

# APPENDIX B

## Community Ignitability Analysis and Recommendations



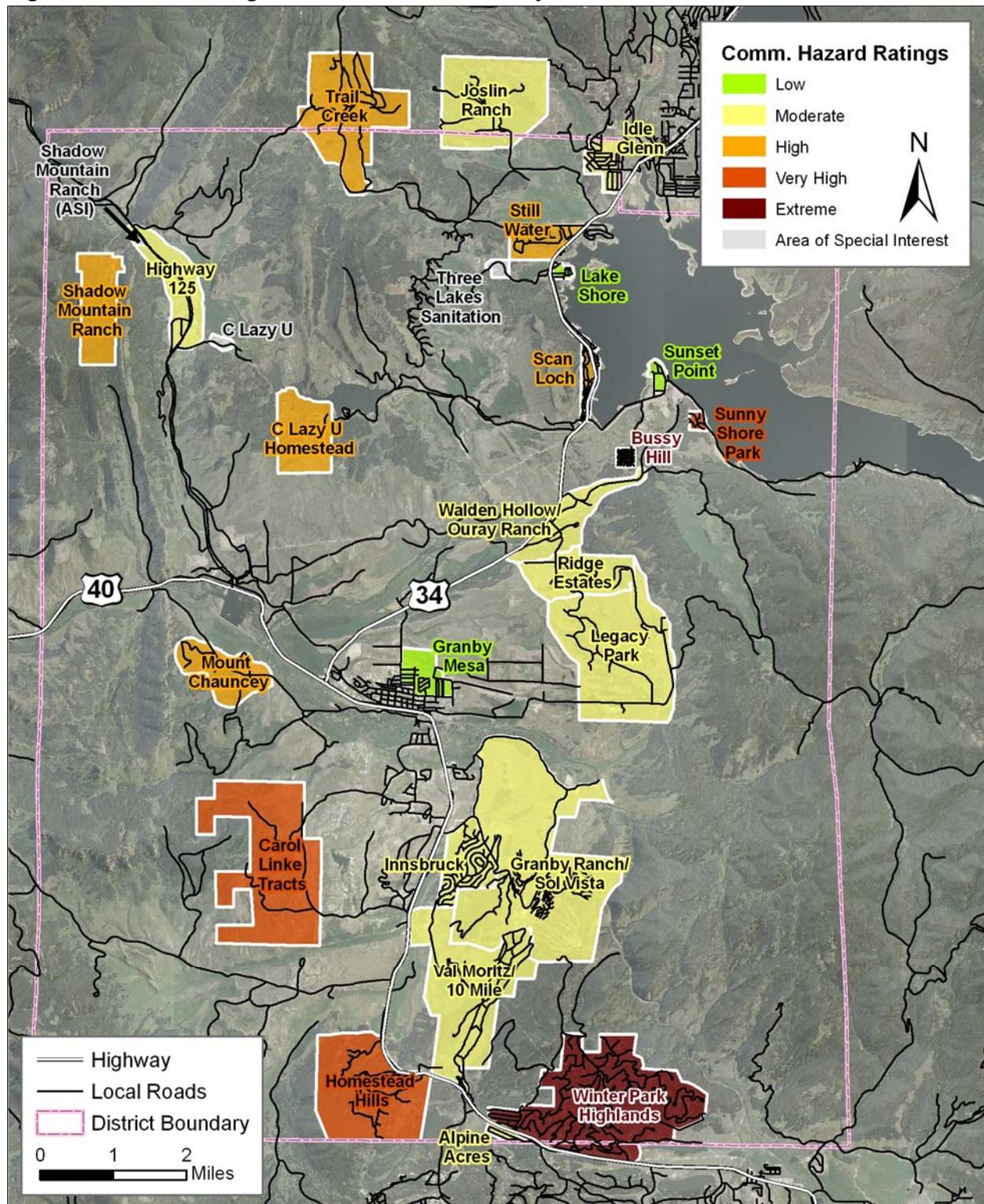
## PURPOSE

The purpose of this appendix is to examine in greater detail the communities in the study area. Of the 24 WUI communities in the Grand FPD No. 1 study area 5 were identified as Extreme or Very High risk. In these communities, a parcel-level analysis should be implemented as soon as possible to ensure the ongoing safety of residents and survivability of structures. Please refer to the table below and the communities map on the next page for easy reference.

**Table 1. Grand FPD No. 1 Community Hazard Ratings**

|                                 |  |
|---------------------------------|--|
| <b>1. Bussy Hill</b>            | <b>13. Granby Ranch / Sol Vista</b>    |
| <b>2. Winter Park Highlands</b> | <b>14. Highway 125</b>                 |
| <b>3. Homestead Hills</b>       | <b>15. Idle Glenn</b>                  |
| <b>4. Carol Linke Tracts</b>    | <b>16. Innsbruck</b>                   |
| <b>5. Sunny Shore Park</b>      | <b>17. Joslin Ranch</b>                |
| <b>6. C Lazy U Homestead</b>    | <b>18. Legacy Park</b>                 |
| <b>7. Mount Chauncey</b>        | <b>19. Ridge Estates</b>               |
| <b>8. Scan Loch</b>             | <b>20. Val Moritz / 10 Mile</b>        |
| <b>9. Shadow Mountain Ranch</b> | <b>21. Walden Hollow / Ouray Ranch</b> |
| <b>10. Still Water</b>          | <b>22. Granby Mesa</b>                 |
| <b>11. Trail Creek</b>          | <b>23. Lake Shore</b>                  |
| <b>12. Alpine Acres</b>         | <b>24. Sunset Point</b>                |

Figure 1. Hazard Ranking of Communities in the Study Area



## GENERAL RECOMMENDATIONS

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A combination of adequate access, ignition-resistant construction, and fuels management will help create a safe environment for emergency service personnel and will provide reasonable protection to structures from a wildfire. These techniques should also significantly reduce the chances of a structure fire becoming an ignition source to the surrounding wildlands.

In addition to the suggested mitigations listed for the individual communities, several general measures can be taken to improve fire safety. The following recommendations should be noted and practiced by anyone living in the Wildland-Urban Interface:

- Stay aware of the current fire danger in the area.
- Clean your roof and gutters at least twice a year, especially during cure-up in autumn.
- Stack firewood uphill or on a side contour, at least 30 feet away from structures.
- Don't store combustibles or firewood under decks.
- Maintain and clean spark arresters on chimneys.
- When possible, maintain an irrigated greenbelt around the home.
- Connect, and have available, a minimum of 50 feet of garden hose.
- Post reflective lot and/or house numbers so they are clearly visible from the main road.
- Reflective numbers should also be visible on the structure itself.
- Trees along driveways should be limbed and thinned as necessary to maintain a minimum 13'6" vertical clearance for emergency vehicle access.
- Maintain your defensible space constantly:
  - Mow grass and weeds to a low height.
  - Remove any branches overhanging the roof or chimney.
  - Remove all trash, debris, and cuttings from the defensible space.

**Note:** All communities rated as extreme to high hazard level were recommended for a parcel-level analysis. In the moderate level communities a parcel-level analysis was recommended only if the evaluator found that a significant number of homes had no, or ineffective, defensible space or a significant number of hazards near homes was detected. In short, the recommendation was made if the evaluator felt information gathered by a parcel-level analysis could be used to generate a noticeable improvement in the community's defensibility.

### **Technical Terms**

The following definitions apply to terms used in the “Description” and “Comments and Mitigation” sections of this appendix.

**Defensible Space:** An area around a structure where fuels and vegetation are modified, cleared, or reduced to slow the spread of wildfire toward or from the structure. The design and extent of the defensible space is based on fuels, topography, and the design and materials of the structure. Zone 1 is defined as the area 15 to 30 feet (depending on the reference source) from the structure. Flammable vegetation is generally removed entirely in Zone 1. The Zone 2 treatment area varies with slope and focuses on fuels modifications such as limbing and thinning.

**Extended Defensible Space (also known as Zone 3):** In this defensible space zone treatment is continued beyond the recommended minimum boundary for Zone 1 and Zone 2 defensible space. This zone focuses on forest management with fuels reduction being a secondary function.

**Citizen Safety Zone:** An area that can be used for protection by residents in the event that the main evacuation route is compromised. The area should be maintained, cleared of fuels, and large enough for all residents of the area to survive an advancing wildfire without special equipment or training.

**Fuelbreak:** A natural or constructed discontinuity in a fuel profile used to segregate, stop, or reduce the spread of fire. As a practical matter, fuelbreaks in the WUI are most effective against crown fires.

## **COMMUNITY ASSESSMENT METHODOLOGY**

The community level methodology for this assessment uses a Wildfire Hazard Rating (WHR) that was developed specifically to evaluate communities within the Wildland Urban Interface (WUI) for their relative wildfire hazard.<sup>1</sup> The WHR model combines physical infrastructure such as structure density and roads, and fire behavior components like fuels and topography, with the field experience and knowledge of wildland fire experts. It has been proven and refined by use in rating thousands of neighborhoods throughout the United States.

Many knowledgeable and experienced fire management professionals were queried about specific environmental and infrastructure factors, and wildfire behavior and hazards. Weightings within the model were established through these queries. The model was designed to be applicable throughout the western United States.

The model was developed from the perspective of performing structural triage on a threatened community in the path of an advancing wildfire with moderate fire behavior. The WHR survey and fuel model ground truthing are accomplished by field surveyors with WUI fire experience.

It is important to note that every hazard rating does not necessarily occur in every geographic region. There are some areas with no low hazard communities, just as there are some areas with no extreme communities. The rankings are also related to what is customary for the area. For example, a high hazard area on the plains of Kansas may not look like a high hazard area in the Sierra Nevada. The system creates a relative ranking of community hazards in relation to the other communities in the study area. It is designed to be used by experienced wildland firefighters who have a familiarity with structural triage operations and fire behavior in the interface.

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<sup>1</sup> C. White, "Community Wildfire Hazard Rating Form" Wildfire Hazard Mitigation and Response Plan, Colorado State Forest Service, Ft. Collins, CO, 1986.

## COMMUNITIES

### 1. Bussy Hill



#### Hazard Rating: Extreme

#### Description

This community has one of the highest hazard ratings in the study area. Access is difficult because of the steep dirt roads, which are mostly 4wd accessible only. There are only 25-30 homes in this community; however there is only one way in/out. There is no defensible space surrounding any of the houses. All homes have propane tanks, which need to be mitigated properly and maintained. The southern part of the community is at greater risk due to the increased tree density and canopy cover. Above ground power lines pose a threat, especially as the beetle attacked trees start to fall. There is no on-site water supply for this community.

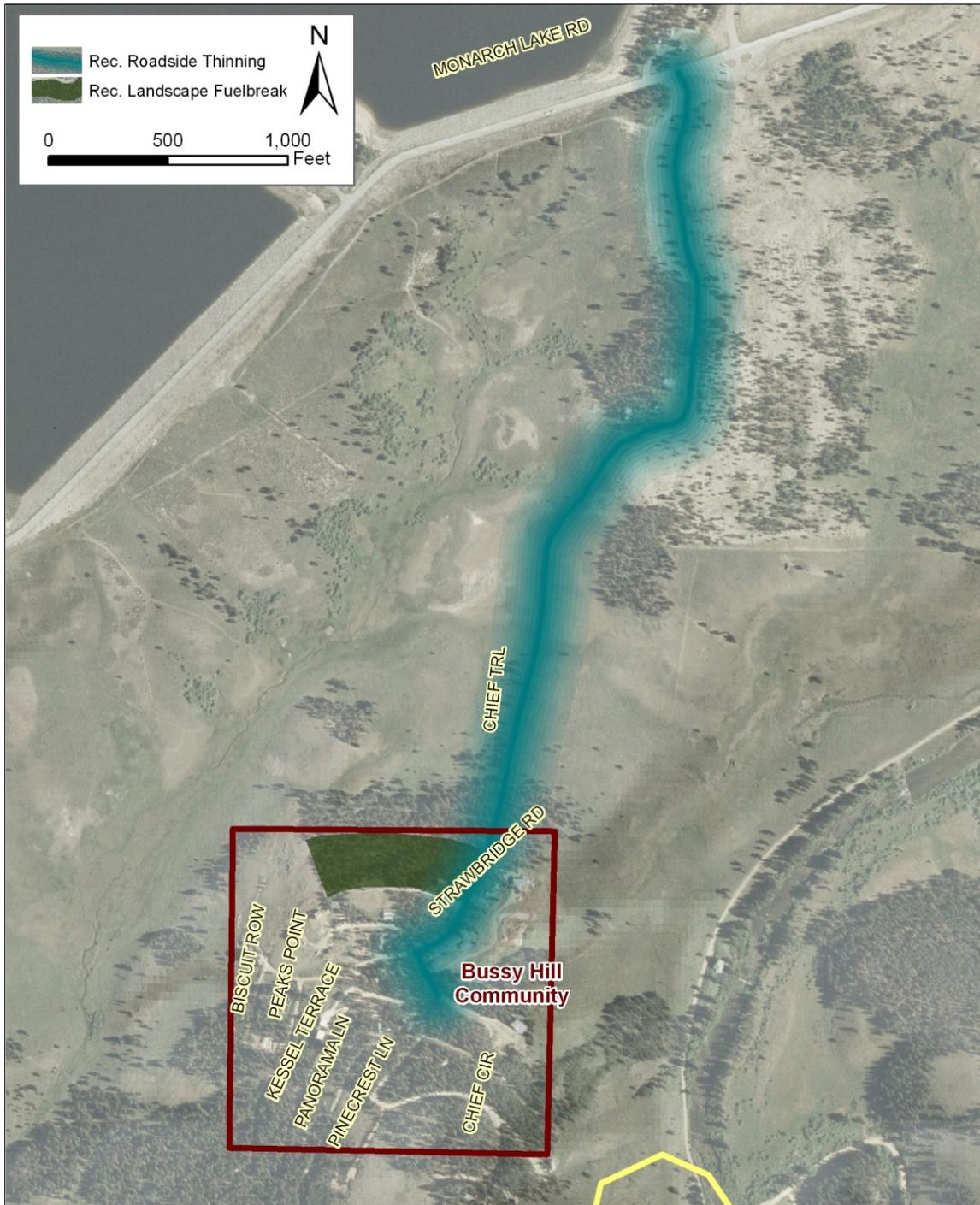
The fuels in the community are lodgepole pines. The majority of the trees in the community are dead as a result of the recent mountain pine beetle infestation. The trees that have dropped their needles create high levels of surface fuel loading. Under extreme weather and an ignition source, there could be active crown fire with long flame lengths and extreme rates of spread through the community. As trees fall, they will contribute to the already high levels of slash, which if ignited, can also propagate fire to extend into the tree tops.

## RECOMMENDATIONS

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- A landscape fuelbreak is recommended for this community on the northwest side (see **Figure 2**). This fuelbreak project serves to decrease fuel continuity and as a result, prevent fire spread into the Bussy Hill community. It also protects access and egress along Biscuit Row, should a fire occur. Placing the fuelbreak at the base of the hill will provide the most benefit for the entire community.
- Roadside thinning and mowing is recommended along the Chief Trail Road (see **Figure 2**). Living trees should be limbed and trimmed along the Chief Trail Road. Standing dead trees that could fall and cut-off road access should be removed, and open areas should be mowed. Roadside mowing should begin from the intersection of Chief Trail Road and Billie Lane and continue north to the lake.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Extended defensible space is recommended for most homes, due to the dangerous topography and heavy fuel loads in and adjacent to this community.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.

Figure 2. Bussy Hills Fuels Treatment Projects



## 2. Winter Park Highlands



### **Hazard Rating: Extreme**

#### **Description**

This is a large community of small to medium sized homes on moderate size lots. The dominant construction is wood siding with a mix of asphalt and wood shake roofs. Most of the homes are built mid-slope or above steep slopes and ravines. Few homes have any defensible space. Many yards have flammable clutter and fuels growing right up to the structure. Access is poor, with narrow, steep roads and few turnarounds for apparatus. Some homes do not have any address marker and of those that do, most are low visibility and non-reflective. There is no water supply for fire suppression in this community and the nearest water source would be ponds and a cistern near Hwy 40. There are overhead power lines and propane tanks (some overgrown with vegetation) which may be a hazard to firefighters.

Fuels are generally heavy loads of mixed conifer with substantial insect mortality. Stands have plentiful ladder fuels and significant surface loads of dead and down materials. There is a railroad line that runs along the bottom of steep slopes below this community which is an additional ignition hazard. The topography in this community is steep and complicated by ravines and drainages. Active fire behavior can be expected under both moderate and especially under extreme weather conditions. Long flame lengths, high rates of spread and active crown fire are possible.

## RECOMMENDATIONS

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- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Extended defensible space is recommended for most homes, due to the dangerous topography and heavy fuel loads in and adjacent to this community.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.

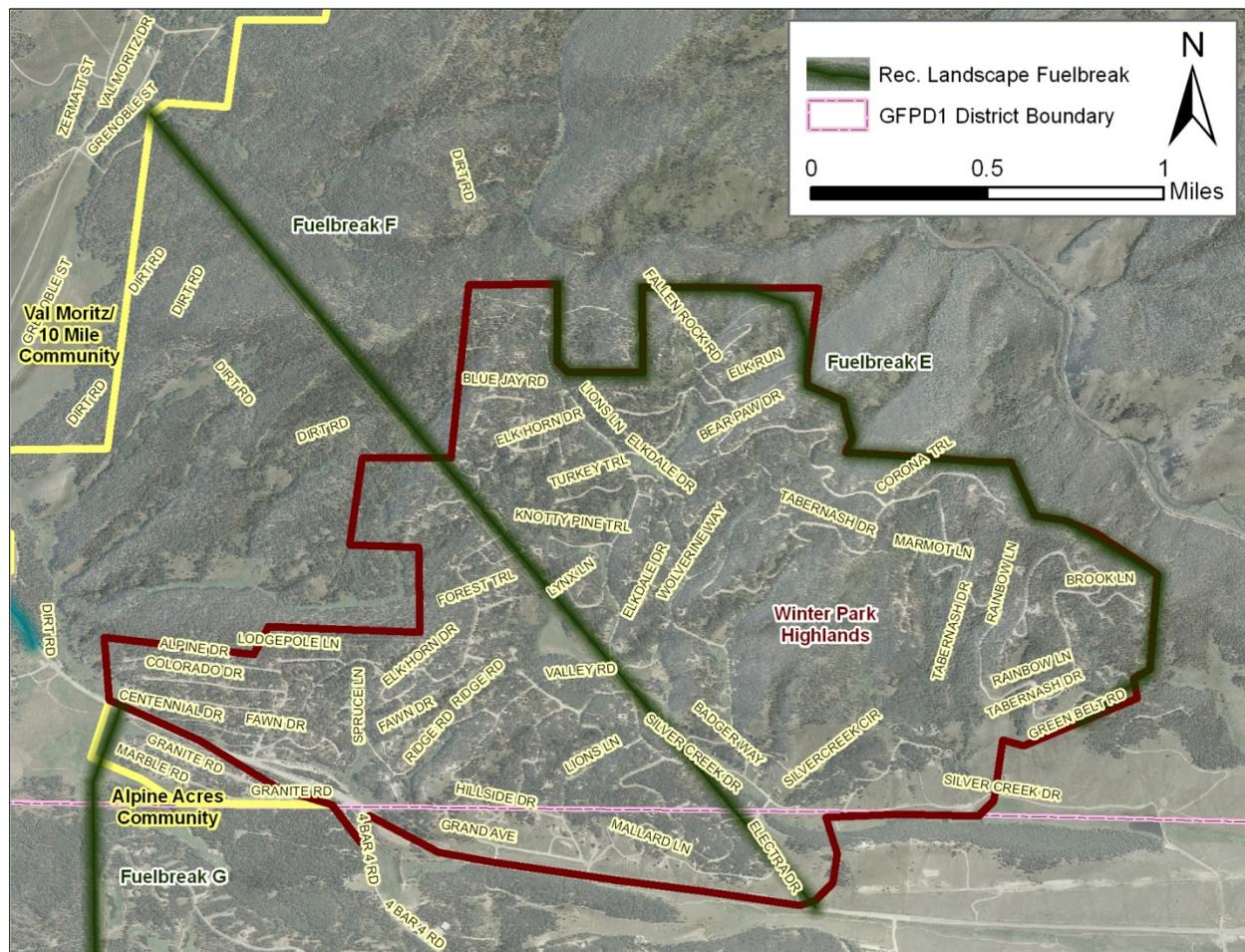
### Winter Park Highlands HOA 2008 Project Completion Summary

The Community has been very active in mitigating wildfire hazards and risks. The following is a summary of 2008 work completed.

#### Total scope of project:

- a) Survey Greenbelt D to determine actual area to be cleared.
- b) 10 acres of logging clear cut (approximately 150' wide) below the ridge in Greenbelt D.
- c) Re-opened old forest service road and added 300 yards of road clearance to allow access for fire protection and emergency equipment.
- d) Training for property inspectors from Colorado State Forest Service, Granby Fire District, community education for WPHOA, and distribution of Upper Fraser Valley CWPP.
- e) 44 homeowners did fuel reduction & fire mitigation on approximately 90 acres around their homes & property in Winter Park Highlands.
- f) Inspection of above properties by trained WPHOA team.

Figure 3. Winter Park Highlands Fuels Reduction Projects



### 3. Carol Linke Tracts



#### **Hazard Rating: Very High**

##### Description

This community has a very high rating due in part to the locations of the homes in dangerous topographic areas such as saddles, chimneys. Individual lots are typically about 35 acres. The roads are wide, well maintained dirt, but they are also steep. There is one access in and out of forested portion of the community. Non combustibile building construction is one of the community's greatest assets. There is no water available for fire fighting.

Fuels in this community are grass and brush fuels, with some timber – mostly dead Lodgepole. There are slash piles that add to the surface fuel loading from small cutting projects that have been going on. Under moderate conditions, surface fire spreading through the brush is most likely. Small pockets of surface fuels located next to lodgepole pines may cause individual torching. Extreme weather conditions are of concern due to the quick rates of spread through the brush and hence long flame lengths, which may likely cause active crown fire, especially through the stands that have beetle kill and still have needles on the trees.

## RECOMMENDATIONS

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- Dead trees along road sides create potentially dangerous situations, especially when there are high winds. Removal of all dead trees along access routes is recommended for the safety of those traveling these routes. Much of this should be focused along Thompson Road (see **Figure 4**).
- While this community has been active in removal of dead trees, many of the slash piles are located near driveways and access roads. If there were to be a fire, the piles could severely limit or cut-off access routes. Slash piles should be relocated to areas that are accessible by a chipper, but do not impinge upon road travel.
- The addition of a 30,000 gallon cistern for water supply is recommended since the community currently has to water. A recommended location for this cistern can be seen in **Figure 4**.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Extended defensible space is recommended for most homes, due to the dangerous topography and heavy fuel loads in and adjacent to this community.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.

Figure 4. Carol Linke Tracts Fuels Reduction Projects



#### 4. Homestead Hills



#### **Hazard Rating: Very High**

##### **Description**

The majority of the houses in this community are accessed by Homestead Drive. Roads are steep and have tight turns. Evacuation through this road system may be slow. There are steep slopes and other dangerous topography in the community. Some defensible space has been completed, but this should be carried out for every house. Currently there is no water available to this community.

Lodgepole pines comprise the majority of the fuel type in the community, and most of these trees have been attacked by the mountain pine beetle, especially on the west side of the community where there is a higher component of forested areas on the hillside. There is less mortality in the lower areas of the community. Under Moderate fire conditions, a surface fire would be most probable given the low surface fuel loading and moderate levels of ladder fuels. Slower rates of spread and lower flame lengths should also be expected. However, the even-aged and dense nature of these stands, combined with the red needle phase of the trees could produce active crown fire under extreme conditions.

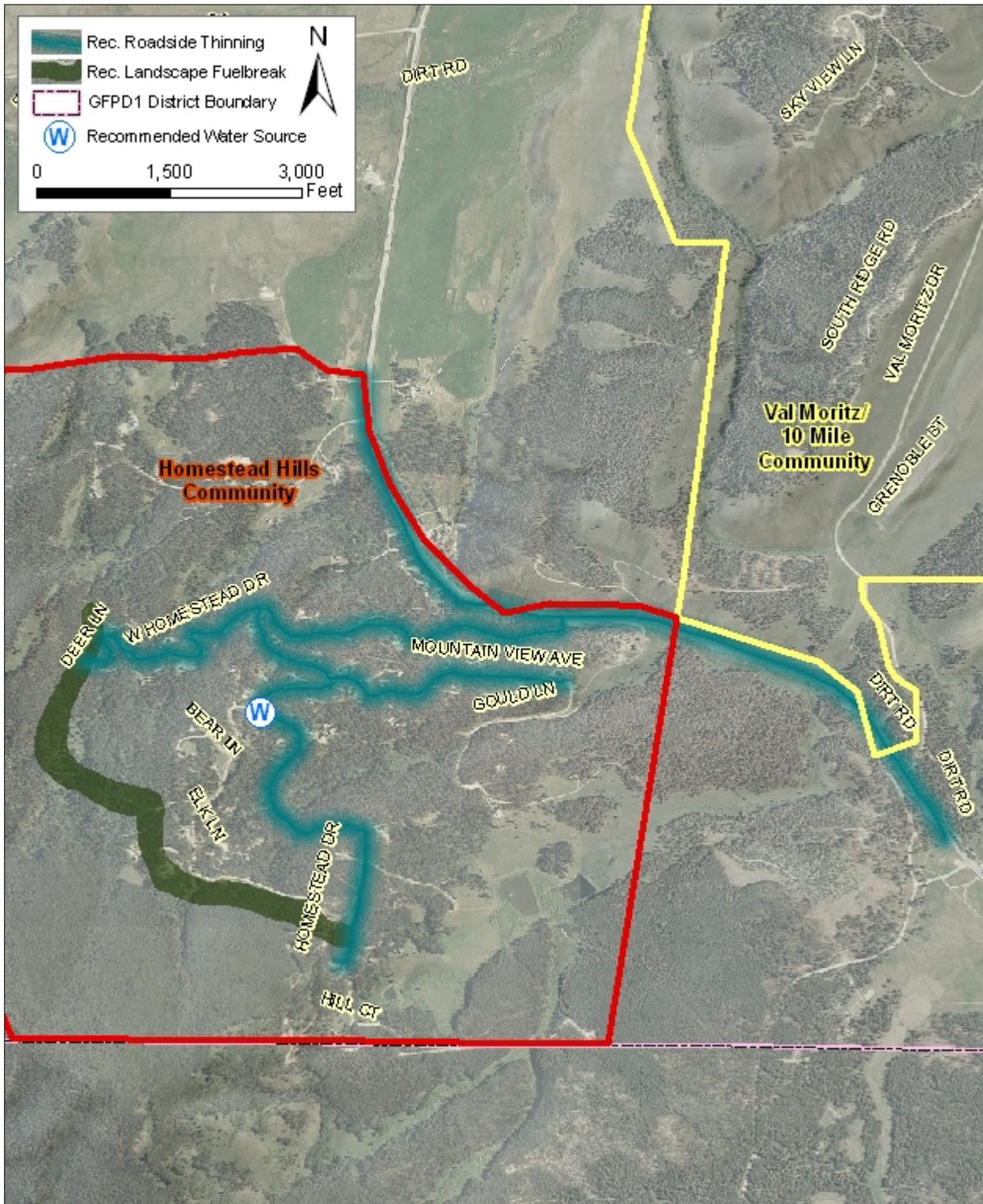
## RECOMMENDATIONS

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- A landscape scale fuel break is recommended for this community along Nine Mile Mountain on the west side of the community. This fuelbreak should tie into the open area near Deer Lane and continue south to the hairpin curve in Homestead Drive. The fuelbreak should be approximately 600-800' wide, following along the uphill side of the road. This project is intended to decrease flame length intensity that may impinge upon road access during a fire. The project occurs along the roadside for operability, not as a roadside thinning treatment. It is possible that due to the topography, fire coming from the southwest of the road could have extreme rates of spread, long flame lengths, and high fire line intensity. Thinning and removing dead fuels, as well as mowing light flashy fuels will reduce ladder fuels and interrupt the crown continuity. It will serve to protect the egress route for residents in this community, as well as to provide a possible control line for firefighting resources.
- Roadside thinning is recommended along most of the roads within the community (see **Figure 5** on page B18). The most important need for roadside thinning is along HW 40, which comprises the northwest boundary for the community. Mowing, thinning, and removing dead trees along roads will protect ingress and egress routes for individuals and fire apparatus.
- It is recommended that a dry hydrant be installed on the Fox property, seen in **Figure 5** on page B18. Access should be developed with fire apparatus in mind.
- A 30,000 gallon storage cistern is recommended (see **Figure 5** on page B18). Additional water storage is useful, especially in combination with a dry hydrant. Work with the fire department to determine a beneficial location.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Extended defensible space is recommended for most homes, due to the dangerous topography and heavy fuel loads in and adjacent to this community.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes

- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.

Figure 5. Homestead Hills Fuels Reduction Projects



## 5. Sunny Shore Park



### **Hazard Rating: Very High**

#### **Description**

This community borders Grand Lake on the south west side. The entire area has steep slopes, ravines and chimneys. The Dam Road, which is a gated, narrow dirt road, is the only access to the community. The roads in the community are steep and unmaintained, and they do not provide adequate turnarounds. Adequate home signage is also recommended. The structures generally have little to no defensible space and Class B roofs with combustible siding. Abandoned structures are scattered throughout. All of the utilities are above ground. The close proximity to recreation areas with campfires and the lack of water supply increase the community's risk.

Surface fuels are abundant under the lodgepole pine overstory. There are continuous fuels, but they typically lack the height to ignite the crowns. Because of the topographic position of the community, high winds are probable. These high winds could increase fire behavior, and initiate areas of active crown fire. Defensible space combined with widening and maintaining the roads is highly recommended.

## RECOMMENDATIONS

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- The recommendations for this community include extended defensible space, which includes linking the work done by individual homeowners, and continuing it out further than the general recommended distances. A shaded fuel break around the perimeter of the community was considered, but it was found to be less valuable than extended defensible space.
- It is recommended that the roads in the community receive regular attention, including widening the road where possible, opening up the roads by thinning and removing dead trees, and grading the road regularly.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Extended defensible space is recommended for most homes, due to the dangerous topography and heavy fuel loads in and adjacent to this community.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.

## 6. C Lazy U Homestead



### **Hazard Rating: High**

#### **Description**

This community is comprised of large acreage lots with large homes. The area tends to have steep slopes, but most homes are in Aspen stands, a fact which serves to decrease their wildfire risk. The dirt roads are narrow and do not provide adequate turnarounds. There is only one way in and out of the community, but another unimproved route leads to the ranch itself. There is no water supply, and response times to this community are very long.

This area has large open areas with brush, Aspen stands, and lodgepole pine stands. A surface fire could get started even in moderate conditions given an ignition source. Ladder fuels are limited, but individual tree torching could occur. In general, flame lengths are expected to be fairly low. Under extreme conditions, especially considering the typically high wind speeds, surface fire spread through the open brush is likely to be greater than one mile per hour, and thereby produce significant flame lengths.

## RECOMMENDATIONS

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- A landscape fuel break is recommended for this community along the road on the northeast side (see **Figure 6**). The project occurs along the roadside for operability, not as a roadside thinning treatment. It is possible that due to the topography, fire coming from the southwest could have extreme rates of spread, long flame lengths, and high intensity. Thinning and removing dead fuels, as well as mowing light flashy grasses, will reduce ladder fuels and help prevent crown fire. This should be done for a distance of at least three times the flame lengths predicted by the extreme weather scenario in the fire behavior model. Mitigation in this community should be focused on ground fuels. This project protects the egress route for C Lazy U Homestead, which is especially important due to very long response times.
- Roadside thinning is recommended along the road that leads into the community (see **Figure 6**). The area around the community has high recreational usage in the summer months, with charcoal grills and campfires. Thinning would help protect the community from an ignition in the campgrounds. There is a concrete ramp that extends toward Willow Creek Reservoir. A temporary access platform should be extended to the water for Fire Department access. Alternatively, a dry hydrant system could be developed to provide a water supply.
- Adequate turnaround space is also recommended. The road that connects to C Lazy U Guest Ranch should be evaluated as a secondary road to be improved for secondary access to and from the community and the Guest Ranch.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the Home Mitigation section in the main report).
- Adequate defensible space is recommended for all homes.
- Extended defensible space is recommended for most homes, due to the dangerous topography and heavy fuel loads in and adjacent to this community.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.

- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.

Figure 6. C Lazy U Homestead Fuels Reduction Projects



## 7. Mount Chauncy



### **Hazard Rating: High**

#### **Description**

Access to this community is a dirt road which turns off of highway 40. There are multiple routes of ingress/egress. The homes are newer large cabins with working ranches and homesteads. Structures are located on a variety of terrain types, including the sides of Mount Chauncy, with others on flat open areas. There is a variety of road marking types, which consistently need to have reflective, 4" lettering. There is no developed water supply available for the community.

This community has large open areas of brush and grass with significant amounts of dead Lodgepole located on the slopes and in ravines. Also present are shrubs and grasses, which are classified as light flashy fuels that allow the quick progress of surface fire, especially uphill. Individual tree torching and crown fire are probable in the Lodgepole stands, even under moderate weather conditions. Extreme weather will likely produce active fire behavior. Very fast fire movement through the lower areas, as well as up the mountain sides is likely. Increased flame lengths would allow fire to extend into the Lodgepole stands, perpetuating the chance active crown fire. There is also the risk of fire moving into the community from adjacent areas. The agricultural area outside the north edge of the community will help somewhat to limit fire spread from that direction.

## RECOMMENDATIONS

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- Fire safety education is recommended for those working on farms.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Extended defensible space is recommended for most homes, due to the dangerous topography and heavy fuel loads in and adjacent to this community.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.
- No landscape scale thinning projects are recommended for this community.

## 8. Scan Loch



### **Hazard Rating: High**

#### **Description**

The Scan Loch community is located along highway 34, on the south west corner of Lake Granby. These two factors serve to mitigate some of the risk due to fire. The roads through the community are steep, narrow dirt roads. They are not maintained, and although there is a turnaround loop, it is too narrow for fire apparatus to utilize. Road maintenance is recommended. Above ground utilities may also limit access by fire apparatus. Some defensible space has been done, but not throughout the entire community. Homes are generally combustible with Class A roofs. There are outbuildings that are of concern due to the lack of maintenance. There is no developed fire fighting water supply available for the community.

There are moderate levels of surface fuels which support surface fire in this community. The highway itself acts as a fuel break, and there are very few fuels between the highway and lake. The lodgepole pines that are present are almost completely dead. Surface fire is most likely under moderate conditions. Extreme conditions may lead to a crown fire, in which the community is at risk due to the fuels that are to the west, especially due to the predominately west winds in the area.

## RECOMMENDATIONS

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- The first priority for this community is to limb and trim the trees along all roads. Removing dead trees, especially where they pose a risk to buildings and roadways is highly recommended.
- A roadside thinning project is recommended for this community. Thinning along the uphill side of Sunset Lane would help protect the community from a fire being pushed into the community from the west (see **Figure 7**).
- The development of on-site water storage is recommended for this community. The location should be investigated for its accessibility for fire apparatus and provide adequate turnaround space. This is increasingly important when fuels reduction projects are being conducted.
- Thinning should be performed along the utility lines.
- Regular road maintenance is recommended for this community.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Extended defensible space is recommended for most homes, due to the dangerous topography and heavy fuel loads in and adjacent to this community.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.

- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.

**Figure 7. Scan Loch Fuels Treatment Projects**



## 9. Shadow Mountain Ranch Community



### **Hazard Rating: High**

#### **Description**

The general area has steep slopes, and unmaintained, steep, dirt roads. There is only one way to access the community, however all homes are relatively close to the highway. Since there is no water supply available, and fire department response times are so long, it is recommended that Shadow Mountain Ranch partner with C Lazy U to develop a mutually beneficial water supply.

The fuels are largely continuous swaths of dead lodgepole pines. Given moderate weather conditions, surface fire would be likely, with some individual tree torching and a few areas of active crown fire. However, with the low fuel moisture during the red needle phase of the beetle-killed trees, and extreme weather conditions, active crown fire is possible over large areas of the community. Long flame lengths and fast rates of spread are likely up the east and west sides of the valley. When the needles begin to drop from trees, the risk of crown fire is reduced, but this leads to increased surface and slash fuel loading.

## RECOMMENDATIONS

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- As more homes are built, adequate road construction, proper addressing, construction materials, and defensible space procedures should be incorporated.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Extended defensible space is recommended for most homes, due to the dangerous topography and heavy fuel loads in and adjacent to this community.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.
- No landscape scale thinning projects are recommended for this community.

## 10. Still Water



### Hazard Rating: High

#### Description

This community sits along the west bank of Lake Granby. There is only one way to access the community, but the roads are maintained dirt, they are fairly wide, and they have adequate turnarounds. The roads are well labeled and the dead-end roads are also marked. Over half of the population is made up of seasonal residents, which can make implementing defensible space difficult. Some of the structures have defensible space, but it is recommended that every structure be treated. Another factor that increases this community's risk is the number of outbuildings. These also need defensible space. There is no water available within the community, but the water pump plant is 2.5 miles away, and is often used for water supply.

The fuels in the community are continuous stands of lodgepole pine, with open areas of brush surrounding the community. There are moderate surface fuels, but high levels of ladder fuels which could allow fire to spread more easily into the crowns of the lodgepole pines. Under moderate weather conditions areas of torching and active crown fire are probable. Extreme weather conditions could lead to increased rates of spread and more active crown fire.

## RECOMMENDATIONS

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- Fire safety signage is recommended along HW 34 and the entrance to the community.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Extended defensible space is recommended for most homes, due to the dangerous topography and heavy fuel loads in and adjacent to this community.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.
- No landscape scale thinning projects are recommended for this community.

## 11. Trail Creek



### **Hazard Rating: High**

#### **Description**

The access to this community is good. Some of the roads are narrow, but they are well maintained and some have adequate turnarounds. The structures are a mixture of combustible materials with large diameter logs. The majority of the homes do not have visible address markings. There are several lakes and ponds in the area that provide water supply in case of a fire. There is a dry hydrant installed at Trout Lake that can be used to draft water. Utilizing these will be important, since fire department response times are long for the community.

The east side of the community has large areas of dead standing lodgepole pines, while the west side is characterized by more riparian areas. Many of the structures are in open areas or surrounded by aspen, which provide some protection from fire. The aspen should be managed so they remain healthy and are not damaged by elk populations. Surface fire with small areas of torching is most likely in the area because of the moderate surface fuel loading. Under extreme weather conditions, active crown fire is possible, but some areas in the western part of the community are typically too wet to burn.

The majority of this community is out of district for Grand County FPD No. 1, but it is still within their response area and therefore included in this CWPP.

## RECOMMENDATIONS

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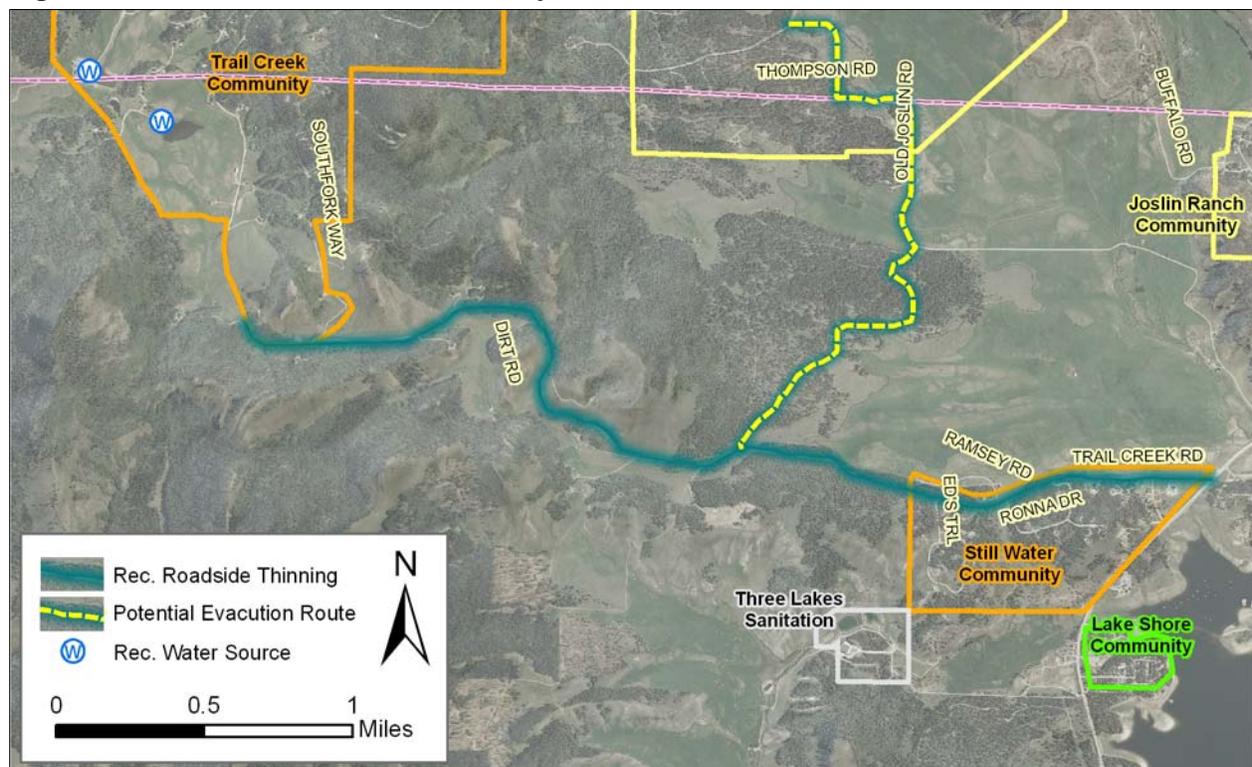
- Roadside thinning is recommended along CR. 41 (see **Figure 8**). This is imperative since it is the only means of access and egress for this community.
- A dry hydrant is already in place at Trout Lake. The connection is low to the ground, which makes accessing this hydrant difficult. For this reason, it is recommended that the hydrant be inspected and modified as needed to provide reliable water supply.
- An additional dry hydrant is recommended along the west side of Trail Creek Pond (see **Figure 8 and picture below**). Like any other dry hydrant, this should be maintained regularly.



- A community fire patrol is recommended to ensure early detection and action. A Citizen Emergency Response Team (CERT) and a fire cache with appropriate protective personal equipment (PPE) should be put into place. Intelgard ([www.intelgard.com](http://www.intelgard.com)) offers a variety of products that could potentially be useful in the community, especially some of the systems developed for ATVs.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.

- Extended defensible space is recommended for most homes, due to the dangerous topography and heavy fuel loads in and adjacent to this community.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.

Figure 8. Trail Creek Fuels Reduction Projects



## 12. Alpine Acres



Hazard Rating: Moderate

### Description

This community is of moderate concern due to its proximity to HW 40, the golf course, and multiple routes of ingress/egress with Marble and Granite Road. The maintained and well marked dirt roads are of sufficient width and provide adequate turnarounds. Some defensible space projects have already been started and should be continued. Homes are typically combustible material with Class A roofs. There are some cedar roofs, which should be replaced. There is no water supply to the community other than the 50,000 gallon cistern owned by the golf course.

The main vegetation in the community is lodgepole pine, but many of the trees have been cut already because of the beetle infestation. As a result, the fuels are horizontally and vertically discontinuous. There is not a lot of understory vegetation to support a surface fire, but the slash loading is high in some areas due to the cutting that has taken place. With moderate weather conditions, very little active crown fire is predicted. However, given the right circumstances, the slash piles, if placed too close to mature trees could cause fire to extend in to the crowns and potentially start a crown fire with large flame lengths and potential ember cast.

## RECOMMENDATIONS

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- It is recommended that the community look into the possibility of obtaining permission to use the 50,000 gallon cistern owned by the golf course for water supply.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.
- No landscape scale thinning projects are recommended for this community.

### 13. Granby Ranch/Sol Vista



#### Hazard Rating: Moderate

#### Description

This resort community is hosts many recreational activities, both in the summer and winter. There are multiple paved roads to access the area. The buildings are a mixture of combustible and non-combustible materials but have fire resistant, Class A roofs. Defensible space has been completed for many homes in the community. There is a system of hydrants throughout. A municipal water supply in combination with the extensive forest management which continues within these communities has significantly contributed the moderate hazard rating for the area.

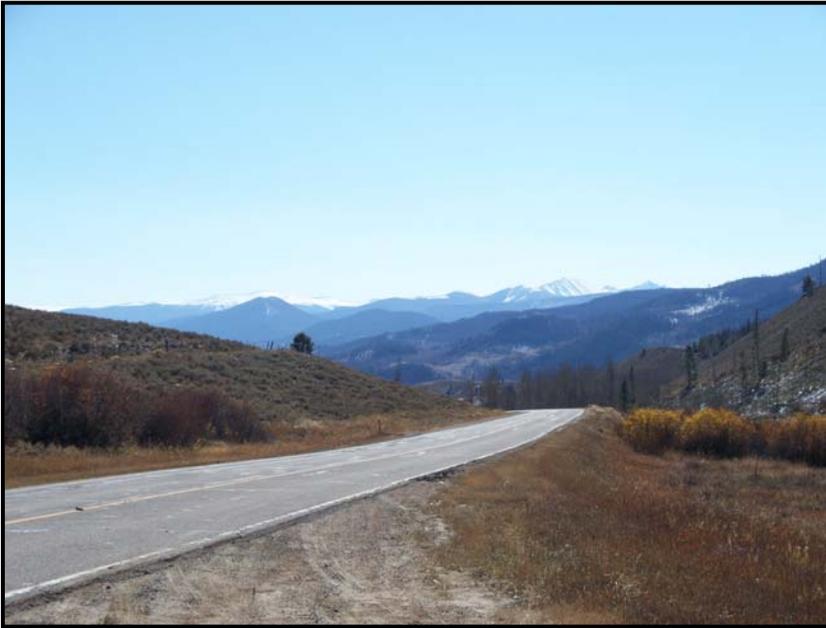
A large part of this community is open brush areas with sage and other shrubs. Along the ski runs and in the southwest section, there are lodgepole pine stands. Like many other areas in the county, the majority of the lodgepole pines have been attacked by mountain pine beetle. There is generally little understory vegetation other than vaccinium and common juniper under lodgepole pine forests. Low severity surface fire is likely under moderate weather conditions. Some areas of high surface fuel loading may lead to increased flame lengths and individual tree torching. Active fire behavior, including active crown fire and rapid rates of spread are possible in the open shrub areas and in the Lodgepole stands under extreme weather conditions. The ski runs will act as fuelbreaks to help limit the rate of spread, but with extreme conditions, ember cast could still cause adjacent stands to burn.

## RECOMMENDATIONS

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- Consider installing an ATV mounted CAFS system such as an Intelagard system ([www.intelaguard.com](http://www.intelaguard.com)) on the heavy duty ATVs owned by the ranch. This would allow quick attack on any fires started by those working on the ranch and at the resort.
- Because this community has hydrants, and surrounding community may depend on them for water supply, it is highly recommended that the hydrants be tested annually for proper functioning and flow rate.
- It is recommended that the fire department provide annual fire safety training for the summer crews.
- Since snow making equipment is already set-up within the community, it is recommended that this equipment be adapted so it can be used as a tool for fire suppression operations in the summer months.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.
- No landscape scale thinning projects are recommended for this community.

## 14. Highway 125



### Hazard Rating: Moderate

#### Description

The Highway 125 community area incorporates the Shadow Mountain Guest Ranch and the surrounding area. The Guest Ranch is also an area of special interest and is discussed at the end of this appendix. The lots along the highway 125 corridor are large, typically around 20 acres. Most of the roofs are Class A, but there are some with cedar roofing. Homes are a mix of combustible and non-combustible materials, with heavy timber being a primary building material. Some defensible space has been completed. Maintained dirt roads provide for multiple ways in and out to highway 125. Road signage is inconsistent. There is no actual water supply for the community, but there are some rivers and ponds, that could be used as draft sites if improvements are made.

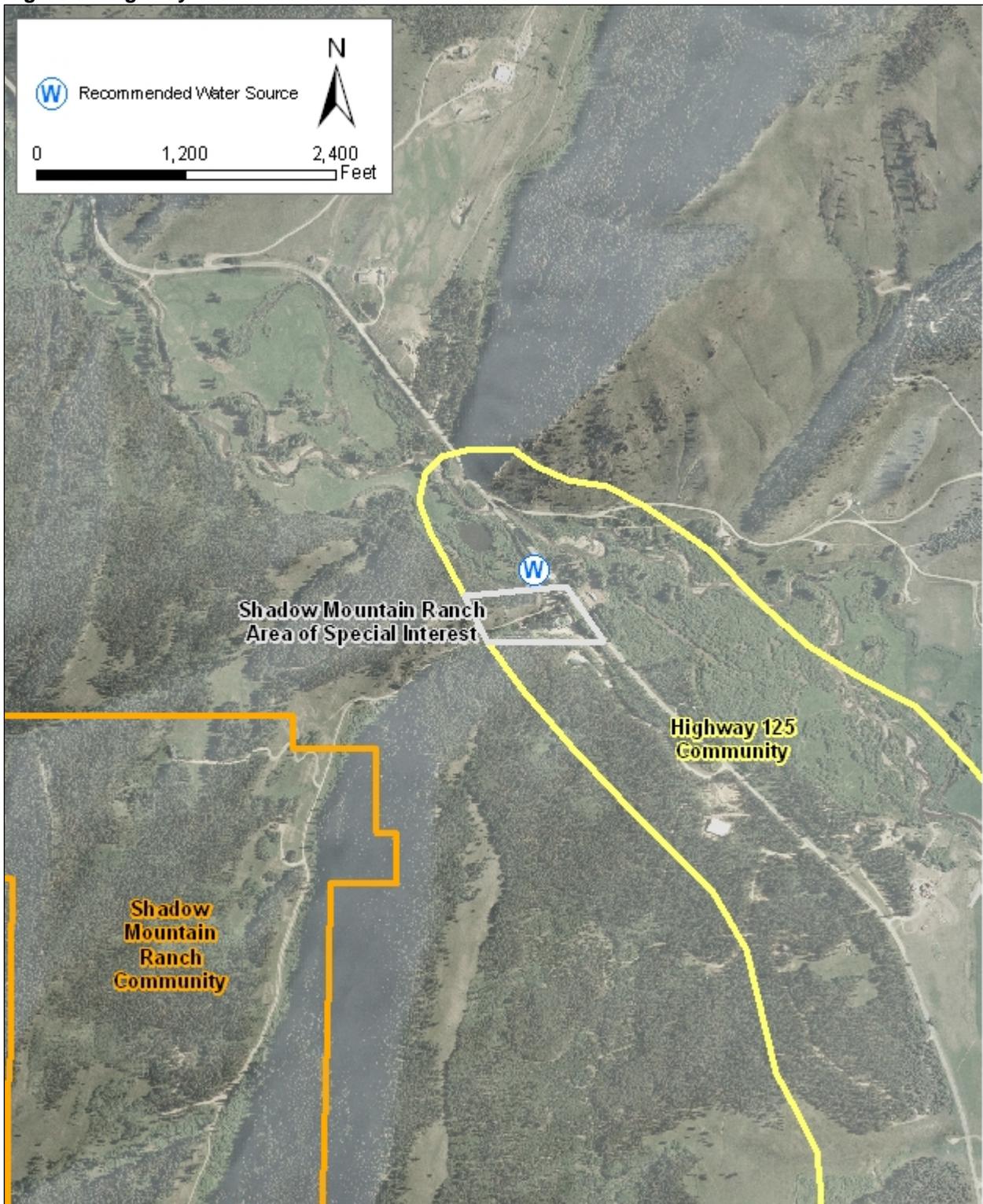
The fuels in the area are patchy, including large open areas of shrubs, large stands of dense lodgepole pines, and wet areas to the west of the highway. This area typically has snow for a long period of time, thus decreasing the amount of time in which fires are possible. Most of the mature lodgepole pines have been killed by mountain pine beetle. Even with the heterogeneous landscape, surface fire is possible under moderate conditions. As fire burns in the open areas, intensity is likely to increase and cause torching once it reaches the lodgepole pines. Flame lengths are generally low. Under more extreme weather conditions, much faster rates of spread are possible. If the lodgepole pines were to burn, intense, active crown fire would be likely. Even under extreme conditions, there are some moist areas that are unlikely to experience fire.

## RECOMMENDATIONS

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- Installation of a dry hydrant is recommended within the area (see **Figure 9**) in the river. There is adequate turnaround space and the location would benefit the community, as well as C Lazy U ASI.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.
- No landscape scale thinning projects are recommended for this community.

**Figure 9. Highway 125 Water Source Recommendation**



## 15. Idle Glenn



### Hazard Rating: Moderate

#### Description

This community's primary access is along highway 34. Interior road widths are adequate, and the roads are well maintained dirt. There are adequate turnarounds, but due to the abundant amount of beetle kill, it is advised to clear along the roads so access does not get blocked from falling trees during a wind or fire event. The nearest established water supply is the Farr Water Plant which is located along highway 34.

The fuels in this area consist of mountain pine beetle attacked stands of lodgepole pine and open areas of sage. The part of the community with the most structures has patchy fuels. There is a moderate amount of surface fuel loading and ladder fuels. Surface fire with flame lengths up to 4 feet would be most common in these fuels. Under extreme weather conditions, a fire could quickly run uphill from the south west. Both brush and forest areas are likely to have fast rates of spread and long flame lengths. Stands that are in the red needle phase are likely to have individual tree torching and active crown fire.

## RECOMMENDATIONS

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- A Fire Danger Sign is recommended along Highway 34 at the entrance to the community.
- A water supply sign should be added to the Farr sign with an arrow that directs fire apparatus to the main water supply.



- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.

- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.
- No landscape scale thinning projects are recommended for this community.

## 16. Innsbruck



Hazard Rating: Moderate

### Description

The Innsbruck community is accessed off of highway 40 and has multiple access/exit routes. There is a year round population in this community. The homes are in a fairly open area, surrounded by lodgepole forests. Many of the homes in the community have defensible space. Home construction is primarily with combustible materials, but roofs are Class A. The dirt roads are well maintained and have good access, but they are not consistently labeled with 4" reflective signage. The municipal hydrant system provides significant water throughout.

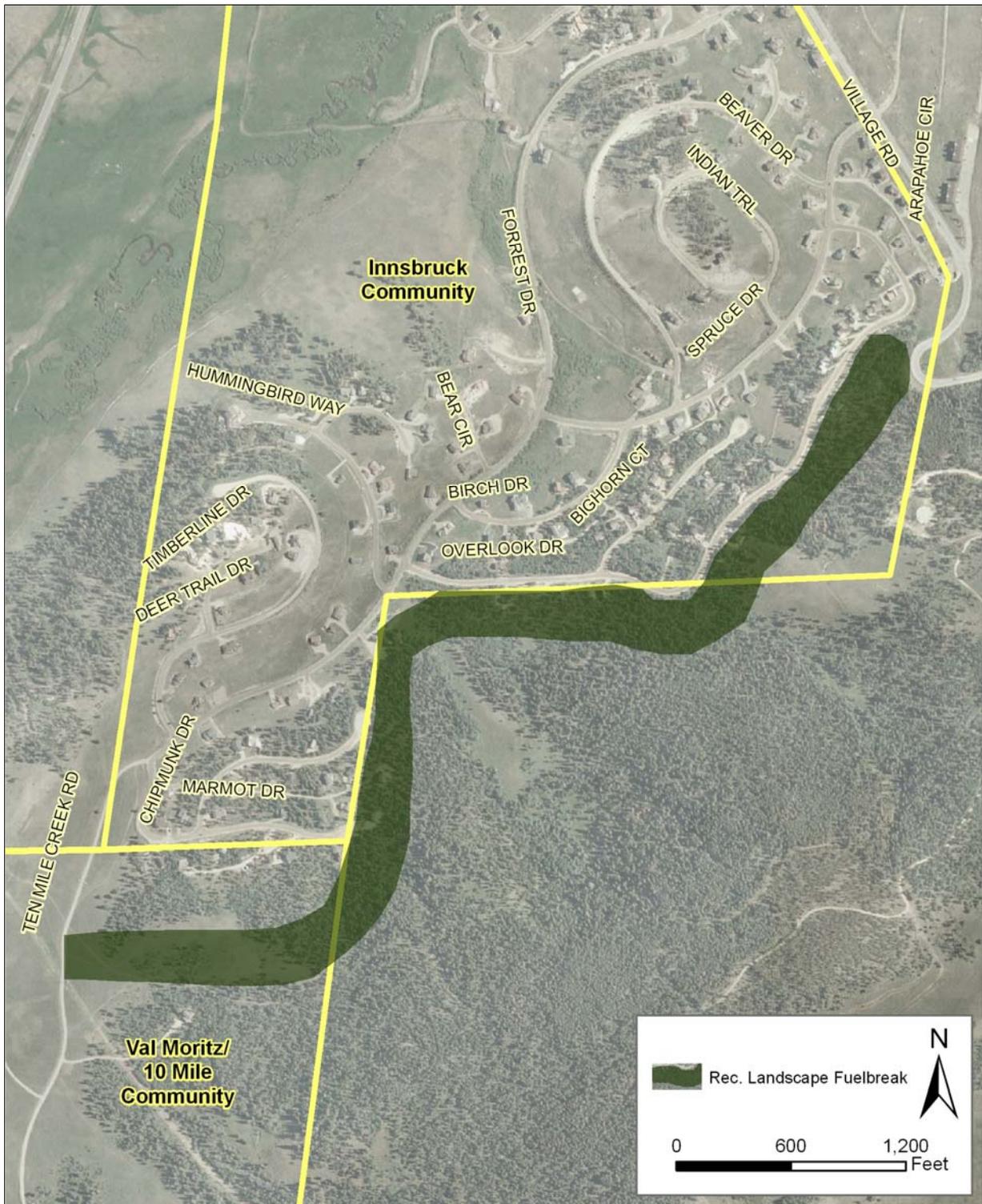
The fuels in this community are highly variable. The northern part is very moist, with a stream and associated riparian vegetation. The vegetation surrounding the structures varies with brush and some lodgepole pines. The lodgepole forest surrounding the community is mostly dead due to mountain pine beetle activity. Within the community itself, surface fire would be most likely with individual torching where surface loading is higher and ladder fuels exist. Flame lengths between 1-4 feet are possible with the given surface fuels. The patchy nature of the fuels limits the rate of spread and crown fire potential. Given extreme conditions, the areas of largest concern for active fire behavior are the lodgepole stands along the outskirts of the structures. With increased wind speeds associated with extreme weather, rapid rates of spread are possible in the forest stands as well as the more open areas throughout the community.

## RECOMMENDATIONS

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- A landscape level fuel break is recommended for this community (**figure 10**). This fuel break also extends into the Val Moritz/10 Mile community. This project focuses on creating a fuelbreak along the east and southeast side of the Innsbruck community. The proposed fuelbreak should begin at the northeast end of Overlook Drive, and continue behind the homes along the road, to the intersection of Overlook Drive and Forrest Drive. It should continue to the open area to the south and tie into Ten Mile Creek Road. This project is designed to provide a fuelbreak from a backing fire moving down the slope above the community. It will also serve to protect the egress route for residents in this community, as well as to provide a possible control line for firefighting resources.
- It is recommended that all the shake shingle roofs be replaced with Class A roofs.
- The homeowner's association already requires the removal of dead trees. This is a policy that should be maintained.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.

Figure 10. Innsbruck Fuels Reduction Projects



## 17. Joslin Ranch



Hazard Rating: Moderate

### Description

This community has a mixture of construction types, including heavy timber construction. Some homes have defensible space. Road access is good, although there is only one way in and out. Because of the beetle kill, logging operations have been ongoing in the community. Other risk factors include agricultural burning and farming in the area. There is no water source available in the community.

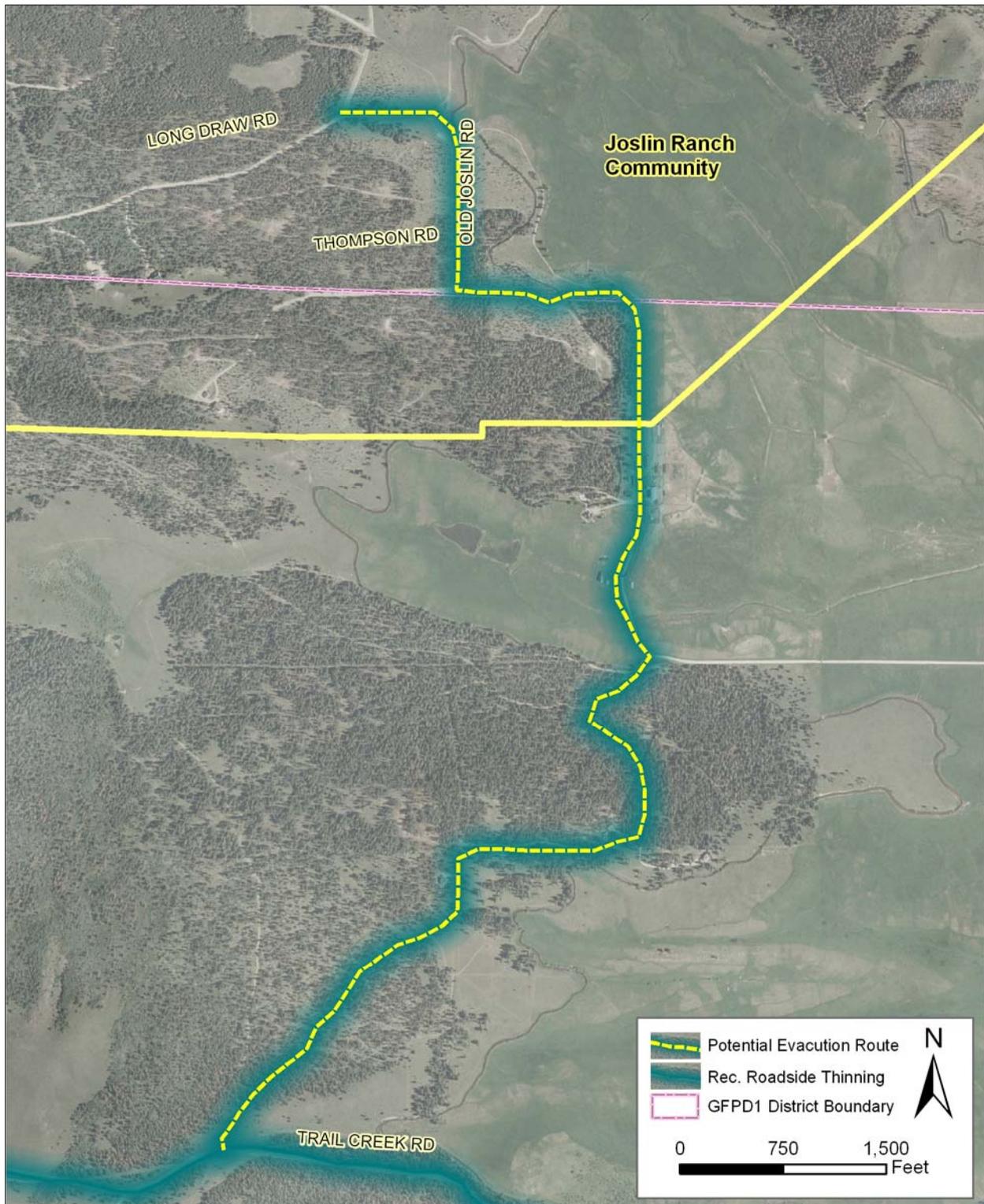
The majority of the fuels are lodgepole pine stands and open shrub / grass land. There is a riparian area along the south edge of the community. Most of the lodgepole pines are dead, due to mountain pine beetle activity. Under moderate conditions, surface fire is expected. Fire behavior is likely to be fairly low, with a few areas of torching where ladder fuels propagate fire in to the tree canopies. Moist conditions in the riparian area make them unlikely to burn. Therefore, the impact from a fire originating to the south of the community is likely to be diminished. Active fire behavior including high rates of spread (especially uphill) and active crown fire are possible during extreme weather conditions. Increased flame lengths from the shrubs could allow fire to reach into the red needle crowns and spread quickly.

## RECOMMENDATIONS

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- Consider roadside thinning along an alternate escape route (see **Figure 11**). Access to Joslin Ranch is off of Highway 34, going west on County Road 42. The recommended alternative escape route would also be along County Road 42, but instead of traveling to HW 34, would then go further west, and drop east into the community of Still Water on Grouse Road. This road needs to be maintained, including thinning fuels away from the roadside and removing any dead trees along the side that may cut-off access. Grassy areas should be mowed regularly. This additional escape route also benefits those living in Still Water, as an additional way out if a fire were to block the access to HW 34 along Grouse Road.
- Public education is recommended for any new logging companies that are working in the area. Logging equipment and associated operations can cause fires that under the right conditions can spread very quickly
- It is recommended to remove debris and reduce fuels around outbuildings and barns. Often times just mowing is enough to limit fire spread into these structures.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.

Figure 11. Joslin Ranch Fuels Reduction Projects



## 18. Legacy Park



Hazard Rating: Moderate

### Description

This community sits on a mesa, just south of the Walden Hollow community, and as a result, is drier than the area to the north. It is accessible by multiple routes on well maintained dirt roads. There are adequate turnarounds, but not all the road are labeled with 4" reflective markers. The lot sizes are large, and the structures are well spaced, but need better addressing. Defensible space has been partially completed for some of the buildings in the community. The community is actively involved with addressing the wildfire hazards that exist. Currently there are three 10,000 gallon cisterns, and more should be added as the community grows. Two ponds exist, one in the northern and another in the southern part of the community. These should be made available for drafting and dipping operations. Three hydrants located in the Walden Hollow community to the north area also available to help provide water supply to the community.

The community is fairly open, but has continuous surface fuels, allowing for the rapid spread of a surface fire. Because of the surface fuel load, defensible space, focusing on ground fuels is recommended. The high frequency of lightning along the rocky ridge serves as an additional risk factor. There are also small patches of lodgepole pine, which have primarily been killed by mountain pine beetle. These areas are capable of having individual tree torching and active crown fire. Once the needles have fallen off of the trees, crown fire and torching risks diminish.

## RECOMMENDATIONS

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- While the current water supply is adequate, it is recommended that additional cisterns be added as the community grows.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.
- No landscape scale thinning projects are recommended for this community.

## 19. Ridge Estates



### Hazard Rating: Moderate

#### Description

This community sits to the south of Walden Hollow and north of Legacy Park. Maintained dirt roads provide multiple routes of ingress/egress. There are adequate turnarounds, but not all the roads are labeled with 4" reflective markers. The structures are more closely spaced than Legacy Park, making adequate defensible space even more important. Defensible space has been completed for some of the structures. There are three hydrants located in the Walden Hollow community that can provide a water supply for Ridge Estates.

The dominant fuel type in this community is open brush, shrubs, and grass. There are a few areas with patches of lodgepole pine, which have been killed by mountain pine beetle. Because of the surface fuel load, focusing on ground fuels is recommended. The propensity of the open areas to dry out quickly may result in fast spreading surface fire under even moderate weather conditions. Areas of high surface fuels with moderate flame lengths are likely to cause active crown fire in the areas with Lodgepole, especially during the red needle phase. Extreme wind, high temperatures and low relative humidity will cause fire spread to be rapid throughout the community. Flame lengths will be long in all fuel types, and crown fire through the lodgepole is expected.

## RECOMMENDATIONS

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- It is recommended that dead trees along the road be removed, as well as mowing along the roadways.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.
- No landscape scale thinning projects are recommended for this community.

## 20. Val Moritz/10 Mile



### Hazard Rating: Moderate

#### Description

Val Moritz and 10 Mile are considered one community planning area for the purposes of this district-wide CWPP. The 10 Mile HOA has developed a community-specific CWPP, which should be referenced for even more specific information. Fuels reduction areas identified in the 10 Mile CWPP are referenced below.

The Communities of Val Moritz and 10 Mile are located at the south end of the study area. The homes are on fairly large lots and are constructed of a mixture of combustible and non-combustible materials. Some structures have defensible space, but it is not implemented throughout the entire community. New and ongoing construction is common in this community. Road access consists of multiple ways in and out on well maintained dirt roads; however road signage is extremely important since the numbering and naming system is difficult to understand. The only water available is at the base of the Sol Vista ski runs, which are located within a neighboring community.

Most of the fuels in the areas are open brush, with sage, grasses, and some aspen. There are a few areas of lodgepole pines that have been attacked by mountain pine beetle. The areas surrounding the community have a much higher component of lodgepole, which could pose a threat to the Val Moritz/10 Mile community. Under moderate conditions, a surface fire would be likely. Fast rates of spread are probable through the light flashy fuels in the open grassy areas. Extreme weather conditions will cause increased rates of spread, long flame lengths, and active crown fire in the dead Lodgepole stands.

The Ten Mile Creek Owners Association (TMCOA) continues to make excellent progress in mitigation efforts within the Ten Mile Creek development. To date, all dead or dying trees have been removed along roadways and power line areas. Home owners continue to remove dead trees on individual properties with several home owners recently completing tree removal. TMCOA will continue to work with individual home owners to complete mitigation in the coming year. In addition, the TMCOA will be installing metal road and residence address signage in the spring and summer of 2009. These signs will provide greater visibility to residence addresses for emergency response agencies. TMCOA is also commencing analysis and evaluation of a shared water source for use within the development in the event of residential and/or wildfire situations.

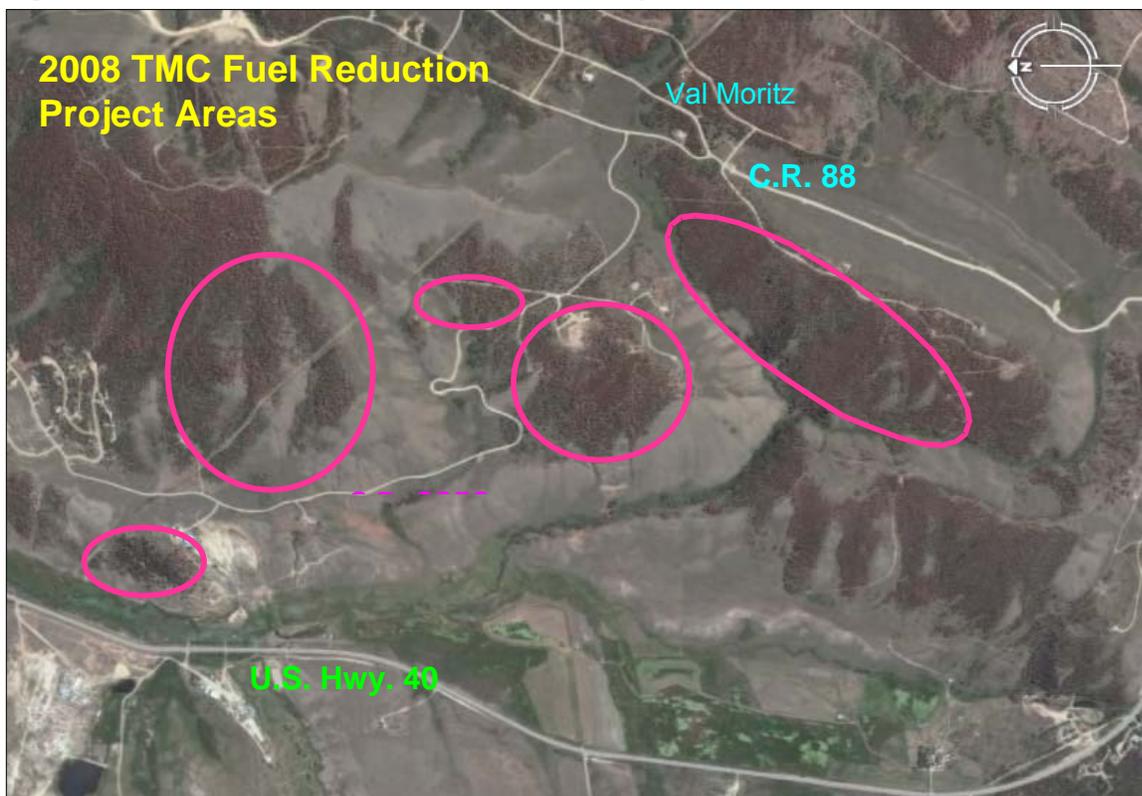
## RECOMMENDATIONS

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- Within The 10 Mile Community, over 100 acres are planned for reduction projects through the use of a commercial timber company. Work was scheduled to begin in summer 2008; however the strong regional demand for timber services and lack of mills may defer completion of the work ( **see Figure 12**).
- A landscape fuel break is recommended for the community. This fuel break begins in the Innsbruck community, but continues into Val Moritz/10 Mile along the north edge (**Figure 13**).
- Currently, the road names within the community are difficult to understand. Clarifying road names and installing appropriate road signage is recommended.
- Firewise practices should be implemented as new buildings are constructed.
- Improving the service road off of Buckhorn Run to Val Moritz is recommended to ensure access to the base of the Sol Vista ski area and municipal hydrants.
- When CR 88 usage increases, it is recommended to place fire awareness signs at the intersection of CR 88 and HW 40.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the Home Mitigation section in the main report).
- Adequate defensible space is recommended for all homes.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.

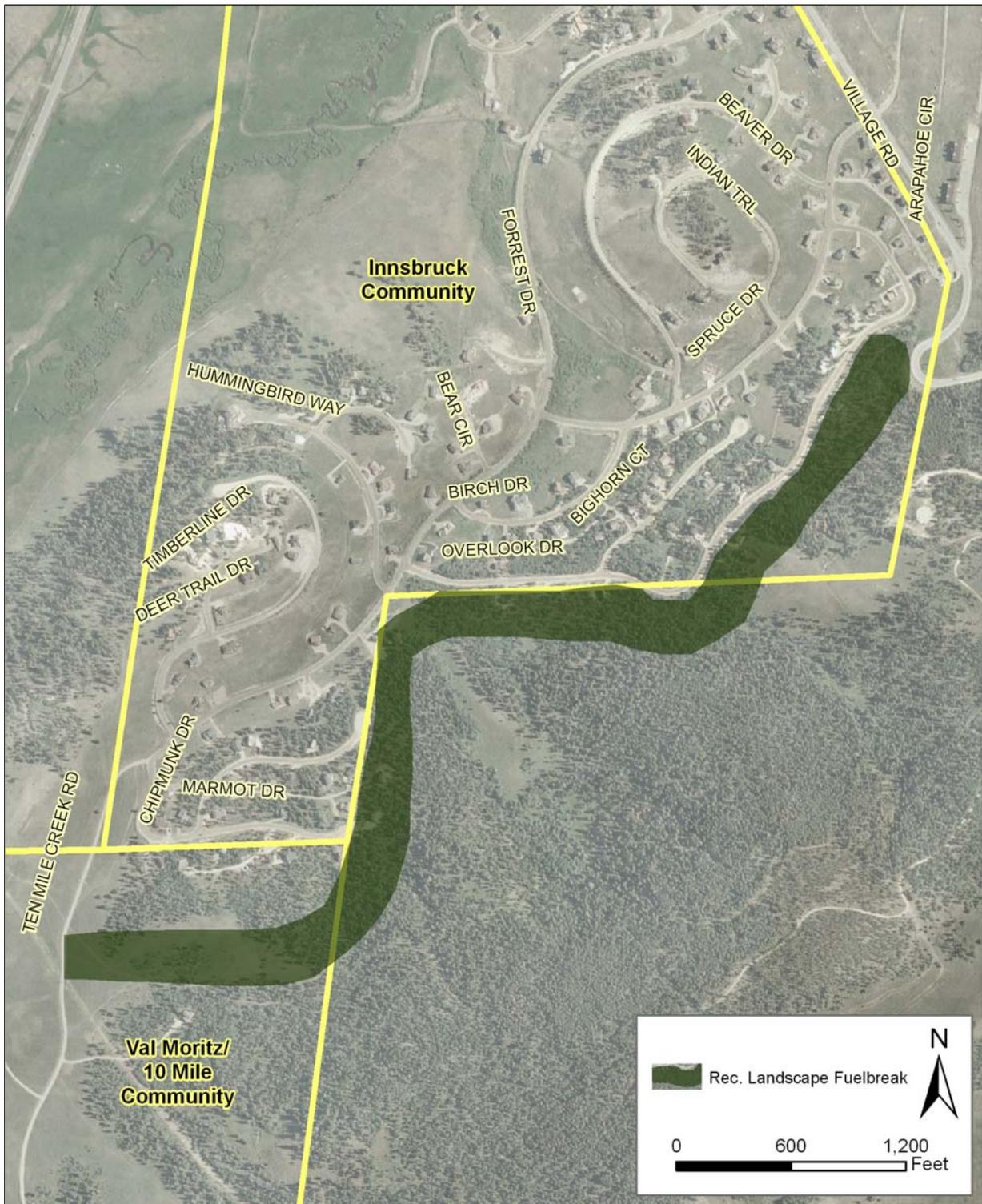
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.

Figure 12. Val Moritz /10 Mile Fuels Reduction Projects<sup>2</sup>



<sup>2</sup> This graphic was taken from the 10 Mile Community CWPP. It identifies treatment areas of beetle killed lodgepole pine.

Figure 13. Innsbruck Fuels Reduction Projects



## 21. Walden Hollow/Ouray Ranch



Hazard Rating: Moderate

### Description

This community is south of Lake Granby and is accessible via highway 34. Road signs are good and all the utilities are located underground. There are multiple, maintained routes of ingress/egress, and there are adequate turnarounds exist. Homes are built with combustible materials but have Class A roofing. Partial defensible space has been done for individual homes in the community. There is an old lodge that acts as a visitor and HOA meeting area. There is a 50,000 gallon tank that provides water for three hydrants in the community.

The fuels in the area are continuous, but because of the wet riparian areas and river that flow through the community, the potential for surface fire is low. In the southern part of the community there is a large lodgepole pine component, which may see individual tree torching and small areas of active crown fire assuming the right weather conditions. Extreme weather will likely cause extreme rates of spread along the northern edge of the community.

## RECOMMENDATIONS

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- Because this community has hydrants, and surrounding communities depend on them for water supply, it is highly recommended that the hydrants be tested annually for proper functioning and flow capacity.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.
- No landscape scale thinning projects are recommended for this community.

## 22. Granby Mesa



### Hazard Rating: Low

#### Description

This community is a mixture of newer subdivisions with some older homes and trailers throughout. The north portion of the community is open range land. There are multiple routes of ingress/egress in the neighborhoods, and the streets are well labeled. Some defensible space projects have begun, and should be done for all the houses on the perimeter or adjacent to wildlands. The neighborhood also has hydrants throughout.

The flat topography, urban development, and lack of forested areas limit fire behavior throughout the community. Surface fire may be possible along the open brush areas to the north, but under moderate and extreme weather conditions, torching and active fire behavior is unlikely. Strong winds and higher temperatures associated with extreme weather will potentially produce longer flame lengths and faster rates of spread, but will likely not directly affect the structures in the interior of the community.

## RECOMMENDATIONS

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- A grass mowing project is recommended. This project serves to protect the homes along the east side of the Granby Mesa community. An unofficial trail behind the homes is used by ATVs and motorcycles. High grasses and frequent usage increase the risk of fire. Light flashy grass fuels could easily spread to the homes. Keeping the area directly behind the homes mowed will prevent fire from spreading to the structures (**Figure 14**).
- The municipal hydrant system should be tested and maintained annually. Identifying hydrant locations utilizing a GPS, would assist the fire department with fire pre-plans
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Adequate defensible space is recommended for all homes.
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.

Figure 14. Granby Mesa Fuels Reduction Projects



## 23. Lake Shore



### Hazard Rating: Low

#### Description

This community sits on the west edge of Lake Granby. The construction is dense and very diverse, including cabins that were built in the 1960s and brand new condos. There is one way in and out, with a looping road through the community. Road widths are good, but street signs are not present. Currently, the nearest fire station is greater than five miles away, but there are plans to build a new station close to the community, which will decrease response times. A 20,000 gallon cistern located on the east end of the community gravity-feeds two hydrants.

The community has a low hazard rating because of the fuel discontinuity, amount of development, and location near the lake. Surface fire would most likely occur under moderate conditions, and low surface loading should keep flame lengths low, and prevent spread into the crowns of the dead trees. However, since many of the structures are located on top of the lake bank, a fire running uphill could produce longer flame lengths and faster rates of spread. In combination with extreme weather conditions, active fire behavior is possible but unlikely since the ignition source would have to come from the lake side of the development. The greater hazard in this community is structure to structure ignition. By definition this is not a wildland urban interface hazard however the close proximity of structures in the development would help to propagate fire spread.

## RECOMMENDATIONS

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- The hydrant system should be tested and maintained annually. Identifying hydrant locations using a GPS would assist the fire department with fire pre-plans.
- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
- Clean leaf litter from roofs and gutters and way from foundations. Clear flammable vegetation away from power lines near homes.
- Discourage the planting of flammable ornamental vegetation within 30 feet of homes
- Simply mowing or weed whacking for 30 feet around homes and structures and away from foundations, in combination with cleaning leaf and needle litter from roofs and gutters, will profoundly increase structure survivability.
- Discourage the use of combustible materials for the construction of projections below roof lines, such as decks.
- Open areas below decks and projections should be enclosed or screened to prevent the ingress of embers and kept clean of flammable materials, especially where such openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.
- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.
- No landscape scale thinning projects are recommended for this community.

## 24. Sunset Point



### Hazard Rating: Low

#### Description

This community sits on the point on the southwest edge of Lake Granby. It is accessible via a dirt road with adequate turnarounds. The lake and road provide good protection from wildfire. Roofs are a combination of Class A and B and homes have combustible siding and decks. Some homes have defensible space, but it is recommended for all the structures in the community, including outbuildings. There is no developed, formal water supply available to the community other than drafting from the lake.

The fuels around the structures are very open lodgepole pine trees which have been killed by mountain pine beetle. The overall continuity of the fuels is patchy, and there is low surface accumulation of materials. Surface fire with individual torching of trees could be possible under extreme weather conditions. When the needles fall from the dead trees, the probability of a crown fire decreases. Dead trees should be removed when possible.

## RECOMMENDATIONS

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- The community of Sunset Point currently has a boat ramp to access Lake Granby. The road between the boat ramp and the community should be improved for fire apparatus access.



- The addition of a turbo draft fire eductor ([www.turbodraft.com](http://www.turbodraft.com)), used to pull drafts from the lake, would be a beneficial piece of equipment. An alternative to an eductor would be a large portable pump, which could be stored on-site or on a trailer and pulled behind an emergency vehicle. This recommendation is high because it benefits not only the Sunset Point community, but

the other surrounding communities as well, including the Bussy Hill community, which was rated as Extreme in the assessment.

- 4" reflective road signage is recommended throughout this community. Currently signage is either inconsistent or missing entirely on some roads. Road signs are not only important in events like wildfire, but for other emergency situations as well, including medical emergencies and structure fires.
- Add reflective addressing to all driveways or homes. A good guideline for this practice is to place the markers five feet above ground level on the right side of the driveway at the road edge.
- Thin vegetation along access roads and driveways. This is especially important for narrow driveways and road segments. Remove standing dead trees that may fall and block road access (see the *Home Mitigation* section in the main report).
- Adequate defensible space is recommended for all homes.
- Remove wood piles and any flammable yard clutter to at least 30 feet from structures and propane tanks. Wood piles should be located uphill or on the same contour with homes; never downhill.
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openings are located on slopes above fuels. Use fine mesh metal screen (1/4 or less) to cover eaves, roof, and foundation vents.

- Encourage owner participation in Grand County 'Code Red' and Reverse 911 notification systems.
- No landscape scale thinning projects are recommended for this community.

## **AREAS OF SPECIAL INTEREST**

In addition to residential communities, other areas have been identified as being of special concern or interest. In some cases, these areas present special problems for firefighters or critical infrastructure at risk. A brief description of each of these properties is presented in this section, followed by recommendations, where applicable, designed to address concerns specific to the individual areas. These recommendations are in addition to, not in place of, other recommendations in this report concerning the community or area where this infrastructure is located. Hazard ratings are not assigned to areas of special interest however the fire behavior for each specific location should be utilized, as needed, to validate fuels treatments and educate citizens. The location and size of these areas can be seen in Figure 1 on page B3 above.

### **C Lazy U Ranch**



Since 1919, the C Lazy U has been known for its rich history, rustic elegance and legendary cuisine. It is the only ranch in North America to have ever achieved both the Five Star & Five Diamond awards as one of the best resorts in the country. The Ranch is operated year-round, and offers a variety of activities for visitors, including snowshoeing, snow cat skiing, cross country skiing, mountain bike riding, horseback riding, golf and tennis. There is also a pool and hot tub. There are over 175 horses on the premises. The lodge holds 150 guests, and there are multiple cabins, barns, and other outbuildings.

## RECOMMENDATIONS

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- Some of the buildings have shake shingle roofs, which are prone to ignition. To mitigate this hazard, roof sprinklers or re-roofing with a class-A roof is recommended.
- “Be Careful with Fire” materials should be distributed to guests in welcome packets. Pamphlets should be available for guests during times of high fire danger.
- Staff should be aware of current fire danger and promote fire safety with guests.
- Consider purchasing an Intelagard system ([www.intelagard.com](http://www.intelagard.com)) for two (2) of the ATVs or “mules” that are on the ranch. These compressed air foam systems (CAFS) would be very beneficial for suppressing small fires on the ranch.
- Install a draft hydrant in the pond behind the lodge. This hydrant should be accessible to fire apparatus and provide adequate turnaround area. If installed, the hydrant should be tested annually to be sure it is functioning properly.
- Maintain 100 feet of defensible space for all structures. For details about creating defensible space, see the *Home Mitigation* section in the main report.
- Work with Grand FPD No.1 to develop a consistent marking system for buildings.
- Develop a wildland fire preplan for the ranch property. Some suggested elements of this plan are: name/number of all buildings, with their use and maximum occupancy; location and type of all water sources; location and condition of all roads and trails. Included should be trigger points for evacuation (including a plan for animal evacuation). This plan should maintain the high level of customer service offered at the Ranch.

## Shadow Mountain Ranch



Shadow Mountain Ranch is a year round destination for hunters, fishermen, and outdoor enthusiasts. It sits directly along HW 125, within the Highway 125 community. There is a main lodge with multiple small cabins and other outbuildings in the area. The area is rather congested with ranch and visitor traffic.

## RECOMMENDATIONS

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- Installation of a dry hydrant is recommended just north of the ranch, within the Highway 125 community.
- “Be Careful with Fire” pamphlets should be available for guests during times of high fire danger.
- Maintain 100 feet of defensible space for all residential structures. For details about creating defensible space, see the *Home Mitigation* section in the main report.
- Work with Grand FPD No.1 to develop a consistent marking system for buildings.
- Develop a wildland fire preplan for the ranch property. Some suggested elements of this plan are: name/number of all buildings with their use and maximum occupancy; location and type of all water sources; location and condition of all roads and trails. Included should be trigger points for evacuation (including a plan for animal evacuation). This plan should maintain the high level of customer service offered at the Ranch.

## Three Lakes Sanitation



In 1982, the District completed construction of a regional waste water collection and treatment facility. The facility contains a minimum of 91,000 gallons of usable water for fire suppression. There is a gravity-fed 5" hydrant connection on the B side of the building. The access road is very narrow, and as a result does not allow safe and effective access for fire apparatus to this valuable water source. This water supply should be considered an alternative for surrounding communities.

The District furnishes a sanitary sewer service only, to its general customers within the boundaries of the District. At present, it services 2,704 residential and 118 commercial properties.

## RECOMMENDATIONS

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- Improving the access road width to accommodate fire apparatus is recommended.



- Posting a water supply sign at the intersection of HW 34 and the entrance to the sanitation plant as well as on the sanitation plant sign is recommended.