2015 Grand Fire Protection District No. 1 CWPP Update

PURPOSE

The purpose of this report is to examine, in greater detail, the communities in the study area that were identified in the 2009 CWPP, and to show the progress each community has made in implementing the recommendations. In 2009, twenty-four (24) WUI communities were identified in the study area. Five (5) of them were rated as "Extreme" or "Very High" risk. In these communities, a parcel-level analysis was implemented to ensure the ongoing safety of residents and survivability of structures. Please refer to the table and the map on the next pages for easy reference.

During the summer of 2014, the communities within the District were revisited. There has been significant work done in terms of fuels reduction, reflective home addressing, water supply, outreach and education. This update captures these changes, as well as identifying additional recommendations. The graphic below shows all the work that has been documented and collected for mapping. The map does not show all the work that has been completed for every community since not every project has been mapped digitally. The information displayed below shows Colorado State Forest Service (CSFS) projects, BLM, and USFS projects. Recommended fuel reduction projects from the 2009 CWPP are also included. Some of the additional work that has not been captured in this map is the extensive work that Mountain Parks Electric has completed along their power lines. It is recommended that any work completed within the district be collected on a GPS unit and given to the CSFS. Communities and organizations within the district should receive credit for their work; it may also help when trying to secure funding for future work.

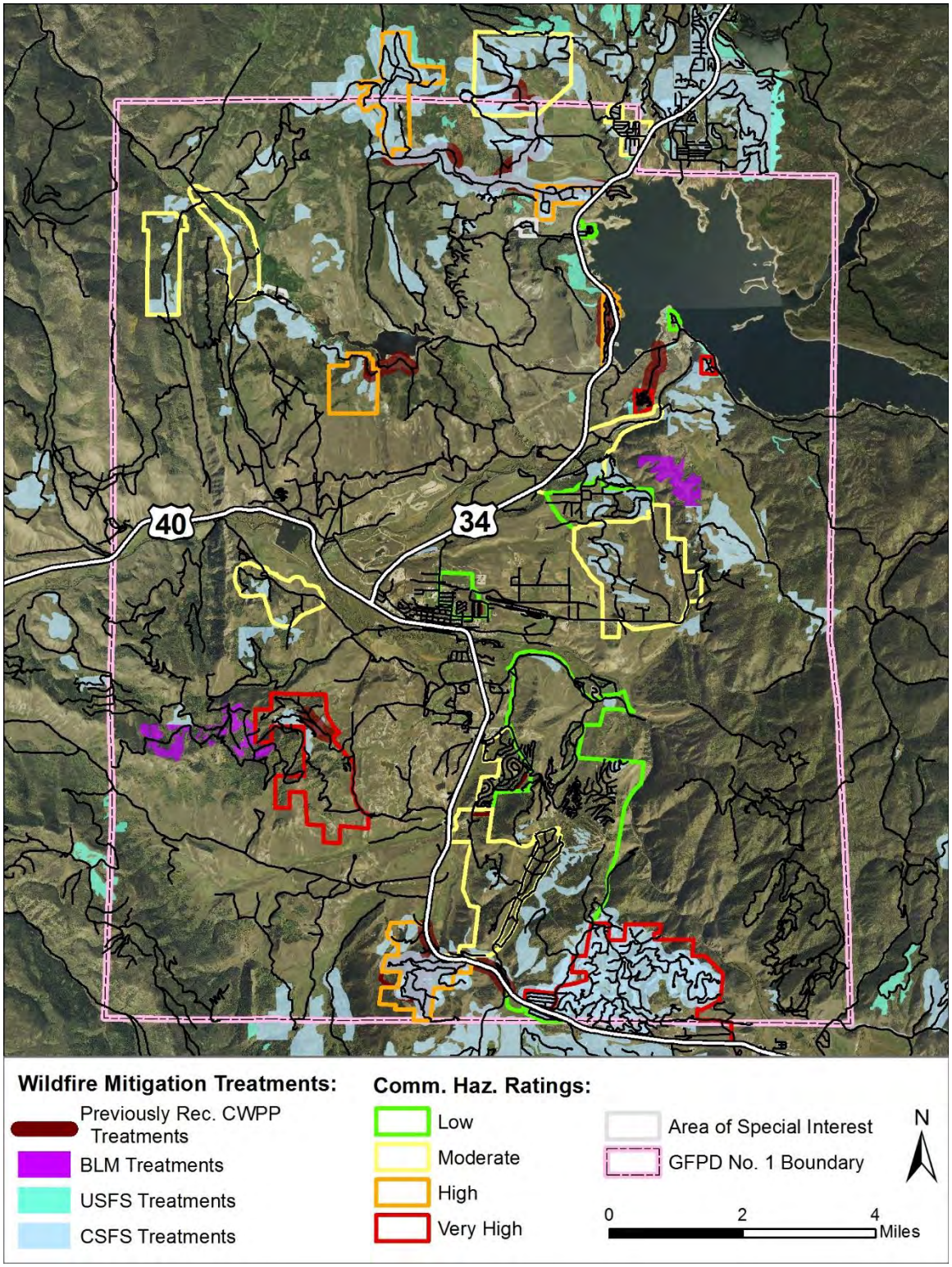


Figure 1. Mitigation treatments by agency throughout the study area.

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. 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.

2009 Rating	2015 Rating	Page
Bussey Hill	Bussey Hill	13
Winter Park Highlands	Winter Park Highlands	15
Separated from Winter Park Highlands	Alpine Park	17
Carol Linke	Linke / Orr Survey Tracts	19
Sunnyshore Park	Sunnyshore Park	21
Homestead Hills	Homestead Hills	23
C Lazy U Homestead	C Lazy U Homestead	25
Scan Loch	Scan Loch	27
Stillwater Estates	Stillwater Estates / Antler Ranchettes	29
Trail Creek Estates	Trail Creek Estates	31
New Addition	CR 4: Colorado Anglers/Rocky Mountain Estates	34
Idleglen	CR 4: Idleglen	36
Highway 125	Highway 125	38
Joslin Ranch	Joslin Ranch	40
Legacy Park	Legacy Park	42
Mount Chauncey	Mount Chauncey	44
Ouray Ranch / Walden Hollow	Ouray Ranch / Walden Hollow	46
Shadow Mountain Ranch	Shadow Mountain Ranch	48
Silver Creek / Innsbruck	Silver Creek / Innsbruck	50
Separated from Val Moritz	Ten Mile Creek Estates	52
Alpine Acres	Alpine Acres	54
Granby Mesa	Granby Mesa	56
Granby Ranch	Granby Ranch	58
Lake Shore Estates	Lake Shore Estates	60
Ridge Estates	Ridge Estates	62
Sunset Point	Sunset Point	64
Val Moritz / Ten Mile	Val Moritz	66

Table 1. Community ratings in 2015 compared to 2009.

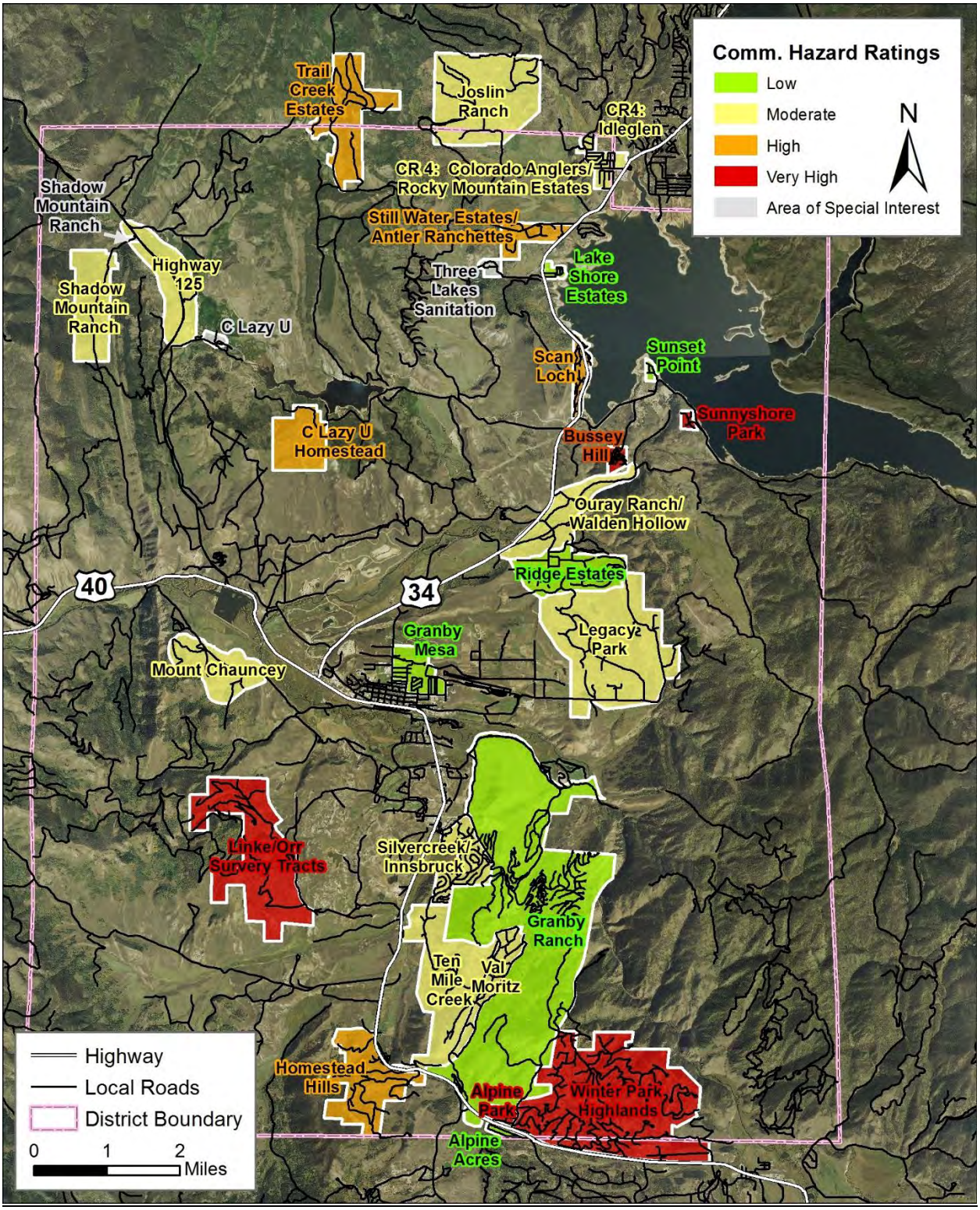


Figure 1. 2015 Hazard Ranking of Communities in the Study Area

GENERAL RECOMMENDATIONS

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, there are general measures that can be taken to improve fire safety, including creating defensible space. Defensible space is the space between a structure and the wildland area that creates a sufficient buffer to slow or halt the spread of wildfire to a structure. It protects the home from igniting due to direct flame or radiant heat. Defensible space is essential for structure survivability during wildland fire conditions. For more information about defensible space visit the Firewise Communities website, www.firewise.org. There is also a wealth of information about defensible space and landscaping choices on the Colorado State Forest Service website: www.csfs.colostate.edu.

CREATING DEFENSIBLE SPACE*

HOME (ZONE 1): Create a noncombustible perimeter around the structure (0 to 5')

- Install a concrete walkway or mulch up to the foundation with pebbles or stones
- Use annuals and perennials with high moisture content
- Keep the area well-irrigated

ZONE 2: 30 to 100' out from the structure

- Remove all dead or dying trees, shrubs and grasses
- Trim tree canopies regularly to a minimum of 10' from structures and other trees
- Remove leaf litter (dry leaves/pine needles) from yard, roof and rain gutters
- Relocate woodpiles or other combustible materials into Zone 2
- Remove combustible material and vegetation from around and under decks
- Remove "ladder fuels" (low-level vegetation that allows the fire to spread from the ground to the tree canopy)
- Create "islands" of vegetation with desirable trees and shrubs (no junipers)

ZONE 3: 100' out from the structure (or to the property line)

- Make sure needle litter (duff) is less than 3" deep
- Remove all dead or dying trees, shrubs and grasses
- Trim the height of low-level vegetation and trim low tree branches at least 6' up from the ground. Trim annual grass down to a maximum of 4"
- Reduce the density of tall trees so canopies are not touching

**According to the International Association of Fire Chiefs (IAFC)*

Construction materials and the quality of the defensible space surrounding it are what give a home the best chance to survive a wildland fire. Embers from a wildland fire will find the weak link in a home's fire protection scheme and gain the upper hand because of a small, overlooked or seemingly inconsequential factor. To harden a home even further, consideration should be given to installing a residential fire sprinkler system. Fires are fast; they can go from a tiny flame to total destruction in as little as three minutes. A sprinkler system can suppress a fire started by an ember that enters the home and gives occupants more time to escape.

HARDENING THE HOME

ROOFS
Roofs are the most vulnerable surface because they have such a large surface area where embers can lodge and start a fire. Use rated roof material such as composite shingle, metal, clay or cement tile.

EAVES/VENTS
Enclose eaves, fascias, soffits and vents. Box or enclose them with metal screens. All vent openings should be covered with 1/8" metal screen.

WALLS
Use fire-resistant building materials on exterior walls such as cement, plaster, stucco, or masonry.

WINDOWS
Use double-paned or tempered glass. Double-pane glass can help reduce the risk of fracture or collapse during extreme wildfire. Tempered glass is the most effective. For skylights, glass is a better choice than plastic or fiberglass.

DECKS, etc.
Remove all vegetation and other fuels from around overhangs and other attachments (room additions, bay windows, decks, porches, carports and fences). Box in the undersides of overhangs, decks and balconies with noncombustible or fire-resistant materials. Fences constructed of flammable materials like wood should not be attached directly to the house. Anything attached to the house (decks, porches, fences and outbuildings) should be considered part of the house. These act as fuel bridges, particularly if constructed from flammable materials. If a wood fence is attached to the house, separate the fence from the house with a masonry or metal barrier. Decks and elevated porches should be kept free of combustible materials and debris.

Some other general considerations:

- Adopt building codes throughout the district, specifically wildland fire codes.
- Stay aware of the current fire danger in the area.
- 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.
- Defensible space needs to be continually maintained. It may also need to be extended out farther than 100 feet in high hazard areas.
- 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.
- Encourage participation in Grand County CodeRED emergency notification system (www.gcemergency.com).

Note: In the 2009 CWPP, all communities rated as high to extreme 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.

COLLABORATIVE EFFORT

On September 4, 2014, Grand Fire's management team, Anchor Point Group and the Colorado State Forest Service conducted community tours in the Fire District. Homestead Hills HOA Board showed the group the locations for their three water cistern installation plan. Winter Park Highlands HOA Board highlighted their water cistern locations, present and future, as well as the GIS mapping of their community, and the work done removing hazardous fuels in their greenbelts.

The tour visited Tim Hartmann at Allegiant Management, the company that manages Legacy Park, Ouray Ranch, and many other subdivisions in the District. Mr. Hartmann is in constant contact with Fire Department officials regarding hazard mitigation, reflective addressing and general public education of his owner groups regarding wildland fire preparedness and prevention.

That afternoon, Sunnyshore Park homeowners walked the group through their community where individual owners had completed some small projects.

On January 28, 2015, the following email was sent to over 200 community stakeholders asking for input into a Google Document capturing any fuels reduction/hazard mitigation projects that the District did not have mapped.

Property Owners / HOAs / Interested Parties located in Grand Fire Protection District No. 1:
GFPD, in cooperation with local, state and federal stakeholders, is in the process of updating the 2009 Community Wildfire Protection Plan. A community meeting is planned for Saturday, March 14th at 10am at the Headquarters Fire Station, 60500 US Hwy 40 in Granby. The purpose of this meeting is to provide

an opportunity for local residents and other interested stakeholders to share their ideas, comments and suggestions regarding the update. In attendance at this meeting will be representatives from Grand Fire, the USFS and CSFS, BLM, and Anchor Point Group, the wildfire consulting firm responsible for facilitating and updating the final CWPP update.

Since 2009, there have been many fuels modification projects completed and we want to make sure we capture all of the work that has been done in the District at the community level. Therefore, we ask that you please add any fuels reduction/hazard mitigation projects to the list in the Google drive document below. Here is the link:
https://docs.google.com/spreadsheets/d/1gjq-36LnC88P-Hd8CrvhmVJj1lo5XdrxUlmme02Yjkg/edit?usp=sharing
The additions to this document are automatically updated in Google Drive. Please feel free to forward this email to any other interested parties.

If you have any questions, please call Schelly Olson at 970-887-3380 or contact Kerry Webster at Anchor Point Group at 720-771-7853. **We would like to have your input in the Google document by February 20th**.
Thank you very much for your support.

The Staff at Grand Fire

On February 5, 2015, Grand Fire's management team performed an assessment of the communities that the group did not survey in 2014, including Highway 125, C Lazy U, Bussey Hill, Legacy Park, Ridge Estates and Ouray Ranch.

On March 14, 2015, Grand Fire Protection District No. 1, along with Anchor Point Group, held a CWPP Community Meeting. The following organizations were represented at the meeting, with 22 individuals:

- Grand Fire Protection District No. 1
- Colorado State Forest Service
- USFS Sulphur Ranger District
- Bureau of Land Management
- Grand County Dispatch (Sheriff's Department)
- Mountain Parks Electric
- Granby Ranch (homeowner and forester)
- The Valley at Winter Park HOA (homeowners)
- Town of Granby (homeowners)
- Val Moritz HOA (homeowner)
- Pole Creek Meadows HOA (homeowner)
- Winter Park Highlands HOA (board)
- Innsbruck HOA (homeowner)
- Anchor Point Group

- See advertisement that was placed in the SkyHi Daily News for three weeks.

Topics on the meeting agenda that were discussed included:

- Introductions
- CSFS Comments
- Methodology Presentation from Anchor Point
- Community Hazard Ratings Update
- Project Updates Since 2009 Plan including:
    - Changes in County Codes
    - HOA Requirements
    - Areas of New Development
    - Changes in Water Supply
    - Additional Roads/Evacuation Routes
- Review GIS data
- Public Comments/Questions

TECHNICAL TERMS

Building Construction: The NFPA classifies buildings in five types of construction (Type I through Type V). Each type is defined by the construction materials and their performance when exposed to fire. Type III, IV and V are commonly found in residential structures in the study area and are defined below.

Type III: also known as *ordinary construction*, exterior walls and structure members constructed of noncombustible materials, while the interior walls, columns, beams, floors and roofs are completely or partially constructed of wood.

Type IV: also known as *heavy timber/mill construction,* uses large-dimensioned lumber generally greater than eight inches in dimension with a fire-resistance rating of two hours.

Type V: also known as *wood or stick frame*, the exterior load-bearing walls are composed entirely of wood. A veneer of stucco, brick, or stone may be constructed over the wood framing.

Roof Covering Fire Ratings: Fire ratings include Class A, B or C. Class A is the largest of the three brand sizes used in the rating tests. If the burning Class A brand doesn't result in fire penetrating completely through the roof covering and sheathing into what would be the attic space, then the roof would earn a Class A fire rating, which is the best protection from burning embers. Unrated wood shingles or shakes are the most vulnerable to embers/firebrands.

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, and for fire suppression operations to occur. The design and extent of the defensible space is based on fuels, topography, and the design and materials of the structure. According to the Colorado State Forest Service, Zone 1 (0 to 30 feet) is defined as the area nearest the home and other structures. This zone requires the maximum hazard reduction. The Zone 2 (30 to 100 feet) treatment area varies with slope and focuses on fuels modifications such as limbing and thinning. Zone 3 (100 feet or to the property line) is the area farthest from the home. It extends from the edge of Zone 2 to the property boundary.

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.

Firebrands: Any source of heat, natural- or human-made, capable of igniting wildland fuels. Flaming or glowing particles (embers) can be carried naturally by wind, convection currents or gravity into unburned fuels.

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.

COMMUNITIES

BUSSEY HILL

2009 Hazard Rating: Extreme

2015 Hazard Rating: Very High

Location: Eastern edge of Lake Granby, access off of CR 6, mostly seasonal residents

Construction: Type V, Class A/B roofing, some unrated wood shingles

Access/Egress: Difficult access with steep dirt roads, four-wheel drive accessible, single access/egress

Water Supply: None

Fuels & Fire Behavior: Hazard rating was lowered as possible extreme fire behavior has been greatly limited by the clear cutting in the area. Some long flame lengths and fast rates of spread possible through stringers of remaining trees.

Actions Taken:

- Ready, Set, Go! and Firewise materials provided
- Community phone and e-mail list compiled
- Thinning along Chief Trail, standing dead trees removed

These actions have been significant enough to reduce the hazard rating for the community.

Recommendations:

- Install water cistern for fire suppression
- Complete defensible space on all structures
- Remove trees near access roads/widen and harden roads for safer egress
- Retrofit any wood shingle roofing
- Add reflective addressing signs

Figure 2. Aerial view of Bussey Hill

WINTER PARK HIGHLANDS

2009 Hazard Rating: Extreme

2015 Hazard Rating: Very High

Location: Winter Park Highlands is bordered by Highway 40 on the south end of the community; it is in the southernmost part of the fire department response area.

Construction: Type V, Class A/B roofing, some unrated wood shingles

Access/Egress: Multiple access points to Highway 40, additional egress through Granby Ranch through the Red Gate

Water Supply: Dry hydrant at Bielenberg Pond, one 30,000 gallon cistern installed, three additional cisterns planned

Fuels & Fire Behavior: Steep slopes and ravines full of fuels, combined with southwesterly exposures facing prevailing winds, can produce long flame lengths and fast rates of spread, fuels right against homes, crown fire can be expected.

Actions Taken:

- Grant funding and HOA dues used to treat greenbelt areas
- Reflective address signage for 85% of homes
- Additional egress for Green Ridge to Highway 40
- Approximately 110 acres treated, including mitigation by Mountain Parks Electric
- Informative website with many links to Firewise resources (See **www.winterparkhighlands.org**)
- Recognized Firewise Community USA (2013-present)

These actions have been significant enough to reduce the hazard rating for the community because fire behavior has been altered and the overall safety of residents has been increased.

Recommendations:

- Continue to remove dead, standing trees, reduce ladder fuels
- Add signage on CR 8514 stating that the access through the Red Gate is for evacuation only
- Continue installing water cisterns
- Implement slash removal program
- Exercise evacuation plans

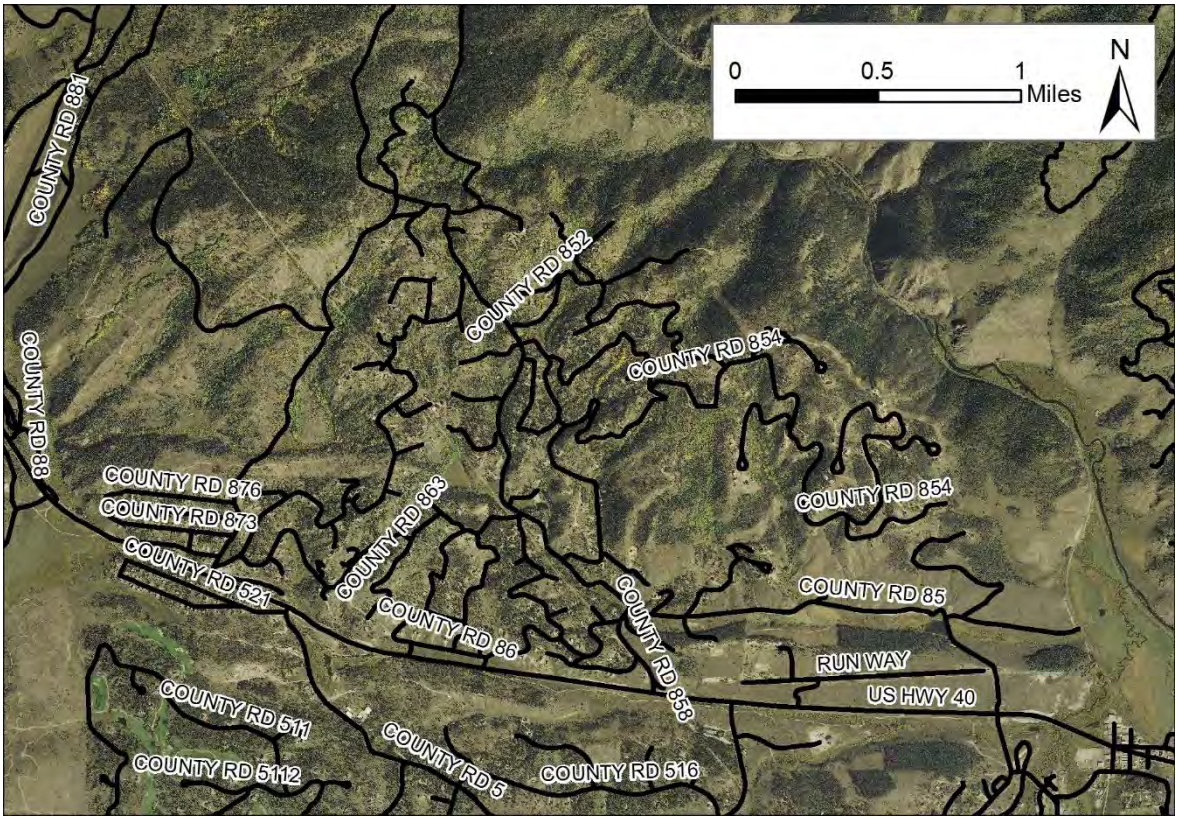


Figure 3. Aerial view of Winter Park Highlands

ALPINE PARK

2009 Rating: Part of Winter Park Highlands

2015 Rating: Very High

Location: Originally part of Winter Park Highlands, this community has been separated for the update. It is located to the west of Winter Park Highlands along Highway 40

Construction: Type V, Class A/B roofing, some unrated wood shingles

Access/Egress: Multiple access points to Highway 40, additional egress up through Winter Park Highlands and then Granby Ranch through the Red Gate

Water Supply: This community has the same water supply as Winter Park Highlands. There is a dry hydrant at Bielenberg Pond, one 30,000 gallon cistern installed, three additional cisterns planned in Winter Park Highlands.

Fuels & Fire Behavior: Steep slopes and ravines full of fuels in the surrounding area, combined with southwesterly exposures facing prevailing winds, can produce long flame lengths and fast rates of spread, fuels right against homes, crown fire can be expected.

Actions Taken:

- Reflective address signage for many of the homes
- Mitigation by Mountain Parks Electric around the area

Recommendations:

- Continue to remove dead, standing trees, reduce ladder fuels
- Create and maintain defensible space around homes
- Educate homeowners regarding wildland fire preparedness

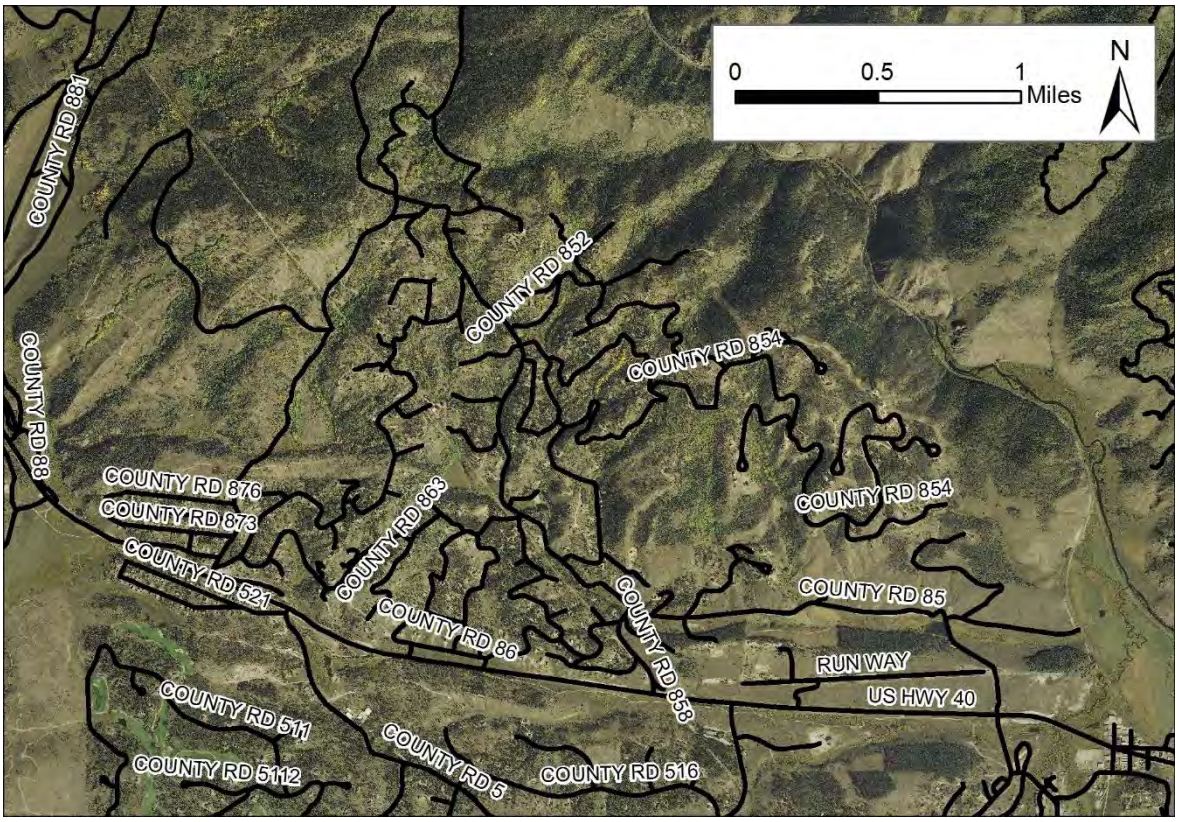


Figure 4. Aerial view of Alpine Park/Winter Park Highlands

LINKE / ORR SURVEY TRACTS

2009 Rating: **Very High**

2015 Rating: **Very High**

Location: Originally titled Carol Linke in the 2009 CWPP, Linke/Orr Survey Tracts is west of Highway 40, primarily accessed from CR 56.

Construction: Homes on large lots (~35 acres), non-combustible building construction.

Access/Egress: Well maintained, wide, steep dirt. There is one way in and out of the forested portion of the community.

Water Supply: None

Fuels & Fire Behavior: Primarily grass and brush, dead lodgepole. Pockets of surface fuels may cause individual tree torching. Fast rates of spread can be expected in the brush.

Actions Taken: Some cutting projects within the community that have created slash plies

Recommendations:

- Continue to remove dead trees, especially those along the roads.
- Locate slash piles where they will not impact access and egress
- Install a 30,000 gallon cistern within the community, located farther out CR565
- Burn slash piles created from fuels reduction projects
- Add reflective addressing signs

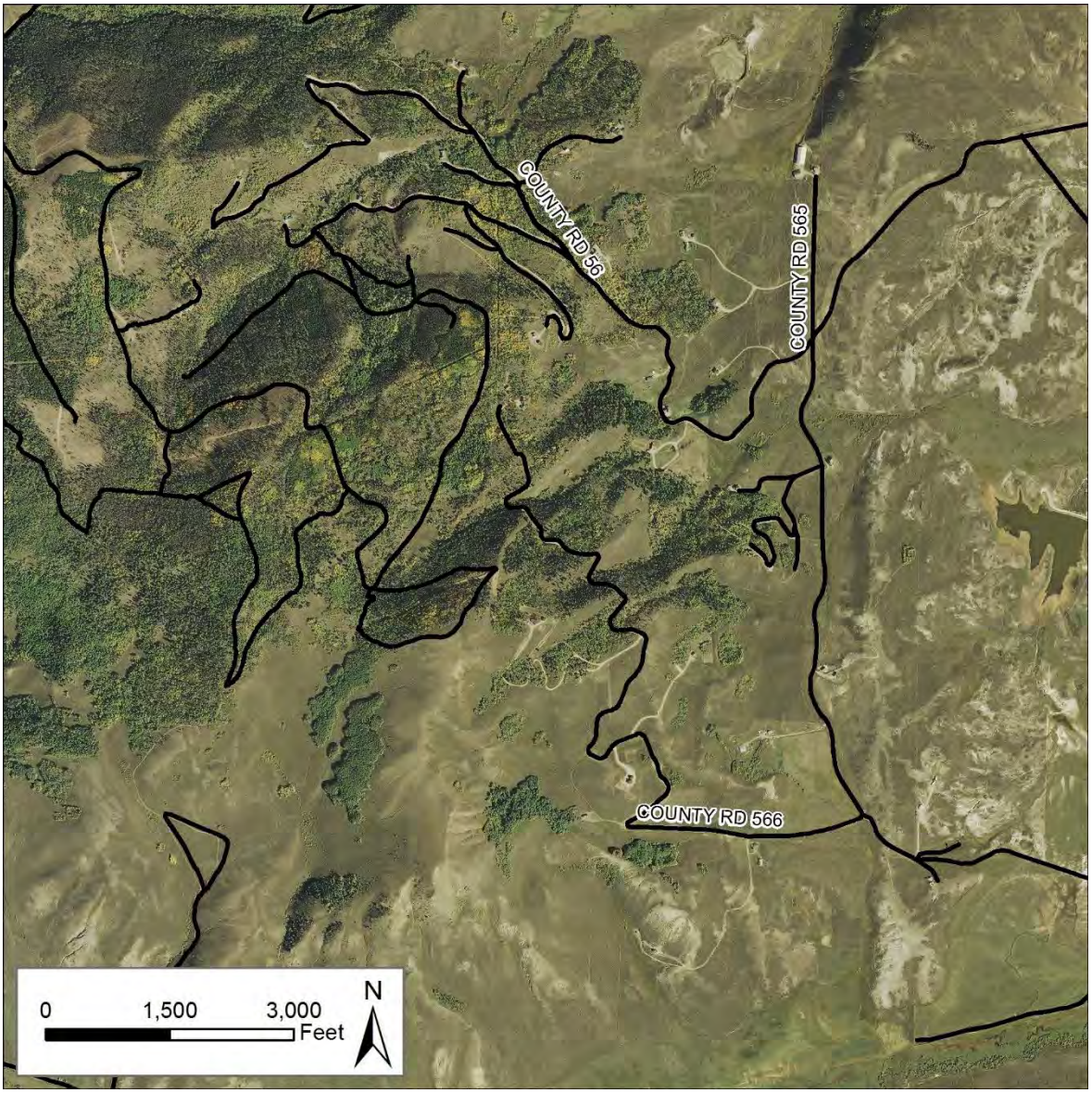


Figure 5. Aerial view of Linke / Orr Survey Tracts

SUNNYSHORE PARK

2009 Rating: **Very High**

2015 Rating: **Very High**

Location: The community borders Grand Lake on the southwest side

Construction: Combustible siding with Class B roofs, above-ground utilities, abandoned structures

Access/Egress: One way in and out, steep, narrow dirt roads, access from the Dam Road, inadequate turnarounds

Water Supply: There is a pump house in the community, but is not currently accessible for firefighting operations. Work with the department to identify what needs to be done to make this a viable option for water within the community.

Fuels & Fire Behavior: Surface fuels under the lodgepole pine are unlikely to initiate crown fire, but high winds could increase fire behavior and cause a crown fire.

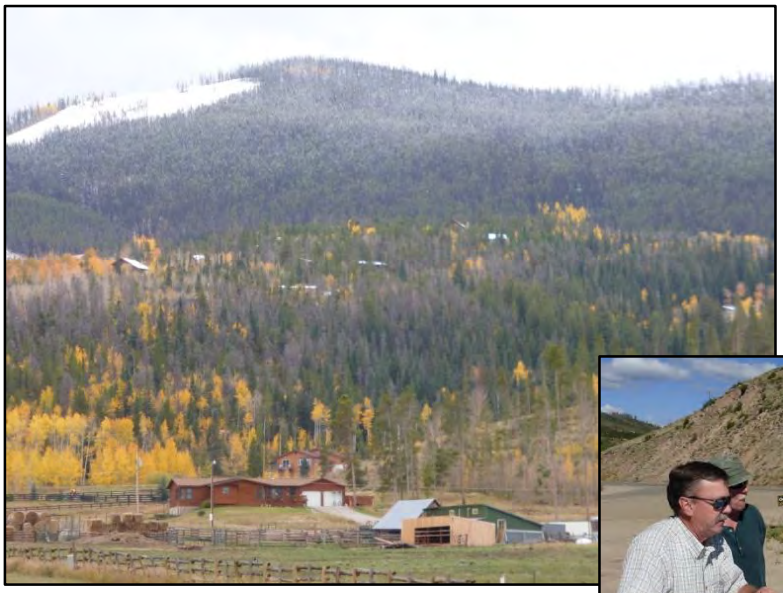
Actions Taken: Met with fire department professionals regarding water supply and CWPP recommendations

Recommendations:

- Replace current signage with reflective signs
- Complete defensible space for all homes
- Install a 15,000 gallon cistern for firefighting purposes
- Widen and maintain roads; create improved turnaround space for fire apparatus

Figure 6. Aerial view of Sunny Shore Park

HOMESTEAD HILLS



2009 Rating: **Very High**

2015 Rating: **High**

Location: Homestead Hills is west of Highway 40, accessed by Homestead Hills Drive in the southern part of the District. There are some portions of this area accessed by other county roads off of Highway 40.

Construction: The construction type is typically combustible siding with Class A roofs

Access/Egress: Steep roads, tight turns, slow evacuation

Water Supply: 15,000 gallon cistern planned for 2015 installation, followed by two more cisterns

Fuels & Fire Behavior: Surface fire most likely because of low surface fuel loading. Slower rates of spread and smaller flame lengths likely under moderate weather conditions. Active fire behavior in beetle killed areas with extreme weather conditions.

Actions Taken:

- Large sections of beetle-killed lodgepole pines have recently been removed by the owners, the HOA, the Federal government, Grand County, and Mountain Parks Electric.
- Nationally recognized Firewise Community USA (August 2014-present)
- 15,000 gallon cistern planned for 2015 installation, grant being pursued for two additional cisterns.
- Most homes have reflective addressing at the end of driveways.

These actions have been significant enough to reduce the hazard rating for the community because fire behavior has been altered and the overall safety of residents has been increased.

Recommendations:

- Roadside thinning throughout the community to assist with access and egress along all of the roads within the community.
- Discussions with private property owners for secondary egress routes on the northwest and on the southeast as alternative accesses to Highway 40. The one on the southeast is at the end of Hill Court/CR 547.
- Installation of 2-3 additional water cisterns is highly recommended

Figure 7. Aerial view of Homestead Hills

C LAZY U HOMESTEAD

2009 Rating: High

2015 Rating: High

Location: C Lazy U Homestead is located along the southern shore of Willow Creek Reservoir

Construction: Large acreage lots with large homes, combustible siding, Class A roofs

Access/Egress: Narrow dirt roads without adequate turnarounds, one way in and out, long response times

Water Supply: None

Fuels & Fire Behavior: Aspen stands around the homes will typically not burn as readily; surface fire is possible in the brush and grass, some torching in the lodgepole stands.

Actions Taken: Small patch cuts along the east of the community

Recommendations:

- Landscape fuelbreak along the road on the northeast side, focus on ground fuels.
- Thin along the road that leads into the community
- Extend the concrete ramp into the reservoir to provide fire department access
- 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
- Update entry gate to open for emergency vehicle siren

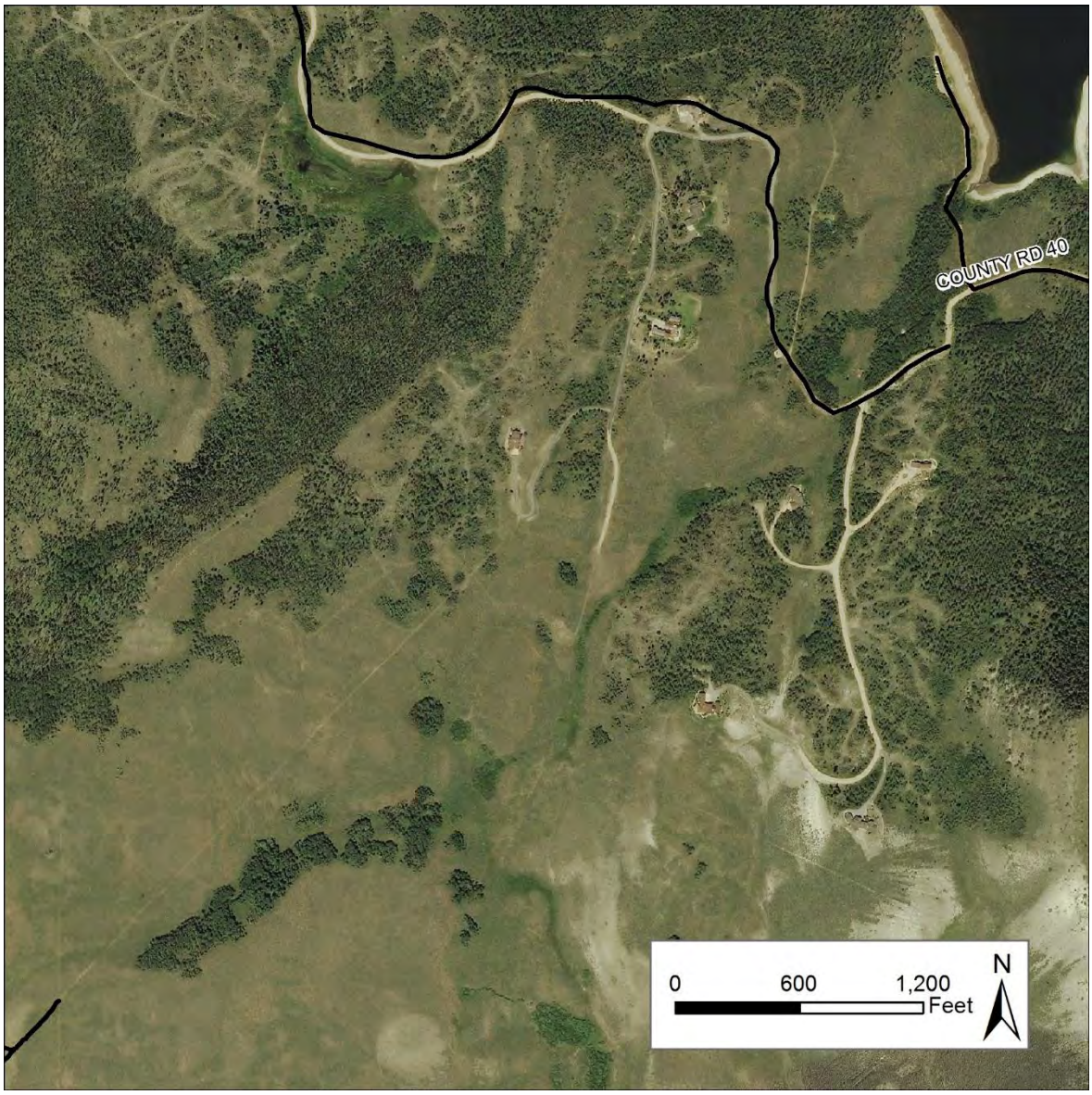


Figure 8. Aerial view of C Lazy U Homestead

SCAN LOCH

2009 Rating: High

2015 Rating: High

Location: The community is along the south eastern edge of Lake Granby and is accessible off of Highway 34

Construction: Combustible siding with Class A roofs. Outbuildings throughout that are not maintained

Access/Egress: Steep, narrow dirt roads. Turnaround loop is too small for fire apparatus.

Water Supply: No developed water supply

Fuels & Fire Behavior: Surface fuels will support surface fires. Major roads act as fuelbreaks. Extreme weather conditions may lead to some crown fire in the dead lodgepole pines, but as the majority of the needles have fallen, crown fire is less likely than it was several years ago.

Actions Taken: None

Recommendations:

- Limb and thin trees along all roads. Remove dead trees
- Thin trees along the uphill side of Sunset Lane
- Install water cistern for fire suppression

Figure 9. Aerial view of Scan Loch

STILL WATER ESTATES/ANTLER RANCHETTES

2009 Rating: High

2015 Rating: High

Location: Antler Ranchettes was added as part of the title for this CWPP update. The community is on the west bank of Lake Granby. There are also many outbuildings.

Construction: Homes are Type III, IV and V, most have rated roof coverings, some shake shingles

Access/Egress: There is only one way in and out, but the roads are maintained dirt and are fairly wide. There are adequate turnarounds. Roads are well-marked.

Water Supply: No water supply, but water pumping plant is 2.5 miles away and is often used

Fuels & Fire Behavior: Lots of ladder fuels could allow fire to transfer from the surface into the tree crowns. Torching and crown fire are possible.

Actions Taken: None

Recommendations:

- Work on outreach to seasonal residents to complete defensible space
- Install a fire safety sign along Highway 34 at the entrance to the community
- Replace wood shake roofs with Class A roof coverings

Figure 10. Aerial view of Still Water Estates/Antler Ranchettes

TRAIL CREEK ESTATES

2009 Rating: High

2015 Rating: High

Location: The majority of this community is out of district for Grand County FPD No. 1, but since some area is within their response area, it has been included in the CWPP and the update.

Construction: Primarily Type V construction, others heavy timber construction (Type IV)

Access/Egress: Some narrow roads, but well maintained and adequate turnarounds

Water Supply: There is a dry hydrant at Trout Lake that can be used for drafting, and there are several lakes and ponds in the community available for water supply.

Fuels & Fire Behavior: Dead lodgepole pine stands are found on the east side of the community, while the west side is primarily riparian vegetation. Surface fire with areas of torching is most likely.

Actions Taken: None

Recommendations:

- Use reflective signage for addressing and ensure that it is visible from the road
- Roadside thinning along CR 41 because it is the only access/egress for the community
- Install an additional dry hydrant along the west side of Trail Creek Pond
- A community fire patrol is recommended to ensure early detection and action. A Citizen Emergency Response Team (CERT) and a fire cache with appropriate personal protective equipment (PPE) should be put into place. Intelagard (www.intelagard.com) offers a variety of products that could potentially be useful in the community, especially some of the systems developed for ATVs
- Possible inclusion into the Grand FPD

Figure 11. Dry hydrant at Trout Lake

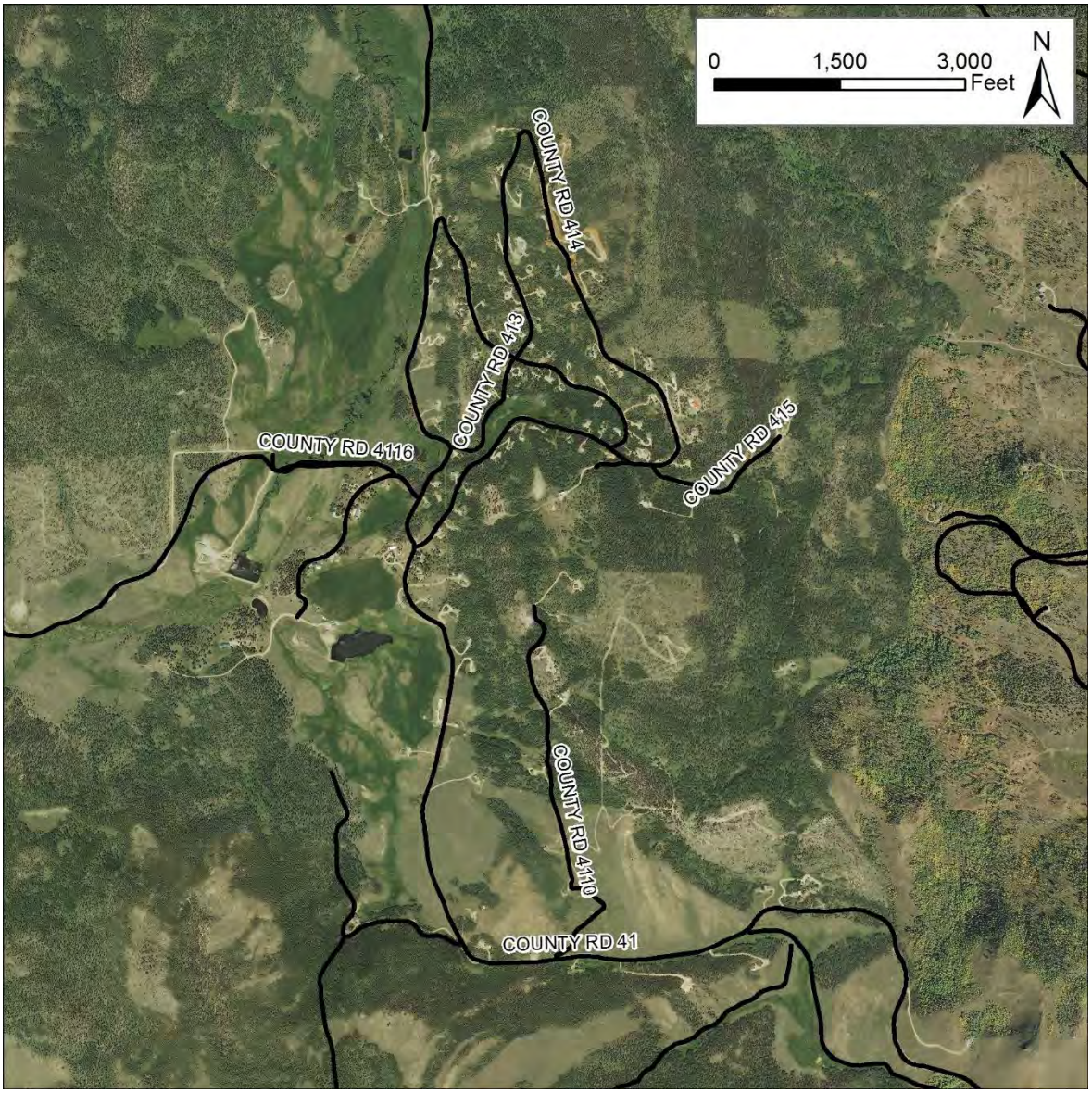


Figure 12. Aerial view of Trail Creek Estates

CR 4: COLORADO ANGLERS' CLUB/ROCKY MOUNTAIN ESTATES

2009 Rating: New Community

2015 Rating: Moderate

Location: In the 2009 CWPP, Colorado Angler's Club/Rocky Mountain Estates was included in Idleglen, but has been separated out because of ownership and a slightly different fuel type.

Construction: The majority of the homes have combustible siding and Class A roofs

Access/Egress: There are several ways to access the community off of Highway 34. Roads are well maintained dirt.

Water Supply: There is a 30,000 gallon cistern in this area, with a dry hydrant located on the northwest corner of the intersection of CR 4036 and CR 4039

Fuels & Fire Behavior: The fuels are primarily grass with some stands of lodgepole pine. The area is fairly open.

Actions Taken: Dead trees have been removed in the area.

Recommendations:

- Fire Danger Sign is recommended along Highway 34 at the entrance to the community
- Use reflective signage for addressing and ensure that it is visible from the road

Figure 13. Aerial view of CR 4: Colorado Anglers' Club/Rocky Mountain Estates

CR 4: IDLEGLEN

2009 Rating: **Moderate**

2015 Rating: **Moderate**

Location: Access is along Highway 34, along the north bank of Lake Granby

Construction: Combustible siding with Class A roofs

Access/Egress: Well-maintained dirt roads with adequate turnarounds

Water Supply: Nearest water supply is the cistern in Rocky Mountain Estates located on the northwest corner of the intersection of CR 4036 and CR 4039. Also Farr Pumping Plant near mile marker 10 on Highway 34.

Fuels & Fire Behavior: Significant amounts of trees have been removed, reducing the risk of crown fire. Fast rates of spread given a surface fire are possible.

Actions Taken: Many of the dead lodgepole stands have cut

Recommendations:

- Use reflective signage for addressing and ensure that it is visible from the road

Figure 14. Aerial view of CR 4: Idleglen

HIGHWAY 125

2009 Rating: High

2015 Rating: Moderate

Location: This community sits on both sides of Highway 125, northwest of Willow Creek Reservoir

Construction: Homes are mix of combustible and non-combustible siding, primarily heavy timber (Type IV). Mostly Class A roofs, some unrated cedar shake roofs.

Access/Egress: Maintained dirt roads provide multiple access/egress routes

Water Supply: No official water supply, some rivers and ponds if improved

Fuels & Fire Behavior: Patchy fuels, large open areas of shrub and some dense lodgepole are the fuels in the community. Surface fire is possible with fast rates of spread if wind is significant.

Actions Taken: Some defensible space work has been completed. Increasing the amount of defensible space, the reduction of fuels around the community, and the lack of needles on the lodgepole pine have resulted in a reduction of the rating for the community.

Recommendations:

- Replace all cedar shake roofs with Class A roofs
- Installation of a dry hydrant is recommended within the northern portion of the community along the river. There is adequate turnaround space and the location would benefit the community, as well as C Lazy U Area of Special Interest (ASI).
- Use reflective signage for addressing and ensure that it is visible from the road.

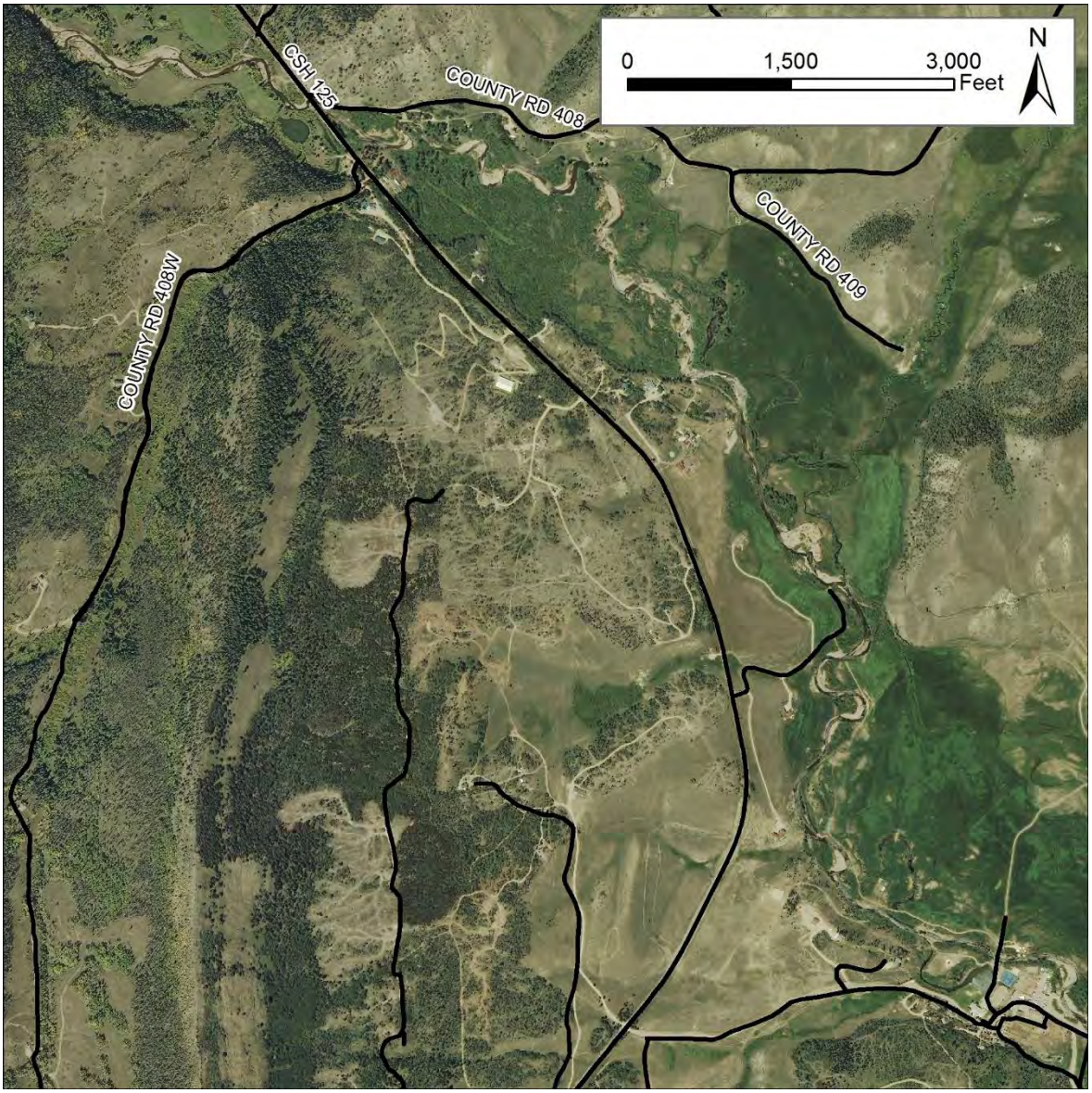


Figure 15. Aerial view of Highway 125

JOSLIN RANCH

2009 Rating: **Moderate**

2015 Rating: **Moderate**

Location: Joslin Ranch is in the northern part of the fire protection district, east of Trail Creek and north of Idleglen

Construction: Various construction types, including heavy timber and combustible siding

Access/Egress: One way in and out along well-maintained roads

Water Supply: No water supply

Fuels & Fire Behavior: Lodgepole pine stand with open shrubs/grasslands will most likely produce surface fire. Some torching may occur where there are ladder fuels.

Actions Taken: Logging operations within the community to remove beetle kill

Recommendations:

- Remove debris and reduce fuels around outbuildings and barns. Oftentimes mowing is enough to limit fire spread into these structures
- Use reflective signage for addressing and ensure that it is visible from the road
- Work to install a 30,000 gallon cistern or develop other water supply within the community

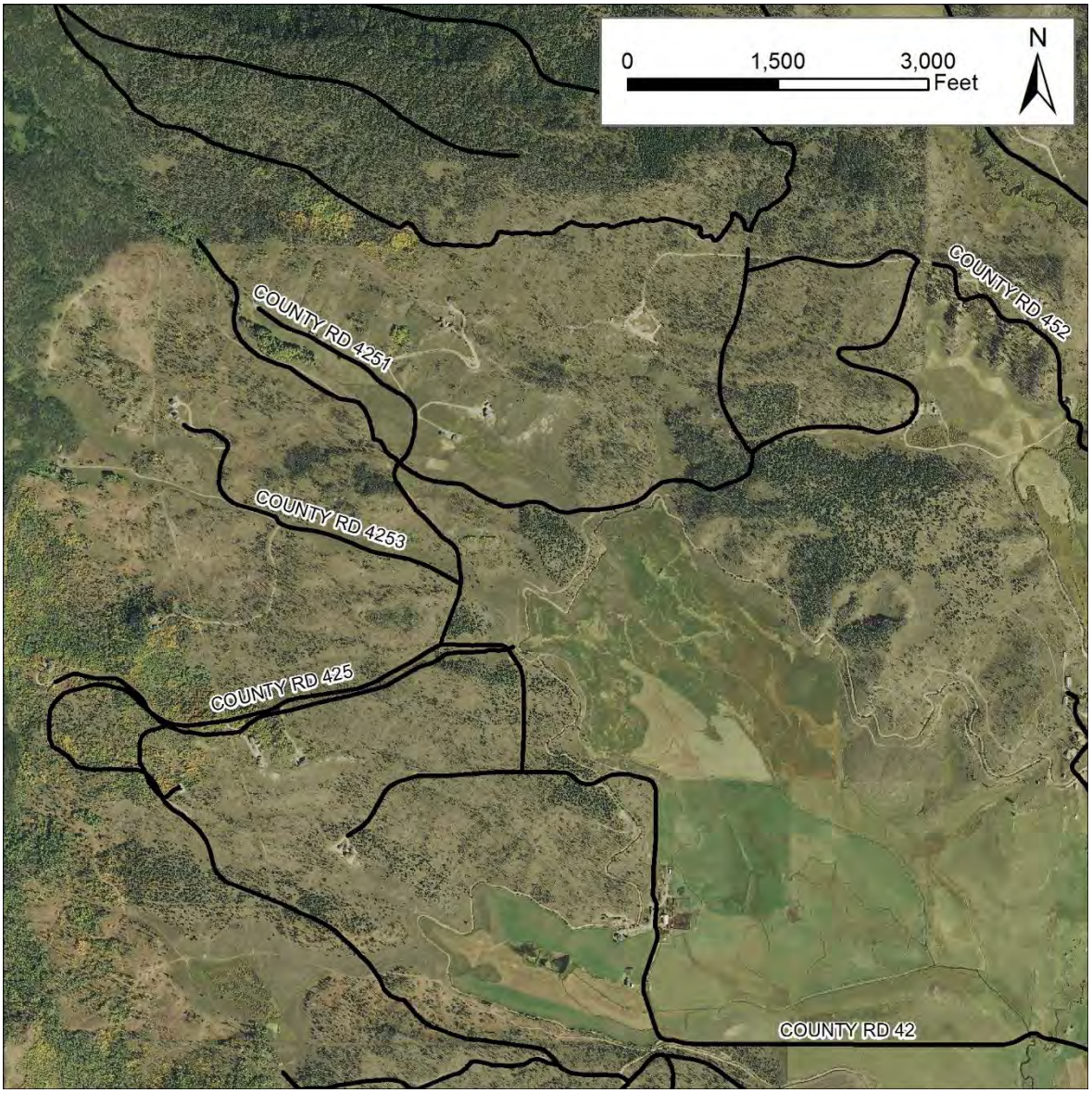


Figure 16. Aerial view of Joslin Ranch

LEGACY PARK

2009 Rating: **Moderate**

2015 Rating: **Moderate**

Location: Legacy Park is just north of Granby Ranch on the east side of Highway 40. It sits on a mesa.

Construction: Type III, IV and V construction, class A/B roofing

Access/Egress: Access is available via multiple routes on well-maintained dirt roads. There are adequate turnarounds.

Water Supply: There are three 10,000 gallon cisterns tested annually by the fire department

Fuels & Fire Behavior: Surface fire is most likely because of the continuous surface fuels. Patches of dead, beetle-killed trees pose a threat of torching.

Actions Taken: Some defensible space projects have been completed

Recommendations:

- Add reflective addressing to all driveways

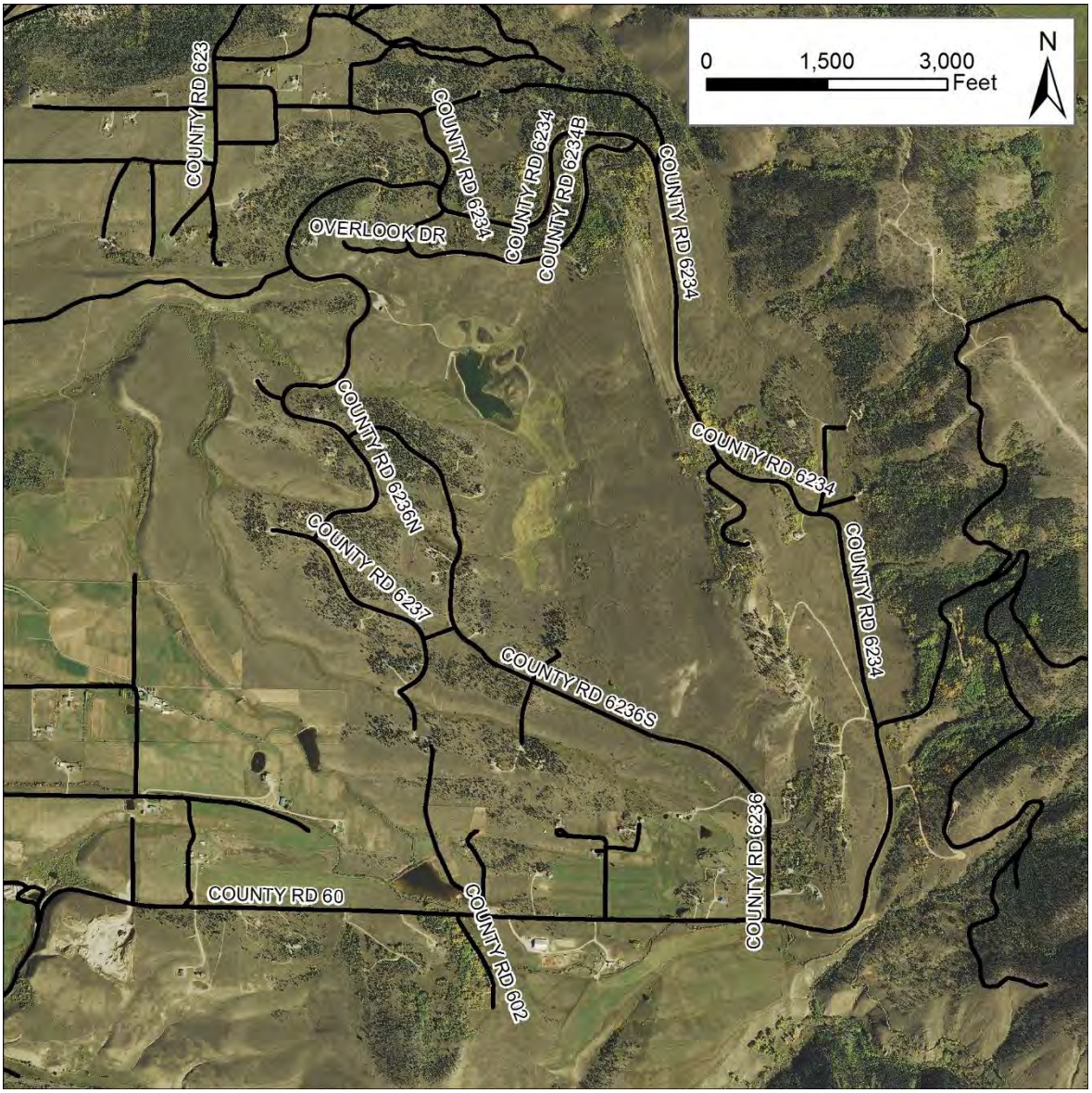


Figure 17. Aerial view of Legacy Park

MOUNT CHAUNCEY

2009 Rating: High

2015 Rating: Moderate

Location: Mount Chauncey is just south of Windy Gap Reservoir, accessible off of Highway 40, east of Granby

Construction: Newer large cabins with ranches and homesteads. Typically Type V construction

Access/Egress: Dirt road off of Highway 40 is primary access, multiple routes for access/egress

Water Supply: No developed water supply

Fuels & Fire Behavior: Large areas of open brush and grass lead to fast rates of spread, especially uphill. Active fire behavior in lodgepole pine stands with high winds.

Actions Taken: None. Fuels work has been completed along the western border of the community, but not within the community. These actions, combined with the loss of needles on the lodgepole pine result in less extreme fire behavior and a lower rating.

Recommendations:

- Use reflective signage for addressing and ensure that it is visible from the road
- Fire safety education for those working on farms

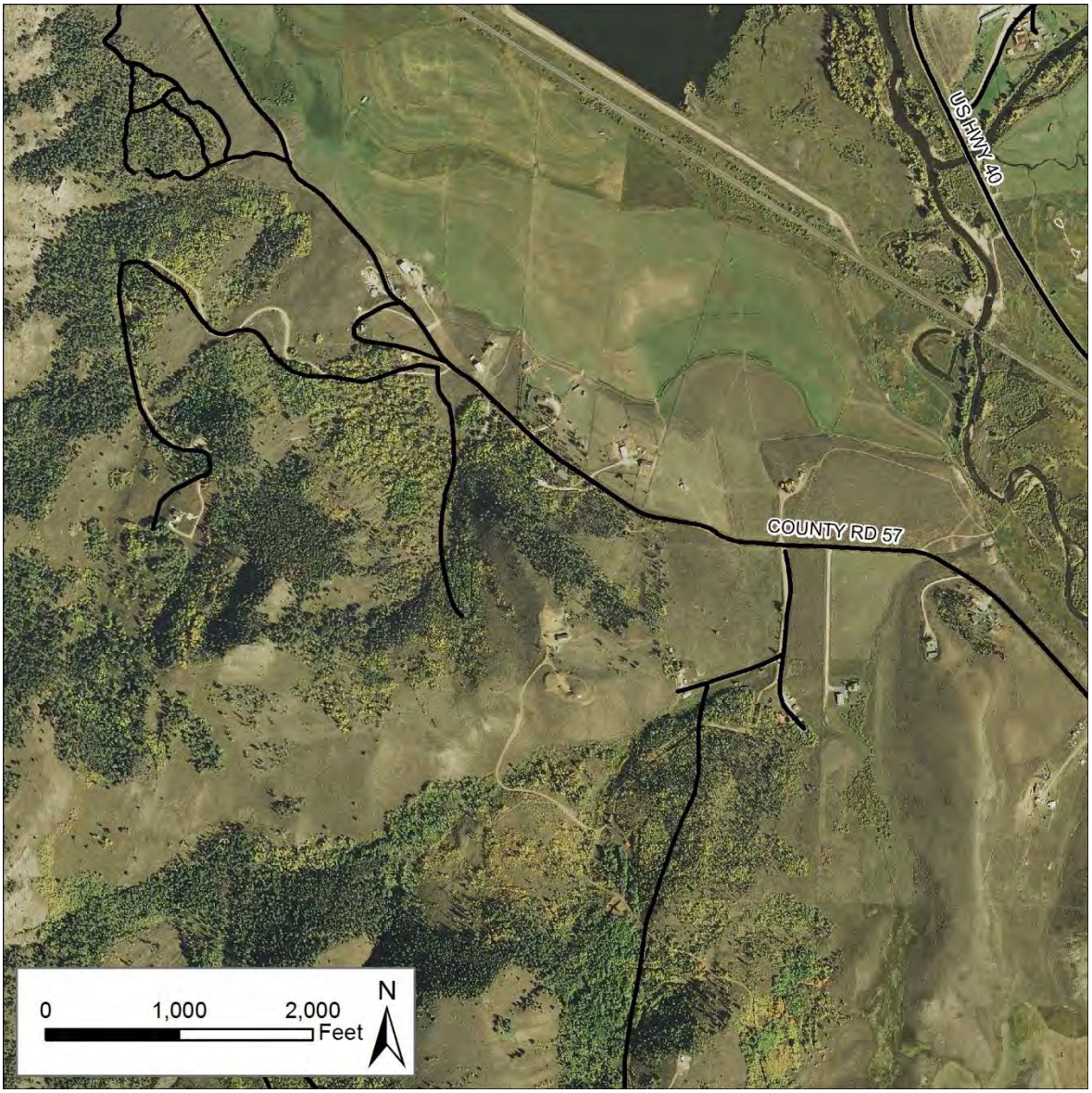


Figure 18. Aerial view of Mount Chauncey

WALDEN HOLLOW/OURAY RANCH

2009 Rating: **Moderate**

2015 Rating: **Moderate**

Location: This community is south of Lake Granby and is accessible via Highway 34

Construction: Homes are built with combustible materials but have Class A roofing

Access/Egress: There are multiple, maintained routes of ingress/egress, and adequate turnarounds exist

Water Supply: There is a 50,000 gallon tank that provides water for three hydrants in the community

Fuels & Fire Behavior: 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 with extreme weather conditions.

Actions Taken: Partial defensible space has been done for individual homes in the community

Recommendations:

- 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
- Add reflective addressing to all driveways

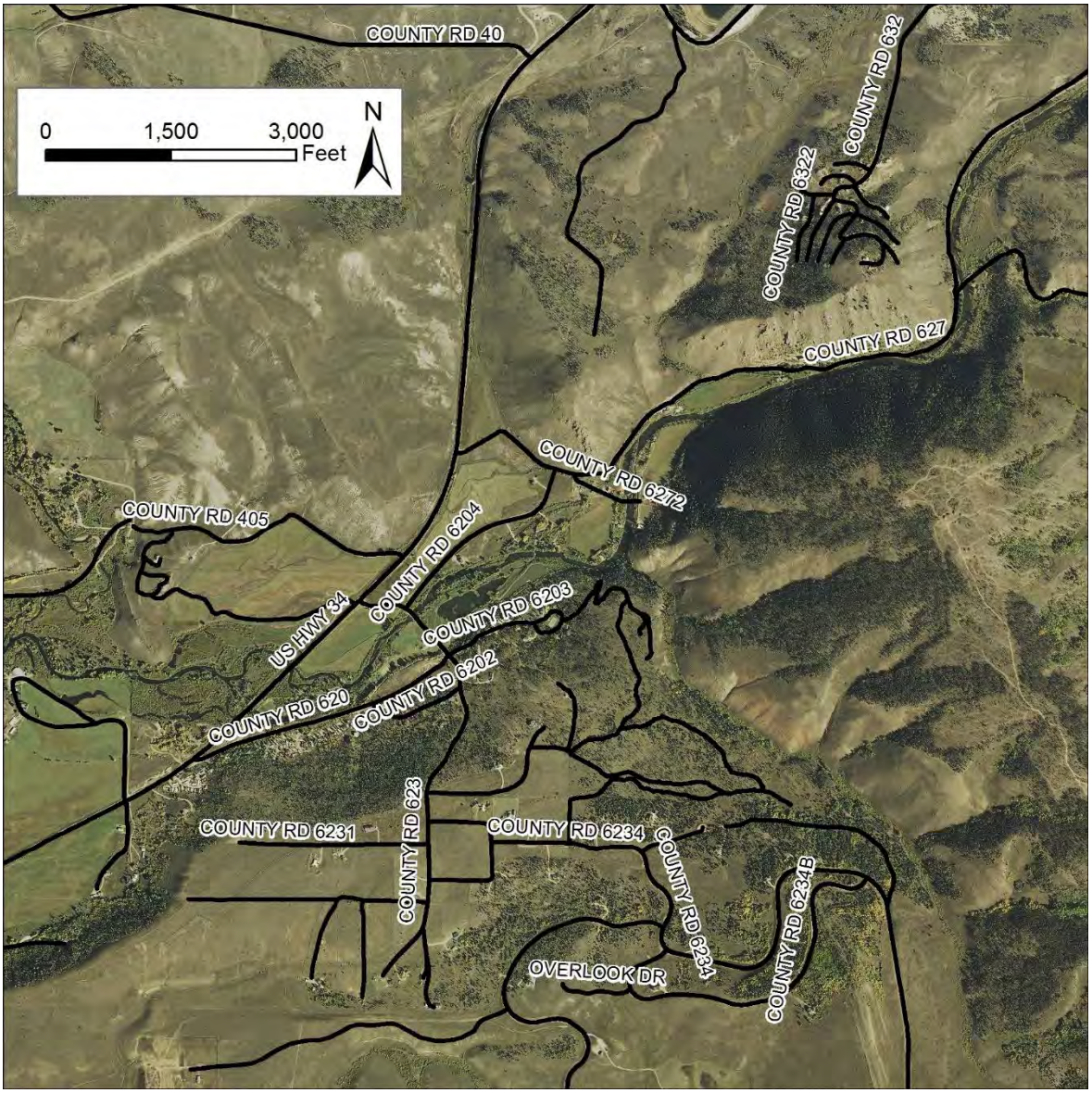


Figure 19. Aerial view of Walden Hollow/Ouray Ranch

SHADOW MOUNTAIN RANCH COMMUNITY

2009 Rating: High

2015 Rating: Moderate

Location: The community is east of Highway 125 along the western edge of the fire protection district

Construction: Combustible siding with Class A roofs

Access/Egress: Unmaintained, steep dirt roads with only one way in and out of the community. Homes are fairly close to the highway.

Water Supply: None

Fuels & Fire Behavior: There are large areas of dead lodgepole pine stands that could have extreme fire behavior with the right weather conditions. Surface fire is more likely with individual tree torching since most of the red needles have fallen off the trees.

Actions Taken: None. Although no work has been done, there has been work done in the vicinity, and the fuel continuity has changed as the lodgepole have lost red needles. This is why there has been a reduction in the 2015 hazard rating.

Recommendations:

- Partner with C Lazy U to develop a mutually beneficial water supply
- Ensure adequate road construction, reflective addressing, defensible space and fire resistant construction materials are more homes are built

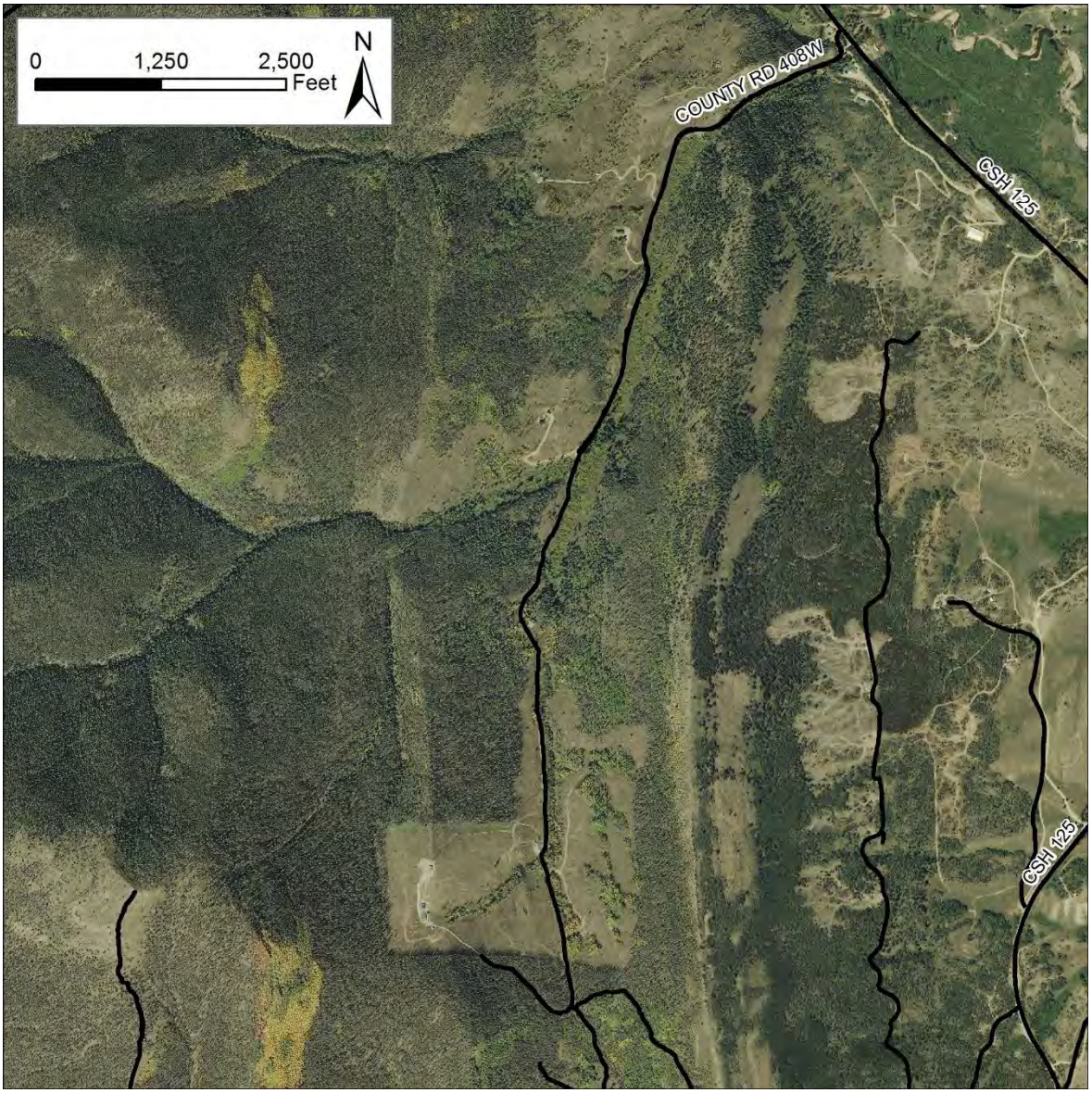


Figure 20. Aerial view of Shadow Mountain Ranch

SILVER CREEK/INNSBRUCK

2009 Rating: **Moderate**

2015Rating: **Moderate**

Location: Silver Creek/Innsbruck is off of Highway 40, north of Val Moritz/Ten Mile Creek and west of Granby Ranch

Construction: Home construction is primarily combustible materials with Class A roofs, some unrated shake shingle roofs

Access/Egress: There are multiple points of access/egress

Water Supply: Municipal hydrant system

Fuels & Fire Behavior: Because of the shrubs and grasses, a surface fire is most likely. Spread would be limited because of the patch nature of the fuels.

Actions Taken: A five-acre fuelbreak was completed along the north end of the community

Recommendations:

- Replace any shake shingle roofs with Class A roofing
- Look into reflective group addressing
- Create a fuelbreak along the east and southeast side of the community

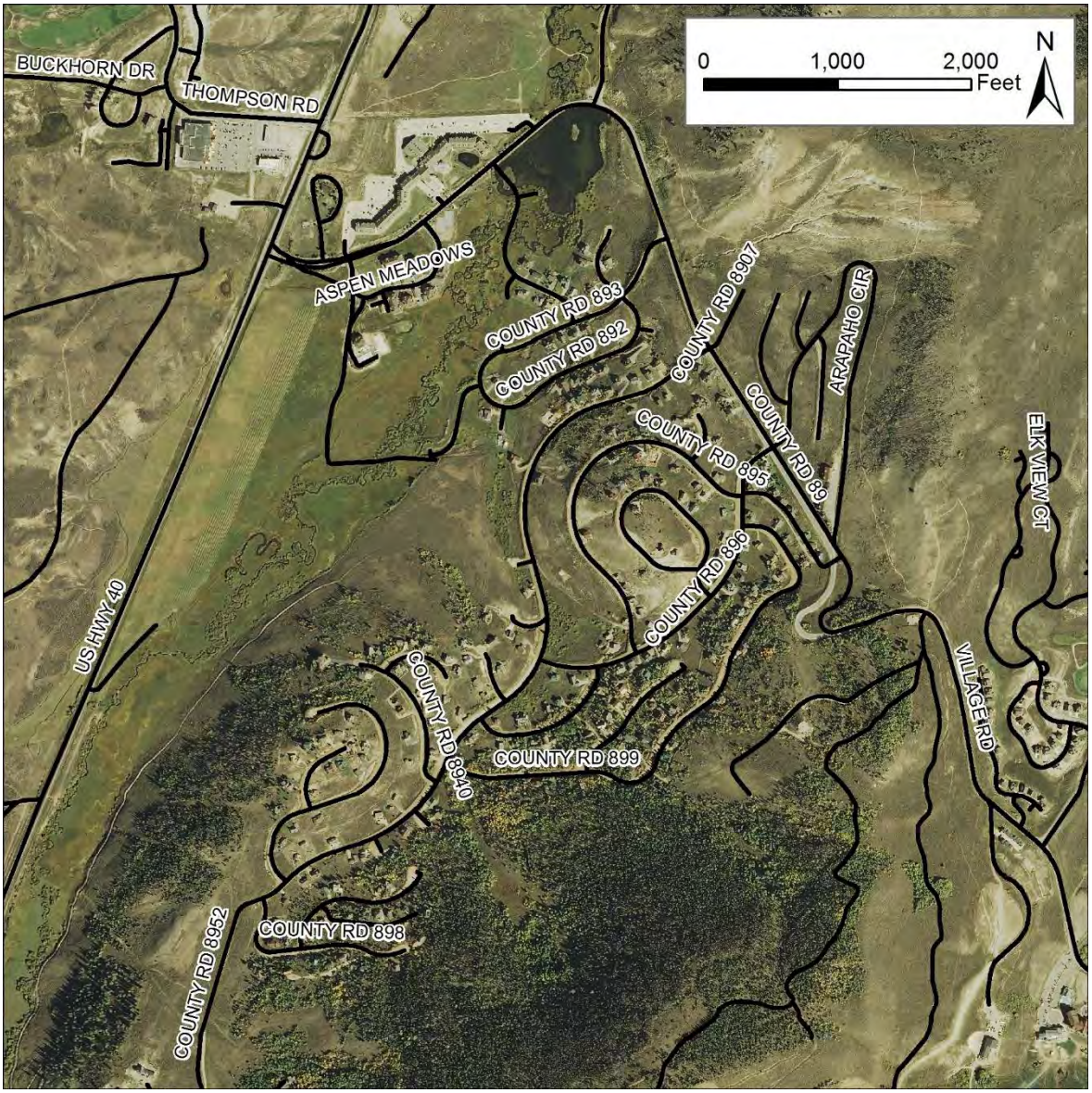


Figure 21. Aerial view of Silver Creek/Innsbruck

TEN MILE CREEK ESTATES

2009 Rating: **Moderate,** part of Val Moritz

2015 Rating: Low

Location: Ten Mile Creek Estates is located at the south end of the study area, accessed through Granby Ranch on CR8952.

Construction: The homes are on fairly large lots (~35 acres) and are constructed of a mixture of combustible and non-combustible materials.

Access/Egress: Road access consists of two ways in and out on well-maintained dirt roads; one access roads are secured with gates on south and north ends of community

Water Supply: Hydrants are located within the neighboring community of Granby Ranch.

Fuels & Fire Behavior: Most of the fuels in the areas are open brush, with sage, grasses, some stands of lodgepole pines and a lot of aspen groves. 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.

Actions Taken: The Ten Mile Creek HOA developed a CWPP in 2008, and will be updating it in 2015. Four separate homeowner initiatives have resulted in complete beetle-killed tree removal with only a few slash piles remaining. Homes and roads have reflective addressing. Over 350 acres have been treated within the community. All of these actions are responsible for the reduction in the rating from 2009.

Recommendations:

- Slash piles should be burned (when conditions permit) or removed
- Installation of a 30,000 gallon cistern on the Hulley property, with a pull out for fire apparatus
- Communicate with Val Moritz HOA regarding road egress
- Communicate with Granby Ranch on property that abuts to Ten Mile Creek properties regarding hazardous fuels removal.

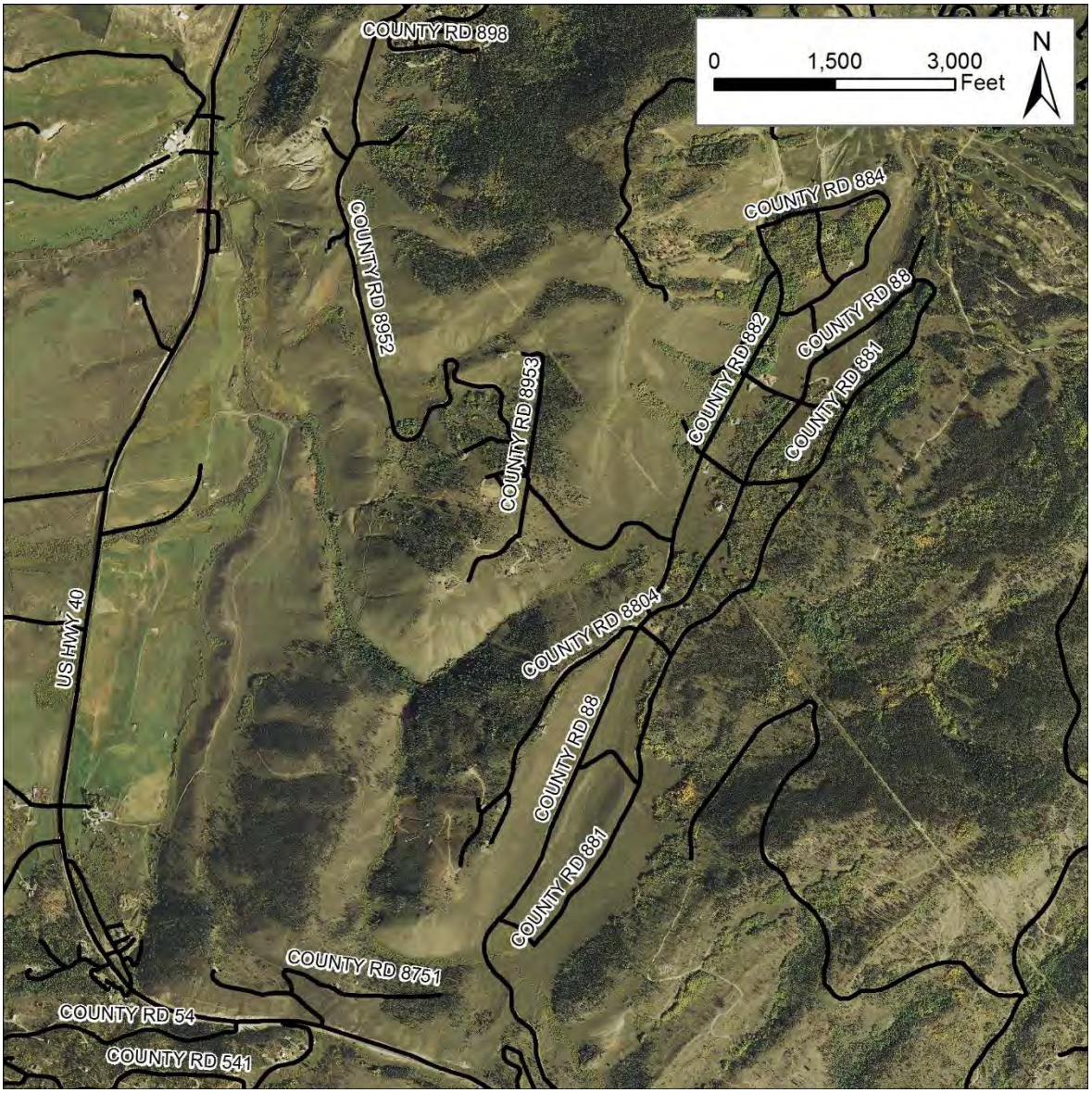


Figure 22. Aerial view of Val Moritz/Ten Mile Creek Estates

ALPINE ACRES

2009 Rating: Moderate

2015 Rating: Low

Location: Alpine Acres is located on the south side of Highway 40 near the edge of the fire district. Alpine Park is across Highway 40 to the north and should be considered to be similar as Winter Park Highlands' "Very High" hazard rating.

Construction: Combustible siding with Class A roofs. There are some cedar roofs which are being replaced.

Access/Egress: Multiple routes for access/egress with Marble and Granite Road. Well-maintained and marked dirt roads with adequate turnaround space.

Water Supply: 50,000 gallon cistern on golf course property owned by Fraser Recreation District

Fuels & Fire Behavior: Surface fire is most likely because of the understory vegetation. Crown fire could occur in the remaining lodgepole stand given extreme weather conditions.

Actions Taken: Many of the dead lodgepole pines have been removed. Because of the proximity to the golf course and Highway 40, combined with dead tree removal this community has a low rating in 2015.

Recommendations:

- Obtain permission to use the 50,000 cistern for water supply in the event of a fire
- Add reflective addressing to all driveways

Figure 23. Aerial view of Alpine Acres (south)/Alpine Park (north)

GRANBY MESA

2009 Rating: Low

2015 Rating: Low

Location: Located north of and overlooking the Town of Granby

Construction: This community is a mixture of newer subdivisions with some older homes and trailers throughout, mostly Type V construction; many modular and trailer homes.

Access/Egress: There are multiple routes of ingress/egress in the neighborhoods, and the streets are well labeled

Water Supply: The neighborhood has hydrants throughout

Fuels & Fire Behavior: The north portion of the community is open range land. 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 even extreme weather conditions, torching and active fire behavior is unlikely.

Actions Taken: Some defensible space work has been completed

Recommendations:

- 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
- The municipal hydrant system should be tested and maintained annually. Identifying hydrant locations utilizing a GPS will assist the fire department with fire pre-plans.

Figure 24. Aerial view of Granby Mesa

GRANBY RANCH

2009 Rating: Low

2015 Rating: Low

Location: Granby Ranch is located east of the Town of Granby, off of Highway 40 at mile marker 216 and just east of Silver Creek/Innsbruck

Construction: Buildings are a combination of combustible and non-combustible materials but have Class A roofs

Access/Egress: There is only one way in and out

Water Supply: There is a system of hydrants throughout the community

Fuels & Fire Behavior: Open brush with sage and other shrubs would carry low-severity surface fire. Some individual tree torching is possible. Ski runs act as fuelbreaks, but ember cast could still be a concern.

Actions Taken: Defensible space has been completed throughout, and extensive forest management activities have taken place throughout the community. Hazardous tree removal has occurred along the subdivision roads. Additional BLM funding is forthcoming to treat additional acres.

Recommendations:

- Consider installing an ATV mounted CAFS system such as an Intelagard system (www.intelagard.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
- Add reflective addressing to all driveways

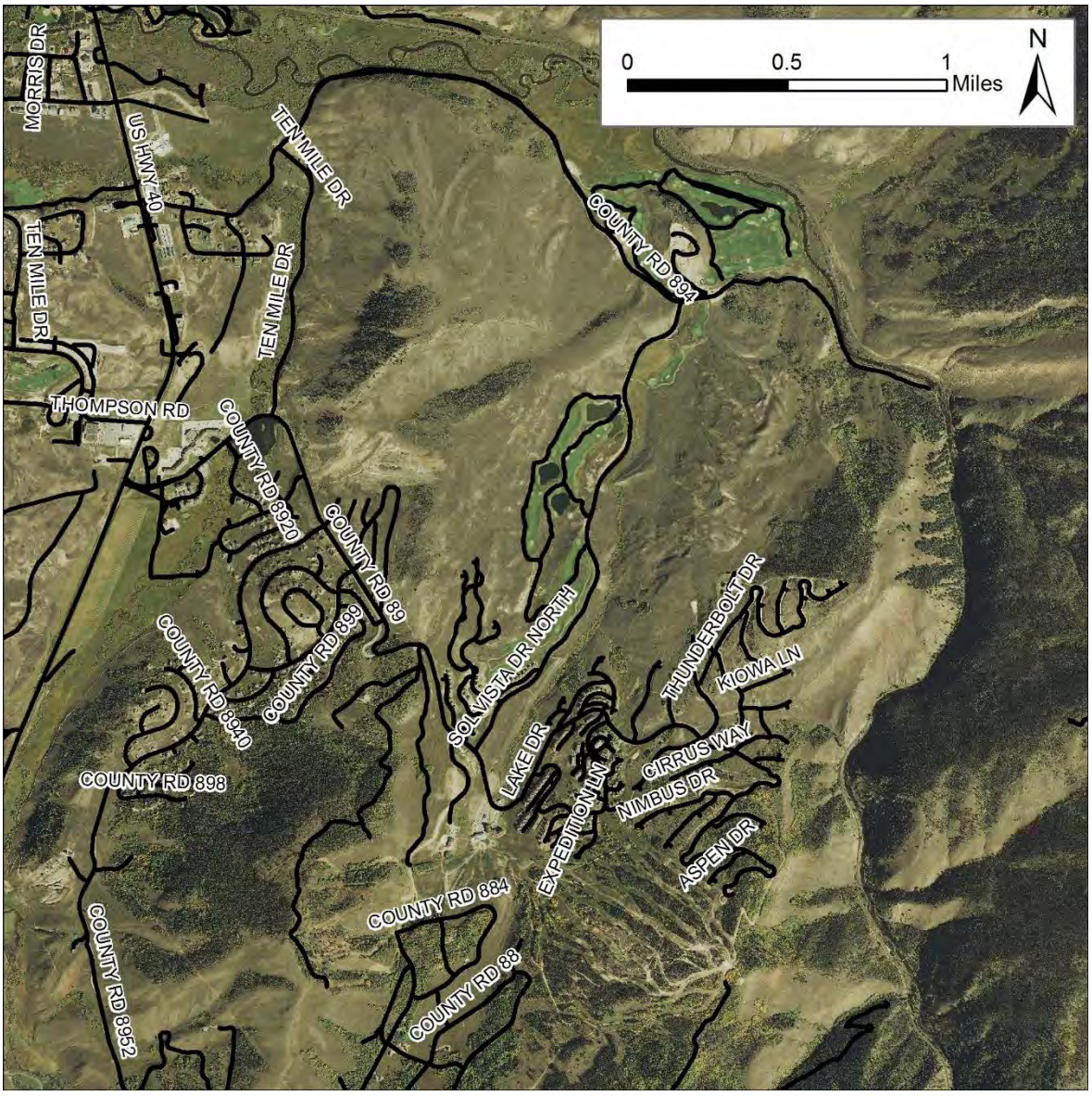


Figure 25. Aerial view of Granby Ranch

LAKE SHORE ESTATES

2009 Rating: Low

2015 Rating: Low

Location: This community sits on the west edge of Lake Granby, accessed by Highway 34 near mile marker 8

Construction: The construction, Type III and V, is dense and very diverse, including cabins that were built in the 1960s, brand new condominium buildings, and large single-family dwellings Rows of mobile trailer homes line the entrance of CR 640.

Access/Egress: There is one way in and out, with a looping road through the community. Road widths are good, but street signs are not present.

Water Supply: A 20,000 gallon cistern located on the east end of the community gravity-feeds two hydrants

Fuels & Fire Behavior: 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. 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.

Actions Taken: None

Recommendations:

- The hydrant system should be tested and maintained annually. Identifying hydrant locations using a GPS would assist the fire department with fire pre-plans.
- Add reflective addressing to all driveways

Figure 26. Aerial view of Lake Shore Estates

RIDGE ESTATES

2009 Rating: **Moderate**

2015 Rating: Low

Location: This community sits to the south of Walden Hollow and north of Legacy Park.

Construction: Home construction is Type V typically with metal and Class A roofs

Access/Egress: Maintained dirt roads provide multiple routes of ingress/egress. There are adequate turnarounds, but not all the road are labeled with 4″ reflective markers.

Water Supply: Three hydrants are located in Walden Hollow

Fuels & Fire Behavior: The dominant fuel type in this community is open brush, shrubs, and grass. The propensity of the open areas to dry out quickly may result in fast spreading surface fire under even moderate weather conditions.

Actions Taken: Some homes have defensible space. Further evaluation of the community in 2015 has led to an overall reduction in the hazard rating. The lack of heavy fuels and defensible space warrant a low rating.

Recommendations:

- It is recommended that dead trees along the road be removed, as well as mowing along the roadways
- Add reflective addressing to all driveways

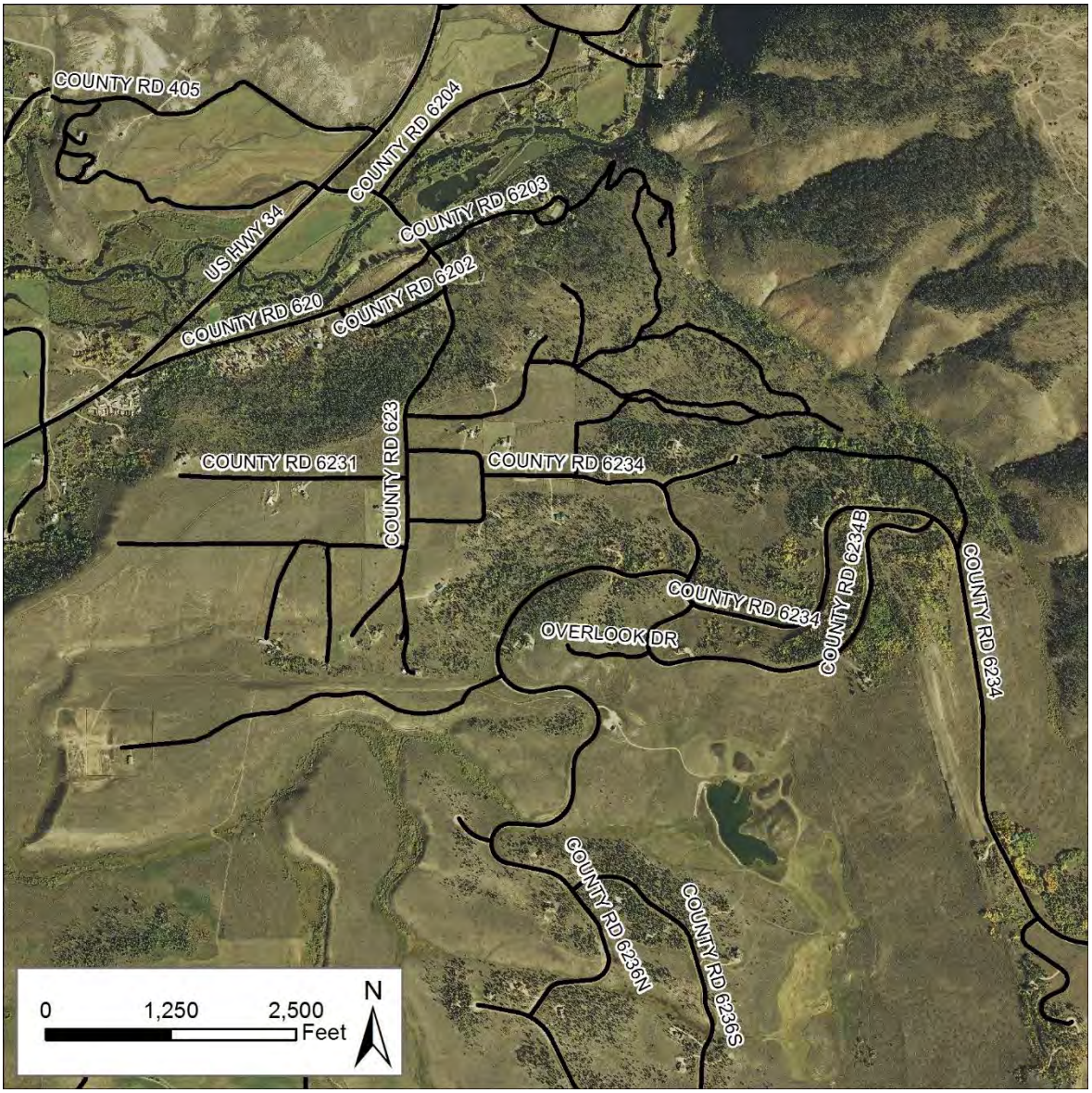


Figure 27. Aerial view of Ridge Estates

SUNSET POINT

2009 Rating: Low

2015 Rating: Low

Location: This community sits on the point on the southwest edge of Lake Granby and is accessed off of Highway 34 at CR 6, near mile marker 5

Construction: Roofs are a combination of Class A and B and homes have combustible siding and decks

Access/Egress: It is accessible via a dirt road with adequate turnarounds. The lake and road provide good protection from wildfire.

Water Supply: There is no developed, formal water supply available to the community other than drafting from the lake

Fuels & Fire Behavior: 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.

Actions Taken: Some homes have defensible space, but it is recommended for all the structures in the community, including outbuildings

Recommendations:

- 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), 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
- Add reflective addressing to all driveways

Figure 28. Aerial view of Sunset Point

VAL MORITZ

2009 Rating: Moderate

2015 Rating: Low

Location: Val Moritz is located at the south end of the study area, accessed by CR88 at the top of Red Dirt Hill in Granby.

Construction The homes in Val Moritz are on one acre lots and are constructed of a mixture of combustible and non-combustible materials, primarily Type V construction. All roof coverings are Class A/B.

Access/Egress: : Road access consists of one way in and out on CR 88, a well-maintained dirt road Most secondary roads are looped and some cul-de-sacs. There is egress for Val Moritz through Ten Mile Creek, however there is a locked gate with a code. Also undeveloped roads into Granby Ranch.

Water Supply: The "Moose" Pond could be a drafting site, but there is no hydrant. The Red Dirt fire station will be installing a 40,000 gallon cistern in October of 2015. YMCA Snow Mountain Ranch is the nearest reliable source of water for tender shuttle.

Fuels & Fire Behavior: Most of the fuels in the areas are open brush, with sage, grasses, some stands of lodgepole pines and a lot of aspen groves. 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.

Actions Taken Trees have been removed along roadways and power line areas. Homeowners continue to remove dead trees on individual properties, however, slash piles are an issue. Over 100 acres have been treated in the community. All of these actions are responsible for the reduction in the rating from 2009.

Recommendations:

- Improve the service road from Granby Ranch to Val Moritz to ensure emergency egress
- Add reflective addressing signs to properties
- Enhance defensible space. (About 60% of the homeowners have adequate defensible space)
- Slash piles should be burned when conditions permit or removed
- A landscape fuel break is recommended for the community. There is a fuel break in Granby Ranch, which could be continued into Val Moritz.
- Annually review HOA covenants to ensure they are in line with CWPP recommendations.
- Communicate with Granby Ranch on property that abuts to Val Moritz properties regarding hazardous fuels removal.

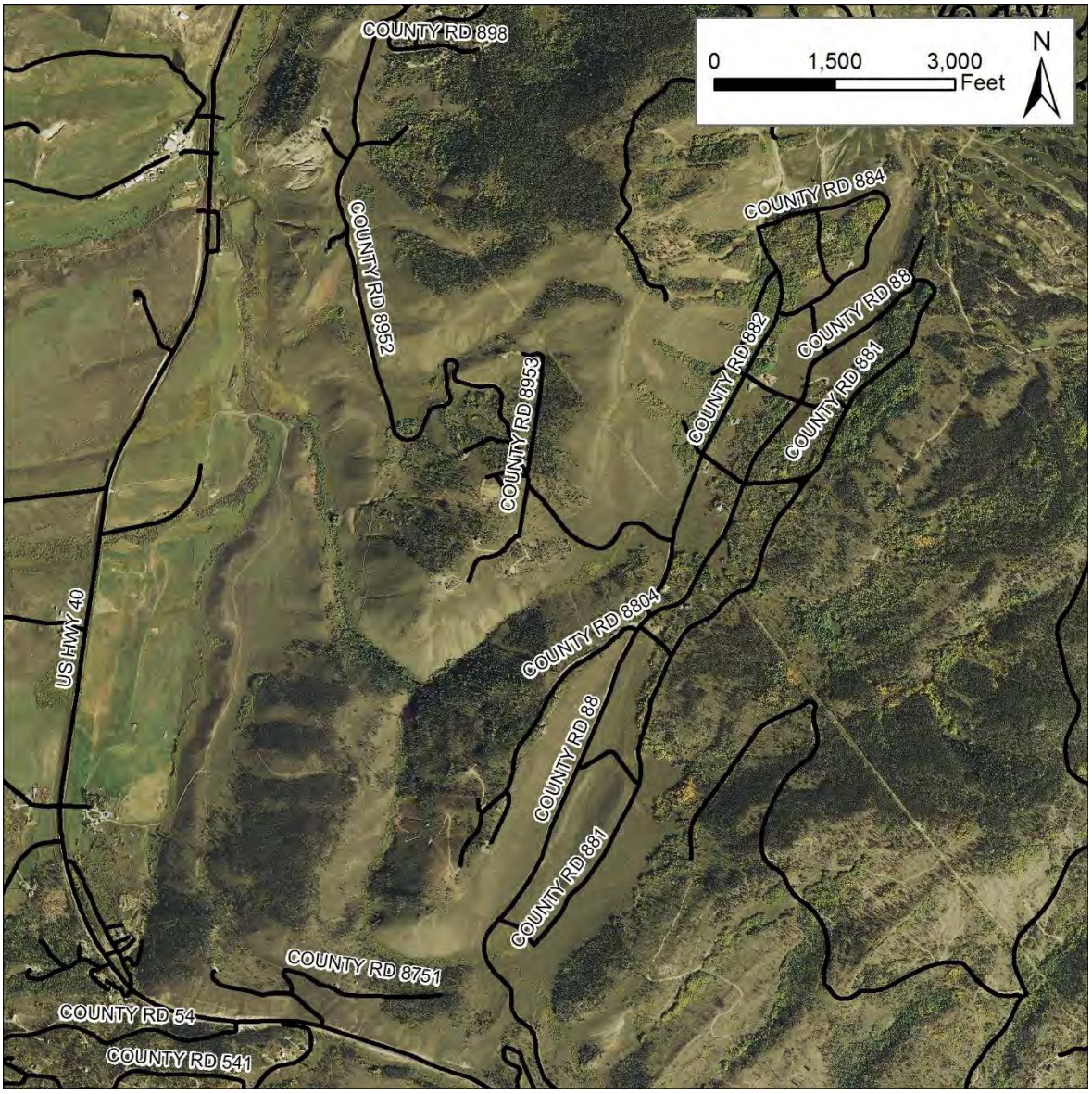


Figure 29. Aerial view of Val Moritz/Ten Mile Creek Estates

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 3 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 and Five Diamonds 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

- Some of the buildings have wood-shingle roofs, which are prone to ignition. To mitigate this hazard, retrofitting with Class A roofs is recommended.
- Grand County Wildfire Council and BeWildfireReady.org information 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) 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 this 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 Highway 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

- Installation of a dry hydrant is recommended just north of the ranch, within the Highway 125 community.
- Grand County Wildfire Council and BeWildfireReady.org information should be distributed to guests in welcome packets. 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 this 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

- Improving the access road width to accommodate fire apparatus is recommended
- Posting a water supply sign at the intersection of Highway 34 and the entrance to the sanitation plant as well as on the sanitation plant sign is recommended

Figure 30. Widen road so fire apparatus can access the area