

WALDEN PRESERVE FILING #6

WILDFIRE HAZARD EVALUATION

WILDFIRE MITIGATION PLAN

AND

FIRE PROTECTION PLAN

Rubicon Wildfire Solutions LLC was engaged by Vertex Colorado Springs Consulting to develop the necessary Wildfire Hazard Evaluation report and the Wildfire Mitigation Plan and Fire Protection Plan for the **Walden Preserve Filing #6 PUD** project as required by the El Paso County Planning and Community Development department. These reports and plans are developed in the framework of the Colorado Wildfire Resiliency Code (v-1 June 2025) to meet compliance requirements in development planning.

Rubicon Wildfire Solutions works as a broad spectrum wildfire consulting company including new developments, home builders, homeowners, insurance companies and fire agencies to reduce the impacts of wildfires. The same owner/consultant has been providing similar surveys and reports since 1992, well before State of Colorado requirements. Robert Harvey, CWMS has also been involved since 1981 in developing community and structure survivability in wildfires including being internationally assigned as a Structure Protection Specialist to major wildfires.

SURVEY

Rubicon Wildfire Solutions conducts all site surveys in person to ascertain the current dynamics of the wildfire environment of a proposed development or home construction site, aerial surveys and photos have been found to be inaccurate and not up to date for the development site needing current information to make critical development decisions. Robert Harvey's long career in the fire service makes him keenly aware of the vital information that these reports and plans provide the fire agencies that are the AHJ in the sites being surveyed and developed that require approval for fire protection coverage.

The site survey for Walden Preserve Filing #6 was conducted on a clear day with no snow on the ground for the preceding 2 months. Fuels were in their cured and available profile in relation to vertical arrangement (no snow compaction). Grass fuels were still in the cured state with no green up for the spring. A spring which saw minimal moisture gains missing the

averages in this region for the time of year. Soil moisture depth was measured in fresh dig method at 4.5" below the surface

Topography plays an important role in wildland fire behavior with aspect (direction a slope faces relative to compass points) and slope percentage being critical factors in the preheating of the wildland fuels and fire carry (speed) in the preheated fuel elements.

The Walden Preserve subdivision site is situated just north of the high point ridge of the Palmer Divide, a ridge that represents the high point between Denver (5,280 feet ASL) and Colorado Springs (6,200 feet ASL). The Palmer divide connects the Rampart Range (mountains west) to the Black Forest in Elbert County, CO (east). The Palmer Divide varies in elevation to a mean average of 7,200 feet ASL.

SLOPE: The slopes observed and measured on the Walden Preserve site did not exceed 5% (5' vertical rise/fall in 100' of horizontal travel). Wildland fire behavior does not take a slope of less than 10% into consideration when estimating fire behavior calculations.

ASPECT: The aspect of the site while on the north side of the ridge more closely represents flat ground that would exhibit no intrinsic influence on wildland fire behavior, this is due to the 5% or less slope input factor.

TOPOGRAPHIC FEATURES: There are no topographic features on this site such as box canyons, saddles, chimneys, chutes, narrow canyons or narrow ridge tops that would impact wildfire behavior.

FUELS: The Walden Preserve site most closely represents NWCG Fire Behavior Fuel Model 2 (without brush/shrub component) with total fuel load less than 3" live and dead to be under 4.0 tons per acre and dead fuel load of less than 0.25" to be 2.0 tons per acre. These fuels loadings appear to be slightly higher than observed on site.

The NFPA 1140 Standard describes this site to fit the Fuel Model C category: Open pine stands with Perennial grasses being the primary ground fuel. Some brush and shrubs can be present, but they are of little consequence.

DEVELOPMENT SITE OBSERVATIONS: The Walden Preserve filing #6 site indicates a gentle slope of under 5% that rises from Colorado State Highway 83 on the west boundary of the development and tops out on the east side with low continuity grass fuels along CO Highway 83 to dispersed Ponderosa Pine at the top of the slight rise. The Ponderosa Pine component comprises approximately 65% of the development site, this forested area has been previously logged or fell under a Timber Stand Improvement plan to thin the Pines and remove any brush component (understory or sub-canopy) that would create a ladder fuel connection to the Pine canopy.

FIRE BEHAVIOR: The current conditions observed during the site survey would indicate that the wildfire occurrence on this site would be a low intensity ground fire that would not have

opportunity to rise to the Ponderosa Pine level for a crown fire level incident. The grass fuel class is of low continuity meaning that even small patches of dirt will disrupt fire spread capabilities. The lack of a brush component indicates the fire activity would remain on the ground providing ease of suppression by forces with handtools and small diameter hose lays of 1.5" diameter hose. Flame Lengths in the grass fuels would struggle to exceed 1 foot and would slowly progress without a significant wind. If wind was an influencing factor on the flame front gusts above 20 mph do have a tendency to extinguish the fire due to low fuel continuity. **Overall this site shows a very low complexity fire easily extinguished without the use of mechanized equipment or air attack resources. Firefighters should expect a fireline intensity of no greater than 30 BTU Sec/FT with a water fire flow rate at 15 to 20 gallons in direct application to extinguish a fire on this site. No records of fire incidents on this site were discovered and the Black Forest Fire perimeter was in excess of 3 miles south of this location.**

COLORADO WILDFIRERISK VIEWER

The Colorado Wildfire Risk Viewer is a program owned and provided by the Colorado State Forest Service. It was developed for the use of Realtors, homeowners and the insurance industry to gain an understanding of potential wildfire risk to a parcel of property in the State of Colorado. The CWRV is not used by fire staff in determining fire behavior or threat characteristics and is only provided in this document to meet El Paso County requirements for these reports. A Fire Behavior Analyst utilizes inputs with numerical modeling to develop fire behavior predictions and not a color coded index as is used in the CWRV.

Fire Intensity – Low/Moderate (expresses a probable fire behavior level)

Burn Probability – Moderate (expresses the total consumption of the primary fuel)

Values at Risk – Lowest (describes any value at risk from crops to historic structures).

WUI - Lowest (describes in poor terms the WUI risk at survey point in time).

Surface Fuels – GR2 Low Load Dry Grass/GS1 Low Load Grass Shrub (not accurate).

Vegetation – Grass and Conifer. (very general description).

WUI – Class 2 – 1 House per 20 acres (a method to indicate home numbers).

Canopy – Indicates 50%-75% (ground survey indicates approximately 65%).

Slope – Lowest Input (FBAN will use actual slope expressed as a percentage).

Building Damage Potential – Very Low (very accurate when no structures present).

Building Density – Less than 0.5 per acre.

Ingress/Egress – 7/8 on scale of 1 to 8 (Has absolutely no value in reporting).

Defensible Space – Low to High (no value to reporting with no structures on site).

WILDFIRE HAZARD IDENTIFICATION

CWRC CHAPTER 3

The Colorado Wildfire Resiliency Code requires that a land parcel or subdivision be assigned a Wildfire Hazard Intensity Classification (CWRC Section 303.2). This allows the assignment of the appropriate Structure Hardening Classification (CWRC Chapter 4) and the appropriate Site and Area Requirements (Mitigation) found in CWRC Chapter 5. This assignment process can only occur after the site has been surveyed by qualified individuals who can interpret the dynamics of a wildfire environment. Each piece of ground must be analyzed for accurate wildfire values and dynamics, reliance on a general map or aerial photographs cannot reveal the actual dynamics of the land and vegetation on it. Of course this survey and evaluation can only record the existing configuration of the fuels and topography, excavation, building and design can greatly alter the wildfire potential on a piece of ground or an entire neighborhood.

The **Walden Preserve Filing #6** is placed into the **Low Fire Intensity Classification (CWRC 303.2.1)**. Based on observations of wildland fuels arrangement and topography this Classification fits the description of the Low Category:

Identified in areas with light to medium surface fuels, such as grasses, shrubs and scattered low density vegetation. These fuels are often discontinuous, which limits flame propagation, but can sustain burning under moderate weather (wind) conditions.

Fires in this class may occur on gentle to moderate slopes where topography begins to influence the rate of spread. Although flame lengths remain relatively small – typically less than two feet – limited spotting may occur, especially with a wind component.

Trained firefighters with PPE and standard tools and usually suppress these fires through direct fire attack.

The **Walden Preserve Filing #6** fuels and terrain fit this description. While mature Ponderosa Pines are present on approximately 65% of the site there is only a grass understory on the surface, no brush class fuels that would be considered ladder fuels or trunk impacting fuels are present, it is best described as park like in the configuration of fuels. The slope is 5% or below, removing the slope spread factor in fire behavior. **Fire behavior potential on this site indicates low complexity which is easily suppressed without mechanized equipment or air attack resources. Developing building sites on lots in this subdivision will further reduce the Ponderosa Pine canopy.**

STRUCTURE HARDENING

CWRC CHAPTER 4

Structures built in the **Walden Preserve Filing #6** subdivision should comply with the requirements found in **Class 1 Structure Hardening (CWRC Section 403)**. This is not necessarily critical protection from wildfire events on the land proposed for subdivision as the fire load will decrease as a result of home construction, rather it is protection due to proximity of parcels outside the development that may not be mitigated to the same degree and therefore become ember generating fuel beds that would impact the subdivision.

To avoid redundancy and any misinformation the stipulations of Section 403 of the CWRC are not added to this report at this point. Any Builder, Homeowner, Developer, Designer or Architect must be in possession of the CWRC that is current at the time of design through construction as these stipulations may be altered prior to a Building Permit issuance.

The Homeowner should also discuss their home design and building products to be used with their insurance company to ascertain if the insurer has other requirements that must be incorporated into the property in the design phase.

SITE AND AREA REQUIREMENTS

(MITIGATION)

CWRC CHAPTER 5

The mitigation requirements of the **Walden Preserve Filing #6 need to meet the stipulations found in Section 502 Class 1 Requirements of the CWRC (v-1 2025)**. With overlapping zones of mitigation influence a well mitigated area in the entirety of this subdivision should be achieved. Caution must be exercised when landscaping within this development to avoid canceling the positive attributes of community level mitigation that this subdivision will achieve.

To avoid redundancy and misinformation all Homeowners, Landscape Designers, Landscapers involved in the exterior of the homes property must have a copy of the current (at time of Building Permit issuance) CWRC to refer to and design and implement to.

The Homeowner should also seek consultation with their insurance company to learn of any requirements the insurance company may have that are more restrictive than the Building or Fire Codes and the CWRC.

The Homeowner should consider engaging the services of a Certified Wildfire Mitigation Specialist to be part of their team in designing and development of their property. A CWMS can add benefit to work with Homeowners, Builders and Landscapers who are not familiar with the CWRC or the intricacies that may occur in a wildfire prone environment.

These surveys and reports were prepared by:

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WALDEN PRESERVE

FILING #6

FIRE PROTECTION PLAN

The Walden Preserve Filing #6 is located within the boundary of the Monument Fire Protection Districts, a Fire District that was formed under Colorado Revised Statutes to provide emergency services to the public. The Monument Fire Protection District provides structure firefighting, wildland firefighting, Community Risk Reduction functions, Emergency Medical Services, EMS Transport of patients, Rescue Services and Hazardous Materials at the Responder level.

Monument Fire Protection District is a career staffed fire agency that responds from 5 fire station locations within their district. In addition the MFPD participates in the North Group (North El Paso County) Mutual aid and Automatic Aid configuration with Black Forest Fire Rescue, US Air Force Academy Fire Department, Colorado Springs Fire Department, Palmer Lake Fire Department and the Falcon Fire Protection District. This consortium has been in existence for approximately 40 years and has proven very effective in providing incident mitigation support to each other during serious events such as the Waldo Canyon Fire.

The Fire Stations that would be the primary response force to the Walden Preserve Filing #6 subdivision would be:

Station 5, 3.4 Miles response distance at 15055 CO Highway 83.

Station 2, 3.4 Miles response distance at Roller Coaster Rd. and CO 105

Station 4, 4.4 Miles response distance located at Gleneagle DR and Baptist Rd.

Monument FPD is a dual agency in that some portions of the district are supported by fire hydrants while others are supported by the Hauled Water Evolution that is tested by the ISO for efficiencies in maintaining fire flow. In addition there are cisterns available in some areas of the district for emergency utilization.

The Walden Preserve Filing #6 will be developed with fire hydrants the required configuration for a suburban classification by NFPA and the local Standards of the Monument Fire Protection District. The fire hydrant system will be supplied as an extension of an existing water district that maintains and tests the fire hydrants to NFPA and American Water Works Standards. No cisterns will be utilized in this subdivision.

ACCESS

Primary access to the Walden Preserve Filing #6 will be by travel on Colorado State Highway 83, a two lane highway that is paved and maintained by the Colorado Department of Transportation. This maintenance includes snow plowing to this vital roadway that allows access to the development in a north/south travel configuration. Streets that enter the Walden Preserve Filing #6 subdivision will have direct access from Highway 83 as well as Pinehurst Cir. an existing street built to El Paso County Streets and Roads Design Manual that provide guidance and regulation in developments within El Paso County.

No grades impacting apparatus response or barriers were observed during the site survey of this property.

This Fire Protection Plan developed by:

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