

4.0 ASH CANYON – WESTERN NEVADA COLLEGE

FUEL HAZARD: MODERATE – HIGH COMMUNITY RISK: MODERATE

The Ash Canyon interface assessment area includes residences in the Wellington Crescent Subdivision, Cogorno Drive, the Joost Ranch, and the Kingston Park subdivision. The west flank of Silver Oak Subdivision between Winnie Lane and College Parkway connects the Ash Canyon neighborhoods to the Western Nevada College (WNC) assessment area to the north. The WNC assessment area includes residences along Harvard, Radcliffe, and Dartmouth Streets and residences further west along Combs Canyon Road, including the Murphy Drive and Vanpatten Avenue neighborhoods.

4.1 INTERFACE CONDITIONS AND FUEL HAZARD

The Ash Canyon neighborhood is characterized by classic interface conditions, with the exception of a few residences that are intermixed with wildland fuels at the end of Ash Canyon Road. A 200' wide fuelbreak from Foothill Road (off of Winnie Lane) follows the north and west edge of Wellington Crescent to its terminus at Ash Canyon Road. This fuelbreak was established in 2002.

In 2004 widespread expanses of fuels in this area were consumed in the Waterfall Fire. Drill seeding with fire-resistant species occurred during rehabilitation efforts in the fall of 2004, changing the fuel type and structure throughout most of the interface. Since that time, annual prescribed grazing by sheep and targeted herding has been used to control cheatgrass and reduce the height and density of fine, dry grassy fuels.

The vegetative fuel density within the Ash Canyon neighborhood assessment area varies between light and medium, with fuel loads estimated at 0.5 to 4.0 tons per acre. Dominant vegetation consists of rabbitbrush and big sagebrush with a minor component of bitterbrush. This area is classified as a **moderate fuel hazard**.

The interface between the private residential properties at Silver Oak and the wildland fuels to the west is characterized by an expanse of non-flammable cover, including a stormwater basin, baseball diamond, and parking lot coverage.

The WNC residential assessment area is characterized as a classic interface condition. Shrubs including big sagebrush, bitterbrush and rabbitbrush that range from four to six feet in height dominate the WUI. In recently disturbed areas, such as those areas around the constructed stormwater basins, or previously burned areas, annual plants including cheatgrass, Russian thistle and mustard form a ground fuel layer. The total fuel load ranges from 2.0 to 4.0 tons per acre and is considered a **high fuel hazard**.

The terrain west of the wildland-urban interface is generally between 8 and 20 percent slopes, with some areas (the Joost Ranch, Martin Drive) adjacent to fairly steep terrain (>30 percent slopes). The area has several west/east directional canyons (Ash Canyon, Vicee Canyon, Combs Canyon). The predominant wind direction is from the south-southwest, with strong afternoon downslope winds during the summer months and on the approach of cold fronts. Downslope afternoon winds along the Eastern Sierra Front commonly spread wildfire into the wildland-urban interface, and are the most common factor contributing to structure loss in a WUI for this region (Klug 2009, Washoe Tribe 2009). There is a history of lightning strikes and repeated wildfires to the north and west of the assessment areas.

The fuel hazard condition ratings are shown in Figure 4-1 at the end of this chapter. Photographs in Figure 4-2 show the representative fuel types in the wildland-urban interface. Table 4-1 summarizes the history of fuels reduction treatments within the Ash Canyon and WNC Assessment Area.

Table 4-1. Fuels treatment history for the Ash Canyon – WNC neighborhood.

Treatment Type	Treatment Area (approximate acres)	Treatment Year	Ownership
Shrub Thinning and Seeding	10	2008	Carson City Board of Regents State of Nevada
Grazing	594	2008	Carson City State of Nevada Board of Regents Private
Grazing	315	2007	Carson City State of Nevada Private
Hand Treatment	66	2004	Private
Mechanical	11	2004	Carson City
Mechanical	34	2002	Carson City Board of Regents State of Nevada Private

4.2 NEIGHBORHOOD RISK/HAZARD RATING

The risk/hazard assessment resulted in classifying the Ash Canyon – Western Nevada College neighborhood in the **Moderate Hazard** category (45 points). A summary of the values that affect the hazard rating is included in Table 4-2 at the end of this chapter. The primary wildfire hazard conditions in the Ash Canyon – Western Nevada College neighborhood were related to construction materials, lot size and the potential for severe fire behavior due to topography and fuel loading.

4.2.1 Community Design

Throughout most of the Ash Canyon – Western Nevada College neighborhood there is a clear line of demarcation between wildland fuels and structures in the neighborhood. Fuels do not continue into the development area. Most homes are situated on lots less than one acre in size, and there are typically three or more structures per acre. Thus structures are spaced relatively close together.

- **Interface Condition:** classic wildland-urban interface condition.
- **Access:** College Parkway, North Ormsby Boulevard, and Winnie Lane are the primary access roads to the Ash Canyon – Western Nevada College neighborhood. The roads are greater than 24 feet wide and have less than a five percent slope, providing adequate access for fire suppression equipment.
- **Signage:** All street signs and 96 percent of residential addresses in the survey area were adequately visible from the street. Clear and visible residential addresses are

important to aid firefighting personnel in locating homes during low visibility conditions that may occur during wildland fire.

- **Utilities:** low risk of ignition.

4.2.2 Construction Materials

Nearly all the homes (96 percent) within the Ash Canyon – WNC survey area were built with fire resistant composite roofing materials; however, thirty-five percent of the homes were built with combustible siding and several (14 percent) had unenclosed or unscreened balconies, decks, porches, eaves, or attic vents that create drafty places where sparks and embers can be trapped, smolder, ignite, and rapidly spread fire to the house.

4.2.3 Defensible Space

Of the seventy-four homes evaluated, most (91 percent) have landscaping that would meet the minimum defensible space requirement to help protect the home and minimize the potential for damage or loss during a wildfire.

4.2.4 Suppression Capabilities

Wildfire Protection Resources

The Carson City Fire Department and the Sierra Forest Fire Protection District are responsible for wildfire and structure fire protection within the Ash Canyon – Western Nevada College neighborhood. The US Forest Service also provides fire protection for the national forest lands in the vicinity of the Ash Canyon – WNC neighborhood.

Water Sources and Infrastructure

Water availability for fire suppression in the Ash Canyon – Western Nevada College neighborhood is provided by 500 gpm hydrants within 500 feet of structures.

4.3 RECOMMENDATIONS

Ash Canyon

Recommended and planned treatments for the Ash Canyon-WNC neighborhood are shown on Figure 4-1 and described in Table 4-3.

Table 4-3. Fuels treatments recommended or planned within the vicinity of the Ash Canyon – WNC neighborhood.

Treatment Type	Treatment Area (approximate acres)	Ownership
Shrub Thinning and Seeding	57	Carson City Board of Regents State of Nevada Private
Drill Seeding	5	Private
Grazing	910	Carson City Board of Regents State of Nevada Private

Additional recommendations based on the 2008 assessment are described below.

Ash Canyon

The existing fuelbreak from Foothill Road to Ash Canyon Road has a five-year maintenance cycle. The annual grazing treatment is expected to maintain a low fuel hazard condition in the area west of Wellington Crescent. The following actions should be taken in addition to the fuelbreak maintenance cycle and the grazing plan:

- Reduce the shrub density and fuel loads on the wedge-shaped parcel between the bike path and the trailhead at Foothill Road & stormwater pond. (1.3 acres).
- Thin the shrub component with hand crews or by mechanical means at the interface south of Ash Canyon Road. Thin shrubs an additional 180 feet beyond the fuelbreak by removing approximately 75 percent of the shrub cover in this zone (determined visually in the field). Leave the remaining shrubs (approximately 25 percent) in a clustered mosaic pattern, with a preference for retaining healthy specimens of bitterbrush, Mormon tea, and desert peach. (Approximately 9 acres).
- If cheatgrass control is necessary in the treated areas, apply a pre-emergent herbicide according to the recommendations from the University of Nevada Cooperative Extension (or as approved by the jurisdiction involved).
- If needed, reseed the fuelbreak in the fall of the year (October-November) with a fire-resistant seed mixture. A sample seed mix for the Carson City interface is included in Appendix E. Develop site-specific seed mixes in collaboration with the jurisdiction involved.
- If resprouting rabbitbrush becomes excessive, use an appropriate herbicide application as recommended by the University of Nevada Cooperative Extension to control rabbitbrush reestablishment, or as approved by the jurisdiction involved.
- Conduct annual defensible space and hazardous fuels evaluations on private and public lands.
- Distribute copies of *Living With Fire: A Guide for the Homeowner, Eastern Sierra Front Edition* (U of NV Cooperative Extension).
- Encourage homeowners to follow the UNR Cooperative Extension's recommendations for fire safe landscaping.

Western Nevada College

- Monitor the buildup of tumbleweeds and other flammable debris in the following areas and maintain them free of all flammable debris accumulations:
 - Along the west side of the wooden fence line at Silver Oak between the College parking area and the stormwater basin at Foothill Road;
 - Along the wooden fence lines behind Harvard, Radcliffe, and Dartmouth Streets; and
 - In the rock-lined infiltration ditch to the west of Harvard.
- Monitor the 200-foot wide fuelbreak established in 2004 and maintain as necessary.
- Conduct annual defensible space and hazardous fuels evaluations on private and public lands.
- Continue the defensible space dumpster program to provide homeowners with an easily accessible biomass removal option.
- Distribute copies of *Living With Fire: A Guide for the Homeowner, Eastern Sierra Front Edition* (U of NV Cooperative Extension).

Table 4.2 Results of the wildfire risk/hazard rating in the Ash Canyon – Western Nevada College neighborhood.

<p>A. Urban Interface Condition 1</p> <p>B. Community Design</p> <p>1. Ingress / Egress <u>1</u> /5</p> <p>2. Width of Road <u>1</u> /5</p> <p>3. Accessibility <u>1</u> /3</p> <p>4. Secondary Road <u>1</u> /5</p> <p>5. Street Signs <u>1</u> /5</p> <p>6. Address Signs <u>1</u> /5</p> <p>7. Utilities <u>1</u> /5</p> <p>C. Construction Materials</p> <p>1. Roofs <u>1</u> /10</p> <p>2. Siding <u>5</u> /5</p> <p>3. Unenclosed Structures <u>1</u> /5</p> <p>D. Defensible Space</p> <p>1. Lot Size <u>5</u> /5</p> <p>2. Defensible Space <u>1</u> /15</p> <p>F. Fire Behavior</p> <p>1. Fuels <u>3</u> /5</p> <p>2. Fire Behavior <u>7</u> /10</p> <p>3. Slope <u>10</u> /10</p> <p>4. Aspect <u>3</u> /10</p> <p>E. Suppression Capabilities</p> <p>1. Water Source <u>1</u> /10</p> <p>2. Department <u>1</u> /10</p>	<p>TALLIES</p> <p>74 Total Houses 11 Residential Streets</p> <p>B5. Street Signs</p> <p><u>0</u> not visible <u>11</u> visible <u>100%</u> visible</p> <p>B6. Address Signs</p> <p><u>3</u> not visible <u>71</u> visible <u>96%</u> visible</p> <p>C1. Roofs</p> <p><u>3</u> combust <u>71</u> not combust <u>96%</u> not combust</p> <p>C2. Siding</p> <p><u>26</u> combust <u>48</u> not combust <u>65%</u> not combust</p> <p>C3. Unenclosed Structures on Lot</p> <p><u>10</u> not enclosed <u>64</u> enclosed <u>14%</u> not enclosed</p> <p>D1. Lot Sizes</p> <p><u>69</u> <1ac <u>5</u> >1ac <10ac <u>0</u> >10ac</p> <p>D2. Defensible Space</p> <p><u>7</u> not adequat <u>67</u> adequate <u>91%</u> adequate</p>
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Community Hazard Score: 45 /128

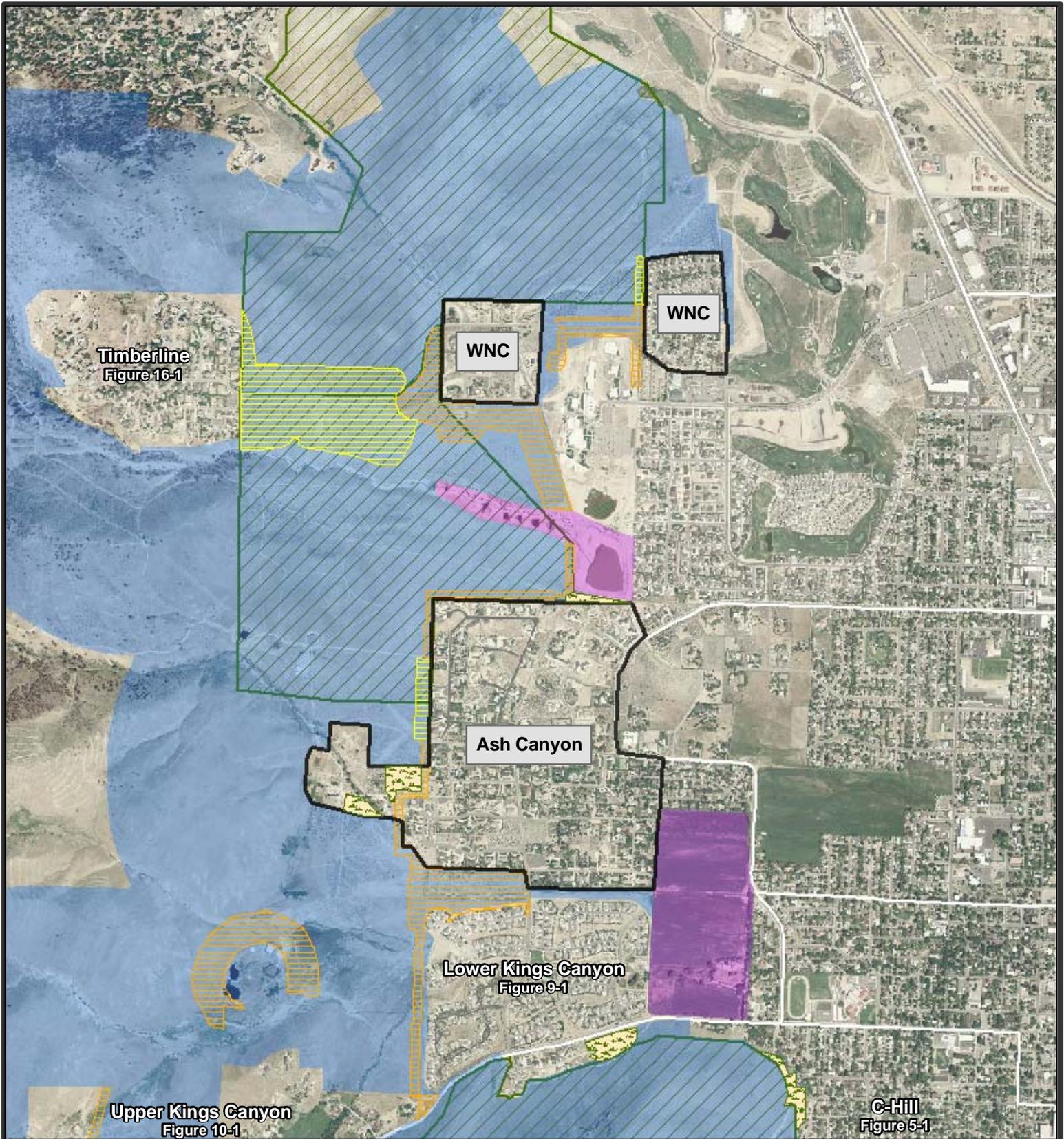


Figure 4-1. Ash Canyon - WNC fuel hazard conditions and recommendations for fuel hazard reduction

Recommended Treatments

-  Drill Seed
-  Thin Shrubs & Seed
-  Thin Shrubs
-  Grazing Treatment

Fuel Hazard Class

-  Low
-  Moderate
-  Neighborhood Boundary

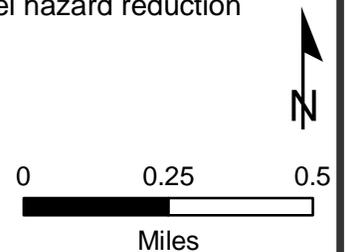


Figure 4-2. Representative fuel types in the wildland-urban interface around the Ash Canyon-Western Nevada College neighborhood.



Ash Canyon-WNC 1. UTM 4339778N 258326E. View to South.



Ash Canyon-WNC 2. UTM 4340409 N258257E. View to East.