Buckskin Heights

Community Wildfire Protection Plan

Masonville, Colorado
2006
Revised June 2014
Updated January 2017

By: Don Vandendriesche
Buckskin Heights Resident

With Collaborative Support from:

- Tony Simons, Larimer County Emergency Services Specialist, Wildfire Safety Program
- Mandy Wiedeman, Forester, Colorado State Forest Service
- Emily Saeli, Student, Warner College of Natural Resources, Colorado State University

With Contributing Support from:

- Wendy McCartney, Forester, Colorado State Forest Service
- Boyd Lebeda, Forester, Colorado State Forest Service
- Dick Edwards, U.S. Forest Service, Arapaho-Roosevelt National Forest

With Neighborhood Support from:

- Katherine Hoffman, Buckskin Heights Resident
- Dan Glanz, Buckskin Heights Resident
- Paul Hesson, Buckskin Heights Resident

Revised By: Paul Hesson, Buckskin Heights Resident
Reviewed By: Diana Selby, Colorado State Forest Service
Revision Approved: Buckskin Heights Fire Committee, June 2014

Buckskin Heights
Community Wildlife Protection Plan (CWPP)

Table of Contents **Page**

I. INTRODUCTION

"It does not do to leave a live dragon out of your calculations, if you live near him."
From *The Hobbit* by J.R.R. Tolkien[1]

These are wise words taken to heart by the residents of Buckskin Heights Neighborhood, Larimer County, Colorado. Pro-active is better than reactive. The former is taken with enlightenment for the consequences whereas the latter only leads to regret. It is with this desire than a Community Wildfire Protection Plan was pursued and developed for our beloved neighborhood.

A. Necessity of Plan

In 1994, the Colorado State Forest Service conducted assessments for some subdivisions within Larimer County; however, a complete list was never created. In November 2002, Larimer County's Wildfire Safety Program received a $10,000 grant from the Colorado State Forest Service to assist in the development of a County Fire Plan. The Wildfire Safety Program used the grant money to compile a county-wide subdivision wildfire hazard assessment. This subdivision assessment was incorporated into the County Fire Plan and serves as a planning tool for future projects and education outreach.

Assessments were conducted by either an on-site inspection or utilizing aerial photos. The assessments evaluated the subdivision as a whole or on a landscape scale and did not assess individual lots or structures. The assessment form created in 1994 by the Colorado State Forest Service was utilized during the 2002 process. This form identifies critical items that may contribute to wildfire hazard and assigns them a numerical value. These values are added together to determine a Hazard Rating (low, moderate, high, severe, and extreme). Items evaluated included:

Subdivision Design - access, road widths and grade, average lot size, street signs
Vegetation - Fuel type, defensible spaces present
Topography - Slope
Fire Protection - Response time, water source/proximity
Structure Hazard - Construction materials
Utilities - Placement

The assessments are based upon firefighter knowledge of anticipated fire behavior and emergency response. The ratings were made by looking at subdivisions as a whole, not by concentrating on individual structures.

The Subdivision Assessment process compared all subdivisions to one another using the same categories and factors. This process identified the most critical subdivisions within Larimer

[1] Cited from "Living With Wildfires", Janet C. Arrowood, Bradford Publishing Company, 1743 Wazee Street, Denver, Colorado 80202, 2003, 171 pp

County and assists in planning for future fuel reduction projects. Wildfire education and awareness programs are also targeted at these developments.

The Buckskin Heights community fared as follows:

Wildfire Hazard Rating For Subdivision
BUCKSKIN HEIGHTS

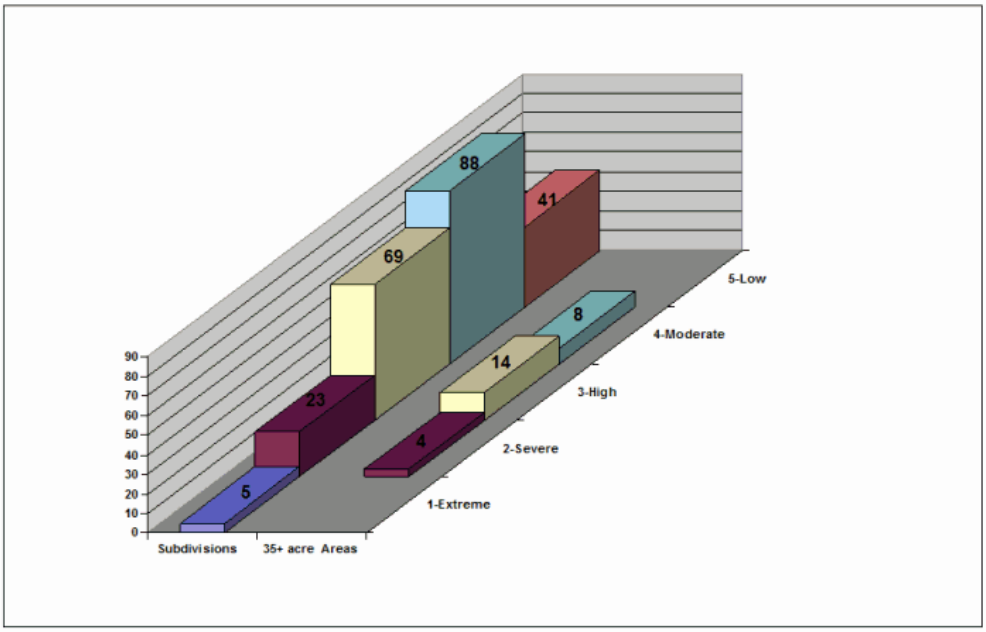
Criteria	Score
Ingress/Egress	5
Primary Road Width	1
Accessibility	1
Secondary Road Terminus	3
Average Lot Size	1
Street Signs	1
Fuel Type	3
Defensible Spaces Completed	1
Slope	5
Response Time	10
Water Source (within subdivision)	10
Water Source (off site)	10
Materials (predominant)	5
Utilities (gas and electric)	10
Total Score	**66**
Rating	**Severe**

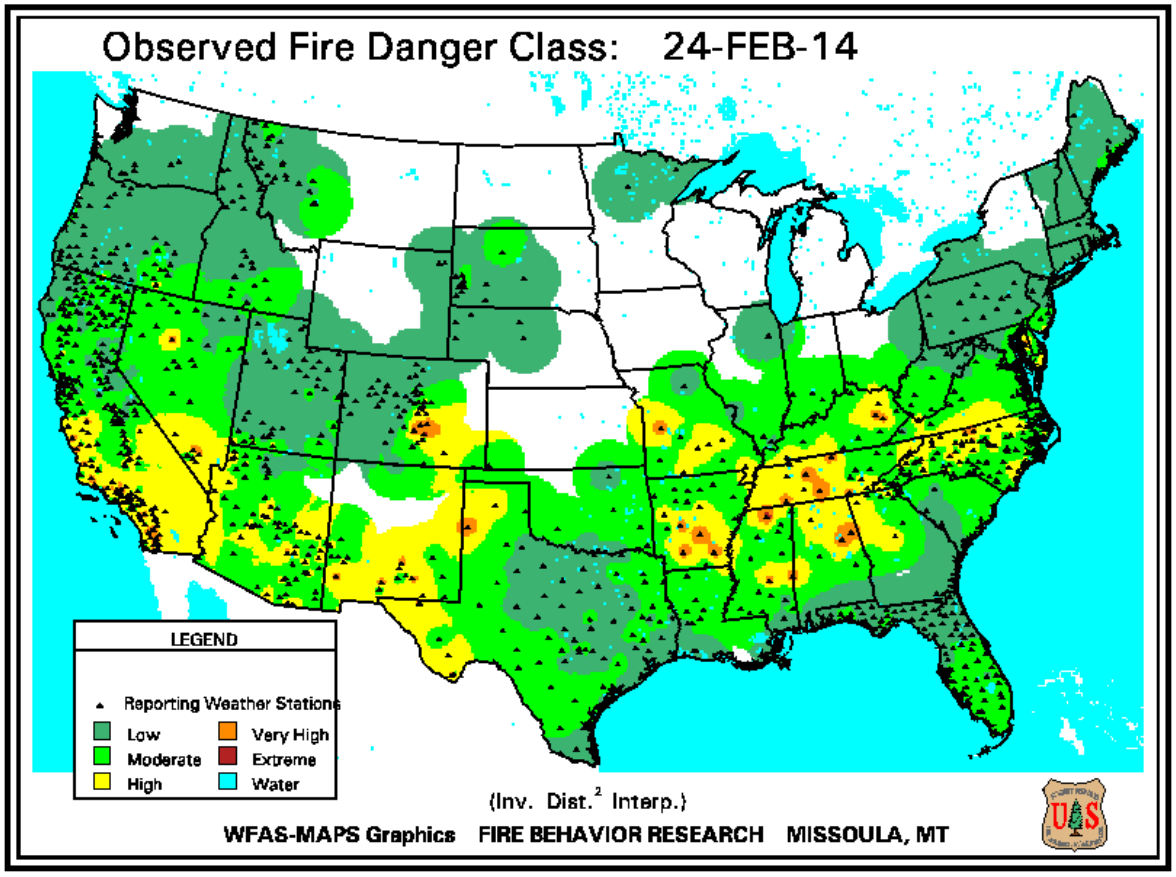
Date Evaluated: 10/18/94

View the following graph of other subdivisions within Larimer County to the Buckskin Heights Community relative to wildfire hazard rating:

In recent years, Colorado has experienced numerous droughty periods. This contributes to high fire danger. Combining dry weather with extreme fuel hazard adds up to a 'matter of time' situation when catastrophe hits. Preparedness is the only solution to combat climatic realities.

Subdivision and 35+ acre Area Hazard Rating Graph





B. Objective of Report

The idea for community-based forest planning and prioritization is neither novel nor new. However, the incentive for communities to engage in comprehensive forest planning and prioritization was given new and unprecedented impetus with the enactment of the Healthy Forest Restoration Act (HFRA) in 2003. This landmark legislation includes the first meaningful statutory incentives for the U.S. Forest Service (USFS) and the Bureau of Land Management (BLM) to give consideration to the priorities of local communities as they develop and implement forest management and hazardous fuel reduction projects.

In order for a community to take full advantage of this new opportunity, it must first prepare a Community Wildfire Protection Plan (CWPP). Local wildfire protection plans can take a variety of forms, based on the needs of the people involved in their development. Community Wildfire Protection Plans may address issues including but not limited to: wildfire response, hazard mitigation, community preparedness, and structure protection.

The process of developing a CWPP helps a community clarify and refine its priorities for the protection of life, property, and critical infrastructure in the wildland urban interface. It also can lead community members through valuable discussions regarding management options and implications for the surrounding watershed.

C. Organization of Document

This Community Wildfire Protection Plan is organized in five chapters as follows:

II. *Neighborhood Setting* – This section familiarizes the reader with important background information such as location, access, and climate.

III. *Community Assessment* – This section presents the evaluation of fuel hazard, risk of ignition, wildlife occurrence, values at risk, local preparedness, and protection capability.

IV. *Mitigation Measures* – This section describes local practices targeted for wildfire prevention, fire mitigation, fuel hazard reduction, infrastructure improvement, defensible space initiative, improved protection capabilities, and monitoring activities.

V. *Photos* – This section provides neighborhood photographs of the good, not so good, and opportunities to be had in our efforts to improve wildfire protection.

VI. *Maps* – This section includes maps pertaining to the wildland urban interface zone, fuel hazard locations, and local topography.

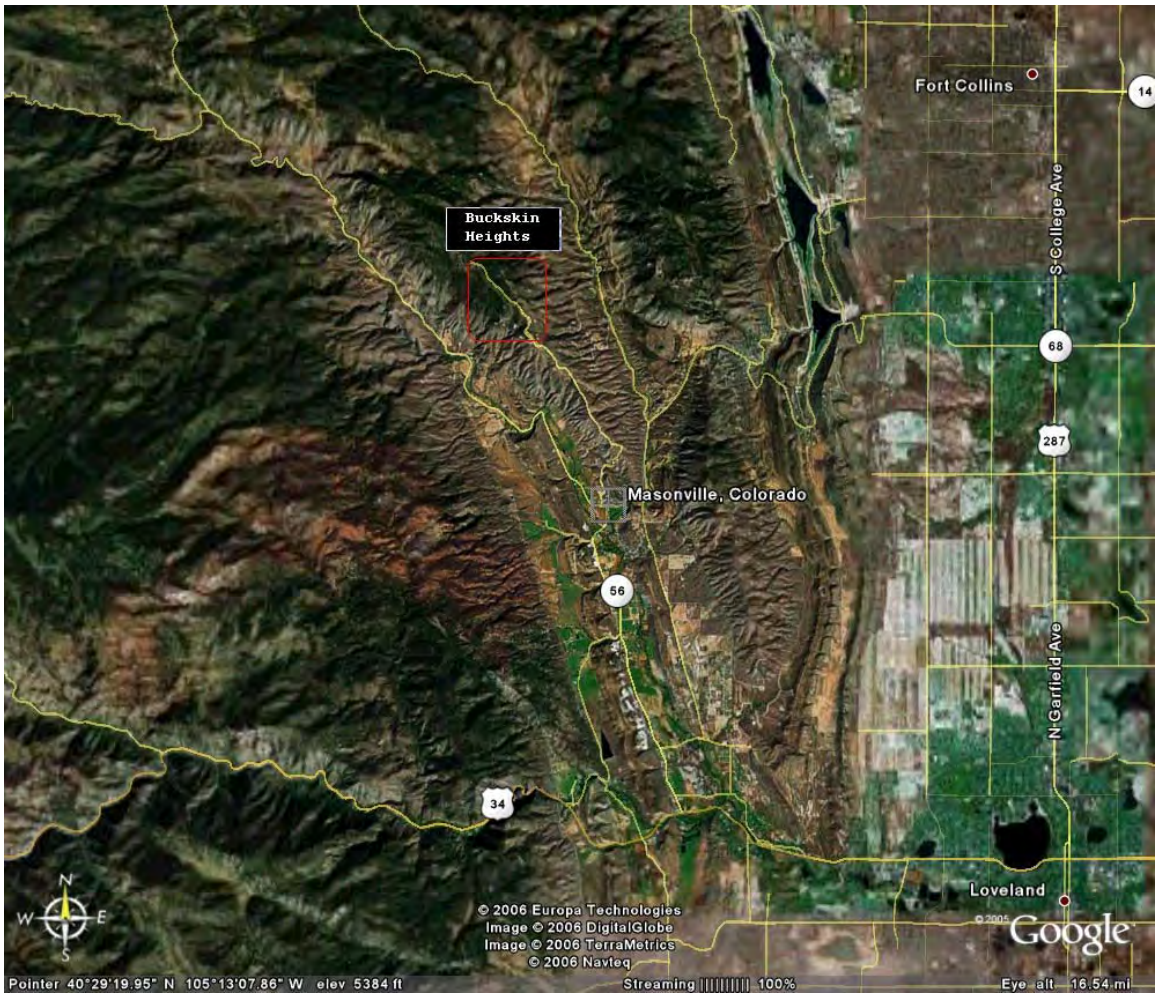
As a matter of brevity and convenience, applicable support information can be found in the appendices.

II. NEIGHBORHOOD SETTING

The Buckskin Heights Community covers slightly more than 1,000 acres. It is located in Larimer County, Colorado. The largest resident lot size is 67.0 acres, the smallest is 4.4 acres, and the median size is 13.2 acres.

A. Community Location

The Buckskin Heights neighborhood is located four miles north of Masonville, Colorado, situated along the southern ridgeline of Christ Mountain. Masonville is ten miles west of Fort Collins, Colorado, accessed via County Road 38E; ten miles northwest of Loveland, Colorado, accessed via CO 56; and ten miles southeast of Stove Prairie, Colorado, accessed via County Road 27W. Otter Road is the main artery into Buckskin Heights. All roads to and through the neighborhood are mountainous dirt roads.



Legal description is as follows: Buckskin Heights resides within Latitude 40 degrees 45 minutes North, Longitude 105 degrees 15 minutes West. Buckskin Heights fully encompasses Section 33 and partially, Sections 28, 29, 32, and 34 of Township 7 North Range 70 West.

The elevational gradient from the southeast corner of the neighborhood to the northwest corner ranges from 6,600 ft to 7,400 ft. Christ Mountain rises to 7,919 ft and is located on private ranch land, three miles northwest of Buckskin Heights.

B. Neighborhood Access

From the familiar Masonville T-intersection formed by County Roads 38E and 27, proceed 100 yards west on Buckhorn Road and turn right onto Otter Road. Follow this gravel road four miles, while climbing curvy terrain and gaining 1,250 ft in elevation, to the metal gate marking the entrance to the Buckskin Heights neighborhood.

The road system within the Buckskin Heights community is designated by roads, drives, and courts. Otter Road continues north beyond the gate along the ridge and provides the main access through the subdivision. Woodchuck Drive splits off to the west and Raccoon Drive to the east portions of the neighborhood. Fox Court appends west midway up Woodchuck Drive. Otter Court branches west midway up Otter Drive. Wolverine, Raccoon, and Gray Squirrel Court dissect Raccoon Drive to the east.

There were two filings in the development of Buckskin Heights. Each filing designated 30 distinct lots ranging from 5 to 35 acres. Refer to the plat map on the following page for exact locations of individual properties. Road signs have been placed on the intersections of the interior roads. Road names generally are listed on south- and west- facing signposts.

C. Evacuation Routes

The primary evacuation route is south via Otter Road through the gate at the main entrance to the sub division and continuing to the bottom of the mountain.

The alternate route is north to the end of Otter Road then north across Lot # 30 to a ranch gate, through the gate onto the Anderson Ranch and then 200 yards northeast following the cleared path to a gate connecting to Puma Gulch Road (at the Wedum property) and then to the Redstone County Road .

The alternate emergency route is not recommended for primary use and should only be used in an extreme emergency if no other safe option is available**. In almost all cases response personnel will indicate the evacuation route to be used**. Residents should be advised that significant risks are involved in making the decision to use this route; locked gates, confusion about where to turn arising from using an unfamiliar route, useable only with high clearance four wheel drive vehicles, and other unforeseen obstacles to a safe exit. In the absence of specific instruction from response personnel, members of the community should make their own personal

evacuation route decision that provides the maximum safety and the least risk for their family. Neither the BHRA nor the publishers of this evacuation plan assume personal or property liability for resident's usage of this route. **Residents are advised to follow all the instructions of fire fighters and law enforcement regarding all aspects of an evacuation.**

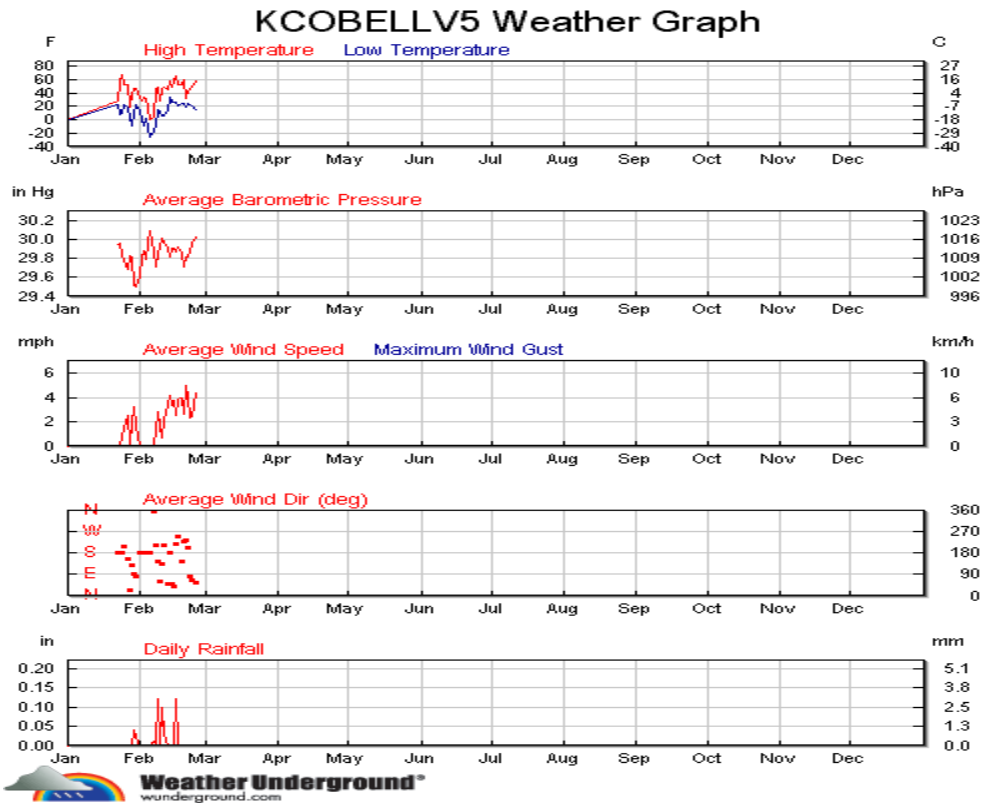
The complete evacuation plan is reprinted in Appendix II and available at http://buckskinheights.org/Buckskin_Heights_Wildfire_Evacuation_Plan_2014_Copyright_2014

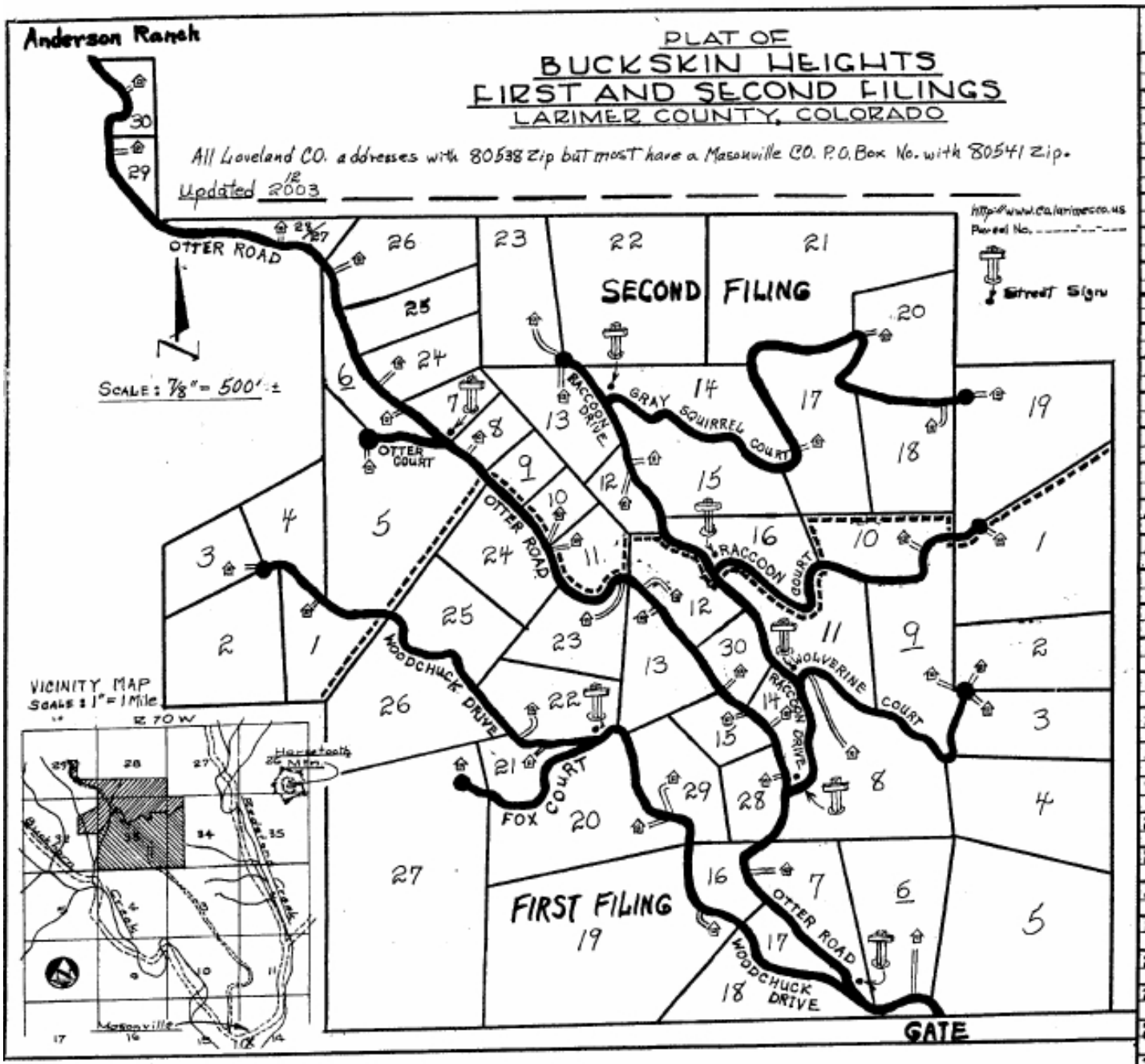
D. Local Climate

Weather data has been gathered by neighborhood residents for the past fifteen years. This information is currently maintained in paper form. Efforts are being made to enter a local automated weather station has been installed. Weather attributes such as temperature, barometric pressure, wind speed, wind direction, and daily rainfall are being relayed to the WeatherUnderground Website.

Weather statistics have been gathered since January 1, 2014 for the Buckhorn Canyon. The internet Website address to access this data is:

`http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KCOBELLV5&graphspan=custom&month=1&day=1&year=2014&monthend=12&dayend=31&yearend=2014`





FIRST FILING		SECOND FILING	
1.	8001 Raccoon Ct.	1.	3821 Woodchuck Dr.
2.	8001 Wolverine Ct.	2.	3721 Woodchuck Dr.
3.	8017 Wolverine Ct.	3.	3725 Woodchuck Dr.
4.	07333-05-004	4.	3724 Woodchuck Dr.
5.	4532 Otter Rd.	5.	57 Otter Court
6.	4528 Otter Rd.	6.	3521 Otter Rd.
7.	4524 Otter Rd.	7.	3616 Otter Rd.
8.	8124 Wolverine Ct.	8.	3615 Otter Rd.
9.	8120 Wolverine Ct.	9.	3712 Otter Rd.
10.	8220 Raccoon Ct.	10.	3728 Otter Rd.
11.	3900 Raccoon Ct.	11.	3820 Otter Rd.
12.	3928 Otter Rd.	12.	3725 Raccoon Dr.
13.	4017 Otter Rd.	13.	3621 Raccoon Dr.
14.	4120 Otter Rd.	14.	3504 Raccoon Dr.
15.	4121 Otter Rd.	15.	3724 Raccoon Dr.
16.	07334-05-016	16.	3820 Raccoon Dr.
17.	07334-05-017	17.	8613 Gray Squirrel Ct.
18.	4525 Woodchuck Dr.	18.	8129 Gray Squirrel Ct.
19.	4429 Woodchuck Dr.	19.	8001 Gray Squirrel Ct.
20.	4225 Woodchuck Dr.	20.	8220 Gray Squirrel Ct.
21.	4135 Woodchuck Dr.	21.	8613 Gray Squirrel Ct.
22.	4132 Woodchuck Dr.	22.	3500 Raccoon Dr.
23.	3821 Otter Rd.	23.	3501 Raccoon Dr.
24.	07332-05-024	24.	3520 Otter Rd.
25.	07332-05-025	25.	3408 Otter Rd.
26.	07333-05-026	26.	3332 Otter Rd.
27.	3829 Fox Ct.	27/28	3312 Otter Rd.
28.	4217 Otter Rd.		
29.	4220 Woodchuck Dr.	29.	3212 Otter Rd.
30.	4016 Otter Rd.	30.	3120 Otter Rd.

III. SITUATION ASSESSMENT

Generally, the fire hazard and vulnerability to wildfire within the Buckskin Heights neighborhood is high to extreme depending on the time of year and the fire weather conditions. Because of the fuel type, the continuity of down woody debris, and the steepness of slope, a wildfire under conditions of very high fire danger would be detrimental to the community and the forest. Major factors contributing to the fuel hazard are tall herbaceous grasses, dense ponderosa pine saplings, and the prevailing low-lying branches of larger trees. This creates a continuous fuel ladder that could spawn a powerful crown fire. A major contributor to the fire hazard regardless of weather conditions is the forest debris that has built up over several decades. These high fuel loads are due to natural causes such as tree mortality from wind throw, insects, and disease. Ground fuels have also been generated by unnatural causes such as fire suppression activities occurring in otherwise fire adapted ecosystems. During an average year the fire hazard is lowest in the winter and mid-summer months during the onset of the Monsoon season. High hazard occurs in the spring and fall seasons.

A. Fuel Hazard

Natural Fire Hazards – Fuels in the area vary between the east and west facing slopes, and to a lesser degree from south to north. On most of the eastern flank of the neighborhood below 7,000 ft elevation, grasses and brush dominate the vegetation component. Throughout the western aspect of the community and above 7,000 ft elevation, ponderosa pine trees have become established. Truly at the lower extents, this is a fringe community transitioning from grasslands to marginal forestland. A conservative estimate of site quality would be less than 50 feet in height development at 100 years old. At such poor site indices, ponderosa pine has trouble expressing dominance. Thus, self-thinning and pruning does not occur. Rather, without natural intervention via fire or human activity such as mechanical thinning, stands tend to stagnate. Interspersed amongst the pine are fire-flashy Rocky Mountain juniper trees. They are characterized by thickets of stems with crowns extending the full length of their boles. This is a very tenuous situation if wildfire were allowed to burn. Tall prairie grasses reside along most of the roadways. During dry seasons of the year, this material would ignite quickly, carrying wildfire throughout the community.

An insidious disease is impacting Buckskin Heights from north to south. Dwarf mistletoe has spread dramatically from the neighboring ranch to the north. Perhaps the best forest sites exist at the north boundary due to the higher elevations; however, mistletoe has rendered this area a wasteland for tree development. The dwarf mistletoe has ravaged ponderosa pine; big and small, old and young. Aided by recent years of drought and marauding bark beetles, several home sites have endured massive mortality. Wildfires, prior to suppression efforts, would eradicate epicenters of mistletoe. As a consequence, without human intervention, mistletoe proliferates unchecked, leaving a path of dead and dying trees. This too adds to the fuel load at the northern reach of our neighborhood.

In addition to the misletoe profliferation, the community has been infested with the mountain pine beetle. As a result, there are many dead ponderosa pines, posing an additional safety issue.

Topographic Slope – Estimates of slope percent range from five percent along the Christ Mountain Ridgeline paralleling Otter Road above 7,100 ft elevation to fifty five percent or more along the western aspect of the community adjacent to Woodchuck Drive. Road grades vary from 0% to 15% within the neighborhood. The steep slopes (over 40%) add significantly to burning intensity, rate of spread, and spotting potential of a wildfire. Several home sites are at the top of steep slopes exacerbating the high hazard and vulnerability of the structures. Many of the homes along Woodchuck Drive would be cut off during a wildfire. This road dissects extremely steep ground and terminates without providing an escape route.

B. Risk of Ignition

History – Up until approximately 80 to 100 years ago, fire occurrence within this area varied from approximately 10 to 25 years. It is speculated that this area may have been permanently maintained as grassland, at least on the south and east aspects at lower elevations. Most Buckskin Heights ponderosa pine trees are 80 years old. There are few fire scars on the young-growth trees; fire scars that have been found exist on old remnant trees. This indicates a history of open grass meadows that were perpetuated by frequent wildfires. Another possibility was that stand-replacement fires totally denude the existing landscape, requiring many decades if not centuries to restore the forest. Recently, most wildfires have been suppressed, causing a greater proportion of young trees and denser vegetation with fewer interruptions in fuel continuity.

Causes – The primary cause of fires in this community has been lightning. However, as human dwellings and activities increase, the likelihood of accidental ignition by people is increasing.

Risk – Since fire suppression has been a longtime policy within this community, there are few places on the landscape where fuel density, fuel continuity, and fuel loads have not increased. Therefore, the probability for a large wildfire has gradually increased over the years especially during drought years or when the weather is hot and the fuels are dry.

Risk within Buckskin Heights is high to very high due to the fuel continuity coupled with an abundance of flammable debris scattered throughout the neighborhood. When fire danger is very high to extreme and there is wind, a crown fire is highly likely and would be difficult to control.

C. Wildfire Occurrence

The recent local fire history as best known by Buckskin Heights residents has been compiled. The list includes adjacent properties and ownerships. Noted are the associated date, size, location, and cause.

1984 Summer: Small fire north of Otter Rd, caused by lightening
1987 Summer: Small fire at 3821 Otter Rd, caused by lightening
1987 Summer: Small fire at 4217 Otter Rd, caused by lightening
1997 Summer: Barn fire at 4120 Otter Rd, caused by lightening
1999 Summer: Small fire at 4429 Woodchuck Dr, caused by lightening
2000 Summer: 10,000 acre fire, Bobcat Fire
2000 Summer: Small fire at 8001 Wolverine Ct, caused by lightening
2003 Summer: Small fire, Buckhorn Canyon
2003 Autumn: Veteran's Day Fire below 3312 Otter Rd, possibly human ignition
2011 Summer: Crystal Mountain Fire, human caused by burning slash
2012 Summer: High Park Fire, caused by lightening
2013 Spring: Galena Fire (Lory State Park, March 16), human caused, but not a campfire

D. Values at Risk

The Buckskin Heights Community has been extremely fortunate to have excellent support from Larimer County, the Colorado State Forest Service, and Colorado State University personnel. We are indebted to these fine individuals who dedicated their time and expertise to help direct our efforts to create a Community Wildfire Protection Plan. Generally, bi-monthly meetings have been held throughout 2006 that have had commendable participation from many Buckskin Heights residents.

A tangible output from our community meetings has been the formulation of common values as related to living in the forest and living with potential wildfire threats. A Group Facilitation session was conducted by Emily Saeli from CSU. Emily helped our residents verbalize their concerns and issues. However, before doing so, we addressed our shared interests. The following is our value assessment as summarized from our April meeting:

Group Facilitation Notes: *Indicates the number of times value(s) were identified by other groups (subgroups of residents were assembled to solicit input).

Common Values:
- Intrinsic nature (scenery/views, wildlife, trees, hummingbirds)****
- Inspirational, low stress, relaxing, peace and quiet***
- Close-knit community/neighbors*** Selective independence/privacy – you can decide how much you'd like to interact with neighbor***
- Close proximity to Ft. Collins, Loveland, Greeley*
- Good investment (financially)
- No HOA restrictions
- Security and safety
- Area clean
- Healthy lifestyle
- Privacy
- Not adjacent to campgrounds or public hiking trails

Interactions between Fire & Values:
- Affects the scenery – environment
- Affects wildlife
- Not peaceful
- Impacts the people (homes, homeless, evacuation)
- Property values decrease
- Lost trees = lost privacy
- Lost homes = financial, sentimental costs
- Consider your belongings – what to take, be prepared
  - Neighbors – help each other (community assistance – how to utilize in time of crisis)
- Positive = kill mistletoe
- Negative = erosion
- Pets/livestock
- Fire = cleansing effects
- Renews the land
- Nutrient recycling

Unique Values:
- "Love the gate!"
- Road – hiking, biking, running
- Front Range view (lights)
- Can be off power grid
- Artists, artistic expression
- John Anderson (sense of history)
- Visiting cattle

Brainstorming Objectives:
- Having evacuation plan / communication plan with neighbors / family plan
- Fire training (for small fires)
- Cleaning flu on regular basis
- Trimming trees/shrubs
- Smoking – NO cigarette butts
- Properly disposing of fireplace ashes
- Water storage
- Reporting fires – communication/notification
- Fuel reduction
- Fuel reduction along roads (major roads as fire breaks)
- Map for staging areas (heliport)
- Well-marked roads
- Small group efforts – coordinate chipper use etc.
- Treatments w/o loosing aesthetic value
- Using fire wise construction materials on new building
- Ensure that roads allow for fire trucks, exit
- DMT – treat those trees
- Treat house/treat roads/treat between house and roads
- People coming up during Bobcat to look at fire, Buckskin residents couldn't get out (addressing similar incidents/plan for keeping out spectators)
- Alternative evacuation route – North Side – spread knowledge of this route
- Phone tree
- Thinning along easement

Values – There are approximately 45 home sites in the Buckskin Heights Community. Most include multiple structures such as detached garages and utility sheds. Most of the structures have good defensible space; however, some have flammable materials nearby, on the porch or under the decks, increasing their vulnerability. A few structures have wooden shingle or shake roofs. The composition and wooden roofs tend to hold pine needles and forest debris allowing accumulations that also increases vulnerability to fire brands. Many structures are vulnerable to wildfire damage occurring from firebrand ignition and/or radiation ignition due to the heavy forest fuels within the area. Many homes are also vulnerable to ignition from the potential radiant heat because of the close proximity of hazardous fuels.

Access – The primary access road, Otter Road, is steep in spots and slow to travel with heavy fire equipment. It is currently the only way into and out of the community. Most auxiliary roads have switchbacks with tight corners. Road signs and addresses are in-place but may lack visibility at night or through heavy smoke. Some driveways are narrow and turnarounds are marginal to non-existent at the end of the driveways. This is problematic to protecting the home site.

Risk – Because of the natural fuel continuity, steep slopes, and limited access, the community would be very difficult to protect in the event of a wildfire under very high or extreme fire danger conditions. The common and intrinsic values identified by the residents would be in jeopardy.

Evacuation – Escape planning is needed to minimize fire emergency confusion and risk to residents who might be asked to evacuate in the event of an emergency. With a small amount of road improvement work, and for emergency purposes, Redstone Canyon offers the best alternative evacuation route to the north and east. A cooperative agreement would need to be drawn. There are several locked gates across the road that would need to be addressed. Along segments of the road there are fuel concentrations that should be reduced.

A cooperative agreement was reached in April 2011, as described in the letter reproduced on the next page:

Buckskin Heights Road Association
P.O. Box 351
Masonville, Co 80541

April 21, 2011

Dixie Gibbens
1026 McHugh
Fort Collins, CO 80524

Robert Wedum
Woodcraft
328 S. Link Lane #10
Fort Collins, CO 80524

The purpose of this letter is to document the agreement regarding the mutual alternate emergency evacuation route for Buckskin Heights and Puma Gulch Road residents.

The Buckskin Heights alternate evacuation route is from the northern end of Otter Road, north across lot # 30 (Conrad Property) to a ranch gate, east approximately 150 yards across the Gibben's ranch land to a gate on Robert Wedum's property, follow Puma Gulch Road to the county road in the Redstone Canyon. Puma Gulch property owners would evacuate in a reverse direction to that described above using Otter Road as an evacuation route. Permission to use this route has been obtained from Dixie Gibbens, Robert Wedum and the Buckskin Heights Road Association. It is understood that this evacuation route is limited to a fire evacuation route and shall not be used for any other purpose whatsoever without further agreement from Gibbens, Wedum and Buckskin Height Road Association.

In a related discussion regarding fire danger with ranch owner Dixie Gibbens, she felt the unauthorized use (trespass) by ATVs on the ranch property constitutes a significant threat of fire. The Community Wildfire Protection Committee shares her concern and recommends that the Road Association make all property owners aware of respecting property rights and the specific fire danger related to off road ATV use.

Paul Hesson
Community Wildfire Protection Committee

E. Local Preparedness

Larimer County has developed a Fire Management Plan, which incorporates federal, state, county, and city policies and procedures and facilitates interagency coordination throughout the county. The plan includes, among other things, directives for coordinating fire prevention, training and preparedness, hazard mitigation, suppression within critical wildland urban interface (WUI) areas throughout the county and gives emphasis to the importance of safety. The plan also includes an Annual Fire Operating plan for the county, an annual Tactical Operations Plan, and several other plans and policy documents pertaining to specific agencies with fire protection responsibilities.

Initial Attack – Official fire protection comes from Larimer County Emergency Services. Their primary firefighting equipment consists of a pickup mounted 300 gallon water tank. Fortunately, the Loveland Fire Department has responded to all recent incidents requiring major firefighting equipment. The primary fire stations (Redstone Canyon, Horsetooth West Bay, Loveland) are several miles away from the home sites within this community.

The Division of Fire Prevention and Control is also a primary responder to a wildland urban interface wildfire. Mutual aid agreements provide a formal structure that encourages a cooperative approach between the county and the state and federal agencies. Through the mutual aid agreement, reinforcements will be dispatched to a wildfire depending on the need.

F. Protection Capabilities

Water Availability – Throughout the Buckskin Heights Community water supply is limited. Many of the wells do not yield enough to provide daily and weekly domestic needs and additional water is hauled. There is very little water available for fire protection. 10,000 gallons of water has been identified in Buckskin Heights. These water sources are available to first responders. Each of the addresses below are marked with the Water Source Here signage.

Lot 19/2	8001 Gray Squirrel Ct.	2000 gal.
Lot 17/2	8315 Gray Squirrel Ct.	1500 gal.
Lot21/1	13311 Woodchuck Dr.	2500 gal.
Lot 10/2	13428 Otter Rd.	1000 gal.
Lot 11/1	8315 Raccoon Dr.	2000 gal.
Lot 20/2	8220 Gray Squirrel Ct.	1000 gal.

There are some smaller tanks including a swimming pool and hot tubs scattered throughout that may be available in an emergency situation. There is a small stock pond located between Raccoon and Wolverine Courts, east of Raccoon Drive that holds water in the spring and early summer seasons.

IV. MITIGATION PLAN

Group facilitation meetings were conducted that developed consensus on community values and potential risks by prioritizing action items to address the wildfire threat. Buckskin Heights residents ranked several activities as either "high, medium, low, deferred" emphasis. The results were as follows:

Group Facilitation Notes on Action Items: *Indicates the number of times value(s) were identified by other groups (subgroups of residents were assembled to solicit input).

HIGH PRIORITY***

#1. Evacuation Plan Initiative

a. Alternative evacuation route to Redstone Canyon – see Evacuation Plan above.
b. Develop phone tree (by Otter Road and Raccoon/Woodchuck Drive)
c. Create email contact list
   An email contact list was established using Big Tent, a group online communication tool. The site has many communication features and tools, and it is free to join. BH property owners, with email addresses of record with BHRA, have all been invited to join BT as of February 26, 2014. Any subsequent new property owners will be added to BT, once they provide their email address(es). The owners are responsible for creating their own profile, and for providing (and maintaining) their own contact data. This contact data is the input into the "BH Fire Committee Emergency Phone Tree."
d. Off-mountain meeting location – Masonville Presbyterian Church)
e. Identify daytime residents and individuals with special needs
f. Care for school-aged children
g. Pasture arrangements for large animals
h. List properties with hazardous materials
i. Use community website to post information

#2. Defensible Space Activities

a. Perform home site visits
b. Enhance current conditions
c. Maintain conditions into the future

#3. Treat Road Easement

a. Submit grant proposal
i. With assistance from Larimer County
ii. Through assistance from the Colorado State Forest Service
iii. To US Forest Service for matching funding
   In 2013, Buckskin Heights received a Wildland Urban Interface (WUI) Matching grant through the Colorado State Forest Service. The grant is a $10,000 grant for defensible space/fuel reduction, fuel break work within the Buckskin Heights community. This will include creating defensible space around homes. Creating fuel breaks along roads and the fuel reduction efforts (thinning trees). The grant includes work done from September 2013 through September 2015 and must total at least 13.5 acres throughout the community.
b. Gather property release notices
c. Implement thinning (Larimer County Fuels Mitigation Crew)
d. Haul slash to roadside (Buckskin Heights residents)
e. Chip fuel and scatter (private contractor)

MEDIUM PRIORITY**

#1. Standardize Address Signs
a. Roads, drives, and courts
b. Property lots

#2. Sustaining Implementation
a. Address board member turnover
b. Continuing education process
c. Sustainability/maintenance of plan

#3. Forest Health Issues
a. Proactive dwarf mistletoe treatments
b. Preserve/maintain old growth trees

LOW PRIORITY*

#1. Community Slash Pile
a. List people with trucks and trailers
b. Obtain chipping cost bids
c. Matching funds for chipping

#2. Community Cistern near Otter Rd gate

DEFERRED ITEMS

#1. Conserve wildlife habitat
#2. Ensure a steady funding stream
#3. Become part of a fire district
#4. Partnership with Anderson Ranch

A. Wildfire Loss Prevention

The purpose of most of these actions is to reduce fuel continuity next to the structures, reduce the potential radiant heat and production of fire brands near each structure, and to reduce the vulnerability of each structure.

- Emphasize landowner's responsibilities to create a fire resistant community and the urgent need for each of them to create defensible space for their home sites.

- Expand defensible space and do fuel hazard reduction, including thinning and pruning within 150 to 200 feet of structures. Thin the areas adjacent to the home sites to achieve spacing of 12 to 20 feet between tree crowns or large brush stems and remove all slash and natural forest debris.

- Assist residents to be informed and to implement "FireWise" recommendations.

- Coordinate a central slash disposal system for the community.

B. Fuel Hazard Reduction

The treatment of fuel hazards for the Buckskin Heights Community should be a high priority. For it to be effective, it must be a coordinated effort between the community, the County, and the State. The fuel treatment projects should be designed at a community scale through interagency, community, and property owner coordination. The distance and extent of hazard reduction for each project depends on steepness of slope, height and density of vegetation, and distance from structures. The purpose for most of these proposals is to interrupt large fire momentum and reduce the potential for fire to spread at a rapid rate or propagate into tree canopies. The following are the actions that should be taken by priority. The first item should be coordinated with the defensible space work being conducted throughout the community.

1. Implement an intra-community fuel hazard reduction program to reduce the potential wildfire intensity and spread as follows:

    - Thin and reduce stagnate ponderosa pine trees 200 feet below structures and roads, and within 100 feet above structures and roads (along topographic contours). Create small clearings. Encourage adequately spaced regeneration in these areas.

    - Within 100 to 150 feet of travel ways, treat fuels along forested segments of roads and driveways by thinning to achieve a 40 percent canopy cover, pruning limbs six feet up from the ground, and removing slash and flammable debris. The roads are strategic infrastructures needed for evacuation and suppression operations. Ignition of a back-burning fire from roadways may be instrumental in combating a raging fire front.

2. Develop a fuel break with crown closures less than 40 percent along the top of Christ Mountain Ridge.

C. Infrastructure Improvement

For access roads and driveways over 150 feet long, the community should provide terminus turnarounds suitable for fire equipment. This generally requires a turning radius of 45 feet or hammerhead turnaround with pullouts at least 34 feet long. The neighborhood residents should mark driveways and other internal travel routes with a sign indicating limitations such as no turnaround, steep slopes, narrow width, or other deficiencies. Buckskin Heights should also expand fire protection water availability and increase the storage capacity as feasible.

D. Defensible Space Initiative

Two rounds of home site visitations were undertaken during the summer of 2006. A total of 23 properties were assessed for "FireWise" practices and defensible space. Several recent home construction sites had also been visited prior. Of the potential neighborhood lots that could benefit from a site evaluation, approximately two-thirds took advantage of the program offered by the Larimer County Wildfire Safety Specialist.

Overall, most properties were exemplary. Very few lots required tree marking to increase the buffer zone for the home. Propane tanks were identified as a source of potential combustion. Tanks should be placed on a concrete platform. Areas around these tanks should to be cleared of vegetation. Maintenance of defensible space will require an on-going effort.

E. Improve Protection Capability

The Buckskin Heights home owners should establish a permanent board, committee, or individual representative to help coordinate with the County and State as well as within the community for actions agreed upon for implementation. The Buckskin Heights Fire Committee has been established and is actively addressing issues identified in this plan.

Development of an evacuation plan is paramount. It should provide critical information that would be needed in an evacuation and that accommodates initial attack vehicles while safely evacuating the residents. The community has designated the egress route from Otter road to Redstone Canyon as an emergency evacuation route. The community should contact the Redstone Canyon representative to coordinate this proposal and to insure the route remains open and passable for emergency use by Buckskin Heights residents (see letter of agreement previously cited). The community needs to reduce the road corridor fuel hazards along the

forested and brush segments of the emergency route and ensure that the windfall trees are removed from this route every spring. Consideration of a central warning siren system for the upper portion of the community would be beneficial.

The local fire department should pre-plan a strategy for moving more water into the Buckskin Heights area during a wildfire emergency. Two examples would be for multiple water tankers to be dispatched for hauling water from Horsetooth Reservoir to strategically located portable water tanks and/or arrange for a helicopter to transport water to tanks near the top of the Buckskin Heights Community.

F. Monitoring

Buckskin Heights residents should set goals and monitor implementation progress made to reduce the community vulnerability to a devastating wildfire. All fuel hazard reduction improvements and the evacuation route should be inspected annually for repair needs and cleanup work.

V. PHOTOS

1. Good Examples
- Expanded defensible space from home
- Roadside debris piles readily accessible for chipping

2. Not So Good Examples
- Dense ponderosa pine thickets
- Vegetation adjacent to propane tank

3. Opportunities
- Preservation of community aesthetics
- Wood products derived from treatments

The Good

The Not So Good

Opportunities

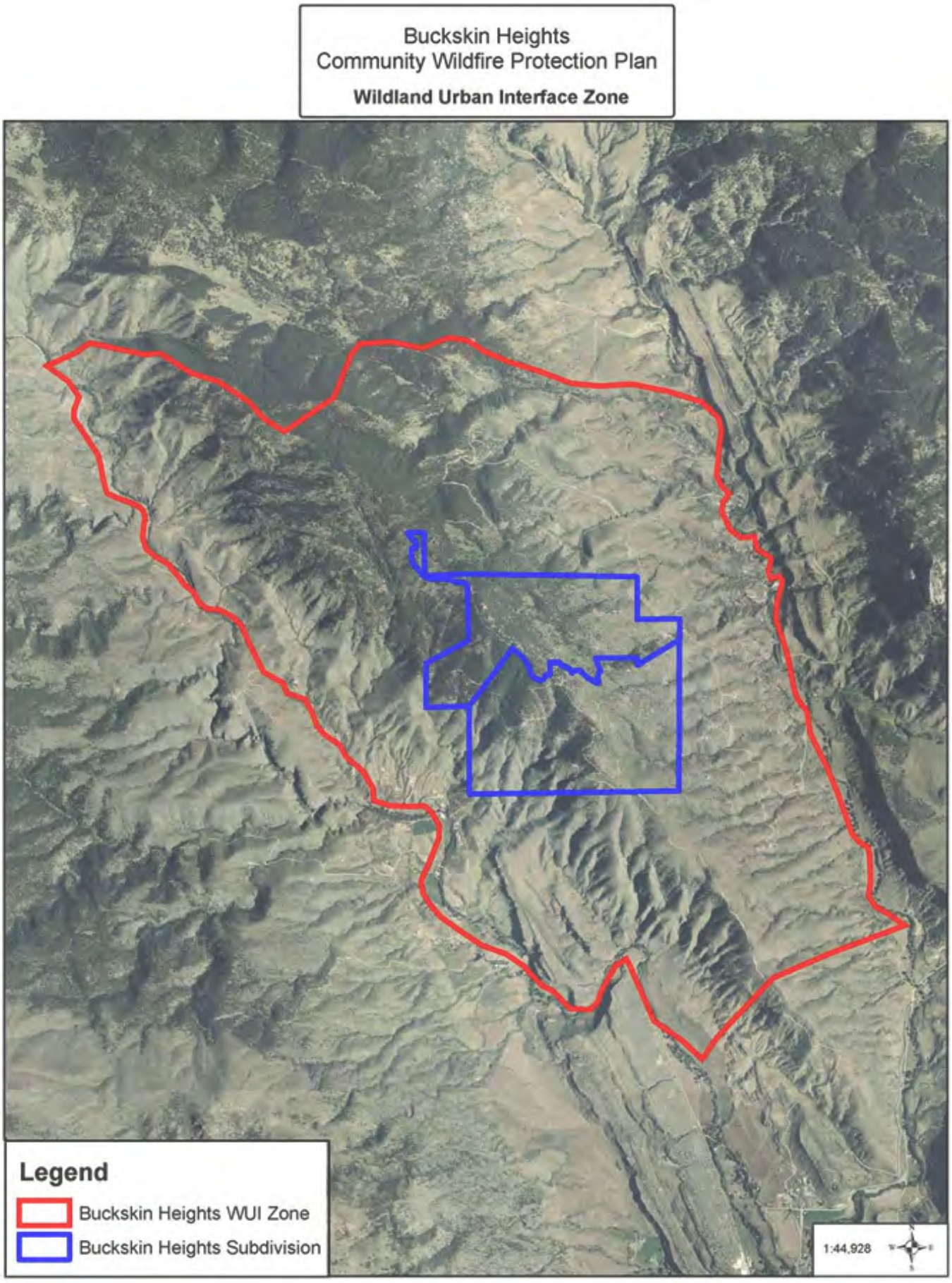
VI. MAPS

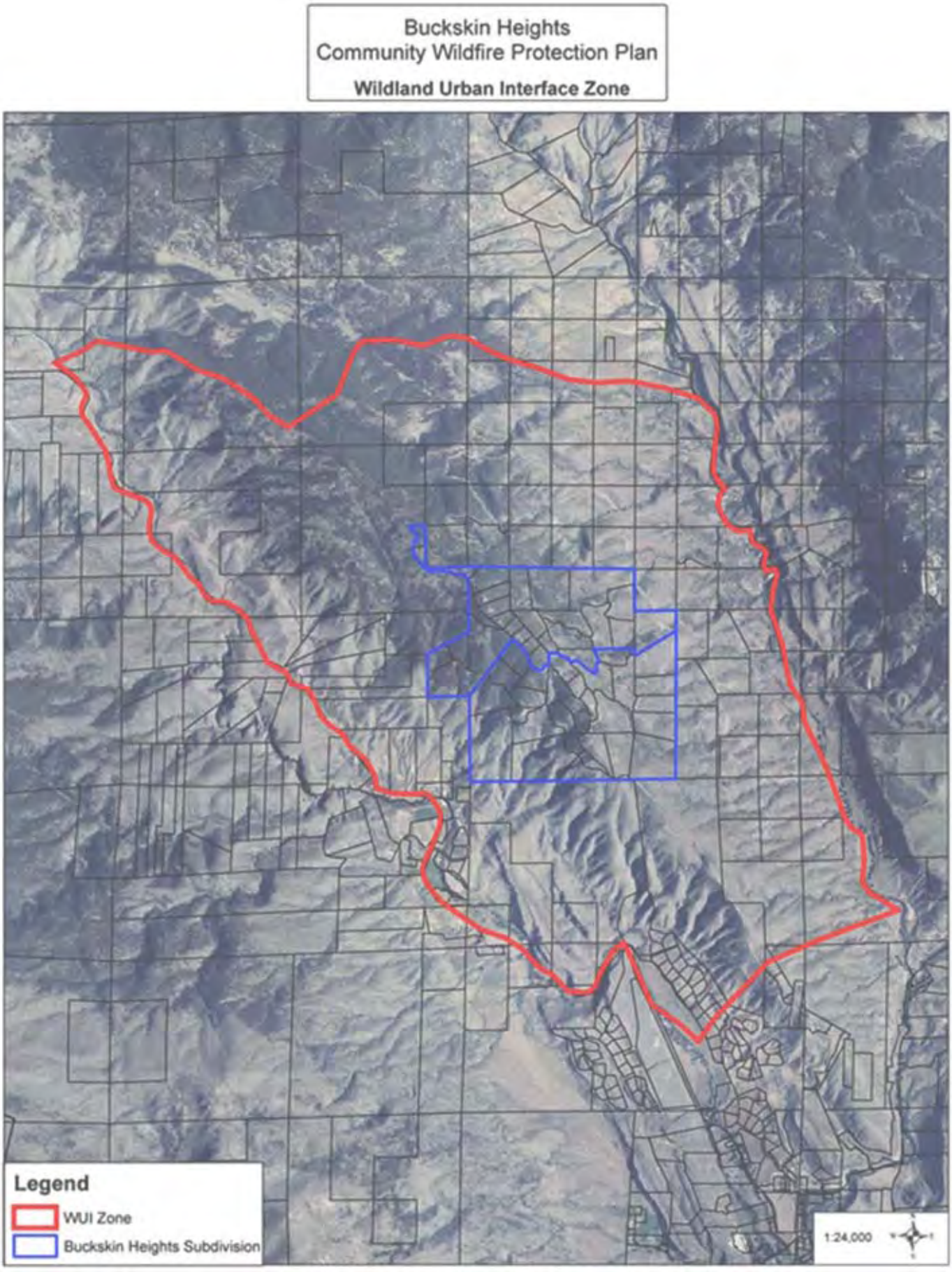
1. Buckskin Heights Wildland Urban Interface - Orthophoto

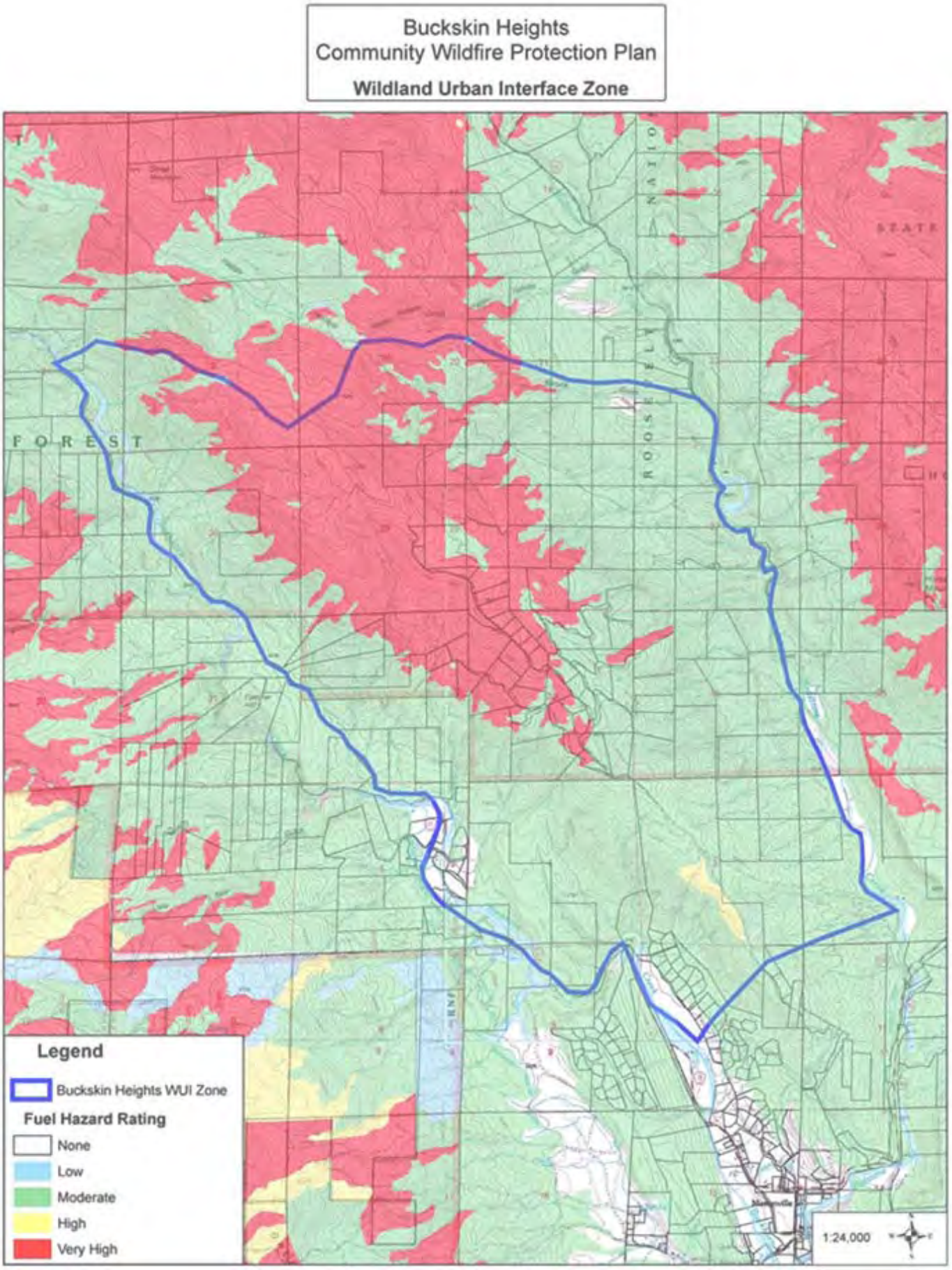
2. Buckskin Heights Wildland Urban Interface – Subdivision Overlay

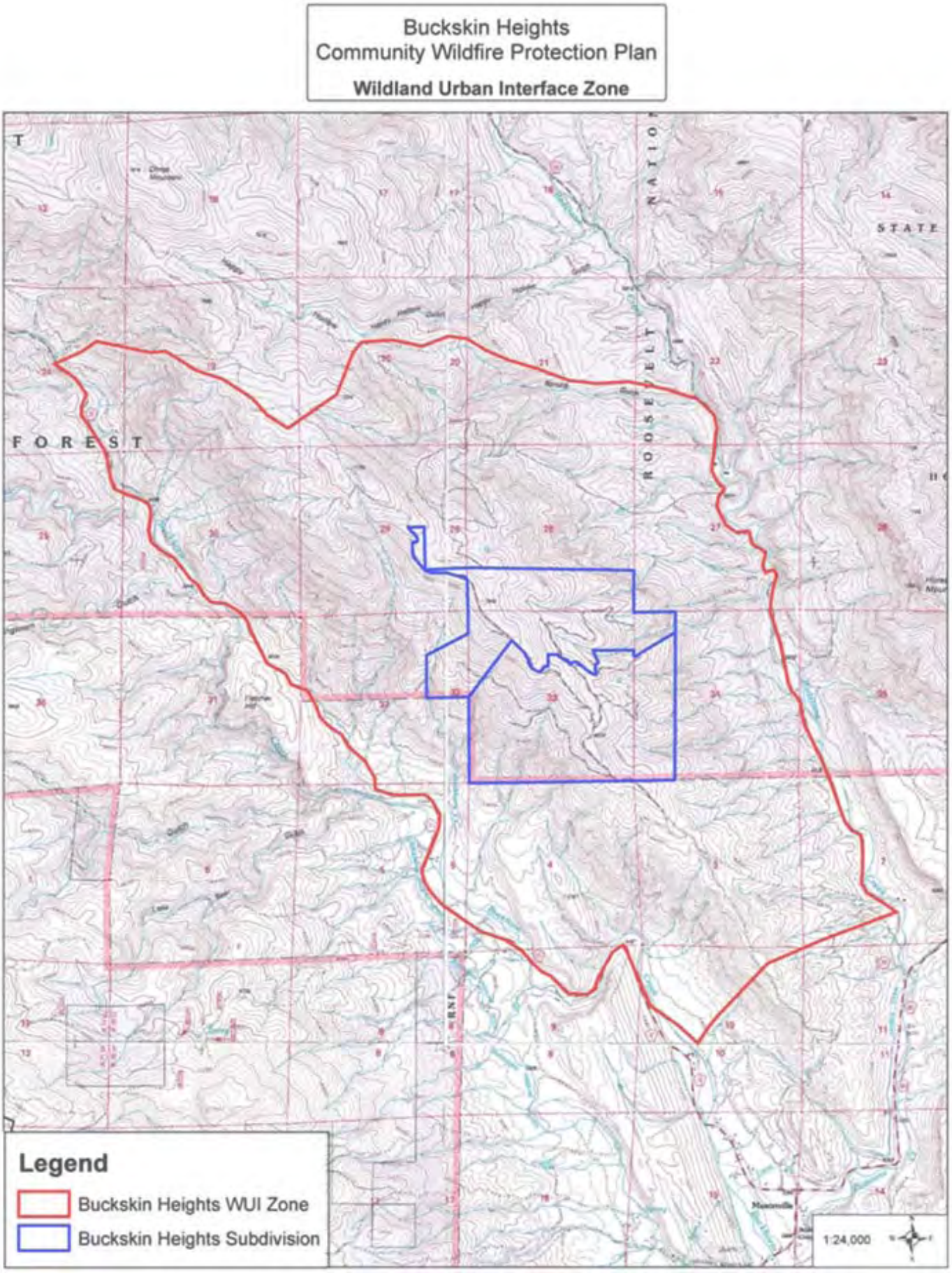
3. Buckskin Heights Wildland Urban Interface – Fuel Hazard Rating

4. Buckskin Heights Wildland Urban Interface – Topography









Appendix I. Subdivision Review – Itemized

Assessments – Questions and Assumptions. Listed below are comments and assumptions that the staff conducting the assessments utilized.

Subdivision Design

- *Ingress/Egress* – How many ways 'in' or 'out' of the subdivision?
- *Primary Road Width* – Are the main roads wide enough for two vehicles to pass each other, or does one need to pull over and yield the right-of-way?
- *Accessibility* – Is the road steep, does it have many tight switch-backs, and could a large fire engine make it up or down the road?
- *Secondary Road Terminus* – Are there 'loop' roads, could an engine turn around, or would the vehicle need to back out?
- *Average Lot Size* – Are the lots large enough to allow home owners adequate room to construct a proper defensible space? If not, what steps have the owners done to mitigate the problem?
- *Street Signs* – Are the streets, and houses legibly marked in order for fire personnel to find their way?

Vegetation

- *Fuel Type* – What fuels surround the structure? Is the house in the middle of a meadow? Is the house surrounded by a ponderosa pine stand? Does the house have continuous trees or shrubs leading up to it?
- *Defensible Spaces Completed* – How many homes in the subdivision have constructed defensible spaces, how many have not?

Topography

- *Slope* – Does the majority of the subdivision sit in a flat meadow, or is it located on a steep hillside?

Fire Protection

- *Response Time* – How long before personnel are on scene? In districts that have full-time firefighters the response time is less, areas where volunteer firefighters are utilized, response times may be longer.
- *Water Source Availability* (within subdivision) – Is there any water within the subdivision? Ponds, streams, lakes, hydrants, rivers, etc.
- *Water Source Availability* (off-site) – If no water is available within subdivision, where is it? Five minutes down the road, or does it need to be trucked in by water tender?

Structure Hazard

- *Materials* – Does the house have a shake shingle roof or a metal roof? Is the house sided with vinyl siding, or log?

Utilities

- *Placement* – Are the gas and electric lines run under ground or above? Does it even have utilities?

Wildfire Hazard Ratings

Each subdivision was rated on the following criteria, with points awarded accordingly. The higher the number, the more severe the danger.

Subdivision Design
Ingress/Egress:
- two or more primary roads 1
- one road 3
- one way in/out 5

Primary Road Width:
- 20 ft or more 1
- 20 ft or less 3

Accessibility:
- road grade 5% or less 1
- road grade 5% or more 3
- other 5

Secondary Road Terminus:
- loop roads or turnarounds 45' or more 1
- turnarounds 45' or less 2
- dead-end roads less than 200 ft 3
- dead-end roads over 200 ft 5

Average Lot Size:
- more than 10 acres 1
- between 1 and 10 acres 3
- less than 1 acre 5

Street Signs:
- present 1
- not present 5

Vegetation
Fuel Type:
- grass 1
- litter beneath timber 3
- brush 5
- logging slash 10

Defensible Spaces Completed:
- more than 70% of homes 1
- between 30% and 70% of homes 5
- less than 30% of homes 10

Topography
Slope:
- 0 to 10% 1
- 11% to 30% 5
- greater than 30% 10

Fire Protection
Response Time:
- within 15 minutes 1
- 16 to 30 minutes 5
- greater than 31 minutes 10

Water Source (Within Subdivision)
- 500 gpm hydrants, less than 1000 ft spacing 1
- draft location, dip site 5
- none of above 10

Water Source (Off Site)
- 20 minute round trip 1
- 21 to 45 minute round trip 5
- 45 minute or more round trip 10

Structure Hazard
Materials (Predominant)
- roof and siding, no wood 1
- wood siding, non-wood roof 5
- wood roof 10

Utilities (Gas and Electric)
- all underground 1
- one above, one below ground 3
- all above ground 10

HAZARD RATING SCALE:
Low – 0-36
Moderate – 37-50 high - 51-64
Severe – 65-78
Extreme – 78+

Appendix II. Buckskin Heights Wildfire Evacuation Plan

2014

TABLE OF CONTENTS

I. Introduction

An evacuation plan for Buckskin Heights Sub-Division has been developed and approved for use by the Buckskin Heights Fire Committee in the event that a wildland fire threatens the area and necessitates an evacuation.

Buckskin Heights presents a unique challenge for evacuation due to the relative isolation of the community. Many of the residents work during the day and are removed from their mountain homes by as much as an hour of travel time. Emergency services are also not immediately available and have similar travel time constraints. Therefore, it is vitally important that the community develop a sense of cooperation in executing this plan. Only with a sense of shared responsibility will the residents enjoy the many community values identified in our Community Wildfire Protection Plan (CWPP).

Colorado's sheriffs, district attorneys, and county and municipal officials have the authority under emergency situations to order the evacuation of citizens and enforce the order should they choose to do so. A person disobeying these orders can be charged with the crime of obstructing government operations or obstructing a police officer or firefighter. The crimes are punishable with jail of up to one year and fines up to $1,000. The authority to enforce these laws is found in Colorado statutes and the power of the government to protect the safety and welfare of the community in disaster emergency.

If you see a wildfire, call 911. Don't assume that someone else has already called. Describe the location of the fire, speak slowly and clearly, and answer any questions asked by the dispatcher.

The decision to fight a fire should be taken only after careful consideration of the danger to yourself or others who may be required to come to your rescue. Wildfires can be unpredictable and explosive and present a serious threat to the untrained. [Back to Top]

II. Evacuation Notice

Evacuation notice will be by one or more of the following: telephone calling tree, door to door notification, or reverse 911(see instructions below for accessing LETA). If you have blocking mechanisms on your telephone to prevent telephone solicitations or other unwanted calls, the Larimer County Emergency Phone Notification advisements or evacuation alerts will not reach you. To dispense with this feature, call the Century Link Customer Care Center at 800-244-1111, or your cell phone provider.

Larimer Emergency Telephone Authority has implemented a new enhanced emergency notification system, LETA. This system allows them to CALL YOU to alert you to an emergency in your area. The system uses phone numbers in the 911 database. The new system allows you to enter additional information into the emergency notification system to be called if there was an emergency in your area. There is no cost to you for this service and the information you enter is protected.

With the new system you can enter your cell phones, a text device, email address, fax number, or work phone number. In addition, you can sign up to receive an alert at multiple addresses within Larimer County. If you would like to sign up for alerts at your home address but also at your work address, the system will allow you to do that. You pick where, and you pick how to be notified.

All residents of Buckskin Heights are encouraged to sign up for LETA service by visiting the Larimer County web site at www.leta911.org/

The Big Tent Fire Phone Tree will have a new format using a cloud computer called Big Tent to create and distribute the phone tree. Big Tent is an internet based tool used to manage group communications. To access this web site: visit www.bigtent.com. Questions regarding the use of this system should be addressed to Kathy Merlo at grafite100@aol.com.

Most wildfires occur in the afternoon when the majority of our residents are at work. Please keep this in mind when submitting telephone numbers in the telephone calling tree and the community data base. [Back to Top]

III. Evacuation Routes

The Primary Evacuation Route is South via Otter Road through the gate at the main entrance to the sub-division and continuing to the bottom of the mountain.

The Alternate Evacuation Route is North to the end of Otter Road then north across Lot # 30 to a ranch gate, through the gate onto the Anderson Ranch and then 200 yards northeast following the cleared path to a gate connecting to Puma Gulch Road (at the Wedum property) and then to the Redstone County Road. **This alternate route is to be used only for fire evacuation and is not to be used for any other emergencies or blockages of the roads of Buckskin Heights.**

The alternate emergency route is not recommended for primary use and should only be used in an extreme emergency if no other safe option is available. In almost all cases emergency response personnel will indicate the evacuation route to be used. Residents should be advised that significant risks are involved in making the decision to use this route; locked gates, confusion about where to turn arising from using an unfamiliar route, useable only with high clearance four wheel drive vehicles, and other unforeseen obstacles to a safe exit. In the absence of specific instruction from emergency response personnel, members of the community should make their own personal evacuation route decision that provides the maximum safety and the least risk for their family. **Neither the BHRA, Anderson Ranch, Puma Gulch residents, nor the publishers of this evacuation plan assume personal or property liability for resident's usage of this route. Residents are advised to follow all the instructions of fire fighters and law enforcement regarding all aspects of an evacuation**.

The evacuation meeting site will be the Buckhorn Presbyterian Church in Masonville (970-667-2308).

The American Red Cross and Larimer County Emergency Management will establish an Evacuation Shelter which will provide necessities such as food, water, sleeping and other logistical needs. [Back to Top]

IV. Preparing for Evacuation.

If residents are alerted to a possible evacuation order, the following preparations are advised. How much you can accomplish is dependent upon time constraints with the safety of the residents being the deciding factor.

Delays in evacuation may impede emergency vehicles traveling the roads. Good judgment and following the instructions of emergency personnel should be exercised:

- Back your car into the garage or park in an open space facing the direction of escape. Shut doors and roll up windows. Leave a second set of keys in the ignition. Place your valuables in the car ahead of time.
- Confine pets to one room so they will be readily available when the time comes to evacuate. Make plans ahead of time to care for your pets in case you must evacuate. Contact the local kennels, animal shelters, friends, etc.
- Close windows, vents, Venetian blinds or non-combustible window coverings and heavy drapes. Be sure to remove any combustible materials from near the windows to prevent radiant heat from igniting them.
- Close all interior doors to confine drafts and prevent a fire from moving inside the structure.
- Shut off propane. Turn off pilot lights.
- Move flammable furniture into center of the home away from windows and sliding-glass doors.
- Turn on a light in each room to increase the visibility of your home in heavy smoke. Be sure to turn on the outside porch light as well. This will help firefighters to find your house in low visibility conditions.
- Seal attic and ground vents with precut plywood or commercial seals.
- Remove gas grills from decks and patios, place propane tanks in garage.
- Place combustible patio furniture inside.
- Place a non-combustible ladder on house for access to roof for firefighters.
- Remove firewood or any other stored combustibles near your home.
- Connect garden hoses. Fill pools, hot tubs, garbage cans, tubs or other large containers with water.
- Disconnect any automatic garage door openers so that doors can still be opened by hand if the power goes out. Close all garage doors.
- **Don't lock up.** Leave doors and windows closed but unlocked. It may be necessary for firefighters to gain quick entry into your home to fight fire. The entire area will be isolated and patrolled by sheriff's deputies or police. [Back to Top]

V. What to Take with You?

When the evacuation order comes time may be of the essence and prior planning will make the job much easier if there are severe time constraints. The following items should be considered for inclusion in your evacuation kit:

- Medications in original containers
- Telephone numbers of family and friends and other important numbers.
- An extra pair of eyeglasses/sunglasses.
- Wills, insurance policies, contracts, deeds, stocks, bonds.
- Passports, social security cards, immunization records.
- Bank account numbers.
- Credit card account numbers and companies.
- Inventory of valuable household goods.
- Family records (birth, marriage, death certificates).
- Recent tax returns, bills, checkbook
- Current driver's license, insurance cards
- Mementos, keepsakes, and photos that are important to you.
- Computer CPU

It is important to recognize time constraints when assembling items for evacuation. Please follow instructions from emergency personnel regarding the urgency of evacuation. Now is probably not the time to attempt to load up furniture.

BEFORE YOU LEAVE TIE A WHITE TOWEL, SHEET, OR RIBBON ON YOUR FRONT DOOR TO ADVISE EMERGENCY RESPONDERS THAT YOUR HOME HAS BEEN EVACUATED. [Back to Top]

VI. Evacuation of Pets, Horses and Livestock.

Arrangements should be determined for the shelter of pets and/or livestock prior to a wildfire. For public health reasons, many emergency shelters cannot accept pets. Most boarding kennels, veterinarians and animal shelters will need your pet's medical records to make sure all vaccinations are current. Make sure identification tags are up to date and securely fastened to your pet's collar. Make sure you have a secure pet carrier, lease or harness for your pet so if the pet panics, they can't escape.

It is recommended that arrangements for evacuating pets or livestock be made with neighbors who are usually home during the day as in many cases the pet owner will be working and access to the sub-division may not be possible. Plans for pet and livestock evacuation should be established by the owners of these animals. Owners should know how to contact those that they have asked to evacuate their animals. If evacuation is not possible, a decision must be made and shared with the owner's designate, whether to turn them outside.

[Back to Top]

VII. Special Needs

People with special needs will be identified on the telephone call list and all residents should be aware that some may need assistance in the evacuation process.

People with medical conditions should know the location and availability of more than one facility if dependent on a dialysis machine, oxygen or other life-sustaining equipment or treatment.

If you have special needs, find out about special assistance that may be available in your community. Register with the Larimer County Emergency Management Office or the local fire department for assistance so needed help can be provided. [Back to Top]

VIII. What Do I Do during the Evacuation?

Listen to local TV and radio for updates on the fire and information regarding "all clear."

Radio Resources	Denver TV
1310 AM KFKA	Channel 9
1410 AM KIIX	Channel 4
88.9 KRFC	Channel 7
91.5 KUNC	Channel 31
90.5 KCSU	

Wildfire updates may occur at Buckhorn Presbyterian Church or The Ranch at the Larimer County Fairgrounds, or other designated sites.

Save all receipts for expenses incurred during a mandatory evacuation as your insurance company may reimburse you for these expenditures. [Back to Top]

IX. Additional Information

The following internet web sites will provide updated information on the status of a fire:

http://inciweb.nwcg.gov
http://www.larimer.org/emergency/
https://twitter.com/larimersheriff
http://www.radioreference.com/apps/audio/?action=wp&feedId=7897
http://www.geomac.gov/viewer/viewer.shtml

[Back to Top]