**INFORMATIONAL COMMENT:**
Pursuant to new office procedure, Black Forest Fire Protection will review this. Comments may be forthcoming.

# SUNDANCE WEST

# FIRE PROTECTION PLAN

## JUNE 6, 2026

VERTEX Consulting Services (vertexcos.com) of Colorado Springs engaged the services of Robert Harvey, Owner and Primary Consultant of Rubicon Wildfire Solutions LLC and Rampart Fire Services to develop this Fire Protection Plan for the Sundance West Development site. Mr. Harvey is a retired Fire Officer and Fire Marshal who served 51 years in government and community service in developing similar plans or reviewing plans as the Fire Chief/Fire Marshal, City of Leadville, CO. as the Fire Marshal for Leadville/Lake County, CO. Fire Chief/Fire Marshal Black Forest Fire Rescue Protection District, CO. The Assistant Chief/Fire Marshal, City of Newport FD, OR and the Fire Marshal for Newport Rural Fire Protection District, OR. Mr. Harvey provides Code development and Code interpretation for small Fire Protection Districts that have limited resources and teaches Company Level Inspections to further the cause of fire prevention and protection in agencies where a Community Risk Reduction Officer or staff may not be available.

This Fire Protection Plan has been developed for **the Sundance West Subdivision** in El Paso County, Colorado. The Fire Protection Plan is not developed to guide a fire agency in their administrative or operational procedures, nor does it suggest how to suppress a fire, rather it is developed to examine specific areas of concern in the development planning process and suggest viable alternatives in areas such as water supply, complexities in response routing which may be modified by the Developer to improve operational capabilities while remaining in the recognized standards and codes that dictate new developments or subdivisions of existing parcels. Developing a Fire Protection Plan for a new development can also have positive benefits for adjacent or proximity developments where these factors were not considered in the planning phase during the era these were developed.

## AUTHORITY HAVING JURISDICTION

The AHJ for this development site is **Black Forest Fire Rescue Protection District,** a fire district that was formed under Colorado Revised Statutes that has grown from a complete Volunteer base to a combination (career/volunteer) staffing profile to fully career staffing profile. The BFFRPD responds to structure, wildland, EMS and Hazardous Materials incidents and provides Paramedic level EMS with patient transport. The Black Forest District participates in the North Group (North El Paso County) mutual aid and automatic aid compact to affect dynamic emergency services delivery with closest unit response (regardless of AHJ) to provide the fastest possible response to mitigate emergencies.

Black Forest Fire Rescue responds from two (2) stations and has mutual/automatic aid agencies within very reasonable response distances. The station nearest to the Sundance West Development site being Station 2 as the primary responder.

**BFFR Station 2 – 1.4 miles (road) to Sundance West development site.**

**BFFR Station 1 – 7.1 miles (road) to Sundance West development site.**

**Monument FPD Station 5 – 3.2 miles (road) to Sundance development site**

**Monument FPD Station 2 – 4.3 miles (road) to Sundance West development site.**

The locations of stations to support operations in the Sundance West Development are in line with NFPA Standard 1720 Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations to the public by largely volunteer or combination fire departments. NFPA 1720 Classification of Rural Zone (population is less than 500 people per square mile): 6 staff members with water on the fire in less than 14 minutes. This objective of suppression (response force) arrival should be accomplished 90% of the time. This suggested aspect of the Standard is well supported by the BFFR and their mutual/automatic aid partners.

A significant challenge to the public perception is to understand that Fire/EMS response and delivery in rural America may be a change in the understanding and service they were previously accustomed to with fire stations located at closer intervals, multiple unit housing, greater diversity of services and fire hydrants located with 500' separation (Municipal Operations covered by NFPA 1710). The BFFR has been well known for their exceptional service to the Rural Classification the district was formulated as. **While the Sundance West Development still retains the NFPA 1720 Rural Classification the BFFR organization will be faced with a growing Suburban Classification in the south end of the BFFR District which will require a different response time and staffing profile on scene that will challenge the districts operations. The Sundance West Development and other nearby subdivisions are not going to move from the Rural Classification to the Suburban Classification due to lot size which precludes population increases and further subdivision of lots.**

# WATER SUPPLY

Water supply for firefighting efforts is the most critical element in providing a fire suppression effort in rural America across all fire protection districts

Black Forest is a predominately **Hauled Water** agency (brining water to the fire scene by means of apparatus), with less than 10% of the district supported by fire hydrants in the south end of the district. Sporadic installation of fire dedicated cisterns within the district jurisdiction has been due in part by varying County Regulations, extremely efficient hauled water capabilities, land parcels that typically do not fit the description of need found in NFPA 1720 or NFPA 1142. The property parcels where structures (homes) are built on lots of 2 acres to 5 acres or more. Parcel size factor removes the classic interface or neighborhood configuration and in the wildfire environment this lot size creates a dispersed interface. In structure fires it automatically creates building envelopes that provide a greater distance for the recognized SSD (Safe Structure Distance) which is 30 feet between combustible framed structures in the single family dwelling size.

By using the Hauled Water Evolution in conjunction with a pressurized water supply source will increase unit operational efficiencies and allows an engine dedicated to static water pumping to be available as a tactical resource..

**Both the NFPA 1142 Standard on Water Supplies for Suburban and Rural Firefighting and the El Paso County Land Development Code Section 6.3.3 allow for an AHJ (in this case BFFR) to deviate from the requirements for cisterns when alternative means and methods can be justified as providing an equal to, or better source of water for firefighting operations.**

The water supply requirement for the Sundance West Development is based on the subdivision of a single parcel with an existing structure into 7 parcels of land averaging 2.5 acres with one 4.9 acre parcel (existing structure). Homes will be in the 2,000 square foot to 3,000 square foot range. With this structure size placed on the 2.5 acre parcel the structure to structure fire extension is on the lowest side of probabilities. This lot configuration indicates that due to separation and distancing of structures the Safe Structure Distance (SDS) as developed by NIST and IBHS will be met, or exceeded. The El Paso County Land Development Code also dictates the separation of structures on a single parcel (ancillary buildings or ADU structures) maintaining the SSD to reduce chances of either structure igniting the other on the same property.

## UNIQUE WATER SOURCE

The pressurized water source in the form of fire hydrants is the most efficient and rapid method to fill Water Tenders in the developments like Sundance West. In 2012-2014 the Cherokee Water District installed several wells, storage tanks and pumping stations that deliver water from the Sundance Ranch (0.25 miles East of Sundance West) with a water transmission line of 24" diameter pipe, with pumping capacity of approximately 2,600 gpm to send water to the Frank Road Tank SE of the Sundance Ranch well and tank location. Along this transmission line are fire hydrants placed approximately 1,000 feet apart to meet rural water supply standards of NFPA and American Water Works Association Standards. The Sundance Ranch tank has a capacity to store 500.000 gallons of water and the Frank Road Tank has a capacity of 2 million gallons. Both the Sundance Ranch tank and the Frank Road tank are on constant fill from pumps on the wells that have power backup. The Frank Road tank having a higher elevation will flow to the north (down grade) if a hydrant is opened between the two tanks.

When Cherokee Water District was developing the Sundance wells, pumps and fire hydrants, the agreement between Cherokee Water District and Black Forest Fire Rescue Protection District was that the fire hydrants would **be used for firefighting purposes only** with no restrictions on regional utilization by other fire agencies. **The agreement excluded use for training, street washing, construction use (excavating) or development irrigation.**

The use of a fire hydrant without regard to location of a fire is a fairly common practice as the use in an immediately adjacent (AHJ) fire situation may prevent the fire from entering the neighboring fire district or water districts impoundment and processing plants. **A very good example of this emergency use factor is the Abert Subdivision (located in the Monument Fire Protection District) along State Highway 83. This subdivision has no cisterns or water system, yet, across Highway 83 are fire hydrants owned by City of Colorado Springs Utilities**. Abert and Flying Horse subdivisions were being built in the same period and CSU agreed that utilization of city hydrants was mutually beneficial to the city and the structures being built East of Highway 83 corridor, to preclude fire intrusion from any source into the city jurisdiction. **The Colorado Springs hydrants were utilized during the Black Forest Fire of 2013 as the majority of other water sources and cisterns were compromised by the fire behavior and its rapid progression.**

**Sundance Water District Water Transmission Line**

**Recently the Sundance Water System fire hydrant located at Black Forest Road and Country View Lane was upgraded to provide better access and parking of water tenders or fire engines with a pull out to provide for improved Firefighter safety. This fire Hydrant is known as Sundance Hydrant #17 and could provide a significant pressurized water source for the Hodgen Road corridor. Other fire hydrants in the Sundance System are also available to the Sundance West Development with closer proximity to the development.**

**List of pressurized water sources and distances to Sunadance West Development:**

**0.2 Miles – Sundance Hydrant at Sundance Ranch gate on Hodgen Rd.**

**0.72 Miles – Sundance Hydrants at Sundance tank, gravity and pump supported.**

**2.63 Miles – Sundance Hydrant #17 on Black Forest Rd. and Country View Lane**

**List of static water sources (existing) in proximity to the Sundance West Development:**

**0.1 Miles – Haes Haven Vw. and Farrar Rd. 10,000 gallons (no placard).**

**0.9 Miles – High Forest Ranch , Mountain Dance Dr. 10.000 gallons, placard.**

**1.4 Miles – Black Forest Fire Station 2, Black Forest Rd. 30,000 gallons, placard.**

**Combination Water Source (Pumped and Dry Hydrant):**

**2.93 Miles – This source is a 2 million gallon reservoir equipped with a dry hydrant as well as a pump capable of supplying direct fil to fire apparatus through 2 fire hose connections at a rate of 500 gpm or better with electric pumps supported by electric generator for power failure.**

Given the proximity of the pressurized water supply system of the Cherokee Water District's Sundance System within reasonable transport distances to not only the Sundance West Development, but also the existing structures located along Farrar Rd. (and no doubt future development within this area) along with those structures (primarily single family dwellings) North of Hodgen Road a significant improvement in available tactical engines, and hauled water cycles would be experienced without the need to position an engine at a static water source to fill tenders. In addition the confidence in a system that is in compliance with NFPA and AWWA Standards and testing provides a significant level of improved service to the fire agencies when compared to the management issues, confidence challenges and a very limited NFPA testing regimen for static water supplies that are inherent with cisterns and dry hydrants.

**ACCESS**

Access to the Sundance West development site will occur with East/West travel on Hodgen Road, a two lane paved Highway with no grades exceeding the 10% limitation imposed by the El Paso County Land Development Code as well as NFPA 1901 Standards for Fire Apparatus. Hodgen Road is maintained by the El Paso County Public Works Department which provides repairs and snow removal.

The intersecting road (North/South travel) to Sundance West properties will be on Farrar Road. This is a 20 foot wide dirt road that is in the El Paso County inventory of roads but receives little maintenance due to the resident's decision not to pave this road. Minimal snow removal is conducted after the 6" depth threshold has been reached similar to other County controlled streets and roadways.

Property access will be achieved by shared driveways meeting El Paso County Design Standards Manual and Black Forest Fire Rescue Protection District Standards for each set of 2 homes from Farrar Rd. with grades not exceeding 4% and roadway length not to exceed 500 feet. The Developer has been informed that cooperation with the AHJ is critical for the positioning, the safe movement and positioning of fire apparatus.

This Fire Protection Plan prepared by:

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