

Reference 1 - 2.24% Coverage

After considering the current conditions of the lands and associated habitats impacted by the Juntura Complex wildfires, comments received during the public comment periods, and input from the Juntura Complex IDT, it is my decision to select Alternative 2 as analyzed in the Juntura Complex Emergency Stabilization and Rehabilitation Invasive Plant Management Plan EA. The Standard Operating Procedures (SOPs) and Project Design Features (PDFs) (Juntura Complex EA, Appendix C) will be adhered to as part of this decision. The IDT has determined that these actions will best address the rehabilitation, restoration and protection of sagebrush landscapes including Greater Sage-Grouse habitat by increasing the resistance of habitat to invasive annual grasses invasion and improving the resilience of sagebrush ecosystems so that future wildfire disturbances have fewer and/or lesser undesirable effects. These treatments and actions also allow for the cooperative control of invasive plants so they do not infest or re-infest adjacent unburned or non-BLM administered landscapes, enable recovery of native vegetation within the burn area, improve seeding success, and stabilize soils vulnerable to erosion.

Reference 1 - 1.94% Coverage

A dominant threat identified in the Oregon Greater Sage-Grouse Approved Resource Management Plan Amendment (ARMPA) for Oregon (2015, p. 1-29) is decreasing fire return interval resulting from abundance of invasive annual grasses. The control of invasive annual species under Alternative 2 is expected to break up fuel continuity, lengthen fire return intervals, and increase the reproduction and vigor of existing native perennial plants, contributing to the long-term ecological stability of the plant communities in this area. Due to the rough, uneven and broken terrain within the Owyhee Canyon Fire ESR Project area, aerial application is the only option whereby an even 68 ounce per acre rate of application of imazapic can be attained. Ground based broadcast equipment cannot access much of the area and in the limited spots where it could, a consistent output at the 6-8 ounce rate could not be assured, causing unacceptably high rates and impacts to non-target species or lower than desired rates causing poor to no control on target species in other areas.

Reference 1 - 1.02% Coverage

Windblown accumulations of tumbleweeds would be burned primarily along fence lines in the spring-like conditions whereas live vegetation fuel moistures are elevated and cured grass or thatch has higher moisture of extinction. The accumulated weeds would be burned in place during periods when there is little chance of fire escape to surrounding areas and would not

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require manual line construction that consists of removing vegetation to create a fire barrier. The fuels adjacent to linear features such as, fence lines and roads are typically sparse and light

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and should not carry beyond the ignition point in spring like conditions.

Reference 1 - 0.67% Coverage

We have decided to authorize the development and maintenance of fuel breaks along 271 miles of roads (219 miles in Idaho and 52 miles in Oregon) following the specifications put forth in the Proposed Action

(Alternative 2) of the environmental assessment (DOI-BLM-ID-B030-20160003-EA). Though the Proposed Action involved development and maintenance of fuel breaks along 442 miles of roads (Figure 1), this decision only authorizes 271 miles, a subset of those roads/reduced selection routes, for fuel break development and maintenance (Figure 2). Fuel break development is authorized to the maximum width (up to 200 feet on both sides of roads) as described in the Proposed Action (EA Section 2.5), including the methods, maintenance, design features, and monitoring and control (Section 2.4). Finally, this decision authorizes the ongoing maintenance of the 271 miles of roads to meet fuel break objectives.

Reference 2 - 0.68% Coverage

Of the 271 miles of fuel breaks being authorized by this decision, 36 miles will be developed along the Owyhee Front using biological thinning (hereafter referred to as targeted grazing) or prostrate kochia seedings (Figure 2; Table 1). Per adaptive management outlined in the livestock grazing design features, the BLM would seed prostrate kochia (except where resource or other constraints preclude it) within the treatment area (200 feet to each side of the road) to create fuel breaks. An additional 235 miles will be developed along other roads which transect the Soda Fire footprint and into the surrounding area (Figure 2; Table 1). The BLM will utilize the following tools as stand-alone treatments or in combination to implement the fuel breaks along those 235 miles of roads: mowing, hand cutting, prescribed burning, seeding native and/or non-native species other than kochia, and herbicide application (Table 1).

Files\\BLM_2017_07_Malheur Sage Grouse Project DM - § 1 reference coded [0.83% Coverage]

Reference 1 - 0.83% Coverage

High-Elevation Sagebrush/Bunchgrass Restoration Treatment: Machine pile burning, conifer cutting, aerial herbicide for annual grass control, fuel breaks, jackpot burning. Management objectives under this treatment would be to reduce live conifer density and associated fuels in high-elevation sagebrush/bunchgrass communities by 70 percent and reducing of treatment generated hazardous fuels that are 3 inches in diameter or larger by a mean total of at least 90 percent. Secondary objectives would be to prevent invasive annual grass cover from increasing from current cover values within the areas identified for treatment. Conifer cutting (predominantly western juniper), and machine pile burning would be the principal activities. Jackpot burning or a follow up lop and scatter activity would only be employed where excessive hazardous fuels are not created by conifer cutting activity. Biomass utilization may occur where accessible and feasible. Of the 102,055 acres of high-elevation sagebrush/bunchgrass plant communities within the Project Area, approximately 56,379 acres of are proposed for treatment due to the exclusion of the Beaver Dam Creek WSA from treatment. There would also be approximately 45 miles of linear fuel breaks on BLM administered land constructed through the high elevation sagebrush/bunchgrass treatment area. A detailed description of fuel breaks activities follows below.

Files\\Berthoud Fire Protection District_2007_CWPP - § 10 references coded [2.56% Coverage]

Reference 1 - 0.09% Coverage

Safety Zones

When pre-planning for a wildfire incident, designating safety zones for use by the responding firefighters should be a top priority. More than one safety zone is advised, because fire operations can be spread out over a large geographical area. When evaluating areas to be used, they must be easily accessible and adhere to current guidelines recommended by NWCG. (See Figure 14)

Reference 2 - 0.22% Coverage

A number of areas in the BFPD have poor and/or inconsistent street signage and addressing of properties. In

the worst cases, addressing was found to be missing altogether or attached to combustible objects. (See Figure 15.) In the foothill areas of the BFPD, there are many intricate mountain roads and driveways. In these areas, proper, standardized, reflective signage is critical to effective response. Response times are substantially reduced, especially at night and in difficult conditions, by standardized addressing. Knowing at a glance the difference between a road and a driveway (and which houses are on the driveway) cuts down on errors and time wasted interpreting maps. This is especially true for city employees who have not had the opportunity to train on access issues as often as career emergency responders. Standardized reflective signage mounted on a non-combustible pole is highly recommended. These signs can be used in addition to the current markers.

Reference 3 - 0.07% Coverage

Emergency Access Route One road has been identified as an emergency access route alternative to the primary access. This route will help to enhance firefighter and public safety by connecting the road into a loop thus discarding the hazards of one-way in / out type of roads. The route is highlighted in Figure 16.

Reference 4 - 0.17% Coverage

In order to reduce conflicts between evacuating citizens and incoming responders, it is desirable to have nearby evacuation centers for citizens and staging areas for fire resources. Evacuation centers should include heated buildings with facilities large enough to handle the population. Schools and churches are usually ideal for this purpose. Fire staging areas should contain large safety zones, a good view in the direction of the fire, easy access and turnarounds for large apparatus, a significant fuel break between the fire and the escape route, topography conducive to radio communications, and access to water. Local responders are encouraged to preplan the use of potential staging areas with property owners.

Reference 5 - 0.27% Coverage

Identify and pre-plan alternate escape routes and staging areas.

3. Perform response drills to determine the timing and effectiveness of fire resource staging areas.
4. Educate citizens on the proper escape routes and evacuation centers to use in the event of an evacuation.
5. Use a reverse 911 system or call lists to warn residents when an evacuation may be necessary. Notification should also be carried out by local television and radio stations. Any existing disaster notification systems, such as tornado warnings, should be expanded to include wildfire notifications.
6. Emergency management personnel should be included in the development of preplans for citizen evacuation.
7. Post placards clearly marking "fire escape route." This will provide functional assistance during an evacuation and communicate a constant reminder of wildfire to the community. Be sure to mount signage on non-combustible poles, preferably under the street name

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sign. The placards should start from the furthest point into the subdivision and work outward. These placards greatly assist responding firefighters from other agencies who may not be familiar with the layout of the subdivision.

Reference 6 - 0.34% Coverage

The wildland urban interface area of the Berthoud Fire Protection District is experiencing continuing development. Rising property values and a limited number of building sites have resulted in recently constructed, high-value residences mixed in with older homes, rental properties and historic buildings in various states of decay. There is likely to be a varied understanding among property owners of the intrinsic hazards associated with building in these areas. An approach to wildfire education that emphasizes safety and

hazard mitigation on an individual property level should be undertaken, in addition to community and emergency services efforts at risk reduction. Combining community values such as quality of life, property values, ecosystem protection and wildlife habitat preservation with the hazard reduction message will increase the receptiveness of the public.

Field contacts and interviews indicate that some homeowners in the study area are very supportive and proactive with regard to wildfire mitigation efforts. Unfortunately there are still homeowners and landowners who refuse to acknowledge the fact that they live in an area at risk of wildfires. Continued attempts to provide educational materials through personal contact should be conducted. Property owner education and the wildfire hazard mitigation message should be an ongoing effort in the foothill portions of the BFPD and throughout the front-range interface.

Reference 7 - 0.57% Coverage

Firefighter Training (Priority Level High): Provide education and experience for all firefighters including:

- NWCG S-130/190 for all department members
 - Annual wildland fire refresher and “pack testing” (physical standards test)
 - Organize and facilitate an annual wildfire interface training exercise within the communities outlined in this CWPP.
 - S-131 Advanced Wildland Firefighter
 - S-215 Fire Operations in the Urban Interface
 - S-290 Intermediate Fire Behavior
 - I-200 and I-300 – Basic and Intermediate ICS
 - Encourage personnel to seek higher wildfire qualifications
 - Encourage personnel to participate in out of district wildfire assignments
 - Encourage prescribed burn participation
 - Encourage Type 3 Incident Management Group participation and utilization
- Equipment:

- Priority Level High. Provide minimum wildland Personal Protective Equipment (PPE) for all career and volunteer firefighters. (See NFPA Standard 1977 for requirements).
- Priority Level High. Provide gear bags for both wildland and bunker gear to be placed on apparatus responding to fire calls. This will help ensure that firefighters

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have both bunker gear and wildland PPE available when the fire situation changes.

- Priority Level High. Purchase and equip an additional type-6 engine. Type-6 engines are a versatile piece of firefighting equipment. Run in tandem with a standard structure engine, the type-6 allows for the ability to accomplish many different tasks.
- Priority Level High. Purchase an additional porta-tank (2500 gallon).
- Priority Level High. Purchase and equip an additional type-3 engine. This engine should be equipped with a “light” structural complement (SCBA, TIC, etc.) so it can function (in a limited capacity) as a piece of structure apparatus.
- Priority Level Moderate. Provide and maintain a 10-person wildland fire cache, in addition to the tools on the apparatus. This cache will also be used for mitigation work. The contents of the cache should be sufficient to outfit two squads for hand line construction and direct fire attack. Recommended equipment would include:
 - Four cutting tools such as pulaskis or super pulaskis
 - Six scraping tools such as shovels or combis
 - Four smothering tools such as flappers
 - Four backpack pumps with spare parts
 - Two complete sawyer’s kits including chainsaw, gas, oil, sigs, chaps, sawyer’s hard hat, ear protection, files, file guides, spare chains and a spare parts kit
- MREs and water cubies sufficient for 48 hours

Reference 8 - 0.40% Coverage

Home Mitigation FMU Community responsibility for self-protection from wildfire is essential. Educating homeowners is the first step in promoting a shared responsibility. Part of the educational process is defining

the hazard and risks at both the community- and parcel-level.

Of the ten communities in the study area, the community-level assessment identified three that are at very high risk. Construction type, condition, age, fuel loading of the structure/contents, and position are contributing factors in making homes more susceptible to ignition under even moderate burning conditions. There is also a likelihood of rapid fire growth and spread in these areas due to steep topography, fast burning or flashy fuel components, and other topographic features that contribute to channeling winds and promotion of extreme fire behavior.

Table 3 illustrates the relative hazard rankings for communities in the study area.

- A rating of nine or less indicates an area of extreme hazard.
- A rating of 10 to 19 indicates a very high hazard.
- A rating of 20 to 29 indicates high hazard.
- A rating of 30 to 34 indicates moderate hazard.
- A rating of 35 or greater indicates a low hazard.

The communities with very high hazard ratings should be considered an FMU where a parcel level analysis should be implemented as soon as possible. Please see Appendix B for more detailed information.

The single most important element for the improvement of life safety and property preservation for every home in the study area is compliant, effective defensible space. This is especially important for homes with wood roofs and homes located on steep slopes, in chimneys, saddles, or near any other topographic feature that contributes to fire intensity.

Reference 9 - 0.28% Coverage

One of the most effective forms of landscape-scale fuels modification is the fuelbreak (sometimes referred to as “shaded fuelbreak”). A fuelbreak is an easily accessible strip of land of varying width (depending on fuel and terrain) in which fuel density is reduced, thus improving fire control opportunities. Vegetation is thinned, removing diseased, fire-weakened, and most standing dead trees. Thinning should select for the more fire-resistant species. Ladder fuels, such as low limbs and heavy regeneration, are removed from the remaining stand. Brush, dead and down materials, logging slash, and other heavy ground fuels are removed and disposed of to create an open park-like appearance. The use of fuelbreaks under normal burning conditions can limit the uncontrolled spread of fires and aid firefighters in slowing the spread rate. Under extreme burning conditions, where spotting occurs for miles ahead of the main fire, and probability of ignition is high, even the best fuelbreaks are not effective. Nonetheless, fuelbreaks have proven to be effective in limiting the spread of crown fires in Colorado.⁸ Factors to be considered when determining the need for fuelbreaks in mountain subdivisions include:

Reference 10 - 0.14% Coverage

RECOMMENDATIONS

- Priority Level High. A medium sized (10,000+ gal.) cistern is recommended for the area of Dakota Ridge. The intersection of Moss Rock Court and Moss Rock Drive would be a suitable location. This is the most critical water supply need in the entire study area. See FIGURE 21.
- Priority Level High. A dry hydrant is recommended to access the water canal that runs just south of the Rabbit Mountain Trailhead parking area. See FIGURE 21.
- Priority Level Moderate. A dry hydrant is recommended to access water from Carter Lake. Two locations have been selected and are possibly currently used as draft sites. See FIGURE 21.

Files\\Buckskin Heights_2014_CWPP - § 6 references coded [3.48% Coverage]

Reference 1 - 0.42% Coverage

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.

Reference 2 - 1.25% Coverage

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.

Reference 3 - 0.89% Coverage

#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

Reference 4 - 0.11% Coverage

#2. Defensible Space Activities a. Perform home site visits b. Enhance current conditions c. Maintain conditions into the future

Reference 5 - 0.75% Coverage

#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)

Reference 6 - 0.06% Coverage

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

Files\\Cherokee Meadows_2007_CWPP - § 6 references coded [4.65% Coverage]

Reference 1 - 0.94% Coverage

Distribute public educational information to landowners: such as FireWise, and mountain pine beetle
Encourage property assessments pertaining to wildfire issues, and provide landowner appropriate contacts

Reference 2 - 0.33% Coverage

Improve access; widening roads, thinning trees, improving escape routes

Reference 3 - 1.98% Coverage

Install an underground water holding tank and research other sources of water that could be used in an emergency

Develop a community evacuation plan. Components would include: emergency alert method such as a siren; developing community instructions to deal with the emergency alert system; educate community about the emergency alert system; develop a communication plan; investigate the use of hand held two-way radios as a communication tool

Reference 4 - 0.20% Coverage

Implement ongoing defensible space projects

Reference 5 - 0.71% Coverage

Address tree mortality issues associated with magnesium chloride with county commissioners; includes removing dead trees, and discontinue applying to roads

Reference 6 - 0.48% Coverage

Use forest stewardship techniques to reduce wildfire risk; especially techniques that remove ladder fuels

Files\\CherokeeMeadows_2012_CWPP - § 1 reference coded [1.17% Coverage]

Reference 1 - 1.17% Coverage

1. Conduct defensible space work around homes/outbuildings.
2. Improve options for emergency egress and community evacuation plan.
3. Fuel reduction needs of particular concern are the densely treed/difficult to access west and the southern forested areas of CMRA, including both the private properties and the adjacent USFS and State lands. (See attached maps A and B)
4. Encourage private landowners to continue to reduce hazard fuels on their property.
5. Assist Livermore Fire Protection District in their efforts to protect our community.
6. Continue to educate the community about wildfire related issues.
7. Seek out finding and Grant opportunities to assist in aforementioned items.
8. Keep the CMRA CWPP updated.

Files\\Crystal Lakes_2008_CWPP - § 3 references coded [3.85% Coverage]

Reference 1 - 2.29% Coverage

- A. Educate the community on acceptable Fire Protection Measures and Forest Health
1. Firewise Community Training Session
 2. Mailings on defensible space and forest health
 3. Participation at community meetings
 - a. Defensible space
 - b. Fuel breaks
 - c. Other forest management practices
 4. Demonstration area
 5. One on one assistance
 6. Signs along road (Firewise, Fire Danger, etc.)
 7. Identify Point of Contact
- B. Increase community awareness on Emergency Procedures
1. Mail out to each resident and owner the evacuation plan
 2. Post evacuation route signs
 3. Post safety zone signs
 4. Exercise and test evacuation and warning system annually
 5. Develop subdivision evacuation diagrams and post them at development entrances
 6. Post warning signs at entrances to all dead-end roads “No Outlet”

Reference 2 - 0.71% Coverage

- B. Assess Emergency Response Needs (1st Priority)
1. Assess Evacuation Routes
 2. Assess Escape Routes and Safety Zones
 3. Assess emergency response needs—Access
 4. Assess communication
 5. Assess water sources
 6. Assess Department capabilities

Reference 3 - 0.85% Coverage

- Develop Crystal Lakes Firewise Management Plan
1. Plan mitigation and develop priorities for treatment of all public & private lands
 - a. Defensible Space
 - b. Construction Materials
 - c. Safety Zones
 - d. Defensible Profile Thinning, and Prescribed Fire (National Forests)
 - e. Mountain Pine Beetle

Files\\Denver Post_2010_10_Park cites benefits of slow fire - § 3 references coded [11.13% Coverage]

Reference 1 - 3.18% Coverage

For now, fire managers are content to keep it boxed in and let it burn, reaping the environmental benefits of a blaze that might continue until the first major snow.

Reference 2 - 2.41% Coverage

"Right now, it's just creeping along the ground, doing its job," said Mike Lewelling, the park's fire management officer.

Reference 3 - 5.54% Coverage

Meanwhile, it's creating a natural fire break that will slow the intensity and spread of large, fastmoving fires in the future. The fire is also consuming downed logs and debris, allowing nutrients to be recycled back into the soil, said Nate Williamson, fire ecologist for the park.

Files\\Denver Post_2011_04_Crystal fire put out after 11 days - § 1 reference coded [8.52% Coverage]

Reference 1 - 8.52% Coverage

The fire in thick pine stands and dry grass on private property and public lands in the Roosevelt National Forest was fed by high winds.

Files\\Denver Post_2012_06_112 homes were lost in early days - § 1 reference coded [2.01% Coverage]

Reference 1 - 2.01% Coverage

Around the county, people evacuated from the fire zone and people worried for their friends rallied to try to make their community feel a little better and to say thanks to the firefighters helping them

Files\\Denver Post_2012_06_High Park fire scorching tourist economies - § 1 reference coded [2.85% Coverage]

Reference 1 - 2.85% Coverage

Dan Morin 29 years ago installed an impulse sprinkler and fire-suppressing foam system to cover the lodge at his Sundance Trail Guest Ranch near Red Feather Lakes about 25 miles west of the fire line. He hasn't had any cancellations and not many concerned calls from his mostly repeat guests.

Files\\Denver Post_2012_06_Insurance claims begin to pour in - § 3 references coded [12.95% Coverage]

Reference 1 - 1.99% Coverage

Other homeowners on the periphery of the massive wildfire are continuing efforts to create defensible spaces in an attempt to keep flames at bay.

Reference 2 - 5.75% Coverage

Members of the Smith family of Fort Collins returned Tuesday to their vacation cabin in the Cache la Poudre canyon -- a few miles west of the fire -- to continue mitigation efforts.

"We've raked up pine needles and pine cones and thrown them in the river," said Cindy Smith. "We've always done a really good job with mitigation in terms of keeping the trees trimmed and the grass cut. Now we're kind of at Mother Nature's mercy."

Reference 3 - 5.20% Coverage

Unlike California, which requires homeowners to reduce or eliminate flammable materials and vegetation within 100 feet of their homes, Colorado has no similar defensible-space law. However, property insurers can mandate the space as a condition of issuing policies.

"Brush clearance is No. 1 when it comes to being prepared," said Farmers Insurance spokesman Jerry Davies.

Files\\Denver Post_2012_06_Red slurrys toxic dark side - § 1 reference coded [1.49% Coverage]

Reference 1 - 1.49% Coverage

Some homeowners have rigged sprinkler systems. Firefighters also often haul away firewood and trim surrounding trees, rushing to create "defensible spaces."

Files\\Denver Post_2012_06_Residents dig in to protect temple - § 1 reference coded [3.86% Coverage]

Reference 1 - 3.86% Coverage

Hennigan is leading the crew protecting structures vital to the mountain retreat's water systems and clearing grasses and scrub from central buildings -- the study center, kitchen and offices -located "downtown

Files\\Denver Post_2012_09_Disastrous wildfire era set to continue - § 10 references coded [13.30% Coverage]

Reference 1 - 0.66% Coverage

Fifteen years ago, the U.S. Forest Service boldly announced a goal of eradicating hazardously overgrown forests nationwide by 2015.

Reference 2 - 1.40% Coverage

Seventeen years of Forest Service policy, decreeing that fires are a natural and necessary feature of the forest

ecosystem, were reversed in a two-page memo. In 2012, the agency couldn't take the chance of letting them burn, and it couldn't devote resources to restoration or clearance.

Reference 3 - 1.52% Coverage

Forest Service officials took the warning to heart. For the next six years, they seemed to be gaining ground. Each year, they treated 2 million to 3 million acres of forests by thinning them mechanically or setting controlled fires. Lightning-ignited fires were allowed to burn in forests far from human habitat.

Reference 4 - 0.94% Coverage

Forest Service leaders still say they are making progress, year by year, and focusing their forest treatment efforts in the most vital places, such as forests bordering mountain communities.

Reference 5 - 1.24% Coverage

"We need a good snowpack this winter, and then at least some intermittent rains in the first half of the summer," said Boyd Lebeda, district forester for the state in Fort Collins, adding that lowering fire risks with forest restoration is a long-term job.

Reference 6 - 2.30% Coverage

Yet, a few hundred yards down this rutty road, a green oasis appears in the blackened landscape. Here, in a series of fuel treatments from 2006 to 2009, the ponderosa pines had been thinned.

The fire burned through here and burned some of the trees but not all. Because it burned at a lower temperature, a green carpet of grass quickly regrew, creating a pretty meadow in the midst of a fire zone. Fifteen wild turkeys meandered through the meadow, feasting on the new vegetation.

Reference 7 - 1.21% Coverage

Weeks later, when the Waldo Canyon fire eclipsed the High Park fire, destroying 346 homes, Colorado Springs credited another fire break with saving another neighborhood. The fire stopped a mile above Cedar Heights, leaving every house untouched.

Reference 8 - 0.87% Coverage

Schulz just hopes the federal grants that have subsidized Colorado's treatment efforts keeping trickling down. "These grants are really what's saved us at this point," he said.

Reference 9 - 1.32% Coverage

Politically, "people are much more in favor of the mechanical work," said Tony Cheng, director of the Colorado Forest Restoration Institute. Support for prescribed fires is still "fairly high, but that support goes down if they know the fire is right out their back door.

Reference 10 - 1.86% Coverage

At Colorado State University, professor Doug Rideout and others from the forestry department toured the High Park fire area -- and noticed surviving homes that still had no defensible space between them and the forest.

To create a defensible area around your home, "you could easily be out three to 10 grand. Let's not blame the homeowners; let's understand their behavior," he said.

Files\\Estes Park Uplands_n.d._CWPP - § 4 references coded [4.16% Coverage]

Reference 1 - 2.84% Coverage

The Uplands HOA Board has met with Scott Dorman, Fire Chief of the Estes Valley Fire Protection District

to gain his insight regarding the risk of wildfire within the Uplands subdivision. At the 2010 Annual Meeting, Sue Pinkham, Community Liaison Officer for the Estes Valley Fire Protection District presented a program on fire mitigation and actions that property owners should take to better reduce the risk of wildfire. Bob Clark, President of the Uplands HOA and Ron Harris, one of the property owners attended a seminar in 2011 sponsored by the Colorado State Forest Service on Fire Mitigation and Community Wildfire Protection Plans. The Board also approved the development of a Forest Stewardship Plan for the Uplands subdivision which was prepared by Greg Zauzen and Kyle McCatty – both employees of the Colorado State Forest Service. The plan was presented to the HOA Board on August 10, 2011, and will in turn be shared with the property owners at a meeting in October 2011. In addition to the above matters, the Uplands subdivision spent \$8088 this year in spraying for pine beetles and 41 of the 42 property owners also had many of their trees sprayed. This year for the first time we were able to persuade four property owners to treat their trees for dwarf mistletoe. These actions will reduce the risk of tree death and increased fire danger. In the spring of 2011 the HOA spent \$550 to remove beetle infested trees and at our Annual Spring Cleanup we spent \$1250 to remove slash and other debris that property owners removed from their lots and from some of the outlots as part of our fire mitigation effort.. We spent another \$650 to a Fall Cleanup. On December 3, 2011, the newly appointed Forest Stewardship Committee met for the first time to begin plans for the implementation of the Forest Stewardship Plan prepared for The Uplands by the CSFS, This plan was presented to the property owners at their Annual Meeting in November 2011 by Kyle McCatty, Forester for the CSFS. The Forest Stewardship Committee is composed of five property owners in The Uplands one of whom is a member of The Uplands HOA board. The charter of the committee is:

Reference 2 - 0.53% Coverage

Many of the property owners are becoming increasingly aware of the high fire danger within the Uplands and have taken steps to limb trees to 6 feet or more and eliminate some of the ladder fuels. The subdivision, however, is loved for its forest environment and some property owners continue to resist doing substantial mitigation work. That will be the challenge for the Forest Stewardship Committee.

Reference 3 - 0.29% Coverage

In addition to the above presentations, the new Forest Stewardship Committee will send out a letter / email to property owners seeking their support and their suggestions for reducing the fire risk within The Uplands.

Reference 4 - 0.50% Coverage

Each property owner will be asked to develop a fire mitigation plan for their property that will meet defensible space criteria. The Board has created a Forest Stewardship Committee composed of one Board member and other property owners to oversee the implementation of the individual Fire Mitigation Plans and the recommendations contained in the Forest Stewardship Plan.

Files\\Estes Park_2009_CWPP - § 3 references coded [3.16% Coverage]

Reference 1 - 0.54% Coverage

5.2.1 Critical Infrastructure Communications for all emergency services for the Estes Valley are of highest concern. Other factors in considering risk levels for areas include: community water sources and treatment plants in remote areas, the possibility of higher intensity fires due to beetle killed or infected trees, suitable access/egress roads for fire apparatus, and water supply for fighting fires.

Reference 2 - 0.78% Coverage

5.3.1 Local Preparedness A large portion of Estes Park Fire Department response area is within the WUI zone. Access to many of the properties within this zone is limited to narrow dirt dead-end roadways. Many of

the structures in the area are addressed while some are not, and many have poorly posted or hard to read addresses. Some subdivisions only have one access road and do not have adequate escape routes. Some subdivisions have

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been working on improving access/egress for emergency vehicles and mitigating the fuels on access roads, but much still needs to be done.

Reference 3 - 1.84% Coverage

6.2 Recommended Treatments for Specific Fuels Conditions The specific treatments for fuel conditions in specific areas will be determined at the time the action plans are developed for those specific areas by consultation with representatives of the USFS, CSFS, Larimer County, EPVFD, and community members to determine the best method for each specific area or project.

Examples of treatments include the following: 1. Thin out continuous tree and brush cover to create a “defensible space” within 10 feet of a structure

2. Trim trees up at least 6 –8 ft above ground level 3. Clean debris from gutters and roof valleys 4. Remove leaves, needles and cones close to walls of wooden structures to a width of at least 3 feet from the structure 5. Remove branches that overhang a roof or wooden deck 6. Thin trees on outer edge of properties so that the crowns of trees are at least 10-15 feet apart. The exception is in a Lodgepole or Aspen forest or grove where a higher density is needed to protect the trees from wind throw.

7. Create fuel breaks (width dependent on fuels and topography) 8. Dispose of all slash by chipping, spreading, hauling away, burning or cutting up for firewood 9. Replace wood shingle and other flammable roof materials with asphalt or metal roofing.

The prime objective is to reduce available fuels, particularly dead forest debris, near structures and near at-risk infrastructure components.

Files\\Glen Haven Retreat Communities_2007_CWPP - § 2 references coded [4.77% Coverage]

Reference 1 - 1.90% Coverage

Fire Department Actions/Projects • Water storage development in two locations at The Retreat and one location in Glen Haven

- Repair of the existing water storage facility (14,000 gal) in Glen Haven • Placement of (at least) two more dry fire hydrants in Glen Haven, ideally also in The Retreat
- Create access space for fire apparatus wherever possible Turn-around/turn out space Pull-off drafting areas Space for portable dump tanks Room to place apparatus alongside roadways
- Proper signage (addresses, evacuation route signs, road signs) • Enhance the helispot accessibility, to both aircraft and ground transportation • Posted weight limits on roads and bridges • Establishment of safety zones
- Implementation of property/structure wildfire triage process

Reference 2 - 2.87% Coverage

General Community Actions/Projects • Creation of defensible space around all structures • Management of riparian vegetation to improve fire department access and reduction of dead/ladder fuels

- Completion of details for evacuation plan • Developing educational materials for landowners on Firewise concepts, forest health issues, insect and disease problems, preparing for emergency evacuation, etc.
- Creation of fuel breaks where appropriate • Adequate access for fire equipment in driveways (overhead clearance and driveway width), including private culverts and bridges that have inadequate weight limits
- Addressing dead and currently infested trees due to Mountain Pine Beetle and other aesthetic concerns that pose a fire hazard

- Evaluate and determine weight limits on roads and bridges • Address issues with locked, private gates to homes and trails • Educate landowners on county restrictions and required permits for burning piles or performing a prescribed burn on their land
- Develop a community slash pile program for community members • Identify areas on National Forest land adjacent to the community for fuels reduction treatment

Files\\HCRC_2009_03_Consensus Document DRAFT - § 1 reference coded [0.12% Coverage]

Reference 1 - 0.12% Coverage

aspen stands that are: o healthy, o reproducing, and o have trees of multiple ages

- an extent of aspen stands that achieves historic distribution over time.

Files\\HCRC_2015_02_Meeting Notes - § 1 reference coded [2.83% Coverage]

Reference 1 - 2.83% Coverage

Discussion on the Prescribed Burning treatments: For prescribed burn treatments - Estimating burning about 55% of the sites – only dry pine areas, not touching lodgepole pines. We have wildlife treatment areas and the goshawk - look at Nickel ridge in the plan, this spring is 6000 acres burn over 3-5 days will get a variety of effects. I don't ever do anything in sagebrush – not a fuels concern. It is not clear that you won't burn in sagebrush – this is a 40K planning area with one person doing the burning? The focus is on SW aspects with trees large enough that we don't do a stand replacing burn. The way this is written is a blank check, we don't want

2

you to burn in winter range. Would like a few more boxes. What is the expectation that you will be able to burn 20,000 acres in the next 10 years? We have a lot of areas to burn, I talk to all the specialists before I burn – and bring wildlife concerns to me.

Files\\HCRC_2015_09_Field Trip Notes - § 1 reference coded [4.13% Coverage]

Reference 1 - 4.13% Coverage

We're lacking in stand initiation phase across the forest. Need all stages but it is definitely harder to get a big tree than it is an opening.

- There's a tendency to thin from below and leave the biggest and end up looking like a tree farm.
- This is a poor site for an opening – too close to a major road – for big game security. - Josh's response: Our vision for this project is wider opening with multiple story stands with areas of intense brush. We're trying to increase the heterogeneity and restore fire low severity fire to the landscape. There are thousands of acres on this project we're not touching. This part of the forest is a long ways from being a tree farm.

Files\\HCRC_2015_10_Meeting Notes - § 1 reference coded [2.88% Coverage]

Reference 1 - 2.88% Coverage

The end goal of all projects is to produce a forest that is tolerance to prescribed fire. Currently, the forest is not at this phase, there are too many stems/ acre. Prescribed fire cannot be used when the forest is not fire tolerant. The usual return interval in this forest is 6-20 years we have gotten far away from this. The goal for our forest is to have multiple seral stages in our forest. We need stand initiation, large diameter trees, and we are trying to reduce competition to create old growth stands. Unfortunately with our current prescriptions we are hammering the midgrowth stands. If we only go after mid-growth we need to retain some of the economically viable stands to retain

Files\\HCRC_2015_11_Meeting Notes - § 5 references coded [17.83% Coverage]

Reference 1 - 4.01% Coverage

Lessons Learned from the Canyon Complex Fire from Dana Skelly Dana provided a video produced by John Day FS on the Canyon Creek Fire. It is not available to the public but FS hopes to make it available in the future. Dana's points from the fires this season: □ Have to be able to do more prescribed burning both in terms of time (longer season) and scale (more acres).

- Need to communicate better with other resource folks about the timing and importance of prescribed fire.
- Need to plan ahead and let other agencies and forest users in on the planning. 1 | Page
- DEQ and EPA smoke constraints and the need for more burning makes accomplishing more burning difficult.

Reference 2 - 7.73% Coverage

Comments: Kerry Kemp – A new publication with a review of nineteen studies showed that those restoration projects that had prescribed fire post treatment showed a real difference in being able to tolerate a wildfire. Without prescribed fire there was no difference between treated and untreated areas. (Kerry sent the pdf of this paper, available on www.highdesertpartnership.org) Jason McGovern – Regarding burning more – there needs to be a mix of big and small units. When conditions are right for a long period of time we can tackle the big units. If they're not, like this year, we can still work on small units. We need 100 to 300 acre units as well as the 10,000 acre units because we don't know what our fire window will be. Dana Skelly – Need to see more open stands and mechanical treatments need to be a part of it. We can't restore the forest with just fire alone however we could treat some areas like Inventoried Roadless Areas with just fire. Josh Giles – Need to keep skips as far from roads as possible to keep game away from roads. Tom Segal - We wildlife guys want hotter fires to get more shrub response and overstory removal. Need to work on zones of agreement between wildlife and silviculture regarding burn sizes. Need to treat different areas at different times.

Reference 3 - 1.33% Coverage

Zach Williams: Thin throughout the diameter range of a stand. We wouldn't be hammering the mid-diameter trees and we would be increasing variability across the landscape. There would be less heavy fuels on the ground.

Reference 4 - 3.86% Coverage

Travis: Being able to thin throughout the diameter range. Take some trees greater than 21". Dana: Get prescribed fire treated for air quality purposes the same as wildfire. Wildfires don't require burn permits. This would increase the burn opportunities. Jason McGovern: More fire. It would manage tree density, decrease small diameter timber and allow more water to infiltrate the soil. Jason Kesling: Treat thinned and unthinned areas with large prescribed fires. Dan Bishop: Harvest more volume per acre, harvest some of the large diameter trees, treat riparian areas and end up with a forest that is better for younger trees.

Reference 5 - 0.91% Coverage

Kerry Kemp: Allow wildfires to burn under more moderate conditions. Use wildfires as a tool. Would have to change views of society towards wildfire.

Files\\HCRC_2016_05_Meeting Notes - § 2 references coded [4.54% Coverage]

Reference 1 - 3.75% Coverage

Review Old Growth Consensus Statement (Draft 3 written by Josh Giles and Jim Campbell) Regarding OldGrowth – The revised statement after the discussion is as follows: Our goal is: Resilient old-growth stands □ An extent of old-growth stands and structure that move towards achieving historic conditions and

distribution over time

□ An extent of replacement old-growth stands that achieves historic distribution over time.

To achieve this goal, we will recommend: The harvest of some large trees if: □ Removal will decrease shading of aspen and other riparian hardwoods by encroaching conifers.

□ Removal will improve the retention and survivability of older trees (i.e. old growth ponderosa pine) and to transition toward a more fire resilient landscape. □ Improves the health and vigor of the surrounding stand.

Reference 2 - 0.79% Coverage

I hate to see the whole forest burn up because we are not caring for it and could be because I can't really work on the words. Promote logging to keep everything from burning up.

Files\HCRC_2016_06_Meeting Notes - § 2 references coded [11.72% Coverage]

Reference 1 - 8.13% Coverage

pre-commercial thinned. Fuels piled and burned with a prescribed fire in spring 2016. This is an area that did not have any commercial logging/ timber in this last treatment. There have been commercial harvests since 1980s. It is a long haul for the timber to come out of here and get to the mill in John Day. Currently, it is not economical to log in this part of the forest. Some of the bitterbrush was burned but it is fire tolerant and should resprout but it can't be burned too often (less than 10 years). The prescription achieved the goals of maintaining the big trees, removing needle/ duff buildup. The wildlife cover clumps were burned but they will be the future wildlife openings in this area. The prescription stayed within NEPA guidelines. This forest work was paid for through the Hazardous Fuels Reduction program – and the goal of the program is to maintain large, old trees.

Reference 2 - 3.59% Coverage

The HCRC group on this tour indicated that what they saw with the prescribed burning should be seen and understood by the broader general public and would like to see how to get some educational information out to the public. The group feels there is ignorance and apathy about land management and general public does not realize the complex set of decisions of managing on a landscape scale.

Files\HCRC_2016_10_Meeting Notes - § 1 reference coded [11.10% Coverage]

Reference 1 - 11.10% Coverage

Had a good fall prescribed fire season but felt very lucky that they were able to conduct prescribed fires without converting into wildfires. It was a short season, but the prescribed fire crews never missed a burn day and they never had smoke into town. The crews burned as much as they could. The crews have a variety of things to burn, including slash and also trying to reduce fine fuels. Two other forests in the area had prescribed fires convert to wildfires. The Dairy Project prescribed fire was conducted most recently (10/8/16), on the day they burned the Ochoco forest had a fire convert to wildfire. On the Dairy project it was an active fire with thousands of spot fires but it was a very successful burn. In this project in the timber sale area the burn was beautiful. Heavier fuels and the trees looked good with bigger fuels burned well. Logging is not enough, important for optimum desired ecological conditions need to burn. Fall burning is better than spring to get optimum fire activity. With the prediction of a big storm (Oct. 15) it is anticipated the prescribed fire season is over. There are over 8000 acres of pile burning (essentially 1 pile for every 10 acres for landing piles) that still need to be conducted and this can occur after significant moisture. Wet conditions are actually desired for pile burning. However, the work force is small now, most seasonal positions are now terminated. USFS is finding that the smoke management officials (DEQ from Oregon Dept. of Forestry) have been out to the forest to help understand the issues more. They are working with USFS.

Files\\HCRC_2017_03_Meeting Notes - § 2 references coded [1.94% Coverage]

Reference 1 - 1.15% Coverage

Q. How many years does the 70K acres project go back? A. probably as early as 2008. It is well documented a 30-plus year project in Marshall Devine with mechanical treatment is great but if you don't add prescribed fire you don't get the same benefit and then need keep fire return intervals in more line with normal fire cycle. There should come a day when maintenance burning will be natural fire and be unplanned ignitions.

Reference 2 - 0.79% Coverage

Need to get the story out. A lot of misunderstanding out there. There are a lot of people that don't know what is going on out there. There is a quality conversation going on out there. Need to get the information out – you are going to get smoke. Do you want it in the form of wildfire or prescribed?

Files\\HCRC_2017_04_Common Ground - § 5 references coded [7.77% Coverage]

Reference 1 - 0.95% Coverage

Low basal area indexes that will create stands that are more fire tolerant initially and for a longer time after treatment except on: - North facing slopes - Areas needed for wildlife needs

Reference 2 - 0.32% Coverage

More extensive use of prescribed fire where and when possible.

Reference 3 - 2.18% Coverage

Regarding Prescribed Fire Our goal is: • The use of prescribed fire is increased in time and scale so that 20,000 acres (or as many acres as is required to get Emigrant Creek district back to historic return intervals) are burned annually on the Emigrant Creek Ranger District to maintain the historic fire regime However, we recognize the difficulty in addressing safety and air quality concerns with the use of prescribed fire.

Reference 4 - 1.45% Coverage

To achieve this goal, we suggest: • As much as possible small diameter, non-commercial timber is thinned so that burning can occur at a time of year when safety and air-quality concerns are not a factor.

• Where and when possible use prescribed fire in both treated and un-treated areas.

Reference 5 - 2.87% Coverage

Regarding Riparian Areas and Aspen Our goal is: • Riparian areas that have appropriate vegetation and wildlife for the site, • The production of high water quality that meets or exceeds standards, • To achieve full biological potential given the limitations of the current infrastructure (i.e. Manmade features such as roads and culverts)

• To meet optimal “properly functioning conditions” • To have aspen stands that are: - healthy, reproducing and have trees of multiple ages

• To have an extent of aspen stands that achieves historic distribution over time.

Files\\HCRC_2017_04_Meeting Notes - § 2 references coded [3.92% Coverage]

Reference 1 - 3.14% Coverage

The best way to get a better outcome is to take pieces and burn on a schedule. Need multi-year treatment schedules and to stretch the prescription window.

• Use a new treatment that could be used elsewhere. • Trusting fire people and getting it burned out that way it should be. • Getting heterogeneity across the landscape. • Use some mechanical treatment to protect areas concerned about before we use fire. • Should do some mechanical treatment for fire lines. • See conditional

NEPA – if we have agreement across stakeholders then every project doesn't have to analyze for fire. It could go in at a higher level. Public perception is accepting, building social license.

Reference 2 - 0.79% Coverage

Define Fire-centric: Use fire as restoration as opposed to anything else. Question being asked is best outcome to restore Rattlesnake using fire over any other tool.

Files\\HCRC_2017_04_Meeting Notes(1) - § 4 references coded [11.19% Coverage]

Reference 1 - 3.19% Coverage

Tim stated he doesn't think it is unreasonable to burn now but resources aren't available so that is the reality of the situation. Even for a wildfire we still need a prescription. Dana Skelly kept a log from April 15-June 15 – every day recorded if we burned, if we didn't why we didn't, we put a lot of effort in that. Say there were fire modules roaring through the forest, now they are wildland fire modules. I can't guarantee we used to have low/moderate ignition. We still have firefighting capacity issues and in the fall, we don't really don't have resources.

Reference 2 - 1.17% Coverage

Mechanical and prescribed fire return interval could be longer to get it back into sync. Need to burn about every 10 years. Once return to historic range of variability, burning every 20 years is probable.

Reference 3 - 4.01% Coverage

Q. How to create a larger burn window without further resources? A. Bigger area network for resources, maybe looking to other forests and regions. Cultivate contract fire crews. ODF has a 5-person crew that operates with agreements on the forest and are in place. Thinning crews wildlife & ranges can be available for prescribed fire. Vegetation management is set up out of John Day and they don't let the crews go to fires. Tim believes it is possible to ignite a prescribed fire in October for Marshall Devine. Forest Service with the support of collaborative and general public still have capacity. We will never not burn because of lack of funds. It is best to thin first and then use prescribed fire.

Reference 4 - 2.82% Coverage

After 20 years, still don't have social license to prescribed fire. If we are going for wildfire, then we need to step up the mechanical treatments. It's not limiting future fires, its broadcast burning but beyond a certain point we don't have social license for a 100,000 acre fire. Cost of a prescribed fire is \$50-70 per acre. Why doesn't Malheur have a managed wildfire plan? Malheur does have this. How should do prescription work to create a fire-resistant forest. Tim is willing to try it.

Files\\HCRC_2017_09_Meeting Notes - § 1 reference coded [4.18% Coverage]

Reference 1 - 4.18% Coverage

Keep doing landscape scale on Emigrant Creek • Keep working together as a group • Maintaining what we are doing • This time next year be on track to burn 2 times as much as last year, • Burn more, have new faces at the collaborative • Quadruple burning and restoration footprint • Find maximum feasible acres to treat with fire and find other treatments we can use • Branch out to more restoration, mahogany, meadows, stream restoration • Find funding for recreation, tap into user groups for funding trails, outback horsemen • Pursue more burning, it is the best bang for the buck. • Gain the social license to burn. • Need to come to terms with smoke as a society, we can help have the conversation with the community

- Convince people smoke is a necessary part.

Files\\HCRC_2017_10_Meeting Notes - § 3 references coded [4.42% Coverage]

Reference 1 - 2.07% Coverage

Soldier CE is the third project. We did this as a rush job and we talked about how the restoration projects will be in the subsequent EA to make good on our promise. Soldier CE will be signed in the next month, Rattlesnake project and Aquatics EA. We need a Rattlesnake project because we need prescribed fire. Pam can't sign on to just a commercial CE because she can't explain this to the environmental community, but every one said they would put all the other things in Rattlesnake. All the commercial acres – CE can cover precommercial thinning and commercial thinning, but not prescribed fire in a small area because it causes us to put a fire all around. This would be too much disturbance for a small area but Soldier Creek acres could be put in Rattlesnake for prescribed fire. Now that we are taking a bigger look at this we can do it.

Reference 2 - 1.68% Coverage

Recently talked with someone who did a 4,000 acre burn on the Ochoco and it was \$19/acre. Much less than it costs at \$5,000/acre to manage a wildfire. Practically speaking we are not going to get caught up on the amount of acreage that needs prescribed fire. Strategically place treatments with small amount of prescribed fire to manage a wildfire. We need to get much more strategic about future wildfires to make sure the wildfires help us. It is more complex, but we need an order of magnitude change is going to come in the form of wildfire. Use this as a tool to get social license for prescribed fire. We need to get this in front of congress, saving lives, saving resources.

Reference 3 - 0.67% Coverage

Kerry: Perception about wildfire management is not about managing catastrophic fires. We historically had a number of smaller fires – just allow some of those events to do good work. We must frame what we mean when we say catastrophic. This is not those kinds of events.

Files\\HCRC_2017_12_Meeting Notes - § 5 references coded [8.84% Coverage]

Reference 1 - 0.44% Coverage

The cumulative work done on the southern Malheur. We're making a difference on the landscape through commercial and non-commercial thinning along with prescribed fire.

Reference 2 - 1.95% Coverage

Average of 40,000 acres burned per year over a ten-year period. - Combination of multiple run teams on prescribed fire projects. - A couple of 'managed' natural ignitions each year. - Wouldn't have to do much if a fire was started, it would flare up, die down, wander around on its own.
- Public OK with more fire on the southern Malheur Forest due to increased communication among the collaborative, the public and the Forest Service.
- Fires of low, medium and severe intensity. - A strategic fire plan would be in place. - Historic conditions for fuel loads on the southern Malheur achieved. - A more natural fire regime resulting in a forest structure matching historic conditions. - Eighty percent of the southern Malheur National Forest sees fire every fifteen years.

Reference 3 - 4.58% Coverage

What are the strategies and behaviors that will help us achieve our desired situation regarding fire on the southern Malheur National Forest? 1. Giving FS tools they need and leeway to make decisions in field to be as efficient as possible. 2. Collaborative supporting the project. 3. FS needs to be better at lending resources. 4. Start education about fire at a younger age. We need to come up with the next cartoon to replace Smokey Bear. Start a fire curriculum.
5. Change thought processes in some of the Forest's upper management – don't put fires out immediately.

6. The public information part is critical. Without social license, we won't get to do any of the things we want such as managing unplanned natural ignitions.
7. Tell our story a little better outside of the Forest Service to shift the mindset of the public. (So, when something goes wrong the public has a better understanding of why.)
8. Educate public on how fire works. It's not exact, does some things we don't want it to do. We can't have no smoke and a healthy forest.
9. Nationally, the fire terminology changes – appropriate management response: if conditions are right, manage the fire. Make a decision based on conditions – availability of fire fighters, weather, etc.
10. Education: need to change attitude of wildfire, talk about restorative properties – example is Canyon Creek fire – benefits to wildlife. Rx fire before commercial treatment. You know what you're going to get if you treat after.
11. Value in getting to higher ups in FS. Make sure that all funds don't all go to fire. putting some \$ to restoration you're not going to get out of this endless loop.

If you're not

12. Dream position: every district has a Public Affairs Officer partnership position that has ear of local community. Need a prevention position. Education.

Reference 4 - 0.14% Coverage

0. Managed unplanned natural ignition (MUNI) on ECRD.

Reference 5 - 1.75% Coverage

Jack: While restoration projects have done a good job of reducing tree density through removal of commercial trees and some non-commercial trees the projects are falling behind on non-commercial thinning and prescribed burning. Since reintroducing fire is such a critical aspect of forest restoration should we rethink our restoration process? Instead of working on projects that are unable to be completed in terms of non-commercial thinning and prescribed fire should we instead start working on fuel breaks along main arterial roads that will allow the Forest Service to utilize wildfire as the main fire management tool? What if we don't have any natural ignition on the forest?

Files\HCRC_2018_03_Meeting Notes - § 2 references coded [5.05% Coverage]

Reference 1 - 3.86% Coverage

Update on the Rattlesnake, Soldier and Hazard Tree projects - Travis Swaim Currently, laying the project out and moving forward with implementation. The prescriptions are written as everything up to 21" are harvestable. No 21" trees will be cut. We don't know slash treatment yet (Travis doesn't make that call, didn't specify in the NEPA document so could go anyway). Drainages are fir, rest of the project is Ponderosa, Old growth dead and dying. We have no salvage component the idea is to take the pressure off good green trees, density management is the goal to let trees protect themselves. Beetle killed trees. Q. How about spraying the beetles? A. This is very expensive and with the stage of the outbreak, it is too late in the life cycle. However, in the campgrounds we are putting together a spray program to save old trees.

Reference 2 - 1.20% Coverage

District wide danger tree project Harney County asked us to do this project because they were seeing these dead trees. Trying to respond to the county concern. This project is on all 2 and 4-digit roads – all likely and imminent danger and will do campgrounds.

Files\HCRC_2018_05_Meeting Notes - § 3 references coded [19.87% Coverage]

Reference 1 - 7.13% Coverage

What are your worst fears about having more managed fire on the southern Malheur National Forest? • The

one that gets away (2 • Resource depletion • Political will and community will change the objectives of returning to a fire interval • Knowing the good of fire on the landscape but the concern of catastrophic fire • Something might go wrong • Don't get enough of prescribe fire done (4 • Public misunderstanding and disconnect of the big issues. • Too risk adverse to try to innovate to meet ecological objectives • Tim (Boyce) will take a job somewhere else • Fire is unpredictable, and people focus on areas that don't meet prescription. • I don't think benefit outweighs the risk. If we can subsidize fire why can't subsidize getting it out of the woods for biomass?

- The landscape is not ready for managed fire yet and then they blow up. • From wildlife standpoint need hotter fires for landscape goals • Irrate public in my face. • Several stand replacing fires before returning fire and the public putting FS in a no-win situation. • Not enough timber removed in a stand before fire introduced.

Reference 2 - 4.41% Coverage

Q. Occurrence of the insect invasion linked to fire intensity? Yes, it is linked to hotter fire. Comfort level of managed ignition – how easy is it to designate the forest ready for fire? This is a social thing, what impacts hoping to see, what season to manage a fire, I want to get the point across – part of a larger action, commercial thinning, noncommercial, grazing, we want it all. The fire is in addition to what we are doing on the forest already. Fuel levels after a stand replacing fire, if we don't salvage all the wood making it worse, - would have reburn potential. if we salvage it all then and leave all the fine fuels, all the slash and it also an area that would burn again.

Reference 3 - 8.33% Coverage

DEQ smoke management rules. Smoke sensitive receptor areas are in John Day and Burns. 2.5 microns or less impact people's health. Change in the proposal to allow some smoke intrusions allowed. 2 levels – 24 hours max and if it goes over the max. Also, the one-hour max - usually happens early in the morning when the air is not moving. Public comment is invited. Light spikes of smoke are not impacting public health. Q. How does this impact the municipalities, and do they need to deal with this? A. Not under ODF regulations. Even if someone is burning fields we document that as well. I represented the collaboratives on the revisions. Even though there is some movement and it is still very limiting.

If you

provide comments, DEQ, Oregon health authority, Still look at prescribed fire to be something that comes out of a tail pipe and that is what they are trying to regulate. Haven't had the conversation yet with landscape scale. There are certain areas where smoke stagnates in these counties and the challenge is at the night. Because there is now a communication plan. There is a protocol where people go through and there is a communication plan to help notify and mitigate for the vulnerable population. Have to alert and notify the public in a way we never have done before.

Files\HCRC_2018_06_Field Trip Meeting Notes - § 2 references coded [13.83% Coverage]

Reference 1 - 7.49% Coverage

Looks good • Looks perfect • Don't like seeing the pocket of mountain mahogany that got burned (2) • These trees will fall down, creating a jack-strawed mess • In our current projects, can we capture commercial values? Designing our treatments with more clumps of trees.

- If we have more of this fire on the landscape it will allow us to do more of this burning.

Jack asked Tim for the final takeaway at this stop: We take all the concerns that I have heard this morning into consideration when prescribing fire. There is an in-exactness to it but it is also the beauty of it in creating a diverse forest in a mosaic pattern.

Reference 2 - 6.34% Coverage

A. More of an organizational issue? Is anyone making plans to change this in the future? There is economic risk and weather risk? We are figuring out forest burn plans for a landscape scale. There is a right fire, right piece of ground and right time. Smoke management and public perception is going better. But there are folks in town who think we are just burning up the forest and not capturing economic value of the resource. Tim (Boyce) has been a driving force for prescribed fire and has done a lot of good in educating.

Files\\HCRC_2018_08_Meeting Notes - § 5 references coded [15.57% Coverage]

Reference 1 - 1.86% Coverage

Fuel Treatment Monitoring (both mechanical and prescribed fire) However, there hasn't been fire in the monitoring plots yet, only mechanical thinning. They have looked at fuel response to a wildfire in Canyon Creek though.

Reference 2 - 0.77% Coverage

One way to expand our window in the fall is to burn at night (when rh's start to drop & temps drop)

Reference 3 - 2.11% Coverage

Showed slide of smoke in spring prescribed burn vs. smoke the first of August. (smoke during the spring burn had an increase in smoke during the night which dispersed early in the morning, whereas the smoke we're experiencing in August peaks at around noon)

Reference 4 - 4.07% Coverage

Comment by Jim Sproul – it seems like a priority for management should be reducing fine fuels (in July / August) through cattle grazing, grasses are the most combustible fuel source and are what carries the fire. Tim's comment in response to previous comment: The buildup of duff & litter is the bigger issue, whether there is grass or not. Cattle aren't going to remove the buildup of those types of fuel, which also carry the fire and result in most of the tree mortality (buildup around tree base).

Reference 5 - 6.77% Coverage

Pam Hardy read off the (April) draft consensus statement – we worked through the document as a group changing and highlighting things that needed to be addressed along the way.

Several notable comments were:

North facing slopes (removing these is taking out a large portion of acreage available and often areas with most & highest dollar timber)

Quantifying prescribed fire goals (is 20,000 acres a reasonable number to include in the document?)

In regard to managed wildfires, Harney County won't sign on unless there has been a silviculture treatment of the area in last 10 years. NEPA approved for fire.

Let's not stay inside of the Forest Plan sideboards and ask for what we really want to accomplish and work from there.

Ben will send out draft to the group prior to next meeting, where we will try to wrap up this document.

Files\\HCRC_2018_09_Meeting Notes - § 2 references coded [9.39% Coverage]

Reference 1 - 7.70% Coverage

We started to see this on a Damon TS field trip. From what I've seen, it doesn't matter what NEPA it was, once it's ran through contract we still get outcomes we didn't really want.

When we are hamstrung by spacing (basal area per acre / stem spacing / crown spacing) we will be forced

to leave those fir trees (we don't want) in many cases.

We have 20% variance (in terms of spacing requirement) in contracts currently, & sometimes that is not enough to get us to where we need to be.

If we could change specs to read a 75% variance it would fix a lot of the situation. 5'-35'.

Perhaps cutting all Grand Fir / Lodge Pole in the contracts would address this issue?

20X20 equals 109 TPA, does it matter how they are spaced & is that number appropriate?

Reference 2 - 1.69% Coverage

Consensus statement on Prescribed fire – Pam Hardy

Considerable time was spent wordsmithing the document, small tweaks and changes made to appease the group.

Files\\HCRC_2018_09_Rx ZOA - § 4 references coded [34.13% Coverage]

Reference 1 - 9.28% Coverage

To achieve this goal, we suggest:

Low basal area indexes that will create stands that are more fire tolerant initially and for a longer time after treatment.

Target stand density indices (SDIs) that are appropriate for the HRV of the site. Management should drop SDIs to the lower end of the recommended (Powell's reference) management zones to allow more time between treatments.

More extensive use of prescribed fire where and when possible

Exempt specific areas needed for wildlife

Reference 2 - 9.19% Coverage

Science indicates that density management especially commercial & noncommercial mechanical thinning (as recommended above) is usually a necessary first step in restoration. It removes many of the fuels that could cause a crown fire, and it produces valuable saw-logs that should go to the mill. However, science indicates that fire-adapted forests, like ours, are not fully returned to their historic fire, drought and insect resiliency until fire is returned to the ground.

Reference 3 - 7.52% Coverage

The use of planned ignitions should increase in time and scale so that 20,000 acres (or as many acres as is required to get Emigrant Creek district back to historic return intervals) are burned annually on the Emigrant Creek Ranger District to maintain the historic fire regime. However, we recognize the difficulty in addressing safety and air quality concerns with the use of prescribed fire.

Reference 4 - 8.14% Coverage

e treatments should preferably follow mechanical treatments to reduce the possibility of resource loss (unless site specific surveys indicate that it's not necessary).

As much as possible small diameter, non-commercial timber is thinned so that burning can occur at a time of year when safety and air-quality concerns are less of a factor.

Where and when possible, use prescribed fire in both treated and un-treated areas.

Files\\Hermit Park Open Space_2008_CWPP - § 4 references coded [4.54% Coverage]

Reference 1 - 0.95% Coverage

Local Preparedness and Firefighting Capability □ Initial response to all fire, medical and associated emergencies is the responsibility of the Estes Park Fire Department. Wildland fire responsibilities of Larimer County, Colorado State Forest Service, United States Forest Service, Bureau of Land Management and the National Park Service are described in the current Larimer County Annual Operating Plan. All mutual aid agreements, training, equipment, and response are the responsibility of the local fire department and the agencies listed above.

Reference 2 - 0.47% Coverage

Wildfire Reduction Priorities Please refer to the attached prioritized list of needs regarding fuel reduction treatments within the WUI zone. • Fuel reduction needs (Attached map identifying treatment types and ways to reduce structural ignitability.) • Fire response needs

Reference 3 - 2.50% Coverage

High

- Regulate use of campfires; limit them to designated fire grates • Educate visitors about wildfire risk and the proper use of campfires, as well as campfire bans during high wildfire risk periods
- Ensure effective ingress/egress routes for firefighter response and evacuation • Create an emergency evacuation plan, including evacuation of people with disabilities as well as horses, that will be shared with the visiting public
- Implement forest management activities including mechanical thinning and/or prescribed burning.
- Create defensible space along the roads in high wildfire-risk areas • Create defensible space within and around campgrounds in high wildfire-risk areas
- Maintain defensible space around structures and utilities, including removing flammable vegetation within 15-feet from structures, avoiding stacking firewood within 30-feet and locating propane tanks away from structures as feasible
- Continue partnering with CSFS and Larimer County Emergency Services to address forest management and wildfire mitigation, including prescriptions for thinning stands, creating defensible space, and addressing forest health concerns (especially mountain pine beetle infestations)
- Continue to apply for grants to implement wildfire mitigation projects • Provide emergency responders with a map of the open space that clearly identifies roads, campgrounds, trails, trailheads, cabins and locations of other structures.

Reference 4 - 0.62% Coverage

Medium • Collaborate with the USFS and private landowners to conduct forest management and fuels mitigation along shared boundaries

- Contract with the CSFS to develop a forest stewardship implementation plan for the open space including forest inventory, prescriptions for thinning stands, creating defensible space, and addressing forest health concerns

Files\\Larimer County_2009_CWPP - § 3 references coded [1.95% Coverage]

Reference 1 - 0.55% Coverage

Preparedness Objective

Agency Contacts: USFS RMNP CSFS

Canyon Lakes Ranger District Fire Management Officer

Fire Management Officer

Colorado State Forest Service Fort Collins District

Larimer County Emergency Services 970.295.6780 970.586.1287 970.491.8660

Plan the most effective level of resources to protect human and natural values. Actively participate in preparedness and all hazard planning.

970.498.5300 USFS and RMNP responsibility is primarily tied to National Forest lands and National Parks lands

respectively. The CSFS and Larimer County assist all agencies, communities and associations with fire planning, readiness and wildland fire hazard identification. All agencies share responsibility to coordinate and cooperate in FireWise planning, Pre-attack planning and communication with the public and the news media.

Reference 2 - 0.81% Coverage

USFS and RMNP fuels reduction implementation is tied primarily to National Forest lands and National Park lands. The CSFS has coordinated and assisted on fuel reduction projects on state and private lands. Recent agreements allow for cross-jurisdictional fuel reduction project planning and implementation. Larimer County's wildland fire safety program was established in 1998 to help citizens meet adopted building and land use codes, to provide individual wildland fire hazard site inspections and assessments, to provide slash disposal options and to promote education and awareness of wildland fire and what citizens can do to prepare themselves. A wildland fire fuels crew has been established through the Larimer County Sheriff Office

Emergency Services section. The fuels crew is comprised of firefighters and the primary focus of the crew is to implement fuels reduction projects and forest health projects on County Open Space, non-profits and community open space. Additionally, the Fuels crew allows Larimer County to have an initial attack force available throughout the year. This group is primarily funded through grants that the Larimer County Department of Natural Resources and Emergency Services have applied for and have been awarded.

Reference 3 - 0.59% Coverage

Funding for prevention, preparedness, mitigation and burn area rehabilitation by Forest Service personnel is tied to National Forest lands. The Colorado State Forester administers the Emergency Fire Fund (EFF) for those Colorado counties that contribute to the fund. Larimer County contributes annually to this fund. At the Larimer County Sheriff's request, the CSFS District may request EFF designation from the State Forester. If approved, EFF will reimburse county suppression costs according to the current Annual Operating Plan (AOP), the master EFF agreement, and as agreed to for the specific incident. The CSFS will request Federal Emergency Management Agency reimbursement for qualified suppression costs according to the most current agreements. CSFS administer various grants to assist local fire departments and property owners as funds are available for suppression, training and other projects.

Files\\Little Valley_2005_CWPP - § 2 references coded [18.67% Coverage]

Reference 1 - 9.34% Coverage

Little Valley properties contain dense, overstocked stands of pure lodgepole, mixed conifer (lodgepole and ponderosa pine with some aspen and Douglas-fir component), and pure ponderosa with a dense regeneration understory. The topography and slope vary widely within the community; north- and northwest-facing slopes are prevalent, with slope percentages of 15-45%. Little Valley has been working with Larimer County and the Colorado State Forest Service to identify fuel reduction priorities and complete individual property assessments. Both agencies have already assisted the community in marking properties to meet defensible space standards, mark trees to thin in community open space areas, and mark trees along access roads for fuel

break thinning.

Reference 2 - 9.33% Coverage

In cooperation with the Larimer County Fire Education Group, the Larimer Fire Council, the Colorado State Forest Service, and the Estes Park Volunteer Fire Department, Little Valley supports and promotes Firewise activities as outlined in the Larimer County Fire Plan. Specific activities are listed below.

- Wildfire information material sent to residents on a regular basis;
- Wildfire education presentation/information available at annual meetings;
- Site inspections conducted by Larimer County Wildfire Safety;
- Defensible space marking conducted by Larimer County Wildfire Safety;
- Fuel break/thinning marking conducted by CSFS and Larimer County personnel;
- On Site Chipping;
- Access improvement meetings;
- Complete Subdivision assessment.

Files\\Manhattan Creek_2007_CWPP - § 8 references coded [5.35% Coverage]

Reference 1 - 0.94% Coverage

Fire mitigation projects completed by individuals can lend protection to individual homes and neighborhoods as well as lessen the chances of a wildfire starting from within the community. Many community residents have completed fire mitigation projects on their property. Recognizing that people cannot be forced to complete fire mitigation projects on their property, all Manhattan Creek Area landowners are encouraged to create defensible space and reduce other fire hazards on their personal property.

Reference 2 - 0.84% Coverage

Some thinning should occur on a number of properties, especially those properties that abut National Forest land and those that could cause access fire risk to others homes and structures. When properties are thinned, it is recommended that property owners retain the larger trees as well as, aspen, mountain maple and other deciduous varieties. This will allow the property to retain its forest-like quality even as wildfire protection levels are increased.

Reference 3 - 2.26% Coverage

Homeowners should store firewood away from homes and propane tanks. • Should a wildfire occur, deck furniture and hemp door mats should be pulled inside the house before the fire arrives.

- Roofs and gutters should be cleaned of pine needles, leaves and other debris. Needles, leaves and other dead materials must be continually removed from the roof, decks and walkways.
- Little things are important. Any items adjacent to a house are considered “attached” to the house by a fire. This includes wood decks, fences and walkways. Metal flashing can be inserted between the house and its “attachment” it could stop the progress of a fire. For decks, residents should consider using HardiPlank or fiber cement on the side wall adjacent to the wood decking material.
- Pruning and clipping slash are occasionally disposed of into a remote area of a homeowner’s property. Slash should be removed from the area, as it creates a substantial fuel bed. If removing the slash is not practical, it should be piled in an area that is safe to burn and burned during the winter or spring when snow level allows for safe burning. Remember a burn permit is required for slash burns. If the slash is too much for the homeowner to burn in a safe manner, please work with PCFPD.

Reference 4 - 0.33% Coverage

Collaborate with the USFS to address mitigation along shared boundaries, as well as to address other wildfire-related issues (including removing downed timber and dead trees)

Reference 5 - 0.26% Coverage

Create partnerships between the community, Larimer County, the CSFS, and the PCFPD to address wildfire mitigation and other related issues *

Reference 6 - 0.27% Coverage

Specific areas in which residence would like to see fuel hazard reduction: • Elk Horn Creek Trail • 7 mile creek area • Along county roads • Gueswel Gulch

Reference 7 - 0.18% Coverage

Create a formal evacuation plan and phone tree, which also addresses evacuating pets and livestock

Reference 8 - 0.27% Coverage

Continue efforts at community outreach and PCFPD – to hold a meeting at least once a Page 10 public education regarding wildfire risk and mitigation

Files\\Pinewood Reservoir_2008_CWPP - § 3 references coded [11.17% Coverage]

Reference 1 - 3.10% Coverage

Pinewood Reservoir has held numerous community meetings to educate the citizens of the wildfire problems and proposed solutions in cooperation with the Loveland Fire Department, Larimer County and Colorado State Forest Service. Pinewood Reservoir supports and promotes Firewise activities as outlined in the Larimer County Fire Plan Pinewood Reservoir supports and educates its citizens in ways to reduce structure ignitibility through meeting Larimer County Building Code Requirements and utilizing Colorado State Forest Service FireWise Construction Fact Sheets.

Reference 2 - 3.69% Coverage

Pinewood Reservoir has a history of Firewise education and has been working to educate landowners and implement defensible space around their current structures, with the assistance of Larimer County and the Colorado State Forest Service. Currently, about $\frac{3}{4}$ of the homes in this community have completed defensible space; most of those landowners have also requested that thinning be expanded out from the original defensible zone to include the rest of their property. The community has strong leadership, has been supportive of local fuel reduction activity, and has worked closely with Larimer County and the Colorado State Forest Service on the Community Wildfire Protection Plan.

Reference 3 - 4.37% Coverage

The community, in cooperation with Larimer County and the Colorado State Forest Service, plans to pursue grant funds to thin densely forested land that run throughout the subdivision. These projects are completely on private property, however the U.S. Forest Service along with Larimer County have assisted the community in identifying treatment locations. Fuel reduction projects have strong community support and the community has allocated funds to begin their project. Community members meet regularly; prune, chip and haul slash and are a mix of seasonal and permanent residents; annual volunteer time can be estimated at 200 hours. It is anticipated that a county crew or contractor would be hired to fell and chip the marked trees. As of October 2008 Pinewood Reservoir is implementing phase IV of the plan.

Files\\Pinewood Springs_2010_CWPP - § 4 references coded [2.87% Coverage]

Reference 1 - 0.72% Coverage

Some of the areas surrounding Pinewood Springs are being mitigated by the USFS through the Estes Valley Fuels Reduction Program. This program is intended to mitigate the woods in Wildland Urban Interfaces around the town of Estes Park, and the inhabited areas around Estes Park. Over 8,000 acres are to be treated

through this program. A map of the areas that are going to be treated, or have already been treated, can be found in the Appendix of this document, on page 30.

Reference 2 - 0.51% Coverage

Priority One: Property Owner Education

PSFPD has an assigned Wildfire Mitigation Coordinator whose mission is to assist with education of the property owners with wildfire mitigation, and help facilitate mitigation efforts within the community. This staff position is also the fire district point of contact for the CWPP.

Reference 3 - 1.13% Coverage

Priority Two: Property Mitigation Surveys & Defensibility Ratings

PSFPD will encourage homeowners to seek mitigation / defensible space surveys through available resources. PSFPD will assist with educating the public about those resources. It is also in the interest of PSFPD to establish defensibility ratings for individual property parcels to assist with wildfire response planning and decision making. A property owner's individual rating may be shared with that owner upon request.

Priority Three: Property Mitigation

PSFPD will encourage homeowners to mitigate their properties and create defensible space. PSFPD will assist with educating the public about available mitigation resources. See Appendix

Reference 4 - 0.52% Coverage

Priority Five: Evacuation Plan & Route Improvements Pinewood Springs will identify, designate and communicate additional evacuation routes and improve existing evacuation routes. Pinewood Springs will add or improve turnarounds where appropriate. Pinewood Springs will investigate adding loop routes where appropriate.

Files\\Pole Hill_2009_CWPP - § 3 references coded [3.18% Coverage]

Reference 1 - 1.96% Coverage

As people have moved to the area and begun to recognize the responsibilities that accompany the privilege of living in the forest, many have responded to that responsibility by thinning trees and creating defensible space around their homes. Others have become aware of what wildfires can do to a forest and homes within the path, but have not been able or experienced in working toward prevention, thus the importance of education and community organization. Even those whose property needs less fire mitigation work, have a vested interest in having the forest actively managed to avoid a catastrophic, uncontrollable wildfire. Many possibilities for involvement exist for the area which has a variety of native vegetation that includes Ponderosa pine, Douglas fir, Rocky Mountain juniper, cottonwood, aspen, and some Lodgepole pine trees, as well as Mountain mahogany, Alpine currant, chokecherry bushes, assorted pasture grasses, and other plants and wild flowers.

Reference 2 - 0.36% Coverage

Thinning and creating fuel breaks enables trees to be stronger. Healthy, stronger trees are better able to fight insects (e.g. Mtn. Pine Beetle) and disease (e.g. Dwarf mistletoe).

Reference 3 - 0.86% Coverage

Concerns Relating to Protection of Values: 1. Condition of forest 2. Safety in case of fire: escape routes, safe zones, access for fire equipment and emergency help

3. Communication system (phone tree, email, etc.) 4. Assessment of area's current fire-risk 5. Identification of properties 6. Education to help all understand the needs and actions: i.e. defensible space, burn permits,

access options, forest health needs, etc.

Files\Poudre Fire Authority_2011_CWPP - § 6 references coded [0.89% Coverage]

Reference 1 - 0.04% Coverage

Engage WUI communities and residents in fire mitigation planning, mitigation, and preparedness activities

Reference 2 - 0.04% Coverage

Explore potential for chipping program in WUI neighborhoods to support defensible space efforts.

Reference 3 - 0.02% Coverage

Horsetooth Mountain Park fuels treatment

Reference 4 - 0.24% Coverage

The most effective fuels management method for protecting structures in the WUI is the creation of defensible space around structures. By managing the fuels and reducing the potential fire intensity immediately adjacent to the structure, firefighters may more safely defend the home. Defensible space may even increase the probability of the structure withstanding a fire in the absence of firefighters.

Defensible space consists of pruning trees, applying low flammability landscaping, and cleaning up surface fuels and other fire hazards near the home. These efforts are typically concentrated within 30 to 75 feet of the home (see Appendix D).

Reference 5 - 0.26% Coverage

By breaking-up vertical and horizontal fuel continuity in a strategic manner, fire suppression resources are afforded better opportunities to contain wildfires and community assets will have an increased probability of survival. In addition to the creation of defensible space, fuel breaks may be utilized to this end. These are strategically located areas where fuels have been reduced in a prescribed manner, often along roads. These fuel breaks may be associated with or tapered into larger area treatments. When defensible space, fuel breaks, and area treatments are coordinated, a community and the adjacent natural resources are afforded an enhanced level of protection from wildfire (see Appendix E).

Reference 6 - 0.29% Coverage

Prescribed fire may be conducted either in a defined area, as a broadcast burn, or in localized burn piles. Broadcast burns are used to mimic naturally occurring wildfire but only under specific weather conditions, fuel loads, and expert supervision. Burn piles are utilized to dispose of excess woody material after thinning if other means of disposal are not available or cost-prohibitive. It should be noted that pile and debris burning have started numerous catastrophic wildfires along the Front Range. The use of prescribed fire in the WUI must be carefully planned, enacted only under favorable weather conditions, comply with local laws and regulations, and must meet air quality requirements of the Colorado Department of Public Health and Environment (CDPHE) Air Pollution Control Division

Files\Poudre Park_2008_CWPP - § 7 references coded [5.96% Coverage]

Reference 1 - 1.46% Coverage

The above fuel hazard map of the Poudre Park area shows that the current fuel hazard for most of the area is at the moderate or very high level. The large area of very high hazard exists mainly on the south slope near the most populated area of the community. Prevailing winds are from the west and northwest. Forested areas to the north and east are considered a moderate fuel hazard risk at the present time. Fire mitigation projects completed by individuals can lend protection to individual homes

and neighborhoods as well as lessen the chances of a wildfire starting from within the community. Many community residents have completed fire mitigation projects on their property. Recognizing that people cannot be forced to complete fire mitigation projects on their property, all Poudre Park Area landowners are encouraged to create defensible space and reduce other fire hazards on their personal property.

Reference 2 - 0.88% Coverage

Local Preparedness and Firefighting Capability Initial response to all fire, medical and associated emergencies is the responsibility of the Poudre Canyon FPD. Wildland fire responsibilities of Larimer County, Colorado State Forest Service, United States Forest Service, Bureau of Land Management and the National Park Service are described in the current Larimer County Annual Operating Plan. All mutual aid agreements, training, equipment, and response are the responsibility of the local fire department and the agencies listed above.

Reference 3 - 0.74% Coverage

Some thinning should occur on a number of properties, especially those properties that abut National Forest land and those that could cause access fire risk to others homes and structures. When properties are thinned, it is recommended that property owners retain the larger trees as well as, aspen, mountain maple and other deciduous varieties. This will allow the property to retain its forest-like quality even as wildfire protection levels are increased

Reference 4 - 1.19% Coverage

he community and PCFPD members have developed and attached an action plan which identifies roles and responsibilities, funding needs and timetables listed in Hazard Reduction Priorities. The core team will meet annually to evaluate progress and mutually agree on treatment priorities. In cooperation with the Larimer County Fire Education Group, the Larimer Fire Council, and the Poudre Canyon FPD, the community supports and promotes Firewise activities as outlined in the Larimer County Fire Plan. The community supports and educates its citizens in ways to reduce structure ignitibility through meeting Larimer County Building Code Requirements and utilizing Colorado State Forest Service FireWise Construction Fact Sheets.

Reference 5 - 0.16% Coverage

Create a formal evacuation plan and phone tree, which also addresses evacuating pets and livestock

Reference 6 - 1.36% Coverage

Seek funding for fire fighting resources
could purchase and publish an article in the "connection"
PCFPD – will continue to
apply for grants and add the community mitigation efforts.
Homeowners and PCFPD need to identify these areas and work together to develop a communication process to USFS
Homeowners and PCFPD need to identify these areas and work together to mitigate.
PCFDP – will identify a team consisting of homeowners and PCFPD members in the area to develop an evacuation plan.
PCFPD will continue to
pursue grants. Homeowners should support upcoming mill levy and bond issue on November 2008 ballot
Increase water storage capacity and hydrants
Develop a plan to increase community education and awareness; includes the suggestion to discuss

emergency preparedness in the newsletter
Increase volunteer fire fighter recruitment

Reference 7 - 0.17% Coverage

Create a plan for education and public outreach to campground visitors regarding wildfire prevention

Files\\Red Feather Lakes_2006_CWPP - § 4 references coded [2.56% Coverage]

Reference 1 - 0.96% Coverage

1. Establish & maintain a fire break of at least 1500 ft of mitigated forest on the West side of Creedmore Lakes Rd starting at the intersection of 74E extending North to the Fire District boundary.

Reference 2 - 0.67% Coverage

2. Fuel reduction in Section 32 south of CR 169 (Deadman Rd) to protect evacuation check point area & the South & West Evacuation routes.

Reference 3 - 0.60% Coverage

3. Creation of defensible space surrounding all private residences in the Red Feather Lakes Fire Protection District.

Reference 4 - 0.33% Coverage

5. Complimentary treatments on any nearby National Forest lands.

Files\\Rist Canyon Volunteer Fire Department_2010_CWPP - § 6 references coded [7.00% Coverage]

Reference 1 - 1.48% Coverage

RCVFD responds to between 50 and 100 calls per year. Currently, the mixture is about 50/50 fire/medical (rescue). RCVFD is a classic Urban Interface (houses in the woods) fire department and faces all the challenges created by that. As the population density and number of visitors to our area increases, RCVFD continues to see a more diverse set of responses and a higher level of expectation. It is important that, if you visit or live in a rural area such as RCVFD's response area, you understand the limitations imposed upon emergency response by that area. The fact that we have no hydrant system and must deal with diverse weather and topography and long travel distances (not to mention volunteer staff) means that RCVFD will never provide the 4- minute response expected in town. This means that we (RCVFD and the community) must work together to provide appropriate and timely responses. RCVFD is committed to providing the very best professional emergency services we can and continually strive to improve or expand our services.

Reference 2 - 0.71% Coverage

Fire mitigation projects completed by individuals can lend protection to individual homes and neighborhoods as well as lessen the chances of a wildfire starting from within the community. Many community residents have completed fire mitigation projects on their property. Recognizing that people cannot be forced to complete fire mitigation projects on their property, all RCVFD landowners are encouraged to create defensible space and reduce other fire hazards on their personal proper

Reference 3 - 1.64% Coverage

Improvement of structure survivability by reduction of specific hazards, such as (but not limited to) o Establishment of defensive space for structures, homes, key roads o Replacement of shake shingle roofs with fire resistant types o Appropriate storage of firewood away from structures and propane tanks o Screening under decks and in vents/eaves to prevent blowing of burning material into areas that may cause ignition of the structure.

- o Little things are important. Any items adjacent to a house are considered “attached” to the house by a fire. This includes wood decks, fences and walkways. Metal flashing can be inserted between the house and its “attachment” it could stop the progress of a fire. For decks, residents should consider using HardiPlank or fiber cement on the side wall adjacent to the wood decking material.
- o Roofs and gutters should be cleaned of pine needles, leaves and other debris. Needles, leaves and other dead materials must be continually removed from the roof, decks and walkways.
- o Homeowner evacuation pre-plan which includes steps like moving flammable deck furniture, mats, etc into the house before leaving

Reference 4 - 0.35% Coverage

improve access to structures and communities o Improve roads to structures where possible o Add pull outs to narrow lanes to allow 2-way traffic o Assure fire truck turn-arounds at all houses. o Improve addressing to allow coordinated response.

Reference 5 - 1.49% Coverage

Appropriate forest management to reduce fuel load in absence of natural fire and help limit spread of intense fires

- o Some thinning should occur on a number of properties, especially those properties that abut National Forest land and those that could cause access fire risk to others homes and structures. When properties are thinned, it is recommended that property owners retain the larger trees as well as, aspen, mountain maple and other deciduous varieties. This will allow the property to retain its forest-like quality even as wildfire protection levels are increased.
- o Pruning and clipping slash are occasionally disposed of into a remote area of a homeowner’s property. Slash should be removed from the area, as it creates a substantial fuel bed. If removing the slash is not practical, it should be mulched or piled in an area that is safe to burn and burned during the winter or spring when snow level allows for safe burning. Remember a burn permit is required for slash burns.
- o National Forest treatments adjacent to private land

Reference 6 - 1.33% Coverage

Fire Response Priorities □ Continue established RCVFD mapping and signage programs. This benefits both RCVFD and mutual aid departments or out of area fire fighters that may not have good understanding of the RCVFD response area

- Continue educational efforts in the community using the RCVFD web page and the Rist Watch newsletter.
- Pre-plan for key areas and structures, both defensive and evacuation plans □ Encourage clear address marking. □ Continue effective and comprehensive training of RCVFD fire fighters to appropriate level □ Continue to staff and equip stations for effective response. □ Strive for improved communications with external agencies
- o This is particularly complicated by the mixed adoption and viability of VHF and 800MHz communication systems. While intended to improve communications, the mixture of systems increases complexity and can easily lead to worse, not better, communications.

Files\\Rustic Community_2007_CWPP - § 11 references coded [6.00% Coverage]

Reference 1 - 0.83% Coverage

Fire mitigation projects completed by individuals can lend protection to individual homes and neighborhoods as well as lessen the chances of a wildfire starting from within the community. Many community residents have completed fire mitigation projects on their property. Recognizing that people cannot be forced to complete fire mitigation projects on their property, all Rustic Area landowners are encouraged to create defensible space and reduce other fire hazards on their personal property.

Reference 2 - 0.82% Coverage

Initial response to all fire, medical and associated emergencies is the responsibility of the Poudre Canyon FPD. Wildland fire responsibilities of Larimer County, Colorado State Forest Service, United States Forest Service, Bureau of Land Management and the National Park Service are described in the current Larimer County Annual Operating Plan. All mutual aid agreements, training, equipment, and response are the responsibility of the local fire department and the agencies listed above

Reference 3 - 0.76% Coverage

Some thinning should occur on a number of properties, especially those properties that abut National Forest land and those that could cause access fire risk to others homes and structures. When properties are thinned, it is recommended that property owners retain the larger trees as well as, aspen, mountain maple and other deciduous varieties. This will allow the property to retain its forest-like quality even as wildfire protection levels are increased.

Reference 4 - 2.32% Coverage

The homes that have shake/shingle roofs are the most likely not to survive a wildfire. Flammable roofs should be replaced with non-flammable alternatives.

- Homeowners should store firewood away from homes and propane tanks.
- Should a wildfire occur, deck furniture and hemp door mats should be pulled inside the house before the fire arrives.

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- Roofs and gutters should be cleaned of pine needles, leaves and other debris. Needles, leaves and other dead materials must be continually removed from the roof, decks and walkways.
- Little things are important. Any items adjacent to a house are considered “attached” to the house by a fire. This includes wood decks, fences and walkways. Metal flashing can be inserted between the house and its “attachment” it could stop the progress of a fire. For decks, residents should consider using HardiPlank or fiber cement on the side wall adjacent to the wood decking material.
- Pruning and clipping slash are occasionally disposed of into a remote area of a homeowner’s property. Slash should be removed from the area, as it creates a substantial fuel bed. If removing the slash is not practical, it should be piled in an area that is safe to burn and burned during the winter or spring when snow level allows for safe burning. Remember a burn permit is required for slash burns. If the slash is too much for the homeowner to burn in a safe manner, please work with PCFPD.

Reference 5 - 0.29% Coverage

Collaborate with the FS to address mitigation along shared boundaries, as well as to address other wildfire-related issues (including removing downed timber and dead trees)

Reference 6 - 0.24% Coverage

Create partnerships between the community, Larimer County, the CSFS, and the PCFPD to address wildfire mitigation and other related issues *

Reference 7 - 0.12% Coverage

ind a new location for the fire house; possibly on state-owned property

Reference 8 - 0.16% Coverage

Create a formal evacuation plan and phone tree, which also addresses evacuating pets and livestock

Reference 9 - 0.17% Coverage

Continue efforts at community outreach and public education regarding wildfire risk and mitigation

Reference 10 - 0.13% Coverage

Coordinate a community collective effort to spray for mountain pine beetle

Reference 11 - 0.16% Coverage

Ensure access into communities for fire response vehicles and equipment, as well as for evacuation

Files\\Spencer Heights_2008_CWPP - § 7 references coded [5.08% Coverage]

Reference 1 - 0.77% Coverage

Fire mitigation projects completed by individuals can lend protection to individual homes and neighborhoods as well as lessen the chances of a wildfire starting from within the community. Many community residents have completed fire mitigation projects on their property. Recognizing that people cannot be forced to complete fire mitigation projects on their property, all Spencer Heights Area landowners are encouraged to create defensible space and reduce other fire hazards on their personal property.

Reference 2 - 0.72% Coverage

Some thinning and tree crown break creation should occur on a number of properties, especially those properties that abut National Forest land and those that could cause excessive fire risk to others homes and structures. When properties are thinned, it is recommended that property owners retain the larger trees as well as, aspen, and other deciduous varieties. This will allow the property to retain its forest-like quality even as wildfire protection levels are increased.

Reference 3 - 1.87% Coverage

Homeowners should store firewood away from homes and propane tanks. • Should a wildfire occur, deck furniture and hemp door mats should be pulled inside the house before the fire arrives.

- Roofs and gutters should be cleaned of pine needles, leaves and other debris. Needles, leaves and other dead materials must be continually removed from the roof, decks and walkways.
- Little things are important. Any items adjacent to a house are considered “attached” to the house by a fire. This includes wood decks, fences and walkways. Metal flashing can be inserted between the house and its “attachment” it could stop the progress of a fire. For

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decks, residents should consider using HardiPlank or fiber cement on the side wall adjacent to the wood decking material.

- Pruning and clipping slash are occasionally disposed of into a remote area of a homeowner’s property. Slash should be removed from the area, as it creates a substantial fuel bed. If removing the slash is not practical, it should be piled in an area that is safe to burn and burned during the winter or spring when snow level allows for safe burning. Remember a burn permit is required for slash burns. If the slash is too much for the homeowner to burn in a safe manner, please work with PCFPD.

Reference 4 - 0.68% Coverage

In cooperation with the Larimer County Fire Education Group, the Larimer Fire Council, and the Poudre Canyon FPD, the community supports and promotes Firewise activities as outlined in the Larimer County Fire Plan. The community supports and educates its citizens in ways to reduce structure ignitability through meeting Larimer County Building Code Requirements and utilizing Colorado State Forest Service FireWise Construction Fact Sheets.

Reference 5 - 0.37% Coverage

Through advertisements in River Bank Reporter and the fire department web site, increase local awareness of:

- Fire department private gate access locks - Slash burning and chipper check-out programs
- Grant availability for mitigation work

Reference 6 - 0.33% Coverage

Continue the homeowner fire hazard surveys and initiate a field based hazard survey to increase public awareness, stimulate public action, and assist fire department planning as they relate to WUI hazards and mitigation

Reference 7 - 0.35% Coverage

Develop an evacuation plan which considers: - Public input

- Possible safety zones - Coordination with the Larimer County Sheriff's Department - A communications plan
- The possible use of college students or interns for assistance

Files\\USFS_2004_03_Arapaho NRA ROD - § 5 references coded [1.55% Coverage]

Reference 1 - 0.43% Coverage

My decision is based on the analysis in the FEIS and associated planning record. Based upon my review of all alternatives, I have decided to implement Alternative 3, with modifications. Alternative 3 treats the most acres, continues insecticide treatments in high value areas, takes a proactive approach to reducing the fire hazard in the wildland-urban interface, and treats the mountain pine beetle (MPB) infestation on National Forest System (NFS) lands in and around the ANRA. I decided to modify Alternative 3 by: • Deferring my decision on those portions of Alternative 3 in IRAs, and by • Amending Forest Plan direction for the appropriate wildland fire management response in the Knight Ridge area from perimeter control to prescription control.

Reference 2 - 0.14% Coverage

Continuing Management: Insecticide spraying and hazard tree removal has occurred every year since 1996, and will continue on approximately 245 acres within developed recreation and administrative sites (included in the 2,183 acres above).

Reference 3 - 0.36% Coverage

Forest Health: Approximately 1160 acres (included in the 2,183 acres above) will be treated to reduce the extent of the current MPB infestation and to reduce the impact of a future infestation. Treatments will vary depending on the timing and MPB spread. Efforts will be made to increase the amount of aspen in the project area and to improve the quality of aspen stands by clearcutting some existing aspen stands, cutting conifer stands to stimulate aspen growth, or by removing conifer trees from existing aspen stands. Treatment units will not include areas of high soil erosion hazards to mitigate threats to the area's watershed values

Reference 4 - 0.27% Coverage

Fire and Fuel Hazard: Approximately 1598 acres (included in the 2,183 acres above) will be treated for fuel reduction and to break up large continuous fuel profiles. Besides treating areas adjacent to private land through Good Neighbor Agreements (discussed below under Wildland-Urban Interface), areas away from private land will be treated to modify the fuels profile to reduce the resistance to control and provide for firefighter safety in the event of a wildfire.

Reference 5 - 0.35% Coverage

Wildland-Urban Interface: Other than where Forest Service structures or developments are concerned, most fuel reduction treatment activities adjacent to private land will be done to support work on the adjacent

private land. Much of this support work will be done through the Colorado State Forest Service using Good Neighbor Agreements. Treatments around private land will be designed to reduce primary fire hazards of fuel loading, risk of crown fire, and the resistance to control near, or adjacent to, structures or improvements. Treatment areas without Forest access will be entered from private land

Files\\USFS_2007_10_Blue Ridge DN - § 3 references coded [4.03% Coverage]

Reference 1 - 0.55% Coverage

The purpose of this project is to: Modify existing and future fuel buildup from the MPB infestation to moderate fire behavior near structures and other resource values.

Maintain, restore or improve wildlife habitat and watershed conditions in the long term through road and trail management, aspen and sagebrush expansion, and shrub rejuvenation. Salvage the beetle-killed timber before it loses its marketable value.

Reference 2 - 1.63% Coverage

My decision includes vegetation treatments that will salvage dead and dying lodgepole pine from approximately 1,165 acres in 47 ground based treatment units, and 356 acres in 9 cable based treatment units. Approximately 18,325 CCF net commercial volume (9,150 MBF) will be removed. Units may resemble clearcuts except they will have some advanced natural regeneration and trees other than lodgepole pine remaining after harvest. Machine piling of the landing slash, lop and scatter of the unit slash, and burning the piles will be completed to manage the slash. Additional slash treatment may be completed within 600 feet of private land. Less than 3.2 miles of temporary road will be required to remove the timber. No new system road construction is required, although approximately 0.4 miles of reconstruction of system roads will be completed.

An additional 844 acres in 19 units will be treated to reduce the fuels hazard on NFS lands adjacent to private property, possibly with no commercial harvest of timber. Fuels treatment in these units will consist of opening up the crowns within the stand by thinning, removing ladder fuels, piling the slash and existing fuels, and burning the piles. Road construction is not required to access these units.

Reference 3 - 1.85% Coverage

The prescribed burning portion of Alternative 2 was modified in the decision by excluding from burning the area adjacent to and above the Sylvan and Brinker Ditches and north of Timber Creek to reduce the possibility of sediment entering the ditch from management actions. As a result of this modification, my decision includes approximately 11,652 acres to be treated using prescribed burning, a reduction of 993 acres from what was proposed in Alternative 2.

2

Blue Ridge Salvage and Fuels Reduction Project Decision Notice & FONSI

Prescribed burning includes burning in shrub lands and aspen to rejuvenate these habitat types; and burning stands of beetle-killed lodgepole pine, such as by under burning or stand replacement fire, to accelerate regeneration, reduce hazardous fuels, and improve wildlife habitat. The prescribed burning treatments would be implemented over several years, with the amount treated per year dependent on weather and available resources and generally being between 100 and 1,000 acres per year. Acres treated per year would vary depending on ground conditions at the time of implementation. Close coordination will occur with Grand County and Hot Sulphur Springs to reduce impacts of smoke on the town and individuals sensitive to smoke. Prior to implementing prescribed fire the Forest Service will also coordinate and review implementation procedures with the County and Town.

Files\\USFS_2008_09_Red Feather FONSI - § 3 references coded [3.74% Coverage]

Reference 1 - 1.00% Coverage

Collaboration has been on-going between property owners and State, County and Federal agencies to create areas of defensible space around homes and other improvements on private land. To improve the effectiveness of these treatments and meet the purposes of the Healthy Forests Restoration Act (HFRA), the following needs were identified as goals for the project area:

Reference 2 - 0.57% Coverage

Reduce wildfire risk to communities, municipal water supplies, and other at-risk federal land through a collaborative process of planning, prioritizing, and implementing hazardous fuel reduction projects.

Reference 3 - 2.18% Coverage

This alternative fully meets the purpose and need for action for the project as described above and detailed in the EA. Through thinning and prescribed fire, this alternative treats an estimated total of 15,880 acres of NFS land. Thinning treatments on an estimated 10,079 acres will include cutting primarily smaller diameter conifer trees that have green branches growing close to the ground. To further reduce potential for catastrophic wildfires, some mature trees will be cut to increase spacing between the crowns. The maximum diameter of trees to be cut for this purpose would be 12 inches at DBH. The healthiest and largest trees will remain with spacing between tree trunks of approximately 20 to 25 feet. To create a more natural appearance, spacing between individual and clumps of trees will be variable.

Files\\USFS_2009_01_Lonetree Fuels Reduction Project DM - § 2 references coded [6.32% Coverage]

Reference 1 - 2.91% Coverage

The vegetation in the area is primarily mixed conifer stands consisting of ponderosa pine and Douglas fir. Aspen exists in small pockets and stringers and is being encroached upon by the conifers. Past fire suppression activities, tree mortality from insect and disease loss, drought and plant succession have resulted in a build-up of hazardous fuels and overstocked stands within the project area. Approximately 1,649 acres are classified as very high fuel hazard with a tree canopy closure of 70% or greater. Because of the very high fuel hazard, a wildfire start in the Poudre Canyon could result in an intense wildfire with high severity. Prevailing southwest winds could drive a wildfire through National Forest land into the WUI, threatening private property. In 1994, a wildfire burned approximately 600 acres of private and National Forest and stopped just short of the Glacier View Meadows subdivision. In response to this potential threat and the previous experience with wildfire, various private landowners have been creating areas of defensible space on their property.

Reference 2 - 3.42% Coverage

To address the purposes identified for this project, I have decided to implement a variety of mechanical, manual (by hand), and prescribed fire treatments to improve overall forest health while reducing hazardous fuels on approximately 1,880 acres of National Forest land. Of this total, an estimated 1,000 acres will be treated through the use of broadcast prescribed fire. Mechanical and hand treatments on the remaining acres will include thinning overstocked stands of trees. Tree cutting could be completed by hand crews with chainsaws (referred to as manual treatments) or by specialized machinery that cuts the tree or chips it in place (referred to as mechanized treatments). Trees targeted for cutting will primarily be smaller diameter trees with green branches growing close to the ground. Slash treatments will include hand piling and

burning, mastication and chipping (see Table 1). A combination of private contractors and Forest Service employees will accomplish these activities. Because these treatments target the cutting of smaller diameter

trees and road access is limited, there will be little opportunity to salvage forest products such as post and poles or sawlogs. The sale of small quantities of firewood will be considered where appropriate.

Files\\USFS_2009_04_Pingree Hills DM - § 4 references coded [7.28% Coverage]

Reference 1 - 1.87% Coverage

Within the last 30 years, mountain pine beetle and spruce budworm epidemics have been responsible for an increase in mortality in the ponderosa pine and Douglas fir. A portion of these dead trees have been removed from the area through small salvage timber sales. Many of the remaining dead trees are now on the ground and, when added to the young trees that have regenerated, create a condition that is conducive to the spread of severe, fast moving wildfires. In addition to reducing hazardous fuels, areas where improvement to bighorn sheep habitat through the use of prescribed fire were identified. The primary benefits would be an increase in grass for forage and a reduction in hiding cover used by predators to prey on lambs.

Reference 2 - 1.91% Coverage

To improve overall forest health, reduce potential for destructive wildfires, and improve bighorn sheep habitat, I have decided to implement the Pingree Hill Fuels Reduction Project. This project will include treating an estimated 864 acres of National Forest land by mechanical means and using broadcast prescribed fire to improve wildlife habitat within a 1391 acre unit (see attached map). Proposed treatments would include thinning and the use of prescribed fire to reduce the number of trees per acre. The emphasis would be on cutting smaller diameter trees growing underneath larger more mature trees; however, in some cases the healthier tree may have a smaller diameter. Trees larger than 12 inches in diameter would not be cut.

Reference 3 - 1.85% Coverage

This will be accomplished by hand crews with chainsaws or mechanized equipment with tree cutting attachments. The slash created from these treatments will be put in piles and burned at a later date, or scattered to a depth not to exceed two feet. Near private property and roads open for travel, all created slash will be piled. Outside of these designated piling areas, heavy concentrations of slash will be piled. If slash must be moved more than fifty feet to create the minimum pile size, slash will be lopped and scattered. If treated with mechanized equipment, slash could be chipped or masticated. Specific design features limiting the depth of chips and the percentage of ground covered are included in Appendix A.

Reference 4 - 1.64% Coverage

This decision also approves the use of broadcast prescribed fire to improve wildlife habitat within the project area. Prior to implementing this action, a Burn Plan specifically addressing the conditions and the expected outcomes of the prescribed fire will be approved. This plan will include specific thresholds for fuel moistures, predicted weather conditions, and other factors necessary to safely accomplish the goals of the prescribed fire. Where necessary, treatments such as ‘black lining’ and thinning or limbing will occur around the perimeter to reduce the potential for spread outside of the designated burn boundary

Files\\USFS_2010_04_Glen Haven Fuel Reduction FONSI - § 3 references coded [3.57% Coverage]

Reference 1 - 1.45% Coverage

There is a need to apply appropriate vegetative treatments to maintain or improve watershed and forest health, reduce hazardous fuels and modify wildfire behavior in the forested areas of the project area. Treatments need to be applied in a manner and location that complement defensible space efforts on private land and/or protect other values at risk. In addition, these treatments are needed to maintain or restore ecosystem composition and structure that would reduce the risk of uncharacteristic wildfire that would be expected to occur within the current climatic period.

Reference 2 - 0.94% Coverage

There is a need to increase the amount and vigor of aspen stands across the project area. Aspen stands are generally areas of greater moisture that can reduce the intensity of wildfires. Areas of lower intensity can allow wildfire suppression efforts to be more effective. These stands also provide habitat for a variety of wildlife and add to the biodiversity of the project area

Reference 3 - 1.19% Coverage

This alternative fully meets the purpose and need for action for the project as described above and detailed in the EA. Through thinning, prescribed fire, and aspen enhancement treatments, this alternative treats an estimated total of 5,380 acres of NFS land. Thinning treatments on an estimated 4,300 acres will include cutting primarily smaller diameter conifer trees. To create a more natural appearance, spacing between individual and clumps of trees will be variable.

Files\\USFS_2010_06_Elkhorn Project FONSI - § 1 reference coded [1.50% Coverage]

Reference 1 - 1.50% Coverage

This alternative fully meets the purpose and need for action for the project as described above and detailed in the EA. The treatments included in this decision are (1) approximately 2,767 acres of vegetation management treatments for the purpose of reducing fuels, improving forest health, and providing of future Christmas trees and economic forest products; (2) a broadcast prescribed burn over approximately 2,191 acres to increase the effectiveness of fuels reduction efforts on private land, to reduce the potential for destructive wildfires that may affect values at risk, and to improve bighorn sheep habitat; (3) a number of watershed improvement projects for the purpose of addressing degraded watershed conditions within the project area and (4) modifications to the road network within the project area including decommissioning of segments of current Forest System roads, totaling 2.56 miles, conversion of two segments of road, totaling 5.19 miles, maintenance level 1, decommissioning of nearly 22 miles of unauthorized routes and approximately 0.26 miles of new system road construction to enhance the public Christmas tree program.

Files\\USFS_2010_08_Dragons Hump DM - § 1 reference coded [3.14% Coverage]

Reference 1 - 3.14% Coverage

I have decided to precommercially thin seedlings and saplings on up to 5,000 acres of 10 to 20-year-old pine plantations established in clearcuts and shelterwood harvest units on the Emigrant Creek Ranger District of the Malheur National Forest. Precommercial thinning will be followed by treating the slash by either pullback; hand piling and burning; or grapple piling and burning. The objectives of this project are to reduce stocking levels to meet future management objectives for wildlife habitat, fuels reduction, timber production, and aesthetics. This is found in the recommendation sections of the Malheur National Forest Plan and is also recommended by the USDA Forest Service Strategic Plan (2000 Revision) under Ecosystem Health Objects. The project sites are located in T. 18 S., R. 29, 30, 31, 33, 33.5 E.; T. 19 S., R. 29, 30, 31, 33, 33.5 E.; T. 20 S., R. 33 E.

Files\\USFS_2010_08_Forest-wide Fuels Reduction FONSI - § 1 reference coded [1.52% Coverage]

Reference 1 - 1.52% Coverage

Treatments along roads, trails, and within administrative sites (as described above) will involve felling and possible removal of forest products such as saw logs, firewood, and biomass. The majority of treatments will involve lodgepole and ponderosa pine trees, although small amounts of Engelmann spruce, subalpine fir, and aspen may also be felled and removed. Depending on the severity of the beetle infestation and the resultant tree mortality in site-specific areas, treatments may include removal of individual hazard trees, removal of

the overstory, removal of groups of trees, or removal of all trees within a given area. Slash resulting from tree cutting will be treated to reduce the buildup of hazardous fuels, where necessary. Slash treatments will include chipping, masticating, pile burning and lopping and scattering.

Files\\USFS_2010_08_Jane Hazardous Fuel Reduction DM - § 3 references coded [2.26% Coverage]

Reference 1 - 0.51% Coverage

Reduce the fire hazard (including surface fuels, ladder fuels, and crown fuels) within the Calamity subwatershed. Forest Plan pg. IV44-45, Lower Malheur WA, Part 6, pg. 73, Harney County Restoration Collaborative, Declaration of Cooperation pg. 25.

2. Create two 'fuel breaks' utilizing existing roads, natural topography and vegetative treatments so that a fire burning into the project area can be more readily controlled. Forest Plan pg. IV44-45, Lower Malheur WA, Part 6, pg. 73, Harney County Restoration Collaborative, Declaration of Cooperation pg. 25.

Reference 2 - 0.81% Coverage

I selected the Proposed Action (modified) because it responds to the purpose and need to (1) reduce fuels within the urban interface and (2) reduce the impact and severity of the current Western spruce budworm outbreak on National Forest System lands. The Selected Alternative will reduce canopy fuels, ladder fuels, and surface fuels across the

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Jane project area which will contribute to successful fire suppression and protection of life and property under most fire scenarios. The selected alternative decreases the amount of area with a high to extreme potential for crown fire by 22%, (EA Chapter 3, page 342). The Selected Alternative also reduces the amount of area with a high or medium risk to spruce budworm and Douglas-fir tussock moth by 14% and reduces the amount of area with a high or medium risk to bark beetles by 19% (EA Chapter 3, page 3-23).

Reference 3 - 0.93% Coverage

In making this decision, I considered important ecological contributions. Fuel treatments in the selected alternative are designed to protect lives and property, reduce canopy fuels, ladder fuels, and surface fuels, decrease the Fire Regime Condition Class (FRCC) from a future condition class of III to a condition class I, reduce the insect and disease risk, and restore structural and compositional forest conditions considering the variability in landscape vegetation types. Treatments will reduce fuel levels and allow a more natural fire regime to occur in the future, while also restoring deficient old forest structures across the landscape in areas where they are ecologically sustainable. Dense stand conditions have created conditions where large diameter trees are susceptible to loss from fire, insects and disease. By implementing biomass removal and underburning to reduce fuel levels the potential loss of large diameter trees to wildfire, insects and disease are reduced (EA page 3-24 and 3-41).

Files\\USFS_2011_01_Magic Sky FONSI - § 3 references coded [4.96% Coverage]

Reference 1 - 0.80% Coverage

Many of the private landowners within the project area have completed hazardous fuel reduction treatments on their property. To improve the effectiveness of these treatments and meet the statement of purpose of the Healthy Forests Restoration Act (HFRA), the following needs were identified as goals for the project area:

Reference 2 - 1.96% Coverage

here is a need to apply appropriate vegetative treatments to reduce hazardous fuels and modify wildfire behavior in the forested areas of the project area. Treatments need to be applied in a manner and location that complement defensible space efforts on private land and/or protect other values at risk. In addition, these

treatments are needed to reduce the potential for a large crown fire that would be expected to occur within the planning area.

- There is a need to apply appropriate vegetative treatments to maintain or improve watershed and forest health. These treatments are needed to maintain or restore

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ecosystem composition and structure that would increase resiliency in the wake of insect infestations and reduce the risk of watershed damage from uncharacteristic wildfire.

Reference 3 - 2.21% Coverage

his alternative fully meets the purpose and need for action for the project as described above and detailed in the EA. Through thinning and prescribed fire, this alternative treats an estimated total of 2,849 acres of NFS land (see map in EA pg. 25). Thinning treatments on an estimated 1,998 acres will emphasize thinning primarily smaller diameter conifer trees growing underneath larger, more mature trees. However, in some areas where the Mountain Pine Beetle (MPB) epidemic is evident, larger diameter trees infested with MPB could be removed. Treatments in inventoried old growth stands and areas classified in the Forest Plan as old growth development and recruitment would be designed to maintain or develop old growth characteristics. In such occurrences, it may be necessary to leave smaller diameter non-infested trees to allow development of future old growth characteristics.

Files\\USFS_2011_08_West Sugarloaf Stock Driveway DM - § 1 reference coded [0.76% Coverage]

Reference 1 - 0.76% Coverage

To reduce concentrations of fuels in close proximity to private property all generated slash should be lopped and scattered.

Files\\USFS_2012_01_Dairy Project DN - § 1 reference coded [1.15% Coverage]

Reference 1 - 1.15% Coverage

Commercial harvesting, precommercial thinning, biomass removal/reduction activities and associated fuels disposal activities will occur on about 1,296 acres. Thinning and biomass activities will manage live trees less than 21 inches diameter at breast height (DBH), with an emphasis on stocking level controls, removing mistletoe-infected trees, and reducing stocking of grand fir. Trees of poor vigor will be removed, and overstocked stands will be thinned. Harvest will occur on ground with less than 35% slopes that can be tractor-logged. The intent is to remove biomass from the site; however some may be piled and burned or occasionally lopped and scattered. In stands with overstocking of trees less than 7" DBH, commercial thinning will be applied in conjunction with precommercial thinning. Precommercial thinning slash will be burned after piling by hand, or with grapple machines, leaving some piles for wildlife, or areas of light fuel concentrations will be jackpot burned. Biomass removal/reduction does not include removal of downed logs or dead trees over 12" DBH. See Figure 2 for a map of proposed vegetation activities.

Files\\USFS_2012_06_Cedar Park FONSI - § 4 references coded [7.55% Coverage]

Reference 1 - 1.46% Coverage

Two large wildfires that have threatened and/or destroyed homes and other values have occurred within the project area in recent history: the Bobcat Gulch Fire in 2000 and the Crystal Fire in 2011. The impact of these wildfires underscored the need for collaboration between property owners and associations and State and County agencies to create areas of defensible space around homes and other improvements on private land. Furthermore, a large portion of the Cedar Park project area is classified as high or very high fuel hazard (11,744 acres of the 21,819 acre total). Currently there is not a Community Wildfire Protection Plan (CWPP)

in the Cedar Park project area.

Reference 2 - 0.98% Coverage

There is a need to apply appropriate vegetative treatments to reduce hazardous fuels and modify wildfire behavior in the forested areas of the project area. Treatments need to be applied in a manner and location that complement defensible space efforts on private land and/or protect other values at risk. In addition, these treatments are needed to reduce the potential for a large crown fire that would be expected to occur within the planning area.

Reference 3 - 1.97% Coverage

This alternative fully meets the purpose and need for action for the project as described above and detailed in the EA. Through thinning, clearcutting and prescribed fire, this alternative treats an estimated total of 4,400 acres of NFS land (see map in EA pg. 19). Thinning treatments on an estimated 3,660 acres will emphasize thinning primarily smaller diameter conifer trees growing underneath larger, more mature trees. However, in some areas where the mountain pine beetle (MPB) epidemic is evident, larger diameter trees could be removed. Treatments in inventoried old growth stands and areas classified in the Forest Plan as old growth development and recruitment would be designed to maintain or develop old growth characteristics. In instances where MPB is evident, it may be necessary to leave smaller diameter non-MPB infested trees to allow development of future old growth characteristics.

Reference 4 - 3.15% Coverage

Implementation of Alternative 2 will also include the use of broadcast prescribed fire an estimated 419 acres south of Palisade Mountain. The objective for this treatment is to enhance bighorn sheep habitat in an area identified as important habitat by the Colorado Division of Wildlife. The broadcast prescribed burn will also reduce fuel hazards in this area. Low to moderate intensity surface fires would thin some of the younger trees, prune lower branches, and consume flashy fine fuels such as ground juniper and small diameter dead and down material. Removal of this material would decrease hiding cover for sheep predators and increase available wildlife forage while at the same time reducing hazardous fuels that could contribute to fire spread in the event of a wildfire. Where necessary to reduce the potential for fire spread outside of the designated prescribed burn boundary, additional treatments such as thinning trees, pruning branches and constructing hand line may occur around the perimeter of the primary prescribed fire unit. Secondary burn areas will also be designated. Active ignition during broadcast burning operations will not take place in these areas; however, prescribed fire would be allowed to burn as long as weather, fuel moisture, and smoke dispersal conditions are within prescription as designated in an approved Burn Plan. All prescribed fire operations will be implemented by Forest Service personnel.

Files\\USFS_2012_06_Marshall Devine Hazardous Fuel Reduction Project DN - § 4 references coded [2.87% Coverage]

Reference 1 - 0.64% Coverage

The Marshall Devine Interdisciplinary Team (IDT) was directed to address the following purposes with the proposed action and alternatives: 1. Reduce fuels (including surface fuels, ladder fuels, and crown fuels) to alter fire behavior (intensity, duration, rate of spread, torching, crowning, etc) and move the area towards historical fire behavior (low intensity surface fires) and fire regime (frequency) with historical fire effects on vegetation (from high mortality to low mortality).

The need for action is based on the current conditions of resources within the project area. The EA Chapter 3 presents the baseline environment and a detailed description of relevant resource components of the existing environment.

Reference 2 - 0.52% Coverage

The selected alternative responds to the purpose and need to reduce fuels, alter fire behavior and move the area towards historical fire behavior and fire regime with historical fire effects on vegetation on National Forest System lands. The Selected Alternative will reduce canopy, ladder, and surface fuels across the Marshall Devine project area which will contribute to successful fire suppression and protection of life and property under most fire scenarios. The selected alternative decreases the amount of area with a heavy to moderate fuel loading by 21%, (EA Chapter 2, page 2-26).

Reference 3 - 0.83% Coverage

Hazardous Fuel Reduction Activities

Biomass removal activities will reduce hazardous fuels by utilizing silvicultural treatments that reduce densities of live trees less than 21 inches diameter at breast height (DBH). Biomass removal will be accomplished using ground—based equipment such as a mechanical harvester, tractor or rubber-tired skidder. Harvest-generated logging slash will be removed to the landing through whole tree yarding. The intent is to remove biomass from the site. However, some biomass may be piled (machine and/or hand piled) and burned or occasionally lopped and scattered and areas of light fuel concentrations may be jackpot burned. Biomass removal does not include removal of downed logs or dead trees over 12 inches DBH. Reference the Alternative One Vegetation Map at the end of Chapter 2 for a map of proposed vegetation activities. The following treatment types are included in the Selected Alternative:

Reference 4 - 0.88% Coverage

Landscape scale fuels treatment activities will occur on 15,218 acres within 8 fuel blocks (See Prescribed Fire Map). Prescribed fire will remove the excess fuel accumulations and reduce the risk of large stand—replacement fires. Underburning (the use of low intensity ground fire) will be utilized for managing mixed ponderosa pine and associated fir stands to reduce fir encroachment and perpetuate ponderosa pine. The objectives of fuels management are to reduce the fire hazard. Prior to reintroducing fire into the area, some areas will have Hazardous Fuel Reduction Activities, as described in the preceding section.

Roads and natural boundaries will be the main fire control lines however, some areas may need hand or plow constructed line prior to ignition. Implementation of fuel treatments will occur over the next 10 years with periodic review as required by NEPA. The exact timing and acreage will be determined by funding, availability of personnel and variations in weather patterns.

Files\USFS_2013_09_Upper Pine Hazardous Fuel Reduction DN - § 3 references coded [0.68% Coverage]

Reference 1 - 0.22% Coverage

Reduce fuels (including surface fuels, ladder fuels, and crown fuels) to alter fire behavior (intensity, duration, rate of spread, torching, and crowning) and move the area towards historical fire behavior (low intensity surface fires) and fire regime (frequency) with historical fire effects on vegetation (from high mortality to low mortality).

Reference 2 - 0.11% Coverage

Salvage harvest trees recently killed by insects and/or disease in order to reduce fuels and capture the economic value of those dead trees that are surplus to other resource needs.

Reference 3 - 0.35% Coverage

Fuel treatments in the selected alternative will reduce fuel levels and allow a more natural fire regime to occur in the future, while also restoring deficient old forest structures across the landscape in areas where

they are ecologically sustainable. Dense stand conditions have created conditions where large diameter trees are susceptible to loss from fire, insects and disease. By implementing biomass removal and underburning to reduce fuel levels the potential loss of large diameter trees to wildfire, insects and disease are reduced (EA page 3-26).

Files\\USFS_2015_03_Manhattan DM - § 1 reference coded [2.94% Coverage]

Reference 1 - 2.94% Coverage

In order to improve forest health and reduce hazardous fuels in the vicinity of Crystal Lakes and Red Feather Lakes, Colo., the Forest Service plans to implement 54 acres of vegetation treatments (see Map 1 and Table 1 below). These areas were previously treated in the Sevenmile project, but significant mortality has occurred since as a result of the mountain pine beetle. These units are adjacent to fuels treatment units planned as part of the Red Feather Fuels Reduction Project and will likely be implemented in 2015 or 2016. Treatments will be accomplished using mechanical equipment and forest products would be removed where feasible and appropriate.

Files\\USFS_2015_05_Cherokee Park FONSI - § 3 references coded [2.78% Coverage]

Reference 1 - 1.30% Coverage

As a means of reducing the threat from wildfire created by these conditions, many property owners have completed, or are in the process of creating, defensible space around their structures. To meet the project's purpose and need of increasing the effectiveness of fuel reduction efforts on private lands and reducing the potential for destructive wildfires, the U.S. Forest Service proposes to reduce the amount of hazardous flammable fuels on portions of National Forest system lands within the Cherokee Park project area.

Reference 2 - 0.86% Coverage

In addition, there is a need to enhance aspen stands and montane meadows within the project area. Conifers have encroached into both of these ecosystems. In meadows, fire suppression in recent decades is partially responsible for this conifer encroachment. Aspen stands and meadows provide defensible areas for firefighters and slow fire's spread.

Reference 3 - 0.62% Coverage

Reduce hazardous fuels and restore the historic forest structure in the vicinity of Cherokee Park, Colo. on approximately 3,124 acres of NFS land through a variety of vegetation treatments including thinning, clearcutting and removal of dead trees.

Files\\USFS_2015_07_Wolf Vegetation Management Project DN - § 4 references coded [1.56% Coverage]

Reference 1 - 0.05% Coverage

Reintroduce fire on the landscape as a natural process (Forest Plan IV-45, 53, and 61) (Watershed Assessment-73)

Reference 2 - 0.27% Coverage

The Selected Alternative will provide commercial timber products with an estimate between 10 and 15 million board feet available as sawlogs and/or non-saw (biomass) material. The project activities such as harvesting, thinning, biomass utilization, aspen, meadow, riparian and sagebrush restoration, and road closures and decommissioning will primarily be done through contracts, providing employment opportunities to the local community. Although there is no guarantee the economic benefits will be derived locally, the project provides opportunities to provide a local contribution.

Reference 3 - 0.86% Coverage

Harvest Mixed Conifer – 1,283 Acres

Harvest in mixed conifer stands will be accomplished through variable density thinning to reduce tree density creating stands that are more resilient and resistant to fire making the stand composition and structure reflect more closely what may have been in the area historically. No trees over 21" DBH will be cut. The treatment includes variable density thinning by reducing basal area to around an average of 80 ft². Gaps up to 2 acres in size will be created by removing all trees less than 21" DBH within those openings. This is to simulate disturbance. Skips of high tree densities will be left uncut for the benefit of wildlife; these patches will be 2 to 5 acres in size. One skip and one gap will occur for every 10 acres. If feasible all created biomass will be removed for commercial use. Any created biomass not utilized for commercial purposes will be piled and burned or jackpot burned in areas of light fuel loads.

Harvest Ponderosa Pine – 2,958 Acres

Harvest in ponderosa pine stands will be accomplished through variable density thinning to reduce tree density creating stands that are more resilient and resistant to fire making the stand composition and structure reflect more closely what may have been in the area historically. No trees over 21" DBH will be cut. The treatment includes variable density thinning by reducing basal area to an average of 60 ft². Gaps will be created measuring up to 2 acres by removing all trees less than 21" DBH within those openings. This is to simulate disturbance. Skips of high tree densities will be left uncut for the benefit of wildlife these patches should be no more than 2 acres. Gaps will be placed every five acres and skips will be one each for every 10 acres. If feasible all biomass will be removed for commercial use. Any biomass including slash not utilized for commercial purposes will be piled and burned or jackpot burned in areas of light fuel loads.

Reference 4 - 0.38% Coverage

Landscape scale fuels treatment activities are proposed across 39,441 acres within 10 fuel blocks. These areas overlap some previously mentioned proposed actions (Table DN-3). Because prescribed fires burn in a mosaic pattern, the entire 39,441 acres will not actually be burned. An estimated 22,000 acres will be burned, about 56% of the area. Prescribed fire will be a tool in removing the excess fuel accumulations and reducing the risk of large stand-replacement fires. Underburning (the use of low intensity ground fire) will be common for managing mixed ponderosa pine and associated fir stands to reduce fir stocking and perpetuate ponderosa pine. The objectives of fuels management are to reduce the fire hazard. Prior to reintroducing fire into the area, some areas will have thinning and harvest activities as described in the preceding section.

Files\\USFS_2017_03_Poudre Canyon Rx DM - § 2 references coded [2.28% Coverage]

Reference 1 - 0.91% Coverage

The proposed project would implement prescribed broadcast burning to improve and maintain bighorn sheep habitat within the Upper Poudre Canyon approximately 8 miles west of Rustic, Colorado. The two proposed burn units encompass approximately 636 acres on the north side of Highway 14 (Appendix A). Approximately 85% of the units are NFS land, and 15% is Colorado Division of Parks and Wildlife (CPW) land on the Poudre River State Fish Hatchery and Bliss State Wildlife Area.

Reference 2 - 1.37% Coverage

The project would implement broadcast burning on two units (449 acres, 187 acres) that generally are grass and shrub—dominated habitat, with varying levels of ponderosa pine and Douglas—fir increasing toward the top of the units. Prescribed burning would reduce conifer, juniper, and shrub densities, and increase grass, forb and new shrub growth, resulting in improved forage and browse habitat quality. Low and moderate intensity surface fire would reduce shrub densities and thin or kill primarily smaller conifers, while

retaining most large mature conifers. Sight distances for bighorn sheep would be substantially improved reducing the risk of predation. Burn implementation would occur when the open

Files\\USFS_2017_05_Dove Vegetation Management Project DN - § 1 reference coded [0.20% Coverage]

Reference 1 - 0.20% Coverage

The majority of research studies report that thinning treatments result in a decline in snag densities (EA Chapter 3 at 3-70). Prescribed fire can have both positive (creates snags) and negative (consumes snags) effects on snags. Large scale vegetation treatment projects reduce snag recruitment in the mid-term due to reducing stocking rates of trees (EA Chapter 3 at 3-70). Figures 15 and 16 (EA Chapter 3 at 3-72) display the short and longterm changes to snag densities in snags greater than 10 inches DBH and 20 inches DBH from DecAID. The Selected Alternative will create a snag gap when compared to the No Action alternative, but snag levels will still be above the 30 to 80 percent tolerance levels for snags greater than 10 inches DBH and greater than 20 inches DBH.

Files\\USFS_2018_02_Flat Vegetation Management Project DN - § 2 references coded [0.60% Coverage]

Reference 1 - 0.04% Coverage

Promote low severity fire on the landscape as a natural disturbance regime (Forest Plan IV-45, 53, and 61)

Reference 2 - 0.56% Coverage

I also evaluated the environmental consequences of a non-commercial size restoration alternative (Alternative A, EA Chapter 2 at 2-2). Without removal of trees ranging from 10-21” DBH targets aimed at increasing diversity and structure in upland forest would not be met. Reference conditions described by Churchill et al. (2017) show trees occurring as widely spaced individuals (no neighbors within 20 ft) and high proportions of stands containing large openings. A vast majority of the project area is currently characterized by dense, even-aged, second growth timber stands with homogeneous horizontal and vertical structure and high percentages of trees falling between 10-21” DBH. Without removal of trees in this size range the project area will continue to deviate from reference conditions. Specifically, targets for structural stages and openings across the landscape will not be met. Furthermore, without removal of trees in this size range

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stocking levels would remain above those recommended by Powell (1999). A noncommercial alternative will leave stands overstocked and will not mitigate against current and predicted future drought effects, leaving stands highly susceptible to insect and disease attacks and stand replacing wildfires.

Files\\USFS_2019_02_Magic Feather DM - § 3 references coded [3.07% Coverage]

Reference 1 - 0.86% Coverage

The purpose of this project is to restore the ponderosa pine and mixed conifer stands to a more natural state. Restoration of these stands will include reducing surface and crown fuel loading across the landscape and across jurisdictional boundaries, retaining and encouraging old growth qualities, and improving wildlife habitat. The ponderosa and mixed conifer stands in the Red Feather Lakes area will benefit from reintroducing fire back into these fire dependent ecosystems. Decreasing the fuel loading will increase resiliency to future natural disturbances in these stands. Reintroducing fire across the landscape will also reduce the effects and risk of uncharacteristic wildfire by re—establishing natural fire regimes.

Reference 2 - 1.64% Coverage

Ponderosa pine stands in the project area generally burned every 8—79 years (Hunter, et al 20071) and

mixed conifer stands burned every 7-125 years (Evans, et al 20112). Historical fires in this upper montane zone are described as mixed-severity where areas burned with low severity (surface fires) to high severity (crown fires). This fire regime³ would have led to a mosaic of stand structure across the landscape to include areas that were very open and some areas remaining fairly dense. Because these stands have missed fire cycles, likely due to suppression activities, it will take multiple entries to bring the project area back to a more natural

1 A Comprehensive Guide to Fuels Treatment Practices for Ponderosa Pine in the Black Hills, Colorado Front Range, and Southwest. RMRS—GTR-198, September 2007. 2 Comprehensive Fuels Treatment Practices Guide for Mixed Conifer Forests: California, Central and Southern Rockies, and the Southwest. Forest Guild, May 2001. 3 Fire regime refers to the role a fire plays in the ecosystem. it is the pattern, frequency, and intensity of wildfires that prevail in an area over long periods of time.

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fire regime. Previous broadcast burning in the Lady Moon and Dowdy Lake areas were considered first entries. Re—burning these areas will further move these stands towards their historical fire regime.

Reference 3 - 0.57% Coverage

In cooperation with the Natural Resources Conservation Service (NRCS), The Nature Conservancy (TNC), Colorado Parks and Wildlife (CPW), and Coalition for the Poudre River Watershed (CPRW), the Canyon Lakes Ranger District will broadcast burn 5,536 acres of National Forest System (NFS) lands and 793 acres of nonNFS lands under this decision. Fuelwood sales and burn preparation (cutting and piling near control lines and hand line construction) are also included in this decision.

Files\\Upper Cherokee Park_2011_CWPP - § 4 references coded [3.79% Coverage]

Reference 1 - 1.39% Coverage

ocal Preparedness and Firefighting Capability - Initial response to all fire, medical and associated emergencies is the responsibility of Livermore Fire Protection District. Wildland fire responsibilities of Larimer County, Colorado State Forest Service, United States Forest Service, Bureau of Land Management and the National Park Service are described in the current Larimer County Annual Operating Plan. All mutual aid agreements, training, equipment, and response are the responsibility of the local fire department and the agencies listed above.

Reference 2 - 0.58% Coverage

Community needs regarding fuel reduction treatments within the WUI zone. -Removal of dead/hazardous trees along access/evacuation routes -Removal/thinning of hazardous fuels in surrounding communities and on adjacent USFS lands

Reference 3 - 0.65% Coverage

Fuel reduction needs -Remove dead/hazardous trees along community roads -FireWise treatment in areas surrounding individual structures/driveways/high value areas -Base Map to identify treatment types and waste disposal methods by area within Diamond Creek

Reference 4 - 1.17% Coverage

Fire response needs - Improve access for firefighting crews including: -road improvements (surface, width, turnouts, dead tree removal) -familiarity with area (site visits, structure assessments, gate access) - Identify properties on Fire District maps and with signage - Provide water supply for firefighting crews (e.g. dry hydrant at pond) - Develop staging/safety area for firefighting crews - Develop community evacuation

plan, including communication methods