

HAPPY CANYON COMMUNITY WILDFIRE PROTECTION PLAN

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Submitted by

The Happy Canyon Homeowners Association Wildfire Mitigation
Committee, on behalf of the Happy Canyon Residents

In cooperation with

South Metro Fire Rescue,
Douglas County Wildfire Mitigation Staff,
and the Colorado State Forest Service

Forward

The Happy Canyon *Community Wildfire Protection Plan (CWPP)* is a cooperative effort between the Happy Canyon Homeowner's Association Wildfire Mitigation Committee, South Metro Fire Rescue, Douglas County Wildfire Mitigation Staff, and the Colorado State Forest Service (CSFS). Members of the Happy Canyon Wildfire Mitigation Committee have devoted many hours to the completion of this document. Members of the community have been well served by these devoted citizens.

This document fulfills the requirements of the *2003 Healthy Forest Restoration Act HFRA* and provides a roadmap to both short and long term education and mitigation efforts within the community. This CWPP assesses the community hazards, plans and prioritizes education and mitigation projects, and provides motivation for continued efforts. The plan lays out a path for the community to follow, and update as needed to meet the needs of the community. It will help them stay on task to achieve their goals and modify their objectives as they determine necessary.

The CWPP process the Happy Canyon community has experienced clearly meets the intent of the HRFA legislation. This community came together with a grass roots effort and has created a plan for the community, by the community. The mitigation committee's decisions and recommendations were made in the interest of the entire community. They always considered those in the community who may need extra help to participate. The level of motivation and active participation is unprecedented.

The community relationship with South Metro Fire Rescue is fascinating. The level of personal commitment from the fire district and the community is almost mind boggling. It is not the kind of personal relationship you would expect to find from a fire district as big as South Metro. The level of personal knowledge about the community, its members, and the members of the fire district needs to be recognized and commended. They have a true friendship and deep respect for each other. It has been both a pleasure and a privilege to be part of this process.

The Happy Canyon CWPP would not have been possible without the technical expertise and the sustained commitment of Jill Alexander of the Douglas County Wildfire Mitigation Staff. Her influence on this project has enabled the committee to keep its efforts productively focused.

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1.0 INTRODUCTION

The Happy Canyon Community Wildfire Protection Plan (CWPP) is a community generated plan that identifies the community hazards in the event of a wild land fire, and provides a plan and implementation methods for reducing those hazards. The plan meets the minimum guidelines set forth in the *Healthy Forest Restoration Act (HFRA) of 2003* and the Colorado State Forest Service. The plan is a collaborative effort of the Happy Canyon Homeowner's Association (HCHOA) Wildfire Mitigation Committee, South Metro Fire Rescue, Douglas County Wildfire Mitigation Staff, and the Colorado State Forest Service (CSFS).

The goals of this plan are to identify and detail a long-term commitment to reducing the risk of wildfire to the Happy Canyon community. Objectives include motivating homeowners from *awareness* to *action*, identification of pipeline projects, providing the mechanism for the community to compete competitively for grant funding, and providing mechanisms for the community to implement risk mitigation efforts

The plan will educate and encourage community members to have an evacuation plan, how they can prepare and plan for any kind emergency, how to reduce the risk of wildfire, and how to mitigate the fuel hazards. This plan will be reviewed and updated annually by the HCHOA Board and presented to homeowners at the annual community meeting in May.



Happy Canyon is a community with a long history of mitigation efforts. The property owners in this community understand the need for, and have accepted the responsibility of mitigating their own properties. Countless hours of sweat equity have contributed to these efforts.

1.1 COMMUNITY DESCRIPTION

HAPPY CANYON: A Well-Kept Secret!

The Happy Canyon development (“The Canyon”) is a community of approximately 190 single-family homes situated on the east side of Interstate Highway 25 between Lone Tree and Castle Rock, Colorado. The platted properties are located in Sections 14, 15, 22, and 23, T 7S, R 67W of the 6th Principal Meridian. Happy Canyon is accessible only via Exit 187. With few exceptions, the residents are homeowners who live in The Canyon year-round.

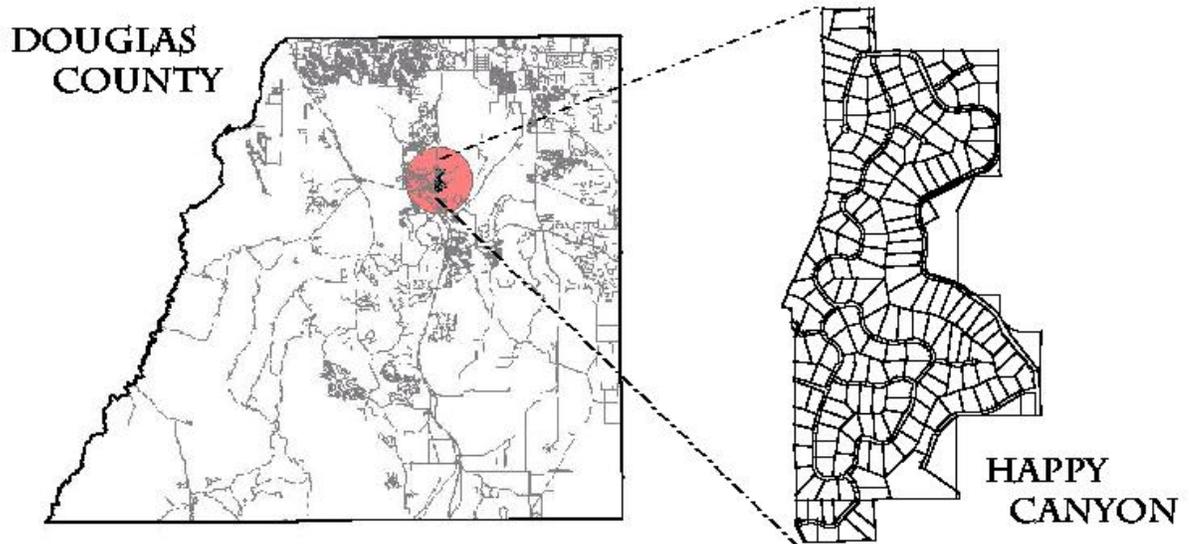
All stages of life are represented in the Happy Canyon population – young families with preschool children to retirees. Some have lived in The Canyon less than a year; others are decades-long residents. Motivations for moving to The Canyon include:

- Escape from urban congestion,
- The appeal of the natural setting of two-acre, wooded lots, often visited by wildlife, and
- Escape from restrictive homeowner association covenants (none are in force in The Canyon).

These factors result in a community that values individualism and self-reliance. That said, it is still a community – a community capable of acting in concert to:

- Work with the Douglas County Commissioners to effect modifications of large-scale development plans that would adversely affect the quality of life in The Canyon and adjacent properties,
- Educate residents on the process of water rights adjudication, resulting in adjudication for a number of residents,
- Secure the assistance of State Wildlife experts to educate residents on interactions with dangerous wildlife (e.g., bears) encountered in The Canyon, and
- Secure the assistance of State and County Forestry experts and South Metro Fire Rescue personnel to prepare a Community Wildfire Protection Plan (CWPP) that identifies a long-term commitment to reducing the wildfire risk to the community.

This is a sampling of activities in the recent Happy Canyon history. Fire mitigation (e.g., via fuels reduction) is, and has been for several years, an active concern of Canyon residents. Although there have been some Herculean individual efforts, this is a community issue that requires a community solution.



1.2 THE HISTORY OF HAPPY CANYON SUBDIVISION

While the modern history of the Happy Canyon subdivision began with the plat filings in May of 1962 with the Douglas County government, the area around Happy Canyon Road has a rich history. It is my attempt with this document to recount some of that history for our wildfire protection plan in order to tell our story and hopefully to preserve it for future generations of Happy Canyonites. It is not my design to recount all the history of Douglas County. While the cities of Parker, Louviers, Larkspur and Highlands Ranch have colorful pasts, they generally don't play a direct role in the development of our Happy Canyon. Other towns like Franktown, Sedalia and Castle Rock and a few now extinct townships such as Douglas, Citadel and New Memphis, are important and while their stories won't be exhaustive in this essay, you will see their names throughout the account. One more provision: I have tried to be as accurate in my reporting as possible. In some cases, names of people were different from source to source and yet their stories were the same. In other instances, dates varied. For instance, the establishment of New Memphis is reported to have occurred in 1864, 1871 and 1874 in three separate sources. I have therefore had to choose between sources for names and dates. Where the name was the same in more than one source, I used that name- -. Where the dates differed, I picked one. Therefore, please forgive any inaccuracies in this narrative.

Indians

Perhaps the first settlers in modern history of Douglas County were the Indians. It is thought that they were in the area at least 200 years before the first white men

arrived. While there were seven Indian nations represented in the county, three were prominent: the Arapahoe, Cheyenne and Utes.

The Utes represented the oldest continuous inhabitants of the county, were an offshoot of the Shoshone tribes and were of the same linguistic family as the Aztecs. They traded Buffalo products with the Spanish explorers and lived mostly in the mountains in the west end of the county. They were very dark-skinned and were often called, "Black Indians," or the "Black Army."

The Arapahoe and Cheyenne were descended from the Algonquin tribes who dominated the fur trade in the Northeastern US. They gradually migrated west hunting Buffalo and while they were from the same common ancestors, the years made them separate peoples such that their languages were quite different. The Arapahoe settled in the foothills of Douglas County and served as translators and business middlemen for their distant cousins the Cheyenne who settled the eastern plains of the county. These "plains" Indians were tall with big noses and lighter-colored skin and came to be known as the "Big-Nosed People."

The Utes were very warlike and constantly fought with the plains tribes. Part of the conflict was fueled by racial hatred. Much of the fighting, however, had to do with land and resources. South Park, in particular, was a rich area for buffalo and salt from the salt marshes there. The plains tribes would often travel there for hunting and the salt but had to travel through Douglas County in order to get to Ute pass near Manitou Springs. The Utes resented this intrusion onto what they claimed as their land and fought ruthlessly to protect their interests. Often they would make raids down out of the mountains to attack the plains tribes and then scurry back to the protection of the Rockies. The plains tribes would often send war parties in pursuit only to find that the Utes had set forest fires to guard their retreats. This practice was actually witnessed and recorded by some of the earliest explorers in the county. Forest fires and Douglas County are no strangers.

The Arapahoe believed that the Great Spirit Manitou had placed the Rocky Mountains in the west as a barrier to separate them from the Utes. Their fear was that the Utes would come and steal their women to breed with and make themselves taller and lighter-skinned. Thus, the springs in the Manitou area became revered as a neutral sanctuary where all could come and pay homage to the Great Spirit. As there was always a peace in Manitou Springs, the Indians came to worship the Great Spirit unarmed. The earliest white settlers of the Round Top area (our modern-day Happy Canyon) found day trails in the area, especially along Newlin Gulch, just north of our neighborhood. Legend has it that the Indians on such journeys would lay down their weapons of war on the mesas on their way south.

Daniel C Oakes

In October of 1858, Major Daniel C. Oakes, a veteran of the California gold rush, and his party of five headed for the goldfields of Colorado. They made camp on the west side of Cherry Creek on the opposite bank of the new town-site of St Charles. This gives him and his party the distinction of being the first group of settlers on the future site of Denver. They traveled further south along Cherry Creek and ended up in William Green Russell's camp five miles south of present day Franktown where they had managed to pan only \$3 to \$5 of gold per man. Disappointed, Oakes returned to Iowa for the winter but he took with him a journal of one Luke Tierney, a prospector with the Russell group.

With partner Stephen Smith, Oakes edited the journal and published *History of the Gold Discoveries on the South Platte River by Luke Tierney To Which is Appended a Guide to the Route by Smith and Oakes*. The book was published in Pacific City, Iowa but was circulated to all points of departure west along the Missouri River. As a result of this and some 19 other such books, some 150,000 people migrated west in the spring of 1859 becoming known as the “59er’s.”

Meanwhile, Oakes, sensing the monetary potential of the blossoming gold rush, purchased a sawmill and on March 20th, began his second journey to Colorado along the Platte Trail. As many scrambled to be first to the gold fields, newer routes sprang up as shortcuts. One of these trails became known as the Smokey Hill Trail. Lacking the settlements and water of the more established but longer Platte River Trail, many parties failed to reach Denver, starving along the way. One party even resorted to cannibalism to stay alive. Thus the Smokey Hill Trail became known as the Starvation Trail, a piece of history our 5th graders study. This fact along with the exaggerated claims of gold discoveries turned some 50,000 of the settlers back to the east. Oakes met some of these disgruntled people in Julesburg and they threatened to kill him. Silver-tongued, Oakes managed to talk his way out of the dilemma and continued his journey. But along the trail, he found three mock burials with epitaphs along the lines of, “Here lies D. C. Oakes who was the starter of this damned hoax.” Having been warned to avoid the gold camps along Cherry Creek or be hanged outright, Oakes moved south into Douglas County and set up the mill along Plum Creek near the present day road that connects U.S. Hwy. 85 with Daniel’s Park Road. It was among the first, if not the first sawmill in the Pikes Peak Region. One year later, Oakes set up a second mill and took advantage of the burgeoning rush towns of Denver City to the north and Colorado City (Colorado Springs) to the south. The neighborhood we know as Castle Pines North and the Daniels Park area was once a heavily forested area. Oakes’ mill, capable of processing 20,000 feet of lumber daily, did considerable damage to the area, deforesting acre after acre. But more on this later.

Kit Carson

Another visitor of note to Douglas County in the 1850’s and 60’s, and friend of Oakes was Kit Carson. In the mid 1850’s, Carson was a trapper and guide in and around Douglas County. He was also an invaluable agent for the US government in negotiating with the Indian tribes. In 1862, he negotiated the return of a captured Arapahoe squaw from the Utes averting a larger scale conflict. When the Indians got frustrated, they often sought retribution by attacking the white settlers.

Because of his success, in 1868 the government requested his presence at a peace conference between the Utes and the US in Washington. He was not well, suffering from an old wound he had obtained in an accident during the campaign against the Navajos. Chief Ouray, Oakes and others had gone by stagecoach to Cheyenne then took the railroad to Washington. In the nation’s capital, Carson successfully negotiated for the removal of the Indians to reservations. After this, he returned to Denver, still ailing. Oakes took charge of him there and decided to help Carson return to his home in Taos. Twenty-five miles south of Denver, on Wild Cat Point or Riley Hill as it became known later, Oakes and Carson lit a campfire. This event, Kit Carson’s Last Campfire in May of 1868, is commemorated by a marker erected in 1923 on Riley Hill near where The

Preserve Golf Course clubhouse stands today. Oakes and Carson traveled on to Fort Lyons where Carson succumbed to his injury on May 24th, 1868.

Happy Canyon, The Original

The original Happy Canyon ran from the rocky cliffs east of Daniel's Park, toward Surry Ridge then north along modern I-25 to Newlin Gulch. In the harsh winter of 1859, John Craig, Jack Johnson and Charles Holmes settled in this canyon where they engaged in mining and raising cattle. As food and supplies were in high demand, things were very expensive and so the trio subsisted mainly on wild game that was abundant. When their clothes wore out, they made due with buckskin. John Craig later purchased the Round Corral now known as Sedalia. Charles Holmes is lost to history. But Jack Johnson stuck around.

John Schweiger, an Austrian emigrant, came to the United States when he was 21 years of age seeking a better life. He first lived in Georgia and Tennessee working in the mines. In 1869 he moved west and was hired by Tabor's Sampling Mills in the Leadville area.

In 1874, desiring to develop a cattle ranching business, John, with two of his brothers, Jacob and Joseph, purchased what would come to be known as Happy Canyon Ranch. Eventually, they sent to Austria for their parents and the whole family settled in a small cabin near a creek. In order to continue to earn money to pay the bills, Jacob and Joseph worked in mining towns. The money earned by them was used to build a ranch house and outbuildings between 1894 and 1910 and some of them were used for over 100 years.

After their mother died, the brothers decided that one of them must marry in order to have a woman for domestic chores such as housekeeping, cooking and laundry. John drew the short straw and in 1885 married Anne Schneider and eventually fathered seven children with her.

As the brothers prospered, the size of the ranch grew. On the property there was a small grove of trees that also contained a small cabin used on occasion by cowboys during roundup. One summer, one Jack Johnson asked to stay in the cabin and John agreed. Jack moved in and soon after graced the Schweigers with his guitar and singing. The singing proved a happy distraction for the family and so, when asked the name of the ranch, John would reply, "Happy Canyon." One day the music didn't play and John went to the cabin to check on Jack finding that he had left, never to be heard from again. But the name Happy Canyon stuck.

The Schweiger's became a prominent family in Douglas County becoming involved not only in ranching but also in real estate and commerce with one descendent opening a gas station in nearby Castle Rock. The ranch was operational until 1965 and now serves as an example of life in the west in the time of the Homesteaders. Located on the property are remains of the Arapahoe Canal, an early example of irrigation in the semi-arid high western plateaus. The ranch buildings can still be seen just east of I-25 at exit 191.

New Memphis and Citadel

The earliest visitors to the Castle Rock area often remarked on the beauty of the rock formations. John Fremont and his party, traversing the county in 1843, called it “pound-cake rock,” an ironical name they invented to distract themselves from the hunger they were experiencing at the time. In 1858, David Kellogg, who had come to pan the headwaters of Cherry Creek, viewed the butte and was the first to call it Castle Rock.

In 1862, Congress passed the Homestead Act so as to help develop the west. Thus many entrepreneurs formed businesses designed to settle the lands. Soon after, a group of settlers, including one John Harris, followed the dream and established a town-site two miles north of the castle rock. But they thought the rock looked more like a battlement and so called their settlement Citadel. In 1864, another group, which included John Harris’ brother Thomas and 50 others, set out from Tennessee under the auspices of the South Western Colony Company. Thomas along with his brother platted out a new township a short distance from Citadel and they called it New Memphis. These towns were located roughly where the Justice center sits today along I-25. For a time, New Memphis was a happening town that overshadowed its upstart neighbor, Castle Rock, to the south. The principal employment of the townspeople, as reported in an 1876 newspaper account, had been, “horse racing, gambling and drinking forty-rod whiskey.” This was soon replaced by, “a quiet country store, a hotel, a few houses...quite a trading point.” In 1872, New Memphis opened a post office. Mail was taken to the town of Douglas, two miles south of fledgling Castle Rock by rail, and then transported by horse and buggy to New Memphis, -and distributed to the settlers of Castle Rock.

In 1872, things got heated. There was a battle for the establishment of the Douglas County Seat. Douglas County’s original county seat was Frank(s)town that was a logical location as it was near the Russellville gold rush and was at the confluence of several major transportation routes. In 1874, Elbert County was formed partly from the eastern half of Douglas County and so Franktown was no longer in the center of commerce and the Railroad had constructed new lines further west. So interest in moving the county seat west became keen and the competition stiff. In the running were Franktown, Castle Rock, Sedalia, Douglas, New Memphis and a town named Glade. The draw for Castle Rock was the flat land at the base of the rock with plentiful water 14 feet below the surface. The drawback was that the railroad went through Sedalia, New Memphis and Douglas, not Castle Rock. But the landowners in Castle Rock donated 40 acres for government buildings and that swung the vote their way. The Harris brothers were not to be outdone. Rather they packed up New Memphis/Citadel, buildings and all and moved them to Castle Rock. There they established the Harris Hotel.

Plateau Quarry

In the early 1870’s, Silas Madge, a local rancher and frustrated gold-rusher, still enchanted by the dreams of precious metal, climbed a flat-topped butte near his ranch. He sunk a few prospect holes and in every one found a pinkish-grey lava stone. Disappointed but undaunted, he sent samples of the stone to a Denver Assay office. The report that followed stated that while there was no precious metal in the samples, the stone would serve as excellent building material. So began the Castle Rock Quarry

industry. In 1872, Madge opened his quarry on a butte south of Castle Rock. The railroad caught on and built a spur to his quarry so that the rock could be transported easily. Soon other quarries opened: the O'Brien Quarry 3 miles east of the Madge Quarry on Lake Gulch Road and the Santa Fe Quarry located west of Castle Rock and now serves as the site for the Red Hawk Subdivision. Before Silas Madge launched the quarry fever in the county, another, lesser-known quarry was already in operation. This was the first "uniquely topped mesa" to be worked for stone in Douglas County and was known as the Plateau Mesa. The stone from this mesa was said to be beautifully variegated and was used for foundations, granaries and schoolhouses. Fonder School on Cherry Creek used stone from the Plateau Quarry, as did the Dewey School built just south of the quarry in 1898. We know the Plateau Quarry as the large hill just south of our own Mesa with the radio towers on the top. If you look, you can still see the horse trails up its side and the piles of rock tailings near the top.

Round Top, Our Happy Canyon

South of the original Happy Canyon lies the Round Top district, named for the round knob rock formations on the tops of the buttes. Round Top Mountain is our very own mesa and was revered by the Indians for its unique visibility. From there one can see Parker, Devil's Head, Pikes Peak and Denver. It is here, according to legend that the Indians put down their weapons on their way to Manitou Springs.

In 1884, John M Chase came to Douglas County with his three sons, Sylvanus, Frederick and John Jr and homesteaded the Happy Canyon-Roundtop area. He was the first treasurer of Michigan University and was an early settler in Detroit in 1838. When the capital of Michigan was moved to Lansing, he gathered up the state funds and drove to Lansing. Along the way, the wagon broke down and so he finished the final 50 miles on foot, the state's funds on his back. Mr Chase was an advocate of reforestation. Concerned about the devastation of Oakes Sawmill operations, he planted over 7000 blue spruce and white and yellow pines on these hills and other devastated hills throughout Colorado and assisted in setting out 10,000 more seedlings. He died at the age of 93 in 1904.

Mr. Chase's sons formed the Happy Canyon Land and Cattle Company and amassed some 3000 acres stretching from the Beverly Hills area north of Castle Pines Parkway to the Nursing Home at the foot of the Plateau Quarry. John Jr became an ophthalmologist and was also a Brigadier General in the Colorado National Guard during the strike-filled days of the early 1900's. He maintained order during a particularly nasty miner's strike in Cripple Creek and helped with the Ludlow strike prior to 1916. In spite of being caught in the middle between angry miners and mine owners, General Chase maintained his reputation as a, "splendid citizen...the peer of any citizen in Colorado in honesty and ability."

General Chase would often bring his troops to Round Top for maneuvers. One of these exercises involved putting artillery on top of our mesa and firing across the valley (our neighborhood) at targets set up on top of the old Plateau Quarry. One-author states, "I have often wondered if some of today's Happy Canyon landowners on the quarry have not found some of those big shells. The targets wasted away over the years up there in

the scrub oaks. We used to come across them when we rounded up cattle. That caused quite a thrill.” So attached to the mountain did General Chase’s troops become that they came to be known as the “Round-Top Cavalry.”

The land that makes up our neighborhood was homesteaded to many people, including the Chases from 1870 to 1919. The first platting of Happy Canyon was approved by the Douglas County Commissioners on June 7th, 1962 and included the head of the canyon, Strawberry Lane, Buckskin Lane, Wrangler Road, Posse Road, Meadow Lane and, of course, Lariat Drive. The rest of the Lariat part of the neighborhood soon followed with the Mesa Drive areas coming on later plats. And the rest, as they say, is history!

2.0 COMMUNITY BASE MAP

The community base map for this plan begins with the parcel data for the Happy Canyon subdivision and surrounding subdivisions overlaid on the photo imagery. To this we added the power lines, bridle easement, and cell tower locations. Roads are also identified. Using the imagery presents a very usable product for the community. This spatial perspective is easy for the community to understand and gives the large-scale perspective. The community boundary is considered the WUI boundary. See Base Map, Figure 11-9.

3.0 COMMUNITY RISK ASSESSMENT

The community risk assessment takes into consideration a number of attributes. It began with fuels and topography and identified values at risk to the community in the event of a wildland fire. From this assessment it was determined that having an evacuation plan in the event of any kind of emergency was the first priority of most residents. Performing and maintaining hazardous fuels reduction on properties to protect those values that were most important to residents was a strong second choice.

3.1 FUEL HAZARDS

The Happy Canyon subdivision is located approximately 25 miles south of Denver along the east side of the I-25 corridor at Happy Canyon Rd. The subdivision lies within Sections 14, 15, 22, and 23 Township 7 S, R 67 West of the 6th Principal Meridian. The community consists of approximately 190 lots, total WUI acreage for the project is approximately 517 acres.

The Happy Canyon Subdivision is characterized by a typical Front Range ponderosa pine overstory with a heavy Gambel oak understory. This dangerous fuel combination is found in large concentrations throughout Douglas County as well as the Happy Canyon Subdivision. Fuel density and continuity, both horizontal and vertical, are dangerous throughout the canyon. The fuel density and continuity decreases as you reach the top of the ridge that quickly transitions to a short, steep, rocky cliff with scattered oak brush. East of the ridge top, fuel type transitions to mostly grass with some scattered small pockets of brush. The further east you go, the heavier the brush concentrations begin to get. North of the subdivision boundaries the fuel type transitions to grass with large

patches of oak, especially in the dry draws. West of the subdivision boundaries, on the west side of the Interstate Highway 25 the fuel type goes back to a heavy ponderosa pine overstory with a heavy Gambel oak understory component (Figure 11-10).



The ponderosa pines throughout the community contain a variety of crown classes. While most of the stems are dominant and co-dominant stems, there are intermediate class trees, some suppressed trees, and some scattered regeneration throughout the community. The dominants and co-dominants have good form and crown ratios. They appear in good health and many have survived past bark beetle attacks. These healthy ponderosa pines are, and will continue to serve as a viable seed source for a future forest. A large portion of the pines throughout the community have positive crown spacing, the tree crowns are not interlocking. Some of the pines are clumpy with interlocking crowns, but do have spacing between the clumps. Some of the spacing is less than the ten foot standard, and Basal Area ranges from 10 BA to 120 BA.

The oak component in Happy Canyon is a combination of healthy thinned stems and large, dense clumps with a heavy concentration of dead material. Densities of the thinned vegetation differ. Oak is a ladder fuel underneath residual trees throughout the community. There is some vertical clearance depending on oak stem and tree size.

There is only one access into the community. It can be classified as a mid slope road going down the canyon allowing for homes to appear “buried”/hidden in the vegetation

below. There are several cul-de-sacs that take off of the main road. Once at the top of the canyon or subdivision the community can be exited to the west at all times, and to the southeast in an emergency.

Fires in this fuel type burn hot and fast and a small ground fire can quickly spread to a crown fire. Impacting not only community residents but adjoining community residents and livestock could also easily be impacted as well as commuters traveling up and down the interstate.



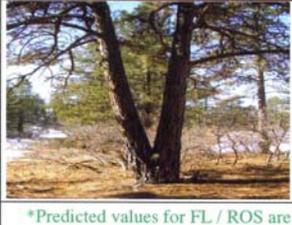
SMFR has determined there are four fuel models present within the Happy Canyon subdivision. They have made surface fire behavior predictions based on these fuel models. Fuel models present include:

- Grass, Fuel Model 3
- Summer brush, Fuel Model 4
- Fall/winter brush, Fuel Model 4
- Timber, Fuel Model 8

Grass is a very flashy fuel and can present very dangerous fire behavior. Recent moisture and higher relative humidity can decrease fire behavior. Summer brush presents a situation for greater fire intensity in live, green fuels. If the oak has suffered some under burning there is a serious potential for re-burn. This re-burn is the type of fire situation that can trap and kill fire fighters. In fall/winter brush the dead leaves that remain on the stems, and those recently dropped to the ground can carry fire expeditiously. For timber

the surface fire behavior predictions are for needle cast and not for crown fires (JMW 2008).

SURFACE FIRE BEHAVIOR PREDICTIONS

Grass Fuel Model 3	Temp.	Wind Speed (mph)	Flame Length (Ft.)*	Rate of Spread (Ft./Min)*	30 Minute Size Projection (acres)
	80-100	0	3.4	6	2.3
		5	15.5	156	197.3
		10	23.2	380	698.5
		15	29.6	642	1442.1
Notes: Recent moisture (3-5hrs.) or elevated RH can decrease fire behavior significantly. Also, predictions apply to cured grass only and will vary for height of grass (expect lower outputs for less than 3')					
Summer Brush (LFM @ 120) Fuel Model 4	Temp.	Wind Speed (mph)	Flame Length (Ft.)*	Rate of Spread (Ft./Min)*	30 Minute Size Projection (acres)
	80-100	0	6.5	7.1	1.4
		5	20.0	82	53.4
		10	30	208	208.4
		15	39	365	463.5
Notes: Fire has potential to burn with great intensity in live, green fuel once Live Fuel Moisture drops below 125%. Use Fall/Winter model if the oak has been under burned - there is significant REBURN potential with a high probability of explosive fire behavior.					
Fall/Winter Brush (LFM <120) Fuel Model 4	Temp.	Wind Speed (mph)	Flame Length (Ft.)*	Rate of Spread (Ft./Min)*	30 Minute Size Projection (acres)
	80-100	0	7.6	9.6	2.5
		5	23	111	98.0
		10	36	282	382.2
		15	46	494	850.0
Notes: Dead leaves that remain on the limbs are good carriers of fire in addition to the freshly fallen leaves on the surface. These factors along with very low Live Fuel Moistures make the oak a significant fire threat all year round.					
Timber Fuel Model 8	Temp.	Wind Speed (mph)	Flame Length (Ft.)*	Rate of Spread (Ft./Min)*	30 Minute Size Projection (acres)
	80-100	0	0.4	0.3	0
		5	1.0	2.0	0
		10	1.4	4.1	0.1
		15	1.4	4.1	0.1
Notes: Predicted fire behavior is for needle cast only, does NOT account for fire being carried by the tree canopies (i.e. torching, limited or sustained crown fire). Surface fuel will hold recent moisture for a longer period of time due to shading provided by canopy.					
*Predicted values for FL / ROS are at the head of the fire and apply to SURFACE FIRES ONLY; expect lower values on the flanks/heel.					
ALL DECISIONS MUST BE BASED ON CURRENT AND EXPECTED FIRE BEHAVIOR AS WELL AS CURRENT WEATHER CONDITIONS AND FORECASTS					
Fire Suppression guidelines based on flame length (Fireline handbook) < 4' Fires can generally be attacked at head or flanks using hand tools. Hand line should hold the fire. 4' to 8' Fires are too intense for direct attack on the head with hand tools. Hand line can not be relied upon to hold the fire. Bulldozers, engines, and retardant drops can be effective. 8' to 11' Fires may present serious control problems: torching, crowning, and spotting. Control efforts at the head will probably be ineffective. > 11' Crowning, spotting and major fire runs are probable. Control efforts at the head of the fire are ineffective.					Area Estimation 1 acre = 200' x 200' 5 acre = 500' x 500' 150 acre = .5 mile in each direction 640 acre = 1 mile in each direction 1500 acres = 1.5 miles in each direction JMW May 2007

3.2 TOPOGRAPHY

Slopes throughout the community range from relatively flat on the ridge top, (0-5%), with a component of more moderate slopes, (6-20%), and a large portion of steeper slopes, (over 20%). Topography is very broken up with long and short steep slopes and more gentle undulations. The community itself is a somewhat steep and narrow canyon. There is a significant elevation change from the bottom of the canyon to the top, about 300ft. See Slope Analysis Map Figure 11-9.

3.3 INSECTS AND DISEASE

There is evidence of past bark beetle activity. There are trees that have survived attacks as well as infestations that caused mortality in single trees or small groups of trees. Gambel oak is mostly healthy with some top dead. Gambel oak is in various age stages as residents have been diligent in their thinning efforts.

Currently there are no dwarf mistletoe infestations in the community.

4.0 RISK OF WILDFIRE OCCURRENCE

Researchers believe the historical fire regimes across the Front Range are diverse and complex. The concept of continuous, regular, low severity fires to keep ladder fuels from accumulating is really only found to be true in the lowest elevations of the Front Range, where these open woodlands and savannas have been maintained over long periods of time (Kaufmann 2005). Researchers from the Colorado Forest Restoration Institute (CFRI), Colorado State University (CSU), the University of Colorado at Boulder (CU), agree that fires in ponderosa pine across the Front Range burned at variable severity at differing times. Fires burned in a complex fashion. These complexities were based on variations in fuels, weather, and topographic conditions (Kaufmann 2005).

4.1 HAPPY CANYON FIRE HISTORY

The fire history in Happy Canyon is, fortunately, very brief. The South Metro Fire District and the Forest Service did not have any recorded information on any fire incidents in the immediate Happy Canyon area. Both jurisdictions referred to the Douglas County Sheriff's Department for call records on the nearby Cherokee Ranch fire and for any other fire related incidents in or near Happy Canyon. A search of records dating back to 2000 by the DCSD personnel came up with only two calls from residents within the immediate Happy Canyon area. Nothing was found in either case and no reports were filed. There were two nearby minor fire incidents reported in addition to the Cherokee Ranch fire that was significantly north and west of the Happy Canyon community.

The first incident was reported on March 23, 2003 at 9:00 AM by a caller at 101 W. Happy Canyon Road near Hwy 85. The responding fire units found a tree smoking from a downed power line and threatening to start a grass fire in an open field. By 9:48 AM, the fire units had left the area.

The second incident was reported on Oct. 29, 2003 at 12:05 PM by a caller at 894 E. Harvey Street near the Grace Chapel just south of the Happy Canyon community. The cause was a grass fire in a vacant lot across the street from 894 E. Harvey Street. All units cleared the area by 12:37 PM. Coincidentally, this fire was reported just 36 min. before the Cherokee Ranch fire broke out. Conditions were reported to be very dry and hot with low relative humidity.

On Oct. 29, 2003 at 12:41 PM, an unidentified cellular caller at N. Daniels Park Road and Hwy 85 reported a blue plume of smoke. At 12:42 PM, an officer at the Daniels Park picnic area reported smoke in the direction of Hwy 85. Fire units were in route at 1245. At 1255 a caller from Cherokee Ranch could see huge flames. The temperature was 80°F- at the time with west winds gusting to 30 mph. Castle Pines, Daniels Park and Castle Pines North were ordered evacuated almost immediately. Later in the day, the evacuation of Happy Canyon - was ordered -. By evening, a cold front pushed through which was accompanied by a light mist that greatly aided fire-fighting efforts. At 11:27PM the fire was considered contained and units began departing shortly after midnight. No residential structures were lost, only a shed and garage. Units from a total of 8 local fire districts responded that day. The following table is the courtesy of SMFR.

Count of Incident Number	Adjusted incident type from old	Incident Year																
		Brush, or brush and grass mixture fire	Chimney fire, confined to chimney	Cooking fire, confined to container	Dumpster or other outside trash receptical fire	Fire, not otherwise classified	GRASS OR BRUSH FIRE - COLD REPORT	LANDSCAPING OR DECORATIVE FOLIAGE FIRE	Lightening strike (no fire)	Outside rubbish fire, not otherwise classified	Outside rubbish, trash or waste fire	Passenger vehicle fire	Road freight or transport vehicle fire	STRUCTURE FIRE - DAMAGE TO STRUCTURE - FIRE OUT	STRUCTURE FIRE - DAMAGE TO STRUCTURE - WORKING	Structure fire involving an enclosed building	Vehicle fire, not otherwise classified	Grand Total
1987	3										1						4	
1988	2										1						4	
1989	2										2						4	
1990	1				2						1	1					5	
1991	1									1	1						3	
1992					1						2	1					4	
1993	2										3						6	
1994	2										2			1			5	
1995	2										3			1			6	
1996	2										2						4	
1997	2				1						3						6	
1998	3										2						5	
1999									1		3						4	
2000	6					3	1	1	2		1		1	1	1		11	
2001	5	1			1						3			1			11	
2002	1										4			1		1	7	
2003															2		2	
2004			1								1				1		3	
2005						1			1		1						3	
2006											1						1	
Grand Total	34	1	1	4	5	1	1	3	1	1	3	2	1	6	5	1	40	

Incident type in all capital letters cannot be reconciled with new NFIRS code set
 Current NFIRS 5.0 conversion from
 NFIRS 4.0 occurred Jan 1, 2003

5.0 HOMES, BUSINESSES, AND ESSENTIAL INFRASTRUCTURE

The Happy Canyon Subdivision Plat was recorded in 1962 and consists of 95 platted lots. Additional filings were platted and the community totals about 190 lots. Most lots are built out. An additional 23 parcels, 15 of which are larger acreages, - border the community. Most of these larger parcels have agricultural zoning, and support horse or cattle operations.

Most of the homes in the community were built in the 1970's and 1980's. The community contains a large number of structures with wood siding and several still contain wood shake roofs, but less than ten percent. In the event of a wildfire homes would easily become part of the fuel loading. There is one main road that essentially goes to the bottom of the canyon. It is narrow and winding, and contains limited vegetation on the banks that line it. In the event of a wildfire the transportation corridor could easily be impacted with smoke and individuals attempting to evacuate.

In addition to homes, residents have the possibility of losing additional important features. Residents in the Happy Canyon Neighborhood are not on a municipal water system. Each structure has a well that serves the water needs of that home. Each home has an individual sewage disposal system or septic system. Power to the community is located above ground and could be severely impacted during a wildfire. There are several lines that run through parts of the community. There is a larger transmission line that is located just east of the subdivision.

Access to a cell site with numerous antennas and a tower is located towards the southeastern edge of the community. The antennas and the tower are on the top of the mesa. The slopes leading to the mesa are moderately vegetated and rocky. This is the only access to the site and is commonly used by hikers, runners, bikers, including adults and children.

Structural integrity of roadbeds could be impacted from heat during a wildland event and from drainage and erosion during wet weather events after a high intensity burn. The State Highway could also suffer some of these detrimental and costly impacts. Both smoke from a wildland event and landslides resulting from soil instability and devegetation pose significant safety hazards to anyone traveling along the State Highway.

6.0 VALUES AT RISK

Structural values as well as intrinsic values are at severe risk in the event of a catastrophic wildfire. Although homes could be rebuilt, septic systems replaced, and power lines restored the intrinsic values of living in "the canyon" would be forever lost in the event of a catastrophic wildfire.

6.1 STRUCTURAL VALUES

Structural values to be protected within the community include houses or out buildings, any structural improvements on properties, septic systems, gas lines, power lines, and roads. Structural values, although important and costly, and easily destroyed in a catastrophic wildfire event, are only a portion of the community values.

6.2 INTRINSIC VALUES

Intrinsic values, very difficult to measure, cannot be replaced if destroyed by wildfire. Should a fire of severe intensity move through this community the landscape would be forever changed. The ponderosa pine and Gambel oak ecotype that lends itself to buffer this community from the busy highway and pasture lands would become a moonscape covered with black sticks. The tranquil setting of living within a Front Range ponderosa pine forest with birds singing and deer browsing is irreplaceable. The same feeling of peace and tranquility could not exist if homes were surrounded by a “charcoal forest”. Erosion would become a major issue. Eventually, the forest floor would show signs of life, but the detrimental effects of a catastrophic fire would last for generations. All roads in the immediate area would most likely suffer impacts from drainage and erosion as well, which could cost tax payers. The existing forest would be destroyed, and the stability and viability of the soil would be impacted. The community would lose the tranquil setting; the very environment that made Happy Canyon attractive to residents would be gone.

7.0 LOCAL PREPAREDNESS AND FIREFIGHTING CAPABILITY

- The Happy Canyon subdivision lies within the boundaries of South Metro Fire Rescue (SMFR).
- SMFR is a special taxing district which provides all- risk emergency responses including fire and medical emergencies, dive rescue, and hazardous materials, among others. The district operates from 10- staffed stations located throughout the 76-square-mile district with approximately 65 personnel on duty 24 hours a day 7 days a week. Automatic Aid agreements are in place with all neighboring jurisdictions to provide assistance whenever it is needed. Those neighboring jurisdictions include those immediately adjacent to Happy Canyon, which is the Parker Fire District on the north and Castle Rock Fire Rescue to the south.
 - 911 calls are routed through Douglas County Sheriff’s office to the Metropolitan Area Communications Center (METCOM) www.metcom911.org. METCOM dispatches and handles all communications for SMFR and the Parker Fire District.
 - Reverse 911 is available to the Happy Canyon area via the Douglas County Sheriff’s communications center. Incident Commanders can request a reverse 911 call to residents in the area; the 911 operators will give instructions to the residents at the time of the call.
 - Initial response to a Wild Land Urban interface fire will vary depending on the severity of

the fire, and prevailing weather conditions as determined by the first arriving units. Units in addition to the first arriving will stage at the top of the Canyon and wait for instructions from the incident commander. Additional apparatus may be requested and assigned based upon information gathered from initial information including 911 calls and/or current weather and fuel conditions (i.e. Red Flag Warning days). If a fire were reported as a “wildland interface fire” in which structures are threatened (as contrasted with a simple grass or brush fire), the initial response would consist of:

- 1 CAFS Brush Truck (A 4-wheel-drive fire engine with special firefighting foam capability, known as a “Type 3 Brush Truck.”)
- 3 Standard Fire Engines (pumpers)
- 2 Brush Trucks (“Type 6 Brush Trucks” which are smaller 4-wheel drives than the “Type 6”, but also designed for wildland firefighting operations.)
- 2 Tenders (3,000 gallon water tankers with portable tanks.)
- 2 Medics (Paramedic ambulances)
- 1 SMFR Battalion Chief
- 1 Training Officer (to coordinate incident safety)
- 1 Emergency Medical Services Supervisor (to assist the Battalion Chief)
- All SMFR personnel are provided at least 8 hours of annual Wildland Fire refresher training. In addition, SMFR has a specially trained Wildland Fire Team, which consists of approximately 50 individuals. These personnel routinely deploy to fight wildland fires in other parts of Colorado and across the country and so will bring a great deal of experience to bear if there is an urban interface fire in Happy Canyon.
- SMFR has purchased software (Red Zone, www.redzonesoftware.com) to assist in hazard identification, mapping, structure assessment, etc. All homes in the Happy Canyon subdivision have been “triaged” at least once using this tool. It identifies features of each property that may aid or hinder firefighting, such as the amounts and types of vegetation around the home, distance of the home from the main road, type and width of driveway, and type of roof. (We know, for instance that out of 201 homes surveyed, 18 have wood, shake shingle roofs.)
- For the past decade SMFR has worked extensively with Happy Canyon homeowners to promote defensible space and wildfire education. These efforts have included a mitigation demonstration project, presentations to homeowners, special mailings and several wildfire mitigation grants. Those grants allowed individual homeowners to have mitigation done on their properties at a significantly reduced cost. And, while the fuel load in the canyon remains high, a majority of homes originally identified, as at “high risk” from wildfire have had mitigation work done and the immediate threat to many structures has been diminished.

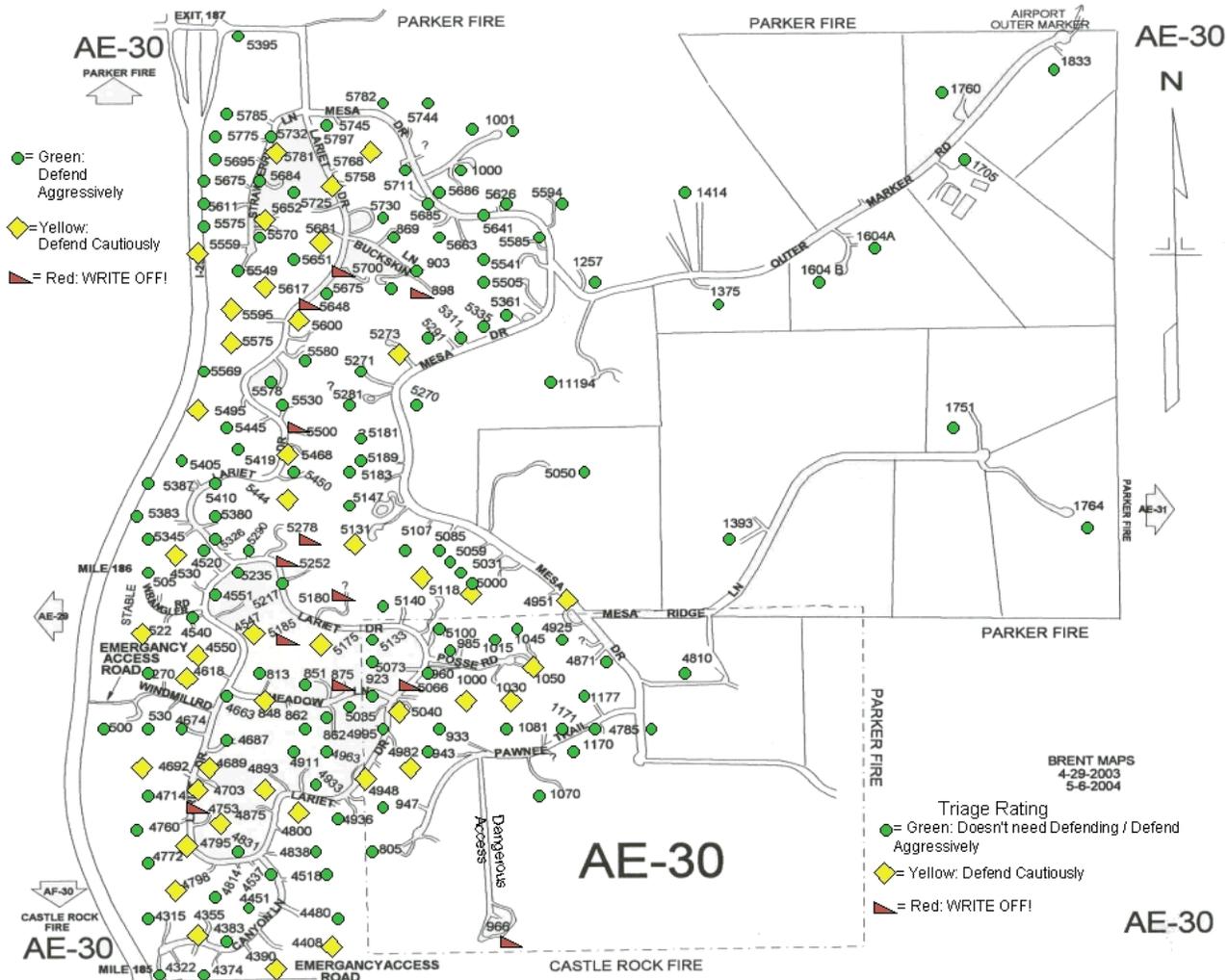


7.1 WATER SOURCES

Water supply is a major concern in Happy Canyon, as the area does not have fire hydrants. Current plans call for use of a water tanker (“tender” in the language of the fire service) shuttle to supply water for firefighting. Under this plan at least one; 3-thousand gallon portable tank would be set up at the top of the canyon. Fire engines would draw water as needed from the portable tanks and multiple tenders would then keep the tank(s) full by shuttling to the nearest hydrant, at Castle Pines Drive and Happy Canyon Road. In recent years a hydrant has been added at Sapphire Drive and Mesa Drive. This could also be used to supply Castle Rock or other units operating in that part of the Canyon. There are some swimming pools in the canyon and those locations are marked on South Metro maps. All South Metro apparatus are equipped with hard suction hoses and could draft water from those pools or cisterns if water was in them when needed.

8.0 COMMUNITY HAZARD REDUCTION PRIORITIES AND RECOMMENDATIONS TO REDUCE STRUCTURAL IGNIGHTABILITY

The Happy Canyon mitigation committee has come together and prioritized a list of projects for the community. The projects begin with continued efforts to create and maintain defensible space around structures, and additional hazardous fuels reduction throughout the property.



2004 Triage Map

In an effort to help residents reduce the level of risk on their property, and reduce the structural ignitability of their homes, SMFR purchased the “Redzone” software with many applications in mind. The first application with the software was a triaging of the Happy Canyon subdivision. With the software the efficiency of the triaging was significantly increased as all of the information was recorded on a PDA instead of written down and later entered into a database. The PDA allowed the data to be uploaded to a computer and then transferred to a number of users. The intent was to create a home assessment report that could be given to property owners. The owners could then analyze the information and continue the dialog with the fire district on how to reduce their level of risk, and make their home more defensible during a wildfire. The fire district plans to continue its’ triaging efforts with this software.

The software itself is very versatile. It can be used for logistical and tactical purposes in real events. It can be used for logistical and tactical purposes in training, it can quickly relay pertinent, accurate information to mutual aid responders to help them do their jobs

better in areas outside of their districts. It can be used by emergency personnel for evacuation purposes.

The Happy Canyon community has worked in tandem with the fire district to recognize the needs and responsibilities of each other in the event of a wildland fire. The fire district spent numerous hours triaging and preplanning the subdivision. They met with the community members and presented their “red”, “yellow”, “green” triage map. This was a very effective tool for the homeowners as well as for the fire district. Many homeowners were stimulated into action and made a long-term commitment to managing the vegetation on their property. Residents know that reducing structural ignitability requires the implementation of defensible space around the structure. Protecting the forest from both catastrophic fire, and insect and disease outbreaks requires vegetation management throughout the property.

9.0 ACTION/IMPLEMENTATION PLAN

The Happy Canyon community has outlined an action plan for continued mitigation and educational activities. The work to date has been completed using a mix of both public and private funding, heavily weighted toward private funding and sweat equity. The HOA is a volunteer one, and dues are minimal. The intent is to complete the CWPP process and be able to compete competitively for public funding. Public funding will be required to complete the majority of projects. A degree of mitigation effort will continually take place on a smaller scale throughout the community. To define the steps of the action/implementation plan to continue the mitigation journey, it is important to understand where the community has already been with their commitment to mitigation activities, efforts, and their accomplishments.

9.1 PAST MITIGATION ACTIVITIES AND PROGRAMS

The majority of Happy Canyon Residents are educated about wildfire, the dangers of wildfire and the concepts, and the technical particulars of defensible space. Many of the community residents have moved from “awareness to action” and have actively participated in mitigation activities on their lots. Residents are aware that mitigation is their responsibility and have accepted that challenge. They are diligent in their efforts and make an annual contribution to mitigation activities around their homes and lots. Some community members are not able to participate in mitigation activities due to financial and or physical limitations. Members of the community recognize the needs of these community members, and have assisted them in mitigation activities around their homes and lots. They continue to be creative in their efforts to help those in need of assistance.



The Happy Canyon community is an active one. Many of the residents frequently used the Local Slash/ Mulch site to dispose of woody material generated through mitigation activities. Douglas County, the Town of Castle Rock, and Plum Creek Wastewater Authority entered into a mutual agreement to fund a slash/mulch program so the citizens of Douglas County would not be burdened with the cost of disposing of material generated through mitigation activities. Although a fair share of sweat equity is required, this is a very viable option for material disposal.

Residents have put forth significant efforts to continue being responsible property owners and continue working on hazardous fuels reduction on their properties. These lots are a couple of acres in size. Each year the residents continue their commitment to vegetation management and defensible space. In February of 2008 the community had 19 residents sign up with an oak mastication contractor for oak treatment on their lots.

The following is a report prepared by Andy Lyon of South Metro Fire Rescue (SMFR) that describes the grant activities and accomplishments of 2006 and 2007.

Happy Canyon Homeowners 2005 Wildfire Grant Project Final Report May 8, 2007

During the summer and fall of 2006, a work crew contracted by South Metro Fire Rescue performed fuels-reduction efforts on 15 properties in the Happy Canyon subdivision of Douglas County, Colorado. Happy Canyon is an intermix area just north of the town of Castle Rock, characterized by a south-facing canyon, a

heavy mixture of pine and scrub oak, and no established water supply for firefighting. For these reasons, Happy Canyon has long been recognized as a being at very high risk for a devastating wildfire. In addition to the 15 homes where substantial mitigation was done, numerous small slash piles from other homes were chipped into mulch. Seven other homeowners also reported mitigation efforts during the grant period.

The crew, typically made up of five individuals, using two chain saws and a large wood chipper, worked approximately 171 hours thinning and clearing vegetation in the 100-foot ignition zone around structures on these properties. This crew charged a rate of \$125 to \$160 an hour and South Metro Fire Rescue paid out \$26,432.50 for this work. In the spring of 2007 South Metro paid an additional \$364.18 to cover the cost of a portable toilet rented for the crew. The work crew was allowed to camp on property in the canyon and to use some facilities at the property owners' home. South Metro contributed matching funds in the form of labor – both to manage the grant and for triage/public education, and purchase of a triage software system. South Metro also made shower facilities at one of its fire stations available to the work crew.

Prior to the work being done, South Metro and the homeowners asked Diana Selby of the Franktown District Office of the Colorado State Forest Service to visit the canyon and the properties slated for mitigation work. Selby did this on at least one occasion and at a meeting among homeowners, the work crew boss, Andy Lyon of South Metro, agreed on the need for mitigation work throughout the canyon.

Of the 15 homes treated, five were considered "red" or at high risk from wildfire in a 2004 triage done by South Metro. Five properties were ranked "yellow" and five were marked "green" (for being defensible.) Some of the homeowners agreed to provide matching funds through their own labor (calculated at a rate of \$17.55 an hour) and others agreed to a cash match of 50% of the cost of the work done on their property. Our aim was to first mitigate homes considered "red" or "yellow," and then to do further mitigation as funding allowed. Of the 15 properties, twelve were in the lower portion of the canyon where the fuel load is heaviest. Of the three mitigated in the upper portion, one was considered "red" and one was rated "yellow."

Prior to and concurrent with the mitigation, members of South Metro's wildland firefighting team began to "re-triage" Happy Canyon using new technology purchased during the grant period. This technology allows use of handheld computers to record data about each property, such as roof composition and the amount of vegetation in each zone around the home. During this process firefighters made contact with many homeowners and were able to deliver one-on-one education about the risks of wildland fire in the canyon. While the new software does not use the "red-yellow-green" color system, it does provide

firefighters with a thorough idea of a properties' defensibility and can also be used to provide homeowners with specific recommendations to improve their property's ability to withstand a wildfire. To date, approximately 95% of the 220 or so homes in the canyon have been re-triaged. This effort has resulted in many, many hours spent by South Metro employees in the canyon, doing public education and triage.

It is difficult to measure the acreage treated by this work but here's a methodology for making an estimate. If each property worked on by the work crew (15) is considered as being in a 100 foot by 100 foot box, and fuel reduction was 100 percent completed for each, then approximately 3.44 acres were treated as a result of our direct efforts. We know, however, that the work was not 100 percent on all homes, and that some of that acreage would be taken up by the structures themselves. Our best estimate is that 2.5 to 3 acres were treated, with additional work done on at least seven other homes.

In August of 2006 South Metro requested and received an extension of the grant period of performance until March 31, 2007. This additional time was used to continue the work of triaging homes in the canyon, and gave homeowners additional time to complete matching work, if so desired. Since some grant funds remained, a private contractor was hired in March of 2007 to complete work on one of the homes where the work crew did not complete mitigation. This contractor had been hired previously to chip two massive slash piles created because of substantial mitigation done on one property. At the time, it was not clear if sufficient funds remained to pay the entire cost of mulching the slash piles so South Metro paid \$1100 and the homeowner paid \$1000 out of pocket. That \$1000 was reimbursed in two checks as the final financial picture became clear.

In summary, while Happy Canyon remains at risk due to all the factors mentioned above, fuels have been reduced and more properties have become more defensible. Just as importantly, this project has helped keep the issue of wildfire danger and the need for mitigation in the forefront among Happy Canyon residents.

South Metro is continuing to triage homes in the canyon and to update past triage efforts on properties where work was done during this project. South Metro Fire Rescue gratefully acknowledges the assistance of all the homeowners who assisted with this project and thanks them for their efforts to help make Happy Canyon a safer place.

Any questions about this report can be directed to Andy Lyon, director of public affairs for South Metro Fire Rescue, at 720.488.7221 or 303.901.6109.

The Happy Canyon residents have identified the following project priorities.

1. **Usable Assessment of Properties for fire mitigation.**

This could include some sort of interface between South Metro Fire Departments triage of all properties and the recording of this information into Redzone software. The main purpose of this project would be to take useful information about a property and share this with the homeowners and their neighbors. We think there should be a way to have a rating system that distinguishes the things that the property owner can control vs. those that they cannot and rates in that way. This project would include software to use on our HCHOA web site so that it is easily accessible. It would include a program for annual updates of the properties.

2. **Public Education.** Articles and web addresses for technical assistance and support agencies would be posted on the community web site for members to read and look for information. We want to connect homeowners with technical advice as well as connecting with other communities with established programs. Encourage residents to tune in The Network DC, the local cable channel that airs Public Service Announcements (PSA) about wildfire and vegetation management, and other educational segments and documentaries on wildfires. Educate residents to have an evacuation plan, (a family evacuation plan) in the event of a wildfire and any other type of emergency.

3. **Monthly Chipping Program.** The first week of the month a chipper will come to Happy Canyon and chip into a truck any pine or oak cuttings that are placed in front of the property just off of the road. A possible less expensive program would chip the cuttings back onto the property owner's property. This is the main aid needed to continue with defensible space efforts.

4. **Demonstration Site.** A full lot mitigation demonstration site would be completed and publicized throughout the community for members to visit and use as a guide for work on their own property. Before and after photos would be available on the web site for community members to look at.

5. **Southern Egress.** This program would create a southern egress at the bottom of Canyon Lane. There is currently a county road that goes from Canyon Lane to the adjacent open field to the south of Happy Canyon owned by a resident of the area. This would be a gated exit and entrance only to be used by emergency personnel. Control of the gate would be in the hands of the two homeowners at the end of Canyon Lane and emergency personnel. The owner of the property to the south has expressed an interest in turning this property into a retail area. This gate would in no way help in this endeavor.

6. **Address Signs.** This program would finance 4 inch, green, reflective signs that some homeowners have now. The purpose is to let emergency personnel know where each house is located by being able to see the address in any unusual condition. The program would include financing for 190 signs for all homeowners and installation of the signs. There may be opposition from some homeowners and 100% participation may not be reasonable, but we predict a large percentage of homeowner compliance.
7. **Bridle Trail.** This program would clear and widen the current Bridle Trail to the widest width that is described in the legal document for this trail. It would make it walk able to Horse and Human. The purpose is to provide a firebreak and a footpath for emergency exits, this would be approximately 20 acres in size.
8. **Cisterns.** We currently have three cisterns. Two leak and the other is not usable. This program would look into the cost of getting the cisterns “up and running” and a tool for the Fire Department, look at locations for more cisterns and a monthly maintenance schedule.
9. **Western Egress.** This program would create a western egress for Happy Canyon residents. It seems that a good location for this would be at the end of Windmill Lane but perhaps there is a better location. The current property owner at one time agreed to have an exit from the highway for emergency vehicles to enter the property. This exit is now overgrown and a horse corral is blocking most of the area needed to enter the property. Funds would be needed for a gate and road upgrade at no cost to the homeowner.
10. **Program to help those that are on a fixed income clean up their property.** Happy Canyon homeowners would nominate themselves or others in Happy Canyon to be a “Demonstration Property”. Their property would be assessed for fire mitigation and the owner and a HCHOA board member would agree on the work to be done. The work would be carried out by a company in the business of clearing trees and brush and perhaps volunteers from Happy Canyon at no cost to the homeowner.
11. **Grant Manager.** This would be a paid position based on the number of grants obtained and would be paid a percentage of the grant for time spent. This person would work with HCHOA, Fire Department, County, and Forestry Departments to obtain the best-suited grants possible for Happy Canyon.

Long Range Programs

Central Water system with fire hydrants

**Happy Canyon CWPP
Implementation Plan**

	Activity	Lead Person	2008	2009	2010
Priority	Fuel Treatments				
	Community chipping	HOA Mit Cmt.		Fund dep	Fund dep
	Set dates				
	Rent chipper				
	Demonstration Site	HOA, Mit Cmt		Fund dep	Fund dep
	select demo site	HOA, Mit Cmt			
	mark to prescription	Mit Cmt & team			
	execute prescription	Mit Cmt & team			
	publicize	Mit Cmt & team			
	Fixed Income Assistance	HOA, Mit Cmt		Fund dep	Fund dep
	Identify those who need assistance				
	define extent of work to be done				
	gather volunteers				
	schedule date(s)				
	Bridal Trail	HOA, Mitigation Cmt		Fund dep	Fund dep
	Contact homeowners	HOA, Mitigation Cmt			
	Project layout	TBD			
	Project advertise & award	TBD			
	Project implementation	TBD			
	Public Education				
	Newsletter articles	HOA	on_going		
	Website	HOA Web mgr	on_going		
	Post /link to relevant timely articles	Web mgr			
	D-space	HOA, web mgr		Spring	
	Managing native vegetation	HOA, web mgr		Spring	
	Demonstration Site	HOA, Mitigation Cmt		funding dep	Funding dep
	Picnic Displays	HOA , Mit Cmt	on_going		
	display project accomplishments	HOA Mit Cmt	on_going		
	Annual Meetings	HOA		Spring	Spring
	List /Present accomplishments	HOA, Mitigation Cmt			
	Update CWPP as needed	HOA, Homeowners			
	discuss outstanding issues	HOA, Homeowners			

2008 will be a year of initial planning and discussions on what our fuel treatment priorities will be. The implementation plan gives us the framework for determining those

priorities and actions that need to be taken for each activity. In regards to fuel reduction projects, the preferred method of treatment will include handwork with chainsaws, pruning saws, use of a chipper, and possible mechanical treatment if the terrain/conditions permit. Appropriate methods of treatment will be determined on a project by project basis.

10.0 MONITORING AND CONCLUSION

The CWPP is subject to and must undergo annual review. At the time of review the plan can be amended to fit the needs of the community if conditions have changed or the thoughts and needs of the community have changed. Projects can be reprioritized or changed as needed, and new projects can be added to the pipeline. The intention of the CWPP is to be a dynamic living document. It should undergo modification as needed. Community members are encouraged to provide ongoing feedback and input to the HOA Board.

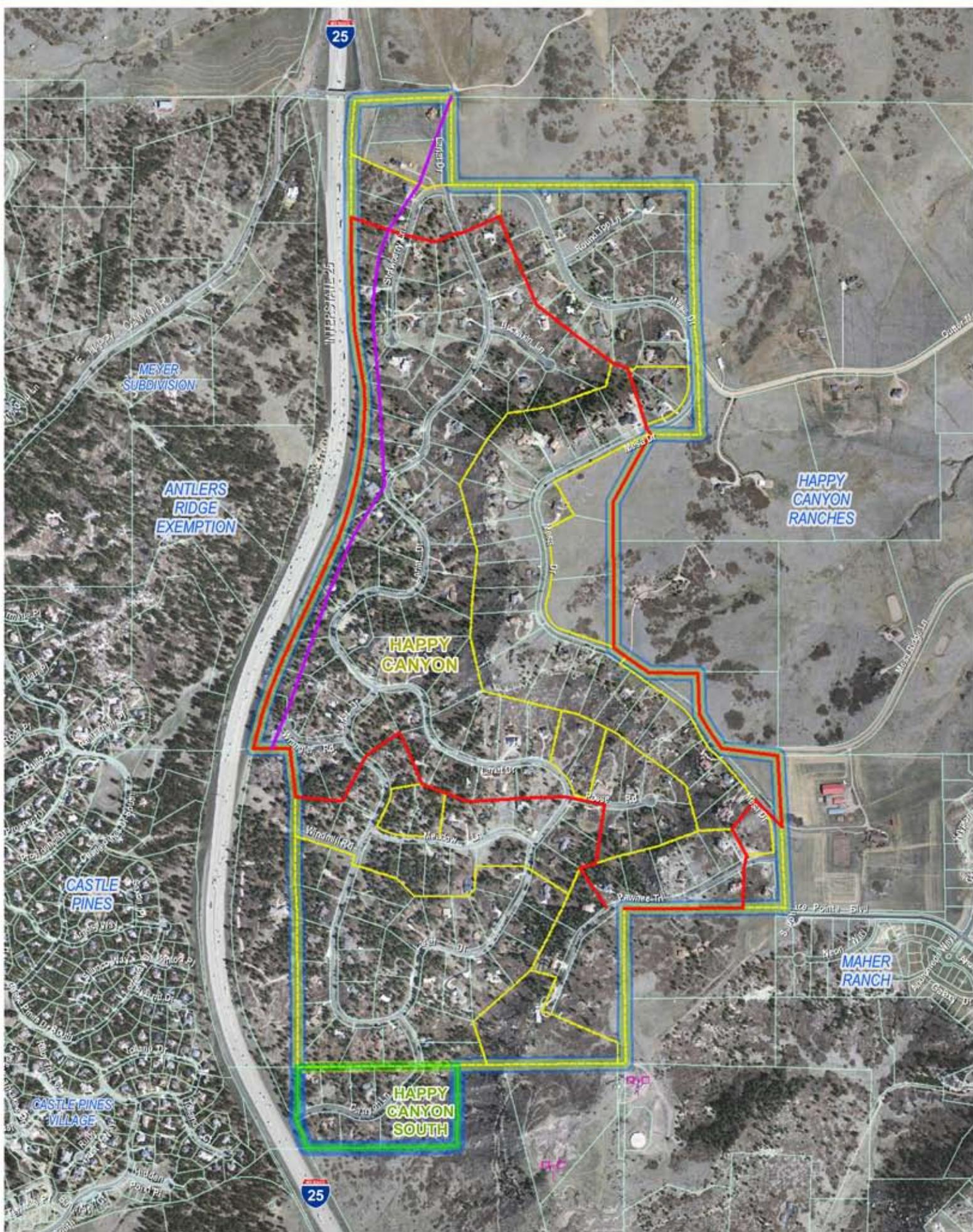
This plan provides a roadmap to continued mitigation and education activities for the community that fits the needs of the community. This plan has assessed the community hazards, and prioritized a list of projects based on those hazards. Completion of this plan also makes the Happy Canyon community a competitive applicant for grant funding to help complete projects identified in the Action Plan. The residents of Happy Canyon remain committed to their mitigation efforts and activities. They remain committed to work in coordination with the SMFR and other natural resources professionals who may offer professional and technical assistance. Their efforts and continued commitment make them a role model for other communities.

This CWPP fulfills the requirements set forth in the *2003 HFRA*. The collaborative process undergone to prepare this plan has been rewarding. We believe this plan best fits the needs of the community.

This CWPP is to be presented and turned over to HOA Board at the annual community meeting in May 2008. Turning over the plan concludes the initial collaborative process of the organizations that contributed to this plan and the CWPP process.

11.0 MAPS

FIGURE 11.9: Happy Canyon & Happy Canyon South Subdivisions: Base Map



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1:9,600
 1 inch equals 800 feet
 0 400 800 Feet

Legend

-  CELL TOWERS
-  TELEPHONE LINE (Approximate)
-  BRIDLE TRAIL (Approximate)
-  WILDLAND URBAN INTERFACE (WUI) BOUNDARY

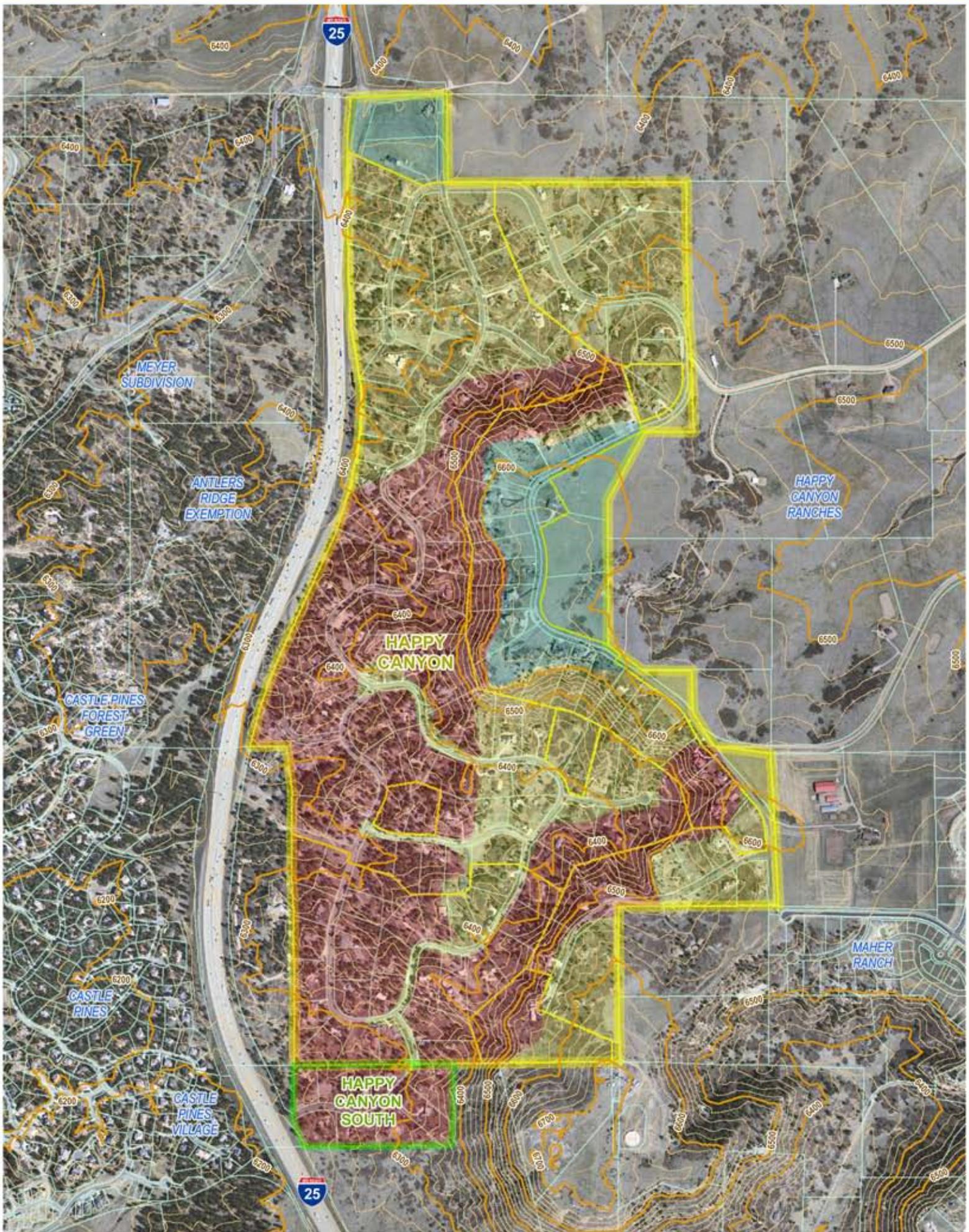
SUBDIVISIONS

-  Happy Canyon
-  Happy Canyon South
-  PARCEL BOUNDARIES



IMAGERY DATE 2006

**FIGURE 11.10: Happy Canyon & Happy Canyon South Subdivisions:
Fuel Hazard Assessment**



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1:9,600
1 inch equals 800 feet
0 400 800 Feet

Legend

- PARCEL BOUNDARIES
- SUBDIVISIONS**
- Happy Canyon
- Happy Canyon South

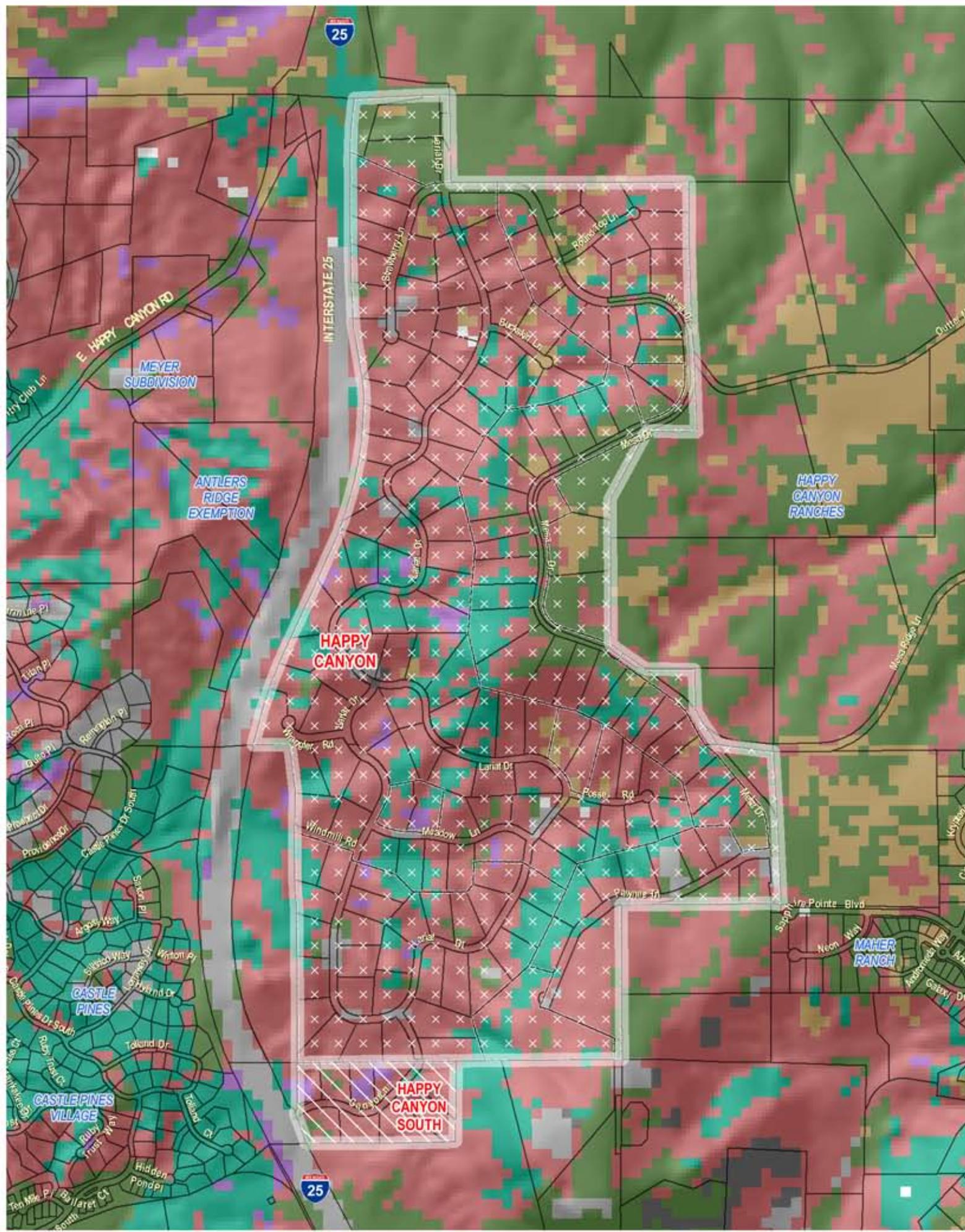
- FUEL HAZARD**
- Level**
 - High
 - Medium
 - Low

- CONTOUR LINE ELEVATIONS**
- Interval**
- 20 Ft
 - 100 Ft

CONTOUR YEAR 1996
IMAGERY DATE 2006



FIGURE 11.11: Happy Canyon & Happy Canyon South Subdivisions: Vegetation Types



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1:9,600

1 inch equals 800 feet

0 400 800 Feet

Legend

PARCEL BOUNDARIES
 SUBDIVISIONS

Happy Canyon
 Happy Canyon South

VEGETATION DATA INFO
 Source: By the Colorado Division of Wildlife & Bureau of Land Management
 Title: Colorado Vegetation Classification Project
 Note: Classification was generalized
 Date Range: 1993-1997

- VEGETATION COVER**
- No Data
 - Barren Land, Rock, Rock Outcrops or Talus Slopes
 - Built Up
 - Grass, Shrub or Forb
 - Water
 - Ponderosa Pine with possible Gambel Oak Mix
 - Aggregated Land
 - Gambel Oak, or Mesic / Xeric Mtn Shrub
 - Cottonwood, or Riparian

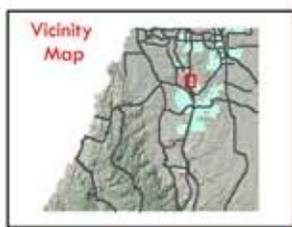
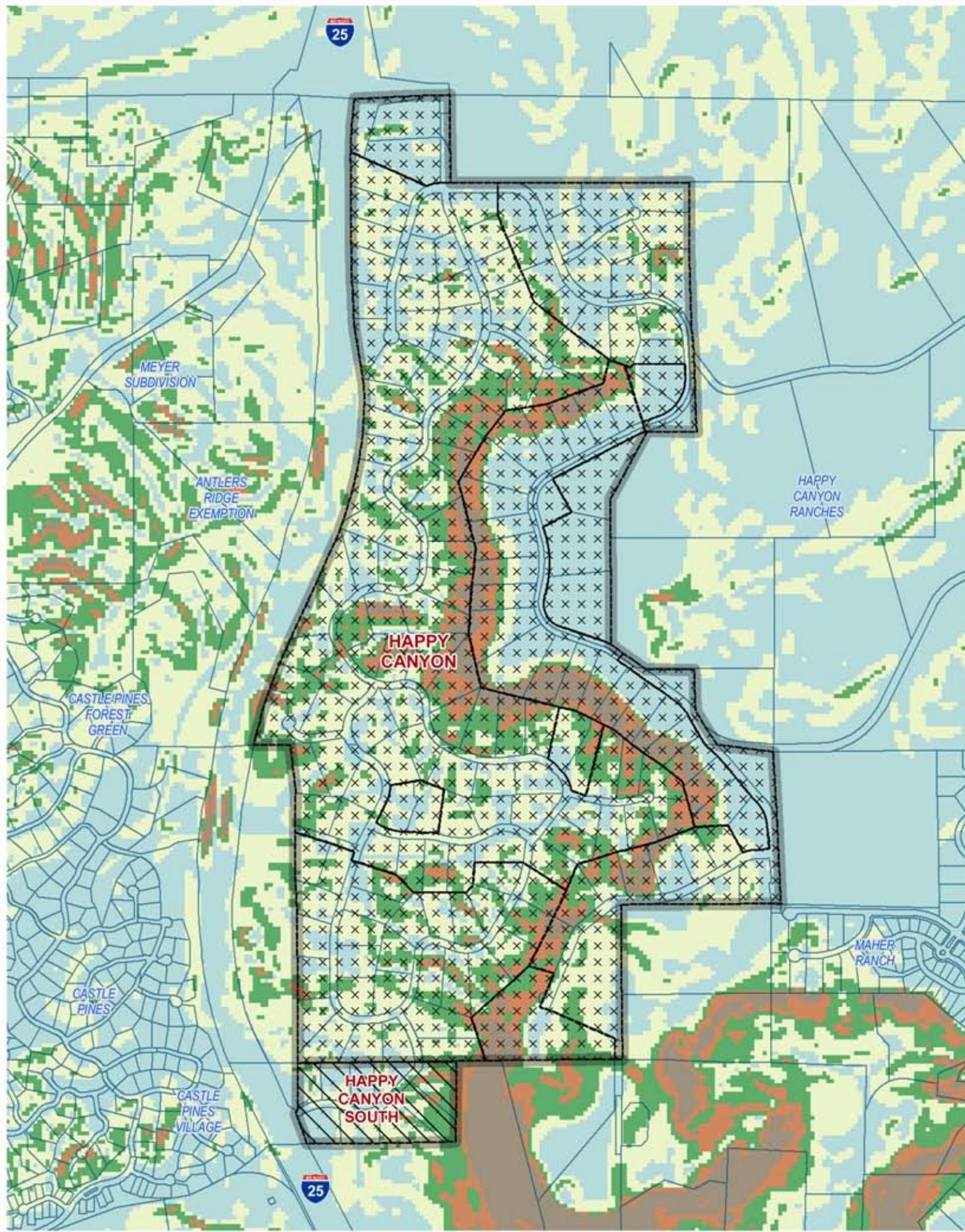


FIGURE 11.12: Happy Canyon & Happy Canyon South Subdivisions: Area Slope Analysis



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1:9,600
 1 inch equals 800 feet
 0 400 800 Feet

Legend

SUBDIVISIONS

- Happy Canyon
- Happy Canyon South
- PARCEL BOUNDARIES

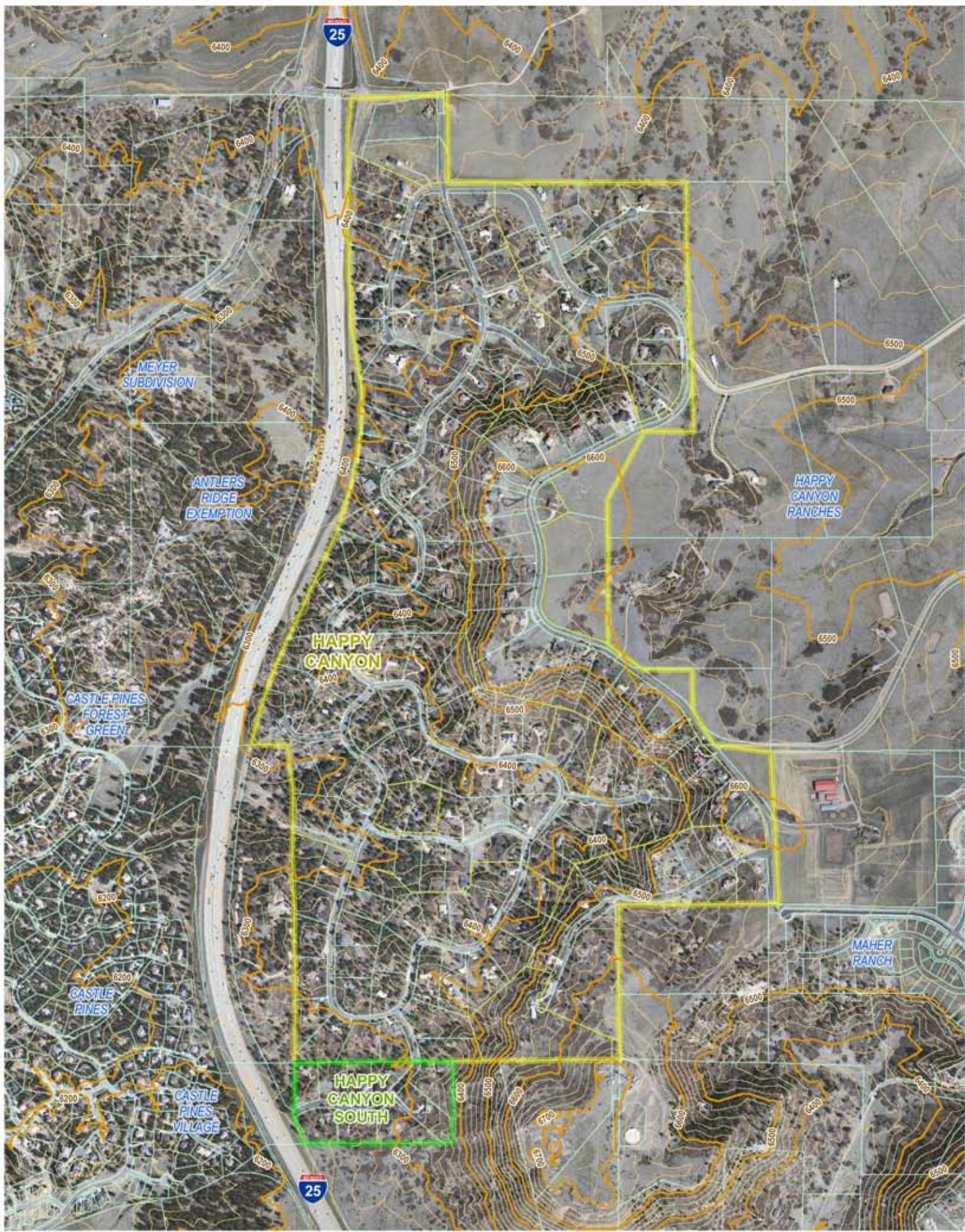
SLOPE

- 0 - 10%
- 11 - 20%
- 21 - 30%
- 31 - 40%
- Greater Than 40 %

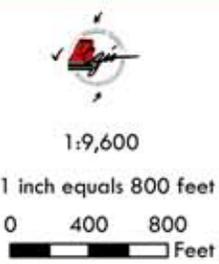
Slope Source: USGS DEM
 Date: 2002-03
 Resolution: 10 m



FIGURE 11.13: Happy Canyon & Happy Canyon South Subdivisions: Contour Line Elevations



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- Legend**
- PARCEL BOUNDARIES
 - SUBDIVISIONS**
 - Happy Canyon
 - Happy Canyon South

- CONTOUR LINE ELEVATIONS**
- Interval
- 20 Ft
 - 100 Ft



CONTOUR YEAR 1996
 IMAGERY DATE 2006

FIGURE 11.14: Happy Canyon & Happy Canyon South Subdivisions: Area Aspect (Directional Slope Faces)



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1:9,600
 1 inch equals 800 feet
 0 400 800 Feet

Legend

PARCEL BOUNDARIES

SUBDIVISIONS

- Happy Canyon
- Happy Canyon South

ASPECT (Slope Face)

- Flat
- North
- North East
- East
- South East
- South
- South West
- West
- North West

Aspect Constructed From USGS 15m DEM



12.0 APPENDICES

12.1 PREPARING A COMMUNITY WILDFIRE PROTECTION PLAN



Preparing a Community Wildfire Protection Plan

A Handbook for Wildland–Urban Interface Communities

Sponsored By:

Communities Committee • National Association of Counties • National Association of State Foresters
Society of American Foresters • Western Governors' Association

Communities
Committee



March 2004



Photo: CA Dept. of Forestry and Fire Protection

Introduction

The idea for community-based forest planning and prioritization is neither novel nor new. However, the incentive for communities to engage in comprehensive forest planning and prioritization was given new and unprecedented impetus with the enactment of the Healthy Forests Restoration Act (HFRA) in 2003.

This landmark legislation includes the first meaningful statutory incentives for the US Forest Service (USFS) and the Bureau of Land Management (BLM) to give consideration to the priorities of local communities as they develop and implement forest management and hazardous fuel reduction projects.

In order for a community to take full advantage of this new opportunity, it must first prepare a Community Wildfire Protection Plan (CWPP). Local wildfire protection plans can take a variety of forms, based on the needs of the people involved in their development. Community Wildfire Protection Plans may address issues such as wildfire response, hazard mitigation, community preparedness, or structure protection—or all of the above.

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

The language in the HFRA provides maximum flexibility for communities to determine the substance and detail of their plans and the procedures they use to develop them. Because the legislation is general in nature, some communities may benefit from assistance on how to prepare such a plan.

This *Handbook* is intended to provide communities with a concise, step-by-step guide to use in developing a CWPP. It addresses, in a straightforward manner, issues such as who to involve in developing a plan, how to convene other interested parties, what elements to consider in assessing community risks and priorities, and how to develop a mitigation or protection plan to address those risks.

This guide is not a legal document, although the recommendations contained here carefully conform to both the spirit and the letter of the HFRA. The outline provided offers one of several possible approaches to planning. We hope it will prove useful in helping at-risk communities establish recommendations and priorities that protect their citizens, homes, and essential infrastructure and resources from the destruction of catastrophic wildfire.

Cover images



Photo: David McNew/Getty Images



Photo: Justin Sullivan/Getty Images

Discussion

Communities and the Wildland–Urban Interface

The wildland–urban interface (WUI) is commonly described as the zone where structures and other human development meet and intermingle with undeveloped wildland or vegetative fuels. This WUI zone poses tremendous risks to life, property, and infrastructure in associated communities and is one of the most dangerous and complicated situations firefighters face.

Both the National Fire Plan and the Ten-Year Comprehensive Strategy for Reducing Wildland Fire Risks to Communities and the Environment place a priority on working collaboratively within communities in the WUI to reduce their risk from large-scale wildfire.

The HFRA builds on existing efforts to restore healthy forest conditions near communities and essential community infrastructure by authorizing expedited environmental assessment, administrative appeals, and legal review for hazardous fuels projects on federal land.

The Act emphasizes the need for federal agencies to work collaboratively with communities in developing hazardous fuel reduction projects, and it places priority on treatment areas identified by communities themselves in a CWPP.

Role of Community Wildfire Protection Plans

The HFRA provides communities with a tremendous opportunity to influence where and how federal agencies implement fuel reduction projects on federal lands and how additional federal funds may be distributed for projects on nonfederal lands. A CWPP is the most effective way to take advantage of this opportunity.

Local wildfire protection plans can take a variety of forms, based on the needs of those involved in their development. They can be as simple or complex as a community desires.

The *minimum requirements* for a CWPP as described in the HFRA are:

- (1) **Collaboration:** A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties.
- (2) **Prioritized Fuel Reduction:** A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure.
- (3) **Treatment of Structural Ignitability:** A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan.

The HFRA requires that three entities must mutually agree to the final contents of a CWPP:

- The applicable local government (i.e., counties or cities);
- The local fire department(s); and
- The state entity responsible for forest management.

In addition, these entities are directed to consult with and involve local representatives of the USFS and BLM and other interested parties or persons in the development of the plan. The process is intended to be open and collaborative, as



Photo: State and Private Forestry, Cooperative Programs Pacific Northwest Region

described in the Ten-Year Strategy, involving local and state officials, federal land managers, and the broad range of interested stakeholders.

If a community already has a plan that meets these requirements, the community need not develop an additional plan for the purposes of the HFRA.

Benefits to Communities

In the context of the HFRA, a CWPP offers a variety of benefits to communities at risk from wildland fire. Among those benefits is the opportunity to establish a localized definition and boundary for the wildland–urban interface.

In the absence of a CWPP, the HFRA limits the WUI to within ½ mile of a community’s boundary or within 1½ miles when mitigating circumstances exist, such as sustained steep slopes or geographic features aiding in creating a fire break. Fuels treatments can occur along evacuation routes regardless of their distance from the community. At least 50 percent of all funds appropriated for projects under the HFRA must be used within the WUI as defined by either a CWPP or by the limited definition provided in the HFRA when no CWPP exists.¹

In addition to giving communities the flexibility to define their own WUI, the HFRA also gives priority to projects and treatment areas identified in a CWPP by directing federal agencies to give specific consideration to fuel reduction projects that implement those plans. If a federal agency proposes a fuel treatment project in an area addressed by a community plan but identifies a different treatment method, the agency must also evaluate the community’s recommendation as part of the project’s environmental assessment process.

Preparing a Community Wildfire Protection Plan

- These step-by-step recommendations are intended to help communities develop a wildfire protection plan that addresses the core elements of community protection. Items required under the HFRA are addressed, as are some additional issues that often are incorporated into wildfire protection planning. Actions beyond those listed in the legislation are not required for the purposes of the HFRA.
- Community fire planning need not be a complex process. A community can use this outline to develop a fire plan that is as extensive or as basic as is appropriate and desired by the community.
- A key element in community fire planning should be the meaningful discussion it promotes among community members regarding their priorities for local fire protection and forest management. This handbook should help to facilitate these local discussions.

¹ In the absence of a CWPP, Section 101 (16) of the HFRA defines the wildland–urban interface as “ (i) an area extending ½ mile from the boundary of an at-risk community; (ii) an area within 1½ miles of the boundary of an at-risk community, including any land that (I) has a sustained steep slope that creates the potential for wildfire behavior endangering the at-risk community; (II) has a geographic feature that aids in creating an effective fire break, such as a road or ridge top; or (III) is in condition class 3, as documented by the Secretary in the project-specific environmental analysis; (iii) an area that is adjacent to an evacuation route for an at-risk community that the Secretary determines, in cooperation with the at-risk community, requires hazardous fuels reduction to provide safer evacuation form the at-risk community.”

✓ **STEP ONE: Convene Decisionmakers**

The initial step in developing a CWPP should be formation of an operating group with representation from local government, local fire authorities, and the state agency responsible for forest management.

Together, these three entities form the core decision-making team responsible for the development of a CWPP as described in the HFRA. The core team members must mutually agree on the plan's final contents.

In communities where several local governments and fire departments are within the planning area, each level of government/authority may need to convene ahead of time and identify a single representative to participate, on its behalf, as a core team member.



✓ **STEP TWO: Involve Federal Agencies²**

Once convened, members of the core team should engage local representatives of the USFS and BLM to begin sharing perspectives, priorities, and other information relevant to the planning process.³

Because of their on-the-ground experience, mapping capabilities, and knowledge of natural resource planning, these local land management professionals will be key partners for the core team. In some landscapes, they will also be largely responsible for implementing the priorities established in the resulting CWPP.

✓ **STEP THREE: Engage Interested Parties**

The success of a CWPP also hinges on the ability of the core team to effectively involve a broad range of local stakeholders, particularly when the landscape includes active and organized neighborhood associations, community forestry organizations that work in forest management, and other stakeholder groups that display a commitment to fire protection and fuels management.

Substantive input from a diversity of interests will ensure that the final document reflects the highest priorities of the community. It will also help to facilitate timely implementation of recommended projects. In some circumstances, the core team may wish to invite local community leaders or stakeholder representatives to work along with them in final decisionmaking.

As early as possible, core team members should contact and seek active involvement from key stakeholders and constituencies such as:

- Existing collaborative forest management groups
- City Council members
- Resource Advisory Committees
- Homeowners Associations—particularly those representing subdivisions in the WUI
- Division of Wildlife/Fish and Game—to identify locally significant habitats
- Department of Transportation—to identify key escape corridors
- Local and/or state emergency management agencies
- Water districts—to identify key water infrastructure
- Utilities
- Recreation organizations
- Environmental organizations
- Forest products interests
- Local Chambers of Commerce
- Watershed councils

This list provides a starting point and is by no means exhaustive.

² Sec. 103 (b)(2) of the Act states that “the Federal Advisory Committee Act (5 U.S.C. App.) shall not apply to the planning process and recommendations concerning community wildfire protection plans.”

³ A CWPP is legally applicable to federal lands only if they are managed by the USFS or the BLM. Nothing in the Act requires a community to exclude other federal agencies—such as the Fish and Wildlife Service or the National Park Service—from planning efforts, but those agencies are not bound by the provisions of the HFRA.



Photo: New Mexico State Forestry

In addition to directly contacting key individuals and organizations, core team members may want to consider using a public notice or public meeting process to acquire additional, more generalized input as the plan is developed.

✓ **STEP FOUR:** Establish a Community Base Map

Using available technology and local expertise, the core team and key partners should develop a base map of the community and adjacent landscapes of interest. This map will provide a visual information baseline from which community members can assess and make recommendations regarding protection and risk-reduction priorities.

To the extent practicable, the map should identify:

- Inhabited areas at potential risk to wildland fire;
- Areas containing critical human infrastructure—such as escape routes, municipal water supply structures, and major power or communication lines—that are at risk from fire disturbance events; and
- A preliminary designation of the community's WUI zone.

✓ **STEP FIVE:** Develop a Community Risk Assessment

The development of a community risk assessment will help the core team and community members more effectively prioritize areas for treatment and identify the highest priority uses for available financial and human resources.

A meaningful community assessment can be developed by considering the risk factors identified below. Choose an appropriate adjective rating (such as high, medium, and low) that best represents the risk to the community posed by each factor. Display the results on the base map to develop a useful tool for the final decision-making process.

State and federal land managers will be a valuable resource in helping communities locate the best available data and in producing quality maps that display and aid assessment of that data. Engaging key stakeholders in the rating process will be essential to a successful outcome.

A. Fuel Hazards

To the extent practicable, evaluate the vegetative fuels on federal and nonfederal land within or near the community. Identify specific areas where the condition of vegetative fuels is such that, if ignited, they would pose a significant threat to the community or essential community infrastructure. Consider how the local topography (such as slope, aspect, and elevation) may affect potential fire behavior.

Identify areas affected by windthrow, ice storms, or insect and disease epidemics where fuels treatment would reduce wildfire risks to communities and/or their essential infrastructure.

State and federal resource planning documents can be a valuable source of information on local forest and rangeland conditions.

Rate each area of identified hazardous fuels and show each on the base map as a high, medium, or low threat to the community.

B. Risk of Wildfire Occurrence

Using historical data and local knowledge, determine the common causes and relative frequency of wildfires in the vicinity of the community. Consider the range of factors, including critical weather patterns, that may contribute to the probability of fire ignitions and/or extreme fire behavior.

Use relative ratings such as high, medium, and low to show areas of concern for fire starts on the base map.

C. Homes, Businesses, and Essential Infrastructure at Risk

Assess the vulnerability of structures within the community to ignition from firebrands, radiation, and convection. Document areas of concern.

Identify specific human improvements within or adjacent to the community, such as homes, businesses, and essential infrastructure (e.g., escape routes, municipal water supply structures, and major power and communication lines) that would be adversely impacted by wildfire.

Categorize all identified areas needing protection using ratings of high, medium, or low, and show them on the base map.

D. Other Community Values at Risk

At the community's option, the risk assessment may also consider other areas of community importance, such as critical wildlife habitat; significant recreation and scenic areas; and landscapes of historical, economic, or cultural value that would benefit from treatment to reduce wildfire risks. Additional recommendations from local stakeholders should be incorporated as appropriate.

Categorize all identified areas that warrant protection using the ratings of high, medium, or low, and show them on the base map.

E. Local Preparedness and Firefighting Capability

Assess the level of the community's emergency preparedness, including evacuation planning, safety zones, and fire assistance agreements, as well as the response capability of community and cooperator fire protection forces. Consider the insurance industry ISO rating, if available and applicable. Use the knowledge and experience of local officials to identify areas in need of improvement.

Incorporate local preparedness information into the base map as appropriate.

✓ **STEP SIX:** Establish Community Hazard Reduction Priorities and Recommendations to Reduce Structural Ignitability

Once the community assessment and base map are completed, the core team should convene all interested parties to discuss the results and their implications for local protection and hazard mitigation needs. A key objective of these discussions is to develop the community's prioritized recommendations for fuel treatment projects on federal and nonfederal lands in the WUI, along with the preferred treatment methods for those projects.

Recommendations should also be developed regarding actions that individuals and the community can take to reduce the ignitability of homes and other structures in the community's WUI zone.

While local interests are gathered, communities may also want to take this opportunity to identify and develop strategies to improve their emergency preparedness and fire response capability.

The discussion and identification of community priorities should be as open and collaborative as possible. Diverse community involvement at this stage is critical to the ultimate success of the CWPP.



Recommendations included in the final CWPP should clearly indicate whether priority projects primarily serve to protect the community and its essential infrastructure or are geared toward reducing risks to the other community values. Under the provisions of the HFRA, only projects that primarily serve to protect communities and essential infrastructure are eligible for the minimum 50 percent WUI funding specified in the legislation.

✓ **STEP SEVEN: Develop an Action Plan and Assessment Strategy**

Before finalizing the CWPP, core team members and key community partners should consider developing an action plan that identifies roles and responsibilities, funding needs, and timetables for carrying out the highest priority projects.

Additional consideration should be given to establishing an assessment strategy for the CWPP to ensure that the document maintains its relevance and effectiveness over the long term.⁴

✓ **STEP EIGHT: Finalize the Community Wildfire Protection Plan⁵**

The final step in developing a CWPP is for the core team to reconvene and mutually agree on the fuels treatment priorities, preferred methods for fuels treatment projects, the location of the wildland-urban interface, structural ignitability recommendations, and other information and actions to be contained in the final document.

If an associated action plan has not been developed, the core team should identify a strategy for communicating the results of the planning process to community members and key land management partners in a timely manner.

⁴ Community planning participants may also want to participate in multiparty monitoring of USFS and BLM projects developed under the HFRA as provided for in Sec.102 (g)(5) of the legislation: “In an area where significant interest is expressed in multiparty monitoring, the Secretary shall establish a multiparty monitoring, evaluation, and accountability process in order to assess the positive or negative ecological and social effects of authorized hazardous fuels reductions projects.”

⁵ Some states have statutes that may require an environmental analysis for plans adopted by local or state agencies. In such states, core team members should determine whether formal environmental analysis is required before finalizing their plans.

Summary and Checklist

- ✓ **Step One: Convene Decisionmakers**
 - Form a core team made up of representatives from the appropriate local governments, local fire authority, and state agency responsible for forest management.
- ✓ **Step Two: Involve Federal Agencies**
 - Identify and engage local representatives of the USFS and BLM.
 - Contact and involve other land management agencies as appropriate.
- ✓ **Step Three: Engage Interested Parties**
 - Contact and encourage active involvement in plan development from a broad range of interested organizations and stakeholders.
- ✓ **Step Four: Establish a Community Base Map**
 - Work with partners to establish a baseline map of the community that defines the community's WUI and displays inhabited areas at risk, forested areas that contain critical human infrastructure, and forest areas at risk for large-scale fire disturbance.
- ✓ **Step Five: Develop a Community Risk Assessment**
 - Work with partners to develop a community risk assessment that considers fuel hazards; risk of wildfire occurrence; homes, businesses, and essential infrastructure at risk; other community values at risk; and local preparedness capability.
 - Rate the level of risk for each factor and incorporate into the base map as appropriate.
- ✓ **Step Six: Establish Community Priorities and Recommendations**
 - Use the base map and community risk assessment to facilitate a collaborative community discussion that leads to the identification of local priorities for fuel treatment, reducing structural ignitability, and other issues of interest, such as improving fire response capability.
 - Clearly indicate whether priority projects are directly related to protection of communities and essential infrastructure or to reducing wildfire risks to other community values.
- ✓ **Step Seven: Develop an Action Plan and Assessment Strategy**
 - Consider developing a detailed implementation strategy to accompany the CWPP, as well as a monitoring plan that will ensure its long-term success.
- ✓ **Step Eight: Finalize Community Wildfire Protection Plan**
 - Finalize the CWPP and communicate the results to community and key partners.

Sponsor Organizations

Communities Committee of the Seventh American Forest Congress

www.communitiescommittee.org

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Columbia Falls, MT 59912
Phone: (406) 892-8155
Fax: (406) 892-8161

National Association of Counties

www.naco.org

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National Association of State Foresters

www.stateforesters.org

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Society of American Foresters

www.safnet.org

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Fax: (301) 897-3690

Western Governors' Association

www.westgov.org

1515 Cleveland Place
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Denver, CO 80202-5114
Phone: (303) 623-9378
Fax: (303) 534-7309

For an electronic version of this Handbook and the latest information visit:
www.safnet.org/policyandpress/cwpp.cfm

Additional Resources on the Web:

- Federal Agency Implementation Guidance for the Healthy Forest Initiative and the Healthy Forest Restoration Act: www.fs.fed.us/projects/hfi/field-guide/
- Field Guidance for Identifying and Prioritizing Communities at Risk: www.stateforesters.org/reports/COMMUNITIESATRISKFG.pdf
- The National Fire Plan: www.fireplan.gov
- Fire Safe Councils: www.firesafecouncil.org
- Western Governors Association: www.westgov.org
- Collaboration:
www.redlodgeclearinghouse.org
www.snre.umich.edu/emi/lessons/index.htm

Examples of Community Fire Plans

(Note: these plans may not meet the requirements of HFRA, because they were created prior to its enactment)

Josephine County, Oregon: www.co.josephine.or.us/wildfire/index.htm

Applegate Fire Plan: www.grayback.com/applegate-valley/fireplan/index.asp

Colorado Springs, CO: csfd.springsgov.com/wildfiremitigation.pdf

Jefferson County, Colorado: www.co.jefferson.co.us/ext/dpt/admin_svcs/emergmgmt/index.htm

Lower Mattole Fire Plan: www.mattole.org/html/publications_publication_2.html

Trinity County Fire Management Plan: users.snowcrest.net/tcrd/

Want to help protect your community from wildfire risk?

Check out this *NEW* Handbook
for preparing community wildfire protection plans!

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12.2 COMMUNITY WILDFIRE PROTECTION
PLAN GUIDELINES FOR
IMPLEMENTATION

COMMUNITY WILDFIRE PROTECTION PLANS



GUIDELINES FOR IMPLEMENTATION

OVERVIEW

Community Wildfire Protection Plans are authorized and defined in Title I of the *Healthy Forests Restoration Act (HFRA)* passed by Congress on November 21, 2003 and signed into law by President Bush on December 3, 2003.

The Healthy Forests Restoration Act places renewed emphasis on community planning by extending a variety of benefits to communities with a wildfire protection plan in place. Critical among these benefits is the option of establishing a localized definition and boundary for the wildland-urban interface (WUI) and the oppor-

tunity to help shape fuels treatment priorities for surrounding federal and non-federal lands.

The CWPP, as described in the Act, brings together diverse local interests to discuss their mutual concerns for public safety, community sustainability and natural resources. It offers a positive, solution-oriented environment in which to address challenges such as: local firefighting capability, the need for defensible space around homes and subdivisions, and where and how to prioritize land management – on both federal and non-federal land.



WHO

- ▶ Community wildfire protection planning should be led by local interests with support from state and federal agencies and non-governmental stakeholders.

- ▶ The HFRA requires that, at a minimum, the local government, local fire authority, and a state forestry representative agree on the plan. The HFRA also requires that the plan be developed through meaningful collaboration with a wide variety of local organizations and interest groups.



- ▶ Federal land managers should contribute specialized natural resource knowledge and technical expertise to the planning process, particularly in the areas of GIS and mapping, vegetation management, assessment of values and risks and funding strategies.

WHAT

- ▶ A Community Wildfire Protection Plan is a written and agreed upon document that identifies how a community will reduce its risk from wildland fire.

- ▶ The plan should address wildfire response capability and protection of homes and other structures, as well as identify and prioritize areas of federal and non-federal land where fuels reduction is needed to reduce threats to the community or its critical infrastructure.

Other values at risk should be identified, such as watersheds, open space, wildlife habitat, etc.)



- ▶ The plan should also include specific steps for implementing the community's recommendations.

WHEN

- ▶ NOW is a good time to start working on a Community Wildfire Protection Plan if your community is in an area at risk for large-scale or high-intensity wildfire. The process will generally take from six months to a year depending on the complexity of a community's situation, the partners involved and/or the resources available to put the plan together.

WHERE

- ▶ A Community Wildfire Protection Plan should emphasize the wildland-urban interface where people, structures and other community values are most likely to be negatively impacted by wildfire.



- ▶ This does not mean communities are limited to considering populated areas. The HFRA suggests that communities develop an interface definition and boundary that suits their unique environment.

- ▶ Depending on the nature of the community, priorities for fuel treatment may include critical watersheds, public water and power facilities, key habitat areas, important recreation sites or other elements of community infrastructure.

WHY

- ▶ A CWPP allows a community to take the lead in and set priorities for its own protection.
- ▶ A CWPP also brings together diverse local interests to develop strategies for improving public safety, community protection and natural resource management.
- ▶ The HFRA gives communities with a CWPP the opportunity to have greater influence over the location and type of land management treatments that occur on federal lands surrounding their community.



- ▶ The HFRA also gives communities the opportunity to define their own wildland-urban interface. Federal agencies are currently directed to spend at least 50 percent of their fuel hazard reduction dollars on projects in the interface.

HOW

- ▶ Several national organizations worked together to develop a publication titled *Preparing a Community Wildfire Protection Plan: A Handbook for Wildland-Urban Interface Communities*. This publication outlines an eight step process for developing an effective Community Wildfire Protection Plan as described in the Healthy Forests Restoration Act.

- ▶ **Step One:** Establish a core group of local leaders with interest in and commitment to the development of a Community Wildfire Protection Plan.



- ▶ **Step Two:** Engage federal and state land managers and enlist their technical assistance, support and participation.



- ▶ **Step Three:** Contact and seek active involvement from diverse stakeholders that may have an interest in identifying where and how community protection activities occur.



- ▶ **Step Four:** Create a working map of the community, including populated areas, land ownerships, and vegetative conditions.

- ▶ **Step Five:** Conduct a community risk assessment that looks at local wildfire response capability, fuel hazards, risks of wildfire occurrence, and homes, businesses and other community values at risk.



► **Step Six:** Identify fuels treatment priorities and methods on federal and non-federal land and describe ways that homeowners can reduce their own risks through Firewise building and landscaping.



► **Step Seven:** Develop an implementation plan and strategy for assessing the overall plan's effectiveness.

► **Step Eight:** Finalize and share the plan with the larger community.

For More Information

- Alamosa District Office
Colorado State Forest Service
(719) 587-0915
- Boulder District Office
Colorado State Forest Service
(303) 823-5774
- Cañon City District Office
Colorado State Forest Service
(719) 275-6865
- Durango District Office
Colorado State Forest Service
(970) 247-5250

- Fort Collins District Office
Colorado State Forest Service
(970) 491-8660
- Fort Morgan District Office
Colorado State Forest Service
(970) 867-5610
- Franktown District Office
Colorado State Forest Service
(303) 660-9625
- Golden District Office
Colorado State Forest Service
(303) 279-9757
- Granby District Office
Colorado State Forest Service
(970) 887-3121
- Grand Junction District Office
Colorado State Forest Service
(970) 248-7325
- Gunnison District Office
Colorado State Forest Service
(970) 641-6852
- La Junta District Office
Colorado State Forest Service
(719) 384-9087
- La Veta District Office
Colorado State Forest Service
(719) 742-3588
- Montrose District Office
Colorado State Forest Service
(970) 249-9051
- Salida District Office
Colorado State Forest Service
(719) 539-2579
- Steamboat Springs District Office
Colorado State Forest Service
(970) 879-0475
- Woodland Park District Office
Colorado State Forest Service
(719) 687-2951

13.0 References

References

Castle Rock: a grass roots history
by Robert L. Lowenberg
Lowenberg; Englewood, Colo.: Printed by Quality Press, 1986

Douglas County: a historical journey
Josephine Lowell Marr; compiled by Joan Marr Keiser
J.L. Marr; Gunnison, CO: B & B Printers, c1983

Douglas County, Colorado: a photographic journey /
by the Castle Rock Writers
Castle Rock, Colo.: Douglas County Libraries Foundation, c2005.
Douglas County Libraries' webpage on the book

Walk with our pioneers: a collection
by Alice M. Thompson.
Grand Junction, Colo.: JLM Sales, 2005.
Publisher's website

And I received a lot of help from the Douglas County Library and staff and resources they have at the Wilcox Branch. There is also a Douglas County Historic Preservation web site which was of great help. It can be accessed through the Douglas County Website.

Kaufmann, M.R., Veblen, T.T., Romme, W.H., 2005. "Historical Fire Regimes in Ponderosa Pine Forests of the Colorado Front Range, and Recommendations for Ecological Restoration and Fuels Management". Colorado Forest Restoration Institute, Colorado State University, The Nature Conservancy.

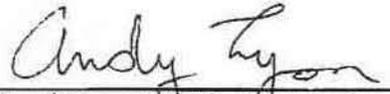
JMW, Surface Fire Behavior Predictions, SMFR, 2007.

The Happy Canyon Community Wildfire Protection Plan was collaboratively developed. Interested parties, including Happy Canyon homeowners, South Metro Fire Rescue Authority, Douglas County Wildfire Mitigation Staff, and the Colorado State Forest Service, participated and provided input to the process.

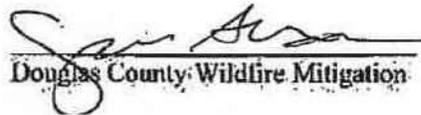
The CWPP identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment that will protect Happy Canyon. It also recommends measures to reduce the ignitability of structures throughout the area.

The following community representatives/agencies have reviewed and support this Community Wildfire Protection Plan.


11-20-08
Happy Canyon HIOA


11-18-08
South Metro Fire Rescue Authority


11-19-08
Colorado State Forest Service
Franktown District


11-17-08
Douglas County Wildfire Mitigation