



## *CITY OF CASTLE PINES WILDFIRE MITIGATION PLAN*

This Wildfire Mitigation Plan (WMP) is a cooperative effort between the City of Castle Pines, each of its homeowners' associations, the Castle Pines North Metro District (CPNMD), and South Metro Fire Rescue (SMFR). This WMP assesses the hazards and vulnerabilities of this city, increases knowledge of the wildfire risk, identifies a path for the city and its neighborhoods to adapt to the potential for wildfires, improves safety for residents, visitors, and emergency responders, reduces home-ignition risks from wildfires, and prioritizes projects to address those risks.

### *CITY DESCRIPTION*

The City of Castle Pines is home to approximately 11,000 residents. The city encompasses 9.55 square miles of land in the north central part of Douglas County. The city has a mix of residential, commercial, educational, and recreational properties.

**Residential:** Homes are a mix of single-family houses, townhouses, multi-family apartment buildings, and duplex/triplex/quadplex connected houses. Most homes have fire-resistant roofing, but there are a few houses with wood-shake shingle roofing that present a significant risk of ignition and generation of embers. Most homes have fire resistant exterior siding. Decking and fences are a combination of flammable and fire-resistant materials. The city's homes represent the most significant values at risk.

**Commercial:** Most of the city's commercial properties are along East Castle Pines Parkway and West Castle Pines Parkway. They include restaurants, gas stations, grocery stores, and offices. Adding new office space and other commercial opportunities are goals in the 2021 Castle Pines Comprehensive Plan. Commercial properties also represent significant values at risk because they provide incomes, employment, and (like residential properties) property taxes.

**Educational:** The City of Castle Pines has four schools in its boundaries: Buffalo Ridge Elementary, Timber Trail Elementary, American Academy, and Douglas County Schools Montessori. Some students and staff live outside the city.

**Recreational:** The City of Castle Pines owns and manages 74 acres of parks and 560 acres of open space. The City is east of Daniel's Park, which is owned by Denver Mountain Parks, and west of Rueter-Hess Reservoir, which is expanding its recreational opportunities.



In terms of governance, all residents are constituents of the City of Castle Pines and the Castle Pines North Metro District. Many residents also belong to individual homeowners' associations.

### *INFRASTRUCTURE*

Infrastructure consists of the basic systems that support neighborhoods physically, socially, and economically. Infrastructure includes the following systems: water, roads, electricity, natural gas, and parks.

#### Water

Buildings on the west side of Interstate 25 are connected to a water system operated by the CPNMD; buildings on the east side are served by Parker Water and Sanitation District. The district's assets include wells, a water treatment plant, distribution system, hydrants, and storage at Reuter-Hess Reservoir.

The City has fire hydrants that meet or exceed minimum flows for fire protection.

#### Roads

- Interstate 25 bisects this city. There are two interchanges from the interstate that provide access to the City: Exit 187 and Exit 188. The former is slated for significant construction work to improve its capacity and safety.
- The eastern half of the city, known as The Canyons, is accessed from Hess Road. Two paved ingress/egress routes lead into the neighborhood. In the future, access roads are planned for the neighborhood's southwestern corner and eastern boundary.
- For the western half of the city, there are five main routes of ingress and egress: West Castle Pines Parkway splits into Daniel's Park Road which can lead vehicles northwest or south, Monarch Boulevard leads vehicle north, Lagae Road leads vehicles south, and Castle Pines Parkway leads vehicles east to and beyond Interstate 25.
- All finished roads are paved and most are wide enough for fire apparatus. They are maintained by the City of Castle Pines.
- Some of the neighborhood roads are gated. Each gate has Knox Box technology for emergency access, but access to neighborhoods may be compromised during a power outage.



### Electricity

- CORE Electric Cooperative (formerly known as IREA) provides electrical service throughout the jurisdiction. Electrical distribution lines are buried, but transmission lines are above ground.
- Xcel Energy also has above-ground transmission lines in the jurisdiction.

### Natural Gas

- Xcel Energy provides natural gas service within CPNMD's boundaries.

### Parks

**Elk Ridge Park:** Located at 7005 Mira Vista Lane, this park features three pavilions, a splash pad, and turf field. The remainder of the park consists of both mown grasses and native grasses. The City maintains a 6-foot wide mow strip along the park's perimeter where it is adjacent to backyards.

**Coyote Ridge Park:** This park is located at 7485 Serena Drive. The amenities in this 15-acre park include two multi-purpose fields, a baseball field, playground, skateboard park, picnic pavilions, and grills. It is maintained by the CPNMD.

**Daniel's Gate Park:** Located at 8682 Daniel's Park Road, this two-acre park includes a multi-purpose grass playing field, playground, and gazebo. It is maintained by the CPNMD.

**Retreat Park:** Located along Tangleoak Lane, this five-acre park is maintained by the CPNMD. Its features include a playground, multi-purpose field, baseball field, picnic pavilions, grills, and a walking trail.

This infrastructure is vulnerable to interruption and damage from wildfires. Mitigation recommendations for individual buildings or sites are available from SMFR.



### ***EMERGENCY RESPONSE***

The first-due firefighting resources respond from SMFR Station 36 (421 E. Castle Pines Parkway), Station 17 (9554 S University Boulevard, Highlands Ranch), and Station 39 (475 W. Happy Canyon Road). SMFR has earned an ISO (Insurance Services Office) Public Protection Classification (PPC) rating of 1 for its entire service area. The rating, which is rare in the United States, represents the best fire protection according to insurance industry criteria and may provide a discount on homeowner's insurance policies to district residents.

The City of Castle Pines contracts with the Douglas County Sheriff's Office, which is based in Castle Rock, for law enforcement.

Douglas County provides emergency management services.

### ***WILDFIRE HISTORY***

The City of Castle Pines is within a wildfire-prone ecosystem. Prior to its incorporation, the area was threatened directly by the Cherokee Ranch Fire in October 2003. That wildfire began to the west of the current city boundaries when high winds toppled a tree onto utility lines. The 1,000-acre wildfire burned eastward toward the district and stopped when a cold front brought lower temperatures and higher relative humidity to the region after sunset. Those conditions helped firefighters contain and extinguish the blaze.

Several wildfires that are contained to one acre or less burn within the city annually. Causes have included sunlight reflecting from windows, malfunctioning or damaged electrical equipment, fireworks, and discarded cigarettes.



## ***ECOLOGICAL CONTEXT***

Topography is one of the key factors that influences wildfire behavior, largely because fire typically burns faster uphill than it does downhill. It does so because convective currents allow the fire to dry and heat fuel above it. Homes and other structures built above vegetated slopes face a higher risk from low-, moderate-, and high-intensity wildfires than other buildings.

Additionally, Castle Pines is on a plateau between Lone Tree and Castle Rock. As a result, its weather can be more extreme than in those adjacent communities. Stronger winds and more frequent lightning strikes add to the intrinsic hazards for this area.

Vegetation within the district is a combination of native and exotic tree, shrub, flower, and ground cover species. Unfortunately, many of the plants chosen for landscaping on private and public property can ignite quickly and produce significant radiant and convective heat.



## *FIRE SCIENCE AND FIRE BEHAVIOR REFRESHER*

Wildfire hazard identification is based on the following fire behavior concepts:

1. A given fuel (structure or vegetation) can produce a flame length 1 ½ times its height. Thus, a bush that is 12 inches tall can produce a flame length 18 inches in length; a tree that stands 12 feet tall can produce a flame 18 feet long. Shorter fuels produce shorter flames; shorter flames release less heat.

2. Firefighters are unable to engage any flame length greater than four feet with a direct attack because of safety concerns. A direct attack places firefighters along the head or front of a wildfire where they create a handline—a path down to mineral soil—in front of the flames to stop its growth. Longer flames generate more heat.

When flames are longer than four feet, firefighters can use indirect attack techniques such as spraying water from further away or building a handline a distance away and burning out unburned fuels between their line and the fire. They also may be able to drive into the burned area and spray water from engine-mounted nozzles depending on topography and other factors.

Flames between four and eight feet in length can be attacked directly with bulldozers and air resources such as air tankers and helicopters. Flames longer than eight feet can be attacked directly by air resources alone.

3. Before a fuel can burn, it must absorb enough heat to cause the remaining water in it to evaporate. The dry part of the fuel then absorbs more heat that causes the solid fuel to break apart into its gaseous state. It's the gaseous state that actually burns. Thus, denser, wetter fuels typically resist ignition longer than lighter, drier fuels.

4. Most deciduous trees and shrubs resist fire because they are full of water. Gambel oak is an exception. The resin inside oak makes it flammable for most of the year during drought conditions.

5. Plants that contain flammable resins, saps, and oils are bad choices to have within 30 feet of homes. These “bad” plant species include juniper, Gambel oak, Pfitzer, cedar, arborvitae, Mugho pine, piñon pine, Austrian pine, and bristlecone pine, as well as ornamental conifers such as Alberta or Norway spruce. They dry and vaporize quickly, which makes them vulnerable to igniting quickly. They also release significant heat.



6. Ponderosa pines are a fire-resistant tree species (not fire-proof) because they have thick bark and low sap content. They were prevalent when the area was developed because low-intensity wildfires limited other plants from competing for limited water, soil nutrients, sunlight, and space. Removing lower branches from mature ponderosa pines and/or limiting vegetation growing and accumulating under these trees helps protect canopies from ignition.

7. Ladder fuels are low-hanging branches of trees. If they ignite, they allow flames to “climb” into tree canopies. By removing these ladder fuels, flames can stay on the ground where they typically are shorter and firefighters have a better opportunity to extinguish them directly.

8. Most structures ignite from embers: burning chunks of fuels lofted above a fire by the rising column of heated air (a convective column). When those burning chunks of fuel, which can be pea- to grapefruit-sized, land on other flammable fuels such as dead needles, dead leaves, junipers, or combustible deck furniture, they can ignite spot fires. Embers typically find vulnerabilities in the nooks and crannies of buildings.

9. Structures also can ignite from heat radiating laterally from burning fuels such as junipers and other buildings and from convective heat flowing up slopes.

### ***MITIGATION RECOMMENDATIONS***

Below are recommendations for private and public property owners and land managers to reduce risks posed by low- and moderate-intensity wildfires. As recommendations, they will not be enforced by SMFR, but they can reduce the potential for structural and vegetation ignitions and improve safety for residents, visitors, and firefighters. These recommendations are consistent with recommendations for other areas of SMFR's district.

During a wildfire incident in which structures are threatened, firefighters will prioritize structure protection based on what they deem defensible in light of current and expected fire behavior and weather conditions. Ideally, property owners will conduct mitigation that allows their buildings to withstand low- and moderate-intensity wildfires without firefighter intervention.



One general recommendation for each of the homeowner associations is to amend the covenants or other rules to encourage residents to adjust their landscaping and structure to be more resistant to low-intensity wildfires.

### **Open Space**

The following recommendations apply to open space areas.

- Mow grasses along property lines and/or fence lines. A mow strip at least six feet wide (the width of a typical commercial mower deck) will provide a speed bump as low- to moderate-intensity wildfires burn from taller grasses into mowed grasses, lowering flame intensity and reducing speed of spread.
- Cut back Gambel oak along fence and property lines. The oak-less width between remaining oak trees/shrubs and fence lines should be at least 1 ½ times the remaining oaks' height.
- Within the remaining oak groves throughout an open space, thin at least 20% of stems and trunks, and remove ladder fuels (low-hanging branches) within six feet of the ground.
- Remove ladder fuels (lower branches) from coniferous trees to protect tree canopies from wildfire. Trim branches within six feet of the ground on mature pines and within two feet of the ground for mature spruces. Adjust those parameters for younger trees to maintain at least two thirds of the tree's canopy.

SMFR will provide specific recommendations for each open space tract as requested by the land management entity. The impact of open space mitigation is leveraged with private property mitigation and vice versa.

### **Infrastructure**

General mitigation recommendations for infrastructure include:

- Maintain three feet of clearance around fire hydrants. Mow grasses during the growing season, trim or remove larger vegetation, and clear snow when necessary.
- Mitigation around utility infrastructure should emulate that of structures or fire hydrants. Although those boxes or structures may be unsightly, their destruction during a wildfire delays neighborhood recovery.
- Firefighting will be limited below electrical lines because smoke plumes can conduct electricity from the lines to firefighters and apparatus on the ground.



## Private Property

The following recommendations apply to structures, both public and private.

- Post address numerals so they are visible and legible throughout the day and, when a light is shined on them, at night. Having an easy-to-read address helps emergency responders as well as law enforcement, utility workers, and delivery people. Use numerals at least four inches tall and of a color that contrasts with their background.
- Prune branches above roofing to create a six-foot tall window of clearance. Removing these branches will reduce the volume of leaves and needles that collect on roofing and in gutters, protect shingles from scraping, and protect the tree from any fire on the roof.
- Trim branches away from eaves, soffits, and exterior walls. Trimming these branches will maintain the integrity of those structural components and prevent flames from having a direct route to your home.
- Eliminate fuels under decking.
- Mow a six-foot wide moat of shorter grass around foundations where native grass is adjacent to a building. Maintain similar mow strips along backyard fence lines to create “speed bumps” for low- to moderate-intensity grassfires where the rate of spread and flame lengths can decrease momentarily.
- Remove dead pine needles and dead leaves from roofing, gutters, gutter screens, and along the base of walls. These piles of dead vegetation are easy fuel for embers.
- Add 1/8-inch mesh to vents to prevent embers from entering ductwork, attics, and eaves. Embers may still enter those vents, but they shouldn’t hold enough heat to threaten the building.
- Wood fencing can act like a fuse and lead flames to buildings. Minimize vegetation growing along wood fences. Consider replacing wood posts and slats immediately adjacent to structures with composite materials that resist ignition.



- Replace flammable groundcover, shrubs, and trees within 30 feet of buildings and infrastructure with native wildfire-resistant species including the following options:

<b>GROUNDCOVER SPECIES</b>		
<b>COMMON NAME</b>	<b>WATERING</b>	<b>LIGHTING</b>
CREeping GRAPE HOLLY	LOW	SHADE
KINNIKINNICK	MEDIUM	SHADE OR SUN
MAT PENSTEMON	LOW	SUN
MOUSE EAR CHICKWEED	MEDIUM	PARTLY SHADED
NORTHERN BEDSTRAW	MEDIUM	SHADE
ROSY PUSSYTOES	MEDIUM	PARTLY SHADED
SMALL-LEAF PUSSYTOES	MEDIUM	PARTLY SHADED

<b>LOW SHRUB SPECIES</b>		
<b>COMMON NAME</b>	<b>WATERING</b>	<b>LIGHTING</b>
ADAM'S NEEDLE	MEDIUM	PARTLY SHADED
ANTELOPE BITTERBRUSH	LOW	SUN
APACHE PLUME	LOW	SUN
BANANA/BROAD-LEAF YUCCA	VERY LOW	PARTLY SHADED
BOG BIRCH	HIGH	PARTLY SHADED
BUCKBRUSH/MOUNTAIN LILAC	MEDIUM	SUN
GOLDEN CURRANT	LOW	FILTERED
LITTLE-LEAF MOCKORANGE	MEDIUM	SUN
LITTLE-LEAF MOUNTAIN MAHOGANY	VERY LOW	SUN
MOUNTAIN NINEBARK	LOW	SUN
NATIVE WILD ROSE	MEDIUM	PARTLY SHADED
OCEAN SPRAY/ROCK SPIREA	LOW	PARTLY SHADED
RABBITBRUSH	VERY LOW	SUN
REDTWIG DOGWOOD	HIGH	EITHER
SHRUBBY CINQUEFOIL	MEDIUM	PARTLY SHADED
SPANISH BAYONET	VERY LOW	PARTLY SHADED
TRUE MOUNTAIN MAHOGANY	LOW	SUN
WAX FLOWER	MEDIUM	EITHER
WESTERN SAND CHERRY	LOW	SUN



<b>LARGE SHRUBS, TREE SPECIES</b>		
<b>COMMON NAME</b>	<b>WATERING</b>	<b>LIGHTING</b>
AMERICAN WILD PLUM	MEDIUM	PARTLY SHADED
ASPEN	MEDIUM	SUN
BOULDER RASPBERRY	MEDIUM	PARTLY SHADED
BEAKED HAZELNUT	HIGH	PARTLY SHADED
HAWTHORN	MEDIUM	SUN
MOUNTAIN MAHOGANY	LOW	SUN
PEACHLEAF WILLOW	HIGH	PARTLY SHADED
PIN/FIRE/WILD/RED CHERRY	MEDIUM	PARTLY SHADED
PONDEROSA PINE	LOW	SUN
RIVER BIRCH	HIGH	PARTLY SHADED
ROCKY MOUNTAIN MAPLE	MEDIUM	PARTLY SHADED
SASKATOON ALDER-LEAF SERVICEBERRY	MEDIUM	PARTLY SHADED
SILVER BUFFALOBERRY	MEDIUM	PARTLY SHADED
TALL NINEBARK	MEDIUM	PARTLY SHADED
THINLEAF ALDER	HIGH	PARTLY SHADED
UTAH SERVICEBERRY	LOW	SUN
WASATCH MAPLE	MEDIUM	PARTLY SHADED
WESTERN CHOKECHERRY	MEDIUM	PARTLY SHADED
WESTERN MOUNTAIN ASH	MEDIUM	PARTLY SHADED

Property owners or tenants may request a personalized free building or site wildfire risk assessment by emailing [ReducingRisk@southmetro.org](mailto:ReducingRisk@southmetro.org). These assessments typically last 20-30 minutes.

SMFR has a specialized guide for new construction: *Wildfire-Resistant Construction and Improvement Guide*. Request a copy by emailing [ReducingRisk@southmetro.org](mailto:ReducingRisk@southmetro.org).



## *EVACUATIONS*

It's essential that all of us prepare for evacuations generated by wildfires or other emergencies. The goal of an evacuation is to move civilians safely and quickly away from approaching or impending hazards. Poor preparation can result in confusion, injuries, and deaths.

SMFR utilizes messaging and materials from the national Ready, Set, Go campaign to empower residents of its fire district to evacuate safely. The complete guide is available at no cost at [www.southmetro.org](http://www.southmetro.org) and [www.wildlandfirersg.org](http://www.wildlandfirersg.org). SMFR also can provide presentations on evacuation preparedness.

Everyone should register for Douglas County's reverse emergency notification system (called Code Red) to receive emergency information such as pre-evacuation and evacuation notices. Register at [dcsheriff.net](http://dcsheriff.net).

One way to prepare for an evacuation is to practice. Families should give themselves 30 minutes to assemble a go-kit and load their vehicle(s). They also should practice driving to their designated family meeting place, preferably in a different zip code. Families also can use that evacuation drill to practice their communications plan of notifying a family member or friend in a different zip code or region of their status and asking that person to contact other family members.



## *INSURANCE AND WILDFIRES*

Two-thirds of wildfire victims in the U.S. are underinsured, according to United Policyholders, a homeowner’s insurance advocacy group. The cost to rebuild a house is not the same as the value of the house before the structure fire, wildfire, or other disaster.

The declarations page of the policy should identify the limit of what will be paid in case it's necessary to rebuild. That cost continues to increase as labor, supply chain, and material costs increase.

A homeowners insurance policy may have extended replacement-cost coverage, but it’s optional. Colorado law requires insurance companies, when offering or renewing a policy, to offer extended replacement coverage of at least 20% above the limit of insurance in Coverage A. That amount may not be sufficient to cover reconstruction of a home in its current neighborhood.

Another type of coverage is called Coverage B. It covers other structures on the property such as fencing, sheds, and detached garages. Make sure it has adjusted over time.

The policy may be based on “prevailing market rates,” according to the Colorado Department of Insurance. The market value of a home includes the land under it and its location, but it doesn’t account for the costs of labor and materials.

Another optional type of coverage is law and ordinance coverage. It covers increased costs for demolition, construction, renovation, and repair associated with updates in building codes and other local requirements.

To get reimbursed for your home’s contents, it’s best to provide your insurance company with a complete inventory of those contents. Colorado law requires insurance companies to cut a check for 30 percent of a homeowner’s total coverage without requiring any documentation, but that’s a significant loss for someone who lost property in a disaster. Providing documentation can increase the return on the insurance investment.

Renters also should look at their coverage, particularly for personal property. This coverage helps reimburse the policyholder if personal belongings are stolen or destroyed by a fire or other covered peril. It can cover clothing, furniture, electronics, and other belongings.



## *RESOURCES FOR WILDFIRE RISK REDUCTION*

Wildfire mitigation can be expensive. The following programs may assist property owners with some of those costs:

- As individuals conduct wildfire mitigation on personal property, a percentage of expenses may be subtracted from state taxable income. The details are outlined in §39-22-104(4)(n), Colorado Revised Statutes and [www.taxcolorado.com](http://www.taxcolorado.com), but the quick version is that the mitigation applies to vegetation rather than structural changes. The total amount of the subtraction may not exceed \$2,500.
- The Colorado State Forest Service may have cost-reimbursement or similar programs to offset part of your expenses for mitigation. The knowledgeable personnel in the Franktown District Office may be contacted at [CSFS\\_Franktown@mail.colostate.edu](mailto:CSFS_Franktown@mail.colostate.edu) or 303-660-9625. The knowledgeable personnel at the Golden District Office are available at <https://csfs.colostate.edu/golden/>, [CSFS\\_Golden@mail.colostate.edu](mailto:CSFS_Golden@mail.colostate.edu), or 303-279-9757.
- The Douglas County Conservation District may have grants or cost-sharing programs for mitigation projects. Check this website for information: <https://douglasconserves.org/grants/>.
- The City of Castle Pines is an essential partner. In the future, it may have funding to assist with grant matching, resources for cost-sharing, and personnel who can write letters of support for projects.
- Douglas County hosts a free Slash-Mulch Site at 1400 Caprice Drive in Castle Rock for county residents on Saturdays from May through October. Acceptable items include tree limbs, loose pine needles, shrubs, and brush with a maximum length of 6 feet and maximum diameter of 12 inches. Information is at <https://www.douglas.co.us/land/wildfire-mitigation/slash-mulch-program/>.
- SMFR personnel are available to write letters of support for projects and provide prescriptions for open space mitigation.



### ***EDUCATIONAL RESOURCES***

SMFR recommends that agencies and other organizations host opportunities (in-person and/or virtual) to educate residents about wildfire risk and preparedness utilizing resources such as those from the Ready, Set, Go project and personnel from SMFR, Colorado State Forest Service, their County, and/or other entities. These subject matter experts can attend meetings and community events, contribute to newsletters and websites, and conduct property risk assessments when requested by residents.



***SPECIAL PROPERTY RECOMMENDATIONS***

To this point, this citywide wildfire mitigation plan has provided general information and recommendations that apply to all property owners. This section contains hazards, recommended risk reduction priorities, and accomplishments for two types of special properties: the Castle Pines North Metro District (CPNMD) and the golf courses within and adjacent to the city.

**Castle Pines North Metro District**

SMFR personnel conducted surveys of the district's open space in February and March 2022. The following table prioritizes 18 open space parcels for wildfire mitigation.

<b>PRIORITY</b>	<b>LEGAL NAME</b>	<b>LOCATION</b>	<b>ACRES</b>	<b>ADJACENT HOMES</b>
1	Tract H1-A Romar West 2nd Amendment	W of Topaz Vista	12.10	45
2	Tract M-1 Romar West 1st Amendment	E and S of Turquoise Terrace	19.37	24
3	Tract A Castle Pines North #27	W of Tapadero Way	9.63	37
4	Tract K Castle Pines North #27	W of Whisper Canyon	21.88	16
5	Tract A (Open Space) Castle Pines North #17a	S of Briar Cliff Drive	20.88	31
6	Tract 5 Castle Pines North Phase I	Surrounding The Retreat	28.83	6
7	Tract E Castle Pines North #27	N of Esperanza Drive	13.46	22
8	Tract K Castle Pines North #21	S of Shoreham Circle	8.40	33
9	Tract AA Castle Pines North #27	S of Esperanza Drive	10.14	26
10	Tract F1 Castle Pines North Filing #27 3rd Amd	S of Serena	11.51	50
11	Tract J1-A Romar West 2nd Amendment	Surrounding Jasper Pointe	7.97	27
12	E1/2 4-7-67 Lying W Of Castle Pines North Filing #6	E of Monarch, N of Tenby Way	8.37	14
13	Tract E Castle Pines North #24	S of Berganot Trail	4.02	26



<b>PRIORITY</b>	<b>LEGAL NAME</b>	<b>LOCATION</b>	<b>SIZE</b>	<b>ADJACENT HOMES</b>
14	Tract N1 Castle Pines North Filing 27 Amendment 2	S of Twisted Oak Drive	6.11	7
15	Tract D Castle Pines North #11 Amended	SE of Kent Place	9.13	23
16	Tract C Romar West	SE of Vacquero Drive	2.10	7
17	Tract L Castle Pines North #21	W of Buffalo Ridge Elementary	2.67	0
18	Tract B Castle Pines North #27	North of Serena Drive	15.83	37

Properties adjacent to these 200+ acres of open space face additional risks from the proximity of vegetation managed less often than that on adjacent private property. The impact of open space mitigation is leveraged with backyard mitigation and vice versa.

Recommended Risk Reduction Priorities for CPNMD

<b>PRIORITY</b>	<b>PROJECT NAME</b>	<b>NOTES</b>	<b>STATUS</b>
1	Open space mitigation as noted in the table above	Mitigate Gambel oak, perimeter grasses using guidance above	
2	Provide educational programming	Hosting presentations, utilizing social/traditional media	Ongoing



### **The Ridge at Castle Pines North**

This golf course surrounds the Estates at Buffalo Ridge, Glen Oaks, and The Hamlet neighborhoods north of West Castle Pines Parkway and PineRidge, Villa Carriage, LifeStyles, and Forest Park south of that roadway.

### **The Sanctuary Golf Course**

The Sanctuary is west of the City of Castle Pines near the intersection of North Daniel's Park Road and West Castle Pines Parkway.

### **The Country Club at Castle Pines**

The Country Club is south of the City of Castle Pines but close enough to homes along CastlePoint Lane to be considered adjacent.

Fairways and greens serve as fuel breaks against low intensity surface fires, but the groves of Gambel oak along those fairways are vulnerable to ignition because few have been mitigated.

Mitigation recommendations for each of the businesses include pruning ladder fuels (low-hanging branches) within six feet of the ground in those groves to protect them from ignition and, as a result, reduce the potential for crown fires to produce ember showers that could impact properties downwind. Additionally, management teams are encouraged to work with SMFR to develop notification and evacuation plans to ensure golfers and staff are notified quickly of emergency conditions and, if necessary, evacuated safely and quickly.



## *NEIGHBORHOOD-SPECIFIC INFORMATION*

Effective wildfire mitigation begins at home: replacing flammable vegetation with non-flammable vegetation, pruning branches along walls and under tree canopies, eliminating ember traps on and beside homes and outbuildings, adjusting home materials and forms to be more resistant to ignition, replacing sections of flammable fence materials with fire-resistant materials, registering for Douglas County's CodeRed System, and preparing for evacuations.

Homeowners associations can leverage the impact of work at individual homes by mitigating its open space and hosting educational presentations for residents.

### **Buffalo Ridge**

Buffalo Ridge is a small four-home neighborhood at the northwest corner of West Castle Pines Parkway and Buffalo Trail. The homes are on a total of 10 acres immediately east of a Denver Mountain Parks property.

Homes have fire-resistant roofing and exterior siding, but multiple materials for decking: some are ignition-resistant, some are not.

### **The Canyons**

In March 2022, The Canyons had approximately 500 homes south of Hess Road and east of Interstate 25. Homes have fire-resistant roofing and exterior siding, but not all decking is fire resistant. The homes themselves represent the most significant values at risk. Residents are a mix of ages. There are no livestock in this growing neighborhood.

The neighborhood currently has a handful of commercial properties. Although most are model homes, the primary commercial structure is The Exchange, a popular coffee house and headquarters for Shea Homes representatives. There are plans for future commercial growth as well as an elementary school.



## **Castle Pines North HOA1, Castle Pines North HOA2, and Canterbury Park HOA**

For the purposes of this plan, these three individual homeowners' associations are considered a single neighborhood because of their proximity to one another, their shared access and egress routes, and their similar ecosystems. This neighborhood is south of West Castle Pines Parkway, east of the Forest Park neighborhood, west of Mira Vista Lane, and north of the Village at Castle Pines.

### **Castle Pines North HOA1**

Most of this neighborhood is east and north of Monarch Boulevard, but it includes 76 homes south of Monarch along Ingleton Drive, the eastern end of Shoreham Circle, and Kent Place. Homes were built in the 1980s, 1990s, and 2000s.

### **Castle Pines North HOA2**

The single-family homes in this neighborhood are west of Monarch Boulevard and south of West Castle Pines Parkway. They were built in the 1980s, 1990s, and 2000s.

### **Canterbury Park**

These residents live in attached townhouses along Norfolk Place and Clarendon Loop, also west of Monarch and south of West Castle Pines Parkway. There are 96 homes in 28 buildings all constructed between 1999 and 2002.

Because homes were constructed over three decades, they were built to different code standards and have multiple materials for roofing, exterior siding, and decking: some are ignition-resistant, some are not. Homes are the most significant value at risk in these neighborhoods individually and collectively.

This neighborhood also includes Buffalo Ridge Elementary School, which is part of Douglas County School District, because of its location, its role in the neighborhood as a hub for social interactions, and for its positive and negative contributions to wildfire hazards.



## **Castle Pines North II**

The Castle Pines North II Homeowners Association (CPN II HOA) differs from many other HOAs because its six sub-associations are located in different parts of the City of Castle Pines.

### **Bramble Ridge**

The single-family homes in this sub-association, which includes the patio homes (although those homes have a separate sub-association), are in a triangular area south of Buffalo Trail and west of Monarch Boulevard. It includes a clubhouse and swimming pool. Homes were built between 2001 and 2003.

### **Briar Cliff**

This sub-association has single-family homes east of Monarch Boulevard, south of Green Briar Boulevard, west of the Xcel Energy easement, and north of Happy Canyon Creek. Homes were constructed in the first decade of the 2000s.

### **Bristle Cone**

This sub-association, which includes the patio homes (although those homes have a separate sub-association), is along the north side of West Castle Pines Parkway west of Timber Trail Elementary School. The homes were built in the 1990s.

### **Green Briar**

This sub-association has single-family homes east of Monarch Boulevard, south of Hiddenpointe Boulevard, west of the Xcel Energy easement, and north of Briar Cliff. Homes were constructed in the first decade of the 2000s.

### **Stone Croft**

This sub-association of single-family homes is west of Monarch Boulevard and east of fairways owned by The Ridge at Castle Pines North golf course.



### **Winter Berry**

This sub-association has single-family homes built in the first decade of the 2000s. It is located north of Buffalo Trail and west of Monarch Boulevard.

Homes have multiple materials for roofing, exterior siding, and decking: some are ignition-resistant, some are not.

This neighborhood includes Timber Trail Elementary School, which is part of Douglas County School District, because of its location, vegetation on its campus, its role in the neighborhood as a hub for social interactions, and for its positive and negative contributions to wildfire hazards.

### **Castle Valley**

This new neighborhood is surrounded by Hyde Park Circle on the north, east, and south; Lagae Road forms the western border. Homes have fire-resistant roofing and siding. Landscaping is new but still consists of a mix of flammable and fire-resistant species. Adjusting those plants now before they develop robust roots and become part of the residents' sense of home is suggested.

### **Claremont Estates and Huntington Ridge**

This dual neighborhood straddles Berkshire Lane on the west side of the Xcel Energy transmission line and Yorkshire Drive on the east side of it. Homes in Claremont Estates and Huntington Ridge are surrounded by significant native and exotic vegetation on private property and along the utility's right-of-way.

Firefighting will be limited below electrical lines because smoke plumes can conduct electricity from the lines to firefighters and apparatus on the ground.



## **The Crossings**

This dense neighborhood is west of monarch Boulevard and north of West Catle Pines Parkway. It is surrounded by open space managed by the CPNMD, but several yards have vegetation that could be receptive to embers from wildfires upwind.

## **Daniel's Ridge**

Daniel's Ridge is a neighborhood of single-family homes and seven tracts of open space. The neighborhood is north of Castle Pines Parkway and east of Buffalo Trail. Each of the homes is addressed and accessed from Vista Lodge Loop. The ranch-style homes with walk-out basements, which were constructed in the early 2000s, are on lots measuring between two and four tenths of an acre.

The homes are the greatest economic values at risk in this neighborhood. There are no outbuildings and no livestock. There are no utilities at risk from surface activities.



## **Esperanza**

Esperanza has single-family homes west and south of Monarch Boulevard in the northwestern part of the City of Castle Pines. Homes have fire-resistant roofing and exterior siding, but not all decking is fire resistant. The homes themselves represent the most significant values at risk. Residents are a mix of ages. There are no livestock in this suburban neighborhood.

Esperanza manages three tracts of open space:

<b>PRIORITY</b>	<b>LEGAL NAME</b>	<b>SIZE</b>
1	Tract AA CASTLE PINES NORTH #27	10.14
2	Tract E Castle Pines North #27	18.06
3	Tract DD Castle Pines North #27	5.22

These tracts present a significant risk to the neighborhood.

- Tract AA is upwind of the neighborhood; winds typically are from the southwest and west. It also slopes upward to homes. Fire typically burns faster uphill than downhill because it dries and heats fuels above the main fire.
- Tract E features horizontally and vertically dense groves of Gambel oak, which is volatile throughout the year. Low- and moderate-intensity wildfires in the grass ecosystem here could climb easily into the oak canopy and transform into a high-intensity wildfire. Once the oak canopy ignites, it can generate significant embers capable of landing within Esperanza as well as within other neighborhoods downwind of the wildfire.
- Tract DD also is below the neighborhood. Wildfires here could burn toward the neighborhood’s eastern egress route and potentially block Monarch Boulevard.



## **The Estates at Buffalo Ridge**

The Estates at Buffalo Ridge is a neighborhood of single-family homes that sit along the sloping Buffalo Ridge Road as well as a pair of short cul de sacs called Buffalo Ridge Way and Buffalo Ridge Court. Each of the homes was constructed since 2005 and only a few lots remain vacant. Lots are typically between two tenths and three tenths of an acre.

Private homes represent the majority of economic values at risk in this neighborhood, but EBR does own and operate a swimming pool and clubhouse at 1135 Buffalo Ridge Road.

The HOA manages three tracts of Gambel oak-heavy open space covering approximately six acres. Since 2017, this neighborhood has participated in Ready, Set, Goat.



**Forest Park**

Forest Park is a neighborhood of over 200 single-family homes and one commercial building along two loops formed by Forest Park Drive, Forest Ridge Circle, and Forest Trail Drive, as well as homes along Castlepointe Lane. Castle Pointe Circle, a loop of homes, stems from the southern end of Forest Park Drive. Homes were built in the late 1990s and first decade of the 2000s. All homes in the neighborhood have fire-resistant siding and roofing. Decking is a combination of wood and composite materials. The homes themselves represent the most significant values at risk in the neighborhood.

The Forest Park Homeowners Association owns and operates a clubhouse and outdoor swimming pool at 6975 Forest Ridge Circle.

Forest Park Drive provides the only access to the neighborhood from the north. An emergency gate that utilizes a Knox Box key may provide emergency access to Country Club Parkway if responders are able to open it. Both directions of Country Club Parkway lead to exits from The Village of Castle Pines to Happy Canyon Road or Lagae Road.

<b>OPEN SPACE NAME (LOCATION)</b>	<b>SIZE</b>	<b>RECOMMENDATION</b>
Tract A (Between Timbercrest Lane and Forest Ridge Circle)	4.70	Mow along fence lines, remove ladder fuels from mature conifers, thin Gambel oak for horizontal and vertical continuity.
Tract C (Adjacent to 7104 Forest Ridge Circle)	0.19	Thin Gambel Oak within 30 feet of the adjacent home, remove ladder fuels from conifers.
Tract D (Adjacent to 7290 Forest Ridge Circle)	0.13	Thin Gambel Oak within 30 feet of the adjacent home.
Tract D (Adjacent to 892 Parkcliff Lane)	0.23	Remove ladder fuels from conifers.
Tract E (Adjacent to 7291 Timbercrest Lane)	0.09	Maintain healthy vegetation.
Tract E (Land surrounding Pool and Poolhouse)	1.30	Remove ladder fuels from conifers, trim branches away from roofing and walls of the poolhouse.
Tract F (Between Pinefield Lane and Forest Ridge Circle)	0.25	Remove ladder fuels from conifers.



<b>OPEN SPACE NAME (LOCATION)</b>	<b>SIZE</b>	<b>RECOMMENDATION</b>
Tract G (Along Forest Park Drive and extending west to Forest Trails Drive)	8.05	Remove ladder fuels from conifers, remove standing dead trees, thin Gambel oak for vertical and horizontal continuity within 30 feet of homes. Be careful to avoid disturbance where soils are fragile and prone to erosion onto Forest Trails Drive.
Tract H (Between Forest Trails Drive and Havenwood Drive)	5.77	Remove ladder fuels from conifers, remove standing dead trees, thin Gambel oak for vertical and horizontal continuity within 30 feet of homes.
Tract H (Adjacent to 1445 Forest Trails Drive)	1.65	Remove ladder fuels from conifers, remove standing dead trees, thin Gambel oak for vertical and horizontal continuity within 30 feet of homes.
Tract J (Adjacent to 7101 Parkwood Lane)	0.53	Remove ladder fuels from conifers, remove standing dead trees, thin Gambel oak for vertical and horizontal continuity.
Tract K (Along Castlepointe Lane)	0.33	Continue current maintenance.
Tract N (Between Forest Park Drive and Woodglen Place)	0.27	Remove standing dead trees.
Tract N (Adjacent to 1278 Forest Trails Drive)	0.14	Remove dead trees, remove ladder fuels from conifers.
Tract X (North of Castle Pointe Circle)	0.43	Remove ladder fuels, maintain vibrant ecosystem.
Tract Y (Southern median along Forest Park Drive)	0.08	Remove standing dead trees.
Tract Z (Northern median along Forest Park Drive)	0.08	Remove standing dead trees.

The open space of Forest Park is an essential component of the neighborhood’s character. Mitigating the open space can be done to maintain the forested ecosystem functionally and aesthetically. One strategy for mitigation is to protect the conifer and Gambel oak canopies by removing ladders fuels—branches within six feet of the surface—and creating a buffer between surface wildfires and those canopy fuels. Treatment options include mechanical, manual, and animal (goat) means.



Forest Park also has driveways that are thick with vegetation. The recommendation for these driveway parcels is to trim vegetation along the driveways to maintain clearance of 15-foot height and 12-foot width. Those dimensions provide minimum access for SMFR’s emergency apparatus.

**Glen Oaks**

This neighborhood, which has participated in Ready, Set, Go! in the past, is west of Monarch Boulevard and east of the Estates at Buffalo Ridge. Glen Oaks Avenue provides the only access to this neighborhood except in an emergency if the emergency route at the end of Glen Ridge Drive is opened.

**The Hamlet**

The Hamlet is a neighborhood of 61 single-family homes within the City of Castle Pines. The homes, which were built between 1987 and 1996, are on parcels of land less than half an acre adjacent to Burggarten Drive or one of the six short cul-de-sacs that branch from that main road.

There is a single commercial structure in the neighborhood, but the “Self Service Booth” as it is called is only 282 square feet and sits at the entrance to the neighborhood

Burggarten Drive, the single access route into this neighborhood is gated. SMFR’s computer-aided dispatcher system has a code for the gate and each of its emergency apparatus has a Knox Box key for entry.

All but six homes in the neighborhood have fire-resistant roofing. Those other six homes have wood-shake shingles and, therefore, pose a significant risk to The Hamlet and nearby neighborhoods. Exterior walls consist of frame masonry veneer or frame stucco. Wood and composite decks are common.



### **Hidden Pointe**

Hiddenpointe Boulevard is the single ingress/egress route for Hidden Pointe, which is a dense neighborhood surrounded by rural neighborhoods and open space. Coyote Ridge Park is to the northwest, the Xcel Energy transmission line and Monarch Boulevard are to the southwest, Surrey Ridge Estates is to the northeast, and Oak Hills is to the southeast. The wildfire risk is far greater for this neighborhood because of those surroundings and their potential to produce ember storms that could shower its houses and yards.

An emergency road from Crossing Circle to Heather Drive is no longer viable. Refreshing this emergency egress route and securing it as other similar routes are secured would improve evacuation options for Hidden Pointe, Surrey Ridge Estates, and surrounding neighborhoods.

### **North Lynx**

North Lynx has single-family homes west and east of Monarch Boulevard. Homes were built in the first decade of the millennium. They have fire-resistant roofing and exterior siding, but not all decking in fire resistant. The homes themselves represent the most significant values at risk. Residents are a mix of ages. There are no livestock in this suburban neighborhood.

### **North Pines Vistas Metropolitan District**

This neighborhood is one of the newest in the City of Castle Pines. While the homes are west of Lagae Road, south of Mira Vista Lane, and north of the Village at Castle Pines, for the purposes of this mitigation plan, the neighborhood also includes American Academy and the City's Elk Ridge Park.

Landscaping is new but still consists of a mix of flammable and fire-resistant species. Adjusting those plants now before they develop robust roots and become part of the residents' sense of home is suggested.



### **PineRidge, Villa Carriage, and LifeStyles**

This neighborhood consists of three components: PineRidge represents the roads, sidewalks, and open space; Villa Carriage represents 16 duplex units and 12 four-plex units, and LifeStyles represents 100 single-family homes. Homes are built in close proximity to one another on small lots and are consolidated in the northeast corner of the development. The southwest corner of the development, which is contiguous to the residences, is comprised of approximately 22 acres of forested open space.

The forested open space south and west of the community contains abundant vegetation and wildfire fuels on steep terrain. The open space is dominated by Gambel oak and mountain mahogany with a low density, healthy stand of ponderosa pine. This arrangement creates a forest with robust vertical continuity from surface fuels to crown fuels and, as a result, has been targeted by residents' mitigation efforts.

This neighborhood pioneered the use of goats for Gambel oak mitigation in 2015.

### **The Retreat**

This neighborhood, which has participated in Ready, Set, Goat for several years, is north of Castle Pines Parkway and east of Monarch Boulevard. Homes are along Tangleoak Lane and five cul de sacs that extend from that road. Although most homes have been hardened against wildfire, landscaping on private property is flammable.

Groves of Gambel oak in the open space surrounding those cul de sacs present a significant risk to The Retreat especially when the groves cross into backyards or lead to other flammable vegetation in those yards.



## **Romar**

Romar is in the northwest part of the city. Its homes straddle Grigs Road, Vaquero Circle, and Vaquero Drive between Tapadero on the east and Ventana/Amber Ridge on the west. Two tracts of CPNMD open space are on either side of Grigs Road and present significant risks to homes because of the groves of Gambel oak have both horizontal and vertical continuity. Surface fires can climb quickly into oak canopies and burn quickly down, across, and up slopes of the gullies toward homes and evacuation routes.

Open space owned by the City of County of Denver to the south of this neighborhood also supports significant groves of Gambel oak that present threats similar to the CPNMD open space.

## **Ventana/Amber Ridge**

This neighborhood has single-family homes west and south of Grigs Road in the northwestern part of the City of Castle Pines. Homes have fire-resistant roofing and exterior siding, but not all decking is fire resistant. The homes themselves represent the most significant values at risk. Residents are a mix of ages. There are no livestock in this suburban neighborhood.

The City & County of Denver owns 311 acres of open space adjacent to the neighborhood on its western and southern boundaries. It presents the greatest risk to the neighborhood because wind typically blows from the west and southwest and because of the dense Gambel oak and grass fuels.

Yard vegetation here as in most neighborhoods is a combination of native and exotic tree, shrub, flower, and ground cover species. The landscaped vegetation is particularly risky in backyards adjacent to open space.



## **Whisper Canyon**

Whisper Canyon is a gated neighborhood of 44 single-family homes. The homes, which were built between 2003 and 2016, are on parcels of land measuring between three tenths and 1.8 acres.

Although two roads lead into this neighborhood, both Whisper Canyon Road and Twisted Oak Drive terminate at Buffalo Trail. Both roads are gated; SMFR's computer-aided dispatch system has a code for the gate and each of its emergency apparatus has a Knox Box key for entry.

This neighborhood is built on a slope above nearly 22 acres of open space owned by the CPNMD, which is adjacent to 261 acres of open space owned by the City & County of Denver. While grazing has reduced vegetation on the larger swath of open space, little to no mitigation has been performed by the CPNMD. Wildfires, regardless of intensity, that ignite along the bottom of the slope or burn to that point could grow rapidly through the neighborhood.

Yard vegetation here as in most neighborhoods is a combination of native and exotic tree, shrub, flower, and ground cover species. The landscaped vegetation is particularly risky in backyards adjacent to and upslope of open space.



**Recommended Risk Reduction Priorities**

The following priorities are valid for each of the neighborhoods within the City of Castle Pines with the exception of participation in Ready, Set, Goat. That program is most effective with Gambel oak because no other browser can stomach (literally) the chemicals in Gambel oak leaves. Goats also effective against weeds such as thistle because their stomach enzymes neutralize seeds prior to defecation.

<b>PRIORITY</b>	<b>PROJECT NAME</b>	<b>NOTES</b>	<b>STATUS</b>
1	Mitigation on private property	Effective wildfire mitigation begins at home. Residents are encouraged to contact SMFR for a free, in-person home wildfire risk assessment to create a written plan as required by local and state regulations. Email <a href="mailto:ReducingRisk@southmetro.org">ReducingRisk@southmetro.org</a> to schedule an assessment.	Ongoing
2	Ready, Set, Goat	For neighborhoods adjacent to open space with dense groves of Gambel oak, they should start or continue utilizing goats because they eliminate ladder fuels without causing the oak's physiological response to a topkill event.	Started in 2015
3	Evacuation drill	Collaborate with SMFR for education before the drill and conducting the drill.	
4	Provide educational opportunities	HOAs and other groups of residents can host presentations, utilize social/traditional media, and collaborate with SMFR, the City, Douglas County, Colorado State Forest Service, and other partners for educational opportunities.	