

Chateau Chaparral Firewise USA® Community Assessment



COLORADO STATE UNIVERSITY

Prepared by:

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1) Introduction

NFPA's Firewise USA® program teaches people how to live with wildfire and increase their home's chance of survival through proactive actions, while encouraging neighbors to work together to reduce losses and damage. The Firewise USA® program is designed to provide an effective management approach for preserving wildland living aesthetics. The program can be tailored for adoption by any community and/or neighborhood association that is committed to ensuring its citizens maximum protection from wildland fire. The following community assessment is a requirement for FirewiseUSA® recognition. It is intended as a resource to be used by the Chateau Chaparral residents for creating a wildfire safety action plan. It's a tool to help residents and their community members understand their wildfire risk and engage them in risk reduction efforts. The plan developed from the information in this assessment should be implemented in a collaborative manner and updated and modified as needed.

The community wildfire risk assessment speaks to the general conditions of the overall Firewise USA® site and does not provide details on each individual dwelling.

The assessment focuses on:

- Vulnerability of homes to embers, surface fire, and crown fire
- Condition of the structures themselves
- Immediate hazards within the HIZ on individual properties
- Concerns presented by common/open space areas or adjacent public lands

Other factors considered that impact risk and influence fire behavior or structure ignitability:

- Structural characteristics (such as roofing, siding, and decks)
- Vegetation types
- Slope and aspect (direction a community faces - north, south, east, or west)
- Housing density

The data used to complete this community assessment was collected utilizing a combination of field observations and remote sensing mapping via the Colorado Forest Atlas. Data was collected by CSFS Forester, Josh Kuehn.

2) Definition of the Home Ignition Zone —

Chateau Chaparral is located in the Wildland Urban Interface (WUI). The WUI is any area where structures and other human developments meet or intermingle with wildland vegetative fuels. Wildfires will happen—exclusion is not a choice. The variables in a fire scenario are when the fire will occur, and where. This assessment addresses the wildfire-related characteristics of Chateau Chaparral. It examines the area's exposure to wildfire as it relates to ignition potential. The assessment does not focus on specific homes, but examines the community as a whole.

A house burns because of its interrelationship with everything in its surrounding home ignition zone—the house and its immediate surroundings. Research has shown embers (burning pieces of airborne wood and/or vegetation that can be carried more than a mile through the wind) and small surface fires to be the primary source of home ignitions during wildfires.

Residents must prepare their home to withstand embers and minimize the likelihood of flames or surface fire touching the home or any attachments. Changing a fire's path by clearing a home ignition zone is an easy-to-accomplish task that can result in avoiding home loss. This includes

interrupting the natural path a fire takes, which includes limiting the amount of flammable vegetation from the area immediately around the structure to prevent flames from contacting it. Reducing the volume of live vegetation around the home will affect the intensity of the wildfire as it enters the home ignition zone.

Other techniques include choosing ignition-resistant building materials and construction techniques, along with periodic exterior maintenance within the three home ignition zones (HIZ). These zones include the Immediate Zone: 0 to 5 feet around the house including the deck and attachments; Intermediate Zone: 5 to 30 feet; and the Extended Zone: 30 to 100 feet.

Included in this assessment are observations made while visiting Chateau Chaparral. The assessment addresses the ease with which home ignitions can occur under severe wildfire conditions and how these ignitions might be avoided within the home ignition zones of affected residents. Chateau Chaparral residents can reduce their risk of destruction during a wildfire by taking actions within their home ignition zones. This zone principally determines the potential for home ignitions during a wildland fire; it includes a house and its immediate surroundings within 100 feet.

The result of the assessment is that wildfire behavior and home survivability will be dominated by the residential characteristics of this area. The good news is that by addressing community vulnerabilities, residents will be able to substantially reduce their exposure to loss. Relatively small investments of time and effort will reap great rewards in wildfire safety.

It is common for home ignition zones to overlap onto adjacent properties. This makes the conditions of neighboring homes and vegetation a part of the wildfire threat. To maximize benefits, it's extremely important that neighbors work collaboratively with each other, and talk with each other, to reduce their shared risk.



3) Description of [Size and Nature of] the Severe Case Wildland Fire Characteristics that Could Threaten the Area

Fire intensity and spread rate depend on the fuel type and condition (live/dead), the weather

conditions prior and during ignition, and the topography. Generally the following relationships hold between the fire behavior and the fuel, weather and topography.

- **Fine fuels** - ignite more easily and spread faster with higher intensities than coarser fuels. For a given fuel, the more there is and the more continuous it is, the faster the fire spreads and the higher the intensities. Fine fuels take a shorter time to burn out than coarser fuels. The most prevalent fine fuel source within and surrounding Chateau Chaparral are tumbleweeds, grasses, and pine needles. Homeowners should make efforts to eliminate these fine fuels within Zone 1 of their defensible space and minimize them in Zone 2.

Fine fuel loading is a significant threat related to wildfire behavior within and surrounding the Chateau Chaparral neighborhood. The area is surrounded by agricultural fields, which at the time of data collection, were non-irrigated and rather dry. Additionally, within the subdivision there are areas with significant fine fuel loading.

- **Weather** - conditions affect the moisture content of the dead and live vegetative fuels. Dead fine fuel moisture content is highly dependent on the relative humidity and the degree of sun exposure. The lower the relative humidity and the greater the sun exposure, the lower will be the fuel moisture content. Lower fuel moistures produce higher spread rates and fire intensities.

In general, Chaffee County has been experiencing prolonged drought conditions for at least the last two decades. These conditions are reflected throughout the Chateau Chaparral community and the area is routinely exposed to full sun exposure.

- **Wind speed** - significantly influences the rate of fire spread and fire intensity. The higher the wind speed, the greater the spread rate and intensity.
 - **Wind exposure** –
 - Regularly exposed to winds of varying intensity

Predominant winds come from the west-southwest direction. Wind will be a considerable factor in determining fire behavior. Given the topography and fuel conditions seen throughout the community, a high wind event has potential to push high intensity fire through the Chateau Chaparral subdivision.

- **Topography** - influences fire behavior principally by the aspect and steepness of the slope. However, the configuration of the terrain such as narrow draws, saddles and so forth can influence fire spread and intensity. In general, the steeper the slope, the higher the uphill fire spread and intensity.

The topography found within and around Chateau Chaparral is mostly flat with moderate slopes under 20% grade. Steep slopes are found along the Arkansas River banks that run up toward the backside of several homes. Wind driven fire could be pushed either from surrounding agricultural fields into the subdivision or fuels ignited through embers along the banks of the Arkansas River could run uphill into the subdivision.

Wildland Fire Management and Suppression Tactics: Public and firefighter safety is the top priority of all fire management officials. In the event of a wildfire impacting this area, the first and foremost action taken will be to quickly yet safely evacuate residents if deemed necessary. Firefighting personnel may or may not be involved in this activity. Suppression priorities for

firefighters will vary based upon capabilities and overall strategy, but since firefighter safety is a top priority, disengagement may result from conditions becoming too hazardous. These priorities make it imperative that individual homeowners effectively treat the home ignition zone around their structures to increase the likelihood of their structures surviving a wildfire without aid from firefighters.

Wildfire Ignition Potential: One of the most likely ignition sources within Chateau Chaparral is a start inside the community. This could occur from several sources including but not limited to, campfires, sparks from lawn care equipment, or a structure fire. An ignition within the neighborhood could run structure to structure or ignite surrounding vegetation and carry throughout.

Another likely ignition source that could impact Chateau Chaparral is a grass fire in the surrounding area carrying into the neighborhood. Agriculture fires are often caused by sparks from equipment, roadside ignitions, or ember showers from nearby wildfires. These are all instances that could potentially impact the Chateau Chaparral community.

4) Site Description

- **Community size-** 40 acres, 306 lots
- **Description of properties within community-** Mobile/Manufactured
- **Types of ownership-** Private and Commonly owned lots
- **Lot sizes-** Less than .10 acres or 4,356 square feet
- **Community history-** Chateau Chaparral was first organized as a condominium property in 1973 with 307 campsites and several acres of common area. Prior to being organized as a condominium property the area was organized as Kampgrounds of America (KOA) campground. The area was likely utilized by the Boy Scouts originally as the suspension bridge that crosses the Arkansas River to the community's common land was constructed by Boy Scout troops.
- **Adjacent landowners-** Chateau Chaparral is bordered by agricultural ranches to the north and south. To the west, Chateau Chaparral is bordered by the community of Nathrop. To the east, Chateau Chaparral is bordered by public lands.
- **Vegetation types and conditions-** Vegetation types in and around the Chateau Chaparral community are variable. Within the neighborhood the majority of the vegetation consists of ornamental and decorative trees, shrubs, and grasses that for the most part are green and healthy. The eastern end of the neighborhood borders the Arkansas River, and typical riparian species can be found along its banks. The stream bank is densely vegetated and could carry fire up to the threshold of homes. Further to the east the public land that borders the neighborhood consists of a typical central Colorado pinon-juniper forest with mixed ponderosa pines. The terrain on the public lands is rocky and does not support dense vegetation. To the south the neighborhood is bordered by another riparian area from an Arkansas River tributary stream. The vegetation in this stretch is dense and what one would expect to find in a thriving riparian ecosystem. Further to the south, beyond the riparian area, to the west and north Chateau Chaparral is surrounded by fields of grasses.
- **CWPP (Community Wildfire Protection Plan) relevance-** Chateau Chaparral is covered under the Chaffee County Community Wildfire Protection Plan (CWPP). This

CWPP rates the subdivision as having a moderate to high wildfire potential. Chateau Chaparral is served by the Chaffee County Fire Protection District.

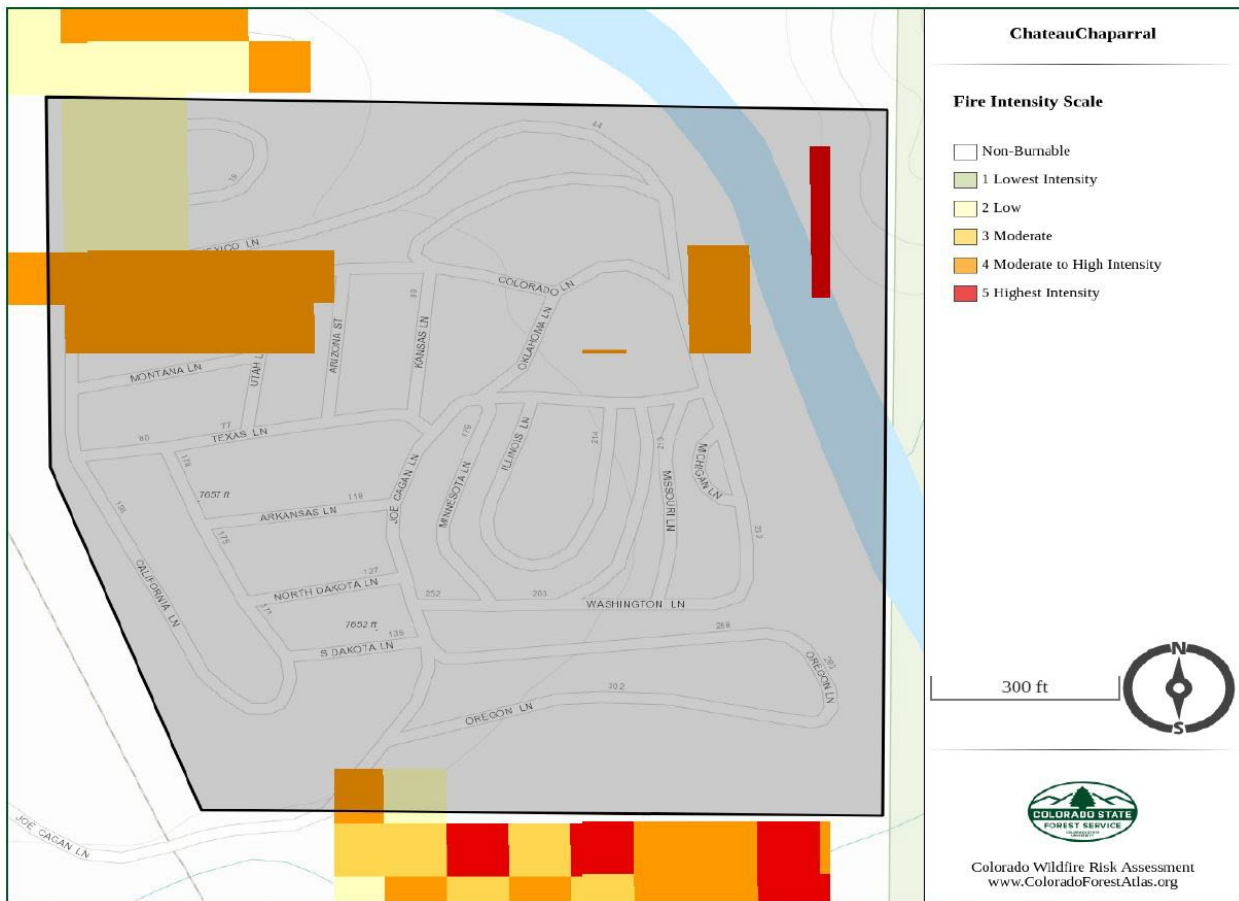
- **Neighborhood Risk/Hazard Assessment** – Chateau Chaparral received a ranking of Moderate Fire Hazard. Simple tasks that may be taken to reduce this ranking include:
 - A: Encourage homeowners to undertake home hardening practices
 - B: Work with residents to reduce fine fuel loading within and surrounding the neighborhood
 - C: Encourage residents to employ defensible space practices where feasible
- **Other pertinent information-**
 - Common ground juniper was found on several lots throughout Chateau Chaparral. This surface fuel burns with volatility and is commonly ignited via ember showers. It is highly recommended that homeowners remove any common ground juniper within their first zone of defensible space (first 5' around the structure).
- **COWRAP (CO Wildfire Risk Analysis Portal) analysis-** The following maps and information were obtained from COWRAP- Rate of Spread, Flame Length, Fire Intensity Scale, Fire Type. More detail is listed below under - **Anticipated local wildfire conditions**

- **Anticipated local wildfire conditions-**

1. **Fire Intensity Scale** - specifically identifies areas where significant fuel hazards and associated dangerous fire behavior potential exist. Similar to the Richter scale for earthquakes, FIS provides a standard scale to measure potential wildfire intensity. FIS consist of five (5) classes where the order of magnitude between classes is ten-fold. The minimum class, Class 1, represents very low wildfire intensities and the maximum class, Class 5, represents very high wildfire intensities. It only evaluates the potential fire behavior for an area.

The fire intensity scale indicates Chateau Chaparral has the potential for moderately dangerous fire conditions.

Homeowners should anticipate this and start reducing fuel through creating defensible space along with hardening their homes.

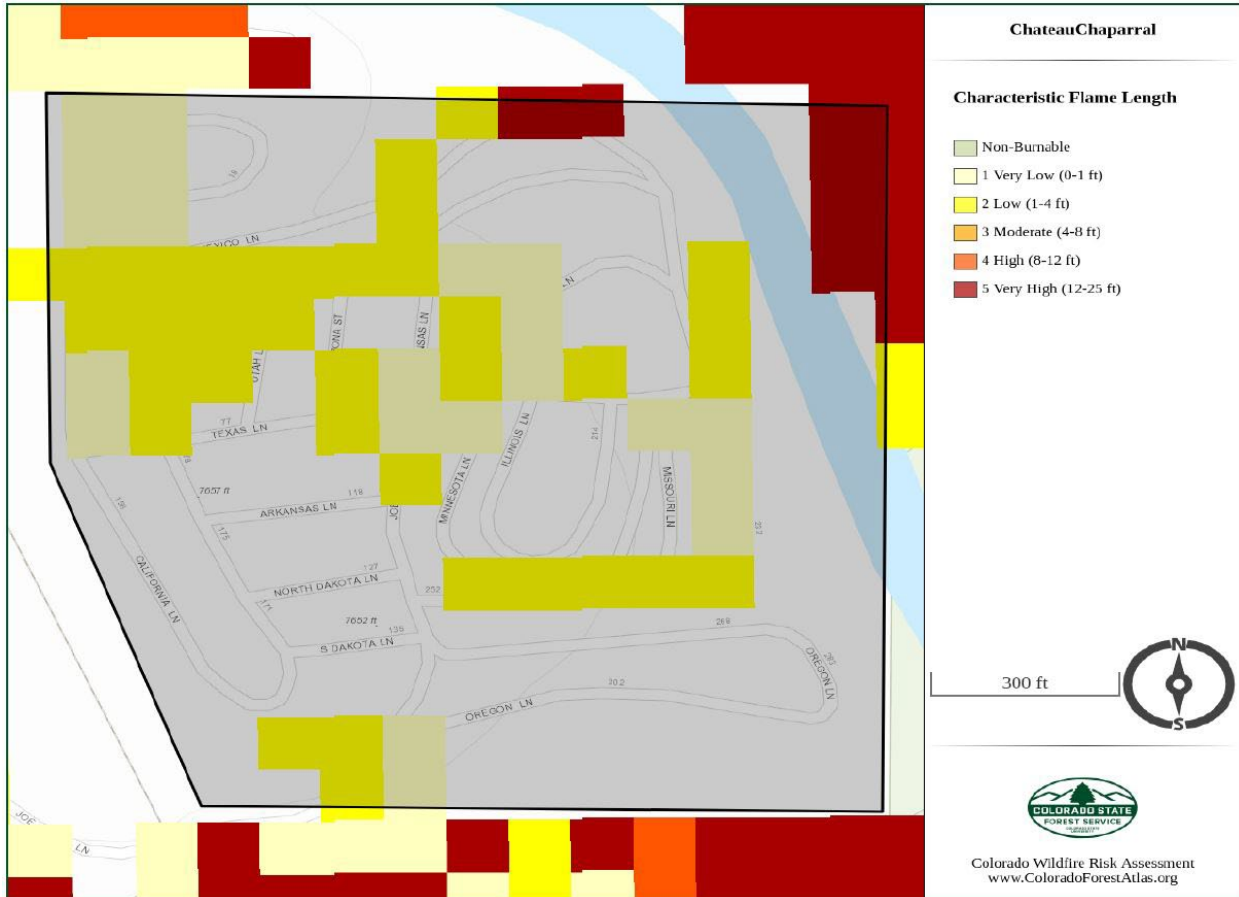


2. **Fire Type** –Represents the potential fire type under the most extreme fire weather conditions. The type of fire determines how firefighters may be able to suppress the fire. Surface fires means that firefighters may actively engage the fire and may be able to be in the area to protect structures. Canopy fires mean that aerial resources are the main form of suppression and firefighters may not be able to safely engage the fire on the ground.

Due to the anticipated fire type firefighters may not attempt to protect all structures. Homeowners may protect their homes in advance by employing home hardening practices and creating defensible space in advance.



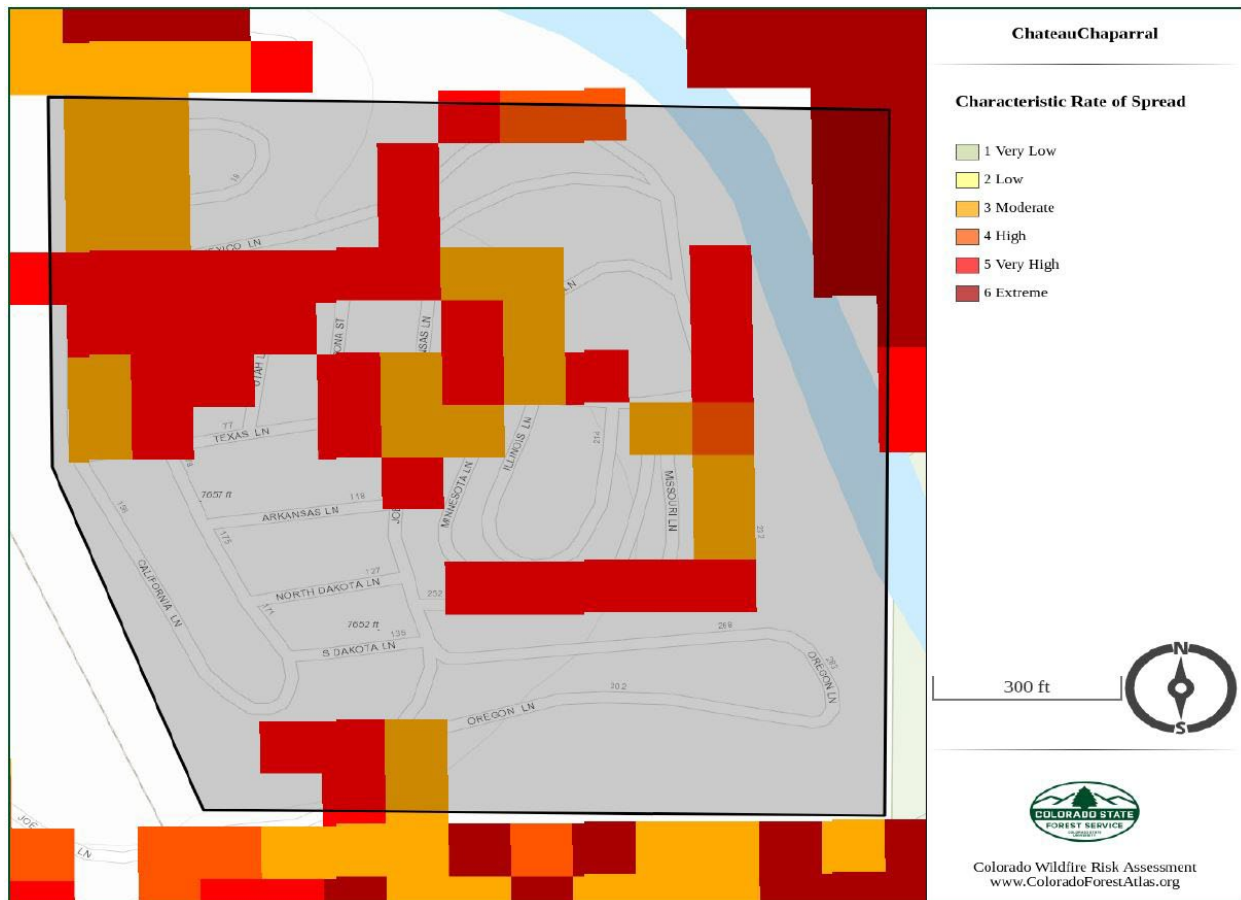
3. **Flame Length** – is a measure of the expected flame length of a potential fire. Flame length is influenced by fuels, weather and topography. It is an indicator of fire intensity and is often used to estimate how much heat the fire is generating. Flame lengths that exceed 4 feet mean hand crews cannot safely control the fire. Due to the anticipated flame lengths firefighters may not attempt to protect structures. Homeowners may decrease flame lengths around their structures through creating defensible space in advance.



4. **Rate of Spread** – is a measure of the expected rate of spread of a potential fire. Rate of spread is influenced by fuels, weather and topography. This measurement represents the maximum rate of spread of the fire front. The anticipated rate of spread for Chateau Chaparral indicates that a potential wildfire could move through the area at a moderate to very high pace.

This means firefighters may not have time to mitigate fuels around structures or that the firefighters can safely defend the structures.

Homeowners should anticipate limited mitigation time and reduce fuels prior to any fire threats.



5) Assessment Process

Data was gathered through several onsite evaluations of the Chateau Chaparral community by CSFS staff. Additional data was retrieved by running a Colorado Forest Atlas Wildfire Risk Reduction Planner analysis of the community. Data obtained from the Colorado Forest Atlas analysis was field verified.

6) Important Considerations

The Firewise USA® program acknowledges that there are many reasons and values that lead a person to live in the WUI and that there may be a desire for certain flammable components to exist on their property.

Homeowners already balance their decisions about fire protection measures against their desire for certain flammable components on their properties. It is important for them to understand the implications of the choices they are making. These choices directly relate to the ignitability of their home ignition zones during a wildfire. The following are examples of look out situations that ought to be considered when undergoing home hardening and defensible space creation.



The above photo illustrates several less than desirable conditions related to defensible space. The large tree in the photo has low hanging branches that could serve as ladder fuels carrying a surface fire into the canopy. Additionally the tree is overhanging a propane tank, and that propane tank is surrounded by fine fuels. At minimum, the lowest hanging branches ought to be removed from the tree and the fine fuels should be removed from around the propane tank.



This photo demonstrates easily ignitable fuels surrounding a structure. Not only is there presence of dense flammable vegetation directly adjacent to the home, many of these fuels are common ground juniper. Additionally, there is an unmaintained wooden deck amongst these fuels that could easily ignite and carry fire up to the structure. The common ground juniper ought to be removed along with trimming of the remaining shrubs and the deck ought to be treated or replaced with composite decking material.



The above photo illustrates a condition found throughout the Chateau Chaparral community – firewood piles located directly adjacent to structures. The CSFS recommends that firewood piles be removed at least 30’ away from structures to lessen the chance of ignition. This standard is likely not achievable within the neighborhood given the small lot sizes unless communal firewood piles were located throughout.

7) Observations and Recommendations

The observation section is broken down by the characteristics of homes and the vegetation management within the home ignition zones and common areas.

Observations (Solutions)

General Structural Observations	Observed
<p>Roofing material -use of flammable roofing materials such as wood shake shingles.</p> <ul style="list-style-type: none"> • Greater than 75% of homes have metal, tile or Class A asphalt or fiberglass shingles <p><i>-Replace with Class A rated roofing material – asphalt shingles or metal.</i></p>	X
<p>Fine fuels - leaf litter, pine needles or debris build-up on roofs/gutters/nooks/decks</p> <ul style="list-style-type: none"> • 25 to 49% of homes have cleaned up fine fuels <p><i>-Remove all leaf/needle build-up from roof /gutters/nooks/decks.</i></p>	X

Flammable furniture/cushions on decks or porches. <i>-Remove from deck if/when not at residence.</i>	X
Attached wooden fences/decks. <i>-Replace wooden fence adjacent to house with metal.</i> <i>-Keep deck free of leaf/needle litter, vegetation adjacent/under.</i>	X
Soffit vent: a screened vent in a house soffit that allows air to flow to the attic or the space below roof sheathing. • Unknown <i>-Replace with metal or wood and add screening.</i>	
The deck is being used for a storage area, especially with firewood or other combustible material. <i>-Remove all combustible material.</i>	X
Address and street sign is clearly visible reflective material. <i>-Label with 4 inch reflective lettering.</i>	
Siding: stucco, masonry products, plaster and cement • Greater than 75% of homes have non-combustible siding <i>-Replace with non-combustible siding</i>	X
Skirting: material used around the bottom of homes and sometimes decks to protect the underside from exposure • 50 to 74% of homes have skirting underneath <i>-Add skirting to exposed homes and decks</i>	X
Combustible attachments: wood vs. non-combustible materials. • 25 to 49% of homes have NO wooden attachments <i>-Replace with non-combustible material. Examples of non-combustible materials include decks made with wood-plastic composites, higher density tropical hardwood, or fire-retardant treated decking materials; fences that use metal or masonry when attaching fences directly to the siding of a home.</i>	X
Windows • Unknown what type of windows exist (single-pane vs. multi-pane) <i>-Replace windows according to recommendations in CSFS FireWise Construction: Site Design & Building Materials.</i>	
Gutter type • 50 to 74% of homes have metal gutters <i>-Replace vinyl gutters with metal gutters.</i>	X

General Vegetative Observations	Observed
Overlapping home ignition zones (less than 200 feet between houses). <i>-Ensure adjacent neighbor is creating a defensible zone.</i>	X
Immediate Zone: 0 to 5 feet from the furthest attached point of homes, this area addresses the immediate vegetation and materials, creating a combustible free area. Items to consider:	X

<ul style="list-style-type: none"> • Is there dead vegetation, dried leaves, pine needles and ground debris near foundations? • Has hardscaping been used around perimeters to keep them free of litter/debris? • Concrete, stone, or gravel walkways? • Have wood mulch products been replaced with non-combustible such as crushed stone/ gravel options? • Flammable vegetation in direct contact with houses? • Are there trees/shrubs next to the home? Are there branches overhanging the roof or within 10 feet of chimneys? <ul style="list-style-type: none"> ○ Less than 25% of homes have treated vegetation and created a combustible free area <p><i>-Prune or remove vegetation from within 5 feet of house.</i></p>	
<p>Intermediate Zone/Zone 1: 5 to 30 feet from the furthest exterior point of the home. This area uses landscaping and breaks (areas of non-combustible materials such as dirt, cement, or rock) to help influence and decrease fire behavior.</p> <ul style="list-style-type: none"> • Are there fuel breaks such as driveways, walkways/paths, patios, and decks? • Are lawns and native grasses maintained (general recommendation is a height of 6 inches)? • Is vegetation in this area spread out? It is recommended that trees and shrubs should be limited to small clusters of a few each to break up continuity; trees should be spaced to a minimum of 10 feet between crowns. • Have ladder fuels (vegetation under trees) been removed so a surface fire cannot reach the crowns? Have trees been pruned? General recommendations are up to six to ten feet from the ground; for shorter trees do not exceed 1/3 of the overall tree height. • Are plants, trees, and lawns watered to keep them from becoming dry? <ul style="list-style-type: none"> ○ 25 to 49% of homes have treated vegetation <p><i>- Mow grass to height of 6 inches or less.</i> <i>- Remove dense/unhealthy vegetation.</i> <i>- Prune trees 10 feet tall or 1/3 height of tree.</i> <i>- Thin trees to 10-foot spacing between tree crowns.</i></p>	X
<p>Extended Zone/Zone 2: 30 to 100 feet. Generally, this area focuses on landscaping - managing the vegetation to influence fire behavior and spread. The goal here is not to eliminate fire, but to interrupt fire's path and keep flames smaller and on the ground. At these distances property lines may overlap, presenting the opportunity and need to work collaboratively with neighbors. Items to consider:</p> <ul style="list-style-type: none"> • Are there heavy accumulations of ground litter/debris? • Is there dead plant and tree material that should be removed? • Are storage sheds and/or other outbuildings in this zone clear of vegetation? Do mature trees have small conifers and brush growing between them or is the space maintained? • Do trees have at least 10 feet between canopy tops? <p><i>- Remove dense/unhealthy vegetation.</i> <i>- Prune trees 10 feet tall or 1/3 height of tree.</i> <i>- Thin trees to 10-foot spacing between tree crowns.</i></p>	

Recommendations- Primary concerns, some of which are listed in Section 7 and addressed in the Community Action Plan include:

- Structures within Chateau Chaparral vary widely in design and construction materials. The newest structures have been constructed using modern construction materials including composite decking, metal or composite roofing material, double-paned windows and screened air vents. In older structures where these construction techniques and materials are not present, homeowners should be made aware of the risks inherent in their structures, and plans should be made to replace materials and / or to correct deficiencies.
- Creating defensible space and reducing structure ignitability are the most important actions a homeowner can do to protect their home from wildfire. While some homes in the community have good defensible space, and others are making progress, some homes do not. **Creating and maintaining defensible space around all of the homes in the community is a top priority.** This includes treatment of fine fuels as well as the thinning of dense tree stands to introduce more canopy spacing between individual trees and surrounding homes. Fine fuels are combustible materials less than ¼ inch in diameter and have a relatively high surface area to volume ratio. These characteristics allow the fuels to dry quickly and ignite readily, resulting in rapid rates of fire spread when fine fuels are abundant and continuous over an area. Common examples of fine fuels are grass, needles, leaves and small twigs.
- For structures surrounded by forests, debris accumulation on roofs and in gutters is an issue that will require constant vigilance. Also it is important to remove debris accumulations next to foundations and underneath decks. **Each landowner must remain vigilant to areas where such accumulations may occur around their structures and make sure they are removed promptly, as these fine fuels have proven exceedingly receptive to ignition from embers.** Additional actions, such as placing firewood and combustible outdoor furniture an appropriate distance from structures are some of the simplest, cheapest, and most effective actions that homeowners may take to protect their homes from wildfire.
- **In areas where only grass surrounds a structure, it is important that landowners mow regularly to reduce the height and amount of grass and other easily ignited forms of vegetation.** Where and when possible, grass should receive irrigation as green grass does not ignite and spread fire as readily as dry grass. Residents must exercise care when mowing rocky areas, as blades hitting rocks can create sparks which may ignite fires, especially in dry grass. To avoid starting fires, it is recommended that mowing occur during cooler times of the day and when humidity is high, or following recent moisture.
- Where present, propane tanks should be parallel (on same slope) and more than **30 feet** away from structures. In a wildfire situation, an uphill propane tank that vents gas and catches fire will allow heat to be directed away from the structure. It is also recommended that all flammable vegetation growing within **10 feet** of propane tanks be removed and replaced with nonflammable ground cover, such as gravel or rocks.

- There are several large open grass-covered fields surrounding Chateau Chaparral. With minimal preparation, the largest of these areas could serve as safety zones to where residents could quickly evacuate in the event of fast-moving wildfires. **It is recommended that residents construct evacuation plans for their particular location, mapping suitable safety zones based on the potential fire approach directions.**
- While local first responders may know where individual locations are, it is certain that mutual aid forces coming in from another community will struggle to find a direct route to an incident. Many roads are a one way in/one way out scenario and this ingress/egress is not always clear. **Roads should be labeled with reflective metal signs with dead end roads marked as well.**

8) Successful Firewise Modifications

When adequately prepared, a house can likely withstand a wildfire without the intervention of the fire service. Further, a house and its surrounding community can be both Firewise and compatible with the area's ecosystem. The Firewise USA® program is designed to enable communities to achieve a high level of protection against WUI fire loss even as a sustainable ecosystem balance is maintained.

A homeowner/community must focus attention on the home ignition zone and eliminate the fire's potential relationship with the house. This can be accomplished by disconnecting the house from high and/or low-intensity fire that could occur around it. The following photographs were taken in Chateau Chaparral and are examples of good Firewise practices:



The photo above demonstrates stellar home hardening and defensible space practices given the context of Chateau Chaparral's lot sizes and structure types. There are several specific items to take note of: 1) the deck surface is made of composite material 2) zone 1 of the structure's defensible space is entirely fuel-free 3) the structure is entirely enclosed disallowing potential embers to eddy underneath 4) clearly posted reflective address signage 5) non-combustible building materials utilized throughout.



This photo demonstrates well done home hardening and defensible space creation. Items of note: the rock wall and gravel serve as a fuel-free zone that will disallow a surface fire to carry right up to the threshold of the structure. The deck, although made of wood, appears to be well maintained and less likely to ignite than a weathered and fraying wooden deck. While there is still some vegetation near the structure, it is isolated and does not pose a significant fire threat.



Both of the structures illustrated in the photo above are on their way to having well mitigated properties. Successful modifications: 1) stone walkways and gravel surrounding the homes will deter surface fires from reaching the structures 2) propane tank, although closer to the structure than recommended, is well protected and has no fine fuels surrounding 3) sparse fuel loading directly adjacent to structures. Opportunities for improvement: 1) while the decks appear to be weathering and could use a fresh coat of paint/stain 2) small section of wood fence connecting the two structures could carry flames, either remove or replace with non-combustible material 3) while the aspen tree itself poses very little threat, it appears that it likely drops leaves into the gutters of the structure on the right – ensure that these gutters are free of fine fuels.

9) Next Steps

After reviewing the contents of this assessment and its recommendations, the Chateau Chaparral Firewise USA® Board in cooperation with the Colorado State Forest Service, Salida Field Office and Chaffee County Fire Protection District will determine whether or not it wishes to continue seeking Firewise USA® recognition.

The Firewise USA® representative will contact the Firewise USA® Board representative by December 31, 2022 to receive its decision.

If the site assessment and recommendations are accepted and recognition will be sought, the Chateau Chaparral Firewise USA® Board will create agreed-upon, area-specific solutions to the

Firewise recommendations and create an action plan in cooperation with the Colorado State Forest Service, Salida Field Office and Chaffee County Fire Protection District.

Assuming the assessment area seeks to achieve national Firewise USA® recognition status, it will integrate the following standards into its plan of action:

- Form a board/committee that's comprised of residents and other applicable wildfire stakeholders. This group will collaborate on developing the site's risk reduction priorities, develop a multi-year action plan based on the risk assessment and oversee the completion of the annual renewal requirements needed to retain an "in good standing" status.
 - Action plans are a prioritized list of risk reduction projects/investments for the participating site, along with suggested homeowner actions and education activities that participants will strive to complete annually, or over a period of multiple years. Action plans are developed by the board/committee and need updating at least every three years.
- At a minimum, each site is required to invest the equivalent of **\$25.43 per dwelling unit*** in wildfire risk reduction actions annually (the rate is based on the 2017 annual National Hourly Volunteer Rate; which is updated every year in April when the new amount is published). Qualifying expenditures include contractor costs, rental equipment, volunteer activities, grants, etc. Residents completing select home modifications, along with any qualifying work performed at their home and in the adjacent home ignition zones can contribute related hours and/or costs towards meeting the site's collective investment amount.
- Each participating site is required to have a **minimum of one wildfire risk reduction educational outreach event**, or related activity annually.
- Every year participating sites must **submit an annual renewal** to maintain their "In Good Standing" status. The annual renewal application can be accessed through the Firewise USA® online management portal (<http://portal.firewise.org/>).

Chateau Chaparral residents are reminded to be conscious of keeping high intensity fire more than 100 feet from their homes. It is important for them to avoid fire contact with their structures, including firebrands or embers. Science tells us that the home itself and 0-5 feet from the furthest attached exterior point of the home are most vulnerable to ember attacks. Residents should focus on making this a non-combustible area by removing any flammable vegetation or materials from wall exteriors; cleaning debris from roofs and gutters; and addressing home construction issues. Remember that, while wildfire cannot be eliminated from a property, it can be reduced in intensity.

Homeowners are reminded that street signs, addresses, road widths and fire hydrants do not keep a house from igniting. Proper attention to their home ignition zones does. They should identify the things that will ignite their homes and address those.

Weather is, of course, of great concern during wildfire season. At such time as fire weather is severe, homeowners should remember not to leave flammable items outside. This includes rattan doormats, flammable patio furniture, firewood stacked next to the house, or other flammables.

10) Community Action Plan

Action plans are a prioritized list of risk reduction projects and the related investments needed to achieve them for the site. It is created from information contained in the community assessment. Action plans also highlight suggested homeowner actions and education activities that participants will strive to complete annually, or over a period of multiple years. Action plans should be updated at a minimum of at least every three years.

1. Many of the structures in the community have features or conditions that compromise their ignitibility potential. Work with homeowners to implement home hardening practices on their structures.
2. Work with residents to improve the number of homes that have removed flammable materials 0 to 5 feet from their structures.
3. Work with surrounding landowners to develop a second viable ingress/egress route for the community
4. The banks of the Arkansas River is densely vegetated and could carry high intensity fire up to the threshold of homes. Work with residents and CSFS Salida Field Office staff to develop a fuels reduction project along the river bank

Appendix A: Community Risk Assessment

NEIGHBORHOOD RISK/HAZARD ASSESSMENT RATING SCORE SYSTEM			
NAME: <u>CHATEAU CHAPARRAL</u>		DATE:	
SIZE (acres): <u>40</u>		# LOTS or HOMES: <u>306 LOTS</u>	
COMMENTS:		RATING: <u>MODERATE</u>	

COMMUNITY DESIGN	16	2. Existing Building Construction Material	
1. Ingress/Egress <input type="checkbox"/> Two or more primary roads <input checked="" type="checkbox"/> One Road <input type="checkbox"/> One-way road in, one-way out	<input type="checkbox"/> 1 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 5	<input type="checkbox"/> Noncombustible siding/decks <input checked="" type="checkbox"/> Noncombustible siding with combustible decks <input type="checkbox"/> Combustible siding and decks	<input type="checkbox"/> 1 <input checked="" type="checkbox"/> 5 <input type="checkbox"/> 10
2. Width of Primary Road <input type="checkbox"/> >24 ft. <input type="checkbox"/> >20 ft. and <24 ft. <input checked="" type="checkbox"/> <20 ft.	<input type="checkbox"/> 1 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 5	3. Unenclosed Features (decks, eaves, vents) <input type="checkbox"/> Less than 25% <input type="checkbox"/> 25-50% <input checked="" type="checkbox"/> >50%	<input type="checkbox"/> 1 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 5
3. Accessibility <input checked="" type="checkbox"/> Road grade 5% or less <input type="checkbox"/> Road grade more than 5%	<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 3	UTILITIES* <input type="checkbox"/> All underground utilities <input checked="" type="checkbox"/> One underground, one above ground <input type="checkbox"/> All above ground	<input type="checkbox"/> 1 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 5
4. Secondary road terminus: <input checked="" type="checkbox"/> Loop roads, cul-de-sacs with outside turning radius of 45 ft. or greater <input type="checkbox"/> Cul-de-sac turn-around radius less than 45 ft. <input type="checkbox"/> Dead-end roads 200 ft. or less in length <input type="checkbox"/> Dead-end roads greater than 300 ft. in length	<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 3 <input type="checkbox"/> 5 <input type="checkbox"/> 10	DEFENSIBLE SPACE	5
5. Street Signs <input checked="" type="checkbox"/> Present 90-100% <input type="checkbox"/> Present 75-89% <input type="checkbox"/> Present <75%	<input checked="" type="checkbox"/> 3 <input type="checkbox"/> 5	1. Fuel Load between Home Sites: <input type="checkbox"/> Light <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Heavy	<input type="checkbox"/> 1 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 10
6. Address Signage <input type="checkbox"/> Present 90-100% <input type="checkbox"/> Present 75-89% <input checked="" type="checkbox"/> Present <75%	<input type="checkbox"/> 1 <input type="checkbox"/> 3 <input checked="" type="checkbox"/> 5	2. Defensible Space for Individual Homes: <input type="checkbox"/> 70% or more of sites <input checked="" type="checkbox"/> 30% or more of sites <input type="checkbox"/> Less than 30% of sites	<input type="checkbox"/> 1 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 15
EXISTING BUILDING MATERIALS*	11	HOME IGNITION ZONE	4
1. Roofing Materials <input checked="" type="checkbox"/> Non-combustible covering 90-100% <input type="checkbox"/> Non-combustible covering 80-90% <input type="checkbox"/> Non-combustible covering 70-80% <input type="checkbox"/> Non-combustible <70%	<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 5 <input type="checkbox"/> 8 <input type="checkbox"/> 10	Thorough Litter and Debris Clean Up: <input type="checkbox"/> 70% or more of sites <input checked="" type="checkbox"/> 30% to 69% of sites <input type="checkbox"/> 10% to 29% of sites <input type="checkbox"/> 0% to 9% of sites	<input type="checkbox"/> 1 <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 7 <input type="checkbox"/> 10
FIRE PROTECTION		FIRE PROTECTION	8
1. Water Source <input type="checkbox"/> 500 gpm hydrants within 500 ft. of structures <input type="checkbox"/> 500 gpm hydrants or draft source within 1000 ft. of structures <input checked="" type="checkbox"/> Water source 20 minutes away roundtrip <input type="checkbox"/> Water source > 45 minutes away roundtrip			<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 5 <input type="checkbox"/> 10

2. Fire Department Protection within 5 Miles <input type="checkbox"/> Career Department <input checked="" type="checkbox"/> Combination Career / Volunteer <input type="checkbox"/> Volunteer with Seasonal Staffing <input type="checkbox"/> All Volunteer Department <input type="checkbox"/> No Organized Department	<input type="checkbox"/> 1 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 5 <input type="checkbox"/> 7 <input type="checkbox"/> 10
FIRE BEHAVIOR	
1. Slope <input checked="" type="checkbox"/> 8% or less <input type="checkbox"/> 8%-20% <input type="checkbox"/> 20%-30% <input type="checkbox"/> >30%	<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 4 <input type="checkbox"/> 7 <input type="checkbox"/> 10
2. Aspect <input checked="" type="checkbox"/> North or <8% slope <input type="checkbox"/> East <input type="checkbox"/> West <input type="checkbox"/> South	<input checked="" type="checkbox"/> 3 <input type="checkbox"/> 3 <input type="checkbox"/> 7 <input type="checkbox"/> 10
3. Fuels <input type="checkbox"/> Light density <input checked="" type="checkbox"/> Medium density <input type="checkbox"/> High density	<input type="checkbox"/> 1 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 5
Situation #3 - Fine or sparse fuels surround structures; infrequent wind exposure; flat terrain with little slope or north aspect; no large wildland fire history or moderate fire occurrence	<input type="checkbox"/> 3
Situation #2 - Moderate slopes; broken moderate fuels; some ladder fuels; composition of fuels is conducive to torching and spotting; conditions may lead to moderate suppression success; some fire history or moderate fire occurrence.	<input checked="" type="checkbox"/> 7
Situation #1 - Continuous fuels in close proximity to structures; composition of fuels is conducive to crown fires or high intensity surface fires; steep slopes; predominately south aspects; dense fuels; heavy duff; prevailing wind exposure or ladder fuels that may reduce suppression effectiveness; history of large fires or moderate fire occurrence.	<input type="checkbox"/> 10

Rating Scale: <div style="display: flex; justify-content: space-between;"> 39 or less points Low hazard </div> <div style="display: flex; justify-content: space-between;"> <u>59</u> Moderate Hazard </div> <div style="display: flex; justify-content: space-between;"> 61-75 points High Hazard </div> <div style="display: flex; justify-content: space-between;"> 76 or more points Extreme Hazard </div>
TOTAL FOR AREA: 59

*most common within subdivision

Appendix B: Field Notes

COMMUNITY ASSESSMENT FIELD NOTES			
COMMUNITY NAME:		DATE:	
Fuel Type			
Overstory			
Percent	Description	Dead	Live
100	Mixed Conifer		95
	Spruce-fir		
	Aspen		
	Ponderosa		
	Riparian (Cottonwood Bosques)		
	Other		
Notes SPARSE TREES - MOSTLY PONDGROST SPRUCE + PINON			
Understory			
Percent	Description	Dead	Live
	Open		
100	Shrubs		95
	Regeneration		
	Willows		
	Dead and down debris		
Notes MANY SHRUBS GROWING UNDER TREES, AGAINST HOMES			
Non-forested			
Percent	Description	Dead	Live
	Grass		
	Shrubs		
Notes			
Other factors affecting fire behavior:			
POTENTIAL FOR STRUCTURE → STRUCTURE IGNITION, MANY WEATHERED WOOD FENCES + DECKS			
USFS/BLM Fuels Interface			
	Fuelbreak recommended	Notes	
Water Sources and Infrastructure			
	Hydrant	Notes	
<input checked="" type="checkbox"/>	Drafting	ARKANSAS RIVER	
Other Hazards			
	Unlabeled load bearing access bridges	Notes	
	Other:		
Prioritized Mitigation Recommendations			
Priority	Task	Notes	
	Create defensible space		
	Thin roadsides for safer ingress/egress		
	Thin land beyond defensible space between homes		
	Create fuelbreak along USFS/BLM boundary		
	Create fuelbreak within community		
	Firewood or other combustible material on/under deck or near house		
	Other:		

