons per acre are common. Normal live and dead fuel loads in Fuel Model 5 are three to five tons per acre. Spread rate is 200-300 feet/hour and flame lengths two to three feet with 10 mph eye-level winds.



*Models 5 / SH2; Aspen (L) and Oak (R)*

**Meadow / Grassland**

**NFFL 1 / Standard Fire Behavior GR2:**

This model includes both native grass and agricultural pasture cover types under two feet in height. Fire spread is governed by the fine and continuous herbaceous material that is cured or nearly so. Fire will not readily spread when relative humidity is over 25%. Fires are surface fires that move rapidly through the cured grass and associated litter. Fires can be intense if fuels are



*Models 2 / GR2*

very dry but fire duration is usually short. Spread rate is high (up to 6500 feet/hour) and flame lengths can be four feet if very dry.

**Miscellaneous Models:**

The NFFL model set does not have model codes for water or barren areas, but the Standard Fire Behavior Models do:

**NB8: Open Water**

**NB9: Bare Ground**

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**Literature Cited**

**Anderson, H.E. 1982.** Aids to Determining Fuel Models for Estimating Fire Behavior. USDA Forest Service General Technical Report INT-GTR-122. Intermountain Forest and Range Experiment Station. Ogden, UT. 22 p.

**Scott, Joe H., Burgan, Robert E. 2005.** Standard fire behavior fuel models: a comprehensive set for use with Rothermel's surface fire spread model. Gen. Tech. Rep. RMRS-GTR-153. Fort Collins, CO; USDA Forest Service, Rocky Mountain Research Station. 72p.

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(Note: As part of the CWPP preparation, Cary Newman, a fire behavior analyst for the USFS, has modeled potential fire behavior at Vallecito; Newman's resulting CWPP recommendations are available in Appendix A, p. 51-53.)

**7.1.4 Fire History**

(See section 1.2 with map showing extent and severity of Missionary Ridge Fire and additional burn severity map, p. 46.)

**7.1.5 Topography**

Vallecito is located in a valley that generally slopes from south to north between significant ridgelines. This slope climbs from an elevation of approximately 7,600 feet to over 8,500 feet at the north end and in the location of several higher homes on both the east and west ridges. Grades vary from fairly flat in the central valley and along the river to 30 % or more on side ridges (one driveway has a 23% grade at the steepest portion.)

**7.1.6 Seasonal Weather Patterns**

Local winds and weather generally tend to move from south to north, frequently from the base of the slope to the top. At Vallecito, 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.

Annual precipitation is approximately 30 inches. May and June are relatively dry, with a summer "monsoon" often occurring in July and August with the wettest months being July, August and September. If the summer monsoon rain pattern occurs, this phenomenon would help lessen wildfire potential, but in seasons when the pattern is late or fails entirely, fire danger increases. Early

monsoonal storms are often characterized by dry thunderstorms with lightning and strong, variable outflow winds. The largest wildfires in the past twenty years in La Plata County have occurred from early June into early August.

### **7.1.7 High Density of Structures**

The high density of residents in Vallecito raises public safety issues as well as increasing the fire risk. Evacuation could be a potentially life threatening problem for the residents and a barrier to emergency response. The large number of residents, especially in the summer tourist season which is also the primary fire season, increases the chances that a human-caused fire will occur within or adjacent to the community. (Also see Section 6.2, p. 13, for population density.)

### **7.1.8 Limited Access and Egress**

Currently and for the foreseeable future there is only one access route in and out of Vallecito – County Road 501. Further, almost the entire north end of Vallecito is simply a series of dead end roads off dead end roads, with most emptying onto either County Road 501 or County Road 500, the latter of which empties onto County Road 501. (See map p. 26)

One proposal to help address the above issue and the possibility of the north end being cut off by fire is the creation of a reasonable place to ford Vallecito Creek. Two such areas have been identified: one at the east end of Charity Place (where there used to be a bridge across the creek) and another at the east end of Ponderosa Homes Drive (across the creek from the Mountain River subdivision club house). By strategic placing of rocks anchored with concrete it is envisioned that north end residents could, during the typical low water times of heavy wildfire seasons, drive across Vallecito Creek to the east side and gain access to County Road 501. This option is being explored.

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. (Developing an Evacuation Hazard Map has been identified on the list of proposed activities in section 9.1.4.) Even if the evacuation routes were safe to travel, traffic congestion could be a serious problem during an emergency – County Road 501 was closed for a time during the Missionary Ridge Fire evacuation due to congestion. 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 Vallecito. This limited emergency access and egress poses a serious risk to residents' safety and the ability of emergency management to respond to a wildfire.

## **7.2 Structural Vulnerability**

Recent research by Jack Cohen (Missoula Fire Science Laboratory, see references p 67) has shown that most homes catch fire from flying embers, not from the flaming fire front. When building and/or remodeling, residents are strongly encouraged to consider using fire-resistant materials and follow construction guidelines.

Roof materials such as metal, cement or cement-fiber shingles and tile are not receptive to sparks, flame and heat. Enclosing soffits with 1/8" metal screening also discourages ignition of roofs and eaves. The underside of wood decks and porches should be enclosed so that embers and flames cannot get underneath them. Decks that are impractical to enclose should not have flammable material stored

under them; keep grass, weeds, leaves and twigs cleaned out. Remove leaves and pine needles from decks, porches, gutters and roofs annually.

### **7.2.1 Ignitability**

The likelihood of a structure, such as a home, catching fire is influenced by its exterior building materials. Wood, the primary building material used, increases the vulnerability of these homes to a wildfire. There are sheds and outbuildings, fences, porches and decks of wood construction; additionally, many homes have stacks of firewood against or near houses. Woodpiles and propane tanks should be located at least 30 feet from structures, preferably uphill, and flammable vegetation should be cleared at least 10 feet away from woodpiles and tanks. Major vulnerability issues are flammable vegetation and pine needle litter in close proximity to the structures. Seasonal homes often have several inches of pine needles on the roofs, patios and decks. Given the fuels in the forest and the houses at Vallecito, there is a high probability of structural loss. (Note: 28 homes lost in 2002 fire.)

### **7.2.2 Access to Structures**

Limited access to the community as a whole, and especially to areas such as the north end, also limit the access to structures. Furthermore, there is a need for better signage in many areas to assist emergency personnel (see priority 2 on p. 33). Many turn-around dead-ends lack the requisite 20-foot width for firefighting equipment and such areas need to be widened or modified into a hammerhead. Some roads are very narrow, have overhanging brush and/or large trees close to the road; such roads would be enhanced by targeted mitigation strategies.

### **7.2.3 Extent of Fire Mitigation Treatments**

Following the October 2012 Vallecito Fire, the renewed determination of Vallecito residents to do fire mitigation treatments has been evident. (*See previous sections dealing with the Vallecito clean-up day and the chipper rebate program.*) Additionally, when FireWise of Southwest Colorado tallied the number of volunteer hours expended in 2012 and 2013, a significant number of those hours were expended within this WUI. More efforts are planned – see section 9.1.4 on Proposed Activities.

## **7.3 Protection Capabilities**

### **7.3.1 Description of Road System Accessibility**

See section 6.3.

### **7.3.2 Fire Hydrants, Water Storage Availability**

The Vallecito area (Zone 4) currently has five certified Dry Hydrants:

1. 328 Hummingbird
2. 280 Mushroom Drive
3. 640 Mushroom Drive
4. 858 Mushroom Lane
5. 410 Mushroom Lane

A dry hydrant is being planned for the residents on the east side of the Reservoir and the possibility of another dry hydrant is being explored for the Happy Scenes Water System spring and pump house.

## 7.4 Fire Risk

### 7.4.1 General Risk Level

High. Fire history over the past 20 year has shown this to be true and the current climate shifts to lesser amounts of rainfall and snow will only increase the general risk level of wildfires. The high amount of dead/down fuel in the surrounding forests from decades of fire suppression, including the Weminuche Wilderness (where no treatments are permitted) is another factor upping the risk level.

### 7.4.2 Potential for Lightning-caused Fires

This is very high within our WUI. See Section 1.2 on Fire History.

### 7.4.3 Potential for Human-caused Fires

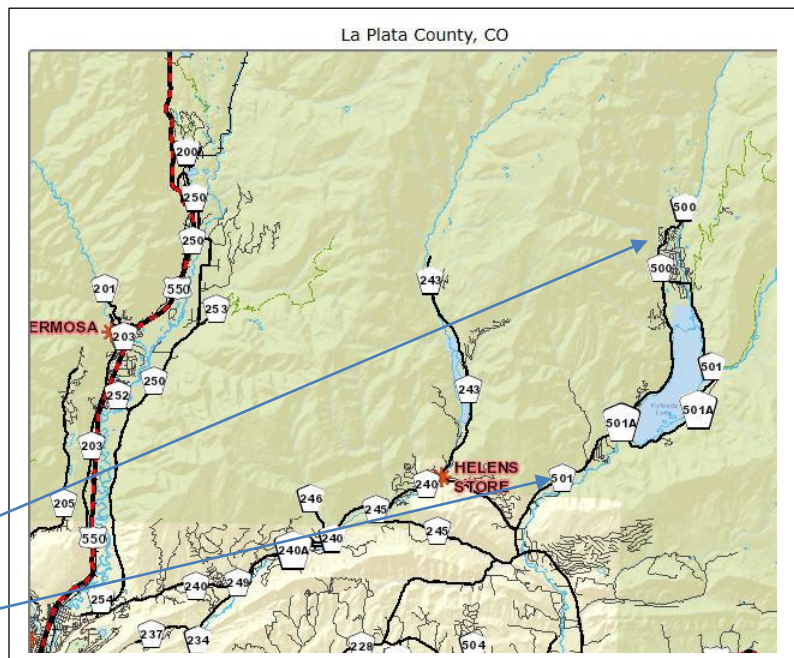
We believe this potential is also high within our WUI. The number of residents and tourists (including campers), especially in the dry summer months when families often enjoy evening campfires, contributes to this potential.

## 7.5 Values at Risk

CSFS CWPP guidelines define values at risk as human and animal life, structures, property and natural resources.

### 7.5.1 Lives

Of the many values at risk at Vallecito, the most important are the residents and their property. House pets are common. The summer population is boosted significantly by the influx of tourists. Ingress/egress to the community depends on CR 501/501A and CR 500; the experience with the Missionary Ridge Fire of 2002 indicated that if roads are compromised and/or closed, designating a “safe zone” will be imperative. The map at right shows CR 500, which is north of the Reservoir and dead ends in the Weminuche Wilderness, and CR 501, the only egress, to the south of the Reservoir. (See map above right; also see Transportation maps in Appendix A, p. 47-50.)





In addition, during the warmer months, much of the surrounding BLM and USFS land is leased to local ranchers who bring up livestock to graze, and it would be impossible to gather and transport all the animals to safety in the event of a large fire.

### **7.5.2 Number of Residences, Other Structures and Density**

In information requested spring of 2014, the Bayfield Post Office, which services the Vallecito community, delivers to 572 residences during “low season” (winter) and to 768 residences during the summer. (See Section 6.2)

In addition to the multitude of beautiful homes, personal property and landscapes valued by our residents, we are a destination location for many visitors. We have many lodges, cabins, restaurants and entertainment venues as well as a marina with many types of boats. Many visitors come for a day or for weeks. Many of our residents earn their living by catering to these visitors. Therefore, in addition to the residential structures and personal property, there is much commercial property and aesthetic value that would be at risk to fire.

There are five parks/campgrounds designated by the US Forest Service around the lake along with numerous points of interest and local parks that attract tourists and residents alike, such as Kokanee Point (a popular fishing spot), Aspen Point, Alan Wyatt Memorial Park, Mountain Utes Lands Park and the Dam Park at the spillway. CR 501A also sports sites for fishing, hunting, hiking and biking as well as 10+ km of groomed seasonal cross-country skiing. The Vallecito Community Events Center at the north end hosts many community meetings as well as events such as weddings, family reunions, and various retreats.

Three Upper Pine Fire Protection District stations in Vallecito provide fire and emergency services to the lake community. The Pine River Irrigation District office, maintenance and supply yard are located just below the Vallecito Dam. A work center for the US Forest Service is located just north of the lake near the intersection of CR 501 and CR 500. Other facilities and structures at risk include Upper Valley Sanitation, a cell phone tower, Grassy Mountain transmitter site, and the hydroelectric generation plant just below the dam and the spillway (see infrastructure map p. 44).

### **7.5.3 Other Economic Values**

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. Potential damage to the road systems and electrical power grid would cause great hardship in addition to costs for repairs and replacements.

Vallecito Lake is a storage reservoir, storing early season flood waters for irrigation of 69,000 acres in primarily La Plata and Archuleta Counties. Post fire mud runoff impacts the storage and effectiveness of the reservoir as a much needed irrigation supply source for farmers and other families downstream.

During the summer and fall, many of the local lodges and outfitters transport horses for guests to use for local day trips and multi-night pack trips. All of this public land that is leased for a purpose and that provides working livelihoods to many residents, constitutes a considerable value at risk in the event of wildfire.

#### **7.5.4 Ecological Values**

Potential impacts of a catastrophic wildfire at Vallecito include burning a significant portion of the forest creating a charred landscape. Wildfire could also cause detrimental soil and slope erosion, adversely affecting soil quality, reducing water permeability, increasing bulk density and removing organic matter. Loss of tree cover due to a severe wildfire would increase susceptibility to erosion and precipitate mudslides, as happened following the 2002 Missionary Ridge Fire.

Density of the ponderosa pine component and suppression of small fires over the past 100 years has increased the downed woody fuels across the WUI area as well as needle and leaf litter depths in areas that did not burn in the Missionary Ridge Fire. Much of the National Forest System lands still contain heavy fuel loading which basically surrounds the community.

Part of the WUI is located in the watershed upstream of Vallecito Reservoir and all is upstream of the municipal water intake for the town of Bayfield. Water originating from the watershed flows into Navajo Lake and the San Juan River, and then into the Colorado River. Introduction of soot and sediment due to a wildfire within the watershed could compromise water quality for Bayfield, Navajo Lake and the Colorado River.

The biological diversity of plants and wildlife would be degraded and result in degradation of the overall ecosystem health. Southwest Colorado is noted for its good air quality; wildfire would negatively affect the air quality of the area during a fire.

#### **7.5.5 Social Values**

Our forest setting is highly valued by the residents. A devastating fire would also change recreational opportunities, alter the local view shed, and affect local cultural and historic resources. In addition to the above, the Osprey nests and Bald Eagle habitats and other wildlife are at risk. The ponderosa pine stands, miles of hiking and bike trails, fishing and recreational spots are cherished values.

The proximity of the Weminuche Wilderness, the abundance of hiking trails in the National Forest and the Wilderness, and the recreational opportunities with Vallecito Reservoir would all be affected by significant fires. This was evidenced even with nearby fires that only caused significant smoke pollution (Bear Creek, Little Sand, West Fork Complex) as tourism took hits during those times. The large Missionary Ridge Fire of 2002 totally shut down the Vallecito Community for that summer season and provided much anxiety as the fire roared up the west side of the reservoir, then up the east side, and then backed down from the Weminuche Wilderness to the north.

### **8. Emergency Management**

#### **8.1 Protection Capabilities and Infrastructure Protection (See infrastructure map p. 44.)**

##### **8.1.1 Upper Pine River Fire Protection District Capabilities**

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 #2 is located on County Road 501, just below the dam and is staffed full time; UPRFPD Station #4 is located north of the Reservoir at Vallecito, just off CR 501.

Upper Pine River Fire Protection District's current capabilities:

- Station One (Bayfield) is manned 24 hours per day, 7 days per week, typically with three firefighters. During our busy season (summer), the staffing level is increased to four if possible.
- Station Two (just below Vallecito Reservoir Dam) is manned 24 hours per day, 7 days per week, with three firefighters.
- Station Four (Vallecito) has one type-one engine, a 2200-gallon water tender and a light rescue truck. It is staffed by four either part-time or reserve status UPRFPD Firefighters living at the north end of Vallecito. UPRFPD is currently working on building living quarters in the upstairs of Station 4; this would be for a residence, not a manned station. A resident station houses an individual that works a normal job and is required to respond to calls in the evenings and on weekends; they are also required to be a fully qualified Firefighter and EMT. Plans are to have two resident firefighters at Station Four by 2015.
- Command Staff responds as well to all wildland calls.
- Currently, in season, UPRFPD's mitigation crews are available to respond (10 – 15 personnel); if and when grant monies dry up so does the UPRFPD's mitigation crew.
- Initial response for a wildland fire would be one Type 3 Engine and one water tender from each of these stations. A Type 3 Engine is a wildland suppression engine.
- Mutual aid from both Los Pinõs and Durango Fire Rescue is also called for at the time of a page; it is better to have resources coming as they can always be cancelled if they are not needed.
- Office of Emergency Management is also notified immediately.
- During wildland season the Command Staff have Tuesday and Thursday conference calls with all of the different agencies in the three counties (La Plata, Archuleta and Montezuma Counties). During these calls agencies go over all available resources in the three counties, all of which are available to UPRFPD.
- All of Upper Pine's reserve staff are paged out as well.

The goal is and has always been to attack all wildland fires with a quick aggressive attack. This community is very fortunate in that UPRFPD has a very good relationship with all of the various agencies involved with wildfire suppression. Also, UPRFPD is very active in sending out personnel and fire apparatus to fires all over the county – providing invaluable experience for UPRFPD firefighters.

### **8.1.2 Inventory of Fire Protection Resources**

An air tanker base is located at Durango – La Plata Regional Airport and additional aerial wildfire support can be provided by several nearby initial attack helicopters. In 2014, the State of Colorado improved their wildfire suppression capability with the addition of two multi-mission fixed wing aircraft that will provide intelligence on new fires within 60 minutes of the first report, three helicopters that can transport helitack crews and drop water (two Type 3, one Type 2), and two additional Single Engine Air Tankers (for a total of four SEATs). They hope to add two large air tankers in 2015.

In September 2014, the UPRFPD Board unanimously approved a recommendation to end use of volunteer firefighters by December 31. As of January 1, 2015, volunteers who qualify could become part-time paid firefighters; UPRFPD is interested in training CERT team volunteers under the FEMA guidelines. In addition to the agency resources previously described, we believe that the community would respond to assist agency personnel as needed and useful, as they did during the 2002 Missionary Ridge Fire.

### **8.1.3 Local Wildland Fire Management Policies**

Other than as previously described, we know of no additional relevant fire management policies. Authority and responsibility for managing vegetation on private property within the WUI rests with the residents.

### **8.1.4 Training Resources and Needs**

La Plata County is planning a mitigation workshop. We need this training on “how-to” items, how to dispose of slash in particular. Although we have several residents (in addition to UPRFPD personnel) trained in property risk assessments, this information needs to be more widely available and if/when more HIZ workshops become available, we need to recruit more residents to participate.

Resources needed include:

- reflective signs for each property (and a way to make these available to every resident)
  - phone trees for each grid section and a plan for putting emergency information into action
  - slash disposal options, such as was done summer 2014 where residents could pile slash below the dam for processing by UPRFPD, or renting a curtain burner (a summer 2014 grant allows for two weeks rental of curtain burner)
    - more avenues for education of residents
    - UPRFPD FEMA certification training
    - more drafting sites for water; DOLA is funding engineering and design on the old fire station site on CR 501 to provide more water for firefighting
- [Note: See also Section 9.1 on Education]

### **8.1.5 Mutual Aid Agreements – AOP, County, Cooperative, EFF, Statute**

If the wildfire exceeds the capabilities of UPRFPD, it would be immediately managed under the La Plata County Annual Operating Plan (AOP) with the help of surrounding counties, federal land management agencies, Colorado Division of Fire Prevention and Control (DFPC), and other Fire Protection Districts in SW Colorado.

The County, DFPC and federal land management agencies, both approve and operate under the guidelines set forth in an AOP) for wildfire. This plan is acknowledged by the Upper Pine River Fire Protection District, the FPD with jurisdiction in La Plata County. The AOP addresses how the participating parties will work together in regard to wildfire prevention, preparedness, response, and payment. Included in the plan are provisions for mutual aid between agencies, significantly enhancing initial and extended attack capabilities through the rapid convening of fire protection resources for managing a wildfire.

The La Plata County AOP is tiered to the “Agreement for Cooperative Wildfire Protection in La Plata County” between La Plata County and the Colorado Division of Fire Prevention and Control. This in turn is tiered to the 2011 “Colorado Statewide Cooperative Wildland Fire Management and Stafford Act Response Agreement” between the federal resource management agencies and FDPC.

La Plata County is a voluntary member of the Colorado Emergency Fire Fund (EFF), which helps the County manage and pay for wildfires that exceed its ability to control. The fund is comprised of annual

fees assessed to each member county. The County must request EFF designation for an incident that meets EFF criteria, and then the Director of DFPC, or his designee, must approve it.

### **8.1.6 Evacuation Information**

Vallecito homeowners should work with the La Plata County Emergency Manager to develop an Emergency Evacuation Plan for the community. The plan should include wildland fire safety zone locations, standard evacuee assembly points, communication telephone trees and management action points. Residents should be offered a general emergency situation safety awareness session annually to update emergency communication trees, evacuation routes and gathering points.

Each resident is asked to develop their own family emergency plans. Since family members might be separated when an emergency occurs, designate someone NOT local as a common contact person. Prepare a sign to post when the last person leaves the residence, indicating that all persons and pets have been evacuated.

Anyone needing special help in an evacuation, such as those with disabilities, oxygen requirements, or neighbors with significant numbers of livestock, etc., should register with Upper Pine River Fire Protection District and volunteer their specific information and needs for evacuation situations. To register, call the Administration Office (884-9508) or email Roy Vreeland, Deputy Chief of Support Services: [rvreeland@upperpinefpd.org](mailto:rvreeland@upperpinefpd.org).

When conditions are present that will be a direct threat to life and property or which may cause extended loss of services including ingress and egress or emergency services, an evacuation notice will be issued. An evacuation notice should be followed immediately. Roads into the affected area may be closed. Evacuation notifications will be issued by either UPRFPD or by the LPC Sheriff. Both evacuation and pre-evacuation notices will be issued through Reverse-911 (a public safety communication system that allows authorities to notify residents in a defined geographic area in emergency situations; weather radios can also issue emergency notifications), door to door if possible, and through local media and department outlets. The notice will be issued with who is issuing the notice, the issue prompting the notification, suggested action and how to get additional information or emergency assistance. In the event of an evacuation, information will be given on routes open or closed and the location of unification/evacuation centers where you can get assistance and inform emergency personnel how to notify you of updates or find the unaccounted-for.

If conditions allow for time to prepare, a pre-evacuation notice will be issued to allow a limited amount of time to prepare for evacuation. Use this time to act on your personal evacuation plan. If assistance will be needed to transport yourself or another member of your household, ensure authorities are notified even if you have pre-registered with UPRFPD or 911 systems (see above).

## **9. Mitigation Action Plan**

In order to develop a mitigation plan, the threats and hazards should be identified. This will help set purpose and importance of this CWPP, identify areas dependent on others and prioritize mitigation efforts. Fire is the hazard addressed here and these are the likely effects:

- It will affect the health and safety of residents
- May trap residents due to single access/egress
- Damage habitat and natural resources

- Damage watershed
- Damage economy

## **9.1 Education and Community Outreach**

### **9.1.1 Audience**

We hope to reach a high percentage of the entire Vallecito community, both full-time and part-time residents, homeowners and renters, businesses (lodges and RV Parks, restaurants, realty offices), local homeowner associations and water boards, and even tourists passing through. Vallecito organizations we are targeting include the Vallecito Church (which has hosted our neighborhood ambassador meetings), Vallecito Chamber of Commerce, Vallecito Lake Council/Homeowners, Vallecito Service League, and the Vallecito Sporting and Conservation Association. In addition we are working with various agencies such as PRID/USBR, USFS, BLM, LPC, CSFS, and of course, FireWise.

### **9.1.2 Methods**

Three priorities were the focus for 2013 and 2014: preparing a “Go Bag” in the event of evacuation orders and having an evacuation plan (including contacting a designated relative that is not local), listing cell phones with the emergency notification system, and doing initial mitigation on private properties. This focus was apparent in ambassador meetings, a meeting with County Commissioners, a booth at the annual Arts & Crafts Fair of the Vallecito Service League, a PowerPoint presentation at the Annual VLC/Homeowners’ meeting, and other presentations. The August 2013 and 2014 Clean-up Days and Chipper Rebate program have already been mentioned. The private property risk assessment program is ongoing. More educational efforts are being planned (see 9.1.4 below).

Residents are encouraged to consider the following “what if” scenarios:

- What if fire occurs on or near Ellington Lane?
- What if fire occurs on CR 501 corridors?
- What if fire affects the dam?
- What if fire affects the vacation population?
- What is the difference in threat from burned vs unburned vs heavy regrowth, etc.?

### **9.1.3 Current Activities**

Emphasis was placed on the three priorities (see sec. 9.1.2 above) in 2013 and 2014. In addition, there were monthly meetings of Vallecito residents and agency representatives from January 2013 to January 2014 to work on eliciting the information needed by the community for a CWPP. Significant writing has been going on, extending to the present, in order to have a draft CWPP ready to present to the Vallecito Community in June 2014, followed by a community comment period (ending July 31, 2014), followed by an agency comment period through September.

The Vallecito Ambassadors met once every two months February 2013 through June 2014 to discuss the task of fuels reduction and making the community a safer place. Education of the community has also been occurring as various residents have attended FireWise meetings in Durango, several workshops

(previously mentioned), sent letters/emails to neighbors and distributed FireWise materials. Education will be an ongoing activity.

**9.1.4 Proposed Activities**

The following mitigation activities and treatment recommendations are listed by very rough priority for the Vallecito residents and lot owners, Upper Pine River Fire Protection District, USFS, and LPC.

Note: Several proposed activities have elaborations below chart; see corresponding priority numbers

Group	Pri- ority	Activity/Action	Cost Estimate	Activity Period
Vallecito Homeowners	1	Acceptance of CWPP by Vallecito Community and agencies; preparation by Marilyn McCord <b>Mostly DONE</b>	5 copies, pd by FW	2014
Vallecito Ambassadors; Steve Walb	2	Achieve installation of reflective signs for all homes in assigned area; ambassadors distribute forms (or signs)		Summer 2015
Melody Walters and Vallecito residents	3	Initiate a community newsletter. Promote chipper rebate program, reflective signs, May 3 event, slash, etc. Submit items to Melody: <a href="mailto:vallecitonews@gmail.com">vallecitonews@gmail.com</a> <b>DONE</b>	Funded by Vallecito res & bus	May to August, 2014
Vallecito Ambassadors / Steve Walb	4	Facilitate a "FireWise Action Day"; door-to-door delivery – bag of brochures and info <b>Mostly Done</b>	continuing	May 3, 2014
Vallecito Ambassadors	5	Organize and structure our email and phone tree contact lists	No cost	Summers 2014-15
Vallecito Ambassadors; Steve Walb	6	Develop water system to incorporate at least one fire hydrant into some of the line repair/replacement work planned; cost shown incremental to work already proposed. <b>In progress</b>	\$10,000	2014 - 16
Butch Knowlton/ La Plata County	7	Complete Evacuation signage placements – <b>Mostly Done</b>	County donated 4	Spring 2014
Butch Knowlton/ Vallec. Ambassdr	8	Develop Hazard Evacuation Plan		Summer 2015
Marilyn McCord	9	Apply for Kick-Starter grant to help fund slash project (#10) and demo area (#11) <b>DONE</b>	No cost	July 2014
Justin/ Steve W/ Pam W, Ken C	10	Arrive at and execute plan for slash removal; also coordinate slash activity with Vallecito Clean-up Day in August <b>DONE</b>		Summer 2014
Pam Wilson, Fire Smart, Volunteers,	11	Execute a demo area at CR 500/501 intersection and north to private property; CSFS grant + volunteers to remove dead/down slash, limb as possible <b>DONE</b>	Grants: \$2500 + \$1080	Summer 2014
Justin, Travis L, Vallecito Volunteers, etc.	12	Rehab watershed above Chain Lakes, improve turn-out. Possible firebreak behind homes on west side of CR 500 to Chain Lakes		As \$ and schedule permit



Justin, Butch, Volunteers, Army Corps of Engrs	13	Create a north crossing to ford Vallecito Creek to be used only if necessary due to wildfire cutting off other egress	FEMA / or other grant	2015 - 2020
Russell Brown, East Lake Homeowners, UPRFPD, USFS	14	Complete two East Lake projects (see 14A, 14B below)		
Melody Walters, Marilyn McCord	15	Create FireWise display for local businesses with DVDs to borrow and materials to take home <b>DONE</b>	Donations	Summer 2014
B. Crowley, S. Bjerke, M. Carter	16	Continue Risk Assessments for private properties <b>Partially Done; continuing project</b>	No cost	2013 and continue
Residents & Volunteers	17	Perform mitigation on road easements along Faith Ln, Hope, Trust; work with willing homeowners for further mitigation	Grants + 50% mtch	2014-2015
Residents & Volunteers	18	Explore ways to accomplish mitigation work on conservation easements in Vallecito area, prioritized according to their potential to slow a wildfire and protect nearby homes.		2015-2018
USFS, others	19	Upgrade FS 603 (old 501A) on east side of lake to better allow evacuation options		
USFS	20	Encourage the Forest Service to do a number of pro-active mitigation projects as described in #20 below		2015 - 2020
UPRFPD	21	UPRFPD intends to apply for mitigation money for the Vallecito watershed or Federal Stevens grants for Vallecito if USFS does prescribed burns on USFS land adjacent to homeowners.		2016
Vallecito Residents	22	Encourage residents to consider fire-resistant building materials when building new homes or remodeling existing homes.		2014 - On
Steve Walb, Marilyn McCord	23	Apply for FireWise Community status	\$2/capita	Winter 2014-15

See p. 35 map for Location of Proposed Activities; map numbers correlate to those above.

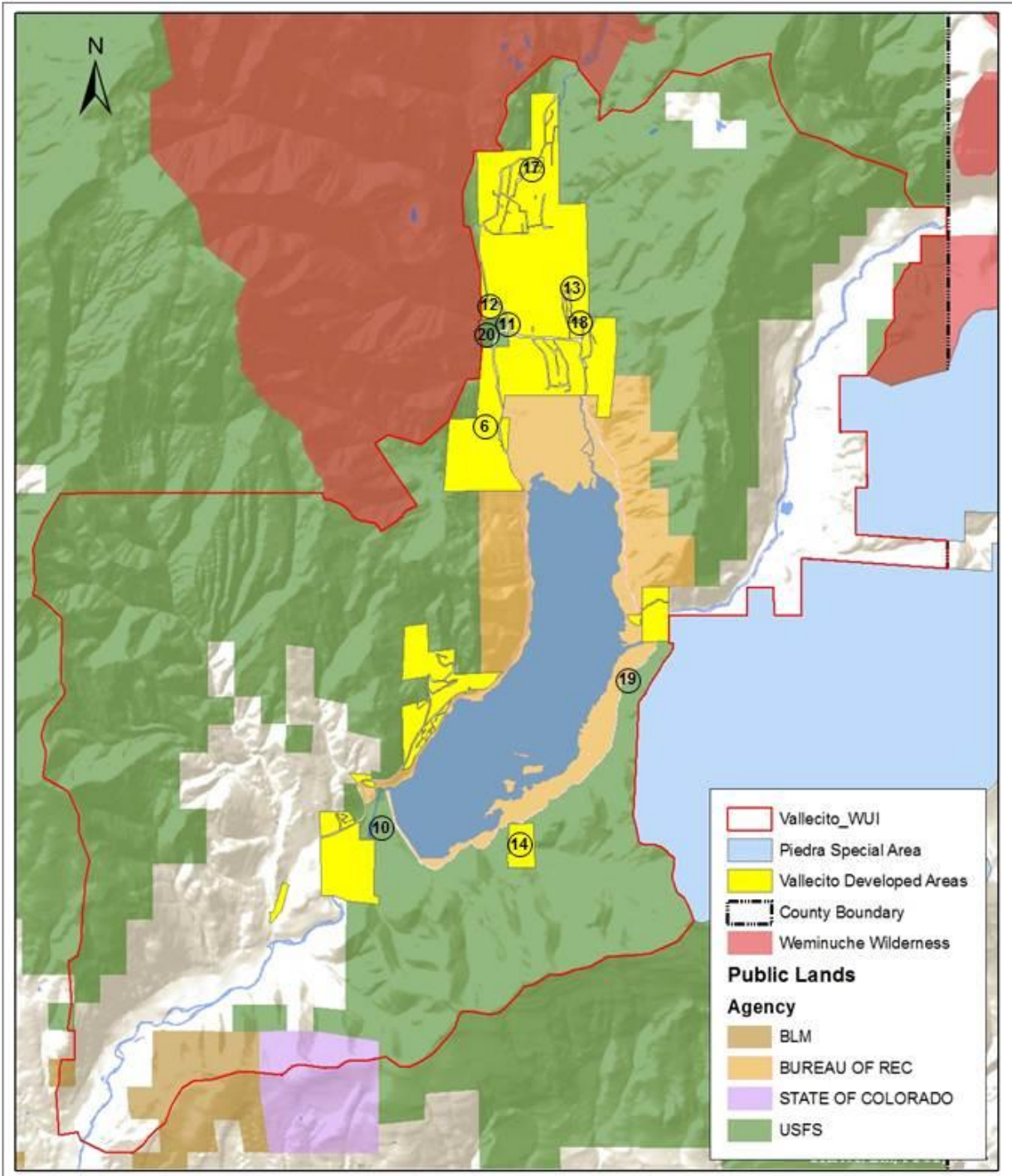
### #6 (SEE CHART ABOVE) DRY HYDRANTS ON HO HUM DRIVE

Pipeline replacement as part of an ongoing water system upgrade project on Ho Hum Drive is nearly complete as of Fall 2014; pipe size has been increased to allow inclusion of a hydrant, the first of three intended in a long range project for this closed water system.



### #14A (SEE CHART ABOVE) INGRESS/EGRESS ELLINGTON LANE INTO EAST LAKE COMMUNITY

**Danger or Need:** There is only one entrance into the east Vallecito development containing 10 private homes. The road, Ellington Lane, crosses National Forest System lands before reaching the private property where these homes are located. Ellington Lane is a one-lane gravel road that is (cont. p. 36)



General Location of Proposed Activities

Reference Section 9.1.4

lined with many dead and down trees. This heavily fueled area poses a risk to property owners but also to fire and emergency services which may need access during a fire. The danger of fire along this section of road could trap emergency personnel and residents without the ability to escape. This danger may even prevent emergency personnel from entering the development due to this danger.

**Scope of Project:** Mitigation work would be performed on both sides of Ellington Lane for the length of Ellington Lane that is on National Forest System lands. The goal is to provide a low fuel zone on both sides of the road that would allow safe passage along this section of road in the event of fire. Thinning of hazard fuels on both sides of the road is recommended with priority given to areas below the road. As the fuel load is heavy in both the under and over story, thinning would need to extend 50 feet below the road and 20 feet above so that any fire has ample opportunity to reduce its intensity as it approaches the road. The cost to complete this work would be approximately \$8,000 - \$11,000 if done by local contractors.

#### **#14B (SEE CHART ABOVE) EAST LAKE COMMUNITY EMERGENCY WATER SUPPLY**

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**Danger or Need:** In the event of fire in this development, water would be hauled in on a tanker truck to supply firefighting equipment. In the event that a water tanker is not available or cannot make it in to where the apparatus is located, an alternate source of water may be required.

**Scope of Project:** Alternate water sources have been identified in the development. There are two ponds on private property as well as the small local water system available for use in case of need. Adapters required to connect to the water system piping have been identified and a suitable location to connect to the piping has been picked by the fire department. The adapters and valves will be purchased and installed at the appropriate location. The location of the water system connection and location of the water ponds will be identified on the fire department maps in the event of an emergency where the water is needed. The cost for the hardware is less than \$50.00 to complete the project and will be installed by the property owners.

#### **#20 (SEE CHART ABOVE) US FOREST SERVICE REQUESTS**

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**Danger or Need:** Fire behavior modeling showed the two areas of greatest concern for wildfire damage were between the north end of the reservoir and the Wilderness boundary and south of the lake near the Coolwater/Los Pinos subdivision. The primary concern on the north is the density of housing and lack of egress points and to the south being that a fire there could block access to Vallecito. There is also concern for the housing area on the southeast side of the reservoir.

**Recommendations:**

- 1) Encourage the Forest Service to burn the slash piles along CR 501 just west of the Forest Service Work Center and continue with their mitigation actions along CR 501 up to the junction of CR 500 and then north to improve visibility and safety. (This is planned as soon as snow comes winter 2014-15.)
- 2) Encourage the Forest Service to continue mitigating northwest of the County right-of-way at the CR 500/501 demo site.
- 3) Encourage the Forest Service to consider creating a buffer zone of 500-1000 feet around the housing area on the southeast side of the reservoir.

- 4) Encourage the Forest Service to manage fires in the old Missionary Ridge burn area to clean up standing dead and down debris and reduce shrub density, but to limit the size of the fire and/or take suppression actions to keep the fire at least ½ mile from nearby homes.
- 5) Encourage the Forest Service to consider a prescribed burn on the east side of the reservoir where the restoration treatment occurred.
- 6) Encourage the Forest Service and Pine River Irrigation District (PRID) to do a prescribed burn in the open ponderosa forest on the south side of the dam.
- 7) Encourage the Forest Service to consider thinning the forest along the Middle Mountain Road.

[Note: USFS has identified fuel treatments in the area as a priority and Vallecito is to be included in their next landscape planning effort. Exact locations will be identified in annual landscape planning meetings and will involve community members as well as other land managers, such as CSFS, LPC, UPRFPD, PRID, etc.]

### **9.1.5 Resources Needed**

To complete community enabled projects, the community will need volunteers with rakes, gloves, loppers, wheelbarrows, pick-up trucks, chainsaws, etc. Locations to dispose of slash will also be needed. For the creek crossing, engineering, large equipment to move rocks, etc., and concrete will be required. This project will also require working with the US Army Corps of Engineers.

## **9.2 Fuels Reduction**

### **9.2.1 Strategies and Methods**

We will encourage residents to reduce fuels on their property. Many residents are already involved in doing mitigation. We will also encourage fuels reduction projects in specific neighborhoods (such as along Faith Lane) and help recruit additional volunteers and resources. It will be very important to then provide options for slash disposal. June 2014, PRID, USBR and UPRFPD collaborated to provide a two-week window for residents to dispose of slash in a pile below the dam – 5 ½ days per week. The community clean-up day in August 2014 again provided options for slash disposal.

**Prescribed Fire:** Some areas of Vallecito could benefit from prescribed burns. Portions of the 2002 Missionary Ridge Fire burn area within the WUI have significant fuel. “Down woody fuels exceed 25 tons per acre in some locations and loads in excess of 10 tons per acre are common.” Burns in the old Missionary Ridge burn area “would also make the terrain safer for firefighters” (quote from Chris Tipton, USFS, who also suggested possible RX burning along the Lake Eileen Trail).

Ponderosa pine and Gambel oak fuels burn readily under prescribed fire conditions but are also very consistent and predictable. Prescribed fire removes a large portion of the litter on the forest floor which lowers the intensity and slows the spread of wildfires. Prescribed fire top-kills the Gambel oak, reducing or eliminating ladder fuels, while pruning the lowest branches of the ponderosa pine trees. These factors make the use of prescribed fire a very effective tool for fuel reduction and wildfire mitigation within Vallecito, where lot size is sufficiently large and slope is not too great. Prescribed fire is best used in conjunction with mechanical treatments and as a cost effective and ecologically sound method to maintain and enhance treatments over time.

### **9.2.2 Community Partners and Current Treatments**

The Vallecito Lake Council / Homeowners' Association sponsored community clean-up days in August 2013 and August 2014 and that event is likely to continue. PRID, USBR and UPRFPD coordinated a burn pile for summer 2014. UPRFPD now has a chipper available for subdivisions to use; the chipper is free if the subdivision can pay for a fire fighter to attend it. In addition, the Forest Lakes Metro District is exploring options to staff their anticipated curtain burner and allow certain days when Vallecito residents might bring slash to the burner. Additionally, a KickStarter grant was secured for two weeks' use (non-contiguous) of an air curtain burner. FireWise is again sponsoring a chipper rebate program.

### **9.2.3 Current and Ongoing Fuel Reduction Projects**

Fuel reductions projects will be ongoing. Many individual residents are already working to mitigate their properties, such as the pine needle disposal at Blue Spruce RV Park, Ken Carpenter's creation of a shaded fuel break around his tree farm, and individual efforts to cut and limb trees, remove wood from porches, etc. USFS has done major fuels reduction around their Vallecito Work Center and on USFS lands across the road, where many burn piles still await the right conditions for burning.

### **9.2.4 Proposed Fuel Reduction Projects & Implementation Action Plans**

Our proposed projects include several fuel reduction projects: The demonstration project at the intersection of CR 501/500 (#11 in chart above) and the East Lake Community project (#14 above) are examples. The clean-up days also provide an opportunity to again encourage fuels reduction within the Vallecito community and provide various levels of support.

## **9.3 Relevant Policies or Covenants**

As of October 2014, 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 only apply to new developments or undeveloped properties. The County Tax Code does not promote fuels mitigation or penalize the lack thereof.

The State of Colorado has experienced high loss of structures with loss of life in the past few years. The State Legislature enacted CRS §39-22-104(4)(n) in 2008, creating a five year program running from 2009 to 2014, subsequently extended through 2024 by the Colorado Department of Revenue, that allows landowners to deduct a portion of the actual costs of their wildfire mitigation from their state income tax. The program allows each landowner to get credit on state income tax for fifty percent of the cost of wildfire mitigation up to a total of \$2,500. To get the full credit the total mitigation costs must be \$5,000 or greater. Prior to 2012 the work had to be done in accord with an existing Community Wildfire Protection Plan to qualify; this requirement was dropped with the time extension.

Fall of 2014, La Plata County proposed new standards for driveways, including standards for grade, pullouts and turnarounds, drainage, widths, curve radii, etc. New construction should be advised of any implications of the new code (not retroactive) – see County website, <http://co.laplata.co.us>.

## 10. Monitoring and Evaluation

Monitoring and evaluation of outreach, education and mitigation efforts within the WUI are an important part of the CWPP. The monitoring and evaluation actions for the CWPP are shown below along with the responsible group and when those actions should occur.

<b>Monitoring</b>		
<b>Group</b>	<b>Action</b>	<b>Period</b>
FireWise Ambassadors	Annual Report to the Community, FireWise Council of SW Colorado, CSFS	Annually
Vallecito Ambassadors	Survey grid area for mitigation needs	As possible
CSFS	Monitoring of mitigation work status for work covered by grants	As required
UPRFPD, Brian Crowley, Steve Bjerke, others	Continuing Risk Assessments of Properties	As possible

### 10.1 Monitoring

#### 10.1.1 Stakeholders

Every Vallecito resident and landowner is a stakeholder as are tourists to the area. Additionally, the federal agencies managing lands included in the WUI, the downstream water users, insurers, and tax payers who end up paying much of the costs of wildfires (so far) all have a stake in the health and future of the community.

#### 10.1.2 Benchmarks/Objectives

The VCWPP team will seek funds through CSFS and UPRFPD and any other possible avenues for the purpose of implementing this plan. In addition, we will do the following:

- Establish a prevention attitude in the community for wildfire via a community newsletter and presentations at various local meetings.
- Strengthen public understanding and acceptance, and participation in UPRFPD operation and improvement proposals
- Facilitate the ongoing cooperation between the VCWPP Team, UPRFPD, USFS/BLM, CSFS, USBR, and La Plata County officials

#### 10.1.3 Annual Updates of Progress

This CWPP will not just automatically complete itself. Monitoring is a crucial role of seeing the plan through to completion. Considering the values at risk in Vallecito, it will be important to take a reading of the accomplishments on an annual basis. The CWPP Team will revisit the CWPP and associated accomplishments each summer (prior to the annual VLC/HOA meeting, and request input from the residents at this meeting) and make adjustments to the Plan in form of revisions.

#### **10.1.4 Plan for Updating and Continued Community Involvement**

A monthly Vallecito Newsletter was published May - August 2014; off-season TBD. Melody Walters has taken responsibility for writing and publishing. In addition to FireWise tips, content included a Calendar of Lake Events, Trail Guides (with a write-up on a specific trail each issue), PRID fees info, Marina info, etc. There was an opportunity for locals offering services (snow shoveling, wood chopping, errand person, child/pet care, etc.) to advertise. There was space for local meetings, fire information, raffles being held including information on tickets, etc. A photo of the month included things seen in the area, scenery, wildlife, events, etc.

Although the newsletter provided information for seasonal visitors as well, the focus was on local news unless something really major occurred close by. Contributions from the community were welcomed. An email account was created specifically for submissions of photos, news ideas, letters to the editor and general information at: vallecitonews@gmail.com. The 2014 editions were mass-mailed to all residents; extras were placed at the various lodges and commercial establishments. Such future newsletter efforts would be dependent on adequate funding.

### **10.2 Evaluation**

#### **10.2.1 Lessons Learned**

FireWise Ambassadors, with the assistance of the Vallecito Ambassadors, will create an Annual Report listing "Lessons Learned" from fuels mitigation projects and activities over the preceding year.

#### **10.2.2 Measure of Progress**

This remains to be done as the community progresses toward its FireWise and Fire Adapted Community goals. From [www.fireadapted.org](http://www.fireadapted.org) : "A Fire Adapted Community incorporates people, buildings, businesses, infrastructure, cultural resources, and natural areas into the effort to prepare for the effects of wildland fire. This website offers information and specific actions you can take, no matter what your role, to reduce your risk to the next wildfire." (See references p. 67)

We will consider volunteer hours, possible increase in homeowners' property values due to mitigation, ease of acquiring insurance, visual appearance of neighborhoods, attendance at meetings, participation in Vallecito Clean-up Day slash removal, participation in chipper rebate program, continuing participation in property risk assessments, dialog with members of FireWise of Southwest Colorado and Upper Pine River Fire Protection District, etc.

#### **10.2.3 Plans for Revision and Updating of CWPP**

UPRFPD will annually review the Vallecito CWPP and measure progress by degree of accomplishment of mitigation benchmarks. Homeowners will update the CWPP at least every 5 years.

#### **10.2.4 Celebrations**

To Be Decided.



## 11. Glossary

**basal area:** (a) The cross-sectional area of a single stem, including the bark, measure at breast height (4.5 feet above the ground). For example, the basal area of a tree 13.5 inches in diameter at breast height is about 1 square foot. Basal area = 0.005454 times diameter squared. (b) of an acre of forest: The sum of basal areas of the individual trees on the area. For example, a well-stocked pine stand might contain 70 to 90 square feet of basal area per acre.

**canopy:** The foliage formed by the crowns of trees in a stand.

**defensible space:** An area around a structure where fuels and vegetation are treated, cleared or reduced to slow the spread of wildfire towards the structure.

**diameter at breast height (dbh):** The diameter of a stem of a tree at 4 ½ feet above the ground.

**downed fuels:** The accumulated woody and vegetative material on the forest floor from leaf/needle fall, natural pruning and breakage that serves as fuel for wildfire.

**ecosystem:** A spatially explicit, relatively homogenous unit of the earth that includes all interacting organisms (Plants, animals, microbes) and components of the abiotic environment within its boundaries. And ecosystem can be of any size: a log, pond, field, forest, or the earth's biosphere.

**fuel loading:** The oven-dry weight of fuel per unit area.

**ladder fuels:** Combustible material that provides vertical continuity between vegetation strata and allow fire to climb into the crowns of trees or shrubs with relative ease.

**litter:** The surface layer of a forest floor that is not in an advanced stage of decomposition, usually consisting of freshly fallen leaves, needles, twigs, stems, bark, and fruits.

**lop and scatter:** A hand method of removing the upward branches from tips of felled trees to keep slash low to the ground; used to increase rate of decomposition, lower fire hazard, or as a pre-treatment prior to burning.

**sapling:** A usually young tree larger than a seedling but smaller than a pole.

**shaded fuelbreak:** A strategically located strip or block of land (of varying width depending on fuel and terrain) in which fuel density is reduced, thus improving fire control opportunities. The stand is thinned and remaining trees are pruned to remove ladder fuels. Most brush, heavy ground fuels, snags and dead trees are removed and an open park-like appearance established.

**silviculture:** The art, science, and practice of establishing, tending, and reproducing forest stands of desired characteristics. It is based on knowledge of species characteristics and environmental requirements.

**slash:** The residue of treetops and branches left on the ground after logging or accumulating as a result of storms, fire, girdling or delimiting.

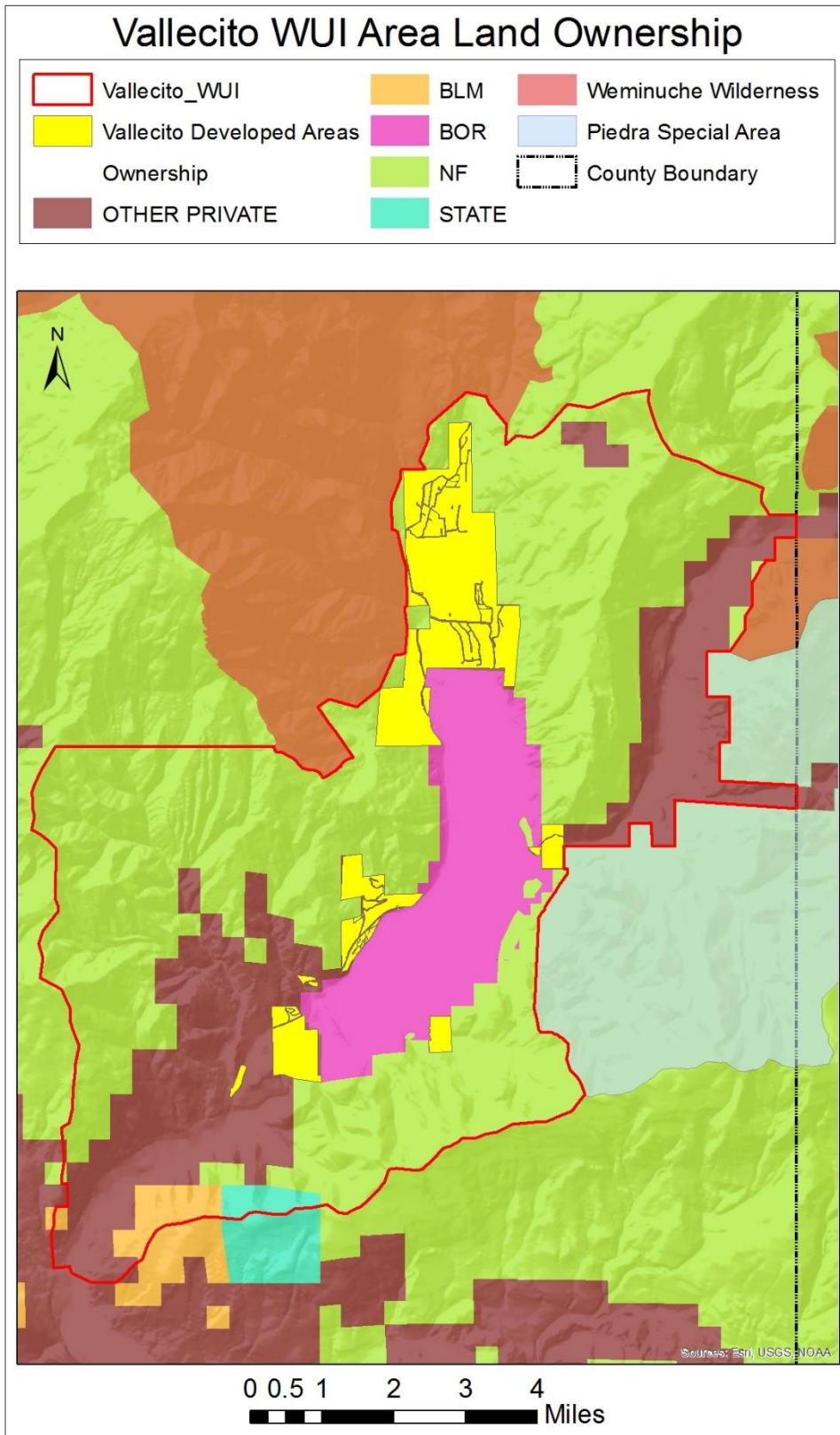
**snag:** A standing, generally unmerchantable dead tree from which the leaves and most of the branches have fallen.

**stand:** A contiguous group of trees sufficiently uniform in age/class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit.

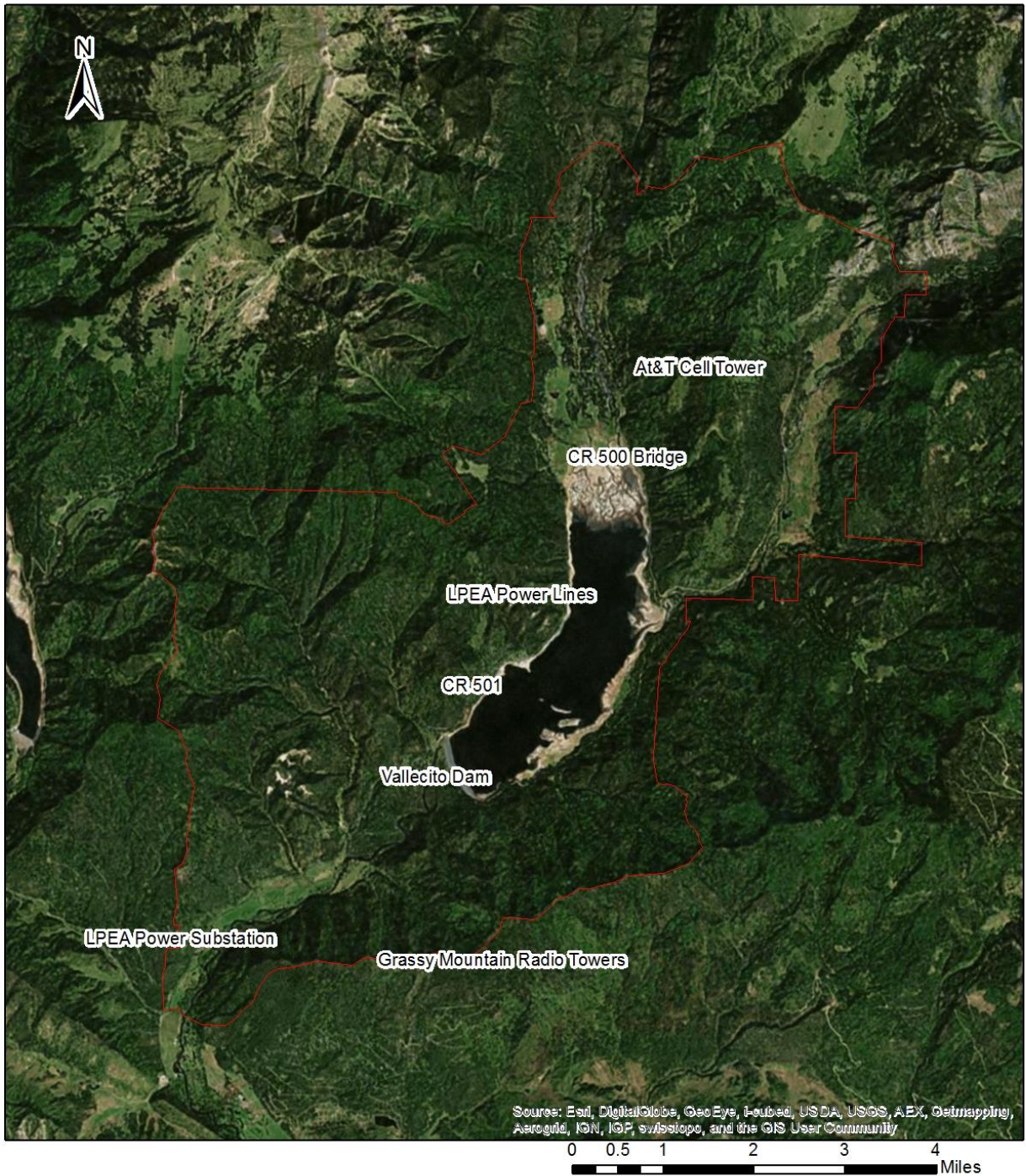
**thinning:** A cultural treatment made to reduce stand density of trees primarily to improve growth, enhance forest health, or recover potential mortality.

**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.

**Appendix A: Public Lands, Vegetation, Burn Severity, Infrastructure, Transportation, WUI Models**

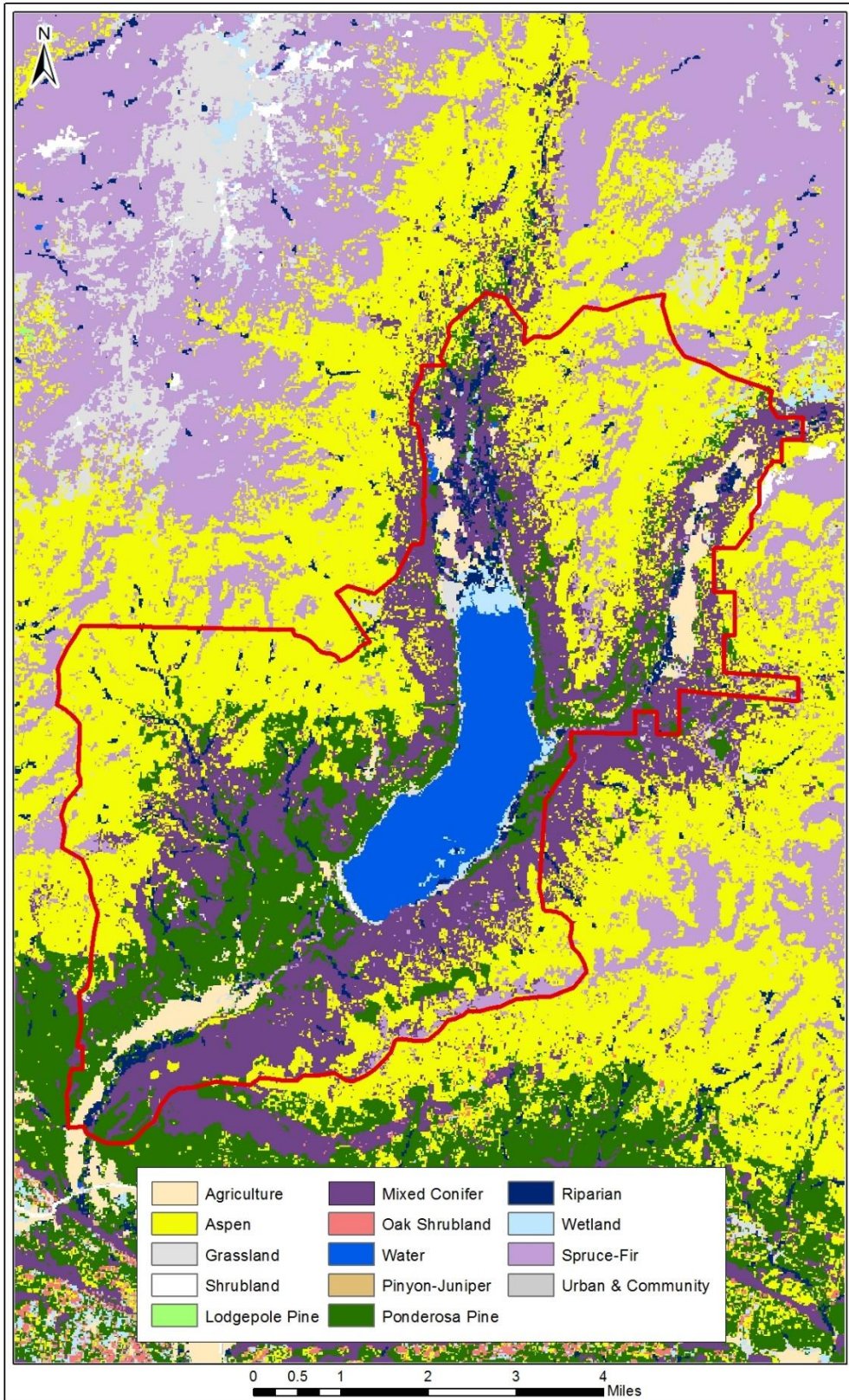


## Location of Infrastructure at Vallecito





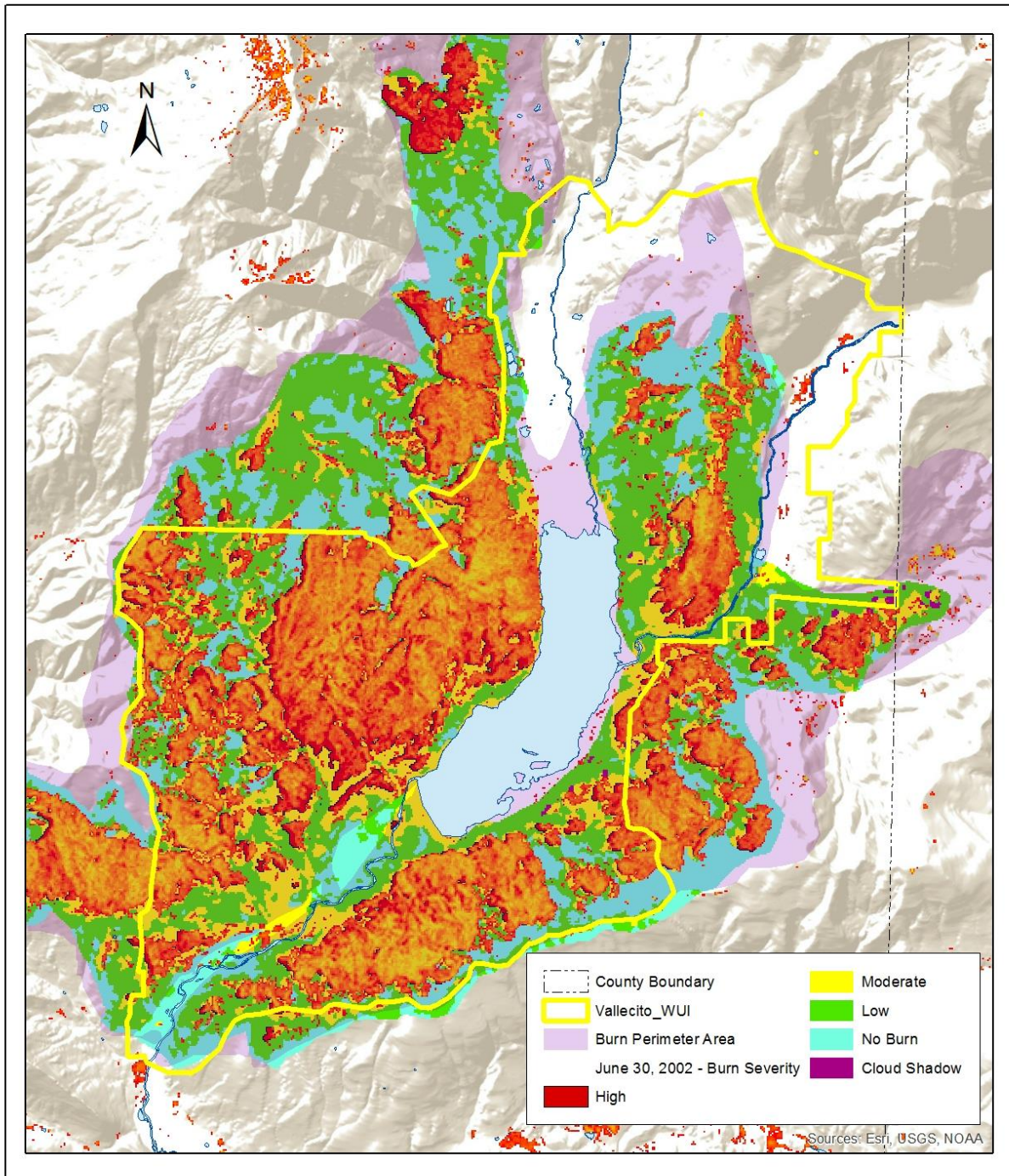
## Vallecito WUI Area Vegetation Map



**CO-WRAP** is a web-mapping tool that provides access to statewide wildfire risk. This map for our WUI shows Vegetation Types. (See: [www.coloradowildfire.com](http://www.coloradowildfire.com))

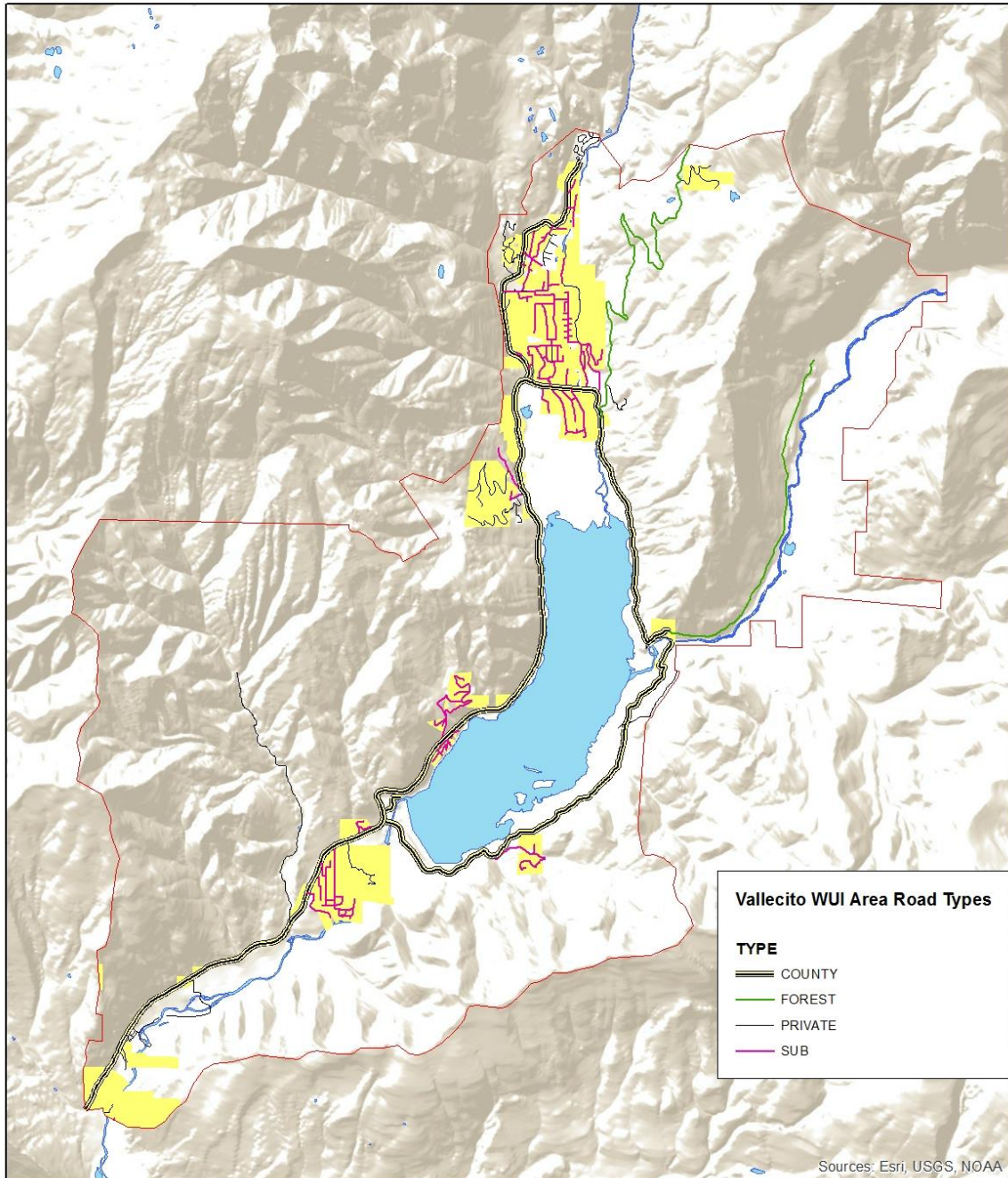


# 2002 Missionary Ridge Fire Burn Severity at Vallecito



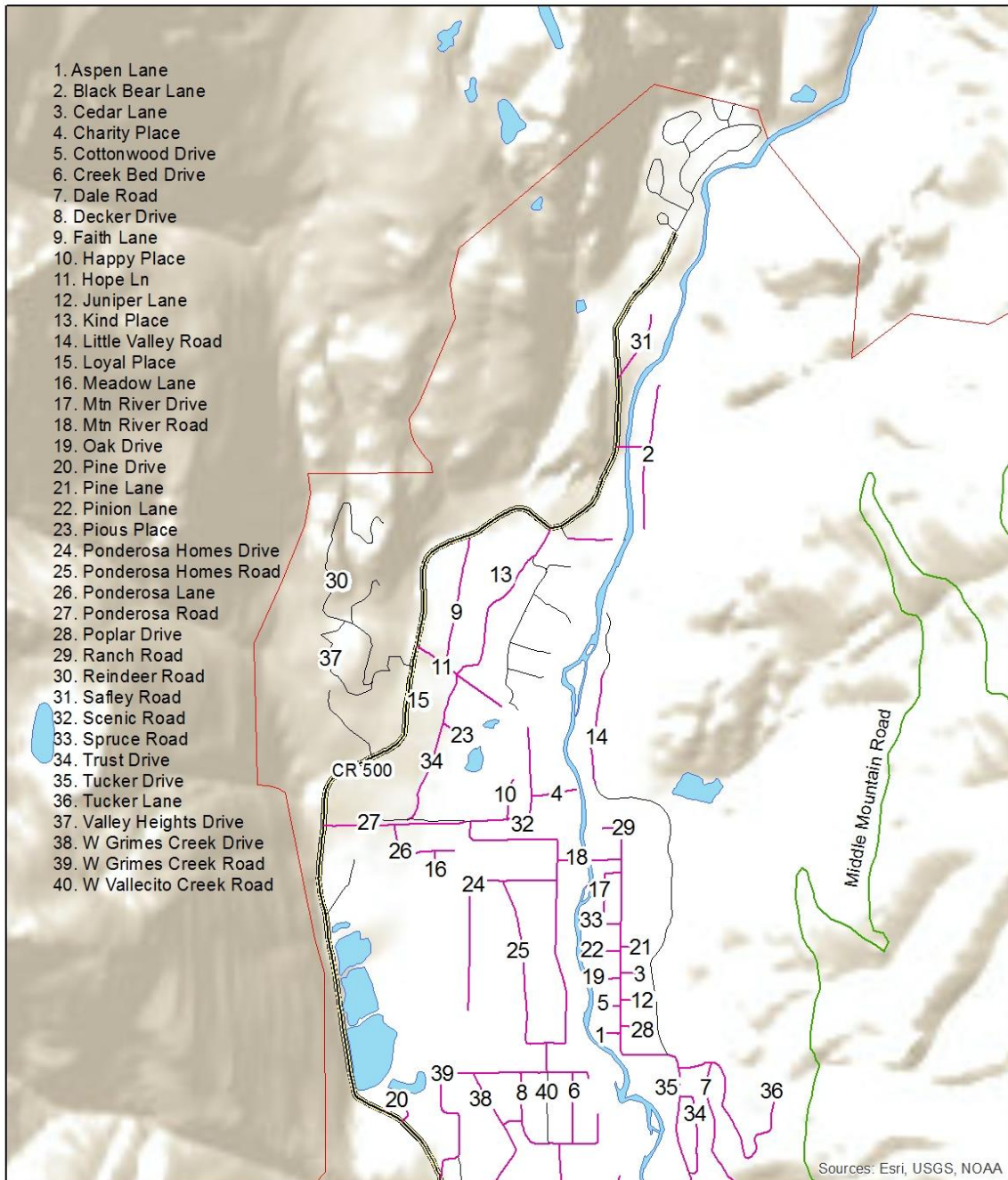


## Vallecito Transportation Overview

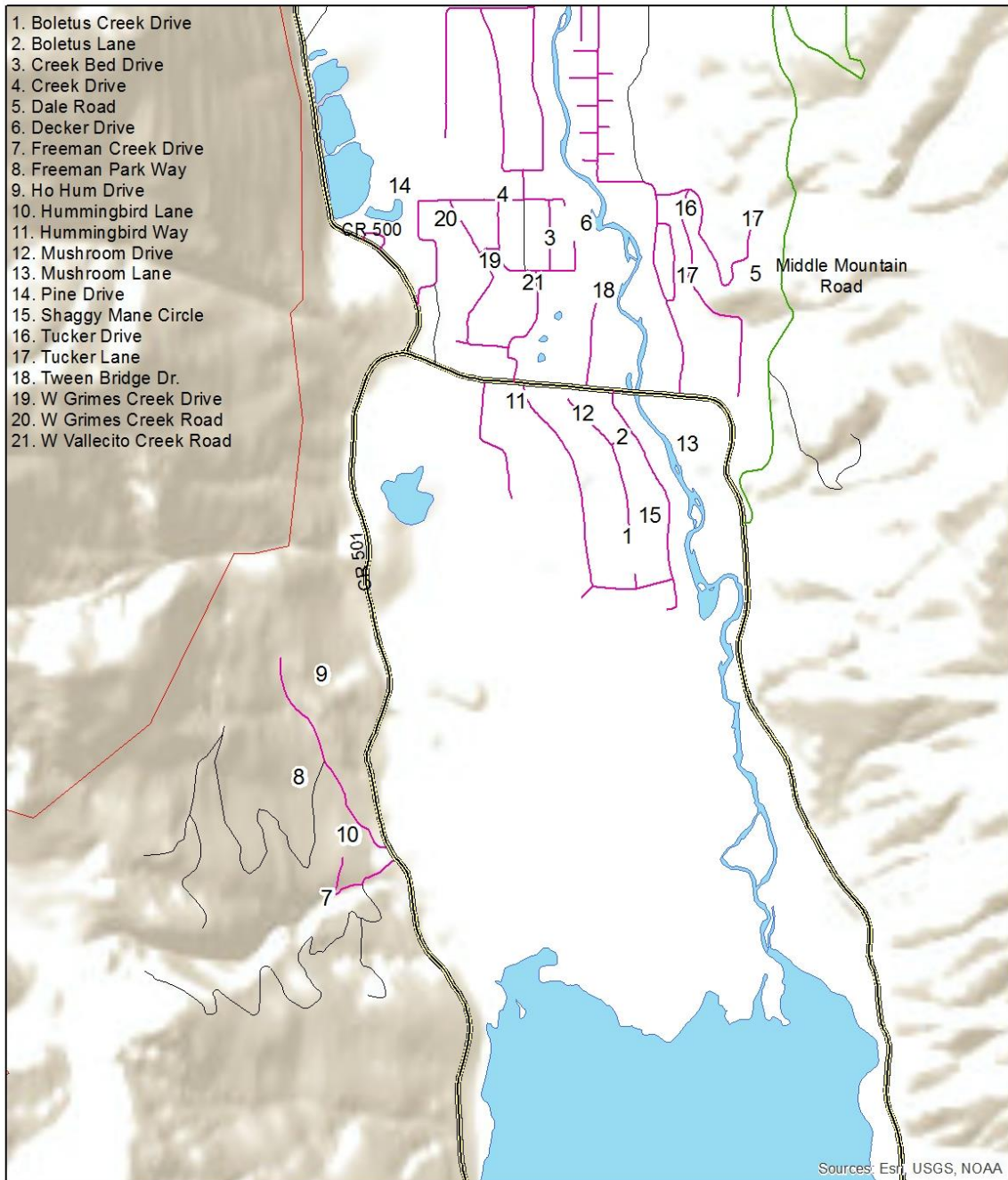




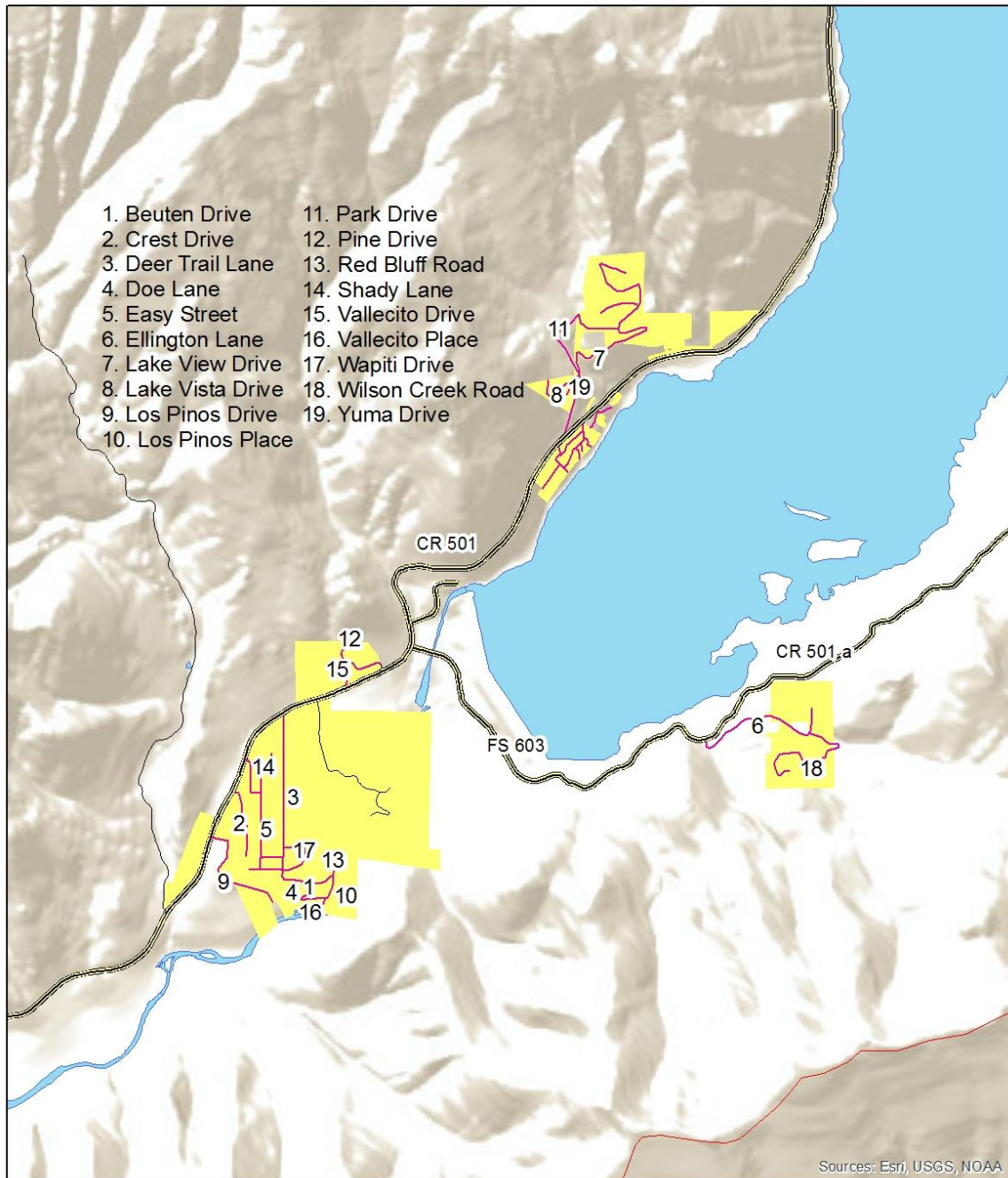
## Vallecito North Transportation I



## Vallecito North Transportation II



## Vallecito Transportation South





## Fire Behavior Model Overview

The FlamMap fire mapping and analysis system ([Finney 2006](#); [Stratton 2006](#)) is a PC-based program that describes potential fire behavior for constant environmental conditions. Wildland fuels along with topography are represented by a landscape file which consists of individual cells or pixels that contain information about fuels and topography for that pixel. FlamMap permits conditioning of dead fuel moistures in each pixel of the landscape file based on slope, shading, elevation, aspect, and weather. Live fuel moistures are held constant. A wind value (speed, direction) is then applied across the landscape and fire behavior is calculated for each pixel. Fire behavior calculations include surface fire spread ([Rothermel 1972](#)), crown fire initiation ([Van Wagner 1977](#)), and crown fire spread ([Rothermel 1991](#)). The resulting outputs include flame length, rate of spread and crown fire activity. Because fire behavior is calculated for each pixel within the landscape file independently, FlamMap does not calculate fire spread across a landscape. It represents a snapshot in time of potential fire behavior within each pixel.

### Vallecito CWPP FlamMap Analysis

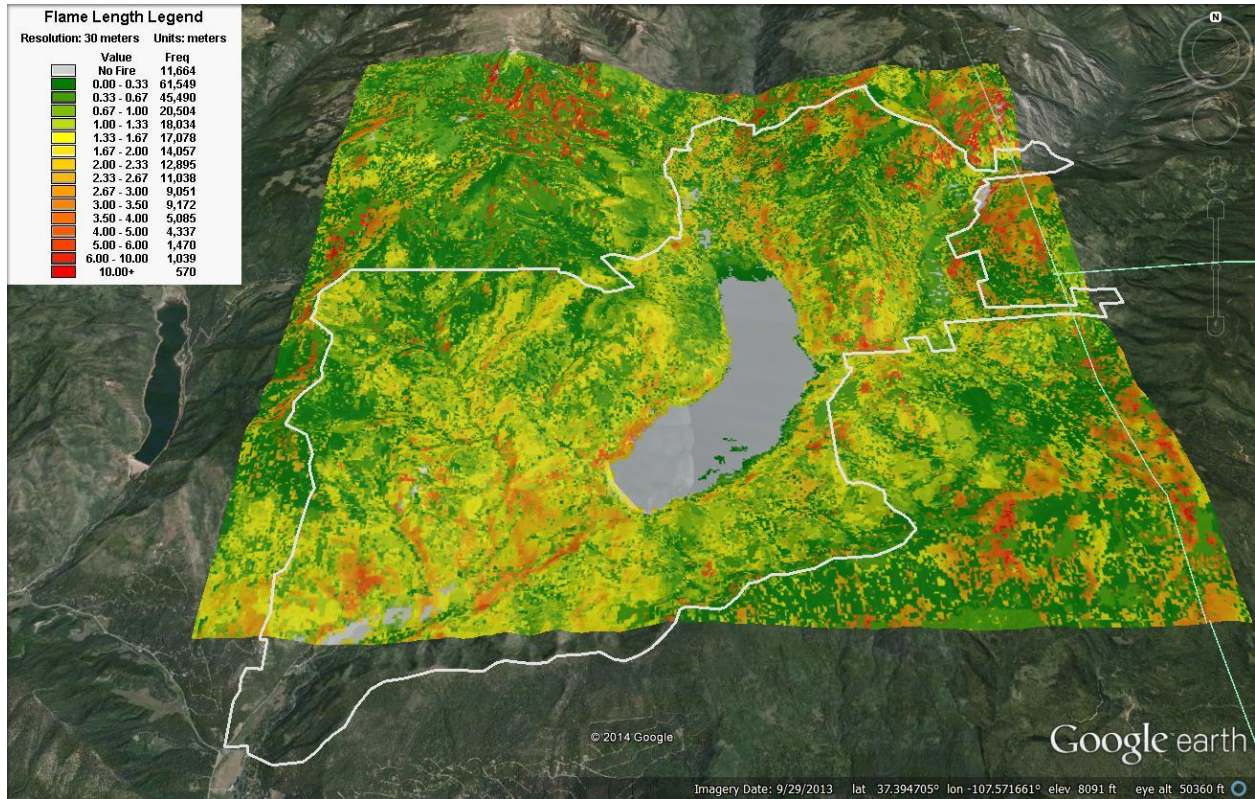
A 30-meter pixel resolution landscape file was derived using [Landfire 2008](#) data. Dead fuel moisture values are representative of extreme burning conditions present during the Missionary Ridge Fire of 2002. Live fuels moistures are also representative of extreme burning conditions where grasses are essentially cured and shrub fuels are nearly dormant. Three wind scenarios were applied; each with a west/southwest wind direction (259°) and wind speeds of 5, 10 and 15 miles per hour at 20 feet above the surface.

**Figure 1** shows the results for flame length using the 15 mph, 20' wind scenario. The values are in meters. Generally, in most areas of concern, the calculated flame lengths are greater than 1 meter (yellow to red).

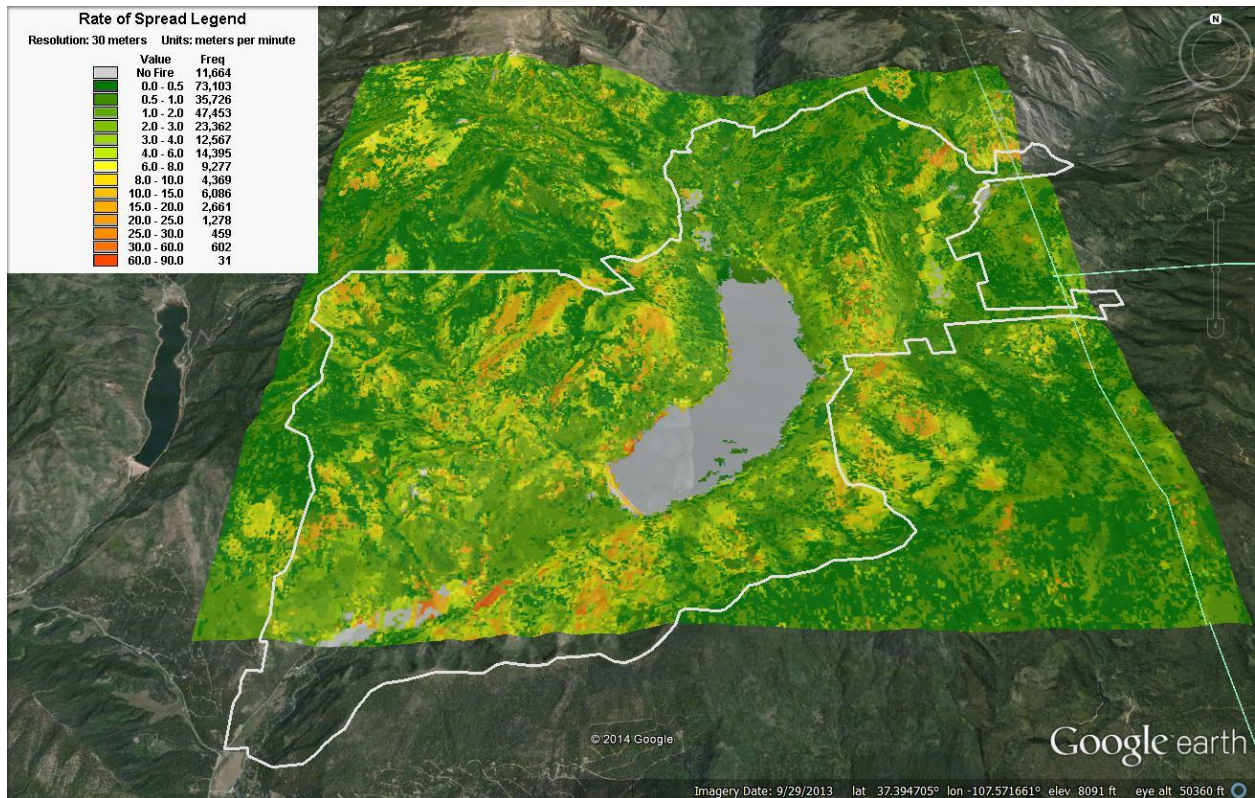
**Figure 2** shows the results for rate of spread using the 15 mph, 20' wind scenario. The values are in meters per minute. The higher rates of spread are generally in exposed areas or areas of greater slope but in most areas of concern the rate of spread is greater than 1 meter per minute.

**Figure 3** shows the results for crown fire activity using the 15 mph, 20' wind scenario. The values are surface fire (yellow), passive crown fire (orange) and active crown fire (red). Passive crown fire is the torching of trees and active crown fire is when fire spreads through the canopy from tree to tree. The results shown the potential for passive crown fire in many areas of concern particularly below the dam in the vicinity of Coolwater/Los Pinos subdivisions, along the southwest and eastern shores, and north of the lake where the greatest number of homes is located.

FLAME LENGTH MODEL

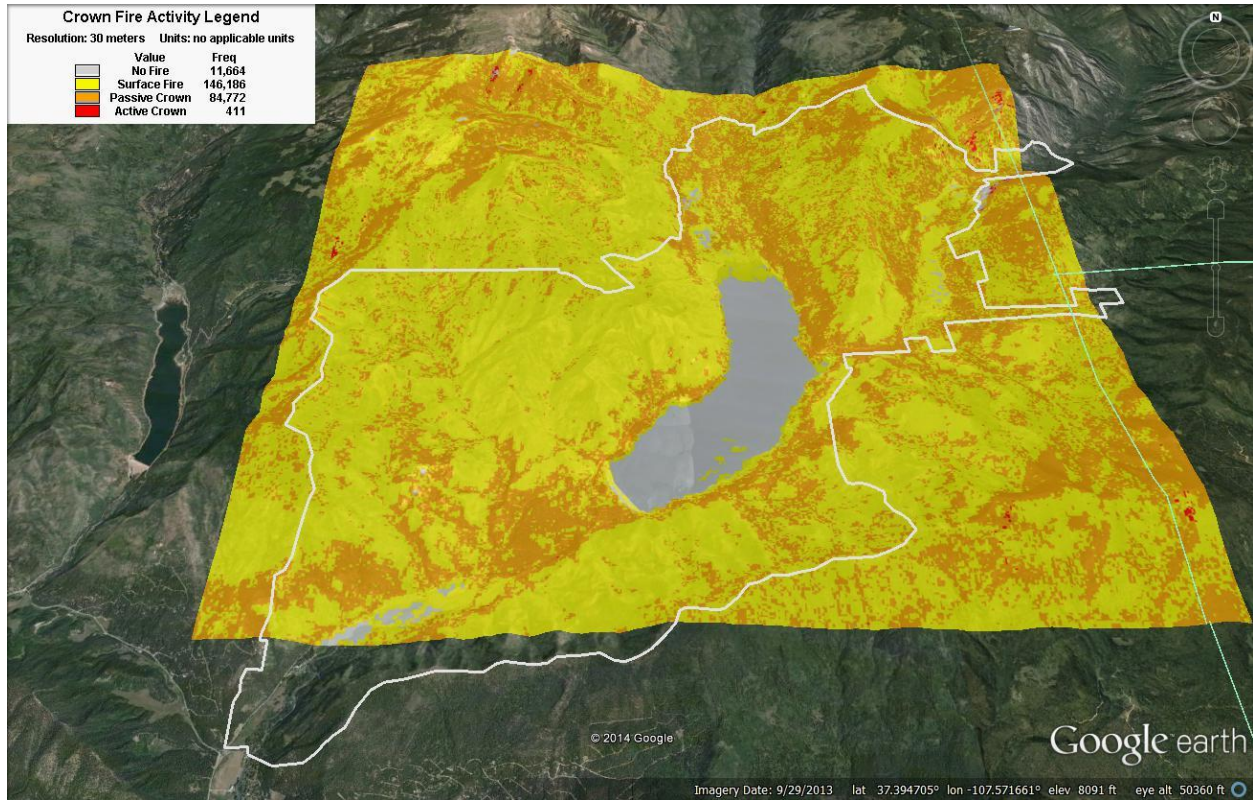


RATE OF SPREAD MODEL





**CROWN FIRE ACTIVITY MODEL**



Note: Moisture content in trees can exceed 100%

<b>Moisture Content (%)</b>	<b>Stage of Vegetative Development</b>
300	Fresh foliage, annuals developing early in the growing cycle
200	Maturing foliage, still developing, with full turgor
100	Mature foliage, new growth complete and comparable to older perennial foliage
50	Entering dormancy, coloration starting, some leaves may have dropped from stem; also indicative of drought conditions
<30	Completely cured (treat as dead fuels)

**Moisture content represents the weight of the fuel compared to its oven-dry weight.**

Source: Fireline Handbook, Appendix B, Fire Behavior Supplement, NFES 2165 (PMS 410-1), 1989, page B-29.



**Appendix B: Ambassadors List and Grid of Responsibility**

**VALLECITO FIREWISE CONTACT LIST**

**AS OF 11/22/13**

**NOTE : BOLD OR RED DENOTES A FIREWISE AMBASSADOR (Past or Present)**

ALDEN HARSCH - fzyface1@yahoo.com  
ALLEN & MOLLY HAWKINSON - Hawk@navajomarina.com  
ANNIE MCDADE - mcdade1001@msn.com  
**ART SHERWOOD - asherwood99@gmail.com**  
**BARBARA & JAIME WAGNER - barbjaim@gmail.com**  
BETTY LEHMAN - blehman58@gmail.com  
BILL SZILVA - bsvila@fasmail.net  
**BOB & ANN CROLL - crollcabins@gmail.com**  
BOB & KAREN STEVENS - lonewolf@bkhost.com  
BOB & LINDA TIKALSKY - lftikalsky@msn.com  
BOB PHELPS - b-dphelps@frontier.net  
BRIAN & KATE CROWLEY - wildfireprotectionsolutions@gmail.com  
BRUCE BLACK - koko16@earthlink.net  
BUD CALLAHAN - bud.callahan@yahoo.com  
**BURT & BARBARA ARMSTRONG - coloradoburt@gmail.com**  
CARA NICHOLS - cnichl04@yahoo.com  
CATHERINE SNYDER - catherineanne1953@q.com  
**CHET & RUTH MCKEE – chetmckee@yahoo.com, ruthmckee57@yahoo.com**  
**CHRIS MYSTROM - kcestrom@durango.net**  
CORLISS THROWER - corthrower@gmail.com  
DEE BAILEY - dbailey1686@msn.com  
DONNA JOHNSON - panama66@msn.com  
**EARL & CATHY WILKENING - wilkening\_1@msn.com**  
EDWARD FETHEROLF - Efetherolf@msn.com  
**GEOFF & LISA BOURQUE - sleddingwithyukon@yahoo.com**  
GLEN RIES - glenries@gmail.com  
J. KENNEDY - jbkennedy@comcast.net  
JACK ROBINSON - durangojackr@gmail.com  
JACQUE & MARK PATE - pate7278@gmail.com  
**JIM & MARY WHITE - jmwhite4@verizon.net**  
JIM PFIFER - jimphifer1@webtv.net  
JIM WILER - jqw162@gmail.com  
JOHN & LAURA WILSON - jhwjch@msn.com  
JOHN BENDER - johnwbender@yahoo.com  
JOHN HARLOW - jharlow86@msn.com

**JOHN IRVING - jani@frontier.net**

JOSH & LEAH DIRKSEN - josh.dirksen@hotmail.com

JULIE BENSON - julieb0809@gmail.com

JULIE COFFERT - jeffjules@frontier.net

**KEN & LOIS CARPENTER - kcarpen557@aol.co**

**KEN BROWN - cowilderness@yahoo.com**

LANITA SOUTHALL - ls73521@aol.com

LESLIE DORAN - sierrapoco@yahoo.com

**LONNIE & GAIL RUSH - rushgail@cs.com**

M. COFFELT - mcoffelt218@gmail.com

MARILYN & JOHN LANG - marilyn@yesdurango.com

**MARILYN MCCORD - mccord@gobrainstorm.net**

MELODY WALTERS - laplatafirewise@gmail.com

**MISSY CARTER - buggus31@gmail.com**

PAM WILSON - chamisa02@earthlink.net

PAUL & SUZANNE PRICE - hpaulprice@sbcglobal.net

RACHEL LEMS - rachel.ann.mays@gmail.com

RAY & NIKKI MILLER - nasloanmiller@yahoo.com

RICHARD HEDIN - rahedin@juno.com

RICK CONNER - connerra@bp.com

ROLAND EARP - snowmasta123@gmail.com

**RUSSEL BROWN - russellbrown@q.com**

**STEVE & NANCY WALB - snwalb@earthlink.net**

STEVE & VALERIE HORNER - svhorner@att.net

**STEVE BJERKE - bjerke.wellbeing@gmail.com**

**STEVE FORD - sford@two4ds.com**

STEVE HALLOF - coloradohallof@msn.com

TERRY SHEAR - mtnhigh@frontier.net

**TOM & SUE BURNS - tom.burns1776@gmail.com**

**TRAVIS GARLICK & JESSICA MARTINEZ – Travis.Garlick@skyutecasino.com, teobug@gmail.com**

VALLECITO RESORT - dlipsiea@yahoo.com

WAYNE & DIANE BARRON - krjbarron5086@comcast.net

WENDY GIBBS - gibbswendy@ymail.com

WILDERNESS TRAILS RANCH - wtr@wildernesstrails.com

**VALLECITO FIREWISE AMBASSADORS AND GRID OF RESPONSIBILITY**

NAME	PHONE	NEIGHBORHOOD
BOB CROLL	884-2083	SOUTH OF PINE RIVER TO PINE RIVER CAMPGROUND I.E. 5 BRANCHES CG, CROLL CABINS, OSBORNE LITTLE CABIN SITES
BARB WAGNER	884-9319	NORTH EAST SIDE OF LAKE, NORTH OF PINE RIVER INCLUDING ELK POINT
STEVE FORD	884-0296	LAKE SIDE OF CR 501 ACROSS FROM PINE RIVER LODGE
STEVE BJERKE	749-0590	LAKE VISTA ESTATES
STEVE WALB	884-2310	HO HUM/HUMMINGBIRD NORTH TO INTERSECTION OF CR 501 & 500
GAIL RUSH	884-4320	VALLECITO 1
LISA & GEOFF BOURQUE	903-4417	VALLECITO 2
CHRIS MYSTROM	884-2300	TUCKER LANE + MOUNTAIN RIVER 1 & 2
ART SHERWOOD & DAVID CALDER	249-6145 / 884-0915	UPPER VALLECITO CREEK RD DOWN TO GRIMES CREEK
MISSY CARTER	749-6719	HOPE LANE SOUTH TO PONDEROSA, EAST TO VALLECITO CREEK ON PONDEROSA
???		PONDEROSA SOUTH TO CR 500/501 INTERSECTION, BOTH SIDES
KEN BROWN	884-0181	VALLEY HEIGHTS & REINDEER + 3 PROPERTIES SOUTH ALONG WEST SIDE OF CR 500
TOM & SUE BURNS	884-2641	BLUE SPRUCE CAMPGROUND
MARILYN MCCORD	884-2220	SOUTH OF BLUE SPRUCE RV PARK, BOTH SIDES OF CR 500 TO HOPE ON EAST SIDE, REINDEER WEST SIDE. HOPE LANE TO TRUST TO CR 500
JENNIFER STOECKL	884-2777	FAITH LANE
EARL WILKENING & BOB TATE	884-2793/ 442-1193	TRUST TO VALLECITO CAMPGROUND, INCLUDING SAFLEY (Bob: 361-649-2914)
CHET & RUTH MCKEE	828-230-7957	BLACK BEAR (Ruth's phone: 828-713-4386)
RUSSELL BROWN	512-659-4885/ 884-2760	EAST SIDE OF DAM, SOUTH END OF LAKE / HOMES ABOVE OLD TIMERS CAMPGROUND UP ELLINGTON & WILSON CREEK, PLUS 7 HOMES BELOW THIS ON CR 501A AKA FS 603
JOHN IRVING	884-9627	UPPER TUCKER (VALLEY OF THE SPRUCE 2) & LITTLE VALLEY ROAD
TERRY SHEAR	884-2349	AREA BORDERED ON EAST BY VALLECITO CREEK, ON SOUTH AT HOPE, ON WEST BY TRUST DR NORTH TO KUEHL'S HOUSE
JIM & MARY WHITE	214-763-7802	FROM CR 501 N ON WVCR EVERYTHING ON EAST SIDE OF WVCR CONTINUING N TO END OF RD
???		FROM CR 501 N ON WVCR ON WEST SIDE OF WVCR TO W GRIMES CREEK, BORDERED ON WEST BY CR 500
DAVID LIPSIEA	884-9458	VALLECITO RESORT
KEN CARPENTER	884-9722	BELOW DAM TO COOLWATER ESTATES, EXCLUDING VALLECITO RESORT

**Appendix C: List of Vallecito Subdivisions**

SUBDIVISION NAME	TOTAL ACRES
BARNEYCASTLE S/D	3.25
BEAVER WILDERNESS	69.97
BROWNVILLE S/D	11.9
CAVIGGIA CHALETs	10.71
CHASE MEADOWS	20.78
CLAUDE DECKER S/D	27.38
COOL WATER S/D #1	44.17
COOL WATER S/D #2	25.7
CROSS CREEK S/D	15.69
DUNSWORTH CABIN SITE	4.59
ENCHANTED FOREST EST	1.1
GRIMES CREEK S/D #1	78.13
GRIMES CREEK S/D #2	12.24
HAPPY SCENES S/D #1	26.06
HAPPY SCENES S/D #2	13.89
HAPPY SCENES S/D #3	6.95
HAPPY SCENES S/D #4	18.58
HAPPY SCENES S/D #5	19.82
HAPPY SCENES S/D #6	5.22
HAPPY SCENES S/D #7	11.36
HAPPY SCENES S/D #8	5.45
LAKE VISTA EST #1	8.46
LAKE VISTA EST #2	52.54
LAKESHORE HOMES S/D	8.52
LAKEVIEW S/D	4.96
LITTLE VALLEY RANCH	21.67
LOS PINOS S/D	43.29
LOST CREEK LODGE S/D	13.79
MCBRAYER JOHNSN&MAC	9.14
MIDDLE MOUNTAIN S/D	6.68
MOUNTAIN RIVER #1	16.47
MOUNTAIN RIVER #2	24.68
OLBERTS CABIN SITES	8.11
OSBORNE LITTLE CABIN	3.18
PINE RIVER LODGE	0.12

SUBDIVISION NAME	TOTAL ACRES
PONDEROSA HOMES #1	10.67
PONDEROSA HOMES #2	10.13
PONDEROSA HOMES #3	22.65
PONDEROSA HOMES #4	16.98
PONDEROSA HOMES #5	16.05
PONDEROSA HOMES #6	4.15
PONDEROSA HOMES #7	14.15
SAMCO LOT CONS 91-83	13.8
SILVER STREAMS S/D	4.11
STARDUST	32.51
VALLECITO MTN VW EST	9.04
VALLECITO VALLEY #1	36.96
VALLECITO VALLEY #2	73.26
VALLECITO VILLAGE	15.59
VALLEY HEIGHTS S/D	15.94
VALLEY OF SPRUCE HOM	40.96
WEST MOUNTAIN PROP'TY	160.32
WITS END S/D	11.17

Note1: Parcels vary widely in # of acres.

Note 2: Not all Vallecito properties are in a subdivision.

## Appendix D: Notes of VCWPP Team Meetings

### Vallecito CWPP Meeting #1, April 17, 2013

The meeting was held at 6 pm at the Blue Spruce RV Park, with supper courtesy FireWise! Attendees included:

Pam Wilson, FireWise Coordinator  
Kent Grant, Colorado State Forest Service  
Bruce Evans, Fire Chief, Upper Pine River Fire Protection District  
Brian Crowley, Upper Pine River Fire Protection District and Vallecito resident  
Chris Tipton, Fire Management Specialist, USFS, Bayfield  
Butch Knowlton, La Plata County Emergency Management  
Mike Canterbury, Pine River Irrigation District/Bureau of Reclamation  
Justin McCarty, McCarty Excavation and Vallecito resident  
Travis Leonard, Leonard & Sons Excavation and Vallecito resident  
and Vallecito residents Steve Walb, Marilyn McCord, Barbara Wagner, Gail Rush, Nickie & Ray Miller, Tom Burns, and Russell Brown.

Pam Wilson did introductions and a brief overview of what a CWPP is and why we want one for Vallecito. The CWPP should come up with recommendations for the community and possible cross-boundary projects with USFS and the Bureau of Reclamation (by HFRA, Healthy Forest Restoration Act of 2003, federal agencies are then required to consider mitigation). The ultimate outcome will be a list of prioritized recommendations by group (agencies and locals), with community approval.

The three main requirements for a CWPP are:

1. Collaboration (“You can’t please everyone, but you build a consensus.”)
2. Prioritized fuel reduction projects
3. Reduced ignitability: includes education on how to make your home more fire resistant. This could be a five-year or more project, and should consider roads, values & deficits in the community, etc.

Steve Walb explained the work done at Vallecito so far – gridding the entire community and finding volunteer ambassadors for each grid section. Ambassadors will help mobilize neighborhoods for better wildfire safety, promote wildfire education, promote mitigation projects, and act as a contact for Upper Pine River Fire Protection District. There were 27 attendees at the April 2 Vallecito meeting. The next ambassador meeting is June 4, 6 pm, Vallecito Church.

Pam explained the various roles: the Core team (writing the CWPP), the ambassadors, technical and subject matter experts, and mapping assistance.

Our first CWPP task is to define our Wildland-Urban Interface (WUI). One criterion would be the distance a fire can travel in a day. Vallecito’s WUI could be five times the size of Vallecito, so considering only the developed area is not sufficient. In looking at some maps, we roughly figured our WUI would be from the Weminuche Wilderness Boundary on the North and West to the Forest Lakes CWPP WUI boundary towards the south, and otherwise to the ridgelines east and west. Chris Tipton volunteered to refine the Vallecito WUI boundaries by the next meeting. He also will blow up the individual ambassador neighborhood maps and return all to Steve.

Homework for the Vallecito residents is to define the values at risk in addition to homes: this could include things such as the cell tower, campgrounds, infrastructure, natural features, viewsheds, etc. We also need to determine how many water systems there are at Vallecito.

Mike Canterbury volunteered the PRID office for the next meeting, to be May 16th (Thursday) at 6 pm.

Notes taken by Marilyn McCord

### 5/16/2013 CWPP MEETING AT PRID OFFICE

**ATTENDEES : MARILYN MCCORD (VALLECITO FIREWISE), STEVE WALB (VALLECITO FIREWISE), MIKE CANTERBURY (PRID), ANTHONY CABALES (UPRFPD). HON SCHLAPFER (USFS), BUTCH KNOWLTON (LA PLATA COUNTY OEM), KENT GRANT (CSFS), GEOFF & LISA BOUTQUE (VALLECITO FIREWISE), PAM WILSON (LA PLATA COUNTY FIREWISE), CHRIS BARTH (BLM)**

We verified the WUI (Wildland Urban Interface) boundaries on the map provided by Chris Tipton.

There are 5 distinct residential areas of Vallecito Lake.

Requested fire behavior modeling specific to Vallecito Lake area.

Discussed getting lists of the following from the local Ambassadors:

- HOA's and copy of CC&R's
- Water systems and operators.

Areas of concern expressed by Butch Knowlton

- Dead end roads / streets
- Vegetation up CR 500

VALLECITO LAKE VALUES AT RISK (Not in order of priority)

1. Upper Valley Sanitation Inc.
2. The cell phone tower
3. All campgrounds
4. Grassy Mountain transmitter site
5. Dam spillway, park below dam & hydro power plant
6. Community Center and Alan Wyatt memorial park
7. County Road 500 upgrade & mitigation
8. Mule Park
9. Upper Pine River Fire Protection Station 4 (top of CR 501)
10. Upper Pine River Fire Protection Station 2 (Below dam)
11. Upper Pine River Fire Protection Lake Vista - Old station #2
12. Forest Service Work Center
13. PRID Office and grounds
- 14 a. Kokanee Point
- 14 b. Aspen Point
15. Ingress & Egress County Road 501 & CR 501A

In addition we identified a couple of other non-numbered values at risk. They would include the Osprey nests and Bald Eagle habitats, the Ponderosa Pine stands, and the phone and power lines.

NEXT MEETING ON WEDS. , JUNE 12 at 6pm at the PRID office again.



**NOTES FROM CANCELLED CWPP MEETING - 6/12/13**  
**(Meeting still held with 4 locals to continue work)**

ATTENDEES : MARILYN MCCORD, GAIL RUSH, MIKE CANTEBURY, STEVE WALB

While many of the stakeholders could not attend the meeting due to fires and other priorities, we decided to meet anyway in a smaller group to finalize some of the open Ambassador areas at Vallecito Lake and put better description detail to some of the existing Ambassador areas. The Excel file with names of the individual Ambassadors and their areas was updated and is attached. A few of the significant moves are as follows:

- Steve Hallof was replaced as Ambassador by Missy Carter, and her territory was expanded south into the area he previously was assigned.
- We cut Missy Carter's northern area and assigned it to Marilyn McCord and Michelle Garnet.
- We called Art Sherwood and requested that he extend his area down to Grimes Creek.
- We called Terry Shear to confirm his involvement and assigned area. He confirmed his willingness to accept the area on the phone.
- We called John Irving and requested he take Upper Tucker Lane as well as Little Valley Rd. He accepted this. We advised John that if he finds he needs assistance in this to let us know.
- We have 4 open areas that are unfilled with Ambassadors at this point. We need to find a few more volunteers. We are considering asking Melody to accept one of them given her new assignment with FireWise.
- We left a message for Gordie Ratoike asking if he would take Black Bear Road (over the North bridge).
- We discussed the imminent need for "Burn Ban" signs and will see if Pam Wilson has any access for such signs to post around the lake when the burn ban goes into effect.
- We discussed the possibility of having a FireWise booth at the Vallecito Service League's annual Arts & Crafts Fair, July 6 & 7. Marilyn will follow this up with Pam Wilson; Steve will solicit volunteers to attend the booth.

We also spent a brief amount of time working on the beginning of the CWPP template. It became evident that we will require the professional input of many of the agency managers for specific detailed information that only they can provide. Steve was to begin the process and then pass the document to Marilyn, and back and forth until we can get agency input.

The next CWPP meeting is scheduled for Thursday, July 18.

(Notes by Steve and Marilyn)

**CWPP MEETING AT PRID OFFICE, 6 PM, JULY 18, 2013.**

**ATTENDEES : MARILYN MCCORD, STEVE WALB, AND GAIL RUSH (VALLECITO FIREWISE RESIDENTS); MIKE CANTERBURY (PRID/USBR); BRIAN CROWLEY (UPRFPD); BUTCH KNOWLTON (LA PLATA COUNTY OEM); KENT GRANT (CSFS); MELODY WALTERS (LA PLATA FIREWISE); AND PAM WILSON (SOUTHWEST COLORADO FIREWISE COORDINATOR).**

Pam did introductions, then updated us on the submitting of Concept Papers relating to potential grants. Pam, Kent, and Bill Trimarco (Archuleta County Coordinator) looked at the counties' needs and wrote one paper for a Vallecito Project and one for Archuleta County watersheds.

We discussed options for possible mitigation projects in privately owned common areas and did not come to any conclusions.

Our list of To-Dos for the next several meetings included: Looking at actual recommendations for the CWPP; description of recent fires (courtesy Cary Newman, long-term fire analyst); looking at dead-end roads, turn-outs/passing spots, especially on CR 500; east side exit strategy clarification (problems due to hill, private land, gates, poor condition of road, etc.); an alternate exit from the north end; and emergency evacuation signage. We could build recommendations for mitigation into the CWPP, planting seeds for the future, even if there are not funds currently available.

Butch related his experiences from the 2002 Missionary Ridge Fire, standing in the dry north end of the lake and said that is still the safest place to be ("...if not for the vortexes, the whole north end would have gone up in flames..."). He suggested a plan to drive vehicles out on USBR land near the Community Events Center and evacuate folks to there. For an alternate exit from the north end, In lieu of bridges (too expensive for County budget and the permitting process is much more complicated), he suggested a scheme to armor the Vallecito Creek bottom, pouring concrete to lock boulders together, gates to prohibit misuse, and in event of fire, open gates and ford the river to evacuate folks to the east side.

Our 5 priorities at this point appear to be (in no particular order): Turnouts, widening some roads, mitigation of vegetation (especially on CR 500), emergency signage, and the plan to ford the river.

We discussed our readiness for a public meeting and the need to model the scariness of possible fires (a task for Cary Newman). Knowing a meeting would need to be held prior to Labor Day when many seasonal residents leave, we phoned Ken Carpenter and secured a position on the agenda of the August 15 Homeowners' Meeting at the Community Events Center. Steve will put together about a 20-minute PowerPoint presentation. Marilyn will get digital photos of the potential river ford area and hand-out lists of ambassadors. Butch will try to get us an 11 x 17 map (both sides may be needed) as a handout to show the various grid sectors of the community (Steve can bring the large map as well).

Pam suggested we do "field trips" through the various neighborhoods in August and September, possibly one every other week, with the corresponding ambassador, and make notes to mark the problems noted in each sector.

NEXT MEETING TO BE DECIDED AFTER THE HOMEOWNERS' OPEN HOUSE, AUGUST 15.

**[Note: See Section 1.3.7 for 2013 presentation at Vallecito Lake Council/Homeowners' Meeting]**

### Vallecito CWPP Meeting 9-26-13

We met at the PRID office at 6pm. Attendees were Pam Wilson (SW Colorado FireWise), Kent Grant (CSFS), Cary Newman (USFS modeling expert), Butch Knowlton (La Plata County Emergency Management), Melody Walters (La Plata County FireWise), Mike Canterbury (PRID/USBR), and Vallecito residents Steve Walb, Marilyn McCord, Gail Rush and Russell Brown. (UPRFPD personnel were out on a prescribed burn.)

Cary Newman presented computer displays of some of the fire modeling he has done for Vallecito. Of particular interest were the extent of the Missionary Ridge Fire burn severity, wind effects relative to flame lengths and rate of spread, vegetation and greatest potential for crown fires (north end, northeast side along Middle Mountain, and the area just below the dam) vs. ground fires, and where potential egress bottlenecks are located. We discussed which fuels can carry fire and which can be mitigated.

Our main questions were: (1) Where are Vallecito's most vulnerable burn areas and (2) where might there be "safe areas" considering various scenarios. Butch stressed the area towards the lake from the Community Events Center as being a good option for a safe area.

Our primary strategies for mitigation were: (1) hazards along egress routes and (2) around personal property/structures. We also have identified two possible "ford the creek" areas to help north end egress in case CR 500 is blocked. Improving a small section of Forest Service Road 603 (east side of reservoir) was also discussed along with the attendant issues of who would pay for it and the limiting impacts of gates being locked around the 5 Branches RV Park to prevent winter access. Although it would enable additional egress options, no definite solutions were proposed or pursued.

We discussed possible pre-suppression strategies, ranges of comfort levels and what the community would be willing to tolerate, and trade-offs between safety (back-burning, thinning, etc.) and sacrifice (enduring some smoke, giving up some trees). Doing some mitigation measures on federal lands could help push risk zones farther away and we should put such things into our CWPP.

The August 23 Vallecito Clean-Up Day emphasized the community's need for ways to dispose of slash and pine needles. Pam mentioned the possibility that Forest Lakes might acquire a "curtain burner" and enable other subdivisions to contribute biomass to that – a potential future resource. Another option would be to request a chipper in a grant proposal, along with details about who would store, who would maintain, how it would be used, etc. A possible \$125K grant next June could apply for funds for any relevant types of mitigation.

We discussed the need for maps defining the WUI – we need a digitized map to include in the CWPP. Cary Newman can likely provide one for us, as well as other maps from his modeling.

The team needs to place a priority on development of email contact lists through the neighborhood ambassadors and also on creation of a community communication vehicle like a newsletter. We will take these issues to the next ambassador meeting.

The next CWPP meeting is planned for Thursday, Oct. 24, and will be held at Justin McCarty's Outpost [subsequently confirmed with Justin].

### Vallecito CWPP Meeting, October 24, 2013

We met at Justin's Outpost at 6 pm. Attendees were Pam Wilson, Steve Walb, Steve Bjerke, Brian Crowley, Russell H. Brown, Roy Vreeland, Justin McCarty, Rana McCarty, Leslie Jackson, Butch Knowlton, Barbara Wagner and Marilyn McCord.

The current status of the CWPP writing was discussed.

**WUI:** We need to refine the WUI boundaries with an independent definition regardless of other CWPP boundaries such as Los Pinos/Coolwater, Enchanted Forest, Forest Lakes; overlap is OK. The southern boundary should probably be the 2002 Missionary Ridge fire choke point. The WUI needs to be contiguous, abut USFS/BLM lands, and include watershed/drainages protections. Grants favor inclusive definitions.

**Grant priorities:** We should tie treatments together, identify hazards, vulnerabilities. Key values are in the core but huge risks are around the periphery. The purpose of the CWPP is to maximize grant potential, therefore the CWPP is the driving factor. Pam will take the current map and refine boundaries and description.

**Fire History:** Pam will work on.

**Vegetation description:** Kent Grant to edit this section.

**Values at Risk:** keep Gail Rush assigned here.

**UPRFPD Resources, capabilities, response time, etc.:** Roy Vreeland

**Community:** We need buy-in from the Vallecito Community. Melody Walters has volunteered to head up a Vallecito Newsletter. We can include a summary of CWPP meetings, any relevant dates, a review of the CWPP process.

**Recommended Actions:** We should construct a table, what the project is, estimated costs, etc. Research will be needed.

**CR 500:** Mitigation near Chain Lakes uphill 350' up to Patrick Gulch. Avalanches occur due to grade. Document with photographs. Boulders, trees are still impacted by 2002 fire. We hope to prevent further damage and future problems. Justin will work on better defining this recommendation and what a demonstration area might be.

**Evacuation Signage:** Butch and Steve Walb to work on.

**Ford the Creek:** Butch to work on.

**CR 501A:** No assignment made; it is unclear what can be done to improve this egress route.

**Slash Pile:** Justin to pursue options; might feed into Forest Lakes' Curtain Burner program.

**Recommendations on USFS and USBR land:** Need USFS and USBR personnel to assist

**Other:** widen roads/turn-arounds; Pam to contact Jim Davis; dry hydrants (HoHum, Happy Scenes?)

Steve will ask Ambassadors to bring ideas for mitigation projects in their grid area to the next Ambassador Meeting, Dec. 3, 2013. Pam, Leslie and Marilyn are to meet and work on a timeline for CWPP completion; we want something by May that we can present to the community when residents return for the summer. Marilyn is to email the draft CWPP .docx file to all team members.

Next Vallecito CWPP team meeting is Dec. 5, 6 pm, Justin's Outpost.

**Vallecito CWPP Meeting – Dec. 12, 2014**  
**Upper Pine River FPD Administration Building**

Present: Pam Wilson, Melody Walters, Chris Tipton and Hon Schlapfer (USFS), Roy Vreeland (UPRFPD), Steve Walb, Marilyn McCord, Leslie Jackson, Russell Brown

The purpose of today's meeting was to develop some recommendations for actions on San Juan National Forest lands that surround the Vallecito area and incorporate priorities into our CWPP. Even though federal fuels budgets are limited at this point, this is a necessary step in the CWPP to help the community define its wildfire risk and accompanying recommendations.

Pam presented a map of the WUI boundary that was prepared by the LPC Office of Emergency Management. One thing that is different from what had previously been discussed is that the WUI boundary was taken all the way down to the intersection of 501/240. One good reason for this is that a fire down that low could cut off or limit access to the Vallecito area. Additionally, this boundary goes straight across the ridge line west from that intersection, thus the Enchanted Forest and Sierra Verde Estates CWPPs can tie their WUI boundaries in with Vallecito. The group also liked the northwest boundary but thought we should include the Granite Peaks Ranch – even the portion into Hinsdale County – as their only access is from the Vallecito side. We should also show the new road below the dam in our WUI map.

Even though much of the 2003 Bear Creek fire area is outside the WUI boundary, the group felt that it would be important to mention this fire in the CWPP to show that wilderness fires could affect the Vallecito community. The question was raised about whether or not to include any wilderness areas within the WUI; this is unanswered as yet. Pam will ask Tom M. to change the boundary as we discussed and digitize the land ownership.

As mentioned earlier, fuels budgets are slim to non-existent at this point but there are grants and the Good Neighbor Authority that could provide funds. GNA allows CSFS to mitigate on either side of the fence, both on private land and FS land. CSFS would hire the contractor and oversee the work. There is also the Forest Restoration grant which requires a 60/40 match and is for watershed protection and forest restoration. This grant also allows a private land owner adjacent to public lands to use the forest service time/money/hours as a match for the work they want to do on private lands.

Two areas of significant concerns that came out in the fire behavior modeling are by Coolwater/Los Pinos and the north end of the lake.

Chris talked a little about some landscape-scale analysis that the District is working on. The area they are currently analyzing is from Hwy 160 south to the NM border. He referred to their approach as a "catcher's mitt" plan based on the idea that you want a fire to move from a hot crown fire to a hot surface fire to a low-intensity surface fire. This means that basically you need more mitigation close to the WUI, then less mitigation the further out you go. The second area they will be addressing is north of Hwy 160 from the District boundary on the east to CR 501 and everything north to the wilderness. It might also include CR 240 and Lemon Reservoir area. They should be ready to start this analysis in the next 12-24 months.

The USFS has come up with some preliminary fuels treatments ideas. They are looking at creating a shaded fuel break of 500-1000 feet around homes using a combination of thinning, broadcast burning, and pile burning. This would mean taking down the standing dead trees where possible. Aspen and brush would be managed as they come in. USFS is not allowed to touch anything in the wilderness, which means that any work done near wilderness will have to be more aggressive because they won't have the distance to step down to the WUI on the NW side of the lake.

The USFS is in the process of redefining the WUI in the San Juans in general and also redoing their Fire Management Plan which was last updated in 2013. It may allow the USFS to fight fires in the Wilderness if it comes within a certain distance of the WUI. In redefining the WUI, they will be looking at structure density, vegetation type, aspect, elevation, fire return, watershed, and infrastructure. Parcel size: 50 is rated less than 5, which is less than 1, etc. No matter which of the four types of models they use, Vallecito comes in as a high-risk area. One of the

Under Secretaries was almost pulled into the Vallecito Fires due to the fact that it was so close to Wilderness. When it comes to the Wilderness, the CWPP should address issues with the density of the forest and the fuel complex and also look at the spotting distance. For example, the West Fork Fire spotted over the Continental Divide and burned in high-elevation alpine forest (spruce-fir). Chris thought one recommendation the CWPP might make would be to try and limit wilderness fires close to the WUI to a certain number of acres (because some areas – especially the old Missionary Ridge burn area DO need to burn to make the terrain safer for firefighters).

So we need to create the buffer zones as best we can, educate the community, look at the people that are remodeling and help inform these folks on fire-resistant building materials. We should look at the Lakeview studies done during the Missionary Ridge Fire in 2002; building construction was one of the main components of home loss. What about the structure fire that starts a forest fire because of construction or poor mitigation? We should help educate on this aspect also.

USFS feels that the burn area needs to burn again...and that it will, and while no one is going to like it, they are going to wait for that to happen to plant trees. They will possibly be doing some RX fire up Lake Eileen trail. Requesting prescribed burning will be a very powerful recommendation coming from Vallecito; it will be a good thing and allow us time to educate the residents. This is not the decision to burn but it will just plant a seed. The forest service will do a public scoping and this will give the public time and the opportunity to have an individual voice. Methods and ways the USFS communicates with communities are: ads in the paper, flyers, public meetings, mail notice of intent, notices in public places, notifications to guides and outfitters, etc. An additional recommendation would be to get mechanical treatment applications, difficult given the poor access and materials present, and the funding will probably be the largest issue. We should not get hopes up for community support for such prescribed burning.

Priority 1 = SE residential area (RX fire in restoration area), Priority 2 = down by PRID, Priority 3 = Middle Mountain, Priority 4 = up CR 500. FS plans to burn the piles at 500/501 next fall. An additional option for clearing is a firewood permit or a pole permit.

Chris felt that the community recommending RX fire in strategic locations in the CWPP would be very helpful in getting FS projects going in the area.

FireWise has the possibility of doing a demo site at 500/501. We would like FS to tie into the project. Chris thought that the Ranger would be supportive; he said stressing the limited site distance, safety, and wildlife could be things to talk to the Ranger about. It was his recommendation for the FS to continue clearing north of the mitigated area into the target area with FS personnel. Pam Wilson still has some funding and indicated that a 15 foot road/shoulder widening/mitigation project would tie in nicely to the FS efforts to make that area a noticeable beginning showpiece.

Notes combined from Pam Wilson, Melody Walters, Steve Walb and Marilyn McCord

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**Vallecito CWPP Meeting, Jan. 16, 2014**

Justin McCarty's Home/Office

Present: Pam Wilson (FireWise Coordinator), Melody Walters (LPC FireWise), Kent Grant (CSFS), Roy Vreeland (UPRFPD), Brian Crowley (UPRFPD and Vallecito resident), Justin McCarty (McCarty Excavation and Vallecito resident), Steve Walb and Marilyn McCord (Vallecito residents).

Pam presented the WUI map; changes will see inclusion of Granite Peaks area, going from the west ridge to CR 240 (ties to Enchanted Forest and Forest Lakes CWPPs), and inserting the road below the dam. Land ownership information will also be included in the final map.

Evacuation signage: A couple of new signs up along CR 501, more to come. Besides identifying evacuation routes (possibly an ad hoc situation depending on a fire, need to know alternatives) we also need signs regarding routes NOT good for evacuation.



Reflective house number signs: We are currently looking for resources regarding companies and contractors to contact; Pam will contact Tom McNamara about possible funding for the project. This should be a 2014 ambassador project with each ambassador working within their grid of the community, stressing importance and assisting neighbors in understanding and installation. Some homeowners object to signs for aesthetic reasons; need to sell importance/safety. Steve will have Lisa add info to FaceBook™ page and edit that write-up.

Creek crossing: Tabled until Butch is present.

Slash removal: Justin indicated a new person heading up PRID beginning Feb. 5; Justin will check with Ken Carpenter and PRID for possible locations for staging slash. We discussed renting Graber's air curtain burner (\$2500/week) or a dumpster, also burning, for disposal. If we bought a chipper we would have to have a plan for storage, maintenance, manning, fuel, etc. DNR grants (50/50 match) do allow for purchasing equipment but there must be a good plan in place. (Timberdale got a brush hog but has their HOA manager to facilitate their plan.) If we rented an air curtain burner, the dates must be well advertised so people can have their work done and slash ready in time. Justin offered services (price/load) to haul slash to a location; a location must be managed so dumped materials are slash only and not trash. It would be good to have two locations – one in the south, one in the north end.

Grants: The volunteer hourly wage is currently \$22.43/hour; if Justin donates equipment that can also be used for matches. The grant protecting watersheds would be a good fit for Vallecito; Pam will discuss with Chief Evans to see if UPRFPD should pursue this and implement. The Colorado Forest Restoration grant (60/40 match and geared toward protecting water and watersheds; Pam has already put in for \$125K DNR grant for mitigation at Vallecito but won't know until June) can be used for federal and private lands, but not widening roads, which could be a FEMA grant (look for pre-disaster mitigation grant). Fording the creek and turnouts might also come under the FEMA umbrella. Justin mentioned mitigation in the Chain Lakes would also affect water quality; there is a 100 foot right-of-way for the county which creates a big workable area (Pam will verify Right of Way area on CR 500 with Jim Davis). Drainage and mudslide issues also need to be addressed in the Chain Lakes area. Justin and Steve will work on putting together a map, scope of work, costs, issues, etc.

Mitigation funding is what we really need at this time so we need to watch for the right grants for this. The next Vallecito Ambassadors' meeting will look at the list of recommendations (attached) and prioritize the mitigation projects; education and the rest will likely be ongoing. Defensible space and fuels reduction work is key and we will continue to seek funding for that; education will be ongoing.

CWPP: Pam will work on fire history, Steve will work on signage, Justin will work out the write-up on the Chain Lakes project, Kent is working on vegetation, Leslie will do values at risk, and Barbara will edit the Executive Summary. Marilyn will notify Steve about holes in the document and together they will suggest who might complete the writing; then Steve will make phone calls to encourage. Brian will get relevant aspects of the Enchanted Forest CWPP that we might use or learn from. Marilyn will get a copy of the Coolwater/Los Pinos CWPP to check for possible data to use in our CWPP. March 15<sup>th</sup> is the deadline to have all the data into Marilyn.

The chipper rebate program will be offered again in 2014; results from 2013 show approx. \$114K spent by homeowners county-wide, \$18K in rebates, 1300 hours (a low estimate) in volunteer time. Around 130 acres across 3 counties (mostly La Plata) were mitigated.

Pam may have a mini-grant fund – hopes to know by May or June – which could provide up to \$750/applicant.

The next FireWise Council Meeting (3 counties) is Jan. 28, 1630 hrs (4:30 pm – 7:00) at the Public Lands Center and will be a grant writing workshop to cover writing, developing a scope of work, etc. The next Vallecito Ambassadors' meeting will be Feb. 4 (Tuesday) at 6 pm at the Vallecito Church.

Notes taken by Melody Walters and Marilyn McCord

## Appendix E: References and Resources

Colorado State Forest Service: <http://csfs.colostate.edu/>

Lots of excellent information and links to **all CWPPs** in Colorado to date, listed by county.

The following brochures are examples of the many available resources:

- Protecting Your Home from Wildfire: Creating Wildfire-Defensible Zones
- Fire-Resistant Landscaping
- Forest Home Fire Safety
- Fire Wise Plant Materials
- Grass Seed Mixes to Reduce Wildfire Hazard
- Cheatgrass and Wildfire
- Gambel Oak Management
- Mastication Operational Guidelines
- FireWise Construction: Site Design & Building Materials
- Fuel Break Guidelines for Forested Subdivisions & Communities

See [www.livingwithfire.info](http://www.livingwithfire.info) for more wildfire threat reduction tips; the brochure “Be Ember Aware!” is especially important to read for mitigation tips.

Other documents:

Preparing a Community Wildfire Protection Plan (handbook):

<http://www.stateforesters.org/files/cwpphandbook.pdf>

Leaders Guide to Preparing a CWPP: [http://csfs.colostate.edu/pdfs/CWPP\\_LG.pdf](http://csfs.colostate.edu/pdfs/CWPP_LG.pdf)

Community wildfire Protection Plan Evaluation Guide:

[http://csfs.colostate.edu/pdfs/evalj\\_9-08\\_web.pdf](http://csfs.colostate.edu/pdfs/evalj_9-08_web.pdf)

Community Guide to Preparing & Implementing a CWPP:

[http://csfs.colostate.edu/pdfs/CWPP\\_Report\\_Aug2008.pdf](http://csfs.colostate.edu/pdfs/CWPP_Report_Aug2008.pdf)

Fire Adapted Communities: <http://www.fireadapted.org> Info and resource links to enhance dialog, networking, increase the sharing of learning and innovations related to community wildfire resilience

National FireWise organization: <http://www.firewise.org/>

See tabs on Wildfire Preparedness, Recognition Program, Online Courses and Education, etc.

Also see articles by Jack D. Cohen, Research Physical Fire Scientist, USFS, Missoula.

National Fire Protection Association (NFPA): [www.nfpa.org/catalog](http://www.nfpa.org/catalog), has lots of products, handbooks, code info, DVDs, etc. Many of the Wildfire Safety items can be ordered in bulk for free.

See <http://wildfireresearch.wordpress.com> for research on wildfire risk, homeowner perception of risk, and how certain behaviors or experiences influence homeowners to participate in wildfire mitigation activities. Homes are assessed by a wildfire specialist on 11 elements that have the potential to increase wildfire risk: addressing and evacuation, home construction characteristics, defensible space and background fuel types, etc. Results from the assessment provide each home with a relative risk rating. Homeowners are also sent a survey mailing which asks them to self-assess. More on the West Region Wildfire Council conducting this research can be found at: [www.COwildfire.org](http://www.COwildfire.org).

Colorado Wildfire Risk Assessment Portal (CO-WRAP): [www.coloradowildfirerisk.com](http://www.coloradowildfirerisk.com) web-mapping tool

Healthy Forest Restoration Act (HFRA) of 2003: go to [www.fs.fed.us](http://www.fs.fed.us) and search for “hfra”.

Natural Resources Grants and Assistance Database: <http://nrdb.csfs.colostate.edu>

See [www.southwestcoloradofires.org](http://www.southwestcoloradofires.org), click on Neighborhood Ambassador Program, then Volunteer Time Report to enter volunteer hours and money spent. Use Vallecito as the “subdivision”. Entering your hours/money will help us achieve match on grant opportunities.

## Additional Photos

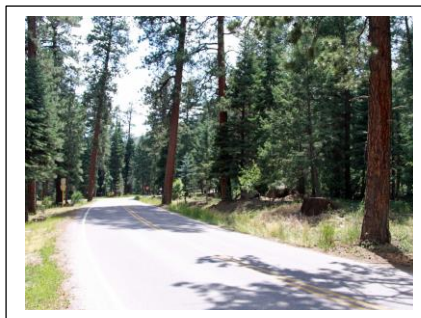
Prior to work



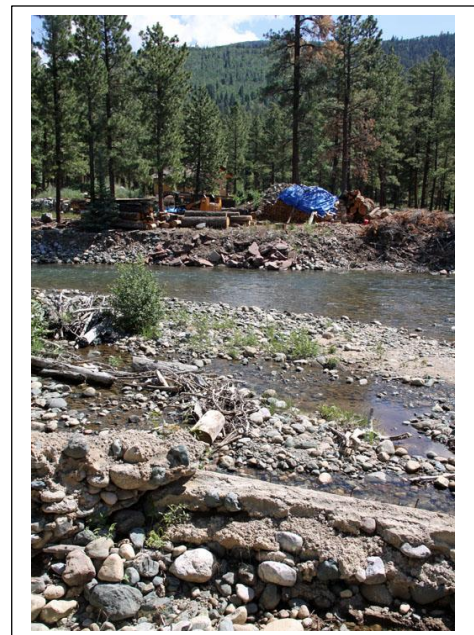
After work

### CR 501/500 Intersection

The demo project here was done to gain the attention of north end residents while also making them safer. Goals: remove slash/ladder fuels, limb trees, cut dead trees, improve visibility.



### Possible Emergency Exits for north end



Left photo shows one possible location for fording Vallecito Creek during low water (would require using private road of Searcy Family on west bank – east bank comes in near Mountain River subdivision recreation center –for emergency ONLY). Right photo shows a potential crossing farther north where there used to be a bridge and there are still outlines of roads. Either option would require working with US Army Corps of Engineers on a proposal to armor creek bed with concrete and rocks, gate area to prevent misuse, but if the north end got cut off by fire, might allow residents to cross to east side for evacuation.