11.0 LAKEVIEW

FUEL HAZARD: MODERATE – HIGH COMMUNITY RISK: HIGH

The Lakeview neighborhood is located in northwest Carson City and is accessed from the south by Combs Canyon Road and from the north by Old Highway 395 onto Hobart Road. The interface properties assessed include residences on County Line Road, Numaga Pass, Wagon Wheel Road, Levi Gulch, Lakeview Road, Weise Road, and Vista Ariana.

11.1 INTERFACE CONDITIONS AND FUEL HAZARD

The Lakeview neighborhood is characterized as an intermix wildland urban interface condition. No clear boundary distinguishes private property from the surrounding wildland fuels, which continue into and in between residential structures. Four vegetation communities occur around the wildland-urban interface: big sagebrush/bitterbrush/rabbitbrush association; rabbitbrush; manzanita with standing dead pine; and Jeffrey pine.

The mixed sagebrush/bitterbrush/rabbitbrush community is most common in the northeast and east portions of the interface, continuing south to Combs Canyon. This vegetation type has a medium vegetative fuel density and shrub heights range from four to six feet in height. Fuel loads are estimated at 2.0 to 4.0 tons per acre, and the vegetation is classified as a **high fuel hazard.**

A dense stand of rabbitbrush established following the 1981 Little Valley Fire along the northwestern portion of the Lakeview neighborhood. Shrub heights range from three to five feet, and the fuel load was estimated at 2.5 tons per acre, with loading up to 10 tons per acre where live timber fuels are present. This vegetation type is classified as a **high fuel hazard**.

A large portion on the west side of the Lakeview neighborhood was burned in the 1981 Little Valley Fire and re-burned in the 2004 Waterfall Fire. The vegetative fuel density is light in this area and is dominated by perennial grasses seeded after the fire and re-sprouting manzanita shrubs 12 to 18 inches tall. A low occurrence of cheatgrass and Russian thistle is present. While scattered pine trees that survived the fire and from reforestation efforts forecast increasing fuel loads in the future, the current moderate fuel load ranges from 0.25 to 0.75 tons per acre.

The fuel hazard in the interface along the southwest quarter of the Lakeview neighborhood is moderate. However, the vegetative fuel hazard within the neighborhood boundary is high. An overstory of Jeffrey pine shades a shrub layer dominated by manzanita, big sagebrush, bitterbrush, and rabbitbrush. Shrub heights range from eighteen inches to four feet. Ground fuels consist of cheatgrass and a thick duff layer of pine needles. Fuel density is heavy. The fuel load between residential structures varies from four to twelve tons per acre and is classified as a **high fuel hazard**.

The topography of the south and west portions of the Lakeview neighborhood interface is steep (greater than 30 percent slopes) and dissected with wind-funneling canyons. The Lakeview neighborhood interface is less steep to the east and to the north. 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. The history of

recurrent fires and lightning strikes to the west of the neighborhood are evidence of a high wildfire ignition risk around the Lakeview neighborhood.

Fuel hazard conditions and representative photographs of fuel hazard conditions are shown in Figures 11.1 and 11.2, respectively, at the end of this chapter.

Table 11-1 summarizes the history of fuels reduction treatments within the Lakeview Assessment Area.

Table 11-1. Fuels treatment history for the Lakeview neighborhood.

Treatment Type	Treatment Area (approximate acres)	Treatment Year	Ownership
Fuelbreak 14,610' x 150'	50	2007	Carson City USFS Private
Grazing	594	2008	Carson City State of Nevada Board of Regents Private
Grazing	315	2007	Carson City State of Nevada Private
Hand treatment	320	2004	Private

11.2 NEIGHBORHOOD RISK/HAZARD RATING

The risk/hazard assessment resulted in classifying Lakeview neighborhood in the **High Hazard** category (63 points). A summary of the values that affect the hazard rating is included in Table 11-2 at the end of this chapter. The primary wildfire hazard conditions in the Lakeview neighborhood were related to community design, construction materials, and the potential for severe fire behavior due to topography and fuel loading.

11.2.1 Community Design

Structures are scattered throughout wildland areas in the Lakeview neighborhood and there is no clear line of demarcation between wildland and residential areas. Most homes are situated on lots between one and 10 acres in size. These scattered structures are widely spaced and interspersed with wildland fuels.

- **Interface Condition:** intermix wildland-urban interface condition.
- **Access:** Combs Canyon Road and Old US 395 South are the primary access roads to the Lakeview neighborhood. These roads range between 20 to 24 feet in width and allow adequate room for fire suppression equipment to maneuver. The road gradient on primary and secondary roads is greater than five percent. Steep roads can increase response times for heavy vehicles carrying water.
- **Signage:** All street signs within the Lakeview neighborhood survey area were clearly visible. Nineteen 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:** moderate ignition risk from propane tanks.

11.2.2 Construction Materials

All of the homes within the neighborhood survey area were built with fire resistant composite roofing materials; however, sixty-six percent of the homes were constructed with combustible siding. Nearly half of the homes had unenclosed or unscreened balconies, decks, porches, eaves, or attic vents that create drafty areas where sparks and embers can be trapped, smolder, ignite, and rapidly spread fire to the house.

11.2.3 Defensible Space

Of the sixty-four homes evaluated, twenty-five 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.

11.2.4 Suppression Capabilities

Wildfire Protection Resources

The Carson City Fire Department and the NDF Sierra Forest Fire Protection District provide wildland and structure fire protection to the Lakeview neighborhood. The US Forest Service also provides fire protection for the national forest lands surrounding the Lakeview neighborhood. Ownership and administration of much of this land will transfer from USFS 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 Lakeview neighborhood includes 500 gpm hydrants within 1,000 feet of structures

11.3 RECOMMENDATIONS

Recommended and planned treatments for Lakeview neighborhood are shown on Figure 11-1 and are described in Table 11-3.

Table 11-3. Fuels treatment activities recommended or planned for the Lakeview neighborhood.

Treatment Type	Treatment Area (approximate acres)	Ownership
Hand Treatment 10,455' x 100' Fuelbreak	24	State of Nevada Board of Regents Carson City Parks
Grazing	594	Carson City State of Nevada Board of Regents Private

Additional recommendations based upon the 2008 risk/hazard assessment include:

- Remove 85 percent of the shrub component on the 9.6-acre Carson City Utilities Parcel (APN 007-211-02) in northeast Lakeview. Leave the remaining 15 percent shrub cover in a mosaic pattern with a preference for retaining healthy specimens of bitterbrush, and desert peach.
- Establish 1,200 feet of fuelbreak 100 to 150 feet wide on private property adjacent to the north side of the Carson City Utilities Parcel.
- If cheatgrass control is necessary, use a pre-emergent herbicide in treatment areas according to the recommendations from the University of Nevada Cooperative Extension or as approved by the jurisdiction involved.
- If needed, reseed treated areas in the fall of the year (October-November) with a fire-resistant seed mixture. A sample seed mix and specifications for the Carson City interface area 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 or as approved by the jurisdiction involved.
- Conduct defensible space evaluations on private parcels as necessary to identify and prioritize parcels requiring defensible space improvement.
- **I**n the southwest quarter of Lakeview, develop a plan to:
  - Hand-treat to reduce shrubs and other ladder fuels
  - Remove conifer limbs to a height three times that of remaining understory vegetation but not more than one-third the height of the tree.
  - Remove tree branches that come in contact with the exterior walls, eaves, or roof of a structure as well as any branches that overhang the home.
  - Reduce conifer canopy closure by selective thinning. On flat to gently sloping ground, the ideal distance between tree canopies is ten feet. The separation distance will be greater on steeper slopes.
- At north end of Wagon Wheel, salvage plastic tree tubes from pine plantings.
  - Replanting Jeffrey Pine in this area is a long-term strategy for rabbitbrush and manzanita control. If a pine replanting effort is to be coordinated, planting should occur in the late fall just before the ground freezes. This will permit the plantings to take full advantage of snowpack moisture in the springtime.
- Continue the defensible space dumpster program to provide homeowners with an easily accessible biomass removal option.
- Conduct annual defensible space and hazardous fuels evaluations on private and public lands.
- Distribute copes 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.

Table 11.2 Results of the wildfire risk/hazard rating in the Lakeview neighborhood.

A. Urban Interface Condition ***2***

B. Community Design

1. Ingress / Egress	1	/5
2. Width of Road	3	/5
3. Accessibility	3	/3
4. Secondary Road	5	/5
5. Street Signs	1	/5
6. Address Signs	3	/5
7. Utilities	3	/5

C. Construction Materials

1. Roofs	1	/10
2. Siding	5	/5
3. Unenclosed Structures	3	/5

D. Defensible Space

1. Lot Size	3	/5
2. Defensible Space	1	/15

F. Fire Behavior

1. Fuels	5	/5
2. Fire Behavior	10	/10
3. Slope	10	/10
4. Aspect	3	/10

E. Suppression Capabilities

1. Water Source	2	/10
2. Department	1	/10

TALLIES

64 Total Houses **11 Residential Streets**

B5. Street Signs

0 not visible | 11 visible | 100% visible

B6. Address Signs

12 not visible | 52 visible | 81% visible

C1. Roofs

0 combust | 64 not combust | 100% not combust

C2. Siding

42 combust | 22 not combust | 34% not combust

C3. Unenclosed Structures on Lot

28 not enclosed | 36 enclosed | 44% not enclosed

D1. Lot Sizes

12 <1ac | 52 >1ac <10ac | 0 >10ac

D2. Defensible Space

16 not adequat | 48 adequate | 75% adequate

Community Hazard Score: **63** /128

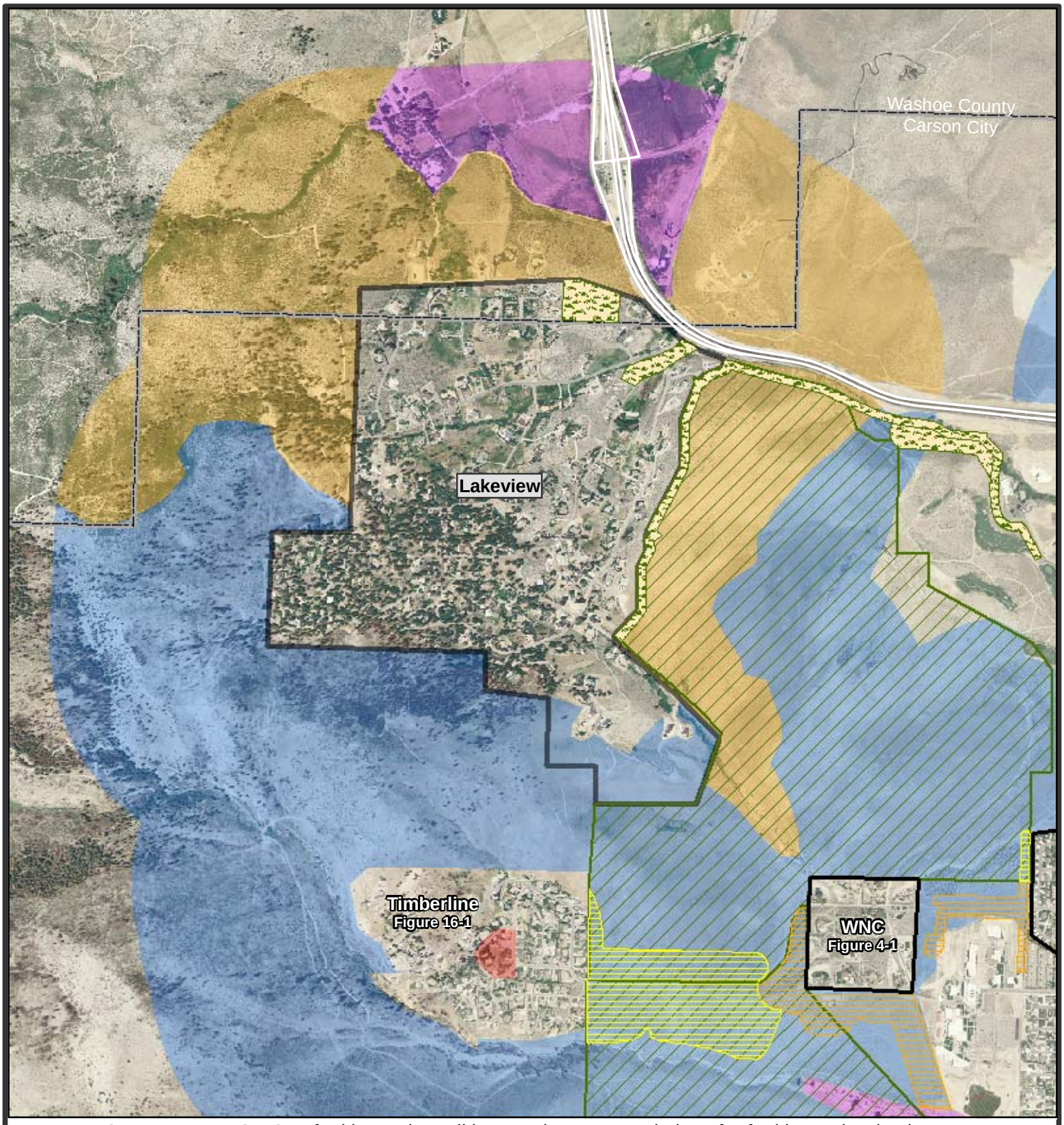

Figure 11-1. Lakeview fuel hazard conditions and recommendations for fuel hazard reduction.

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

Fuel Hazard Class
- Low
- Moderate
- High
- Extreme
- Neighborhood Boundary

N

0 0.25 0.5
Miles

RESOURCE CONCEPTS, INC.
340 N. Minnesota Street
Carson City, Nevada 89703
(775) 883-1600

Carson City CWPP Final Draft, July 2009.
Base map: NAIP Aerial, 2006

Figure 11-2. Representative fuel types in the wildland-urban interface around the Lakeview neighborhood.

Lakeview 1. UTM 4342982N 256807E. View to West

Lakeview 2. UTM 4343261N 257832E. View to East