

14.0 PINION HILLS

FUEL HAZARD: MODERATE COMMUNITY RISK: HIGH

The Pinion Hills neighborhood is located east of Carson City. The neighborhood is bounded on the west by the Carson River and on the east by the Pine Nut Mountains. The northern boundary includes the residences on Deer Run Road that are located a mile north of Sedge Drive and extends south to Lee's Bridge.

14.1 INTERFACE CONDITIONS AND FUEL HAZARD

The Pinion Hills neighborhood is characterized as an intermix wildland urban interface condition. Wildland fuels continue throughout the neighborhood with no clear boundary between the wildland vegetation and residential structures.

Vegetative fuel density was heavy throughout the Pinion Hills neighborhood and wildland-urban interface. Pinion and juniper trees spaced up to twenty feet apart grow within a shrub layer of big sagebrush, bitterbrush, rabbitbrush, and Mormon tea. Tree density is higher near drainages, which can channel air currents and act as chimneys during a wildfire. Ground fuels are dominated by cheatgrass and other annuals. Fuel loads range from 2.0 to 6.0 tons per acre, depending upon tree density. This area is classified as a **high fuel hazard**.

The terrain along the east side of the Pinion Hills neighborhood is very irregular, with slopes from 8 to 20 percent near Deer Run Road to over 30 percent along the base of the Pine Nut Range. The predominant wind direction is from the south-southwest, with strong afternoon upslope and cross slope winds during the summer months. No history or large fires is recorded west of Brunswick Canyon near this neighborhood.

Fuel hazard conditions and representative photographs of fuel types around the Pinion Hills neighborhood are included in Figures 14-1 and 14-2 at the end of this chapter.

Table 14-1 summarizes the history of fuels reduction treatments within the Pinion Hills Assessment Area.

Table 14-1. Fuels treatment history for the Pinion Hills neighborhood.

Treatment Type	Treatment Area (approximate acres)	Treatment Year	Ownership
Fuelbreak 15,100' x 150'	52	2005	BLM

14.2 NEIGHBORHOOD RISK/HAZARD RATING

The risk/hazard assessment resulted in classifying the Pinion Hills neighborhood in the **High Hazard** category (63 points). A summary of the values that affect the hazard rating is included in Table 14-2 at the end of this chapter. The primary wildfire hazard conditions in the Pinion Hills neighborhood were related to community design, including limited access and multiple dead end roads, construction materials, and the potential for severe fire behavior due to topography and fuel loading.

14.2.1 Community Design

Within the Pinion Hills neighborhood there is no clear line of demarcation between the structures and wildland fuels along the roads. Most homes in the survey area (60 percent) are located on lots between one and ten acres in size, and forty percent are located on lots less than one acre in size.

- **Interface Condition:** intermix wildland-urban interface condition.
- **Access:** The Pinion Hills neighborhood is accessed by one primary road in and out of the neighborhood. The road entering the neighborhood from the south, Carson River Road, changes to Pinion Hills Road within the neighborhood. The neighborhood can be accessed from the north by South Deer Run Road. These roads are greater than 24 feet wide which allows access for fire suppression equipment. However, many roads lead to dead ends that limit the ability for fire suppression equipment to maneuver or turn around. The road gradient on primary and secondary roads is greater than five percent. Steep roads and limited access to the neighborhood could limit fire suppression and evacuation activities during a wildland fire.
- **Signage:** Half of the street signs within the Pinion Hills survey area were not visible. Twenty-three percent of the residential address signs were not visible. Clear and visible residential addresses are important to assist firefighting personnel in locating homes during low visibility conditions that may occur during wildland fire.
- **Utilities:** low risk of ignition.

14.2.2 Construction Materials

Nearly all of the homes surveyed within the neighborhood (93 percent) were built with fire resistant composite roofing materials; however, fifty percent of the homes were constructed with combustible siding. Forty-seven percent of the homes had unenclosed structures such as a porch, balcony, or deck that create drafty places where sparks and embers can be trapped, smolder, and ignite, readily spreading fire to the home.

14.2.3 Defensible Space

Of the thirty homes evaluated, eight homes (27 percent) did not 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.

14.2.4 Suppression Capabilities

Wildfire Protection Resources

The Carson City Fire Department provides wildland and structure fire protection to the Pinion Hills neighborhood. The Bureau of Land Management provides wildfire protection for the publicly administered lands surrounding the Pinion Hills neighborhood. Ownership and administration of much of this land will transfer from BLM to Carson City in 2009 or 2010. Fire protection for those lands will become the responsibility of the CCFD.

Water Sources and Infrastructure

Water availability for fire suppression in the Pinion Hills neighborhood is approximately 20 minutes away roundtrip. Within the community there is a 10,000-gallon underground tank located at 1769 Pinion Hills Road.

14.3 RECOMMENDATIONS

- Conduct an assessment of fuel hazard conditions on all lots within the neighborhood boundaries and notify inattentive property owners of Ordinances that require fuel hazard reduction.
- Thin pinyon-juniper stands within and to the south and east of the Pinion Hills neighborhood. Outside of the defensible space zone, gradually diminish the intensity of tree and brush thinning within 0.5 miles of the neighborhood boundary.
- Monitor brush and invasive grass species encroachment on existing and future fuel reduction treatment areas and maintain as necessary. If needed, treat the area with a pre-emergent herbicide according to the recommendations from the University of Nevada Cooperative Extension or the jurisdiction involved.
- If needed, reseed treated areas in the fall of the year (October-November) with a fire-resistant seed mixture. An example of a recommended seed mixture and specifications for the Carson City interface area is included in Appendix E. Create a site-specific seed mix 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 or the jurisdiction involved.
- Remove, reduce, and replace vegetation to create defensible space around homes according to the guidelines in Appendix B.
- 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.
- Continue implementing the defensible space dumpster program to provide homeowners with an easily accessible biomass removal option

Table 14.2 Results of the wildfire risk/hazard rating in the Pinion Hills neighborhood.

<p>A. Urban Interface Condition 2</p> <p>B. Community Design</p> <p>1. Ingress / Egress <u>3</u> /5</p> <p>2. Width of Road <u>1</u> /5</p> <p>3. Accessibility <u>3</u> /3</p> <p>4. Secondary Road <u>5</u> /5</p> <p>5. Street Signs <u>5</u> /5</p> <p>6. Address Signs <u>3</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>3</u> /5</p> <p>D. Defensible Space</p> <p>1. Lot Size <u>3</u> /5</p> <p>2. Defensible Space <u>1</u> /15</p> <p>F. Fire Behavior</p> <p>1. Fuels <u>5</u> /5</p> <p>2. Fire Behavior <u>7</u> /10</p> <p>3. Slope <u>4</u> /10</p> <p>4. Aspect <u>7</u> /10</p> <p>E. Suppression Capabilities</p> <p>1. Water Source <u>5</u> /10</p> <p>2. Department <u>1</u> /10</p>	<p>TALLIES</p> <p>30 Total Houses 6 Residential Streets</p> <p>B5. Street Signs</p> <p><u>3</u> not visible <u>3</u> visible <u>50%</u> visible</p> <p>B6. Address Signs</p> <p><u>7</u> not visible <u>23</u> visible <u>77%</u> visible</p> <p>C1. Roofs</p> <p><u>2</u> combust <u>28</u> not combust <u>93%</u> not combust</p> <p>C2. Siding</p> <p><u>15</u> combust <u>15</u> not combust <u>50%</u> not combust</p> <p>C3. Unenclosed Structures on Lot</p> <p><u>14</u> not enclosed <u>16</u> enclosed <u>47%</u> not enclosed</p> <p>D1. Lot Sizes</p> <p><u>12</u> <1ac <u>18</u> >1ac <10ac <u>0</u> >10ac</p> <p>D2. Defensible Space</p> <p><u>8</u> not adequat <u>22</u> adequate <u>73%</u> adequate</p>
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Community Hazard Score: 63 /128

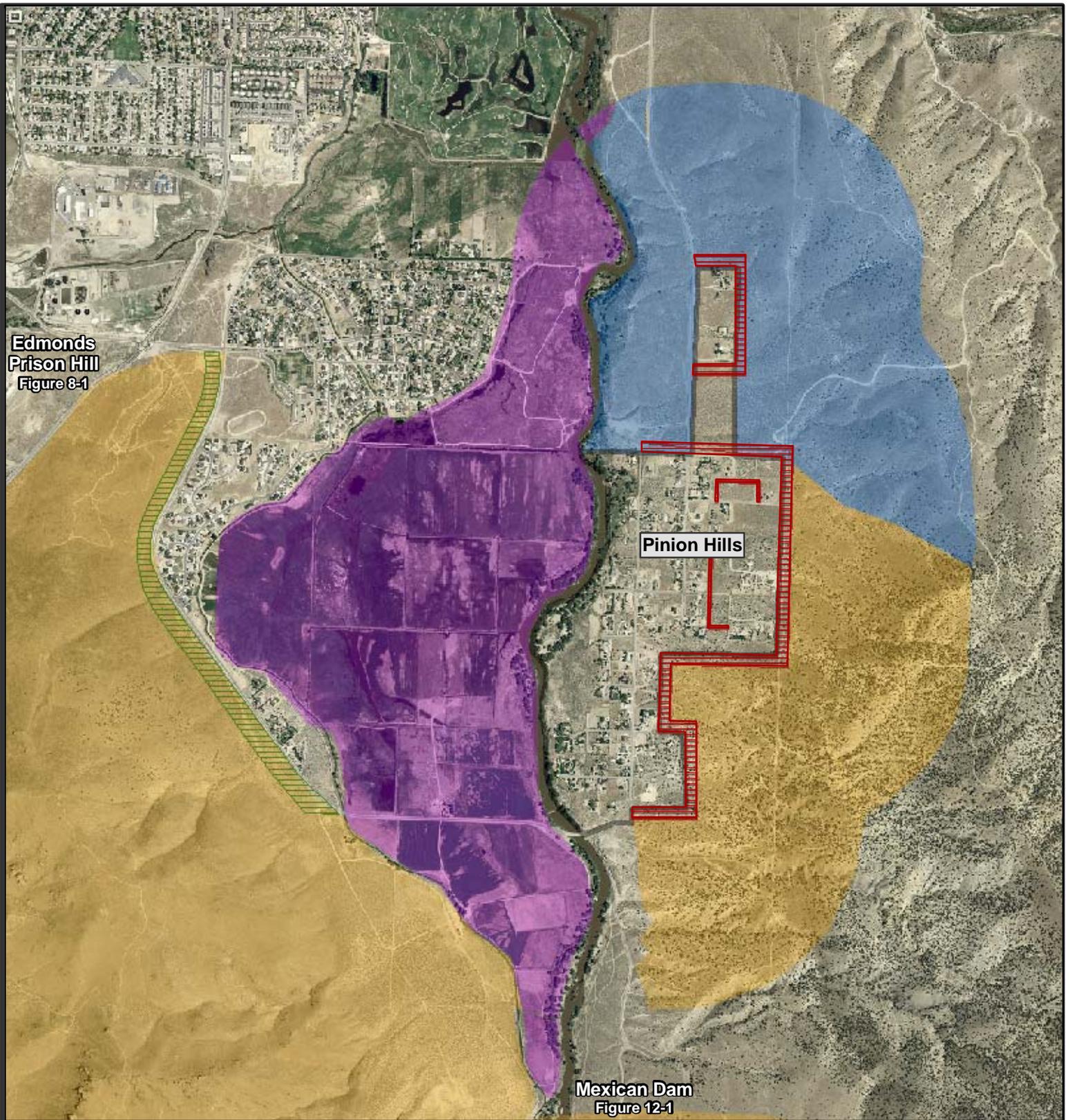


Figure 14-1. Pinion Hills fuel hazard conditions and recommendations for fuel hazard reduction.

Recommended Treatments

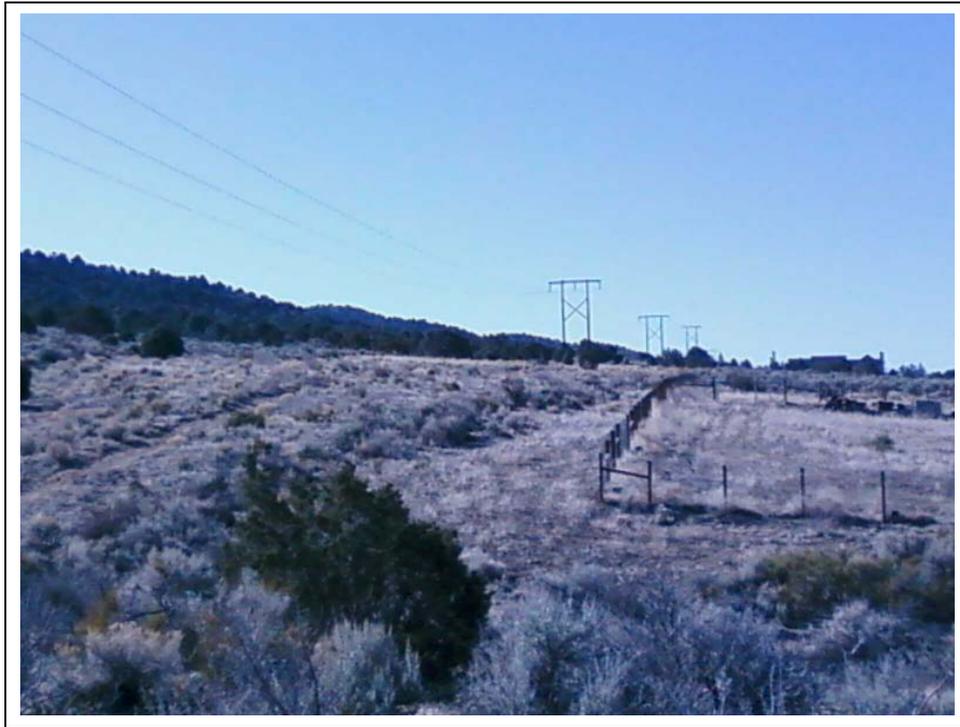
-  Establish fuelbreak
-  Maintain fuelbreak

Fuel Hazard Class

-  Low
-  Moderate
-  High
-  Neighborhood Boundary



Figure 14-2. Representative fuel types in the wildland-urban interface around the Pinion Hills neighborhood.



Pinion Hills 1. UTM 4337700N 267073E. View to West



Pinion Hills 2. UTM 4336178N 266418E. View to East