Crestone Mountain Firewise Community (CMFC)
Firewise Community Assessment and
Community Wildfire Protection Plan

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I) Introduction

The following assessment is intended as a combined Firewise Communities/USA and Community Wildfire Protection Plan as a resource to be used by the CMFC members for creating a wildfire safety action plan. The plan developed from the information in this assessment should be implemented in a collaborative manner, and updated and modified as needed.

Wildfire has been a continuing challenge throughout Colorado's history. The safety of the citizens of any community is a shared responsibility between the citizens; the owner, developer or association; and the local, county, state and federal governments. The primary responsibility, however, remains at the citizen/owner and community level.

Colorado State Forest Service, Alamosa District was the lead preparer of the plan. Peter May with KFM provided historical context and did the property assessments. Discussions with site managers occurred at most locations. Numerous input sessions were held to gather public input. The 2005 Baca Grande Volunteer and Kundalini Fire Management CWPP was reviewed for relevancy and portions incorporated.

Membership Requirements –

- Non-profit organizations outside of the Baca Grande Property Owners Association or land owners outside of the Baca Grande Property Owners Association within the boundary of the " Crestone Mountain Firewise Community (CMFC) Membership Eligibility Area" on the "Ownership Map" (attached to this document).
- Have a Current Fire Plan.
- Receive a Wildfire Risk Assessment.
- Attend annual Firewise Educational Event
- Commit to at least two action items to reduce wildfire dangers.
- Pay annual membership dues.

KFM Background – 2005 CWPP

KFM, a not-for-profit fire service organization, was formed to serve the non-profit groups near Crestone, Colorado. As the groups were part of no official fire jurisdiction, they relied on nearby fire departments for fire response. The primary mission of KFM is to support member groups through training, equipment acquisition, fire management guidance and limited incident response. Because access can be challenging and fire fighters are not paid to be on standby, KFM, by providing fire management guidance and training opportunities, seeks to develop fire awareness, self-reliance, and self-responsibility regarding fire safety and response within its member groups.

To join KFM and come under a potential mutual aid agreement, each group must agree to 1- Develop and implement a fire management plan, 2 – Make significant efforts toward self-reliance and self-responsibility regarding fire safety and response and 3 – Attend an annual fire management meeting to plan trainings, equipment acquisitions, etc.

It is important to note that Kundalini Fire Management's area of service is adjacent to the Baca Grande subdivision. This is a significant relationship due to the continuous fuel, sloping topography, and prevailing winds. The presence of human settlement with its propensity for using fire also puts up a RED FLAG. KFM, therefore, HIGHLY suggests that each group plan for the eventuality that fire will come, and to the advantage of the effects of fire to sustain, recover and restore the vitality of this landscape. Adapting our culture to fire now becomes the priority and since many of the spiritual traditions are not from this area, KFM asks that each group seriously consider developing and implementing fire management plans and strategies for both wildland, structure, and interface fires.

II) Plan Background

CMFC members are located in the Wildland Urban Interface (WUI). The WUI is any area where structures and other human developments meet or intermingle with wildland vegetative fuels. Wildfires

will happen—exclusion is not a choice. The variables in a fire scenario are when the fire will occur, and where. This assessment addresses the wildfire-related characteristics of CMFC. It examines the area's exposure to wildfire as it relates to ignition potential.

The Firewise Communities/USA program is designed to provide an effective management approach for preserving wildland living aesthetics. The Firewise Communities/USA program seeks to create a sustainable balance that will allow communities to live safely while maintaining environmental harmony in a Wildland Urban Interface setting. Homeowners already balance their decisions about fire protection measures against their desire for certain flammable components on their properties. It is important for them to understand the implications of the choices they are making. These choices directly relate to the ignitability of their home ignition zones during a wildfire.

A Community Wildfire Protection Plan is a blueprint and an action strategy for prioritizing the protection of life, property and critical infrastructure in your community. A CWPP allows a community to evaluate its current situation with regards to wildfire risk and plan ways to reduce risk for protection of human welfare and other important economic, social or ecological values. CWPPs help protect and prepare communities in the event of a wildfire.

The purpose of community fire planning is to:

- Empower communities to organize, plan and take action on issues impacting community safety
- Enhance levels of fire resistance and protection to the community
- Identify the risks of wildland/urban interface fires in the area
- Identify strategies to reduce the risks to homes and businesses in the community during a wildfire.
- Identify fuels reduction projects.

How to use this plan

Successful wildfire risk mitigation begins around individual structures, community organizations and entities also have a role to play. Individuals must work to reduce home ignitability and create defensible space. Community-wide collaborative efforts are required to improve ingress and egress, provide signage, develop water resources, and create evacuation plans. This assessment identifies efforts required of everyone with an interest in the protection of our communities.

Firefighters / USFS / CSFS / BLM	Public
Define WUI communities	Identify wildfire hazards in your community
Rank WUI communities	Prioritize mitigation projects
Identify fuels reduction project	Motivate members to perform mitigation
Prioritize treatments	

III) Goals & Objectives

CMFC Area CWPP Goals:

The goals of the CWPP include mitigation practices for hazardous fuel reduction, permanent firebreaks and structure ignitability reduction practices. They may also include public information and education. The specific goals of the CMFC CWPP implementation plan are:

- Fuel treatments are intended to support both firefighter and public safety during wildfire suppression emergencies.
- Guide actions to develop enhanced fire suppression capabilities and infrastructure.
- Fuel treatments will help to protect lives and property from wildland fires
- Fuel treatments will help to greatly reduce the potential of a high intensity crown fire from entering communities and destroying property.
- Fuel treatments will help to provide areas where fire suppression efforts can be effective and destructive wildfires are contained at a minimal size.

- Fuel treatments will provide areas where conditions exist that allow for prescribed fire and wildland fire use with decreased threat to communities.
- Fuel treatments will be based upon the best available science and multi-party monitoring that leads to adaptive management and flexibility in future fuels treatment planning and implementation.
- Fuel treatments will contribute toward restoration of healthy sustainable ecosystems that are resistant to natural disturbances such as drought, insects and wildfire.
- Increase public understanding of living in a fire-adapted ecosystem.
- Create and maintain fire-adapted human communities.
- Increase the community's ability to prepare for, respond to and recover from wildland fires.
- Recommend measures to reduce the ignitability of structures throughout the CWPP area.
- Improve community's preparedness for emergencies and evacuation.
- Raise community awareness of the issues and solutions of living in the wildland-urban interface.
- Assist residents in locating and securing resources for reducing risk.
- Instill a sense of personal responsibility for taking preventative actions regarding wildland fire.

CMFC Area CWPP Objectives:

The objectives of this CWPP are to set clear priorities for the implementation of wildfire mitigation in the CMFC Area. This also includes prioritized recommendations as to the appropriate types and methods of fuel reduction and structure ignitability reduction that will protect this community, individual structures and its essential infrastructure. The objectives should be as specific and measurable as possible.

- Increase number of CMFC Firewise participants, as appropriate.
- Provide detailed maps that facilitate communications with members of KFM and other fire departments responding to requests for mutual aid.
- High and Extreme ranked areas will work to decrease fuels to reduce wildfire intensity and impact in and around the community.
- Increase in number of Centers participating in response agreements with Baca fire, as appropriate.
- KFM will work to evaluate, upgrade and maintain community wildfire preparation and response facilities and equipment.
- KFM will help educate community members to prepare for and respond to wildfire.
- CMFC members will regularly evaluate, update and maintain planning commitments.
- CMFC members will work to develop and implement a comprehensive emergency response plan.

IV) Community Background and Existing Site Characteristics

This provides an overview of the area covered by the CMFC Area CWPP. It provides a description of the area including its location, development history, weather, historic fire conditions and land ownership.

Fire intensity and spread rate depend on the fuel type and condition (live/dead), the weather conditions prior and during ignition, and the topography. Generally the following relationships hold between the fire behavior and the fuel, weather and topography.

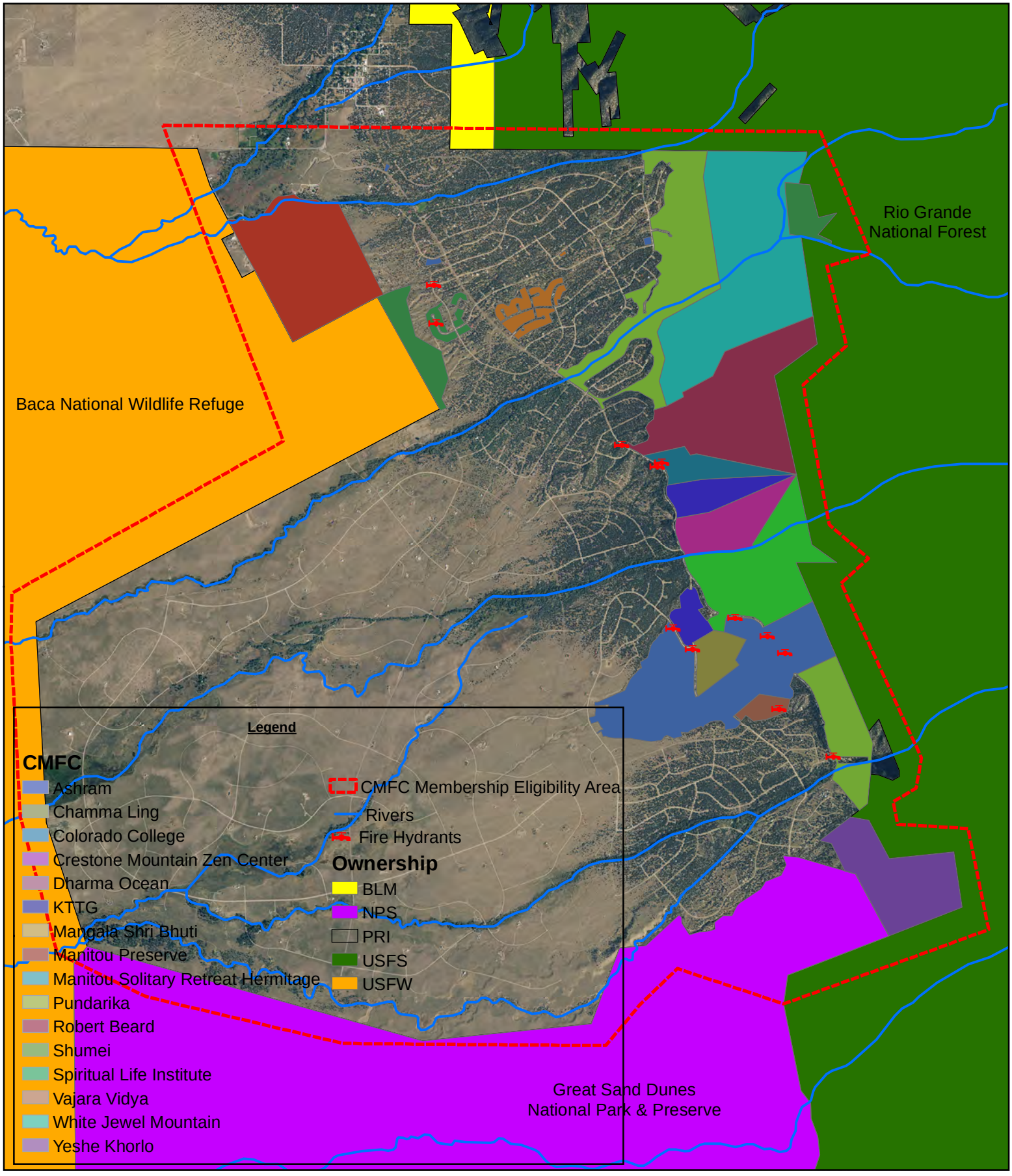
- **Area History -** Crestone started as a small mining town in the 1880's. The area subsequently was mined, logged and grazed. In the 1970s, a large land development, the Baca Grande, was established to the south and west of Crestone and where hundreds homes have been built. Since the 1980's, many spiritual Centers have been built on the eastern edge of the Baca Grande subdivision and adjacent to Rio Grande National Forest. Several world religions are represented, including: a Hindu temple, a Zen Center, a Spiritual Life Institute/ Carmelite monastery, several Tibetan Buddhist Centers, as well as other religious Centers. -*PM*
- **Community Size**- The focus area is the spiritual retreat Centers and Colorado College Baca Campus. The surrounding area is made up of the town of Crestone, the Baca Grande Subdivision, private land, and federal land. It is composed of a small village with the subdivision and the other

Centers and land adjacent to it. The area population seasonally varies between approximately 800 and 1,500 people. *-PM*

- **Historic Fires –** *PM***-** *(Note: Fire scars on trees exist throughout the area, confirming the occurrence of wildfire in this area for at least the past 200 to 300 years.)* According to fire ecologist Kathryn Alington, who studied the fire history of 14 creeks of the Northern Sangre de Cristo Mountains for her doctoral dissertation, each of the upper watersheds burns every 184 years on average, in a stand replacement fire. About 20% of the watershed burns during these stand replacement fires.
    - 1751 - Rito Alto Creek burned in a stand replacing fire.
    - Pre-1840's – A sea of prairie grass stretched from the Sangre de Cristo Mountains to the San Juan Mountains. The native grasses grew higher than a horse's belly.
    - 1850's – Big fire year for the entire area.
    - 1860's to 1900's – Logging occurred for settlement and mining.
    - 1882 – Wildfire threatened Crestone for two weeks, stopped at South Crestone Creek. Scars are still visible on ponderosas east of the Baca Grande firehouse.
    - 1982 – Upper Spanish Creek burned on Baca Corporation land. USFS came in to suppress wildfire as it began to spread.
    - 1994 – 2002 – Numerous grass fires <1 acre to ~ 5 acres. Lightning and human caused. Some forest fires, lightning and human caused, < 1 acre. Homes and/or other improvements were threatened on most of these fires.
    - 1999 – Lightning strike on Willow Creek in greenbelt in dense P/J-Ponderosa east of Badger Road. Smoke column identified ~ 17:00. Lack of detection could have led to a high probability of a large wildfire up Willow Creek.
    - 2000 – April - Sand Fire – Wildfire at Great Sand Dunes National Monument. Started from an ember that was at least two weeks old, out of Zapata Subdivision's burn pile. Winds that day were 50 mph sustained with gusts to 70 mph. The fire burned about 3120 acres, most of it on the first day. Zapata Subdivision was billed around $800,000 for the suppression of the fire.
    - 2001 – Lightning strikes, west of Baca Grande Firehouse, on the Ranch of Gary Boyce. BGVFD responded to Carmelite-Ranch border. Fire put out by heavy rains accompanying thunderstorm.
    - 2001 – Lightning strike, near Upper Willow Park, on Manitou Land, at Yeshe's cabin. Contained and controlled by BGVFD.
    - 2016 – Wildfire from lightning strike in Upper Spanish Creek watershed. Put out by subsequent rainfall. Fires from lightning also occurred in previous years in this watershed.
    - Other fires in similar fuel types in the SLV include: 2002 Million Fire by South Fork, 9,300 acres; 2006 Mato Vega Fire by La Veta pass, 14,000 acres; 2012 Boyce Ranch fire near Crestone, ~80 acres; 2013 Oxcart fire east of Villa Grove, 1,200 acres; 2013 West Fork Complex fire 110,000 acres.
    - For detailed records of other fires, especially between 2001 and 2016 check Baca Grand VFD for detailed fire records for other fires since most of them were in their response area(s). There have been numerous smaller fires, < 10 acres, mainly in grass/brush, and single and multiple tree lightning strikes from 2008 to present.
- **Fine Fuels -** are combustible materials less than ¼ inch in diameter and have a relatively high surface area to volume ratio. These characteristics allow the fuels to dry quickly and ignite more easily, resulting in rapid rates of fire spread with higher intensities than coarser fuels when they are abundant and continuous over an area. For a given fuel, the more there is and the more continuous it is, the faster the fire spreads and the higher the intensities. Common examples of fine fuels are grass, needles, leaves and small twigs.

- **Weather** - conditions affect the moisture content of the dead and live vegetative fuels. Dead fine fuel moisture content is highly dependent on the relative humidity and the degree of sun exposure. The lower the relative humidity and the greater the sun exposure, the lower will be the fuel moisture content. Lower fuel moistures produce higher spread rates and fire intensities.
  The climate and precipitation varies by elevation, with higher elevations being slightly cooler with more moisture. Winter highs average in the mid-20s and mid-30s. The summer highs are generally in the mid- 80s; rarely above 90. Precipitation averages around 13.5 inches.
- **Wind speed** - significantly influences the rate of fire spread and fire intensity. The higher the wind speed, the greater the spread rate and intensity.
  The wind is generally out of the southwest during the summer months and north during the winter months. The winds can vary from near calm to winter and spring gales averaging 35-45 miles per hour with gust as high as 70 mph.
- **Topography** - influences fire behavior principally by the steepness of the slope. However, the configuration of the terrain such as narrow draws, saddles and so forth can influence fire spread and intensity. In general, the steeper the slope, the higher the uphill fire spread and intensity.
  The general topography of the area is that the land further west is flat to gently sloping. As you move east the slope gently then substantially gets steeper. Elevation ranges from approximately 7,800 to approximately 8,800 feet. The area is located at the foot of the western slope of the Sangre de Cristo Range, in the northern part of the San Luis Valley.
- **Adjacent Landowners**- This varies by the Centers. All Centers have some adjacent private. The Centers to the east and furthest up slope are adjacent to the Rio Grande National Forest, however the NF land is far from any structures that NF fuels treatment is currently not needed. Colorado College and Spiritual Life Institute are adjacent to the Baca Wildlife Refuge. KTTG is adjacent to both Rio Grande NF and the Great Sand Dunes Park & Preserve. If Center structures are within 300’ of other private land then there should be a conversation with the adjacent landowner for treatment on their land as well. Priority should be given to work on Center land.
- **Wildfire Ignition Potential:** One of the most likely ignition sources within the area is an unattended religious fire. Currently the Centers do a good job observing red flag warnings and fire restrictions and this has not been a problem. The good diligent work on this should continue. The area receives lots of tourists that may let an errant cigarette start a fire.
- **Other Pertinent Information**-

Ownership Map



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V) Community Base Maps

Ownership:

The KFM Area CWPP incorporates land with various ownership as summarized below:

Land Ownership	Acres	Percentage
Haidakhandi Universal Ashram*	104	4
Chamma Ling*	58	2
Colorado College	307	11
Crestone Mtn. Zen Center - Dharma Sangha*	234	8
Blazing Mountain Retreat Center of Dharma Ocean*	96	3
KTTG	192	7
Mangala Shri Bhuti	497	17
Manitou	414	15
Pundarika	46	2
Shumei International Institute*	369	13
Spiritual Life Institute/Carmelite	125	4
Vajara Vidya	22	1
White Jewel Mountain	48	2
Yeshe Khorlo	320	11
Total	2,830	100
* CMFC members		

Communities:

These areas have been identified as WUI communities. The list is primarily based on areas located within the CWPP that meet the WUI criteria of having more than 1 house per 40 acres and wildland vegetation is more than 50 percent.

WUI Communities		
Ashram*	Shumei*	Crestone Mtn. Zen Center*
Chamma Ling*	Colorado College	Mangala Shri Bhuti
Dharma Ocean*	KTTG	Yeshe Khorlo
Pundarika	Spiritual Life Institute/Carmelite	

These areas have been identified as WUI areas of concern. The list is primarily based on large land holdings with a few structures on them. They **do not** have more than 1 house per 40 acres. If further development occurs in these areas they should be re-evaluated for their status as a WUI community.

WUI Areas of Concern		
Vajara Vidya	Manitou	White Jewel Mountain

For the purposes of this plan, the WUI boundaries were based off of the locations of structures. The entire acreage that a member owns may not be considered part of the WUI.

Each community was given a wildfire risk rating. The rating was based off of the average score of the structures assessed. The factors considered include: visible address, access, slope, background fuels, defensible space, roofing material, building exterior, other combustibles, decking & fencing, water source and other. While the overall wildfire risk rating is at a certain level, the ingress and egress to these Centers may be significantly higher.

Low Hazard	Moderate Hazard	High Hazard	Extreme Hazard	Not Rated
Ashram*	Chamma Ling*			Vajara Vidya
Shumei*	Crestone Mountain Zen Center*			Mangala Shri Bhuti
	Dharma Ocean*			Yeshe Khorlo
				Pundarika
				White Jewel Mountain
				Colorado College
				KTTG
				Spiritual Life Institute/Carmelite

After considering the location of the inhabited areas, critical human infrastructure, risk of wildfire CSFS has identified on the map a wildland-urban interface zone around the community assets, which in general includes the area within 200-400' from the community or structure. Ownership, natural and man-made barriers have been used to define the boundary of the community base map (e.g. highways, ridgelines, rivers, etc.).

VI) Community Hazard & Fuel Maps

Introduction:

The Community Hazards Maps are the same as the Community Base Map but with wildfire hazards from the CO-WRAP analysis. High numbers from any of these maps around your community means that substantial suppression difficulties may exist. These maps identify fuel and topography conditions that increase the communities' risk.

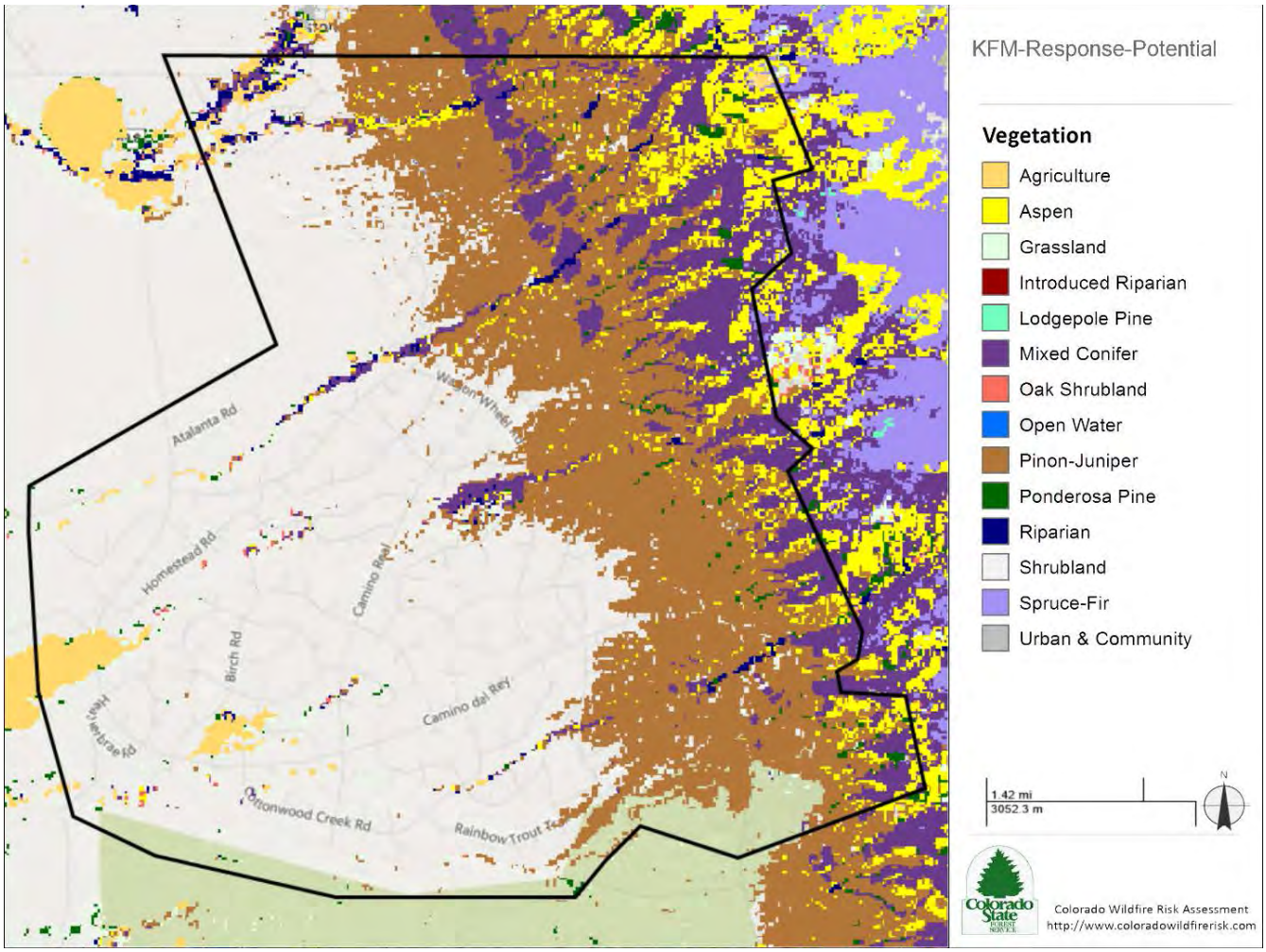
CO-WRAP Maps & Analysis:

The Colorado Wildfire Risk Assessment Portal (CO-WRAP) was used to generate reports on a variety of wildfire-oriented themes. CO-WRAP was developed by the Colorado State Forest Service, it is a tool designed to provide wildfire risk information to both resource managers and any interested citizens. Because CO-WRAP utilizes digital data at a resolution of 30 meter by 30 meter units (approximately 100 ft by 100 ft), smaller-scale differences are sometimes unable to be detected.

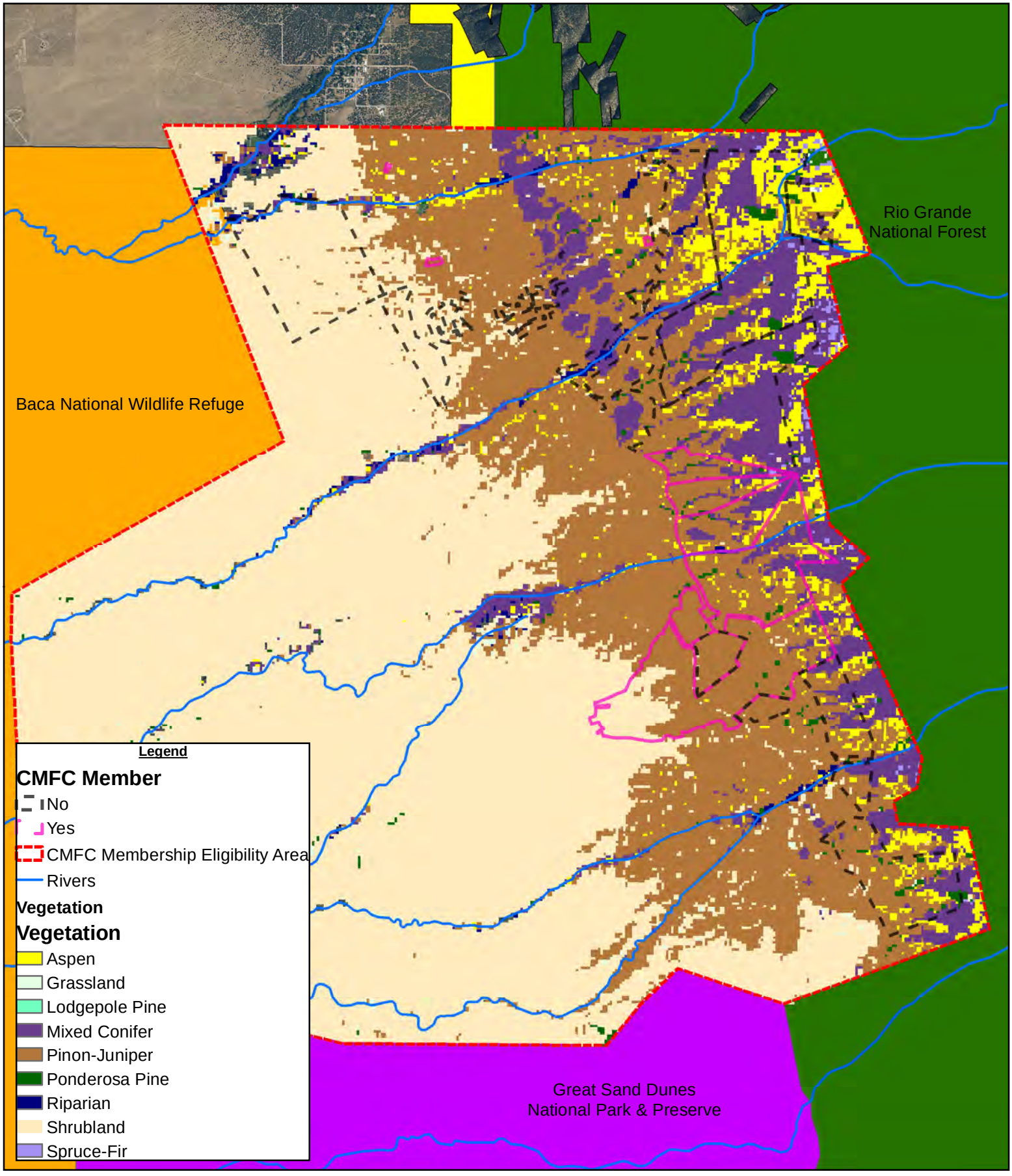
Maps generated by CO-WRAP showing vegetative cover and fuel type are shown on the following pages. These are useful illustrations of how the forests within the CWPP transition across a large area, and the amounts of each type found within the district. On any given parcel of land, there may be several different forest and fuel types present, which will not be reflected on these maps as per the reasons above. Nor do these maps provide any information as to important forest attributes such as tree density, size, age or overall health. These maps do provide information for landscape-scale project planning, but only on-the-ground examination can provide planners the necessary information for detailed project layout.

Vegetation

Depicts general vegetation landcover and fuel type. These are useful illustrations of how the forests within the CWPP transition across a large area and the amounts of each type found within the CWPP. On any given parcel of land, there may be several different forest and fuel types present. Nor do these maps provide any information as to important forest attributes such as tree density, size, age or overall health. These maps do provide information for landscape-scale project planning, but only on-the-ground examination can provide planners the necessary information for detailed project layout.



Vegetation



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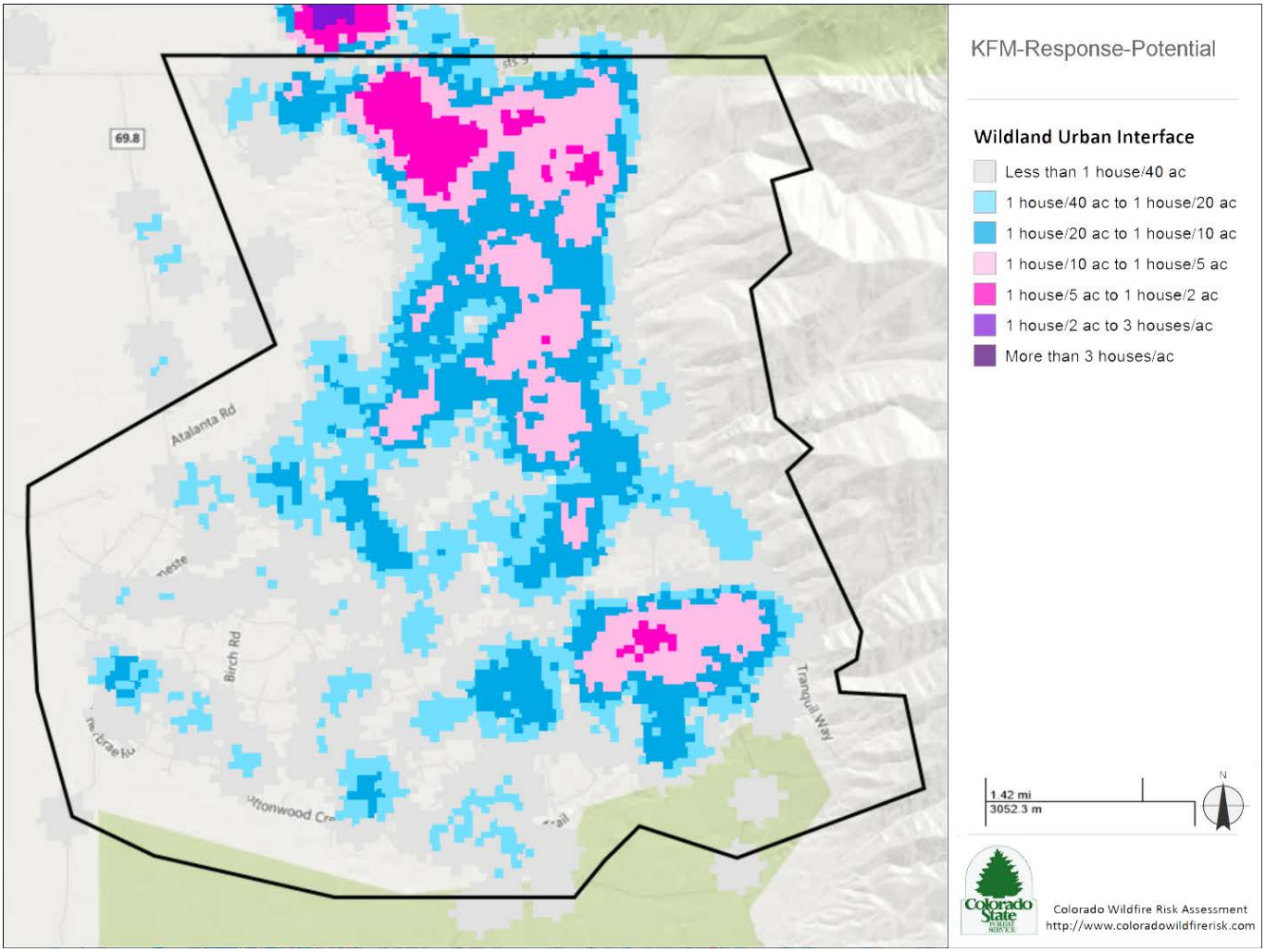
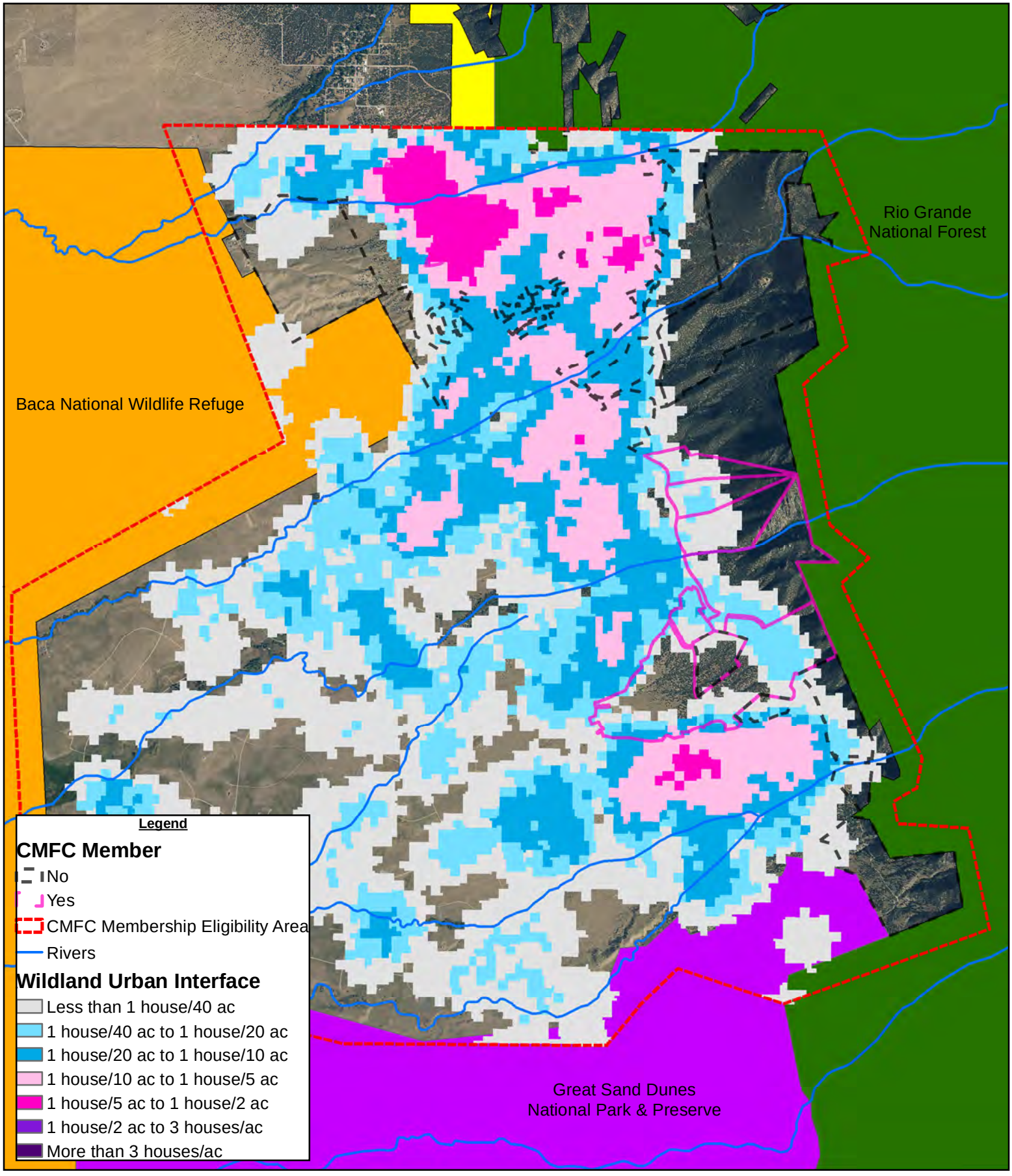
Wildland Urban Interface (WUI)

Reflects housing density depicting where humans and their structures meet or intermix with wildland fuels. Housing density amongst the Centers is not high enough to influence this map. At some Centers the structures are close enough together that their defensible zones may overlap. In this case treatment should overlap as well and "visual screening" should not influence mitigation efforts.

The adjacent Baca has much greater density of housing. A fire starting in those areas could affect the Centers. In order to help address this concern the residents of the Baca should be invited to education events so they can learn how to mitigate their fuels.



Wildland Urban Interface



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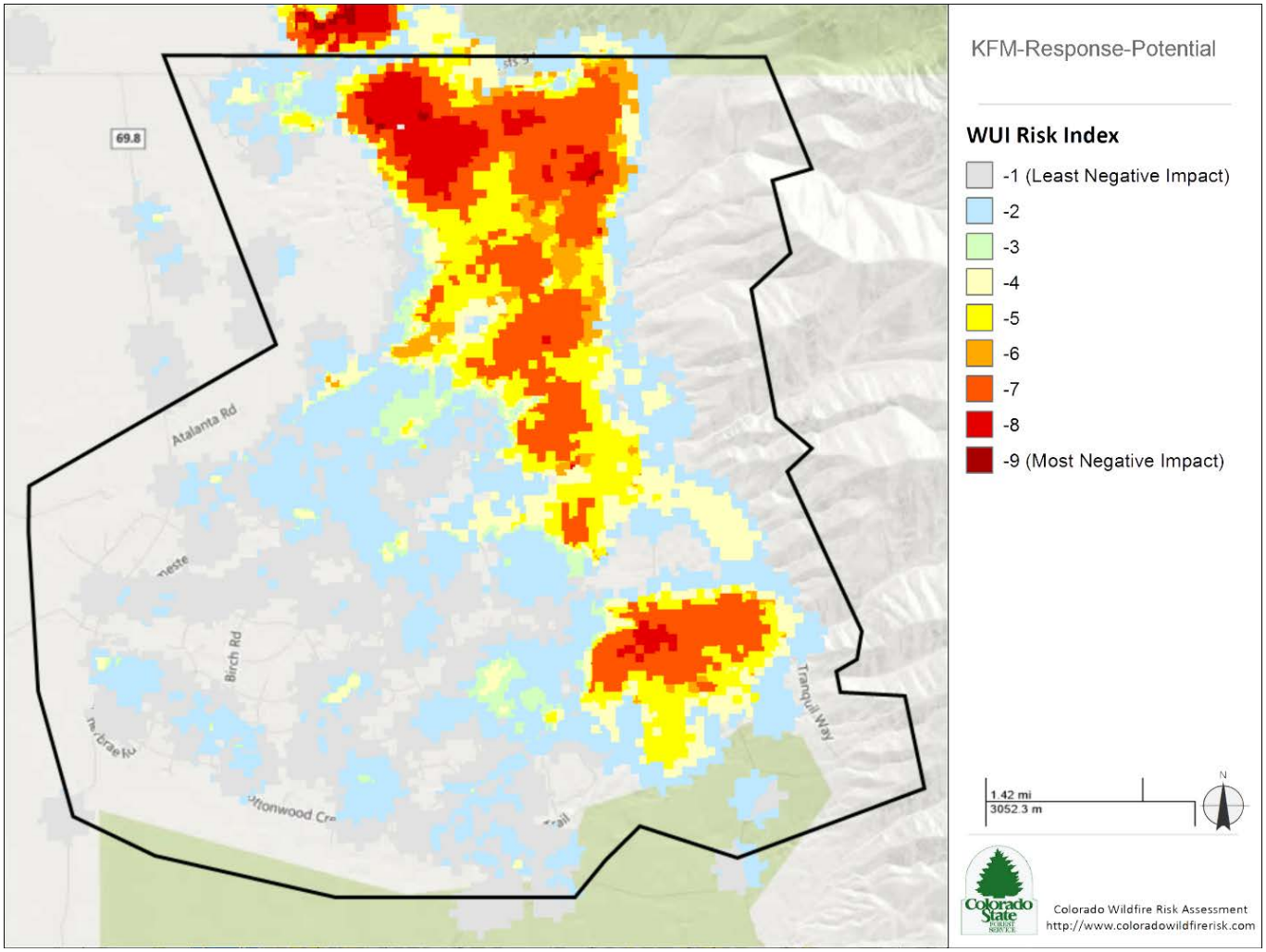
The Wildland-Urban Interface (WUI) Risk Index

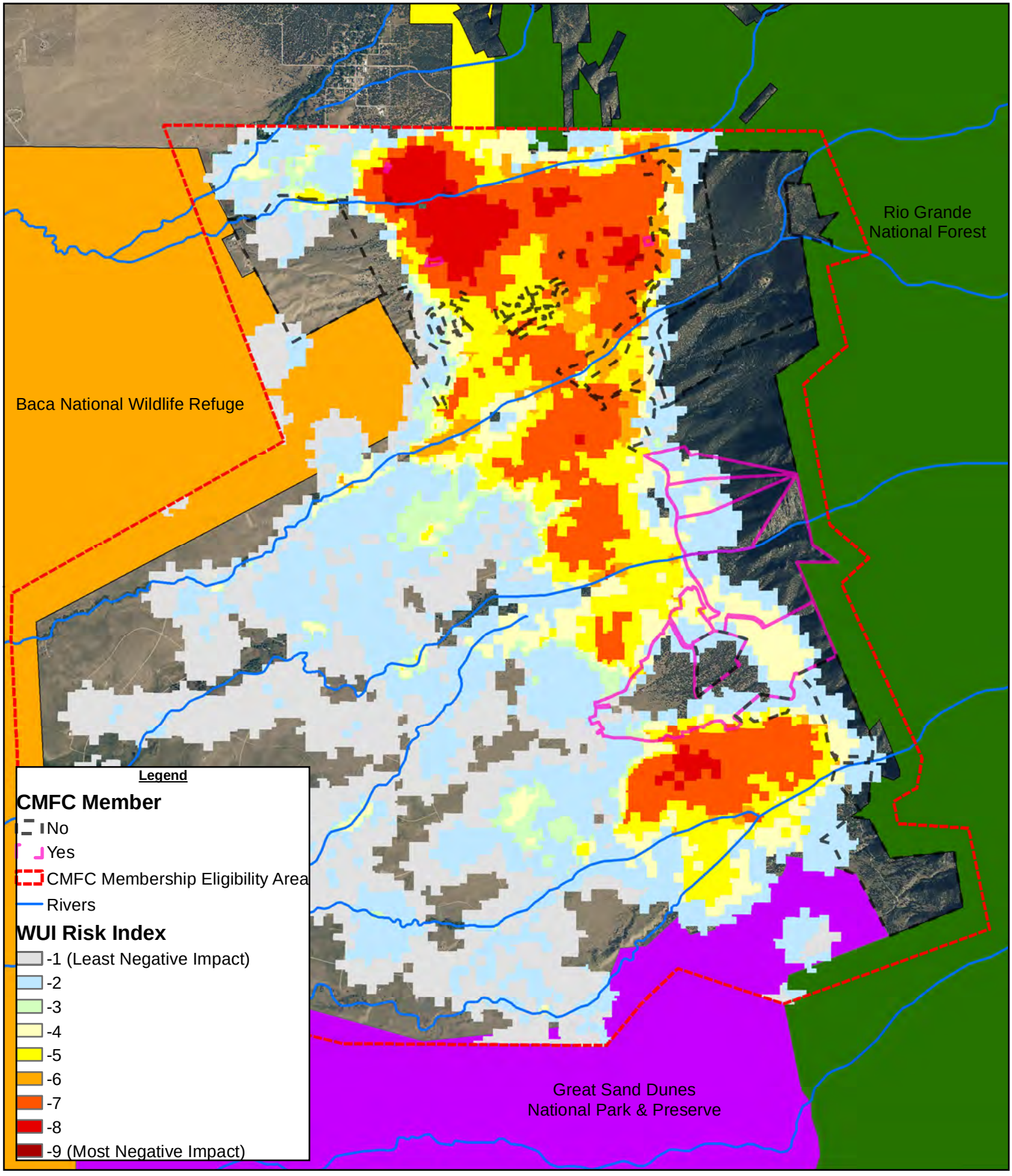
Depicts a rating of the potential impact of a wildfire on people and their homes. The range of values is from -1 to -9, with -1 representing the least negative impact and -9 representing the most negative impact. For example, areas with high housing density and high flame lengths are rated -9, while areas with low housing density and low flame lengths are rated -1.

The low housing density of the Centers means this index is low.

The adjacent Baca has much greater density of housing and higher WUI Risk Index. Due to this the same reccommendations from the WUI map applies. A fire starting in those areas could affect the Centers. In order to help address this concern the residents of the Baca should be invited to education events so they can learn how to mitigate their fuels.



WUI Risk Index



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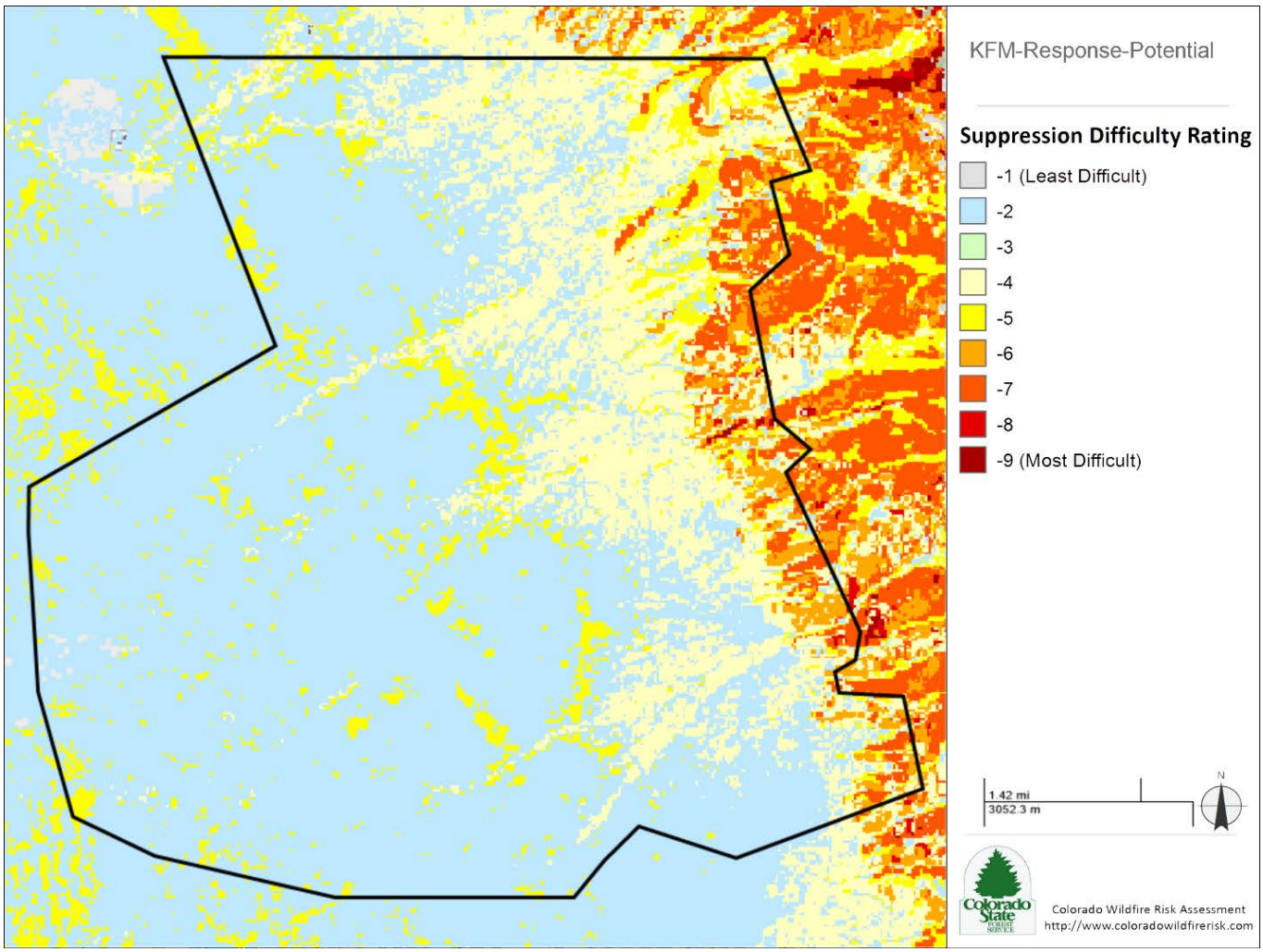
Suppression Difficulty

This rating reflects the difficulty or relative cost to suppress a fire given the terrain and vegetation conditions that may impact machine operability. This layer is an overall index that combines the slope steepness and the fuel type characterization to identify areas where it would be difficult or costly to suppress a fire due to the underlying terrain and vegetation conditions that would impact machine operability. The amount of effort, risks present, the tactics and resources employed in suppression of wildland fires is dictated to a large extent by the current and predicted fire behavior.

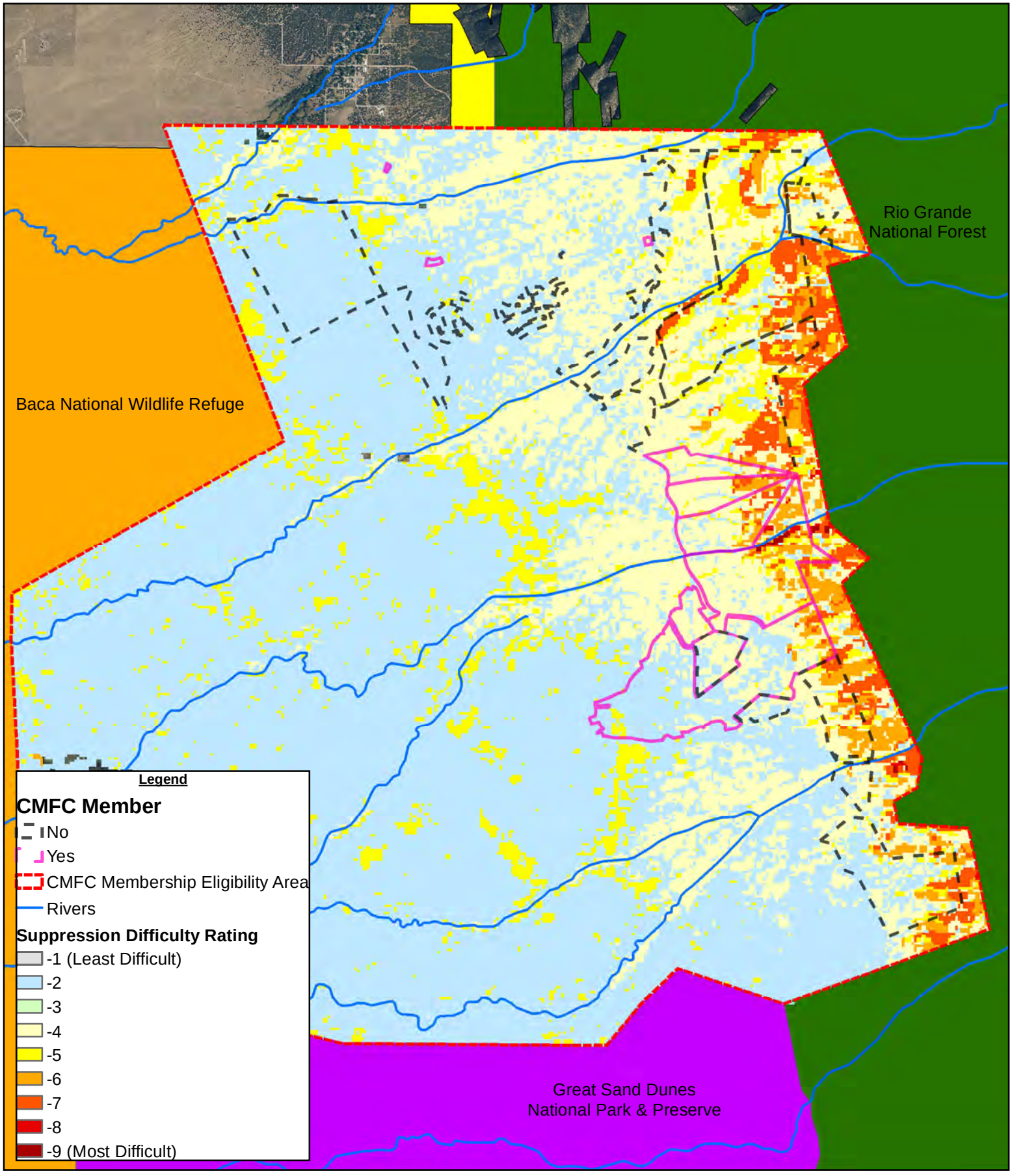
Other important factors may include resource availability, access, ownership and regulations. During the initial attack phase of a fire, the amount of difficulty suppression forces encounter in traveling to and attacking the fire is an important determinant of whether the fire will be quickly brought under control or rage out of control causing great expense and loss.

This is very location dependent on where each Center falls. Due to this each Center should take a variety of actions-

- Start reducing fuel through creating defensible space.
- Increase safe access by thinning vegetation along access roads.
- Decrease fuels beyond 100’ defensible space.



Suppression Difficulty



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Rate of Spread

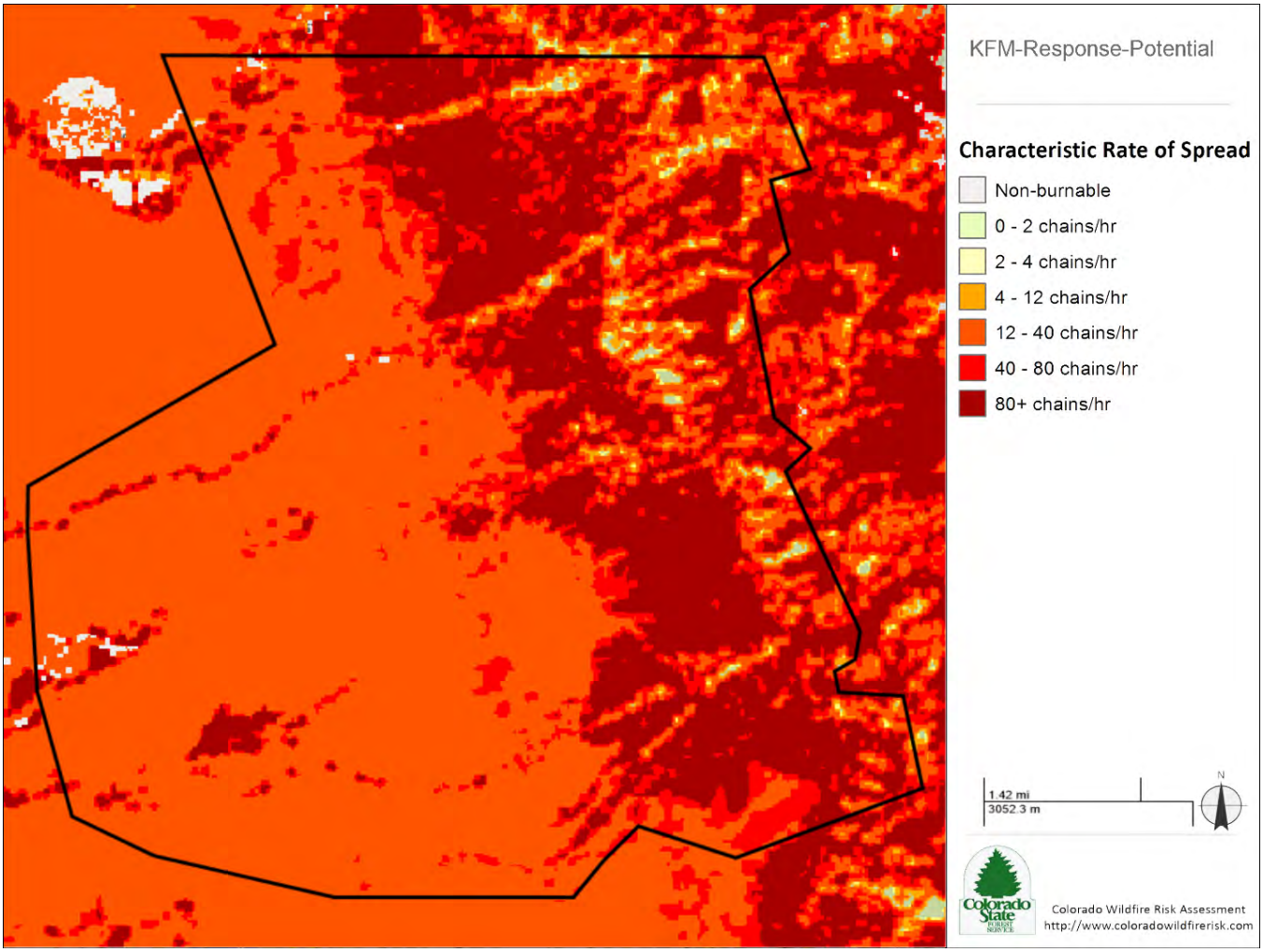
Represents a measure of the expected rate of spread of a potential fire front over time. Rate of spread is influenced by fuels, weather and topography. This measurement represents the maximum rate of spread of the fire front.

A fire's rate of spread also factors into the tactics and resources employed to fight it. Very low rates of spread mean that firefighters may be able to safely attack the fire from all directions or spend time mitigating fuels around structures. A fire moving very quickly may only be safely attacked from the rear and sides (known as a "flanking attack") while the fire front is allowed to burn to a road or some other obstacle and firefighters may not have time to mitigate fuels around a structure.

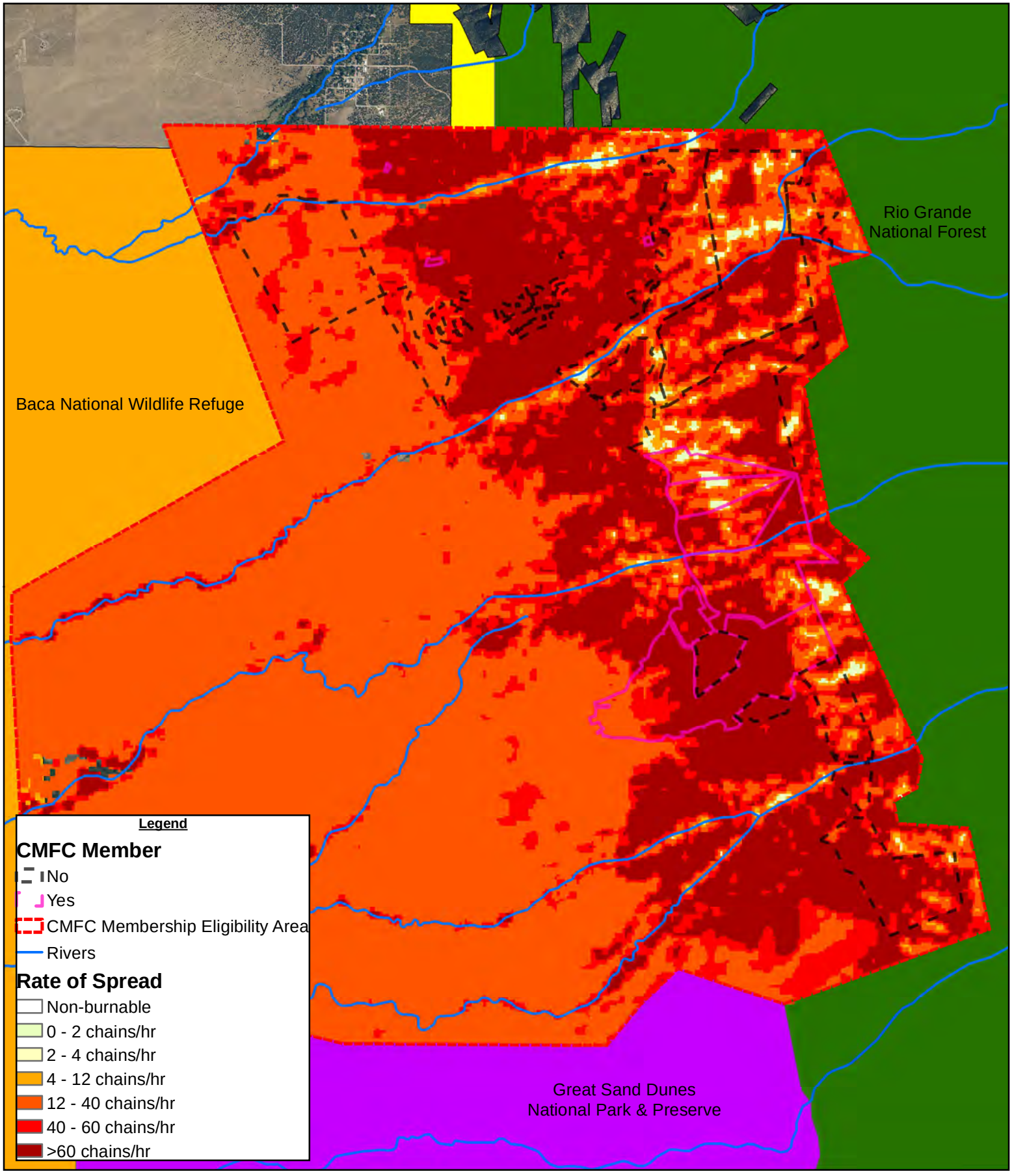
Predictions about rates and direction of a fire's spread also influence emergency managers' decisions regarding public safety. Determining areas for immediate evacuation versus those which may only be on alert are one such example.

The knowledge of how fuel types affect both fire intensity of rate of spread is important to landowners, foresters and fire managers as they seek to reduce risks to lives and property from wildfires. Not only do these measures dictate actions during a wildfire, they also must be considered when planning preventative measures, such as hazard reduction thinning or fuel break construction.

Centers should anticipate very limited mitigation time and reduce fuels prior to any fire threats.



Rate of Spread



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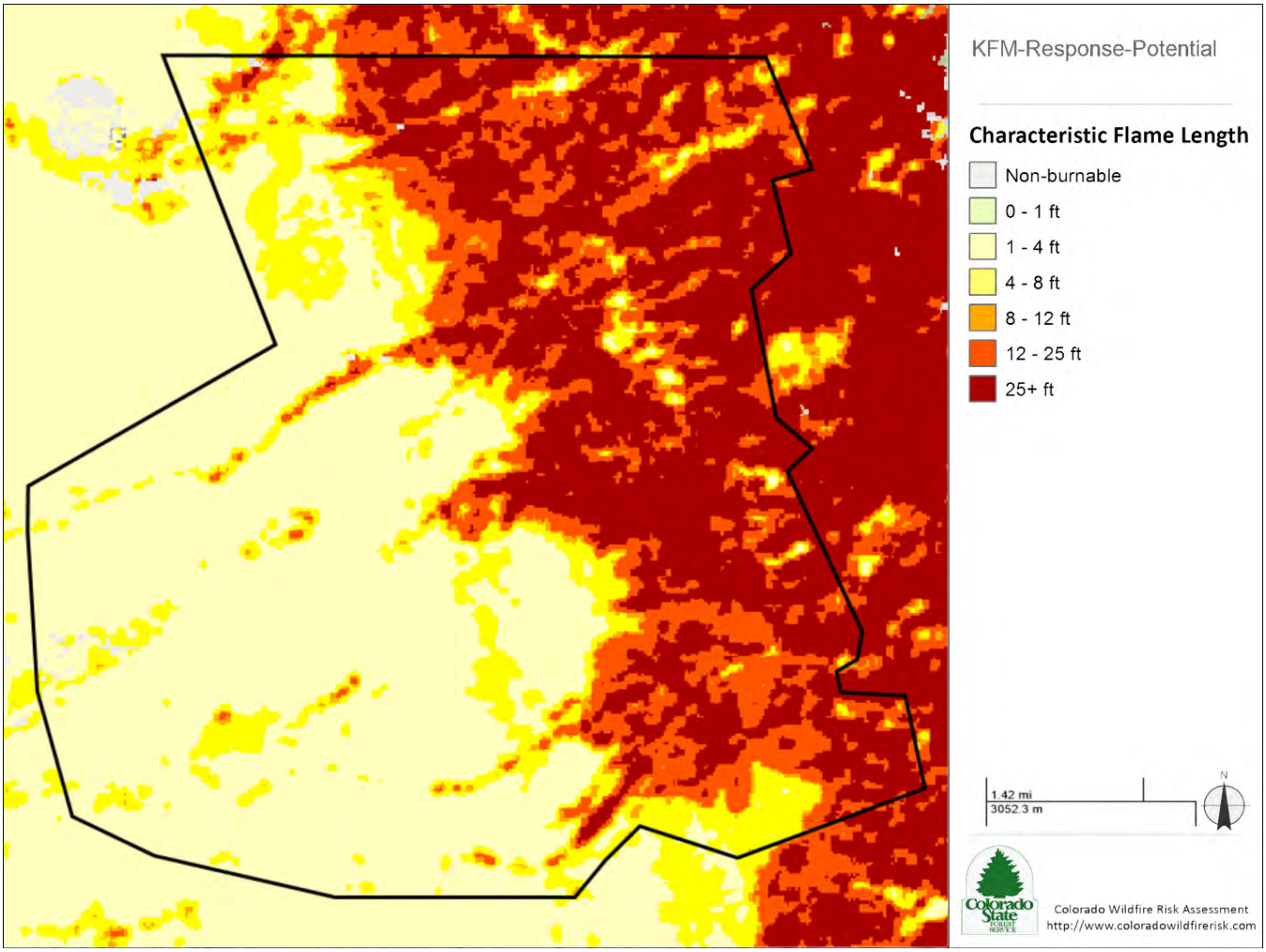
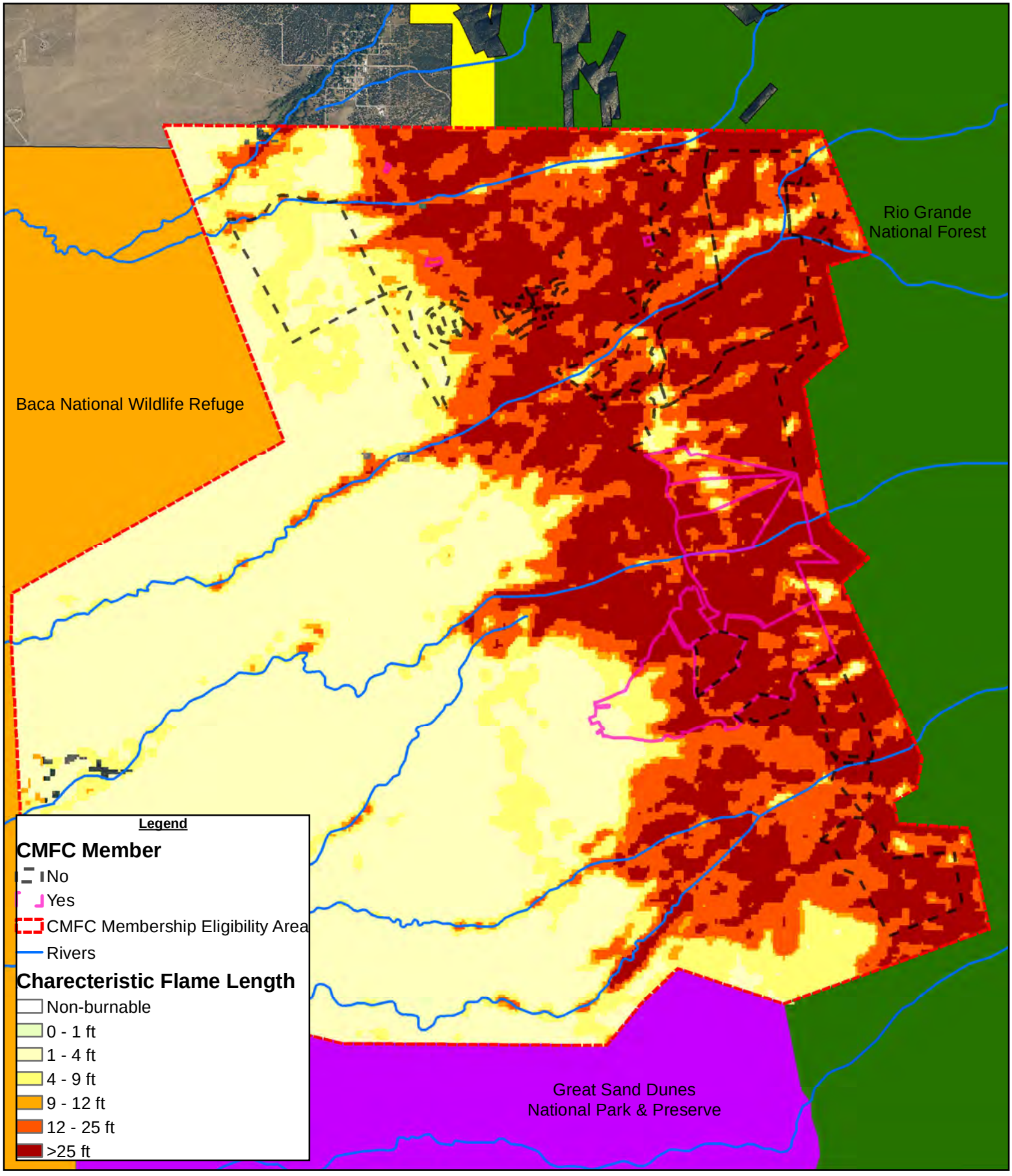
Flame Length

Represents the measure of the expected flame length of a potential fire. Flame length is influenced by fuels, weather and topography. It is an indicator of fire intensity and is often used to estimate how much heat the fire is generating. Since flame length describes the intensity of a fire, it follows that when lengths are low, firefighters and machinery can get close to flame front, and when lengths are high, these resources must be positioned further away. Flame lengths that exceed 4 feet mean hand crews cannot safely control the fire.

Due to the anticipated flame lengths firefighters may not attempt to protect structures. Centers can reduce this risk by performing mitigation activities where the fuel load is reduced and fuel type is modified prior to a wildfire event.



Flame Length



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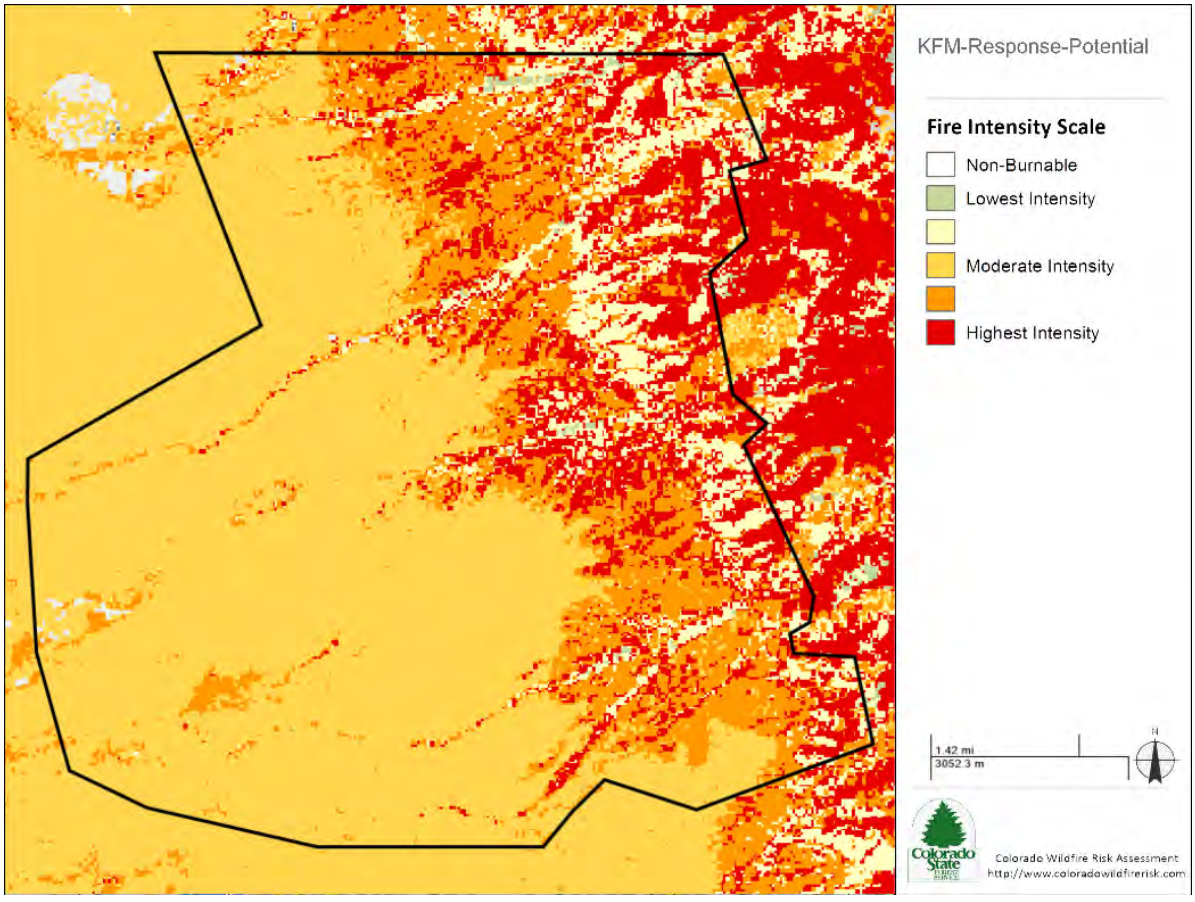
Fire Intensity Scale

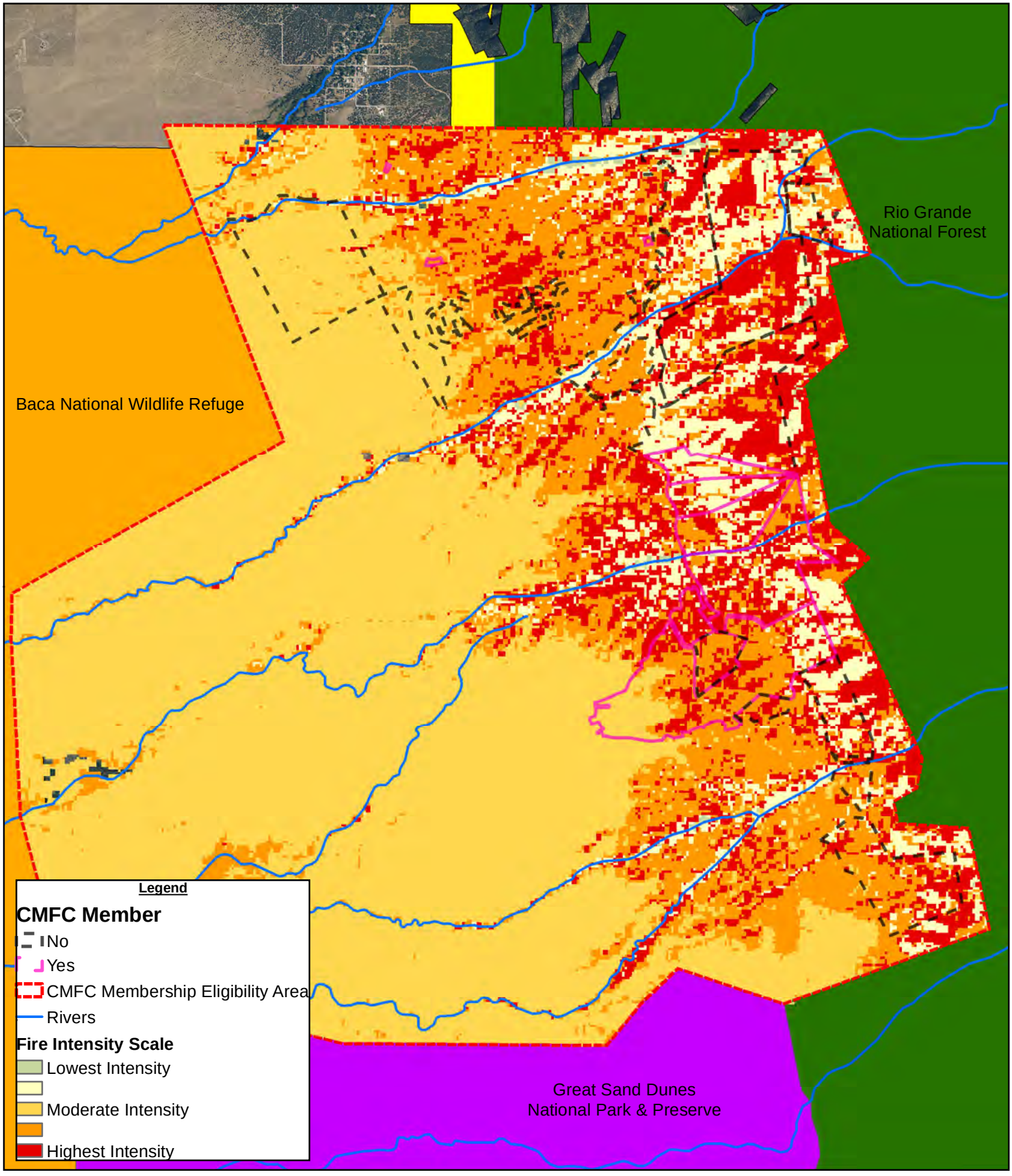
Specifically identifies areas where significant fuel hazards and associated dangerous fire behavior potential exist. Similar to the Richter scale for earthquakes, FIS provides a standard scale to measure potential wildfire intensity. FIS consist of five (5) classes where the order of magnitude between classes is ten-fold. The minimum class, Class 1, represents very low wildfire intensities and the maximum class, Class 5, represents very high wildfire intensities. It only evaluates the potential fire behavior for an area.

1. **Class 1, Lowest Intensity:** Very small, discontinuous flames, usually less than 1 foot in length; very low rate of spread; no spotting. Fires are typically easy to suppress by firefighters with basic training and non-specialized equipment.
2. **Class2, Low:** Small flames, usually less than two feet long; small amount of very short range spotting possible. Fires are easy to suppress by trained firefighters with protective equipment and specialized tools.
3. **Class 3, Moderate:** Flames up to 8 feet in length; short-range spotting is possible. Trained firefighters will find these fires difficult to suppress without support from aircraft or engines, but dozer and plows are generally effective. Increasing potential for harm or damage to life and property.
4. **Class 4, High:** Large Flames, up to 30 feet in length; short-range spotting common; medium range spotting possible. Direct attack by trained firefighters, engines, and dozers is generally ineffective, indirect attack may be effective. Significant potential for harm or damage to life and property.
5. **Class 5, Highest Intensity:** Very large flames up to 150 feet in length; profuse short-range spotting, frequent long-range spotting; strong fire-induced winds. Indirect attack marginally effective at the head of the fire. Great potential for harm or damage to life and property.

The fire intensity scale indicates CMFC Area has the potential for moderately dangerous fire conditions. Centers should anticipate this and start reducing fuel through creating defensible space.



Fire Intensity



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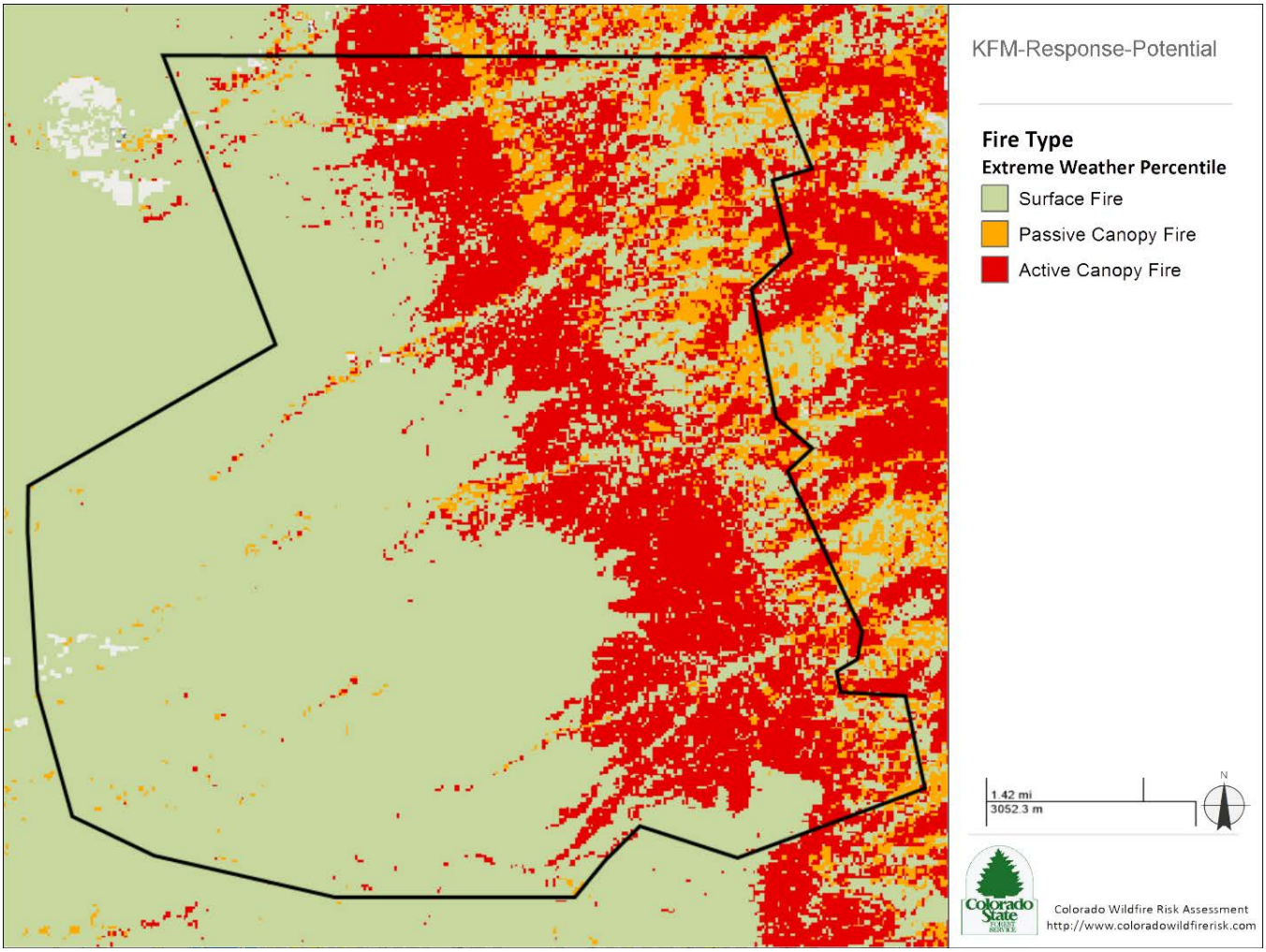
Fire Type – Extreme Weather

Represents the potential fire type under the most extreme fire weather conditions. The type of fire determines how firefighters may be able to suppress the fire. Surface fires means that firefighters may actively engage the fire and may be able to be in the area to protect structures. Canopy fires mean that aerial resources are the main form of suppression and firefighters may not be able to safely engage the fire on the ground.

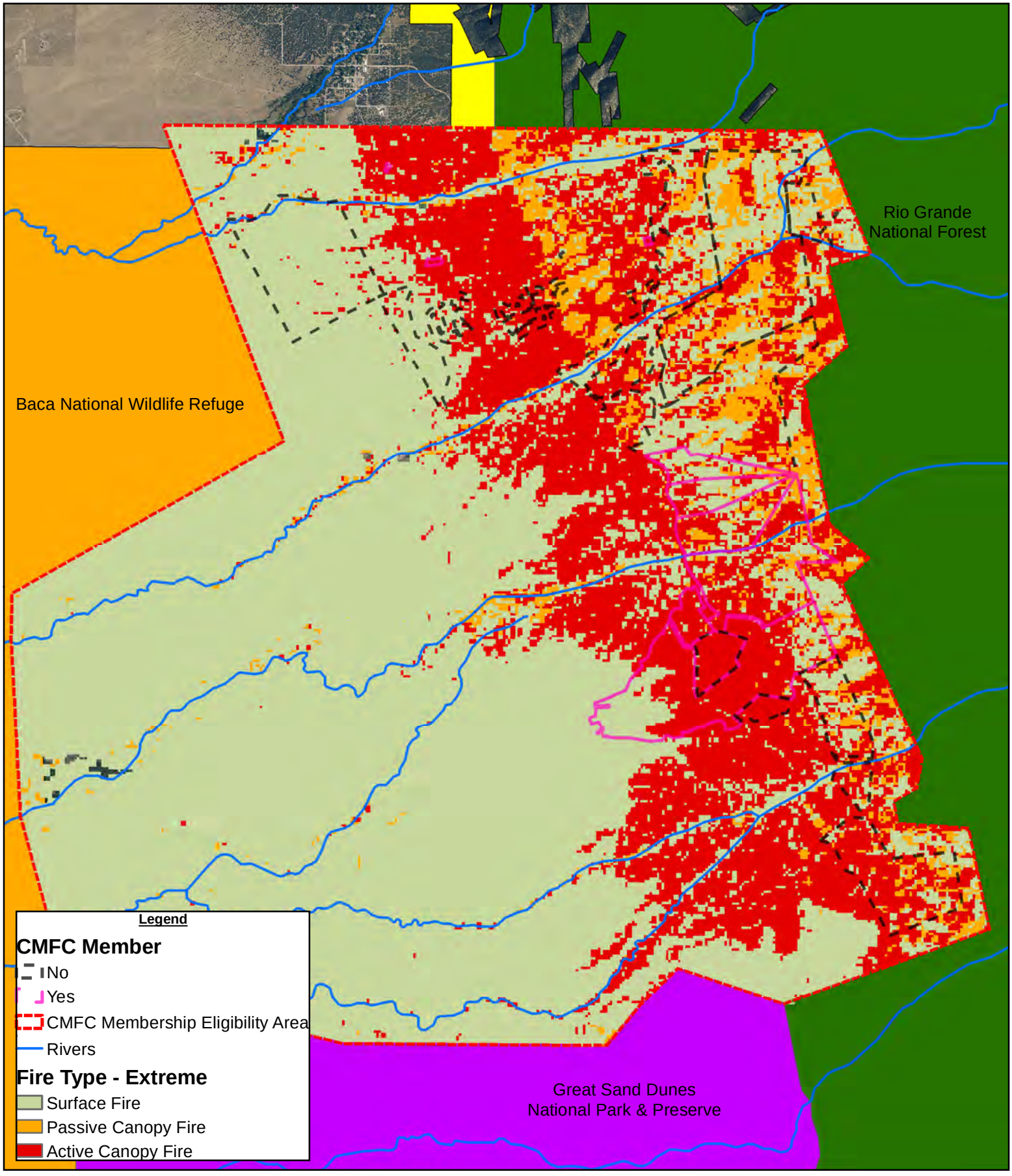
A *Surface Fire* spreads through surface fuel without consuming any overlying canopy fuel. Surface fuels include grass, timber litter, shrub/brush, slash and other dead or live vegetation within about 6 feet of the ground. Surface fires allow firefighters to actively engage the fire and work in the area to protect structures.

Canopy fires are very dangerous, destructive and difficult to control due to their increased fire intensity. From a planning perspective, it is important to identify where these conditions are likely to occur on the landscape so that special preparedness measure can be taken if necessary. Typically canopy fires occur in extreme weather conditions. A *Passive Canopy Fires* burns the crowns of individual trees or small groups of trees. Whereas an *Active Canopy Fire* burns the entire fuel complex (canopy) is involved in flame. Canopy fires often require aerial resources to be used as the main form of suppression since firefighters may not be able to safely engage the fire on the ground.

Due to the anticipated fire type firefighters may not attempt to protect all structures. Centers may protect their homes in advance by creating defensible space in advance.



Fire Type - Extreme



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VII) Individual Community Assessments

Included in this assessment are observations made while visiting CMFC members. The assessment addresses the ease with which home ignitions can occur under severe wildfire conditions and how these ignitions might be avoided within the home ignition zones of affected residents. CMFC members can reduce their risk of destruction during a wildfire by taking actions within their home ignition zones. This zone principally determines the potential for home ignitions during a wildland fire; it includes a house and its immediate surroundings within 100 feet.

The result of the assessment is that wildfire behavior and home survivability will be dominated by the residential characteristics of this area. The good news is that by addressing community vulnerabilities, residents will be able to substantially reduce their exposure to loss. Relatively small investments of time and effort will reap great rewards in wildfire safety.

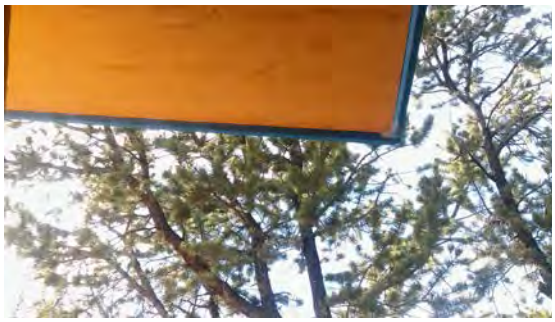
To avoid a home ignition, an owner must eliminate the wildfire's potential relationship with his/her house. This can be accomplished by interrupting the natural path a fire takes. Changing a fire's path by creating defensible space is an easy-to-accomplish task that can result in avoiding home loss. To accomplish this, flammable items such as dead vegetation must be removed from the area immediately around the structure to prevent flames from contacting it.
Also, reducing the volume of live vegetation will affect the intensity of the wildfire as it enters the home ignition zone.

Each community write-up that follows can be regarded as an individual document. As a result, you will see recommendations such as creating defensible space that apply to all communities.

Observations for Improvement – Trends seen at multiple Centers.

Dry weeds can be highly flammable, but easy to remove.

Vegetation is too close to the propane tank.



Vegetation is overhanging roof and should be trimmed back or removed.

Vents should be screened with 1/8" or less size holes.

Observations (*Solutions*)

The community recommendations address the goals of the plan, identifies specific actions needed to complete the goals of the wildfire plan and identifies responsible parties, resources and priorities.

General Observations	**Observed**
Use of flammable roofing materials – wood shake shingles. *-Replace with Class A rated roofing material – asphalt shingles or metal.*	
Overlapping home ignition zones (less than 200 feet between houses). *-Ensure adjacent neighbor is creating a defensible zone.*	X
Dense/unhealthy vegetation. *-Remove dense/unhealthy vegetation.*	X
Flammable vegetation in direct contact with houses. *-Prune or remove vegetation from within 10 feet of house.*	X
Leaf/needle build-up on roofs/gutters. *-Remove all leaf/needle build-up from roof /gutters.*	X
Flammable furniture/cushions on decks or porches. *-Remove from deck if when not at residence.*	X
Attached wooden fences/decks. *-Replace wooden fence adjacent to house with metal.* *-Keep deck free of leaf/needle litter, vegetation adjacent/under.*	X
Vinyl soffits. *-Replace with metal or wood.*	
Chimney is not screened or has a spark arrestor. *-Screen chimney*.	
The deck is being used for a storage area, especially with firewood or other combustible material. *-Remove all combustible material*.	X
Trees in home ignition zone not pruned up. *-Prune trees 10 feet tall or 1/3 height of tree.*	X
Trees in home ignition zone with touching crowns. *-Thin trees to 10-foot spacing between tree crowns.*	X
Grasses and weeds taller than 6 inches. *-Mow to height of 6 inches or less.*	X

Branches over hanging house. *-Trim branches or remove tree.*	X
Address and street sign is not clearly visible reflective material. *-Label with 4 inch reflective lettering.*	X

Recommendations- Primary concerns and addressed in the Community Action Plan include:

- **Structures**: within CMFC vary widely in design and construction materials. The newest structures have been constructed using modern construction materials including composite decking, metal or composite roofing material, double-paned windows and screened air vents. In older structures where these construction techniques and materials are not present, homeowners should be made aware of the risks inherent in their structures, and plans should be made to replace materials and / or to correct deficiencies.

- **Defensible space**: is the most important action a homeowner can do to protect their home from wildfire. While some structures in the community have good defensible space and others are making progress, some structures do not. **Creating and maintaining defensible space around all of the structures in the community is a top priority.** This includes treatment of fine fuels as well as the thinning of dense tree stands to introduce more canopy spacing between individual trees and surrounding homes.

- **Debris**: For structures surrounded by forests, debris accumulation on roofs and in gutters is an issue that will require constant vigilance. Also it is important to remove debris accumulations next to foundations and underneath decks. **Every structure must have someone be vigilant to areas where such accumulations may exist and make sure they are removed promptly, as these fine fuels have proven exceedingly receptive to ignition from embers.** Additional actions, such as placing firewood and combustible outdoor furniture an appropriate distance from structures are some of the simplest, cheapest and most effective actions that owners may take to protect their homes from wildfire.

- **Grass: In areas where only grass surrounds a structure, it is important that landowners mow regularly to reduce the height and amount of grass and other easily ignited forms of vegetation.** Where and when possible, grass should receive irrigation as green grass does not ignite and spread fire as readily as dry grass. Owners must exercise care when mowing rocky areas, as blades hitting rocks can create sparks which may ignite fires, especially in dry grass. To avoid starting fires, it is recommended that mowing occur during cooler times of the day and when humidity is high, or following recent moisture.

- **Roads**: within CMFC are of good quality gravel and are well-maintained. In the west and at lower elevations, surrounding fuels are commonly grass with occasional rubber rabbitbrush or cottonwood. At the upper elevations, heavier forest fuels predominate. **It is strongly recommended that vegetation be thinned alongside of all roads to the maximum extent possible, especially in forested areas. Turnarounds were observed to vary in the ability for firefighting apparatus to turn around effectively and efficiently. Turnarounds should also be thinned of surrounding vegetation as much as possible. Where turnarounds do not exist they should be created.**

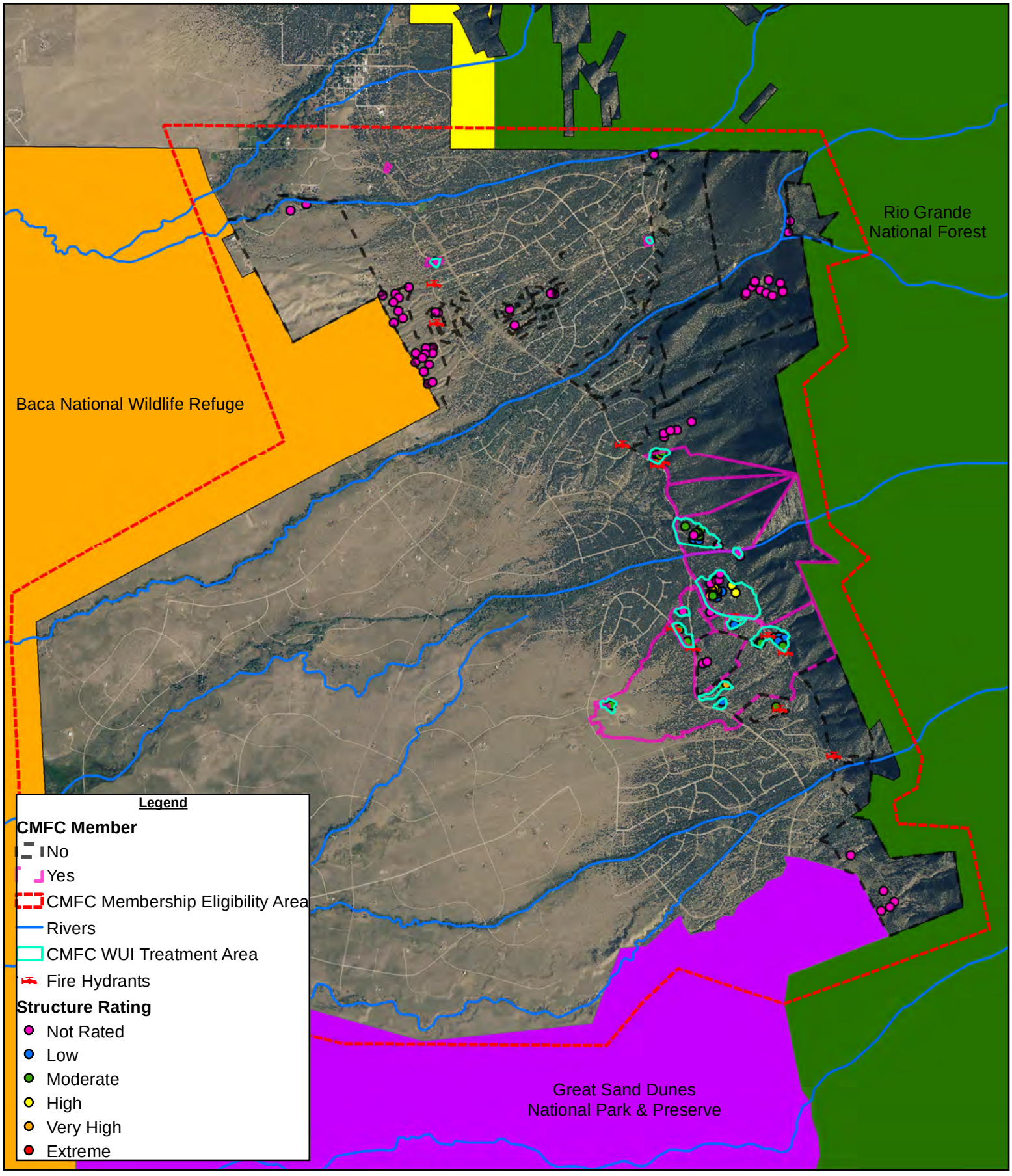
- **Roads**: In several instances, sharp curves and intersections were surrounded by moderately tall vegetation. These particular areas present increased hazards for both residents and emergency personnel, especially in the event of a wildfire. Limited visibility on curves increases the chance of vehicle collisions, and in the event such accidents block traffic, steep slopes on either side do not allow traffic to pass. **It is recommended that vegetation be thinned as far away from the**

roadway as possible to maximize visibility. Warning signs and shoulder reflective posts may also be of benefit.

- **Propane Tanks**: Where present, propane tanks should be either on same slope and more than **30 feet** away from structures or buried if the site allows. In a wildfire situation, an uphill propane tank that vents gas could allow the gas to pool and ignite down slope of the tank in the vicinity of the house. Propane tanks should also not be placed uphill because propane is heavier than air and a leak may cause the propane to build up in the house. It is also recommended that all flammable vegetation growing within **10 feet** of propane tanks be removed and replaced with nonflammable ground cover, such as gravel or rocks.
- **Electric Utilities**: While most residents of CMFC are served by underground electric lines, some overhead electric lines are present. At lower elevations where most vegetation is fairly low, the hazards posed by trees falling onto lines and igniting fires is low. Where the lines extend into taller timber, this hazard must be recognized. Vehicle collisions with utility poles are another potential source of ignition source. Any fuels along electric line rights-of-way could ignite and cause poles to be burned and lines to fall, posing a significant hazard to both residents and emergency responders. **Residents should be vigilant to any hazards posed by electric lines and notify SLV REC to remedy these hazards.**
- **Water Sources**: There are several water sources available to suppression forces. There are multiple hydrants. Some hydrants are in places located some distance from structures. Having nearby hydrants available allows suppression forces to access water more quickly and reduces pumping set-up and travel time. **It is recommended that Centers cooperate with fire department officials to plan for the location and installation of additional hydrants or cisterns in the future.** Multiple hydrants are hidden by vegetation. **Vegetation around all hydrants should be removed so they can be easily located.**
- **Water Sources**: Coordinate with Baca Grande Water and Sanitation District and BGVFD to map all fire hydrants, cisterns and drafting sites. Mark hydrants using NFPA 291 color coding. **Marking them with reflective material would also be useful.**
- **It is recommended that Centers construct evacuation plans for their particular location, mapping suitable safety zones based on the potential fire approach directions.**
- **Road Signs**: It is important that each participating group identify its land entrance with a sign that is easily read day and night. Many of the groups' lands are accessed by the 100 miles of roads and a myriad of intersections in the Baca Grande where road signs are sporadically available. It can be difficult to determine one's location. While local first responders may know where individual locations are, it is certain that mutual aid forces coming in from another community will struggle to find a direct route to an incident. Many groups have a one way in/one way out scenario and this ingress/egress is not always clear. Each group is also responsible for the safety of their visitors. Evacuation routes and/or shelter in place strategies need to be planned, mapped, implemented, and communicated, as life safety is the first priority.
- **Mapping**: Further mapping should occur as additional members are interested in joining. Structures should be rated and mapped. WUI treatment areas for each community should be mapped. All roads and trails should be mapped. These may be able to be enhanced with some thinning to create a fuelbreak. Knowing where they are also allows firefighters to know how to access areas.
- **Summary**: CFMC members are reminded to be conscious of keeping high intensity fire more than 100 feet from their homes. It is important for them to avoid fire contact with their structures. This includes firebrands. The assessment team recommends the establishment of a 'fire free zone',

allowing no fire to burn within **ten feet** of a house by removing fuels located there. It is a bad idea for fire to touch a house during a wildfire. Remember that, while wildfire cannot be eliminated from a property, it can be reduced in intensity. Centers are reminded that street signs, addresses, road widths and fire hydrants do not keep a house from igniting. Proper attention to their home ignition zones does. They should identify the things that will ignite their homes and address those. Weather is, of course, of great concern during wildfire season. When fire weather is severe, Centers should remember not to leave flammable items outside. This includes rattan doormats, flammable patio furniture, firewood stacked next to the house, or other flammables.

Structure Overview



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Alamosa District

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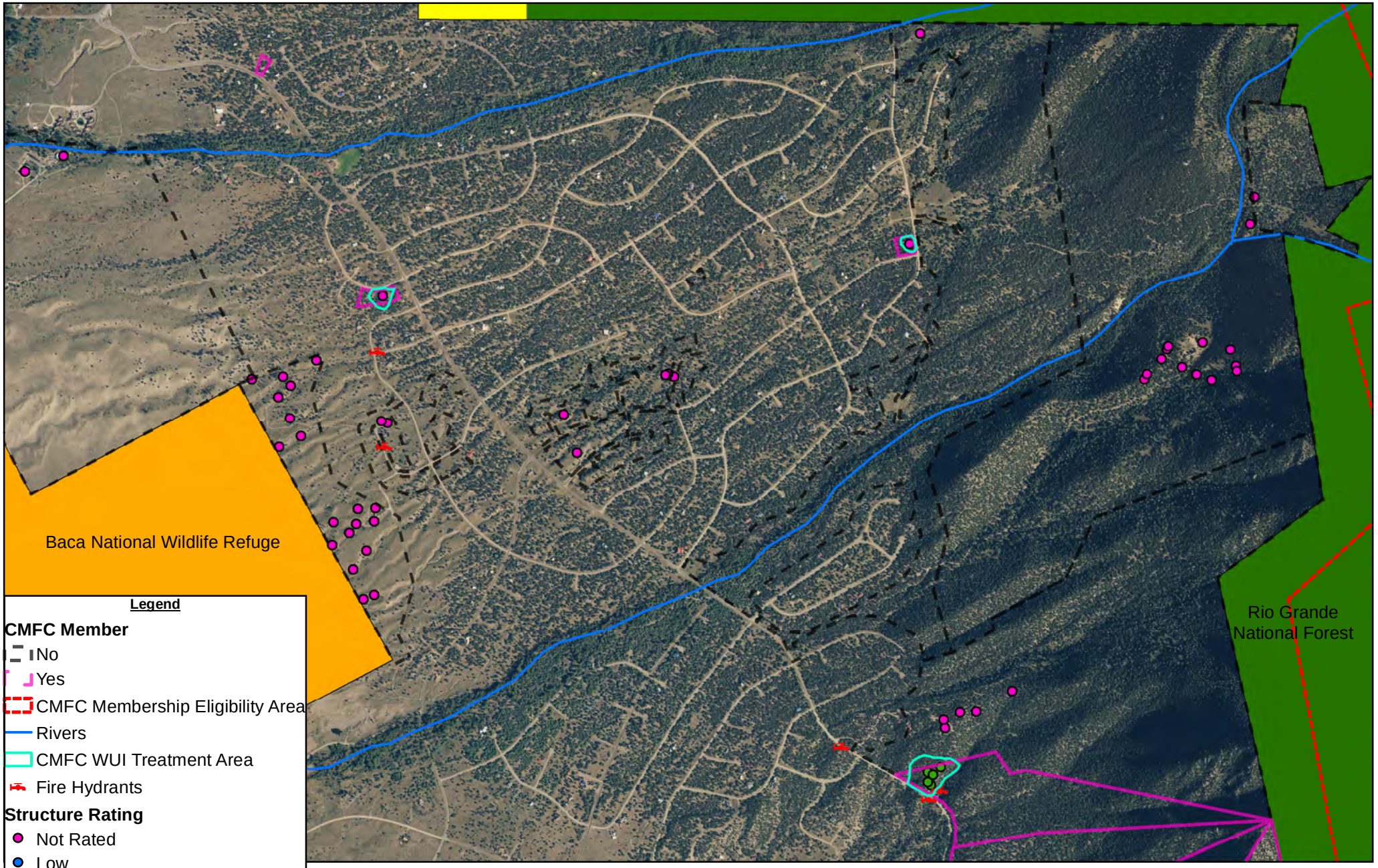
Structures & Treatment - Northern Half



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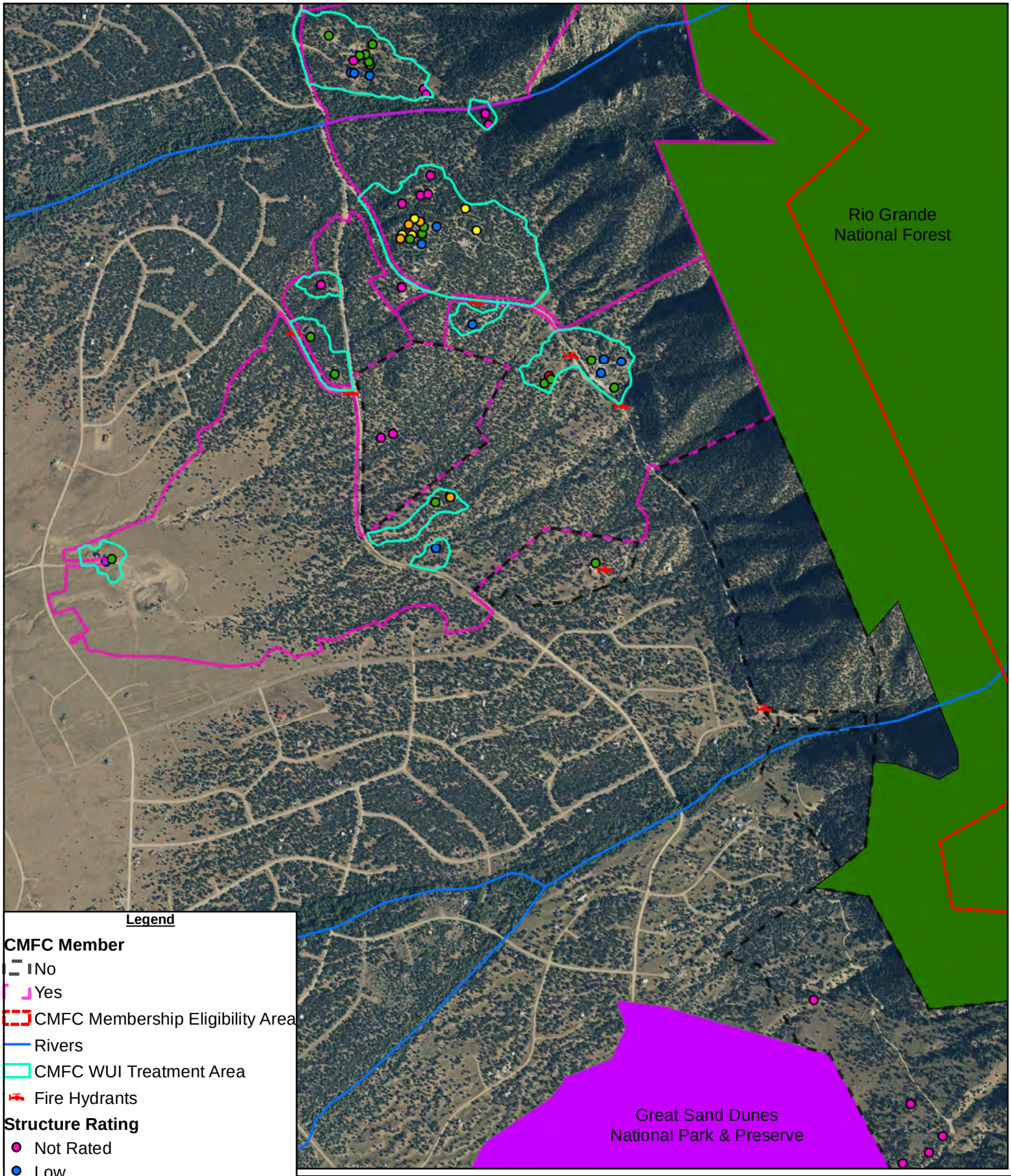
Structure Overview - Southern Half



Legend

CMFC Member
- No
- Yes
- CMFC Membership Eligibility Area
- Rivers
- CMFC WUI Treatment Area
- Fire Hydrants

Structure Rating
- Not Rated
- Low
- Moderate
- High
- Very High
- Extreme

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Ashram

WUI Size	Number of Structures	Overall Fire Hazard
21 acres	6	Low

Community Description: Ashram consists of a combination of residence, spiritual buildings, community buildings and guest residences. It is located up a short steep driveway off the main drive of Camino Baca Grande.

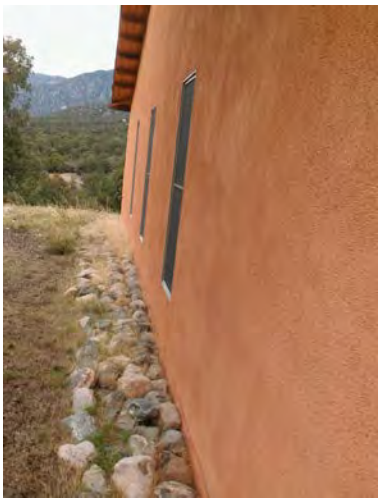
Home construction is similar with an exterior of stucco. One structure is built partly into the ground. Another structure is not visible from the parking lot and a 100 yard walk.

Interface Conditions and Fuel Hazards: The buildings at Ashram are located on a bench with moderate slopes of pinyon & juniper below them. Numerous steeper draws surround the area making the terrain difficult to access. There is an occasional Ponderosa Pine and further from the structures are Birchleaf mountain mahogany. Most of the dead and down trees within 150 feet of structures have been removed. There are some old growth pinyon. The pinyon & juniper do not have good crown separation.

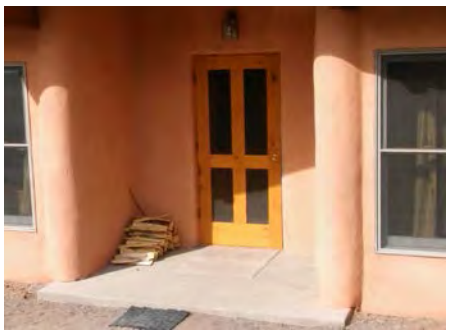
Fire Response Information: Adequate parking and turn opportunities exist for engine types 3-7. No water sources at the site. The driveway width will limit engines to one way traffic.

Prioritized Mitigation Recommendations: The following tables of recommendations were created using information collected during the community assessments. Together, these recommendations are suggested to minimize the overall wildfire.

Priority	Task
1	Create defensible space
2	Extend defensible space
3	Firewood or other combustible material on/under deck or near house
4	Thin roadsides for safer ingress/egress



Nice rock to keep flames away from the building. To maintain its effectiveness it needs to be weeded.



Move firewood 30’ from structure.

Nice green space and path acts as a fuelbreak keeping fire away.

There is a house hidden down this path. How do firefighters know? Label that this path leads to a house.

Ashram

0 65 130 260 390 Feet

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Shumei

WUI Size	Number of Structures	Overall Fire Hazard
27 (14, 3, 5, 2, 3) acres	9	Low

Community Description / Design: Shumei consists of buildings that are religious Centers, dorms, gathering spaces, workshop and storage. It is located directly off Dream Way with three main access points. Shumei owns two cabin structures on their own land, near the Baca Grande subdivision. The third access is moderately sloped and takes you up to the shrine. Buildings are a combination of stone, and straw bale with stucco.

Interface Conditions and Fuel Hazards: The dominant fuel hazards are landscaped plants located close to structures. Further from the structures there is an increase in pinyon-juniper, especially by the workshop. Downhill from Dream Way is a steep vegetated slope. All of the buildings are connected with paths or roads, which currently would work as a fireline and with additional fuels removal work could be a fuelbreak as well.

Fire Response Information: Adequate parking and turn opportunities exist for engine types 3-7. The third moderately sloped access is only wide enough for one-way traffic. All structures can be reached with less than 200' of hose. Two fire hydrants are located along Dream Way. During the warm months the large landscaped waterfall feature would also serve as a water source.

Prioritized Mitigation Recommendations: The following tables of recommendations were created using information collected during the community assessments. Together, these recommendations are suggested to minimize the overall wildfire risk.

Priority	Task
1	Create defensible space
2	Maintain defensible space
3	Firewood or other combustible material on/under deck or near house or garage.

Other Concerns: Shumei also owns a log cabin structure in the Baca.

No trees or shrubs should be located under the eaves.

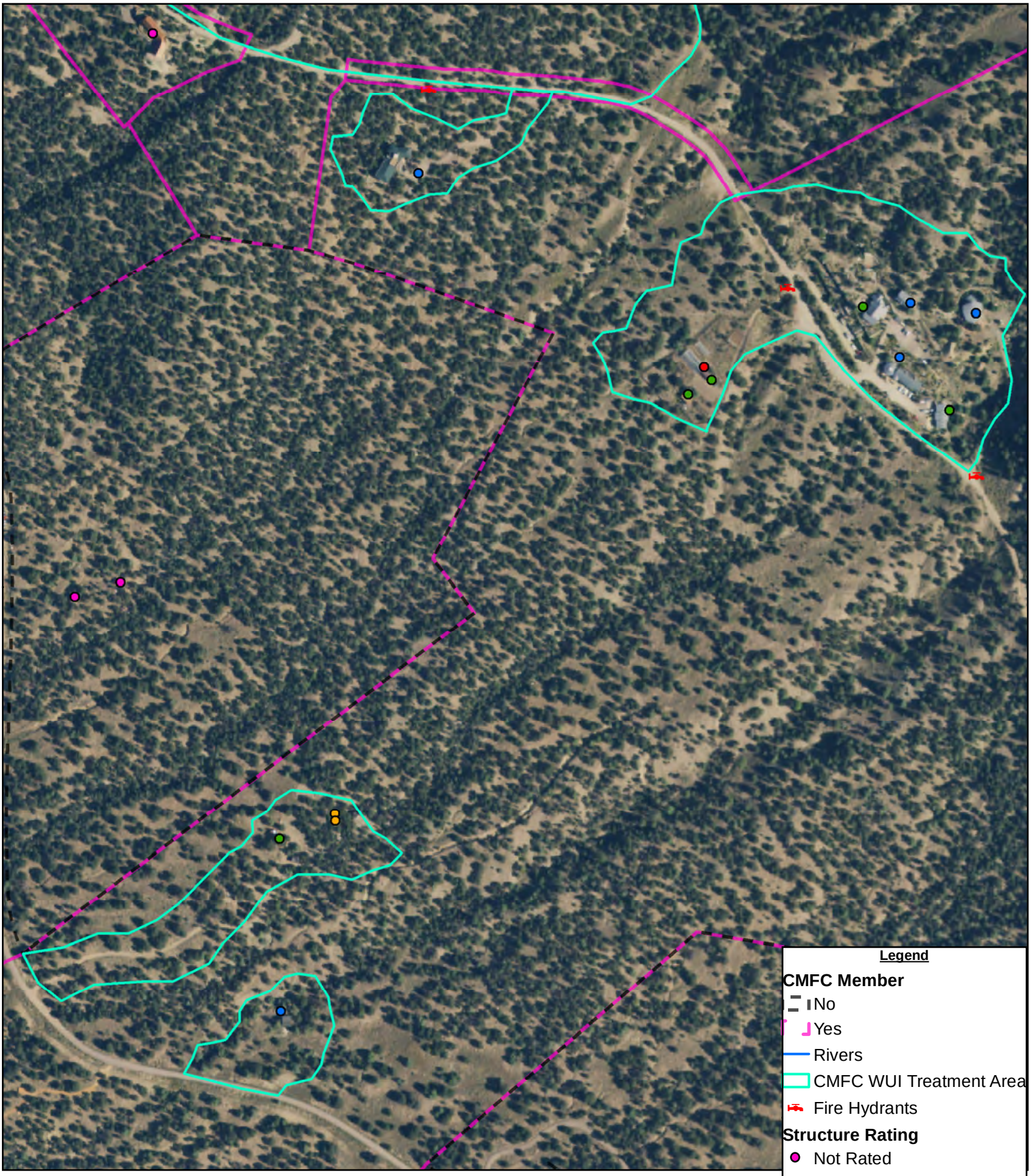
House in the Baca. 30' around should be kept clear of weeds and debris.

No flammable vegetation should be within 10' of structures.

Wood fence should not connect to building. Replace with metal.

Path breaks up the fuel.

Shumei International Institute



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N W E S

Crestone Mountain Zen Center

Size	Number of Structures	Overall Fire Hazard
45 acres	12	Moderate

Community Description / Design: Crestone Mountain Zen Center has the most structures although they are all fall within a 7 acre area and 10 of them are within a 2.5 acre area. One driveway accesses the area. The structures are on a bench with steep downward slopes on three sides. There is a variety of construction materials used, ranging from stone, wood siding and stucco. Most structures have lots of nooks with fine fuels for embers to land and ignite.

Interface Conditions and Fuel Hazards: The dominant vegetation is pinyon-juniper with very little canopy separation between the crowns. Other plants are used as part of landscaping close to the structures. Numerous paths between structures break up the fuels, however more canopy separation should be created around these features. There are some areas that are irrigated for green grass. Consider strategically placing and increasing these areas to act as a fuel break.

Fire Response Information: Access is narrow and steep. The driveway width will limit engines to one way traffic. Vehicle access between structures is limited. A Type 6 engines will be able to access most structures. A Type 4 engine will have room to park and turn around at the parking lots. No fire hydrants or cisterns are present.

Prioritized Mitigation Recommendations: The following tables of recommendations were created using information collected during the community assessments. Together, these recommendations are suggested to minimize the overall wildfire risk.

Priority	Task
1	Continue Home construction retrofit – enclose features, check screens
2	Create defensible space
3	Create fuelbreak between road features
4	Extend defensible space
5	Firewood or other combustible material on/under deck or near house
6	Thin roadsides for safer ingress/egress

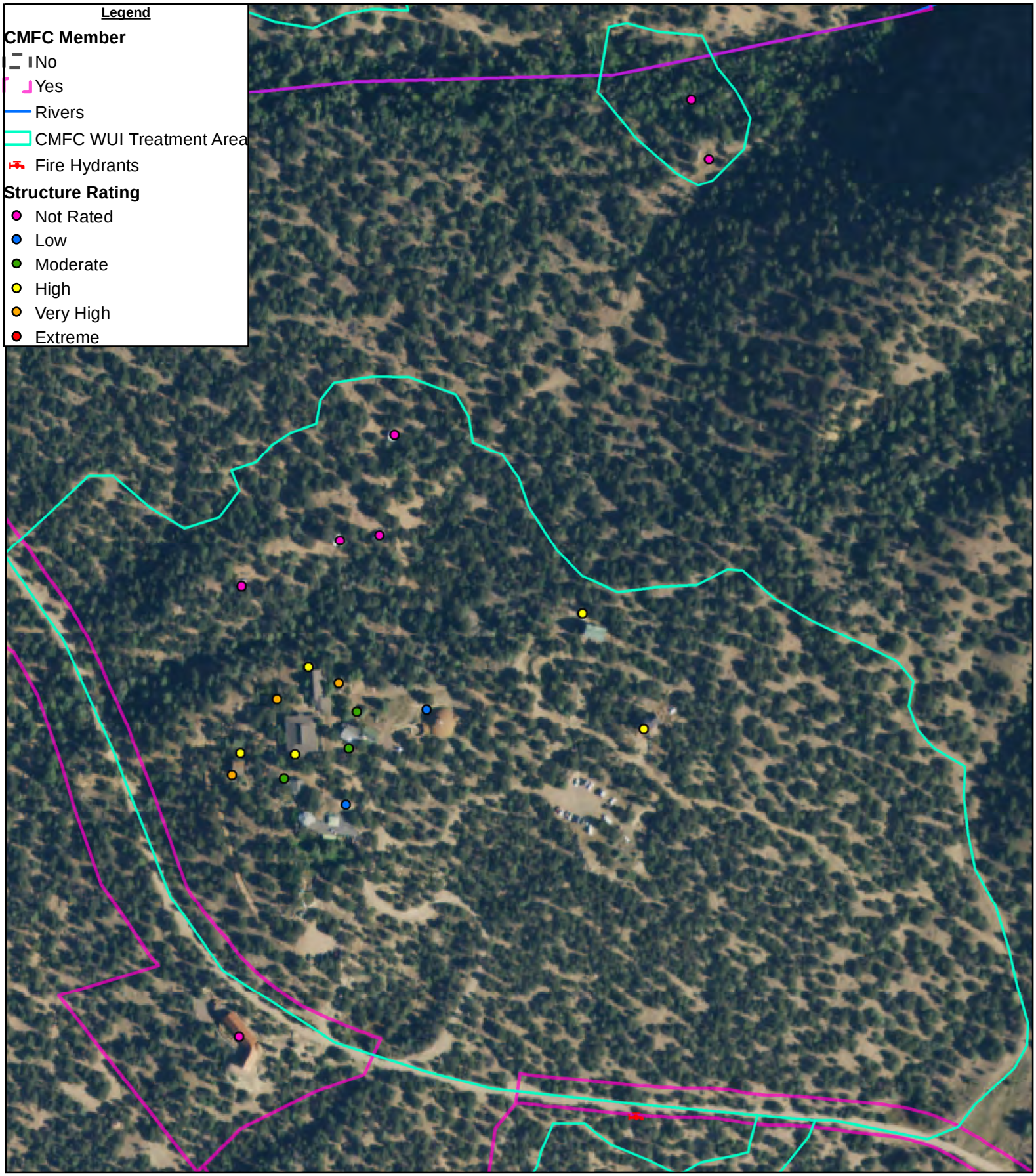
Remove shrubs against the deck. Consider enclosing under the deck or extending irrigated space all around the deck. Prune branches from overhanging the roof.

Store firewood 30’ from structures. Prune branch so that it isn’t under the eaves.

Check screening. 1/8” or smaller should be used.

Clean pine needles from gutter. Trim branches so they don’t overhang the roof.

Crestone Mountain Zen Center



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Chamma Ling

Size	Number of Structures	Overall Fire Hazard
5 acres	5	Moderate

Community Description / Design: Chamma Ling is designed as a walk up facility. The parking lot is directly off of Camino Baca Grande. There is a small service road that is gated. Four of the structures are individual retreat cabins. The fifth structure is a larger dorm style retreat facility. The structures are wood framed with stucco.

Interface Conditions and Fuel Hazards: The structures are located on a small ridge with steep wooded slopes off to three sides. Pinyon-juniper is the dominant overstory vegetation. There is not much canopy separation or natural openings to slow a fire. The structures have gravel surrounding them, but weeds are starting to accumulate and should be regularly removed. Defensible space is mostly non-existent.

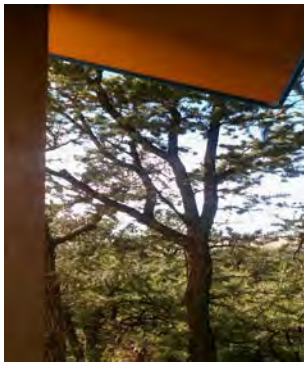
Fire Response Information: A knox box should be installed by the gate for emergency personal access. Access is limited to a type 6 engine. A hose lay of over 300' would be needed to access all of the structures. There is a small diameter hydrant (2.5") in the parking lot. There is a standard municipal hydrant across the street on Camino Baca Grande.

Prioritized Mitigation Recommendations: The following tables of recommendations were created using information collected during the community assessments. Together, these recommendations are suggested to minimize the overall wildfire.

Priority	Task
1	Create defensible space
2	Extend defensible space
3	Other: Install one large propane tank 30'+ from structures instead of multiple small tanks nearby.

Thin vegetation and remove dead and down materials by access roads to increase their capacity as a fuelbreak.

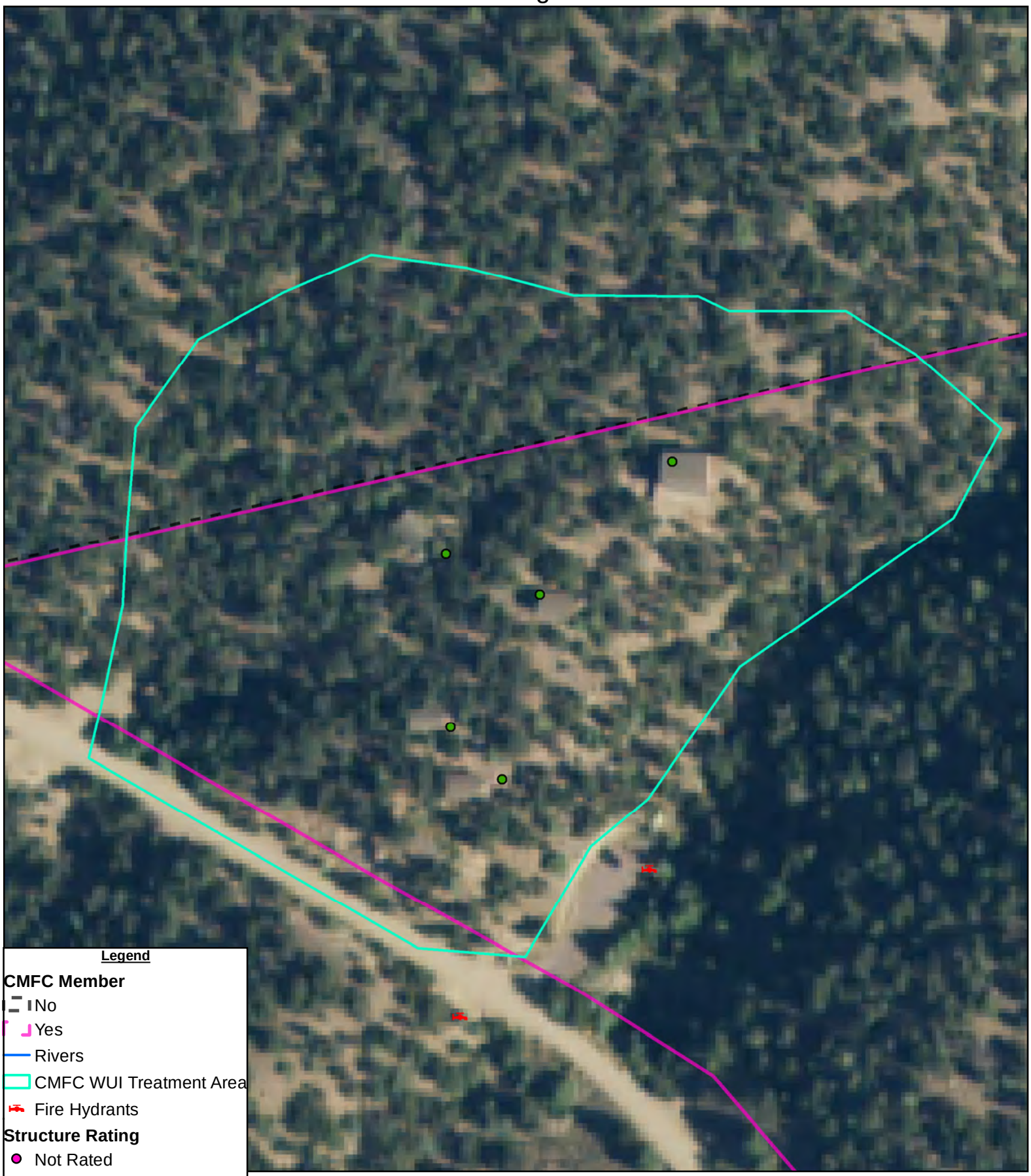
Replace with large tank >30' from structure.



Remove vegetation overhanging roof.

Reduce weeds and all vegetation within 10' of structures.

Chamma Ling



Legend

CMFC Member
- No
- Yes

Rivers

CMFC WUI Treatment Area

Fire Hydrants

Structure Rating
- Not Rated
- Low
- Moderate
- High
- Very High
- Extreme

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Dharma Ocean

Size	Number of Structures	Overall Fire Hazard
8 (6, 2) acres	3	Moderate

Community Description / Design: Dharma Ocean consists of three structures that are spread out and not visible from each other. The two main structures are accessed from N. Carefree Way. Besides these two having parking there is also a path between the structures. These two are visible from the road and have signage. The third smaller structure that is used on an intermittent basis is accessed from Camino Baca Grande. This structure is not visible from the road and has no sign indicating a structure is down there. An address signage at the very least should mark the location of the structure.

Interface Conditions and Fuel Hazards: Pinyon-juniper is the dominant overstory vegetation. Zone 1 (30') has seen significant fuels reduction. Beyond that there has not been much fuels reduction and there is not much canopy separation or natural openings to slow a fire. The two main structures have gravel surrounding them, but vigilant care needs to be taken to ensure weeds do not accumulate.

Fire Response Information: The two larger structures have adequate parking and turn around opportunities exist for engine types 3-7. The structure near the intersection of Carefree & Camino Baca has two entrances that can act as a loop for access. The lone smaller structure off Camino Baca has limited access and turn around and should be limited to type 6 engines. Turn around at this structure should be improved. Two fire hydrants cover the two larger structures. One is near the intersection of W. Carefree & Camino Baca Grande and the other is by the northern structure. A 50,0000 gallon cistern is located at the southern structures. No water is available at the retreat cabin, although South Spanish Creek runs intermittently in the spring of some years.

Prioritized Mitigation Recommendations: The following tables of recommendations were created using information collected during the community assessments. Together, these recommendations are suggested to minimize the overall wildfire risk.

Priority	Task
1	Create defensible space
2	Firewood or other combustible material on/under deck or near house
3	Community design / Infrastrucure: Create turnaround by small structure.
4	Other: Label location of small structure.
5	Other: Replace small propane tanks with a large one > 30' away.

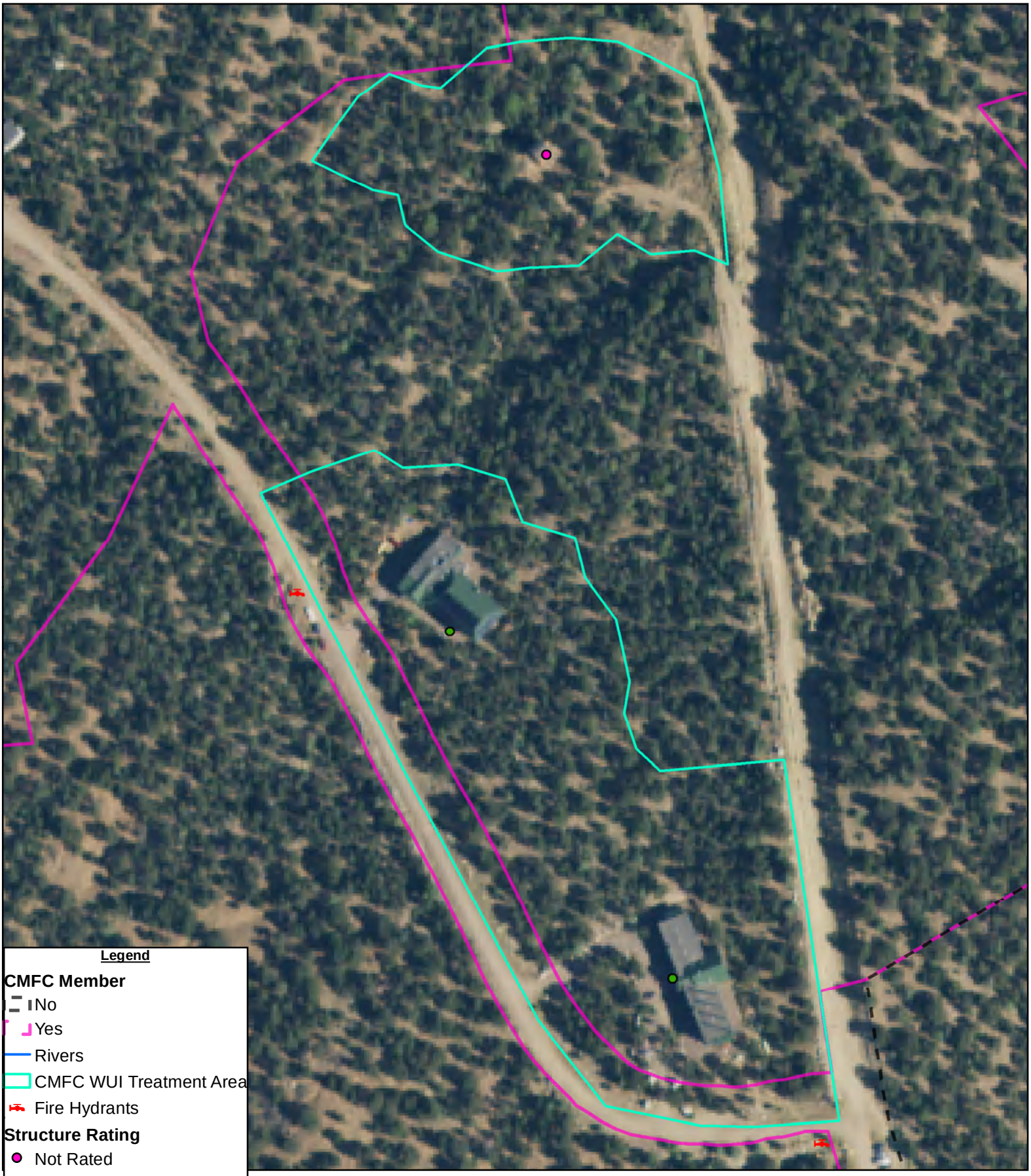
Move firewood away from structure to > 30' away.

No vegetation should be within 10' of propane tanks.

Replace small propane tanks with a large one >30' away. Remove grass within 10' of building.

Minimal vegetation should within Zone 1 (30'). Remove more vegetation.

Dharma Ocean



Prepared By:
Colorado State Forest Service
Alamosa District

COLORADO STATE FOREST SERVICE
EST. 1955

Successful Firewise Modifications

When adequately prepared, a house can likely withstand a wildfire without the intervention of the fire service. Further, a house and its surrounding community can be both Firewise and compatible with the area's ecosystem. The Firewise Communities/USA program is designed to enable communities to achieve a high level of protection against WUI fire loss even as a sustainable ecosystem balance is maintained.

A homeowner/community must focus attention on the home ignition zone and eliminate the fire's potential relationship with the house. This can be accomplished by disconnecting the house from high and/or low-intensity fire that could occur around it. The following photographs were taken of CMFC members and are examples of good Firewise practices.

Observed Good Modifications – Examples that can be incorporated at other Centers.

Propane tank is adequate distance from structure and not surrounded by vegetation.

Address labeled with a reflective sign.

This pathway currently acts as a fire break since it is devoid of vegetation. A little thinning on either side will increase its effectiveness.

Landscaping gravel keeps flames from reaching the structure. Rock exterior is not flammable.

VIII) Community Action Plan

The community plan is generally a simple action plan, comprised of at least three agreed-upon, doable action items that will improve the site's wildfire readiness. It is created from information contained in the community assessment. Some communities create extremely elaborate plans and some good plans are very unsophisticated. All are acceptable. What is necessary within the plan is the identification of doable action items by the Firewise Board. The action plan can be modified with the passage of time.

1. Surveying the Buildings and Educating Community on how to be more Firewise
    - The information gathered in the community assessment will be used to create a report about what can be done at each of the 5 spiritual Centers to become better prepared in the event of a structural or wild land fire. This will be completed by CSFS and the local Fire Department - KFM.
    - The Firewise Event was held on 12/15/2016 and we walked around the Zen Center and Shumei to review the report and talk about what we can do at these two Centers to be more prepared for fires. April 21, 2017 we hosted a "sand table" exercise with in conjunction with the SLV Interagency FMO, other local and federal fire entities to simulate potential response to a fire in the area.
    - This assessment was also done for the other 3 Centers and the local Fire Department, KFM worked with them to understand what they can do at their respective Centers.
2. Forest Mitigation
    - Each Center identified zones where forest mitigation would be helpful and then prioritized this list.
    - The Centers worked with KFM to mitigate in areas specified.
    - Continue to engage the community to help with this effort, ie. Colorado College student volunteers.
3. Fire Trainings – 4 per year, or as needed
    - Organize and hold at least 4 fire trainings per year that the spiritual Centers host and also invite KFM and Baca Fire to trainings.
    - Rotate the host of the training so everyone in the CMFC becomes familiar with each Center's equipment, landscape, layout, etc.
    - Fire Training Topics:
        - Evacuation procedures in the event of a fire, including scenarios when having large groups or remote retreatants.
        - Train with fire engine – run scenarios to learn how to spot fires, understand fire behavior, operate pump on engine, construct lines, put out fires, etc.
        - Improve communication between Centers, Forest Service and Fire Departments – radios, walkie-talkies, cell phones.
        - Review and improve Center's individual fire plans.
        - Become familiar with Center's landscapes, equipment and layout.

Community	Top Priority
Ashram	Create defensible space.
Chamma Ling	Create defensible space.
Dharma Ocean	Create defensible space.
Crestone Mtn. Zen Center	Continue Home construction retrofit – enclose features, check screens
Shumei International Institute	Create defensible space.

The success of the plan depends upon strong leadership at the community, district and county level. Educating citizens and organizations about the risk of wildfires and mitigation to reduce that risk is

paramount. The plan also relies on the efforts of individuals, landowners associations, the KFM, VFD and Saguache County to reduce the risks of wildland fires**.**

No matter how good a plan is, it holds little value if it is not implemented. Defensible space is THE MOST IMPORTANT action an individual can take to protect their home. It is imperative that individual homeowners respond and begin efforts to mitigate the fire risk around their homes. It is also critical that communities organize to accomplish subdivision or community-wide mitigation and fuels reduction.

Tables are included in each community write-up that define and prioritize community action. The priority level should be used to assist in determining which fuels projects should be focused on and in what order they should be implemented. CWPP activities may be eligible for funding through state and federal grant programs.

Stakeholders, including representatives of the community that may include homeowner's association board members or citizens, must support recommendations in this plan. A concerted effort to identify Wildfire Mitigation Advocates within each community may be one of the most important recommendations of this CWPP. A Wildfire Mitigation Advocate can assist local communities in strengthening public understanding, acceptance and participation in the plan.

The projects detailed in the CWPP are not the only projects that are required within the planning area; they are the most achievable for the communities at this point in time.
Landscape scale projects are excellent options as well, but often require the collaboration of multiple communities working with federal, state and county government. As support and community involvement grow through the completion of recommended smaller projects, the larger treatments become more obtainable. The core stakeholder group should consider additional projects at all scales, especially as communities begin to complete the initial projects identified in the CWPP.

Fuel Treatment Standards
Defensible spaces should follow CSFS- Fire 2012-1 Protecting Your Home from Wildfire: Creating Wildfire-Defensible Zones.
Fuel breaks should follow – Fuel Break Guidelines for Forested Subdivisions & Communities.
Previous fuel local treatment standards from the 2005 CWPP are still relevant and should be followed-

- Thin crown covers to 40% or less, clumps of trees are ok within the 40%.
- Remove dead trees if there are many together, or if they pose a hazard of falling across a road.
- Remove most dead wood on the ground greater than 3" in diameter.

Existing Control Features – 2005 CWPP
Control features are areas devoid of burnable vegetation. They include; roads, trails, creeks, rockslides, and cliffs. Control features effectiveness depends upon their location, width, cleanliness and accessibility. Control features that are perpendicular to the wind provide a good chance of stopping a fire's forward spread. Any fireline can be breached by aerial spotting.

The CMFC area has some roads which offer limited defense once a fire has built up a head of steam. The effectiveness of a road as a fireline can be compromised if there is a lot of flammable material immediately adjacent to the road. Rabbit brush is prevalent along the roadways in the flatter, grassland locations. Roads located on a slope are also not as effective as roads on level ground. Using mid slope roads, such as Dream Way, for control of aggressive fires is often a losing proposition.

Individual Group Responsibility – 2005 CWPP
Individual structure fire survivability starts at is foundation and radiates out from the structure. Effective defensible space is the single most important factor in determining the outcome when a wildfire burns through inhabited areas. There is no replacement for landowners redeeming their responsibilities to themselves and the community. It may become critical to connect with other member groups for more effective fire management opportunities

Mitigation actions will improve the ability of member groups to limit the size of wildfires threatening values at risk. This reduction in size potential will have a subsequent influence on numbers of structures endangered during any single wildfire event.

Safety During An Incident – 2005 CWPP
Getting people out of the CMFC area in the event of a wildfire will be problematic. Roads in the CMFC area flow into the Baca Grande development roads, traffic will be substantial. Notifying people in this large area will also be a challenge. When winds are high and conditions dry, there is very little time to implement an evacuation. Each CMFC member group needs to determine how they intend to assure the safety of their people. Each CMFC member group is responsible for developing and practicing an evacuation plan that will work under adverse conditions. Each CMFC member group is strongly encouraged to consider "shelter in place" strategies for use when evacuation compromises safety. But "shelter in place" strategies may only work after they have been implemented, meaning that fuels have been decreased substantially, structures have been made fire resistant, and survivable space has been created. Further discussion and training of this issue with each CMFC member group is warranted.

It is important for the Saguache County Sheriff's Department to be included in all wildfire response and evacuation planning. Though KFM may assist in this effort, each CMFC member group is responsible for their own safety, response, and evacuation plans.

Road Signage – 2005 CWPP
Road signs are a little recognized ingredient for rapid emergency response. The CMFC area and the Baca Grande development have relatively small, low contrast, sporadically occurring signage. It is time to start an initiative to install signs at critical places in the CMFC area. New signs should be more readable and reflective. Consider working with Baca Grande to sign fire evacuation routes. Individual Center evacuation routes will be included in their individual emergency response plan.

Fuelbreaks – 2005 CWPP
A planned system of fuelbreaks would take advantage of preexisting, less dense, forested areas. Fuelbreaks provide firefighters a safer place to make a stand during high burning conditions. They are characterized by lower tree densities and less ground fuels. Tree crown cover of less than forty percent is required to bring crown fires to the ground. Ideally fuelbreaks are also aligned perpendicular to prevailing winds. This orientation allows them to be most effective in stopping a fire's forward spread. Access for fire equipment along fuelbreaks is handy, but not critical. There are limited natural breaks in the pinyon forests in the CMFC area. There may be a couple roads that can be improved to enhance their function as fuelbreaks.

Adjacent Landowners Fuel Treatments
If Center structures are within 300' of private or federal land then there should be a conversation with the adjacent landowner for treatment on their land as well. Priority should be given to work on Center land.
Rio Grande NF - The Centers to the east and furthest up slope are adjacent to the Rio Grande NF, however the NF land is far enough from any structures that NF fuels treatment is not needed. If the Rio Grande is doing any fuel treatments CMFC should take advantage of the opportunity to do a cross border project.
Baca Wildlife Refuge - Colorado College and Spiritual Life Institute/Carmelite are adjacent to the Baca Refuge. Spiritual Life Institute/Carmelite has structures close to the border. Efforts should be made to work with the Baca Refuge to mow this border similar to how it is mowed along the Spanish Creek Trail Road. Colorado College's structures are far enough from the Baca Refuge that no treatment is recommended at this time. If the College expands then this should be reconsidered.
Great Sand Dunes Park & Preserve - KTTG has structures close to the border. Great Sand Dunes should be engaged to see if fuels treatment may occur on their land.

IX) Wildfire Response

Wildland Fire Management and Suppression Tactics: Suppression priorities for firefighters will vary based upon capabilities and overall strategy, but since firefighter safety is a top priority, disengagement may result from conditions becoming too hazardous. These priorities make it imperative that individual homeowners effectively treat the home ignition zone around their structures to increase the likelihood of their structures surviving a wildfire without aid from firefighters.

Resources to Respond to a Wildfire

Water Delivery

Only a portion of this area has hydrants or cisterns. Consider budgeting for dry hydrants or fire wells or cisterns over the next few years to develop alternate water sources.

Fire Response

In the event of a fire, provide for safety first of yourself and others via the established communication and emergency response protocol for each Center. The primary fire response will be by the staff of the individual Centers, as training, equipment, water supply and availability allow. This response should include calling the KFM Response Team. 911 should also be called, which will activate the Colorado State Patrol Dispatch Center in Alamosa. The Dispatch Center will then notify Baca Grande Emergency Services. The 911 call will also inform Northern Saguache Fire Protection District, so they can staff accordingly in case they are needed for standby for mutual aid or for back filling positions. Each CMFC participating Center has an automatic response agreement with Baca Grande Emergency Services, who will be activated via the 911 call.

Each Center has a communication protocol for informing guests. It is highly recommended that the staff of each Center who is responsible for the safety of guests, retreatants, and visitors, receive as much fire training as possible, to help insure the safety of themselves and others in the event of a fire emergency.

Automatic Response

Each CMFC participating Center has an automatic response agreement with Baca Grande Emergency Services. These automatic response agreements are slightly different for each Center. The automatic response agreements should be standardized. New members to CMFC are encouraged to enter into the same standardized agreement.

Equipment

KFM	**BGVFD**
Engine 614 Type 6x 2 Foam wagons (100 gal. pull behind ATV)	Tender 2000 gallons Attack 1 Type 6x mini pumper CAFs truck – Type 3x Chase Vehicle Equipment truck Type 6 engine Type 1 pumper truck

X) Next Steps

The CMFC has completed the following requirements to become a Firewise Community:

- Formed a Firewise Board
    - Lisa Henning (Crestone Mountain Zen Center), President
    - Kathy Grant (Dharma Ocean), Secretary
    - Annette Standing (Shumei International Institute), Equipment Manager
    - Christian Dillo (Crestone Mountain Zen Center)
- Invested at least $2 per capita in Firewise projects
- Created an action plan

- Completed a community assessment
- Held a Firewise Day – See page 44, Community Action Plan
- Attached is the Firewise Communities/USA Application and required appendices.

XI) Assessment / Monitoring

Introduction:

A CWPP is a planning tool. As such, it will help to identify and guide mitigation efforts within the community. Its overall value, however, is directly related to the ongoing evaluation and improvement of the plan in the future. Future plans will reevaluate risks as conditions change and as mitigation efforts are completed. As a living document, the plan relies on the input of all stakeholders. The plan should be revisited at least on an annual basis, and should be formally updated every five years. We invite you to be involved in that process.

Assessment Plan

Work and wildfire hazards do not stop once the CWPP is complete or even once all action items are completed. Resources and landscapes change over time and CWPPs must be revisited and refreshed regularly. Changes in risk ratings should be reflected upon completion of priority projects and new initiatives developed for the CWPP to remain viable. In addition, effective new strategies and wildland programs should be incorporated into CWPP planning efforts.

These guidelines are designed to enhance a CWPP's effectiveness and were generated from actual experiences with mitigation and large wildfires, as well as community planning processes.
Potential process to update your CWPP:

1. Review existing CWPP.
2. Describe progress made and list accomplishments since the CWPP was adopted.
3. Host collaborative meetings.
    a. Identify any new risks that have developed.
    b. List any changes in a community's hazard risk rating.
4. Update maps.
5. Reflect changes in risk ratings due to completed projects or changes in landscape.
6. Develop updated priorities.
7. Distribute CWPP update drafts to key stakeholders (including local, state, tribal and federal partners) for review and input before the final approval.
8. Submit the final document to your local government body, local fire department(s) and State Forestry for required signatures and endorsement.
9. Once signed and endorsed by your local governing parties, submit all documentation to CSFS.

The community intends to assess the progress annually and invite Agencies and members to submit projects that provide community protection. Additional projects will be displayed in an updated appendix to this plan.

The 2005 CWPP **Annual Effectiveness Checklist:** is still relevant and should be followed.

1. Are we mitigating annually to keep designated fuel breaks, roadway creek crossings and evacuation routes clear of debris and fuel hazards?
2. Have wildfire impacts changed this year for our watersheds, open spaces and wildlife habitat?
3. Are there any new structural mitigation priorities?
4. Are we continuing public fire safety education efforts such as meetings with discussions on healthy forests and defensible space?
5. Did we update our emergency maps this year?
6. Can we make any improvements to water delivery systems?

XII) Community Collaboration

Introduction:

Stakeholder input is the best method to achieve the best products, local knowledge, and community input. Stakeholder input will identify and address specific needs presented by the communities.

This CWPP:
1. Was collaboratively developed. Interested parties in the region of this CWPP have been consulted.
2. Identifies and prioritizes areas for hazardous fuels reduction treatments and recommends the types and methods of treatment to reduce the wildfire threat to values at risk in the area.
3. Recommends measures to reduce the ignitability of structures throughout the area addressed by the plan.

The following representatives of the entities required for CWPP approval mutually agree with and approve the contents of this Community Wildfire Protection Plan:

Prepared by: **Colorado State Forest Service – Alamosa District**
PO Box 1137 (129a Santa Fe Ave.)
Alamosa, CO 81101

The following report is a collaborative effort between various entities. The representatives listed below comprise the core decision-making team or reviewers responsible for this report and mutually agree on the plan's contents:

LOCAL GOVERNMENT REPRESENTATIVE
Jason Anderson, Saguache County Commissioner _____
Dan Warwick, Saguache County Sheriff _____
Jim Felmlee, Saguache County Emergency Manager _____

LOCAL FIRE DEPARTMENT REPRESENTATIVE AND OFFICE
Darrick Garcia, Baca Grande Emergency Services_____
Peter May, Kundalini Fire Management _____

STATE AGENCY REPRESENTATIVE
Adam Moore, Alamosa District Forester, Colorado State Forest Service _____

FEDERAL LAND MANAGEMENT AGENCIES
Chad Lewis, Fire Management Officer, Rio Grande National Forest _____
Phil Wilson, Acting Superintendent, Great Sand Dunes NP & Preserve _____
Ron Garcia, Refuge Manager, Baca National Wildlife Refuge _____

Signatory Page

The previous people have reviewed and approved the CMFC Area Community Wildfire Protection Plan.

Appendix A

Individual structure assessments were based off the following Wildfire Risk Rating Key. This key was jointly developed by CSFS and local fire departments. The final rating a structure is given corresponds with the Structure Triage section of the firefighters Incident Response Pock Guide.

- **Defensible- Prep and Hold / Moderate**
  - Determining Factor: Safety zone present.
  - Size-up: Structure has some tactical challenges.
  - Tactics: Firefighters needed onsite to implement structure protection tactics during fire front contact.
- Defensible – Standalone / Low
  - Determining Factor: Safety zone present.
  - Size-up: Structure has very few tactical challenges.
  - Tactics: Firefighters may not need to be directly assigned to protect structures as it is not likely to ignite during initial fire front contact. However, no structure in the path of a wildfire is completely without need of protection. Patrol following the passage of the fire front will be needed to protect the structure.
- Non-Defensible – Prep and Leave / High & Very High
  - Determining Factor: NO safety zone present.
  - Size-up: Structure has some tactical challenges.
  - Tactics: Firefighters not able to commit to stay and protect structure. If time allows, rapid mitigation measures may be performed. Set trigger point for safe retreat. *Remember pre-incident preparation is the responsibility of the homeowner*. Patrol following the passage of the fire front will be needed to protect the structure.
- Non-Defensible – Rescue Drive-By / Extreme
  - Determining Factor: NO safety zone present.
  - Size-up: Structure has significant few tactical challenges.
  - Tactics: Firefighters not able to commit to stay and protect structure. If time allows check to ensure that people are not present in the threatened structure (especially children, elderly and invalid). Set trigger point for safe retreat. Patrol following the passage of the fire front will be needed to protect the structure.

Appendix B

CSFS
Wildfire Risk Rating Key

Date	
Collector	

Category	Observed Condition	Points
Address Visible	Posted and reflective	0
	Posted, NOT reflective	5
	Not visible from road	15
Access	Two or more roads in/out	0
	One road in/out	10
Slope	Less than 20%	0
	Between 20%-45%	20
	Greater than 45%	40
Back Ground Fuels	Light	25
	Moderate	50
	Heavy	75
Defensible Space	Greater than 100'	0
	Between 30'-100'	50
	Between 10' -30'	75
	Less than 10'	100

Category	Observed Condition	Points
Roofing Material	Class A: non-combustible	0
	Class B or C: Combustible (wood)	200
Building Exterior	Non-combustibles	0
	Log, heavy timbers	20
	Weathered wood, vinyl	60
Other Combustables	None, greater than 30' from structure	0
	Between 10'-30' from structure	10
	Less than 10' from structure	30
Decking and Fencing	None	0
	Non-combustilbe deck/fence attached	20
	Combustible deck/fence attached	50
Water Source	Yes	0
	No	20
Other	None	0
	Low	10
	Medium	20
	High	30
Total Rating		

Structure Triage

Overall Total Rating	Action
Low	Standalone
Moderate	Prep and Hold
High	Prep and Leave
Very High	Prep and Leave
Extreme	Rescue Drive By

Overall Total Rating	Min	Max
Low	25	150
Moderate	151	225
High	226	250
Very High	251	349
Extreme	350	630