

Community Wildfire Assessment

Shenandoah Highlands & Shenandoah Estates

Original Tour date: August 30, 2016

Assessors present: Kent Grant, Colorado State Forest Service; Pam Wilson & Nell Jordan, FireWise of SW CO; Rod Allen, Durango Fire & Rescue.

Also Present: Al Chaulk, Neighborhood Ambassador for Shenandoah Estates; BOD members from Shenandoah Highlands and Estates.

Updates Completed in 2019 by: Charlie Landsman, La Plata County Coordinator, Wildfire Adapted Partnership and Lynn Johnson, Neighborhood Ambassador for Shenandoah Highlands. This Assessment and Action Plan completed June, 2022.

Community and Location

The Shenandoah Highlands and Shenandoah Estates communities share access via D&RG Road off of Colorado State Road 141 (Wildcat Canyon). Shenandoah Estates is slightly further west than the Shenandoah Highlands community. Most roads within both subdivisions are paved and approximately 24 feet wide. The road system was designed to accommodate large fire equipment and therefore has adequate turn-around areas. Most roadside areas are grass covered with few trees directly next to roads.

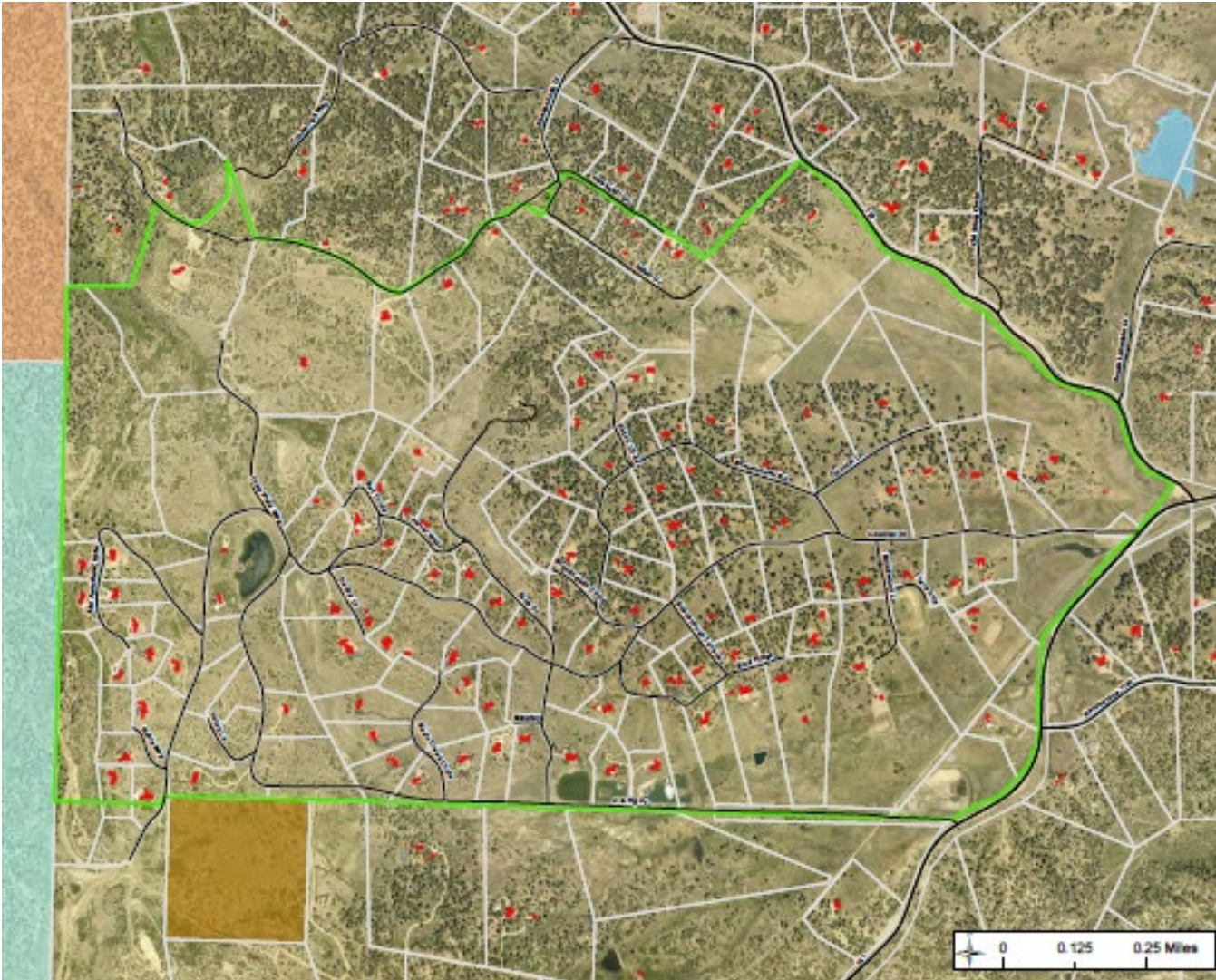
The communities are residential zoned with modern homes constructed since 2000. Shenandoah Estates has 28 lot owners averaging three and half acres each. There are 24 existing homes ranging from 2,700 to 7000 square feet, including two homes on Wapiti Ridge, which are technically not part of the Estates HOA but are subject to some HOA requirements. There is one home currently under construction. Shenandoah Highlands consists of 47 lots also averaging three and half acres each and 41 owners with one or more lots. There are 32 existing homes and three homes that are currently under construction that range between 2,500 to 6500 square feet. In both the Estates and the Highlands, several homeowners own more than one lot and there are both full time and part time residents.

Both communities have well-organized and motivated Home Owners Associations (HOAs), with covenants and architectural guideline restrictions. The HOAs arrange to pay to have the subdivision roadsides mowed or sprayed to an approximate width of three feet on either side of the road at least once per season.



Figure 1. Participants of the Community Assessment tour discuss the two neighborhoods.

Shenandoah Community Assessment Area

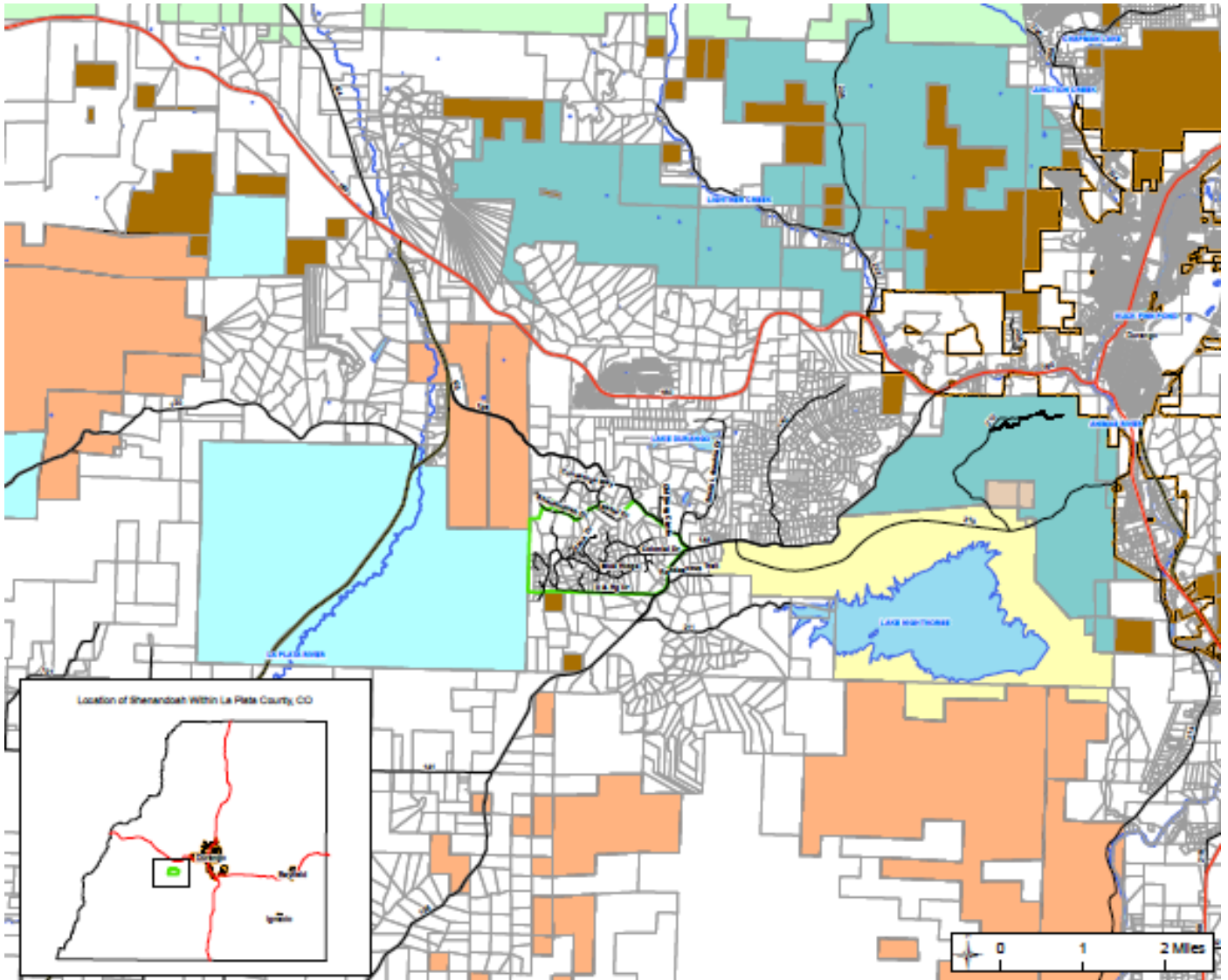


Legend

Shenandoah	Parcel Boundary	LABEL
City Limits	Existing Structures	BLM
Lakes & Rivers	Tribal Lands	BUREAU OF REC
Public Lands		DIVISION OF WILDLIFE
		SAN JUAN NATIONAL FOREST
		STATE OF COLORADO
		DOE
		COUNTY ROADS
		STATE HWY
		US HWY



Shenandoah Community Vicinity Map



Legend

Shenandoah	Parcel Boundary	BUREAU OF REC
City Limits	Lakes & Rivers	DIVISION OF WILDLIFE
Tribal Lands	SAN JUAN NATIONAL FOREST	STATE OF COLORADO
Public Lands	DOE	COUNTY ROADS
LABEL	BLM	STATE HWY
		US HWY



Topography & Vegetation

The gently rolling and open meadows in these communities are dominated by piñon juniper, gambel oak and ponderosa pine across the landscape. There is a 120-foot vertical ridge oriented from north to south on the west border of Shenandoah Estates. Colorado State University owns and Fort Lewis College (FLC) manages the land directly to the west of this area, which are dense, undeveloped forests and meadows. Terrain to the west includes steep cliffs and difficult access. There are high-tension power lines traversing north to south approximately two miles away from the subdivision on this land. A fuel break to the west could exist by adequately clearing near the power lines.



Figure 3. Topography and vegetation.

Water Supply

The water supply system is owned and operated by the Lake Durango Water Authority (LDWA). The majority of the surrounding communities are supplied with water from Lake Durango, approximately four miles to the north of Shenandoah Highlands and Estates. A water supply pipeline has been completed from the newly built Lake Nighthorse to Lake Durango to provide a substantial continuous water supply to local communities as needed, including Shenandoah Highlands and Estates. There is a large water storage tank located on the ridge above Shenandoah Estates.

Thirteen fire hydrants are installed along the roads throughout both subdivisions. LDWA recently conducted hydrant flow rate tests. However, the Fire Department

indicated it would likely fill tanker trucks from other locations when fighting fires in the subdivisions and surrounding areas.

There are several one to five acre decorative holding ponds either adjoining or within a half mile of the Shenandoah Highlands subdivision. The ponds average six to 30 feet in depth depending on the annual precipitation. However, nearby Lake Nighthorse is a more likely water supply for fire fighting.

Wildfire Risk

Wildfire is naturally occurring in this region. According to the Colorado Wildfire Risk Assessment Portal (CO-WRAP) this area is at high risk for high intensity fires. Lightning strikes or human-caused actions could easily ignite dry grasses. Prevailing winds could cause fires to spread quickly given the amount of seasonal dry grasses on the landscape.

If grasses are mowed on a regular basis, a wildfire within Shenandoah Highlands is likely to be fairly low intensity as the community is relatively flat in most areas and not densely vegetated. The wildfire intensity would likely be greater in Shenandoah Estates due to more dense vegetation within the community as well as to the west and southwest of the community along with steeper terrain.

The possibility of ember showers coming off the ponderosa pine from the Southwest and West aspects of the Estates makes it imperative that residents keep their Home Ignition Zone free of flammable materials and harden structures from direct ember ignitions.

Wildfire Preparedness Activities

Wildfire Adaptive Partnership Ambassadors are active in both subdivisions. The Ambassadors work together to coordinate projects including educating community members on best practices related to living in wildfire-prone areas and encouraging residents to participate in wildfire risk mitigation activities on their individual properties.

Homeowners have completed wildfire mitigation and continue to participate in annual mitigation practices. However, there are residents who are not willing to follow wildfire preparedness activities and mitigation to reduce their risk, which ultimately affects these communities as a whole. Further, absentee landowners may not be aware of the importance of preventative wildfire mitigation. Of the 32 homes in Shenandoah Highlands there are currently seven homes with part time residents. In the Estates there are currently six part time residents.

The Ambassadors provide wildfire preparedness and property mitigation information during annual HOA meetings and other community get-togethers and the HOAs electronically mail WAP news and fire prevention information to subdivision residents.



Figure 4. Example of property in Shenandoah Highlands with trees pruned and ladder fuels removed. Trees limbs should be pruned to no more than 1/3 of the total height of the tree.



Figure 5. Wide open roads provide good visibility and paved roads allow easy access for first responders.

Community Strengths and Vulnerabilities

Access

There was concern from residents that due to road layout and local road use restrictions, the Shenandoah Estates area is considered a one-way in/one-way-out road system. However, between Shenandoah Estates and Shenandoah Highlands there is a gated but unlocked secondary access on Colonial Drive, which provides adequate ingress and egress in an emergency. In addition, there is another possible emergency use only route to the north west of the subdivisions located off of Cima Vista to Shenandoah Dr. which is a gravel road off of CR 125. Homeowners have been provided a map showing the Evacuation Routes and a map is posted on the HOA website and at the mail kiosk.



Figure 6. Durango Fire & Rescue assessing accessibility between neighborhoods.

Durango Fire and Rescue Battalion Chief Rod Allen noted that “Access throughout the neighborhood appeared to be sufficient for both structural and wildland apparatus.” Chief Allen is confident a Type 1 engine could access both areas.

Further attention must be paid to the maintenance of road clearing projects. There are a number of locations where branches hang below the 20ft clearance that is standard for vertical clearance for emergency vehicles. Furthermore, over time, ladder fuels have grown beneath larger trees close to roadways. The attached community Action Plan identifies as a goal to have an assessment done by WAP to identify where ladder fuels should be removed next to roadways, e.g. directly below and within 10 feet of the dripline of larger trees. Because lands along the roadways are privately owned, the HOAs will need to communicate with the residents and encourage them to do any necessary mitigation.

Some of the online mapping platforms such as Google Maps and MapQuest do not have an accurate location of certain streets which is confusing for emergency vehicles and others trying to locate homes in the community. The Highlands HOA Ambassador and residents identified the issues and contacted La Plata County GIS for its help in getting corrections made. La Plata County corrected its GIS data base and created an accurate Evacuation Route map for the community. La Plata County GIS, WAP and community members have contacted Google Maps and MapQuest but all the inaccuracies have not been corrected.



Figure 7. Wide-open and paved roads create easy access for first responders.

Home Construction and Landscaping

Many of the homes were built with stucco, and have stone on the lower portions of the vertical surfaces. Some homes within the subdivisions have fire-resistant roofing. Homes with low decks may need fuels reduction underneath, as well as 1/8-inch mesh screening to enclose the decks to prevent ember ignition of fuels under the deck.

The community does require new buildings to be approved by an Architectural Review Committee. This committee should be provided copies of the CSFS “FireWise Construction: Site Design and Building Materials” to ensure that they are knowledgeable about best practices for new structures in wildfire prone areas. New residents looking to construct homes should also be provided this document to ensure they are aware of steps they can take during construction to reduce their wildfire risk.

Many residents have purchased a reflective address sign from the La Plata County Building Department. These signs assist emergency personnel in navigating throughout the community and locating specific residences during an emergency.



Figure 8. Example of home construction and defensible space in Shenandoah Estates.

Defensible Space

Throughout both subdivisions Defensible Space zone one appear to be planned and maintained well at most homes. While many homeowners have created defensible space, there is organic mulch or ground junipers directly around some homes. Both organic mulch and junipers are very flammable and likely to ignite from embers. These landscaping techniques should be discouraged and could realistically cause the loss of structures from ember ignitions even if a wildfire does not enter the community.

In some lots Defensible Space zone two appears to have received fuel reductions in the past, however, continued maintenance in mowing of grasses and Gambel oak sprouts are recommended. Further fuels reduction, especially juniper and Gambel oak, under ponderosa pine is necessary to reduce ladder fuels between the ground and crowns of large trees.



Figure 9. Example of a home that is in need of defensible space mitigation to reduce the risk of home ignition during an ember shower or wildfire fire.

Community Fuel Breaks

Both neighborhoods are fairly open and flat with wide, paved road access and safe areas. Grasses are mowed along roads and trees limbed however, continued maintenance is necessary to ensure fire does not climb into trees along the roadways.

As you continue west from Shenandoah Highlands into Shenandoah Estates the elevation gradient increases gradually which would likely increase fire intensity.

The community should work with CSU and Fort Lewis College to discuss options for clearing along the power lines located on the CSU property to the West of the community to create a fuel break for the community. Further mapping should be conducted with the help of Durango Fire Protection District to determine if or where fuel breaks would be beneficial for fire operations.



Figure 10. Discussing the topography and wild fire risk within Shenandoah Estates

Fire Suppression Resources or Challenges

There are fire hydrants installed along roads throughout the subdivisions. There are several one to five acre decorative holding ponds either adjoining or within ½ mile of the Shenandoah Highlands subdivision. The Fire Department indicated it would likely fill tanker trucks from other locations when fighting fires in the subdivisions and surrounding areas. Nearby Nighthorse Reservoir is a more likely source of water for emergency fire fighting use.

Evacuation Readiness

An Evacuation Route map has been developed with three possible evacuation routes from the community. This map has been provided to existing community members and will be provided to new homeowners. It is unknown what the levels of wildfire preparedness individual residents have planned for their families. Both communities should identify safe meeting areas outside the community and evacuation routes.

All residents are responsible for developing their own evacuation plans for their household. Residents have been encouraged to sign up for Code Red to receive evacuation notices from the county. Residents also should prepare “go bags” for each member of the family. Lists of sentimental items within a home should be made so that during an evacuation, evacuees can reference the list to expedite packing time before leaving. These lists should focus on what a homeowner could realistically grab if he or she has 10 minutes, 1 hour, or 1 day to evacuate and residents should be encouraged during an evacuation to always follow instructions from emergency personnel.

PLAN OF ACTION AND RECOMMENDATIONS SHENANDOAH HIGHLANDS AND ESTATES

1. Provide new residents with the Evacuation Routes for Highlands and Estates so they understand the three ways of exiting the subdivisions during a wildfire. Notify all homeowners of the importance of having a plan for their home such as preparation of To-Go Bags, where to meet up with family members, and plans for pets and horses in the event of a wildfire. Inform all residents of the need to sign up for Code Red through the La Plata County Office of Emergency Management.
2. Request WAP conduct an assessment of the need for mitigation of ladder fuels on private lands along roadways, especially along Zane and Porter in the Highlands and D&RG in the Estates.
3. Inform homeowners of need to conduct mitigation on their property along roadways and offer HOA assistance. HOA will continue moving grasses along roadways.
4. Communicate with non-HOA members and private and public landowners south and west of D&RG regarding the need for fire mitigation on their lands, e.g. CSU, BLM, and the Southern Ute tribe.
5. Encourage more homeowners to have Home Ignition Zone and Defensible Space assessments conducted. Inform residents of free wildfire risk assessments through Wildfire Adapted Partnership or Durango Fire Protection District.
6. Encourage new, and more existing, homeowners to obtain reflective blue number address signs for their homes available from La Plata County Building Dept. at 211 Rock Point Dr., Durango, CO.
7. Continue to provide homeowners with information regarding cost share programs available through WAP or other appropriate organizations or agencies for individual properties.
8. Continue to offer Chipper Days and other ways to dispose of slash from mitigation activities.
9. Ambassadors and HOA boards will continue to present wildfire preparedness and property mitigation information during annual HOA meetings and other community gatherings.