

**Falls Creek Ranch  
Homeowners Association  
Community Wildfire Protection Plan**



**August 2011**

*Protecting lives, homes and assets*

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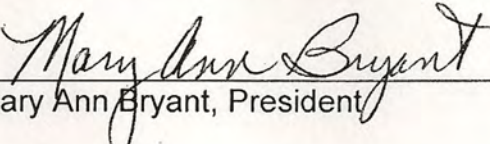
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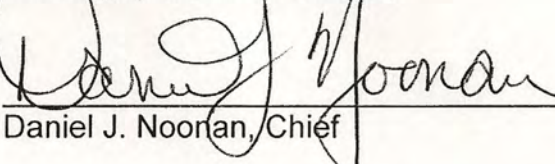
## Signatures of Approval

We, the undersigned, have read this Community Wildfire Protection Plan and approve of its contents. This includes tactical and strategic recommendations, mitigation treatment projects, associated implementation and action plans, and monitoring methodology.

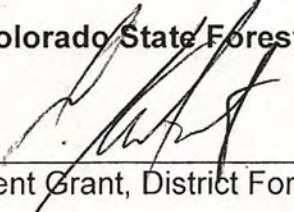
### FCR Board of Directors:

  
Mary Ann Bryant, President 8/5/11  
Date

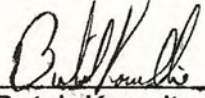
### Durango Fire and Rescue:

  
Daniel J. Noonan, Chief 8/5/2011  
Date

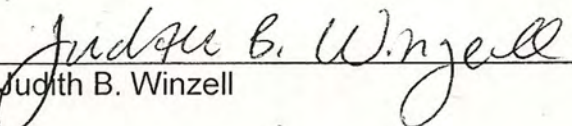
### Colorado State Forest Service:

  
Kent Grant, District Forester, Durango District 8/5/2011  
Date

### Office of Emergency Management:

  
Butch Knowlton, Emergency Manager Aug 5 2011  
Date

### FCR Neighborhood Firewise Ambassador:

  
Judith B. Winzell 8/05/11  
Date

## FCR CWPP Executive Summary

### **The Purpose of this Plan:**

The purpose of the Falls Creek Ranch Community Wildfire Protection Plan is to identify how FCR will continue its long-standing success in supporting the Healthy Forests Restoration Act objectives. (HFRA, 2003, Section i, below) Supporting the HFRA translates to implementing priority mitigation projects (Section V) for the purpose of increasing public and firefighter safety, and reducing economic and aesthetic losses in the event of a wildfire.

### **Collaboration:**

In collaboration with the Colorado State Forest Service (CSFS), Durango Fire and Rescue (DFRA), San Juan Public Lands, and the FireWise of Southwest Colorado, this CWPP is led by the Neighborhood Firewise Ambassador, the FCR Board of Directors and all appropriate FCR committees. The HFRA requires that at a minimum, the CSFS, the DFRA and the Office of Emergency Management agree upon the Plan, and that boundary interface communities are aware of the FCR CWPP.

### **Benefits of the CWPP:**

Benefits of having a CWPP include National Fire Plan funding priority for projects identified in the Plan. The USFS and BLM can expedite the implementation of fuels treatments identified in the CWPP through alternative environmental compliance options offered under the HFRA.

### **How the Plan is Organized:**

All CWPPs have required components and standards to meet HFRA guidelines, e.g., partnerships (local CSFS representatives, local fire authority, and relevant federal land management agencies), descriptions, assessments, mitigation action plans and monitoring/evaluation. The FCR CWPP meets these standards in seven sections summarized below.

#### **Section I: *Community Identification and Description***

The FCR community is described in terms of its size, location, elevation, roads and vegetation types. This provides all parties to this Plan, including collaboration partners listed above, with an understanding of the FCR landscape in relation to jurisdictional boundaries.

#### **Section II: *FCR Wildland-Urban Interface (WUI)***

An essential part of this CWPP is for residents to understand the powerful impact a WUI has on FCR and subsequently, wildfire protection planning. The updated FCR map (Appendix 1) graphically captures the wildland acreage surrounding the community. Living so close to undeveloped terrain and flammable vegetation (where wildfires can occur) has been on the forefront of residents' concerns and an impetus to continue mitigation measures.

#### **Section III: *Community Assessment***

This section identifies the types of fuels on FCR property and evaluates structure ignitability. How well-prepared FCR is to respond to a wildfire is discussed, as well as analyses of hazards and values at risk. Durango Fire and Rescue responsiveness, reverse 911 communications and evacuation planning are included.

#### **Section IV: *Key Fire Mitigation Treatments and Strategies***

Optimal treatment methodology for FCR is described including defensible space as the highest priority. Creating fuel breaks, managing pine and oak stands, and upgrading roads further



enhance the community's ability to withstand an intense or fast-moving wildfire. This Plan initiates the creation of a new team: The CWPP Team (CWPPT). This Team will support the CWPP effort by identifying mitigation projects, monitoring ongoing treatments and recommending updates to the Plan on an as needed basis.

**Section V: *Recommended Treatments for Common Property and Federal Lands***

After several tours of FCR common property with FCR representatives, DFRA, CSFS, Fire Wise of Southwest Colorado, and federal authorities, treatment projects have been identified. These projects were prioritized based on CSFS grant funds already received and recommendations from our partner agencies for reducing hazardous vegetative fuels.

**Section VI: *Mitigation Implementation and Action Plans***

Costs associated with proposed projects are estimated, where feasible, in the Implementation Plan. Putting plans into motion are captured in the Mitigation Action Plan. Individuals and/or positions are assigned specific actions based on a timeframe and expected completion dates.

**Section VII: *Go Forward Plan***

The success of this CWPP is contingent upon the involvement of all parties: DFRA, CSFS, Falls Creek BoD, the CWPPT and ultimately all Falls Creek residents. FCR residents have volunteered many hours for firewise efforts and are commended for numerous extraordinary accomplishments.

***A Multi-Year Timeframe:***

Imminent Mitigation Projects A and B (in Section V), utilize grant funds and must be completed in 2011. Long-term mitigation will require a five to ten-year implementation period as funding and budget allocations are determined.

**2011 FCR Map Showing Priority Common Property Treatments:**

A second version of the updated FCR map entitled "FCR Location Map Showing Proposed Treatment Areas" (Appendix 2) highlights circled areas where proposed mitigation projects will occur.

**Involvement of FCR Residents:**

Every action FCR residents take in mitigation has an equal and positive reaction, i. e., each step we take in creating defensible space around our own home, reduces the risk of wildfire for each of our neighbors. Conversely, every step we don't take in clearing hazardous fuels around our own home, also impacts our neighbors by raising everyone's risk factors. As discussed in Section ii below, FCR homeowners are very cognizant of, and proficient in hazardous fuels and mitigation techniques. This CWPP underscores the many positive accomplishments and strives to motivate residents to keep up the forward momentum initiated in 1978.

To offset any costs of mitigation, homeowners can deduct 50% of these out-of-pocket expenditures (up to \$5,000) on tax returns between 2009 and 2013. All volunteer hours will be tracked and reported to qualify for potential CSFS funding for future mitigation projects. (refer to Section VI)

## **Section i: Overview**

Community Wildfire Protection Plans (CWPP) are authorized and defined in Title I of the Healthy Forests Restoration Act (HFRA) passed by the U.S. Congress in November 2003 and signed into law by the president in December 2003. The HFRA places renewed emphasis on wildfire protection planning by providing benefits for communities with a CWPP in place. Critical among these benefits is establishing a definition and boundary for the wildland-urban interface (WUI) and the opportunity to shape fuels treatment priorities for federal and non-federal lands. Federal agencies are currently directed to spend at least 50 percent of their fuel hazard reduction dollars on WUI projects.

As described in the HFRA, the CWPP brings together local interests to discuss mutual concerns for public safety, community sustainability and natural resources. Per Colorado Senate Bill 09-001 and the HFRA (Colorado State Forest Service, “*CWPP Minimum Standards*,” November 13, 2009) there are minimum standards and guidelines for the contents of the CWPP. The Plan also offers a positive, solution-oriented environment in which to address challenges such as: local firefighting capability, the need for defensible space around homes and within the community, and where/how to prioritize mitigation efforts.

After this Plan receives approval, at a minimum, from the FCR BoD, CSFS, DFRA, La Plata County Office of Emergency Management, it will be posted on the CSFS web site. This CWPP is a living document and will be revised on a regular basis to reflect mitigation progress.

***The ultimate goal is to protect the lives of residents and firefighters, protect homes, and protect community values and assets.***

## **Section ii: Background -- FCR Firewise History and Accomplishments, 1978 -2011**

Over the past 33 years, Falls Creek Ranch residents have been very proactive in promoting healthy forest restoration and fire mitigation treatments. In 1999, the CSFS named FCR “the leader in firewise actions.” In addition, FCR has accomplished many successful firewise projects and mitigation treatments listed below. Highlights of the actions resident volunteers have taken are:

- Established and maintain a central slash area that is safely burned annually
- Conducted road treatments by creating fuel breaks and maintaining them
- Removed and buried the power line previously over the lake, thus providing unimpeded access to lake water via helicopter
- Signed up for the reverse 911 alert system to service both land lines and cell phones
- Established a central and single point of contact to issue text messaging alerts
- Created and maintain evacuation routes (see Appendix 1 FCR Map )
- Implemented seven treatment projects for approximately 240 acres
- A majority of homeowners have performed mitigation work to varying degrees and increased defensible spaces for their homes

## **Successful FCR and Vicinity Firewise and Mitigation Projects Since 1978**

The following is a chronology of successful projects accomplished by residents and partner agencies.

- 1978 Fire hydrant system installed
- 1983 First firefighting plan created
- 1983, 1984, 1996, 2002, FCR receives a 6X6 compressed foam fire truck
- 1981, 1996 and 2002, LogChutes controlled burns on San Juan National Forest, west of FCR, approximately 2,000 acres each time.
- 1984 FCR receives a 6X6 compressed foam fire truck
- 1986 FCR leased land to DFRA to build fire station #13 to house both Type 6 and Type 3 fire engines
- 1998 Dry hydrant installed at the FCR lake
- 1999 Joint FCR and USFS prescribed burn below lot 8, 20 acres; the Washington D.C. USFS sent representatives to FCR to view it as a model of success. This treatment was critical to controlling the 2002 Valley fire. Photo A shows the forest before and Photo B shows the burn and fire line, Photo C shows the forest after the controlled burn. Photo D was taken after the Valley Fire, with the edge of the controlled burn shown with a white line; the fire stopped right at that line.
- 2000 Watson property hand thinning/mowing
- 2001 Good Neighbor Project approved; 2003: this project mitigated 480 acres by contract on FCR and USFS property; this treatment, the Good Neighbor Project mentioned below in 2004, and the Valley fire made great strides in minimizing wildfire threats on the east side of the ranch.
- 2002 FCR designates open common property adjacent to the horse pastures as the central slash pile location. As residents become more attuned to eliminating hazardous fuels, this pile has grown in size every year (prior to each annual burn).
- 2002 FCR creates its first CWPP then called the Wildfire Hazard Reduction Proposal, approved by the USFS and FCR BoD
- 2003 FCR representative attends 3-day Firewise Communities Workshop held by the National Firewise organization
- 2003 -2004 FCR contracts for removal of: 85 trees on common property, 50 trees on private lots, and 10 trees at the intersection of Oakcrest and Ponderosa Park Drives
- 2003 First Neighborhood Firewise Ambassador appointed by the BoD
- 2004 Good Neighbor Project, 25 acres mitigated, 832 trees removed, see Photos C and D, before and after mitigation
- 2005 Fuel break created across from the horse corrals, 300 feet along Falls Creek Main, and 200 feet deep, approximately 6 acres
- 2006 San Juan National Forest Hidden Valley mitigation project at FCR south border, 426 acres
- 2006 Residents initiate vegetation management along north Main, oak brush removed to enable the road to act as a firebreak
- 2007 USFS fire mitigation in Tripp Gulch north of FCR, 178 acres
- 2010 FCR received a new Type 6 fire truck for Fire Station 13
- 2010 FCR Fire Awareness Education Day



- 2011 USFS thinning project on the east side of the FCR lake; 250 slash piles were burned
- 2011 CWPP is expanded and updated to include all FCR firewise accomplishments and implementation plans proposed
- 2010 - 2011 FCR is awarded two Grants (CSFS and SCFC) to mitigate vegetation along FC Main and to improve FCR roads; implementation to be completed by 08/30/11
- 2011 LogChutes thinning and mowing, San Juan NF, 2,000 acres west of FCR
- 2011 FCR Fire Awareness Day CWPP Presentation to residents

**Photo A: Before Prescribed Burn, 1999**



**Photo B: Prescribed Burn Fire Line, 1999**



**Photo C: After Prescribed Burn with clouds, 1999**



**Photo D: After Valley Fire, controlled burn stopped the fire, 2002**



## **Section I: Community Identification and Description**

The Falls Creek Ranch community is located in La Plata County, approximately 10 miles northwest of Durango, Colorado at the end of County Road 205. FCR covers 940 acres with 100 one-acre lots zoned for single, stand-alone houses. The remaining 840 acres is common property

for FCR residents. The FCR community ranges in elevation from approximately 7,125 to 7,800 feet. It is surrounded by 80% USFS land and 20% private landowners. County Road 205 provides the only public access to FCR.

As of 2011, 89 of the 100 building sites have been developed. An additional six sites with structures (commonly owned by FCR Association residents) that include the ranch manager's home, fire station number 13, two horse barns, an equipment shed, a records shed, a sand shed and a mail box shed. Slopes within and surrounding the ranch range from approximately 7% to 100 %. All utilities are underground.

The ranch contains seven miles of graded gravel roads which are maintained year-round for full access to residential lots and infrastructure. Roads are graded regularly, plowed as required in winter, and treated annually with magnesium chloride. Road grades are variable, ranging from flat to a maximum 13.5% grade. Driveway grades range from flat to a maximum 19.8%. Private driveways are the responsibility of the lot owners. FCR is managed by an active Board of Directors (BoD) and 7 committees, which meet routinely to plan and execute required HOA business. Defensible space around structures has been a top priority of the Board of Directors, as well as providing fire mitigation treatments throughout the common property.

FCR vegetation consists of ponderosa pine in the overstory with a principal shrub understory of Gambel oak, chokecherry and serviceberry. The vegetation of FCR is broadcast over moderately dissected series of ridges, draws and four large grassy meadows, which are mowed annually. These meadows are identified as resident safety zones and helicopter landing zones. Refer to Appendix 3: *Fire History and Ecology of Ponderosa Pine in Southwestern Colorado* for a historical perspective on FCR vegetation.

### **Falls Creek Ranch Fire Station**

FCR leased land for the DFRA Fire Station #13 in 1986. Although the DFRA rotates engines in this station, the current equipment includes one 1,000-gallon Class A structure engine, and one 250 gallon Type 6 engine for wildland fire fighting. Currently, there is one full-time Falls Creek resident volunteer who serves as the FCR- DFRA liaison to Station 13. Please refer to Section III, *Local Preparedness and Protection Capability* for other Durango area stations, volunteers and response times.

## **Section II: FCR Wildland - Urban Interface (WUI)**

A Wildland-Urban Interface (WUI) is any area where man-made improvements are built close to, or within, undeveloped wildland, forest or vegetative fuels. The FCR WUI includes sustained steep slopes that may affect wildfire behavior, and an excess of vegetation and fuels that has occurred due to the exclusion of fire that naturally reduces the level of forest fuels. Residential developments bordering a WUI are considered *at-risk communities*, and are defined as *a group of homes and other structures within or adjacent to federal land where conditions are conducive to a large scale wildland fire, thereby posing a threat to human life or property.* (from: [www.fs.fed.us/r6/wenatchee/forest-plan/documents/docs](http://www.fs.fed.us/r6/wenatchee/forest-plan/documents/docs) )

The FCR WUI consists of the San Juan National Forest to the east and west, the High Meadows Ranch subdivision to the north, and Hidden Valley, a two mile stretch of forest service lands to the south. Approximately 80% of the WUI is SJNF. The Falls Creek Ranch subdivision is located on a bench along the low ridge west of US Highway 550 just south of Trimble Lane and is bordered by the Columbine Ranger District and Red Ridge communities as well as many individual private landowners. FCR is accessed via Junction Creek Road and CR 205. Refer to Appendix 1 for the “FCR Location Map” that shows the relationship to the city of Durango, surrounding forest service properties and communities.

### Section III: Community Assessment

The potential risk to FCR from a wildland fire is contingent upon three elements: weather, topography, and fuels. Although weather and topography are not controllable, hazardous fuels can be modified, and is where wildfire mitigation treatments are focused. Table 1 is a brief description of three key fuel models found in the FCR WUI.

#### Fuel Models

Table 1:

<b>Acres by Surface Fuel Model within the Falls Creek WUI Zone (LANDFIRE Rapid Refresh data)</b>	
<b>SURFACE FUEL MODEL</b>	<b>ACRES</b>
91 NB1 Urban/Developed	35
93 NB3 Agricultural	906
98 NB8 Open Water	41
99 NB9 Bare Ground	57
101 GR1 Short, Sparse Dry Climate Grass (Dynamic)	153
102 GR2 Low Load, Dry Climate Grass (Dynamic)	59
121 GS1 Low Load, Dry Climate Grass-Shrub (Dynamic)	112
122 GS2 Moderate Load, Dry Climate Grass-Shrub (Dynamic)	2764
141 SH1 Low Load, Dry Climate Shrub (Dynamic)	74
142 SH2 Moderate Load, Dry Climate Shrub	365
161 TU1 Low Load, Dry Climate Timber-Grass-Shrub (Dynamic)	6709
165 TU5 Very High Load, Dry Climate Timber-Shrub	4548
183 TL3 Moderate Load, Conifer Litter	123
188 TL8 Long Needle Litter	2764
<b>Total Falls Creek WUI Zone Acres</b>	<b>18711</b>

Total fires responded to and reported by federal agencies within WUI zone and within 2 miles of WUI zone =112 Cause Lightning =85 Cause Human =27

Final Fire Size >1 acre =12 Cause Lightning =8 Cause Human =4



FCR vegetation includes conifer (ponderosa pine) and brush (Gambel oak, juniper, chokecherry and serviceberry). Gambel oak and juniper serve as ladder fuels and will lift a surface fire into the crowns of the overstory. There are four scattered meadows and other natural open areas throughout the ranch. Fuel Models are used for estimating fire behavior and they are found in association with one another within and adjacent to the ranch. These fuel models can have high rates of spread when low relative humidity, high temperatures and windy weather situations exist.

Timber stands adjacent to structures with crown closures less than 10 feet are defined as a continuous ground and crown fuel arrangement, i. e., vertical and horizontal trees and brush next to each other. This area becomes susceptible to all types of wildland fires (crown, wind-born embers, etc), even during moderate weather situations. Appendix 5 illustrates the fuel model coverage on Falls Creek Ranch.

Photos E through G, below, show Fuel Models GR2, TU5 and SH7. Photo G illustrates how these fuel models were successfully treated to break the chain of continuous fuels and vegetation (discussed in Section ii, *Background -- FCR Firewise History and Accomplishments, 1978 - 2011*).

**Photo E: North Meadow Fuel Model GR2, foreground; Fuel Model TU5, background; Ridge Lightning Strike**



**Photo F: Fuel Model SH7, foreground; Fuel Model TU5, background**



**Photo G: Area before; Fuel Model TU5**





**Photo G: Area after; Fuel Model TU5 Vegetation Management**



Recent fires on or near FCR are shown in Appendix 4. In Appendix 5, *Falls Creek Ranch Fire Behavior Prediction* is important for homeowners to understand structure location in relation to slopes.

### **Protection of Homes and Structures**

Structure ignitability is a principal cause of structure loss during a wildland fire. Critical factors that increase the chances of loss are flammable roofing, decking and other construction materials (cedar shingles) and flammable vegetation (trees, shrubs and debris/wood piles) near the structure. A wildland fire does not burn a structure unless it meets fuel and heat requirements sufficient for ignition and continued combustion. The flammability of the structure and its immediate surroundings can be managed to reduce the chances of ignition and loss. The primary and ultimate responsibility for structure protection during wildland fires lies with our homeowners. The following are actions residents can take to greatly reduce structure ignitability:

- Develop a defensible space around the structure that is at least 30 feet wide (refer to Section IV, Appendices 6 and 7).
- Use low combustibile plant material for landscaping.
- Remove wood piles next to the structure.
- Use noncombustible construction material to the extent possible – the minimum should be noncombustible roofing material.
- Remove flammable debris such as needle litter, dry leaves and grass from the structure and adjacent areas on a regular basis.

FCR has an Architectural Control Committee (ACC) that reviews and approves all building plans and exterior improvement projects per the subdivision as per the Association's Covenants

and the ACC Rules and Regulations. These documents provide guidelines for use of materials and methods of construction that meet County building and safety requirements. The ACC also provides guidance to residents for landscaping and defensible zone mitigation pursuant to Firewise safety principles. This Plan recommends that representatives of the BoD, the CWPPT or ACC designees attend the Home Ignition Zone Workshop.

In conjunction with Durango Fire and Rescue, FCR conducts unit directional flow tests on 19 fire hydrants to evaluate hydrant health. Map 1 shows the location of all fire hydrants and Appendix 8 illustrates the health of each hydrant. FCR follows up on hydrant repairs and replacements as recommended by the periodic DFRA hydrant inspection.

### **Community Values at Risk**

As referenced in Section I, *Community Identification and Description*, 89 of the 100 home sites or 89% percent of the lots in FCR have structures on them along with numerous free-standing garages and some sheds. In addition to the previously noted common property structures, the Association owns several capital equipment items used for common property maintenance (housed in the FCR equipment shed).

Protection of critical infrastructure such as the water system, including two water storage tanks, wells and pumps is of the utmost importance.

Approximately 65% of the homes are occupied year-round, by approximately 150 residents. FCR owners place a very high premium on the natural surroundings and the visual quality of the mountain landscapes and natural screens created by trees and vegetation. It is critical to protect these views and privacy during any wildfire mitigation project.

Archaeological excavations in the Durango area in the 1930s, (the Basketmaker II occupation AD 1 – 600), were conducted near the fairgrounds, Crestview, and in the Falls Creek Ranch area. These excavations discovered pit house village sites. There are many Anasazi pit houses located on FCR which are on the historic register and considered valuable cultural assets.

Protection of our watershed, particularly in the major drainages to the west of FCR such as Falls Creek and Dyke Canyon is critical due to the extremely steep topography and the location of FCR at the foot of these slopes. A large, high severity fire in this location could cause catastrophic landslides and flooding in the FCR area.

### **Evacuation and Access Planning**

The primary evacuation road is Falls Creek Main to County Road 205. A secondary marked emergency fire exit is entered near the mid-point in Falls Creek Main off Mason Cabin Road and leads to County Road 203. Use of this exit is by agreement between FCR, Red Ridge subdivision, the local Baptist Church Camp and the USFS. This evacuation road is not graded; however, it is reviewed annually for accessibility that would impinge a vehicle evacuation. Another unmarked fire exit is located at the north end of Falls Creek Main through High Meadows subdivision which includes a locked gate. To ensure easy evacuation, the FCR BoD and High Meadows residents will assure the gate is opened in the event of a fire.

Depending upon weather conditions and fire behavior, residents have the option to evacuate on foot through the Valley fire burn area. Also, FCR meadows could provide a “safe area” as well as helicopter landing zones. Evacuation procedures and home preparation recommendations are available in the brochure entitled “Preparing for Wildfire” and on line at: [www.southwestcoloradofires.org](http://www.southwestcoloradofires.org).

There are seven miles of gravel and dirt roads that provide good internal access to FCR. All roads are named and marked/signed. The sign posts are non-combustible while the road name signs are made of combustible material. This Plan recommends these road name signs be replaced with non-combustible material. All residences have the county-issued non combustible, blue reflective address signs prominently posted.

Road grades are variable, ranging from flat to a maximum 13.5% grade. Driveway grades range from flat to a maximum 19.8%. None of the dead end roads currently have “No Outlet” signs at the junction of the main road. Many turnarounds and cul-de-sacs at the end of roads are inadequate for modern large structure fire equipment. The Road Committee has prepared the “Road Upgrades for Improved Emergency Response” document which recommends improvements for resident safety and emergency vehicles (refer to Appendix 13). These recommendations will be included in the “Proposed Falls Creek Ranch Treatment Areas” section of this CWPP. In February 2011, FCR applied for a FireWise mini grant to help fund these road upgrades; in March 2011, the Ranch was awarded \$5,000.

After an evacuation order is given by the Sheriff’s Department, it will be time-critical to ensure everyone is notified. The reverse 911 (refer to Section III) and text messaging systems will play an important role in an evacuation. Back-up plans should be in place when key individuals in the communication process are unavailable, as wildfires can spread quickly depending upon a number of factors. The Valley fire proved to be an invaluable test of the FCR evacuation planning system in exceeding expectations. Sheriff’s Department personnel patrolled the entire Ranch to ensure everyone was evacuated.

## **Triage**

Triage is the concise decision-making process that is used if/when a wildfire threatens multiple structures at the same time. Structure triage was conducted within FCR by the Southwest Conservation Corps on behalf of the DFRA utilizing Red Zone software products. All homes were assessed for roofing and siding materials, driveway grade, and surrounding tree and shrub density. This assessment prepares firefighters for what types of firefighting resources to bring and whether or not the home can be approached and defended. Red Zone information is available to individual homeowners by request to the DFRA.

The role of triage in this Plan is a very quick, inexpensive way to determine overall community wildfire risk and helps to identify areas on which to focus improvement efforts. When only one structure is threatened, firefighting resources are usually assigned to protect that single structure, unless it is totally indefensible.

During a large wildfire scenario when more structures are threatened than there are firefighting resources to protect them, triage assessment helps those in charge assign resources to the

locations where they have the best chance for success. The map developed for this CWPP provides valuable information for the DFRA, reinforcements and mutual aid personnel and will be provided to emergency responders.

### **Local Preparedness and Protection Capability**

The Durango Fire and Rescue Authority (DFRA) have the initial response to a 911 call for a wildfire, after which the appropriate FCR point of contact (POC) receives a page. The POC sends out a text message alert to residents participating in the FCR text system and the FCR Secretary sends out an e-mail alert to all residents.

There are about 60 volunteer fire fighters scattered throughout the Durango area. A 10 minute response time can be expected IF volunteers are available nearby; they will continue to arrive at FCR over the next 60 minutes. Currently FCR has one resident who volunteers with DFRA and serves as our liaison to Station 13. DFRA has recommended that FCR ask for 5 to 6 more residents to sign up for training as volunteer fire fighters. Three areas for training required are: wildfire, EMS, or structural training. These FCR volunteers could specialize in one of these or all three areas. More volunteers could expedite the initial situation assessment (the first 30 minutes) and help get the proper resources mobilized toward trouble spots.

DFRA firefighting response times to FCR are:

- During the summer months DFRA has a wildland fire crew of 3 people available from 7AM to 7PM, when they are not on another fire. Response time would be 20-30 minutes.
- Station 1 (Bodo) could also respond with 6 firefighter/medics and a Battalion Chief within 25-30 minutes 24/7.
- Station 2 (River City Hall) will respond in 15-20 minutes. Staffing is 6 firefighter/medics and an EMS Supervisor 24/7.

A US Forest Service crew of 2-10 people may be available from San Juan Public Lands Center or Bayfield with a response time of 30-60 minutes. Under the Annual Operating Plan and Mutual Aid Agreement between state and federal agencies, collaborative efforts are in place to ensure communities receive emergency assistance.

To supplement an emergency situation, FCR has two Automated External Defibrillators and has provided training for several residents to operate them. In addition, 30 residents are currently trained and certified in administering CPR.

### **Water Supply**

The Falls Creek Ranch water system has four wells and two 50,000 gallon water storage tanks that service the residents. There are 19 fire hydrants on site. The hydrants will flow between 250-1000 gallons/minute with about 100,000 gallons available. The flow could be sustained between 100 and 400 minutes.

FCR hydrants were checked by DFRA on 24 September 2010. Refer to Appendix 8 for the Hydrant Analysis. They strongly endorse our "adopt-a-hydrant" program where residents assume responsibility for a particular hydrant to make sure it is protected, i.e., clear of vegetation, snow, etc. DFRA has offered FCR new hydrant markers (instead of our current yellow poles) that are



color coded to indicate water flow capacity. They recommended the appropriate POC within FCR contact them to obtain these markers.

In a tour and assessment of FCR hydrants, DFRA recommended additional fire hydrants may be warranted on the Ranch. The appropriate FCR POC will contact them for recommended locations and distance standards.

FCR also has a lake available for water supply, and DFRA has six large tenders (water trucks) that would be called in for a large fire. A dry hydrant is available at the lake for water trucks. During an emergency situation, the DFRA authorities will make the on-site call whether or not to use the lake.

### **Reverse 911**

La Plata County's Central Dispatch emergency communications center now has the means to send a "Reverse 911" phone call to a cell phone or VOIP (Skype, Vonage, etc.) phone number. Previously, only land-line phones could be notified of an emergency by a Reverse 911 call.

Falls Creek Ranch residents are able to receive emergency notifications relating to the home address by land-line phone or cell phone. The notifications are sent out by Central Dispatch after receiving notification from the Sheriff's Department or the Office of Emergency Management.

The procedure for listing cell phone numbers or a VOIP phone number with the system is through this link: <http://www.durangogov.org/>. On the front page of the city's website there is a link to the Reverse 911 system provider where up to five phones can be listed. The FCR text messaging system will be used in conjunction with Reverse 911.

### **Uniform House Numbers and Road Signage**

La Plata County has provided standardized, reflective house numbers and all residents have installed them. All roads are named and have signage. The sign posts are non-combustible while the road name signs are constructed of combustible material. This Plan recommends these road name signs be replaced with non-combustible, reflective signs.

## **Section IV: Key Fire Mitigation Treatments and Actions**

### **Defensible Space**

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

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

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

The construction of defensible space involves developing three management zones listed below and shown in Appendix 6, in which different treatment techniques are used. The actual design and development of defensible space depends on several factors: size and shape of buildings, materials used in their construction, the slope of the ground upon which the structures are built, surrounding topography, and sizes and types of vegetation on the property.

#### ***Defensible Space Management Zones:***

- Zone 1- Home Ignition Zone: An area of maximum modification and treatment and consists of 15 feet immediately around structure of which the first 3-5 feet is non-combustible material such as gravel.
- Zone 2 – Fuels Modification Zone: An area of fuel reduction that extends 75-125 feet or more out from the structure. Tree crowns should be spaced an average of 10-20 feet from each other.
- Zone 3 – Fuels Management Zone: An area of traditional forest management zone that extends beyond the defensible space to the property boundary. Tree trunks in this zone should be spaced an average of 10-20 feet apart.

It is very important to note that homes situated on hillsides, in canyons, and on ridge tops are particularly vulnerable to extreme fire behavior. Fire travels faster uphill and winds travel upslope as hot air rises, pushing fire even faster. Homeowners whose property is located in steep terrain need to increase defensible space as shown in Appendix 7. Vacant property owners are strongly encouraged to mitigate natural fuels to protect the value of their property and to help defend neighboring structures and property.

***It is highly recommended by all parties to this document, that all property owners make achieving and maintaining defensible space their highest priority.***

#### **Wildfire Hazard Mitigation Measures**

Pamphlets describing “Creating Wildfire-Defensible Zones, #6.302; Firewise Construction – Design and Materials; and Fuel break Guidelines for Forested Subdivisions and Communities” have been distributed to all residents. Appendix 7 references several critical actions from these Colorado State Forest Service publications for maintaining a firewise community.

#### **Mitigating Ponderosa Pine and Oak Stands**

This plan recommends non-uniform spaced mitigation in ponderosa pine and oak stands not only for reduction of fire hazard but to enhance the visual quality of the stands and to replicate the natural structure found in the southwest. This type of treatment is appropriate outside of the defensible space zones for structures. Pine trees should be spaced from 10 to 30 feet between crowns depending on the size of the tree (i.e. the larger trees should have greater spacing).

Some trees may be left in small clumps with interconnected crowns but to compensate, greater spacing should be created between the clumps. Tree clumps are essential habitat for several



wildlife species that inhabit ponderosa pine stands including Abert's squirrel. Small openings between the clumps of trees should also be created. Existing openings can be enlarged or maintained by removing trees from around the perimeter. The openings can be up to ½ acre in size and are also very important for wildlife habitat.

In addition to reducing fire hazard, treated pine stands will enhance individual tree and forest health. These healthier forests are at lower risk of bark beetle infestations. Homeowners are advised to contact the CSFS or a private forester for help in designating trees for removal. Refer to Photo G for a healthy forest mitigation project.

### **Fuel breaks and Maintenance**

Fuel breaks are easily accessible strips of land of varying width (depending upon fuel and terrain) where fuel density, i.e., continuous tracts of dense timber, is reduced thus improving fire control opportunities. Since fuel breaks provide quick access for wildfire suppression, they aid firefighters greatly by slowing fire spread and allowing safer ingress and egress.

As stated in Section ii: Background -- FCR Firewise History and Accomplishments, 1978 -2011, FCR recently cleared approximately 300 feet along a short stretch of Falls Creek Main, about 200 feet deep. A fuel break was formed by clearing old growth Gambel oak. Many roads and the meadows in FCR provide excellent opportunities to make a stand against an aggressive fast-moving wildfire, and are good locations for anchoring fuel breaks. By managing vegetation on both sides of the road, a broader fuel break can be created to extend 30 feet from each side of the center of the road. This is part of Project A in the *"Imminent Mitigation Project"* section below.

Gambel oak is the most abundant understory species in FCR and sprouts vigorously after cutting or trimming. Keeping scrub oak under control after a treatment requires continuous maintenance using two methods: mowing every 3 years or annual herbicide treatments.

Defensible space costs for homeowners' property is tax deductible as described in Section VII, –Go Forward Plan; Volunteer Hours.”

### **Prescribed Fire Treatment**

As seen in the very successful 1999 prescribed burn described in Section ii above, some areas of Falls Creek Ranch may be well-suited to the appropriate use of broadcast prescribed fire under the supervision and participation of our agency partners (CSFS, USFS, DFRA) and volunteer firefighters. The large amount of common lands within the subdivision results in a very low density of structures and improvements. Ponderosa pine and Gambel oak fuels within Falls Creek Ranch are very consistent and predictable under prescribed fire conditions.

Prescribed fire removes a large portion of the litter and duff on the forest floor which lowers the intensity and slows the spread of wildfires. It also top- kills the Gambel oak reducing or eliminating ladder fuels, while pruning the lowest branches of the ponderosa pine trees. 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. The CSFS and DFRA recommend prescribed burns for 10 to 20 acres at a time over a 10- to 20-year timeframe. Section VI includes a recommendation for future prescribed burns.

## **Wildfire Suppression Infrastructure**

Space is lacking to easily turn around large fire equipment at most dead-end roads. In some cases the terminus is tight even for full-sized SUVs and there is not always adequate room to construct turnarounds. Therefore, creating improved maneuvering space on or near the end of a dead-end road is a recommended option. Along with FCR personnel, the CSFS and DFRA have helped identify these problem areas and suggest the necessary modifications. Increased maneuvering space near fire hydrants is also a priority.

These priorities are included in the FireWise mini grant described in Project B below and the Road Committee's "Road Upgrades for Improved Emergency Response" document.

## **Treatment and Infrastructure Costs**

Fuel breaks and vegetation management treatment costs are highly variable depending on topography, the amount of treatment area, slash disposal, and the relative care involved in doing the work. Grants from the CSFS and BLM, as well as resident volunteers, help minimize out-of-pocket costs for FCR common property treatments. All resident volunteer hours for vegetation management can be applied as in-kind contribution for matching funds as required by most grant applications. A sample time sheet for capturing volunteer hours is attached in Appendix 9. The Common Property Committee, the Neighborhood Firewise Ambassador and other committees as appropriate will collaborate on projects identified in Section V, "*Implementation and Monitoring.*"

## **Firewise Education and Community Involvement**

Falls Creek Ranch began its partnership with the USFS and CSFS prior to 1999 in evaluating and recommending mitigation treatments. In that year, the first joint project, a thinning and controlled burn, was completed that later became a pivotal turning point in controlling the 2002 Valley fire. Due to the success of the burn, the USFS sent personnel from Washington, D. C. to view the project (refer to Section ii: *Successful FCR Firewise and Mitigation Projects Since 1978*). As a result, there have been many burn projects implemented on public lands in the Durango area.

The FCR community has been very proactive in firewise education. The Common Property Committee chair (CPC) attended a Firewise Communities Workshop in 2003, and later participated in the FireWise Council of Southwest Colorado (FCSC) at its inception in 2002. When the Neighborhood FireWise Ambassador program was initiated in 2004, the FCR representative transitioned into that role while also carrying on as the CPC Chair.

This Council's mission is to keep homes, properties and lives from being damaged by wildfire. It does this through neighborhood-based, citizen-driven approaches, including overseeing a Neighborhood Ambassador Program, completing public education projects, encouraging and facilitating homeowners to undertake mitigation, and changing the public will to improve community safety.

The Neighborhood Firewise Ambassador is a liaison between the FCSC and FCR. This position will lead the new CWPP Team (CWPPPT) which is comprised of representatives for all areas of

the Ranch. The Team will help identify areas for hazardous fuel reduction projects as well as monitor ongoing mitigation efforts on common property as identified in this Plan. Team members will provide continuous updates to the existing CWPP Implementation Plan for their respective areas on the Ranch. Also, Team members will establish the CWPPT Vision and Mission as well as the team's strategic objectives and action plans. Appendix 8 lists the CWPPT current membership with their FCR area of responsibility. The Neighborhood Firewise Ambassador's responsibilities are listed in Appendix 11.

Key representatives from DFRA, CSFS, SJPL and FireWise have all committed to participating in FCR educational venues, touring properties with residents and offering expertise as needed.

### **Desired Future Condition:**

The vegetative treatments prescribed in the Falls Creek Ranch CWPP are designed to increase public and firefighter safety and reduce economic and aesthetic losses in the event of a wildfire. The objective is to significantly reduce the probability that the vegetation will support a "crown" fire. Crown fire is the most intense and destructive fire behavior and often produces flame lengths 2 to 4 times the height of the trees, i.e., 100 to 400 feet in length. A high intensity fire of this type is very dangerous and difficult, if not impossible to control. In addition, crown fires produce copious amounts of embers that are spread over large areas by wind and convection columns.

The desired future condition of each new treatment area is a healthy ponderosa pine overstory with tree crowns spaced 20 feet apart on average within the defensible space zones and 10-20+ feet between stems outside defensible space zones. Ladder fuels such as Gambel oak and Rocky Mountain juniper will be removed beneath tree crowns. The occurrence of juniper will be reduced to a level representative of what would be present if fire had been allowed to play its traditional role in a fire-adapted ecosystem. Oak will be left in scattered clumps, retaining the best stands, at an appropriate distance from one another. Openings between clumps will be mowed, brush hogged, masticated, and/or treated with herbicide to prevent oak from filling back in between clumps.

Prior successful treatments in FCR listed in Section ii above have significantly reduced hazardous fuels. Firewise progress is evident in the cultural shift from "not cutting a twig" to today's reality of intelligent forest stewardship. The ultimate regard for FCR assets, while preserving wildlife habitat and preventing beetle attacks, underscores all residents' concerns and actions.

## **Section V: Recommended Treatments for Common Property and Adjoining Federal Lands**

During periods of high to extreme fire danger a wildfire could rapidly exceed the suppression capability of fire fighters. Appendix 4, Falls Creek Ranch Fire Behavior Prediction, shows the difficult position firefighters will face on a dry, windy day. Homeowners should not expect as much protection intervention if/when a large fire burns near or through FCR. The harsh realities of triage will consume local fire forces for a considerable period of time. Firewise rated defensible space is the key to structures surviving on their own. The proposed projects listed in

Tables 2 and 3 below identify priorities for increasing the success of life, property and natural resource protection within Falls Creek Ranch.

**Imminent Mitigation Project 1.0**

Falls Creek Ranch was approved for a CSFS Emergency Supplemental Funds (ESF) Grant for vegetation management along Falls Creek Main. This is the primary exit for FCR residents, High Meadows Ranch residents and one private homeowner. Awarded in 2010, this priority project would mitigate nine acres of common property along Falls Creek Main (up to 50 feet on each side of the road) to provide better access, visibility and turn-around capability. The total management area is 9 acres. Vegetation along the road is oak, juniper and pine.

This project will include coordination between the Common Property and Roads Committee Chairs and the CWPP Team. The project will be presented to residents with an implementation plan to be approved by the BoD and the appropriate agency partners. Work progress will be inspected by the CSFS and upon project completion.

**Imminent Mitigation Project 2.0**

A second grant, from FireWise of Southwest Colorado, was awarded to FCR in March 2011. Funding will be dedicated to upgrade designated subdivision roads to improve safety for residents and emergency responders. This project provides turnouts for narrow roads, increased space near fire hydrants and larger cul-de-sac maneuvering space for large emergency vehicles.

The project will be presented to residents with an implementation plan to be approved by the BoD and the appropriate agency partners. Work progress will be inspected by the CSFS, FireWise and DFRA upon project completion. Refer to Appendix 13 for the Road Improvement Plan.

**Proposed Falls Creek Ranch Treatment Areas**

Fire mitigation treatments are shown below in Table 2 and circled on the “FCR Location Map Showing Proposed Treatment Areas” in Appendix 2. Although the greatest perceived treatment needs are listed below, other wildfire mitigation measures such as additional fuel breaks and anchoring treatment areas to FCR meadows will be addressed over time. Each project is assigned a priority from 1 to 5, with priority 1 indicating Year One, priority 2 indicating Year Two, etc. As Implementation Plans are developed, each project may require multi-year phases for completion.

**Table 2: Proposed Treatments and Infrastructure Needs**

Treatment and Infrastructure Needs	Priority
<b>Project 1.0:</b> As described in “Imminent Mitigation Project 1.0” above, accomplish fuel break project description on current ESF CSFS Grant to FCR: mitigate nine acres of gambel oak, juniper and other vegetation on each side of Falls Creek Main to provide better access and visibility.	1
<b>USFS Project 1:</b> Forest Service land below Lot 7 has a slope >30% and is dense with hazardous fuels. The San Juan National Forest is aware of this priority and will coordinate this project with the appropriate FCR authorities.	1

<b>Project 2.0:</b> FCSC Grant for Roads Upgrades: 6.8 miles to improve safety for residents and emergency responders during fire, medical or other emergencies. The recommendations below were developed during FCR tours with CSFS, Southwest Colorado FireWise Director, BLM, and DFRA. This project provides turnouts on narrow roads, larger turnarounds on dead-end roads (where possible) and wider turnouts at fire hydrants for two trucks.	1
<b>Project 3.0:</b> A fire hydrant needs assessment for all areas of FCR is proposed. The appropriate FCR POC will contact DFRA for recommendations.	1
<b>Project 4.0:</b> Prescribed burn for 150 acres around the east side of the lake; can be done in late Sept. or from mid-April to mid-May. 10-15 acres could also be thinned using a hydro ax or hand thinning prior to the burn.	6
<b>Project 5.0:</b> Barn area needs vegetation management; tie to fuel break across the road	2
<b>Project 6.0:</b> Treat small oak re-growth on fuel break (every 3 – 5 years) across from barns	4
<b>Project 7.0:</b> Anchor a fuel break on the east side of the north meadow	3
<b>Project 8.0:</b> Expand prior mitigation treatment from lot 95 to continue across the road; land up slope is USFS land	1, 2
<b>Project 9.0:</b> Treat area prior to cluster of homes on Oakcrest (east of intersection of Oakcrest and Ponderosa Park)	2
<b>Project 10.0:</b> Examine areas near and above cul-de-sacs for dense ponderosa pine stands, oak and brush. Phase 1: remove 25%; Phase 2: remove 25%; Phase 3: remove 25%	3, 4
<b>Project 11.0:</b> Examine all FCR common property near, below and above owner lots for suppressed trees, dense juniper and oak. Phase 1: remove 25%; Phase 2: remove 25%	3, 4
<b>Project 12.0:</b> Examine all FCR common property between homes/lots for vegetation that needs mitigation	5, 6

## VI. Proposed Mitigation Implementation & Action Plans

### Proposed Implementation Plan

Table 3 lists the prioritized common property mitigation and infrastructure projects. These are coordinated with the CSFS, DFRA, the Office of Emergency Management, and the FCR BoD.

**Table 3: Proposed Implementation Projects by Priority and Cost**

Proposed Projects	Priority	Estimated Cost
<b>Project 1.0</b> CSFS ESF Grant: 9 acres along Main	1	\$4,230.00 at \$470. per acre <ul style="list-style-type: none"> <li>• Contractor/equipment rental</li> <li>• XX volunteer hours @ \$20.85 per hour</li> <li>• Fuel for chainsaws</li> </ul>
<b>Project 2.0:</b> FCSC Grant for Roads Upgrades: 6.8 miles to improve safety for residents and emergency responders during fire, medical or other emergencies.	1	\$5,000 Grant plus 10% cost share in volunteer hours, plus \$15,000 FCR road budget
<b>Project 3.0</b> A fire hydrant needs assessment for all areas of FCR is proposed. The appropriate FCR POC will contact DFRA for recommendations.	1	\$3,500 per hydrant plus new water line connections/pipes
<b>Project 4.0:</b> Prescribed burn for 150 acres around the east side of the lake; can be done in late Sept. or from mid-April to mid-May. 10-15 acres could also be thinned using a hydro ax prior to the burn.	6	Potential grant \$\$ and FS assistance Equipment rental XX volunteer hours
<b>Project 5.0:</b> Barn area needs vegetation management; tie to fuel break across the road	2	Contractor; equipment rental XX volunteer hours
<b>Project 6.0:</b> Treat small oak re-growth on fuel break (every 3 – 5 years) across from barns	3	Contractor; Equipment rental (or purchase?) Herbicide purchase XX volunteer hours
<b>Project 7.0:</b> Anchor a fuel break on the east side of the north meadow	3	Contractor; Equipment rental XX volunteer hours
<b>Project 8.0:</b> Expand prior mitigation treatment from lot 95 to continue across the road: Phase 1 partial treatment can be	1, 2	Phase 1: Current and future Grant \$\$ XX volunteer hours



included in Project 1.0 CSFS Grant above; Phase 2 to include additional thinning upslope on FCR and USFS land – partner with FS		Phase 2: Equipment rental FS assistance
<b>Project 9.0:</b> Treat area prior to cluster of homes on Oakcrest (east of Oakcrest and Ponderosa Park)	2	Contractor; equipment rental XX volunteer hours
<b>Project 10.0:</b> Examine all FCR areas surrounding, below and above cul-de-sacs for dense ponderosa pine stands, oak and brush. Phase 1: remove 25%; Phase 2: remove 25%; Phase 3: remove 25%	3, 4, 5	Contractor/equipment rental XX volunteer hours
<b>Project 11.0:</b> Examine all FCR common property near, below and above owner lots for suppressor trees, dense juniper and oak. Phase 1: remove 25%; Phase 2: remove 25%	3, 4	Contractor/equipment rental XX volunteer hours
<b>Project 12.0:</b> Examine all FCR common property between homes/lots for dense vegetation that needs mitigation.	5, 6	XX volunteer hours
<b>Estimated Total</b>		TBD

## Proposed Mitigation Action Plans

In table 4, the Proposed Action Plan for Completing the Falls Creek Ranch CWPP identifies the responsibilities and tasks necessary to accomplish priority projects. These priorities and responsibilities have been approved by the Board of Directors and the assignees.

**Table 4: Proposed Mitigation Action Plan for Completing Priority CWPP Treatments**

Proposed Projects	Target Dates	Assigned to	Completed
<b>Project 1.0</b> CSFS Grant: <ul style="list-style-type: none"> <li>• BoD Go-forward, support</li> <li>• Mitigation plan designed</li> <li>• BoD presentation and approval</li> <li>• Volunteers identified</li> <li>• Neighbor contact plan</li> <li>• Neighbors contacted</li> <li>• Project start date</li> </ul>	04/11 05/11 05/11 05/11 05/11 06/11 06/11 06/11	Judy Winzell Barry Bryant, CPC Chair, Judy All TBD Judy CWPPT	08/30/11

<ul style="list-style-type: none"> <li>• Contractor contacted and scheduled</li> <li>• Completed project review</li> </ul>	09/11	CSFS, DFRA, FCR reps/ committee chairs, Judy	
<b>Project 2.0:</b> FCSC Grant—Road Upgrades	07/11	Barry Bryant	08/30/11
<b>Project 3.0:</b> Fire hydrants needs assessment	07/11	Don Southworth, Barry Bryant, DFRA	08/30/11
<b>Project 4.0:</b> Prescribed burn for 150 acres around the east side of the lake; can be done in late Sept. or from mid-April to mid-May. 10-15 acres could also be thinned using a hydro ax prior to the burn.	2015-16	Joint project with SJPL, CSFS	
<b>Project 5.0:</b> Barn area needs vegetation management; tie to fuel break across the road	2012	Horse Committee, CPC	9/30/2012
<b>Project 6.0:</b> Treat small oak re-growth on fuel break (every 3 – 5 years) across from barns	2014	CPC	
<b>Project 7.0:</b> Anchor a fuel break on the east side of the north meadow	2014	CPC	
<b>Project 8.0:</b> Expand mitigation across from lot 95; Phase 1: include partial treatment in Project 1; Phase 2: 2012	06/11 07/12	CPC Chair, Doug Parmentier, Judy	Phase 1: 8/30/11
<b>Project 9.0:</b> Treat area prior to cluster of homes on Oakcrest (east of intersection of Oakcrest and Ponderosa Park)	2012	Byard, CPC Chair	
<b>Project 10.0:</b> Examine all FCR common property near, below and above owner lots for suppressor trees, dense juniper and oak. Phase 1: remove 25%; Phase 2: remove 25%; Phase 3: remove 25%	Phase 1: 2012 Phase 2: 2013 Phase 3: 2014	CPC Chair, CWPPT	
<b>Project 11.0:</b> Treat area prior to cluster of homes on Oakcrest	2012	CPC Chair, Byard Peake, Judy	
<b>Project 12.0:</b> Examine all FCR common property between homes/lots for dense vegetation that needs mitigation.	Phase 1: 2012	CPC, CWPPT	

Phase 1: remove 25%; Phase 2: remove 25%	Phase 2: 2013 - 2014		
<b>Project 13.0:</b> Examine common property between homes/lots for dense underbrush and dense oak/pine stands that need mitigation	2013 - 2014	CPC Chair, CWPPT	

## VII. Go Forward Plan

### CWPP Collaboration, Monitoring and Evaluation

The success of this CWPP depends upon the collaboration and cooperation among a myriad of individuals – the DFRA, CSFS, FCR BoD, SJPL, the CWPPT and ultimately all residents. The ability of all parties to this document to monitor the progress and accomplishments is of paramount importance. In addition, monitoring plays a crucial role in setting and identifying strategic objectives as tactical goals are accomplished. Considering the values at risk in FCR, it will be important to assess accomplishments on an annual basis. The BoD and CWPPT (refer to Appendix 9 for current membership) will revisit the CWPP proposed and completed projects each year, prior to the annual meeting, and make adjustments and revisions to the Plan.

The Board of Directors, the Common Property Committee and the CWPP Team will seek funds through the Colorado State Forest Service and other agencies for the purpose of strengthening and implementing this plan. In addition, these parties will:

- Reinforce the wildfire prevention understanding in FCR by strengthening resident education and acceptance
- Support resident participation in Durango Fire and Rescue operations and defensible space improvement proposals
- Facilitate the ongoing cooperation between the FCR Board of Directors, DFRA, CSFS, SJPL, and La Plata County officials

The CWPPT will monitor progress to plan in an Implementation Milestone Chart. This master schedule will integrate all mitigation projects into one document and will show completed action items. This snapshot of mitigation projects will serve as a “report card” for current, ongoing projects as well as a schedule for future mitigation projects and grant applications. In addition, the CWPPT and BoD will compile lessons learned annually and use them to improve the processes included in this Plan.

Also, this plan recommends the BoD create a Firewise budget line item managed by the Firewise Ambassador to support the implementation of the CWPP, e.g., Annual Wildfire Protection Meetings, CWPP Town Halls, CWPPT meetings, WUI communications, tools, etc.

## **Volunteer hours**

The Falls Creek Ranch Board of Directors, along with its Committees and the Neighborhood Firewise Ambassador is composed entirely of volunteers who are dedicated and committed to addressing pre-planning, hazard detection, follow up, communications, coordination, and/or implementation of this CWPP. In addition, the FCR BoD is the mechanism for administering multiple demands, setting priorities, and insuring representation that benefits the community as a whole.

Falls Creek Ranch residents have volunteered many hours of fire mitigation work since 1978. Some of these project hours have been documented with time sheets, however over the years this regimen has been lost. It is extremely important that every volunteer document hours spent on mitigation projects on their own property as well as on common land. Hours recorded can include time spent participating in thinning and mitigation projects and creating/maintaining fuel breaks throughout FCR.

Volunteer hours are applied to:

- Future grants as in-kind contribution and
- Applications to secure new grant dollars for projects identified in the Implementation Plans and Action Plans

Volunteer Time Sheets (refer to Appendix 11) will be distributed to work teams for each treatment project. Working with the Board of Directors, the FCR Neighborhood Ambassador is responsible for inputting the actual hours spent for Firewise community volunteer projects as well as his/her own firewise activities into the San Juan Mountains Association Volunteer Database (website below).

These volunteer hours help the FireWise Council of Southwest Colorado and the San Juan Mountains Association keep track of program outcomes, report out to their partners and is used for grant writing, and program planning purposes. Time keeping will be reported on their database: <http://www.sjma.org/volunteer/voltimesheet/voltimesheet.htm>

## **Future Benefits**

As FCR goes forward with the implementation of its CWPP, it is important to capture other advantages of neighborhood fire mitigation plans. The HB 08-1110 bill within the Colorado Department of Revenue created a 5-year program (2009 – 2013) that allows a landowner to deduct an amount equal to 50% of the costs incurred in performing wildfire mitigation projects, on his/her personal property, up to \$2,500 (per individual or couple) from State income tax. Refer to Authorization 39-22-104(4)(n), C.R.S., at [www.taxcolorado.com](http://www.taxcolorado.com) or call 303-238-3278 for more information.

This bill recognizes the importance of Community Wildfire Protection Plans. Landowners must be within a WUI and all activities performed must be described and authorized by the CWPP. HB 08-1110 concentrates resources and forest management activities on the highest priority areas such as defensible space implementation and other wildfire mitigation measures that reduce the associated risks of wildfire to homes and the entire community.

Wildfire mitigation measures for income tax deduction, meeting CSFS standards include:

- Creating and maintaining a defensible space around structures
- Establishment of fuel breaks
- Thinning of woody vegetation for the primary purpose of reducing risk to structures from wildland fire
- Secondary treatment of woody fuels by lopping and scattering, piling, chipping and removing from site or prescribed burning

### ***Increasing Homeowners' Property Value***

Just like a home remodel, *property* remodels improve aesthetics and can increase homeowners' property value as much as 20 percent. If a home is situated within an overcrowded, dense forest with abundant hazardous fuels, land value may be negatively impacted (refer to [www.colostate.edu/depts/CSFS/](http://www.colostate.edu/depts/CSFS/) ). Selectively removing both healthy and unhealthy trees, brush and ground fuel provides more sunlight to hit the forest floor for an increase in radiant heat in winter and quicker snowmelt on decks, walks and driveways. A less dense forest allows the remaining trees to receive more water and nutrients with less competition, an important factor in forest health, especially in drought years.

### **Celebrations**

For the past 33 years, Falls Creek Ranch residents have worked together to accomplish a myriad of firewise projects. As residents continue to move forward with increased velocity in accomplishing their own fuel reduction plans as well as the projects identified in this CWPP, it is critical to recognize individuals and teams for their successes. The ideal forums would be:

- Annual Firewise Awareness meeting in June
- Annual homeowner meeting in July
- Work Day meetings
- Board of Directors meetings
- FCR electronic communications

As appropriate, special guests from our partner agencies (DFRA, CSFS, et. al.) will be invited by the Neighborhood Firewise Ambassador to participate in these recognition celebrations. Our collective role is to continue to pursue our ultimate goal:

*“The ultimate goal is to protect the lives of residents and firefighters, protect homes, and protect community values and assets.”*

*Falls Creek Ranch CWPP*

**Appendices**

# **Appendix 1**

**Past Fire History Map  
Surface Fuels Map**

**Note: Maps are 11" X 17"**

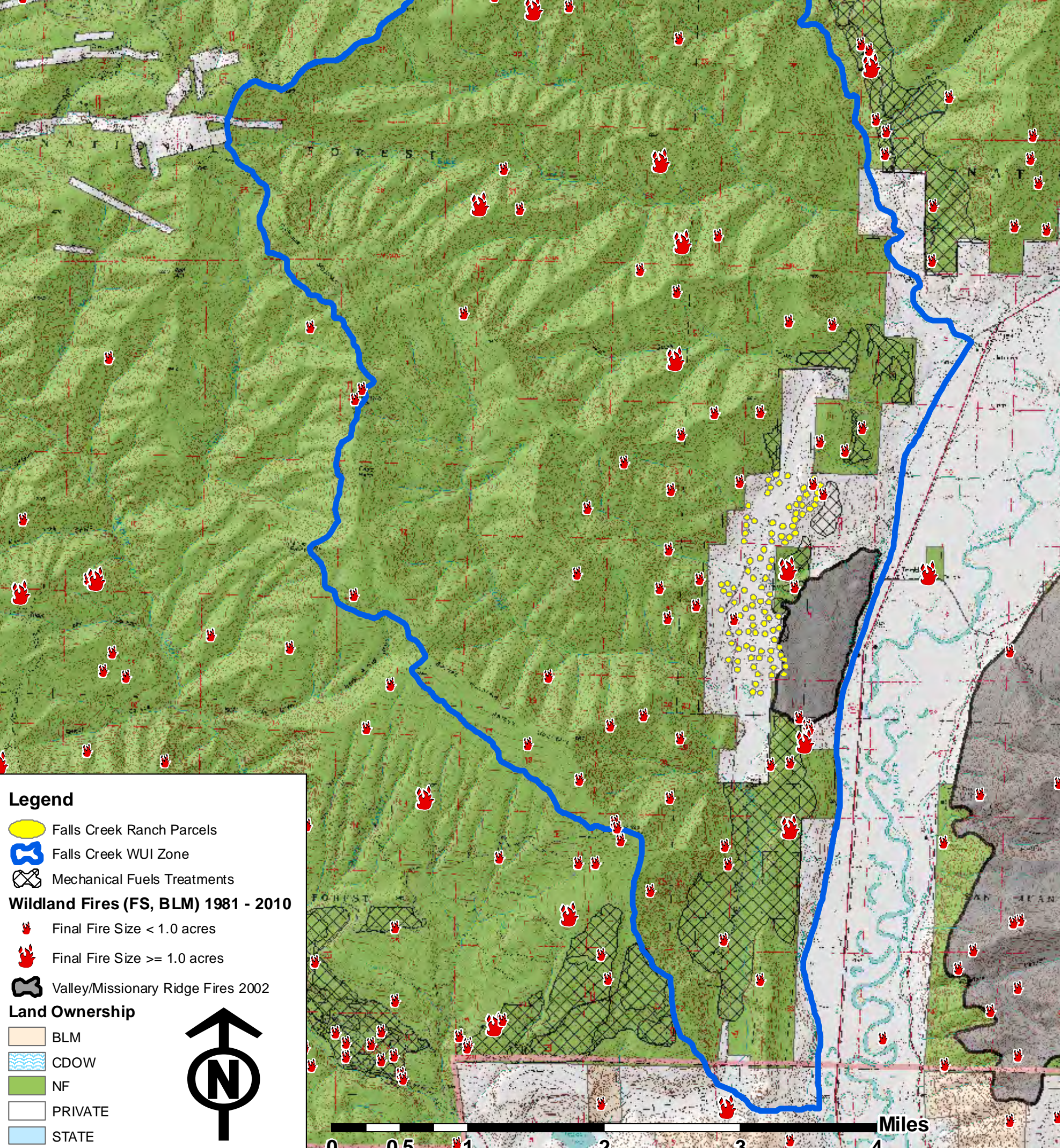


# Falls Creek Ranch Community Wildfire Protection Plan

## Wildland Urban Interface Zone Fire History

Fires  $\geq 1.0$  acre within the Falls Creek WUI Zone and within 2 miles of the Fall Creek WUI Zone

FIRE NAME	FIRE YEAR	DISCOVERY DATE	FINAL FIRE SIZE
BUCK CREEK	1981	6/27/1981	2.0
TED'S	1983	9/12/1983	2.0
FALLS CREEK	1985	7/6/1985	1.0
BUCK CREEK	1988	6/6/1988	3.0
LONG WALK	1989	10/2/1989	1.0
STEEP MAMA	1990	7/26/1990	4.0
JUNCTION CREEK	1994	7/5/1994	1.0
JONES CREEK	2001	6/8/2001	3.0
FALLS CREEK	2002	4/5/2002	12.0
VALLEY	2002	6/25/2002	393.0
TRAIL CANYON	2002	7/3/2002	1.0
HERMOSA	2009	8/17/2009	1.5



**Legend**

- Falls Creek Ranch Parcels
- Falls Creek WUI Zone
- Mechanical Fuels Treatments

**Wildland Fires (FS, BLM) 1981 - 2010**

- Final Fire Size < 1.0 acres
- Final Fire Size  $\geq 1.0$  acres
- Valley/Missionary Ridge Fires 2002

**Land Ownership**

- BLM
- CDOW
- NF
- PRIVATE
- STATE

**Miles**  
0 0.5 1 2 3 4



# Falls Creek Ranch Community Wildfire Protection Plan

## Surface Fuel Models (FBFM40)

Acres by Surface Fuel Model within the Falls Creek WUI Zone (LANDFIRE Refresh 2008 data)

SURFACE FUEL MODEL	ACRES
91 NB1 Urban/Developed	25
93 NB3 Agricultural	52
98 NB8 Open Water	34
99 NB9 Bare Ground	29
101 GR1 Short, Sparse Dry Climate Grass (Dynamic)	684
102 GR2 Low Load, Dry Climate Grass (Dynamic)	54
121 GS1 Low Load, Dry Climate Grass-Shrub (Dynamic)	166
122 GS2 Moderate Load, Dry Climate Grass-Shrub (Dynamic)	766
141 SH1 Low Load, Dry Climate Shrub (Dynamic)	67
142 SH2 Moderate Load, Dry Climate Shrub	109
147 SH7 Very High Load, Dry Climate Shrub	162
161 TU1 Low Load, Dry Climate Timber-Grass-Shrub (Dynamic)	3880
165 TU5 Very High Load, Dry Climate Timber-Shrub	7054
181 TL1 Low Load Compact Conifer Litter	320
183 TL3 Moderate Load, Conifer Litter	2803
186 TL6 Moderate Load Broadleaf Litter	7
188 TL8 Long Needle Litter	2516
<b>Total Falls Creek WUI Zone Acres</b>	<b>18727</b>

**FBFM40**

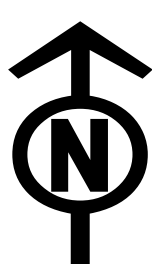
- NB1
- NB3
- NB8
- NB9
- GR1
- GR2
- GS1
- GS2
- SH1
- SH2
- SH7
- TU1
- TU5
- TL1
- TL3
- TL6
- TL8

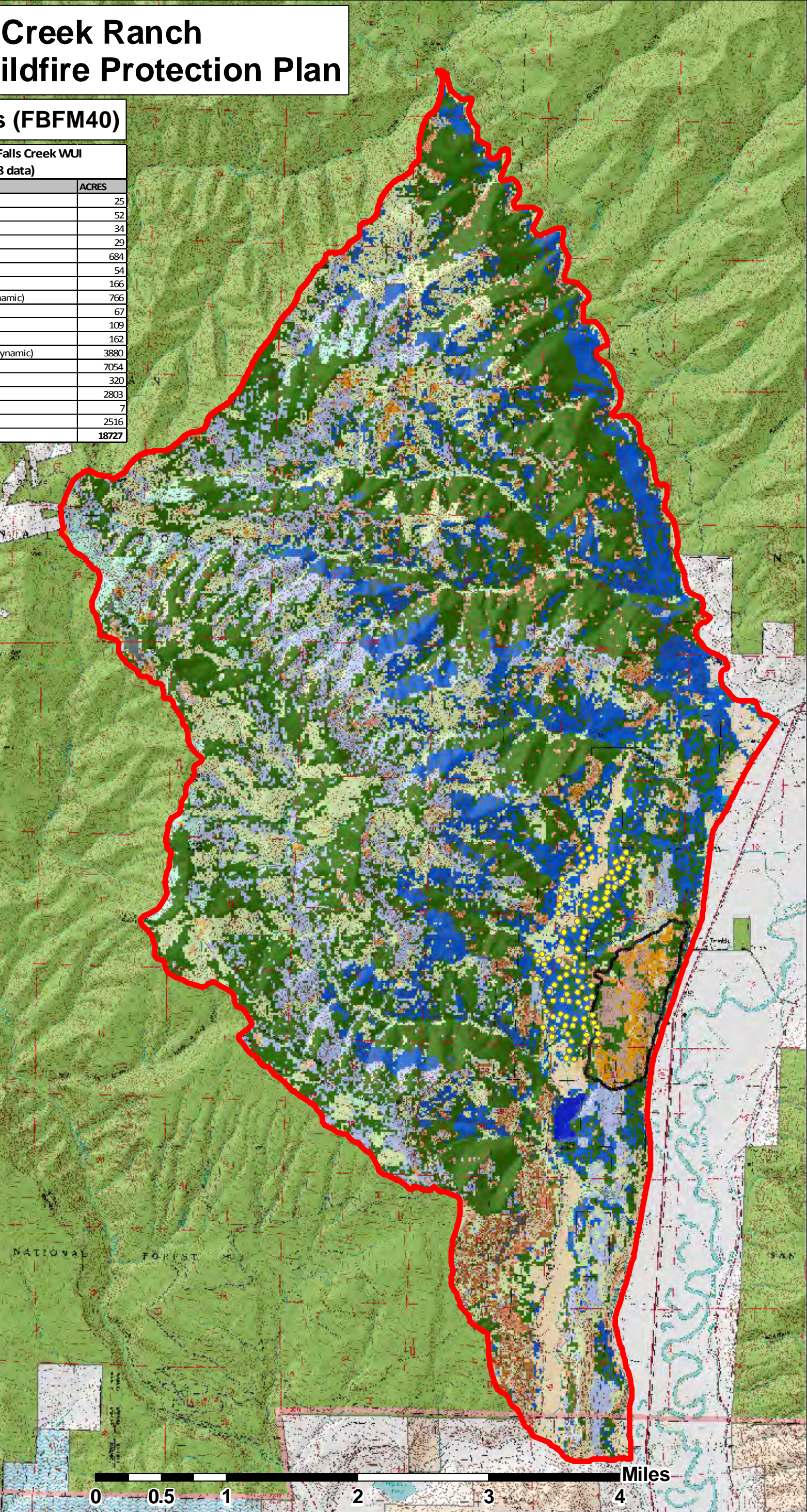
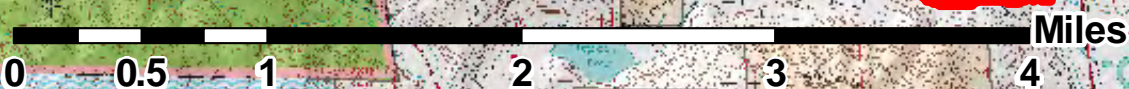
**Legend**

- Falls Creek Ranch Parcels
- Falls Creek WUI Zone
- Valley Fire 2002

**Land Ownership**

- BLM
- CDOW
- NF
- PRIVATE
- STATE







# **Appendix 2**

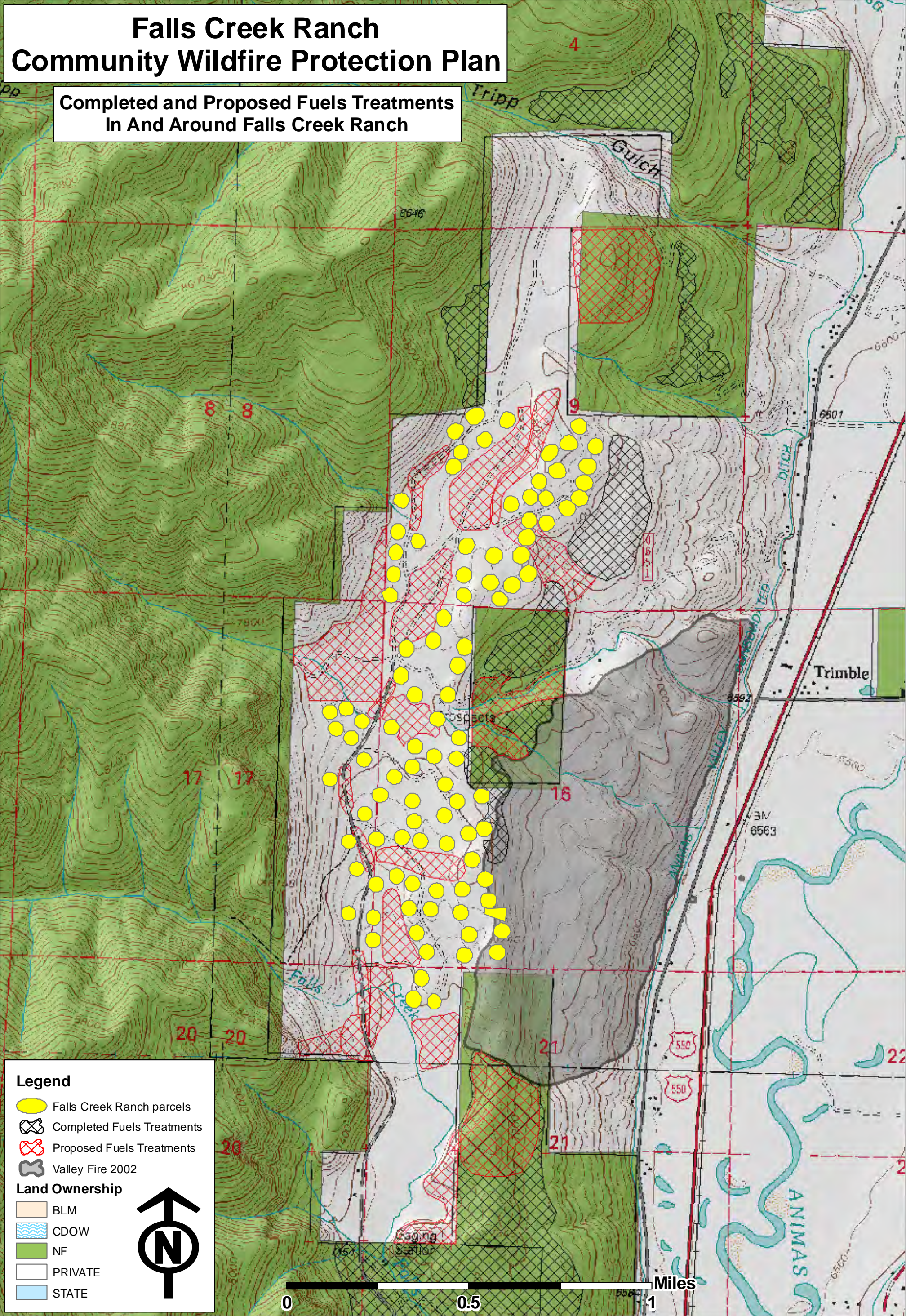
## **Map of Proposed Treatments**

**Note: Map is 11" X 17"**



# Falls Creek Ranch Community Wildfire Protection Plan

Completed and Proposed Fuels Treatments  
In And Around Falls Creek Ranch



**Legend**

- Falls Creek Ranch parcels
- Completed Fuels Treatments
- Proposed Fuels Treatments
- Valley Fire 2002

**Land Ownership**

- BLM
- CDOW
- NF
- PRIVATE
- STATE

**Miles**  
0 0.5 1



## Appendix 3

### **Fire History and Ecology of Ponderosa Pine in Southwestern Colorado**

In southwest Colorado, ponderosa pine/Gambel oak (*Pinus ponderosa/Quercus gambelii*) forests grow at elevations from 7,000 to 8,500 feet. They are the archetypal fire-adapted forests of the southwest region. With thick insulating bark and self-pruning lower branches, ponderosa pine trees are well adapted to withstanding surface fires.

Gambel oak is the dominant shrub associate of ponderosa pine in southwest Colorado (and in other regions where ponderosa pine and Gambel oak coexist) and is ubiquitous throughout this area. Gambel oak is also well adapted to fire much like aspen. Periodic burning renews Gambel oak by top-killing the shrub. After a fire, new stems sprout from the unharmed roots in the soil.

The natural fire regime in ponderosa pine/Gambel oak forest is a frequent low severity surface fire regime. Extensive surface fires occurred every few years to a few decades apart (Grissino-Mayer et al 2004, Brown and Wu 2005). Fire starts were frequent, caused mainly by lightning and likely augmented by indigenous people at certain times of the year. Most lightning fires were small because the live grasses and forbs (non-woody bushes) were too moist to burn during the summer fire season in years of at least average precipitation. Small patchy burns were limited to flammable pine needle litter directly under trees. Frequent fires under trees may have helped limit Gambel oak establishment directly underneath the pines. Large extensive fire events were and are driven by the El Niño-La Niña climate pattern that brings about years of abundant moisture followed by years of drought (Swetnam and Baisan 1996, Swetnam and Betancourt 1998). This climate pattern of one to two wet years to a drought year has been documented in the distant past (1700-1900 A.D.) and still appears relevant today.

In major fire years before European settlement, multiple lightning ignitions across the ponderosa pine landscape probably burned thousands of acres throughout the summer, shrouding the region in smoke. A typical fire burned through needle litter and dry grasses and forbs leaving most of the dominant overstory intact. It killed most seedlings, some saplings, and low shrubs. Fire could also burn up pockets of dense pine if they lay in its path. However, crown runs were limited non-typical events because most of the ponderosa's open stand structure would not support an extensive crown fire.

These frequent surface fires played a major ecological role in maintaining open forest structure. They kept the forest floor relatively clear of coarse woody debris, excessive litter buildup, and regulated Gambel oak and ponderosa pine densities. Trees had a patchy or clumpy distribution. The forest was made up of trees of a variety of sizes and age classes (Cooper 1960, Fulé 1997). Pockets of high-density pine developed on moist sites, protected sites, or in sites that escaped fire for unusually long periods though sheer chance. However, dense stands of ponderosa pine before European-American settlement were relatively uncommon given the natural historic fire regime of these forests.

In ponderosa pine forests in southwest Colorado, large-scale surface fires abruptly stopped in the mid to late 1800s. The actual date of the last fire varies from site to site, but tree-ring studies across southwest

Colorado have shown 1880 to be a reasonable date to mark the beginning of fire exclusion for the area, which was in the midst of European-American settlement. This was before land management agencies existed to implement fire suppression. Therefore the term fire exclusion is often used to refer to the cessation of fire due to European-American settlement activities that were not the result of a formal fire suppression policy.

During European-American settlement, the sudden end of fires elsewhere in the southwest has been attributed to widespread sheep and cattle grazing (Touchan et al 1995, Savage and Swetnam 1990). Grazing practices in southwest Colorado were no different. Hundreds of thousands of sheep and cattle grazed the area.

Chronic overgrazing killed or stunted grasses and forbs that had formerly provided large connected fuel beds for large surface fires. Later, in the early 1900s, the Forest Service adopted a policy of total fire suppression because at the time fires were seen as a destructive force from which forests must be protected. Thus fires and the maintenance role they played in ponderosa pine forests were effectively removed from this forest type. Without fire and competing herbaceous cover, ponderosa pine trees and Gambel oak shrubs filled in the once open forest stands.

The current condition of ponderosa pine forests is now far from what was historically typical. The largest trees were logged in the late 1800s and early 1900s and stands have missed numerous fires due to fire exclusion and suppression. The most obvious and visible difference is that ponderosa forests are now uniformly denser and lack old growth trees. Instead of a predominantly open ponderosa pine landscape with infrequent dense stands, the landscape has developed into a mostly closed canopy ponderosa forest. Gambel oak dominates the understory. It now commonly grows directly underneath ponderosas and acts as a 'ladder' that makes it easier for surface fires to spread into the crowns of the overstory trees. The historically frequent, low severity surface fires of ponderosa pines are now being replaced with high severity crown fires.

Recent fires of one or more acres and within two miles of FCR (see Appendix 4) demonstrate how fundamentally the ponderosa pine fire regime has changed. A good example is the Valley Fire in 2002, one of the most severe drought years on record. It was a human-caused fire that started in the ponderosa pine and burned through all forest types. Of the roughly 12,000 acres of ponderosa pine that burned, 65% burned as high to moderate severity where 50-100% of all trees and shrubs were killed (BAER Report 2002). If frequent fires had continued through the 20<sup>th</sup> century, forest structure would have still been open and the majority of the ponderosa stands that burned would have burned as low severity surface fire.

## Appendix 4

### Recent Fires On or Near Falls Creek Ranch

<b>Fires &gt;= 1.0 acre within the Falls Creek WUI Zone and within 2 miles of the Fall Creek WUI Zone</b>			
<b>FIRE NAME</b>	<b>FIRE YEAR</b>	<b>DISCOVERY DATE</b>	<b>FINAL FIRE SIZE</b>
BUCK CREEK	1981	6/27/1981	2.0
TED'S	1983	9/12/1983	2.0
FALLS CREEK	1985	7/6/1985	1.0
BUCK CREEK	1988	6/6/1988	3.0
LONG WALK	1989	10/2/1989	1.0
STEEP MAMA	1990	7/26/1990	4.0
JUNCTION CREEK	1994	7/5/1994	1.0
JONES CREEK	2001	6/8/2001	3.0
FALLS CREEK	2002	4/5/2002	12.0
VALLEY	2002	6/25/2002	393.0
TRAIL CANYON	2002	7/3/2002	1.0
HERMOSA	2009	8/17/2009	1.5

Reintroducing fire back into ponderosa pine forests in their current condition is challenging for both ecological and social reasons. It is the forest type most in need of restoration work. Ponderosa forests are also where fire hazard mitigation is consistent with restoring forests to a healthier and historically typical condition. Despite the social and ecological alignment, ponderosa forest restoration is hindered by social and ecological obstacles.

Ecologically, the greatest obstacle is the massive scale and the high degree that ponderosa forests are outside their historical condition. Under current forest conditions, large fires in the ponderosa pine are marginalized to extreme fire climate conditions because they are the conditions when suppression resources cannot control them. Although large-scale crown fires are uncharacteristic to the ponderosa pine fire regime, they can endanger lives, destroy homes and property, damage soils, result in flash floods, and kill the large old-growth trees that society wants to protect.

Since fires that start in or near the FCR community are of immediate concern, and given the potential of a wind-driven major fire in the WUI area with a rapid rate of spread and long distance spotting, a two to five mile run into FCR could happen very fast. Appendix 5 provides information into the potential fire behavior on a high fire danger day in FCR.

## Appendix 5

### Falls Creek Ranch Fire Behavior Prediction Fuel

Fuel Model	Rate of Spread (miles/hr)	Flame Length (feet)	One Hour Fire Size (acres)	One Hour Fire Perimeter (miles)	Safety Zone Size (acres)
1/9	2.25	8	852	5.00	2
6	1.45	11	271	3.16	3
6/9	.61	9	64	1.39	2
9	.17	4	6	0.40	0.5
9/6	.80	10	95	1.78	2.5

**Note: shaded zones are well beyond hand crews and engine suppression threshold.**

### Fire Hazard Based on Rate of Spread and Resistance to Control

Fuel Model	ROS	RTC	Hazard	Percentage of Area
1	High	Moderate	High	23
6	High	High	High	2
9	Moderate	Moderate	Moderate	75

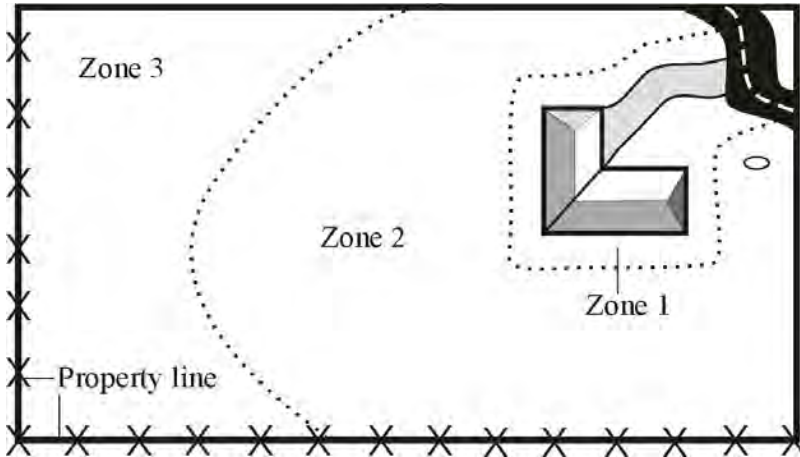
Note: ROS = Rate of Spread  
 RTC = Resistance to Control

Wildfires are not unusual in the area and are seasonal in nature. A fire occurred in Falls Creek Ranch and the nearby area in 2002. This fire burned approximately 395 acres (315 acres FCR and Red Ridge, and 80 acres USFS), 4 homes in FCR and 3 homes in Red Ridge in seven hours. The fire forced evacuation of FCR residents for three days. In this same year, there was an arson fire at the entrance of Falls Creek Ranch and a lightning spot fire.

In the 2010 fire season, there were two lightning strikes - one on FCR property and one in the San Juan National Forest. Both fires were contained quickly. The lake at FCR was used by the Forest Service as a water source for helicopter drops on one of these fires.

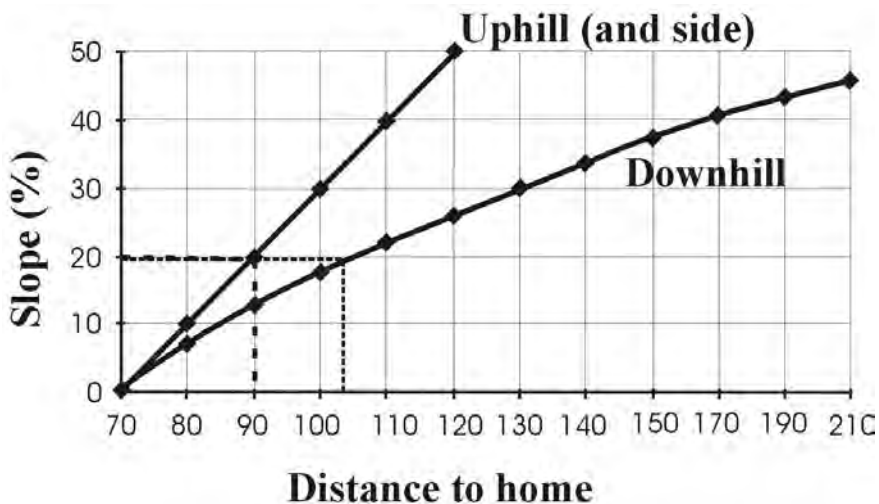
# Appendix 6

## Defensible Space Management Zones



**Zone 1** is the area of maximum modification and treatment. It consists of an area of 15 feet from the outside edge of the structure in which all flammable vegetation is removed. This is the Home Ignition Zone. **Zone 2** is an area of fuel reduction and its size depends upon the slope of ground where the structure is built. Typically the defensible space extends at least 75 to 125 feet from the structure. The chart below shows the distance for defensible space. In this Zone, remove stressed, diseased and dead or dying trees and shrubs. Thin and prune the remaining larger trees and shrubs. **Zone 3** is an area of traditional forest management with no particular size that extends from the end of your defensible space and beyond. This Zone is an opportunity to increase the health and growth rate of the forest. For example, on a 0-10% slope, spacing between tree crowns should be 10 feet. An 11 – 20% slope requires 15 feet between crowns, etc.

### Minimum recommended dimensions for defensible space from the home to the outer edge of Zone 2:





For example, if your home is situated on a 20% slope, the minimum defensible space would be 90 feet uphill and to the sides of the home and 104 feet downhill from the home.

*Source: CSU Extension/Colorado State Forest Service fact sheet "Creating Wildfire-Defensible Zones, #6.302"*

# Appendix 7

## **Wildfire Hazard Mitigation Measures**

Pamphlets describing “Creating Wildfire-Defensible Zones, #6.302; Firewise Construction – Design and Materials” and “Fuel-break Guidelines for Forested Subdivisions and Communities” have been distributed to all residents. The following excerpts from these pamphlets are critical actions for maintaining a firewise community:

- Create defensible space as previously described.
- Separate crown distance 10 to 30 feet between coniferous trees to lower the likelihood of their sustaining a crown fire.
- Remove branches overhanging the roof and chimney.
- Remove ladder fuels, such as brush and small trees (i.e., Gambel oak, Rocky Mountain juniper) from beneath tree crowns.
- Create small scattered clumps of brush spaced at an appropriate distance from each other.
- Remove tree limbs to a height of 8-10 feet from the ground.
- Mow tall grasses.
- Clean combustible debris from under decks, roofs, gutters, next to structures, and within defensible space areas.
- Position stacks of firewood and propane tanks away from structures and clear combustible vegetation from around them.
- Use chimney screens and keep them in good condition.
- Screen attics, roof eaves, and foundation vents to keep out burning embers.
- Screen, enclose, or wall up stilt foundations and decks to prevent burning embers from landing beneath and starting a fire.
- Use fire-resistant building materials in the construction of new buildings and when remodeling.
- Make sure roadways are designed and constructed with adequate turnouts and turnarounds (maneuvering space). Firefighters recommend no more than 400 feet of road distance without a turnout or turnaround.
- Clear overhanging branches to a minimum of 13 feet to allow fire trucks to enter.
- Have an outdoor water supply, complete with hose and nozzle.
- Keep fire extinguishers of adequate type and size in good operating condition.
- Have easily accessible tools such as shovels, rakes, hoes, axes for use in case of a fire.

# Appendix 8

**Table 5: Durango Fire and Rescue Authority Hydrant Analysis**

**2010 Hydrant Testing Data Results**

Basin: Falls Creek

Date Started 9/24/2010 Date Completed 9/24/2010

BASIN #	FHID	TYPE	GEO ADDRESS	TESTED BY/ TEST DATE	TESTED	FLUSHED	IN SVC
FALL 1	NW0161	PACIFIC STATE	70 SKYLINE DR.	C/ 9/24/2010	YES	YES	YES
FALL 2	NW0160	PACIFIC STATE	415 OAKCREST DR.	C/ 9/24/2010	YES	YES	YES
FALL 3	NW0163	PACIFIC STATE	160 PONDEROSA PARK	C/ 9/24/2010	YES	YES	YES
FALL 4	NW0162	MUELLER	160 HIGH RIDGE	C/ 9/24/2010	YES	YES	YES
FALL 5	NW0164	MUELLER	968 FALLS CRK	C/ 9/24/2010	YES	YES	YES
FALL 6	NW0159	MUELLER	7 OAKCREST DR.	C/ 9/24/2010	YES	YES	YES
FALL 7	NW0157	AVK	8000 FALLS CRK	C/ 9/24/2010	YES	YES	NO
FALL 8	NW0158	MUELLER	69 MASON CABIN	C/ 9/24/2010	YES	NO	NO
FALL 9	NW0156	AVK	66 DYKE CYN	C/ 9/24/2010	YES	YES	YES
FALL #	NW0155	PACIFIC STATE	7700 FALLS CRK	C/ 9/24/2010	YES	YES	YES
FALL #	NW0172		29 SNOWSHOE LN.	C/ 9/24/2010	YES	YES	YES
FALL #	NW0153	PACIFIC STATE	3 MEADOWRIDGE TRL.	C/ 9/24/2010	YES	YES	YES
FALL #	NW0154	PACIFIC STATE	161 ALPENGLOW DR.	C/ 9/24/2010	YES	YES	YES
FALL #	NW0149	MUELLER	107 ASPEN LN.	C/ 9/24/2010	YES	YES	YES
FALL #	NW0150	MUELLER	53 STARWOOD TRL.	C/ 9/24/2010	YES	YES	YES
FALL #	NW0151	PACIFIC STATE	132 ROCKRIDGE CIR	C/ 9/24/2010	YES	YES	YES
FALL #	NW0152	MUELLER	238 STARWOOD TRL	C/ 9/24/2010	YES	YES	YES
FALL #	NW0148	MUELLER	7250 FALLS CRK	C/ 9/24/2010	YES	YES	YES
FALL #	NW0147	AVK	499 STARWOOD TRL	C/ 9/24/2010	YES	YES	YES

ADDRESS	STATIC	PITOT	COEF	GPM(Q)	RESIDUAL	FLOW TIME	GPM(20PSI)	GAL FLOWED	COMMENTS
70 SKYLINE DR.	YES	10	0.9	531	38	1	1055	531	TOP NUT LEAKS
415 OAKCREST	YES	10	0.9	531	45	1	661	531	
160 PONDEROSA									
PARK DR.	YES	8	0.9	475	40	1	555	475	BARREL LEAKS
160 HIGH RIDGE	YES	10	0.9	531	30	1	586	531	
968 FALLS CRK	YES	22	0.9	787	60	1	1877	787	
7 OAKCREST DR.	YES	4	0.9	336	45	1	449	336	
8000 FALLS CRK			0.9	0	0	0	0	0	BROKEN BELOW GRADE
69 MASON CABIN			0.9	0	0	0	0	0	HARD TO OPEN NO WATER
66 DYKE CYN	YES	16	0.9	671	40	1	1215	671	
7700 FALLS CRK	YES	18	0.9	712	50	1	1505	712	
29 SNOWSHOE	YES	16	0.9	671	40	1	857	671	
3 MEADOWRIDGE	YES	14	0.9	628	45	1	840	628	
161 ALPENGLOW	YES	12	0.9	581	20	1	581	581	
107 ASPEN LN.	YES	10	0.9	531	60	2	722	1062	
53 STARWOOD	YES	16	0.9	671	45	1	852	671	
132 ROCKRIDGE	YES	10	0.9	531	30	1	570	531	
238 STARWOOD	YES	21	0.9	769	60	1	938	769	
7250 FALLS CRK	YES	19	0.9	732	50	1	887	732	
499 STARWOOD	YES	22	0.8	700	60	2	854	1400	HARD TO OPEN NO WATER

**TOTAL GAL FLOWED: 11,619**

## **Appendix 9**

### **CWPP Team members and areas of responsibility:**

- Byard Peake covering Oakcrest, Skyline and Ponderosa Park
- Doug Parmentier covering north Main (from Mason Cabin to the north end)
- Jim Winzell covering Snowshoe, Saddle and Alpenglow
- Dave Kruft covering Meadow Ridge, Dyke Canyon and Bear Scat
- Bill Bales covering Rockridge, Sunrise and Starwood
- Judy Winzell for south Main (south of Mason Cabin to the entrance)
- Mary Ann McCarthy for Deer Trail, Mason Cabin and High Ridge
- Jackie Strachan, Horse Committee

# **Appendix 10**

## **Draft Wildfire Checklist**

**To Report Fire—call 911, then alert your neighbors**

**To Report Smoke—call dispatch 385-2900**

### **Be alert for fire or smoke especially after a dry electrical storm**

- When walking on the Ranch carry a cell phone with you.

### **Prepare a defensible space around your home**

- Leave a connected garden hose and shovel visible for first responders.
- Install 1/8” metal screens under your deck to prevent embers from flying under the deck.
- Clean pine needles off your roof and gutters.

### **Prepare for an evacuation in advance—know what to do and what to take**

- The reverse 911 system will alert you to an evacuation order and which exit to use.
- Prepare a “grab and go” bag in advance—clothing, medicines, safe deposit box key, cell phone charger, FCR phone list, heirlooms, photo albums, etc. Make a personal list.
- Discuss with your neighbors how you might help each other. Pets?

### **Evacuation—Check out alternate routes in advance—Mason Cabin gate lock is 2020**

- Turn off propane at tank—leave lid open. Turn off grill propane.
- Close all house windows.
- Grab and Go bag and check your own list of items to take. Kennel for pets
- Inform neighbors that you are evacuating. Do they need help with using alternate routes?
- After leaving the Ranch go to the evacuation center and check in.

### **Evacuation Routes**

- FCR Main—Drive slowly since firefighters may be coming onto the Ranch.
- Mason Cabin Fire Exit—Drive down to the church camp. Turn right and drive thru the camp. Combination for gate is 2020. Continue down Red Ridge Rd. to County Road 203.
- If all roads are blocked, walk to the East Ridge and exit through the 2002 burn area or go to one of our meadows.
- In 2002 fire/ police cars were on the Ranch to assist in the evacuation.
- Do not try to drive on a road with fire on both sides. The extreme temperatures can blow out car windows or stall the car.

**Notes:**



# Appendix 11

## Sample Volunteer Hours Timesheet

### LANDOWNER PROJECT COST DOCUMENTATION

I have incurred the following expenses for completion of the practice(s) itemized below.

Notes

- 1) The labor rate to be used if landowner is doing the work is \$20.85/hr.
- 2) Separate expenses by component (activity).
- 3) Attach receipts/copies of cancelled checks when cost share or other grant reimbursement applies.

---

Landowner Signature

Date	By Whom:	Activity/Expense:	Hours	Expenses

# **Appendix 12**

## **Neighborhood Firewise Ambassador Responsibilities**

- Provide timely mitigation information and educational material and educational meetings to FCR residents throughout the year.
- Organize cooperative education and mitigation efforts with DFRA, CSFS, FireWise and USFS (San Juan Public Lands).
- Organize Wildfire Prevention and Education Month activity every June.
- Create educational seminars for residents with the support of the DFRA, FireWise and CSFS.
- Work with the Roads and Common Property Committees to help implement mitigation projects.
- Help track volunteer mitigation hours and report these to the FCSC.
- Monitor and track the Mitigation Implementation Plan.
- Lead the CWPP Team.

In addition to homeowner volunteer hours, the Neighborhood Firewise Ambassador will input his/her own hours for:

- Educating neighbors
- Traveling to and from, and attending Firewise Council of Southwest Colorado meetings
- Writing a Community Wildfire Protection Plan (CWPP)
- Presenting at a BoD meeting and to residents
- Grant writing
- Coordinating mitigation projects (using grant money and volunteers)
- Mitigating their own property
- Preparing mailings
- Walking the subdivision and discussing mitigation needs with DFRA, Forest Service, FCR POCs
- Getting address signage
- Maintaining Firewise information on the FCR web site; update the CWPP on the CSFS web as needed
- Researching CWPP's, mitigation standards, etc.
- Updating contact information

# **Appendix 13**

## **Road Improvement Plan and Map of Upgrades**

### **Road Upgrades for Improved Emergency Response**

Hello Creekers! Please read through this important message from the Road Committee regarding planned improvements to the FCR roads system. Contact Road Chair Barry Bryant ([thebryants@durango.net](mailto:thebryants@durango.net) or 259-4278) with any comments or questions.

**Purpose:** This document summarizes recommendations for upgrades to FCR roads to improve safety for residents and emergency responders alike during times of fire, medical, and other emergencies. These recommendations were developed during meetings and on-site tours of the Ranch with the SW Colorado Firewise, Durango Fire and Rescue Authority, the US Forest Service, and the Colorado State Forest Service as part of the development of our FCR Community Wildfire Protection Plan (CWPP).

**Background:** FCR has established a working group to develop a CWPP for our ranch. This Plan will identify potential wildfire threats to FCR and prioritize actions to be taken to reduce these threats, such as vegetation management and fire breaks. Part of this effort also includes review of our road system's ability to support emergency vehicle operations and provide safe egress for residents to flee during a wildfire emergency. The CWPP working group, including the Road Committee Chair, met with representatives of SW Colorado Firewise, DFRA, USFS, and CSFS twice during the fall of 2010.

The team reviewed each road in the FCR system for its ability to support emergency vehicle operations and safe egress for residents. The emergency responders noted that a safe and viable road system is the backbone of any CWPP plan, and thus should be considered as one of our higher priorities. Their specific comments generally fall into three main groups of recommendations:

- 1) Many of our roads are very narrow and cannot support both a fire truck arriving and a resident vehicle attempting to flee. We need either wider roads or strategically placed turnouts (passing zones) wide enough to allow safe passage for both vehicles.
- 2) Many of our dead-end (cul-de-sac) roads lack adequate turnaround (maneuvering) areas. These areas can be circles, loops or hammerhead designs depending on topography, utilities, and other restrictions.
- 3) Many roads are encroached by dense vegetation. When roadside vegetation limits visibility or catches fire, it creates serious safety conditions for emergency responders, residents and their vehicles.

The Road Committee also met with Ranch Caretaker Ray Smith to identify road improvement areas that would be helpful to improve maintenance and winter operations.

Since much of this work will require excavation work beyond the scope of our current Ranch equipment, the Road Committee and Board recommend use of an outside contractor to perform this construction. It is planned to commence this work using this year's remaining road budget and complete next year (FY2012). The Road Committee has also secured a Firewise Grant of \$5,000 to assist in this effort. Investing in our roads will also show goodwill in our efforts to obtain future CWPP grants.

*Special Note:* This document addresses only ranch roads. The CWPP will also contain guidelines for individual residents to properly address their own driveways and maneuvering areas.

## **CWPP Road Improvement Recommendations**

Following are notes and specific recommendations from the Road Committee for improvement of the FCR road system to support fire safety, emergency response, and maintenance needs. These recommendations are based on the following guiding principles:

- Provide wide spots (turnouts) in our roads to allow passage of at least one firetruck and one car (and to improve winter plowing/driving);
- Provide wider turnouts at fire hydrants (where possible) to allow safe operation of two fire trucks;
- Expand intersections where needed to allow better visibility and safe passage of fire trucks and to facilitate improved road maintenance activities;
- Expand/improve turnaround areas on dead-end roads to allow safe maneuvering of fire trucks and to facilitate improved road maintenance activities; and
- Be sensitive to issues of cost, and privacy between residents’ homes and roads.

These proposed actions have been discussed and reviewed with Durango Fire and Rescue personnel, Ranch Caretaker Ray Smith, FCR Road Committee, and the FCR Board. These parties strongly endorse these improvements.

*Each FCR member is encouraged to review the following specific road recommendations, and to contact the Road Committee for any questions or clarifications. We are willing to meet with anyone interested for a more detailed on-site description of the work to be performed.*

This work will largely involve excavating (or cutting) roadsides in some areas and trucking the material to other areas to be used as fill. The work will also require removal of a small number of trees which will be made available to residents as firewood.

Following are road-by-road descriptions of the proposed work:

<b><u>Road</u></b>	<b><u>Proposed Action</u></b>
	<i>Feeder Roads</i>
Falls Creek Main	Main south of Mason Cabin – no actions planned; Fill/grade inside (eastside) of curve just north of Mason Cabin, ~20cubic yards (cy); Fill/grade outside (eastside) of curve just south of Oakcrest (Option: check utilities for opportunity to cut Westside bank inside this curve); Fill/grade east side from lot 94 driveway to approx 150 feet north (to juniper tree) ~60cy;

	<p>Replace deep culvert (30") and re-cut bar ditch north of lot 94;  Fill/grade east side across from large boulder north of lot 94, ~100cy;  Cut west bank across from lot 95 driveway, ~20cy;  Fill/grade east side at top of hill between lot 96 dual driveways, ~20cy;  Fill/grade east side at bottom of hill near lot 99 big rock, 20cy;  Fill/grade west side across from lot 99, 10cy;  Turnaround – no actions planned.</p>
Oakcrest Drive	<p>Grade wider at hydrant near Main;  Fill/grade wider on inside of curve between Highridge and Ponderosa;  Fill/widen north side at Ponderosa intersection;  Cut west side bank near lot 85; Fill/grade east side north of lot 76;  Cut west side bank near lot 75; Fill/grade east side north of lot 75 driveway;  Cut west bank across from lots 77/78 driveways, ~40 cy.  Cut west bank between lots 79/81, ~100cy  Cut west bank and move large rock at turnaround entrance (end of Oakcrest)</p>
Snowshoe Lane	<p>Grade/widen both sides near AED &amp; pull two stumps across road;  Fill inside (south side) of first curve, ~30 cy;  Install culvert at lot 2 driveway;  At intersection with MR, cut pine and fill inside (south side) of curve from culvert to oaks' ~100cy;  Fill/widen south side across from lot 14 driveway, ~40cy;  Cut bank (south side) on curve just north of Aspen, ~300 cy.</p>
Starwood Trail	<p>Grade/fill east side on upper hill north of Rockridge intersection (front of lot 40), ~30 cy;  Cut bank on north side of curve between lots 48-46, ~200cy;  Cut east bank along lower hill, use fill on west side near bottom of hill;  Grade/fill near hydrant at Main intersection.</p>
Aspen Lane	<p>Improve Main intersection by moving road sign and filling/grading northeast corner, ~40 cy;  Grade/fill both sides near fire hydrant, ~10cy (requires modification to hydrant valve box);  Grade/fill all roads at Starwood intersection.</p>
<i>Dead-End Roads</i>	
Skyline Drive	<p>There is no good solution for an end-of-road turnaround. Options include widening the Oakcrest/Skyline intersection (requires move of telephone pedestals) or expanding area north of sharp turn on Skyline (difficult to maintain level grade).</p>
Ponderosa Park Drive	<p>Expand turnaround to west (opposite lot 70 driveway); hammerhead design; remove one pine, several small oaks; Excavate ~20 ft west, use spoil to level turnaround;</p>



	Grade road wider across from lot 72. Option: cut west bank between lot 72 and 73 to widen road and improve visibility(requires phone pedestal move).
Highridge Road	No actions planned.
Mason Cabin Road	Fill south side of road just west of fire road intersection; Fill turnaround (northwest corner of junction of driveways for lots 12&62), requires removal of several small oaks and aspens, and extend or abandon culvert, ~40cy.
Deer Trail Road	Construct new hammerhead turnaround at intersection of driveway for lot 60, remove 3 small oaks & 1 pine, grade and fill (north and south sides of Deer Trail) ~150cy
Dyke Canyon Trail	Fill north side near hydrant at DC/BS intersection, ~10cy; Fill south side at last curve & reestablish bar ditch; Turnaround complete no action planned.
Bear Scat Trail	Expand turnaround; cut west bank ~15 ft, fill east side. Requires move of lot 30 water meter pit.
Saddle Lane	Remove ladder fuel oaks and limb pine/spruce trees; Grade/fill/level inside of loop, ~10 cy. Option – Expand loop to ‘teardrop’ shape.
Meadow Ridge Trail	Cut bank on east side of curve & move fill downhill near Snowshoe intersection; Construct new hammerhead turnaround (across from lot 7 driveway) at multiple driveway intersection, cut several oaks but leave screen oaks at meadow edge, remove one suppressor pine at lot 7 driveway, ~20 cy. Option – improve turnaround by removing large pine with ‘170’ sign on it.
Alpenglow Drive	Grade/fill both sides at hydrant near lot 8 driveway; Construct new hammerhead turnaround towards south near lot 10 driveway (requires modification to water valve box), ~40 cy.
Rockridge Circle	Fill inside (south side) of first curve, ~40 cy, remove juniper tree; Grade/fill near hydrant north of Sunrise intersection, ~30cy; Construct new hammerhead turnaround by cutting/grading area west of Sunrise intersection, Turnaround – no actions planned.
Sunrise Lane	No good option exists for a turnaround at end of Sunrise...see recommendation for Rockridge Circle above.

Timing: It is proposed to complete this work over a two-week period in June or July 2011. More details will be provided as we get closer to the start of work. Short delays in road traffic may be possible as the work progresses and we appreciate everyone’s patience.

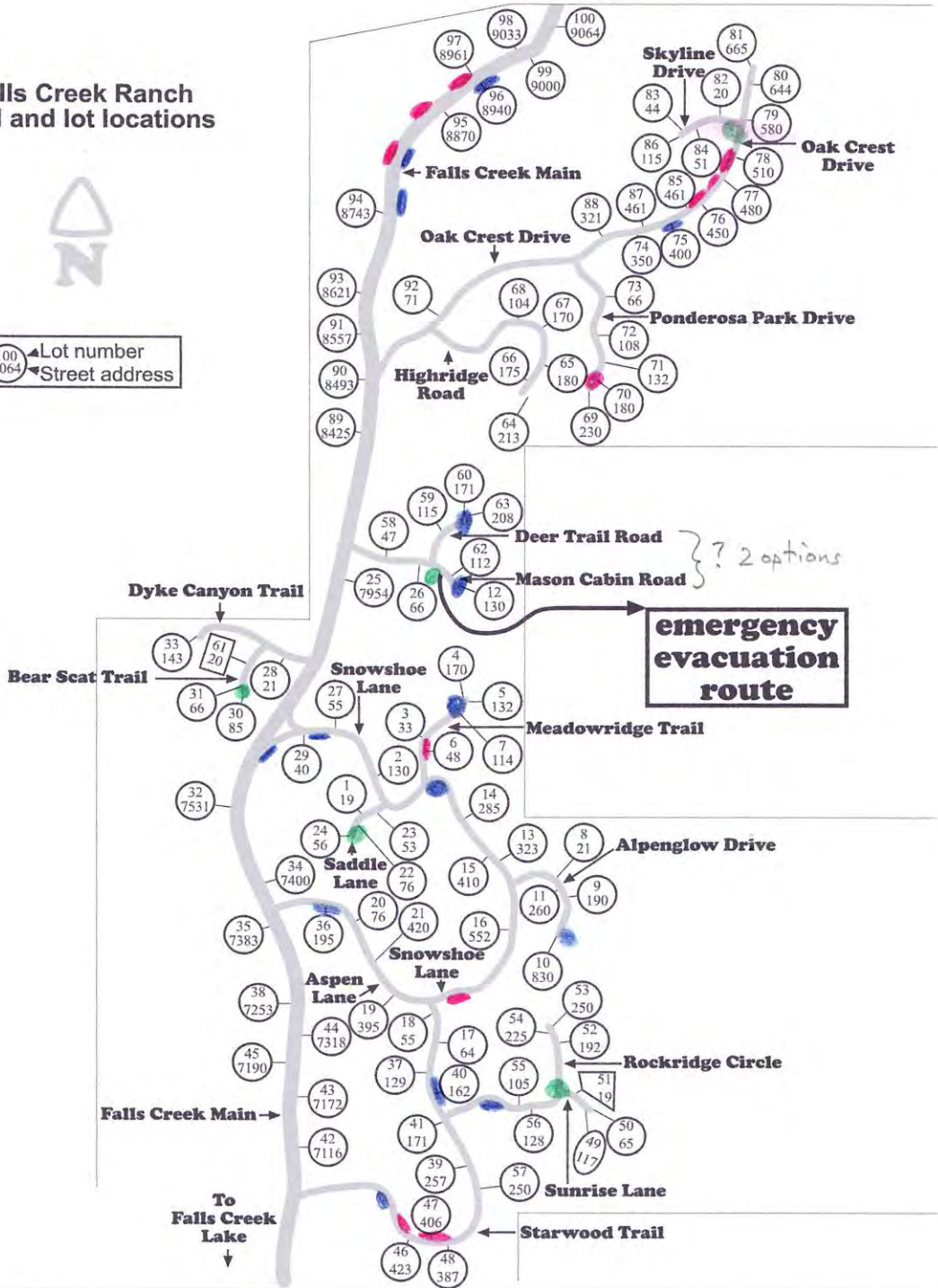
See map of Proposed Road Improvements (next page)

/// Cut  
/// Fill  
/// Grade

Falls Creek Ranch road and lot locations



(100/9064) Lot number  
 Street address



May 1, 2001 - Mary A. Sears

Map of Falls Creek Ranch