

Lost Dutchman Resort Community Wildfire Protection Plan

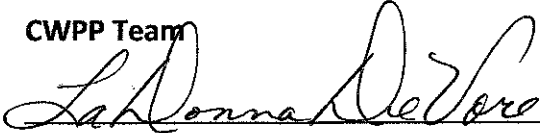


Prepared August 2011

COMMUNITY WILDFIRE PROTECTION PLAN
LOST DUTCHMAN RESORT
TELLER COUNTY, COLORADO
August, 2011

Submitted by:

CWPP Team



LaDonna DeVore, General Manager, CWPP Chair

Date 7/15/11



Pete Kuyper, Owner

Date 7/15/11

Concurred and/or Approved:

 - Chief

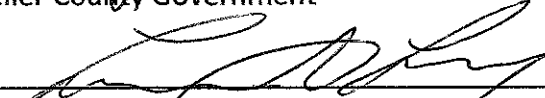
Chief Tom O'Connor, Divide Fire Protection District

Date 7/15/11



Teller County Government

Date 8/11/11



Larry Long, District Forester, Colorado State Forest Service, Woodland Park District

Date 7/19/11

Note: This document was prepared in good faith by the Lost Dutchman Resort CWPP Committee for the benefit of the Resort, members and guests. The committee assumes no liability in the preparation of this document. This document is intended only as a guide for the Lost Dutchman Resort to reduce fire risk and improve forest conditions for the next ten years. The information provided has been obtained from local forest professionals, members and staff participating in this project and from past knowledge and history of projects in the community.

Lost Dutchman Resort Community Wildfire Protection Plan 2011

Introduction

In the late 1940's Baron Frederick Von Schleinitz came from Europe to Teller County and developed the Trout Haven Resort and the subdivisions to the east and west, now known as Trout Haven and Arabian Acres respectively. The lakes were built in the early 1950's and during the 1960's club membership rose to over 500. The resort property, purchased in 1991, is now privately owned and named the Lost Dutchman Resort.

Community Assessment

Situated on approximately 480 acres with 16 stocked fishing ponds, this "members only" resort provides campsites for approximately 132 commercial camping vehicles and has 10 permanent structures on the property, – 4 cabins, a storage building, an events center, a conference center, bath house, general store, and fish-cleaning station. Group short-term campsites are available to those that lease the conference center or event center (pavilion) for a private party such as a wedding. No other non-member or public fishing or camping is available.

The camp sites are leased on an annual basis with the majority of members using commercial camping vehicles – trailers or campers. These are small relatively level sites less than 1/5 acre, most in heavily forested areas along the roadways. Several sites have been leased repeatedly and many trailers or campers remain in place year round. During the most popular camping seasons and at holidays, the number of members on the property may swell to over 130.

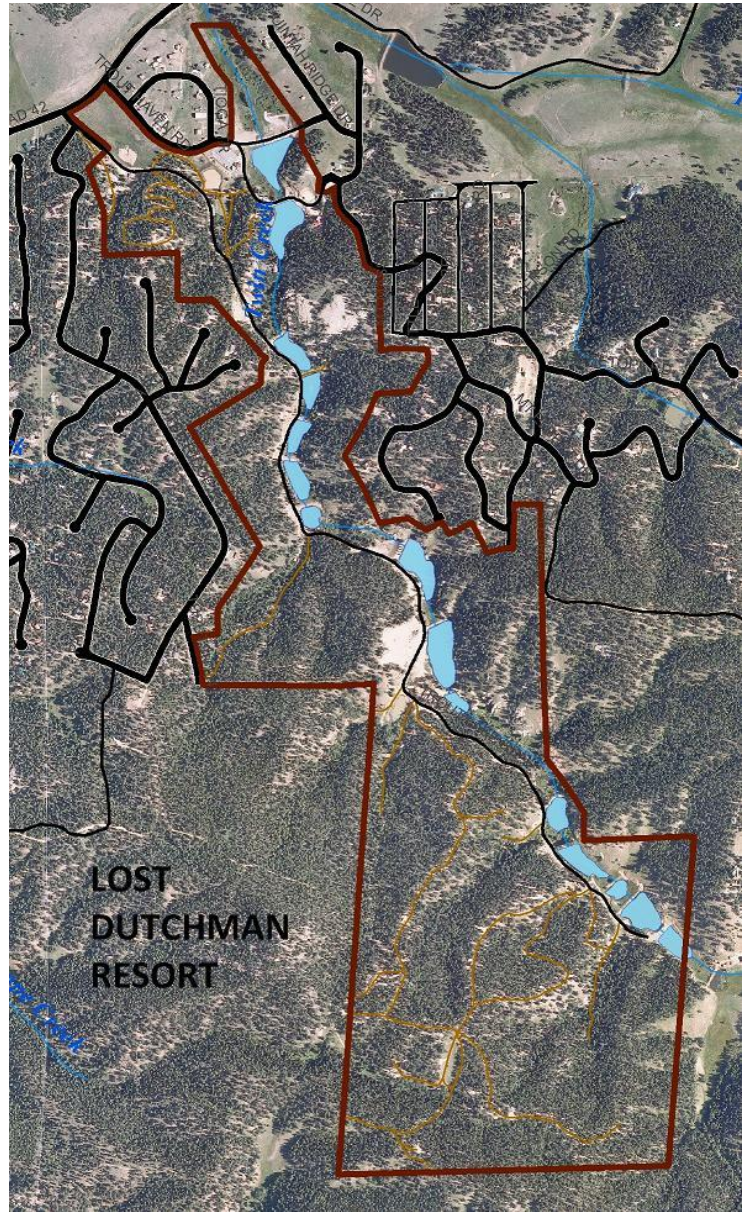


Figure 1: Lost Dutchman Base map

Access

Members enter the property through a code locked gate. This single ingress/egress route through the property runs along the drainage adjacent to the waterways. Smaller side roads branch off to allow access to campsites, which are away from stream banks. These roads offer no secondary route out of the property at this time. Roadways are common grade, gravel and narrow with pull outs to allow for 2 way traffic. One auxiliary road, Wind Valley, has access to the Trout Haven subdivision through Kutsu Ridge Road.

General Forest Conditions

Twin Creek and the associated ponds run through the entire property from SE to NW with moderate to steep slopes on both sides. At an elevation that ranges from 8900 to 9400 ft., the forest of Lost Dutchman is primarily spruce/fir with some ponderosa and aspen. Along the stream and pond banks, willows and low shrubs predominate. With the exception of numerous large rock outcroppings, the forest is predominately a closed canopy with few openings and minimal ground vegetation.



Figure 2 Photo courtesy of C. Long, Lost Dutchman Resort

Other Values at Risk



Figure 3 Photo courtesy of C. Long, Lost Dutchman Resort

Lost Dutchman Resort is at the head of the Twin Creek drainage. Flanked by rock outcrops and mixed conifer forest, the crown jewels of this location are a series of 16 stocked ponds averaging seven feet deep and just over an acre each. Degradation of the water quality in these ponds caused by erosion following a wildfire would be devastating, not only within the resort, but downstream toward Florissant, Lake George and into the South Platte River. The loss of fishing opportunities as well as forest damage would diminish the appeal of this resort as well.

While Lost Dutchman Resort has few structures, it lies between two large, heavily populated subdivisions, Arabian Acres, 209 lots to the west and Trout Haven, 240 lots to the east. These subdivisions were evaluated by the local fire protection district personnel in the Teller County CWPP, 2005, as each having a rating of “extreme risk” of both crown fires and potential property loss. Due to the heavy forest, rough terrain and difficult access, there are a very limited number of locations where wildland fire suppression could safely occur.

Mueller State Park is at the southeast corner of the Resort. Extensive thinning and fuel break development has been done within the Park to reduce the fuel continuity and wildfire hazards. While these projects are not adjacent to the Resort, they will change the fire behavior to the south and east boundary of the Resort property.

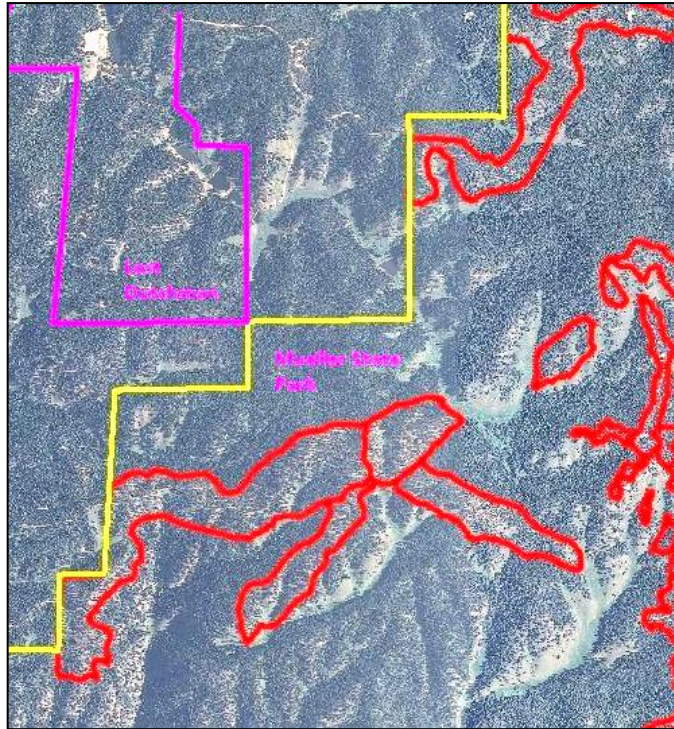


Figure 4: Area map of Mueller Fuel Reduction Projects - courtesy of Colo. State Forest Service

Wildland Fire, Fuels and Risk

Before human occupation, fire was a natural part of the Rocky Mountain environment. Frequent low intensity fires thinned the trees and maintained forest diversity removed dead or down fuels and recycled nutrients necessary for healthy forest growth. These naturally occurring fires also promoted a variety of other vegetation that provided food sources and habitats necessary for wildlife to thrive.

As people moved into the wildland, wildfire was seen as a destructive force to be avoided at all cost. The strict fire suppression activities of the last hundred years, which were meant to protect human life and communities, have interfered with the natural wildfire cycle allowing forest fuels to accumulate, reducing forest and vegetation diversity and limiting wildlife habitats. The potential costs of catastrophic wildfire, in terms of dollars, resources and esthetics, continue to rise as the density of the vegetation continues to increase.

Areas where man-made structures mingle with natural forest fuels are called the Wildland Urban Interface or WUI. In this area, there is a potential of loss of life, destruction of property, and long term impacts on the environment. The focus of this Community Wildfire Protection

Plan is centered on identification of hazardous conditions occurring in the WUI of the Lost Dutchman Resort, and proposed treatments to reduce the risk of catastrophic wildfire effects.

Types of Wildfires

Wildfires can be broadly categorized into two types based on the intensity of the fire and the damage caused to the environment. The most severe type is a crown fire, such as the Hayman Fire of 2002. A crown fire burns in the canopy of the forest, jumping from treetop to treetop, killing most if not all of the trees in its path, and producing extreme heat. The frequent high winds in the Lost Dutchman vicinity increase the risk of crown fires. Soil damage is likely to occur due to the intense heat produced during a crown fire. Long after a crown fire is extinguished, precipitation runs off the impermeable soil causing flash flooding and environmental degradation far from the burn area. As a result of the intense heat and soil damage connected with a crown fire, vegetation re-growth is significantly delayed. The current forest condition in Lost Dutchman is classified as a closed canopy with a high rating for crown fire risk.

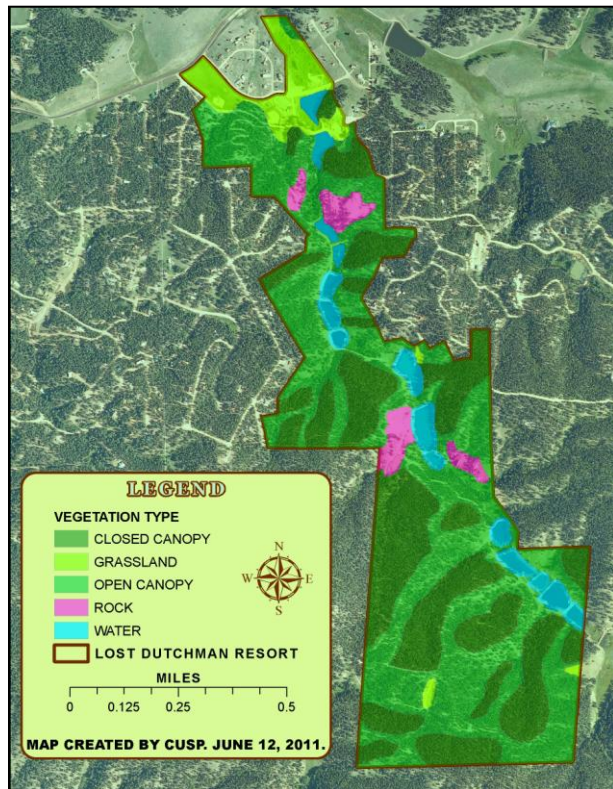
A less severe type of fire is the so-called ground fire. This type of fire is typical of open ponderosa pine forests and open grasslands. In forests that are not overgrown, wildfires burn more slowly and often stay closer to the ground, clearing away excess fuel such as needles, fallen branches and small seedlings. Such a fire revitalizes the forest without destroying the healthy trees. The heat produced is less intense, does not damage the soil and rarely penetrates the thick bark of the ponderosa trees. Due to the release of nutrients attendant to such a fire, new herbaceous plants re-sprout quickly after the fire cools. Prescribed fires mimic this type of fire.

Factors Affecting Fire Behavior

In order to understand the wildfire hazard in Lost Dutchman area, it is necessary to understand the factors that influence how fires burn. The three primary factors that determine fire behavior are weather, fuel and topography.

Weather

Weather is the “wild card” of fire behavior and cannot be predicted or changed. While lightning or human activity may ignite a fire, high temperatures, low humidity and strong winds increase its intensity. Dry conditions any time of year can increase the frequency and intensity of wildfires; however, such fires are usually less severe in cold seasons.



Fuel

The two types of fuel in a wildland-urban interface are vegetative and structural. The fuel available to a fire influences how much heat is produced. Vegetative fuels consist of living and dead trees, brush and grasses. The severity of a wildfire is proportional to the amount of available natural fuel. The diameter of fuel also affects fire behavior. While the focus of wildfire management is usually on forested areas, some areas surrounding the campsites have more grassland and brush than trees. Small diameter fuels such as dry grass, brush or small branches ignite more easily and the fire moves more quickly than a fire in larger diameter fuels such as large logs. In a wildfire, these smaller diameter fuels act as kindling, spreading the fire to the larger fuels.

Figure 5 - Vegetation Configuration

The unnaturally dense forest conditions that cause the potential for catastrophic wildfire in Lost Dutchman also create the potential for cyclical outbreaks of insects and disease because trees weakened by overcrowding and competition for water and sunlight are more susceptible to invasion.

Of the three factors that determine fire behavior, only fuels can be altered to reduce the spread and intensity of a wild fire.

Topography

Topography is a term that describes the lay of the land. The influence of topography on wildfire is simply that heat rises. On a slope, heat rises above a fire, pre-heating and drying the fuel above. The drier upslope fuels ignite more easily and burn more quickly than downslope fuels. The steeper the slope, the more pronounced is this effect. During the day, warming air rises and pushes wildfires upslope. Fires may move four times faster up slopes than on flat ground.

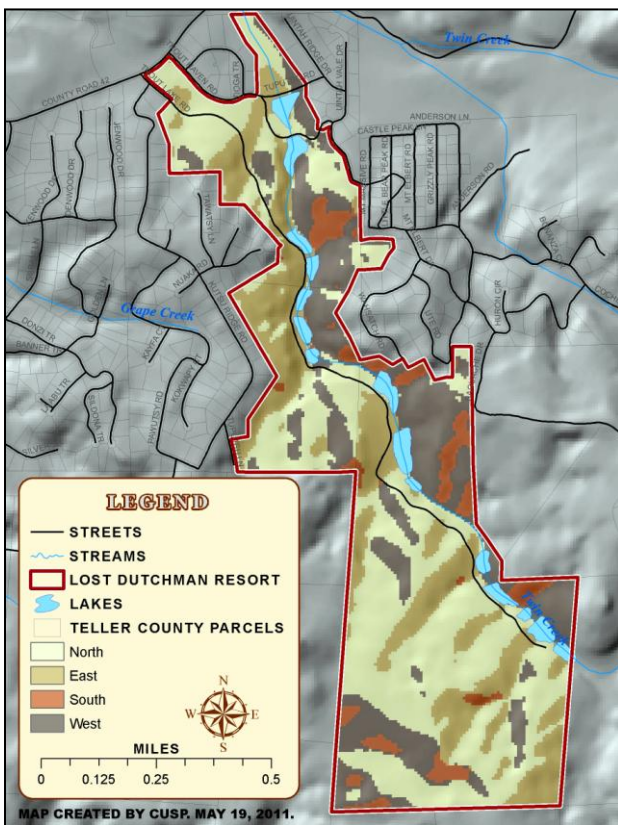


Figure 7 - Aspect

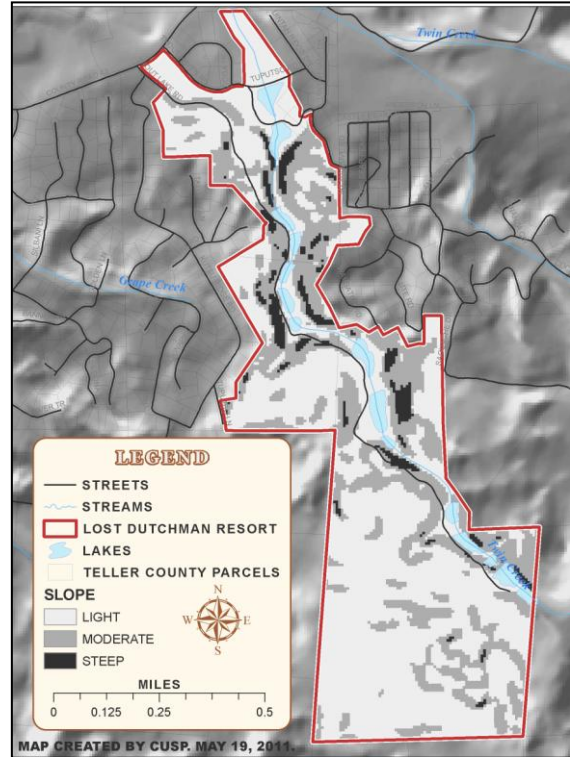


Figure 6 - Slope

Aspect

Aspect refers to the direction a slope faces. Solar heating also plays a part in the intensity of wildfire, and solar heating is a function of the aspect, a term that refers to the primary direction that a slope faces. At this high elevation, slopes in Lost Dutchman that face south and west are pre-heated and dried by strong sunlight which makes these areas more vulnerable to rapidly igniting fuels.

Integrated Risk Assessment

Using computer-based Geographic Information Systems (GIS), the factors that relate to fire behavior (fuels, topography and weather) can be combined to calculate the geographic distribution of wildfire risk. Scores of 1 to 4 (1 being the lowest risk) are assigned to each of the fire behavior factors. The highest total scores occur in areas where the forest fuels are heaviest and where the topography (slope and aspect) are the least favorable. The total scores, shown by color in the following map, provide a general representation of the areas with the highest risk of destructive fire. This map will be used to prioritize fuel mitigation projects within the resort.

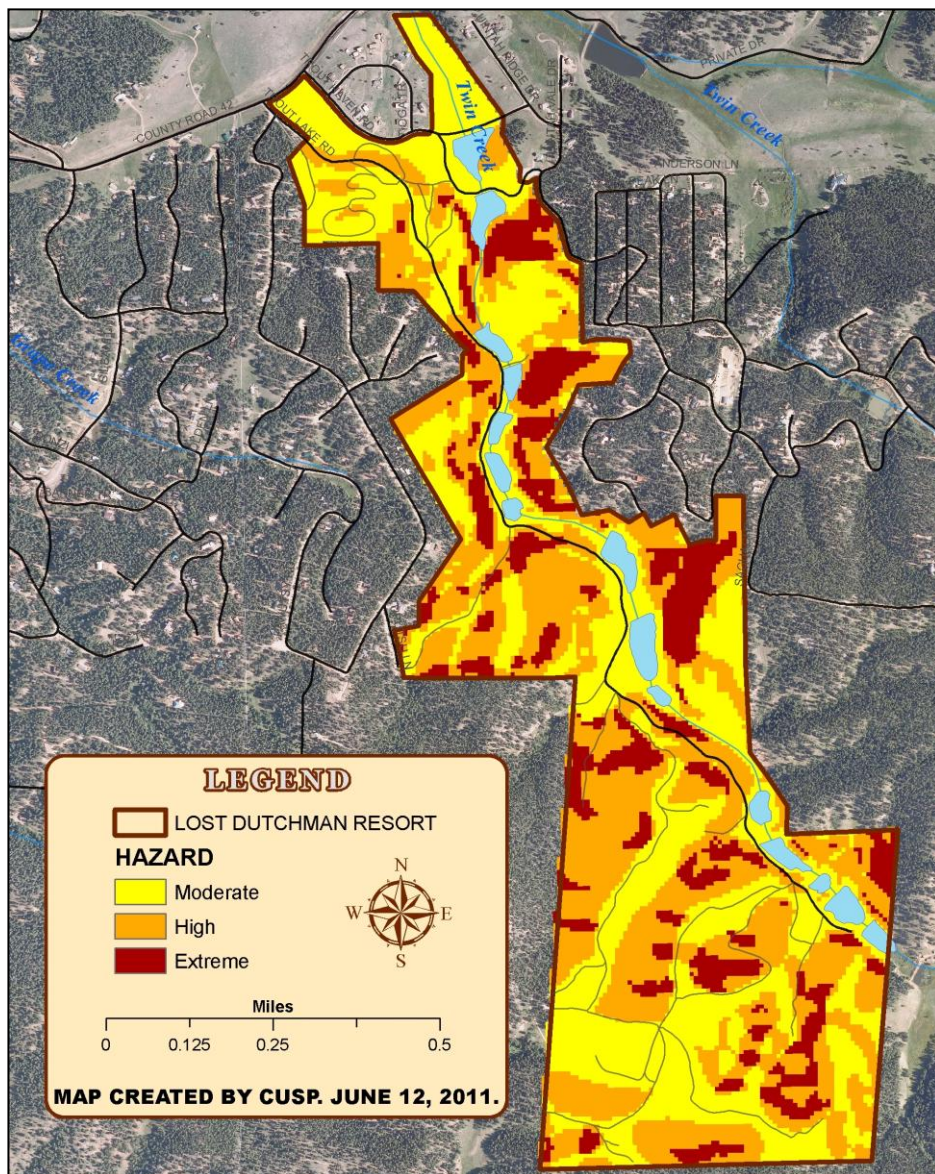


Figure 8 Fuel Hazard Ratings

In the WUI, man-made structures or camping equipment itself will also become fuel and add to any potential fire. Additionally, human activities such as campfires, smoking, or careless burning increase the risk of fire occurrence. The map below includes most of the campsites and buildings on the Lost Dutchman property.

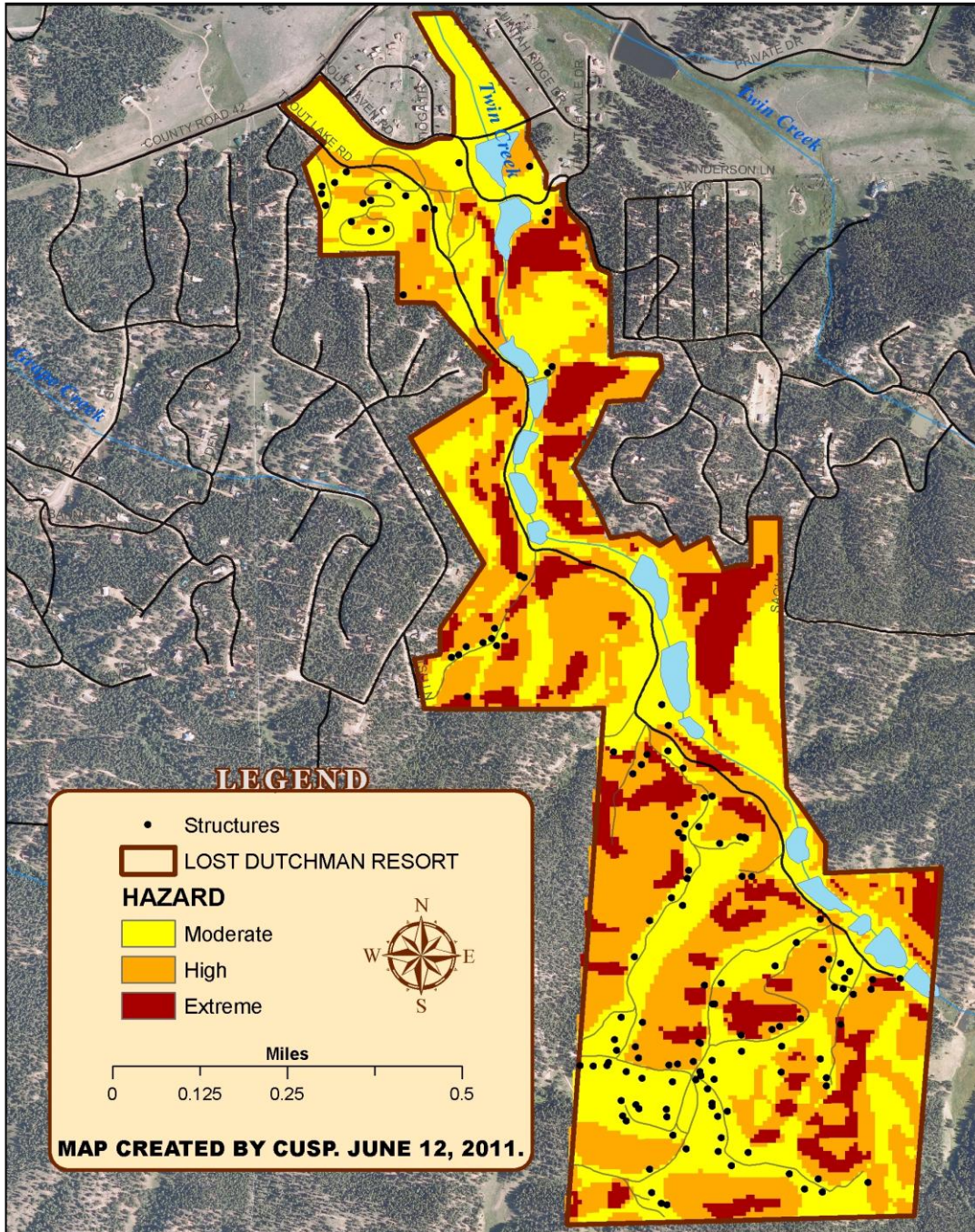


Figure 9 - Fuel Hazards with Campsite Locations

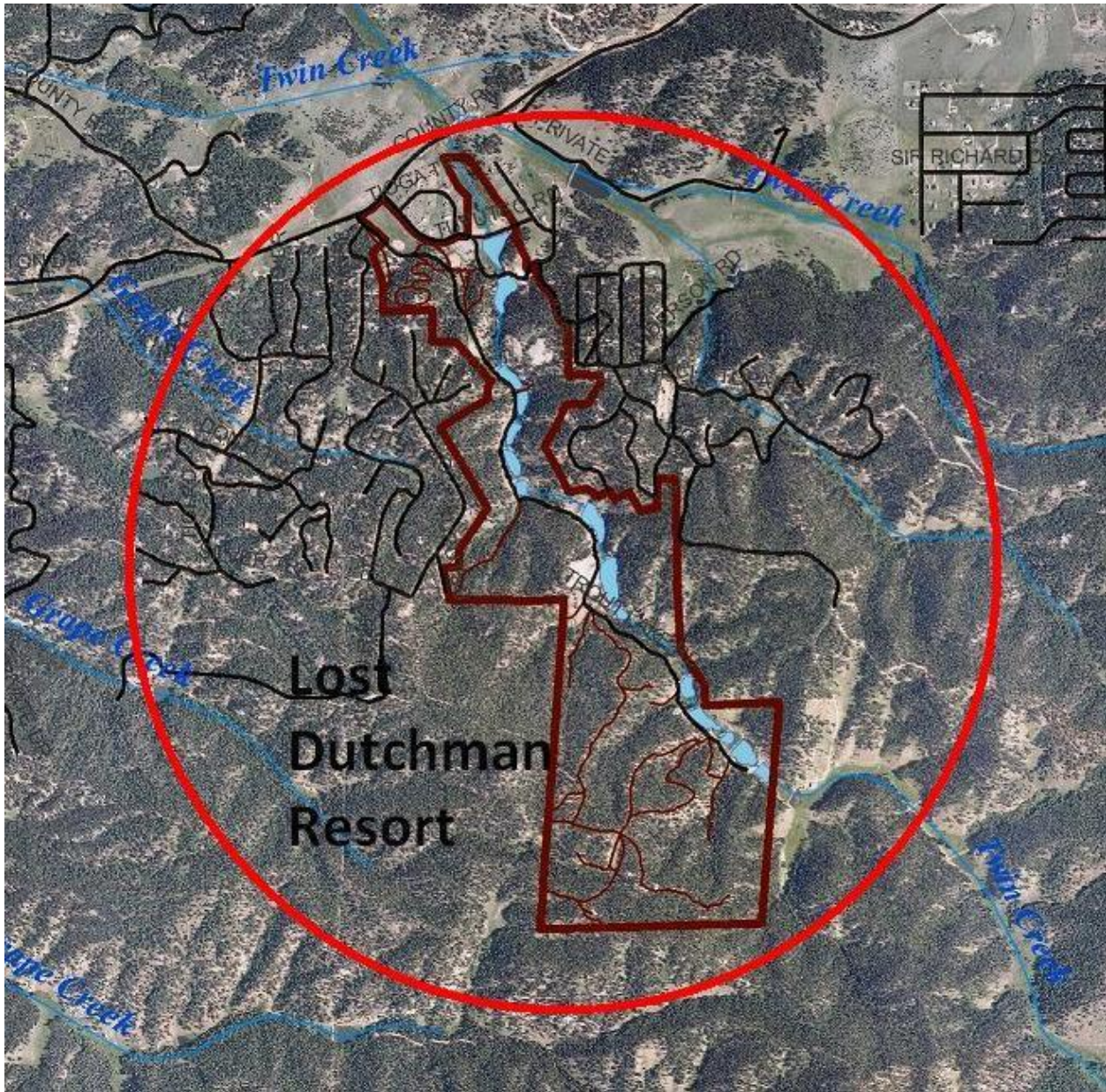


Figure10: Interface Map Lost Dutchman Resort

Wildland Urban Interface Map

Because fire respects no boundary, the neighboring subdivisions and forest fuels located there must be taken into account. This WUI zone poses tremendous risks to life, property, and infrastructure in associated communities and is one of the most dangerous and complicated situations firefighters face.

While there are few structures at risk in Lost Dutchman, there are dispersed campsites with personal property and the two adjacent subdivisions. Consequently, the area around Lost Dutchmen and its neighbors is considered the WUI. Fires in this region have the potential to move onto or off of Resort property and cause catastrophic fire damage.

Suppression Capabilities

Divide Fire Protection District would have the responsibility to be first responder to a fire - wildland or structural - in the Lost Dutchman Resort vicinity. This department is composed of three part-time paid staff and approximately 40 volunteer firefighters. As an all volunteer emergency response department, there are significant limits to the manpower, number of responding vehicles, and response time that can be anticipated in a fire emergency. Mutual aid agreements are in place with neighboring fire districts and additional personnel and equipment can be requested from other fire departments.

Fire Response

In the event of a wildfire that exceeds the capabilities of the Divide Fire Protection District and the mutual aid partners, the Teller County Sheriff appoints an incident management team. Other assistance from the OEM (Office of Emergency Management) includes an emergency operations center which can request mutual aid from other fire departments in Teller County and the ability to request assistance from outside the county, if needed. In the event of an evacuation the Sheriff—not the firefighters-- would be in charge of evacuating residents. Information about evacuations is given out through the media and by the GEOCAST call 911.

The priorities of the first responding firemen are:

- 1 – Ensure the safety of the fire fighters and residents in and near the fire.
- 2 – Evaluate the fire situation, assign firefighters to specific duties to control and suppress the fire, and inform the sheriff and other agencies about the situation.
- 3 – Restrict the loss of homes and other property.

The most common causes of wildfire ignitions are 1) lightning strikes, 2) human actions such as fireworks, open fires, out-of-control burning, careless smoking, etc., and 3) a structure fire which ignites adjacent vegetation and spreads to other homes.

The Lost Dutchman Resort expects prompt initial attack response from Federal, state, and local fire suppression resources in the event of a wildland fire start that threatens the community. When possible, aggressive initial attack, including the use of aircraft, has been shown to be the most cost effective approach for dealing with wildfires. The Lost Dutchman Resort does understand that occasionally, due to reasons such as lack of resources, multiple fire starts, extreme burning conditions, or inability to mitigate firefighter safety issues, initial attack will not be successful; however, the community expects that each party with a role in suppression will take aggressive actions to contain, control, and fully extinguish wildfires during the initial attack period and thereafter, and agrees the primary concern is the extinguishing of wildland fires.

Forest Prescriptions for Lost Dutchman

Legislation passed in 2010 requires Community Wildfire Protection Plans contain specific projects and forest management prescriptions necessary to meet the project objectives. The prescriptions that follow are designed to meet the goals of Lost Dutchman members to reduce the threat from severe wildfire, maintain the beauty of the property, restore wildlife habitat, protect the fish habitat in the stocked lakes, and improve overall forest health.

Even so, these prescriptions are general in nature. The forests in Lost Dutchman, or anywhere, for that matter, are highly variable. Each acre differs in some way from the surrounding ones. As the projects are designed on the ground, a qualified forester should be consulted for advice specific to the treated area.

Thinning to reduce wildfire threats consists of two basic elements: first creating large enough openings in the canopy to prevent fire spread through the tree crowns; second, to reduce the ladder fuels so that a fire on the ground is unlikely to reach the upper limbs of the trees. It is not possible to prevent all wildfires, so the management objective is to create a forest structure where damage is minimal and recovery is quick. This is called thinning from below.

When thinning from below, foresters classify trees based on their position in the forest canopy. In order to make the prescriptions comprehensible to the reader, it is necessary to define the terms. For simplicity, we can divide the forest canopy into three levels: dominant trees, intermediate trees, and overtopped trees.

The dominant trees are the tallest trees in the forest. They are characterized by large diameter trunks and, by virtue of their height; their crowns are in full sunlight. Unless diseased or infested with insects, the dominants are the most vigorous.

The spaces between the dominant trees are occupied by shorter trees—called intermediates--that occupy the middle level of the canopy. They are suppressed by the larger trees around them, and do not receive full sunlight. Their limited supply of energy is used in an attempt to reach the light, and the trunks are smaller in diameter than the dominant trees. Suppressed trees usually have one sided crowns and flattened tops as a result of crowding by dominant trees.

In the lowest level of the forest canopy are the smallest trees that are completely overtopped. These are the least vigorous trees in the forest. The overtopped trees represent a significant fire hazard as so called “ladder fuels”. Ladder fuels are those fuels near the ground that provide a pathway for ground fires to reach the upper forest canopy. Lower branches of dominant trees, dead branches, and shrubs can also be ladder fuels.

When thinning from below many of the intermediate trees are removed to make gaps in the canopy while all of the over topped trees are removed to reduce ladder fuels. Shrubs growing underneath trees are removed, and lower branches are pruned to remove ladder fuels.

This method leaves the most vigorous trees in place, while creating the least visual impact. The general method can be altered to reflect other landowner objectives.

Once in the canopy, a fire becomes wind driven, produces intense heat, and cannot be controlled by firefighters with hand tools. Lack of forest management, recent droughts and unnaturally dense forests conspire to create a serious wildfire threat to the community.

Priority Project Identification

The three priority zones are indicated on the map below and highlight the areas of greatest concern at Lost Dutchman Resort. In these areas, the fuels are heavy, the terrain is least favorable, and the roadway may be compromised which would make evacuation traffic out or fire suppression equipment coming in difficult or dangerous. Other areas of the resort have fire hazards as well, but are not first priority at this time.

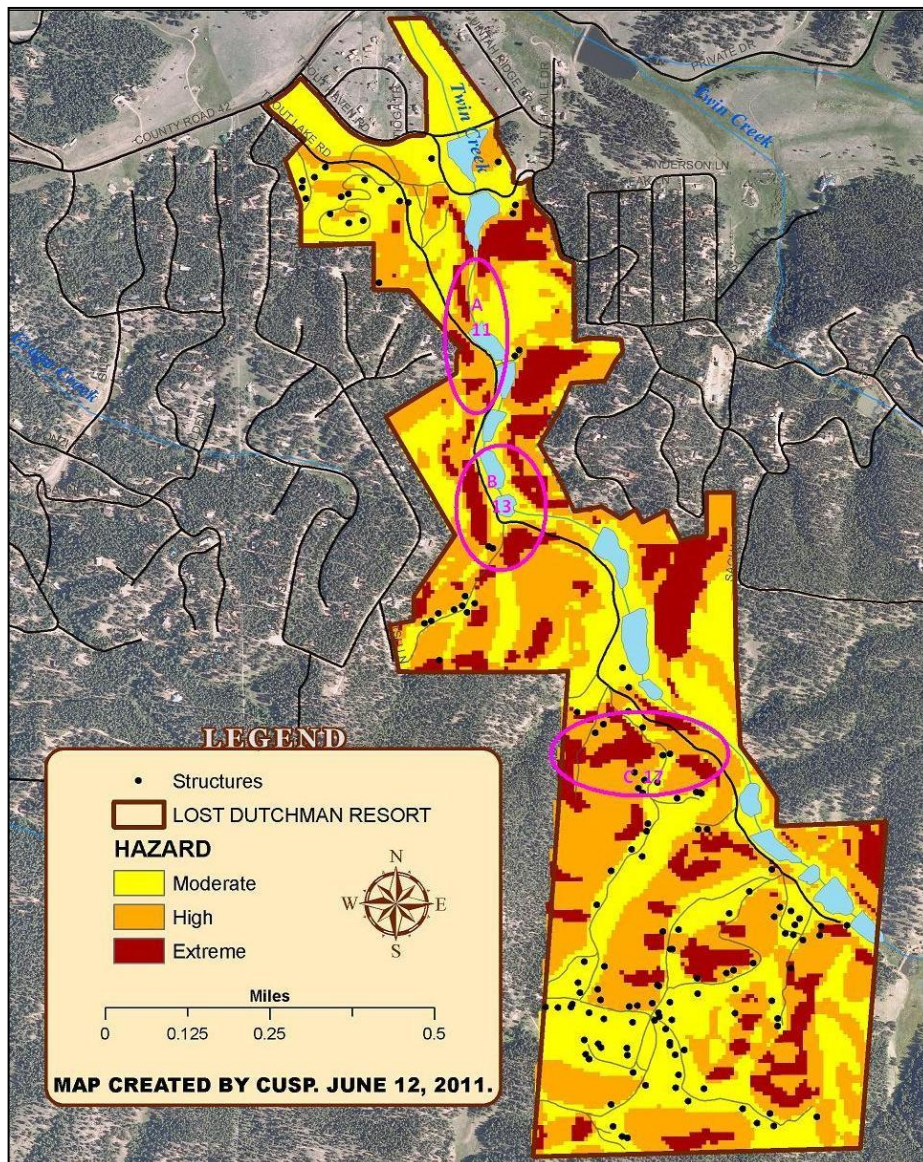


Figure 11: High Priority Hazard Areas

In general, fuel mitigation treatments should consist of site specific identification of trees to be removed by thinning, with preference toward removal of diseased, dead, and deformed trees. Due to steepness of terrain and access constraints, hand thinning will be required. Leave trees should be healthy, mixed age and specie, and given adequate individual space with the exception of shallow rooted spruce. These should be left in small stands of 3-6 trees separated by 10-20 feet to minimize the potential for “blow down”. Aspen should be maintained wherever they occur. Limb up remaining trees 6-8 feet above the ground and remove surface ladder fuels. Chip all slash in place. Remove trees or branches overhanging road where possible to provide a safe travel corridor at least 12 feet in width and 13 feet in height. If possible, widen roadway in narrow, one lane sections to accommodate 2-way traffic.

Objectives, Goals, Actions

Objective 1: Reduce the potential for catastrophic fire loss in locations identified as high priority by current mapping techniques. (See Hazard Map)

Goal 1: Reduce fuels along camp roads, group camping areas, and resort structures

- Pursue grant funding for creation of fuel and fire breaks and consider incorporating current roadways to improve access and reduce fire hazards.
- Host a “community chipping day” where excess forest fuels are chipped back onto site to reduce soil compaction and erosion.

Goal 2: Fuel reduction at individual camp sites

- Inspect and rate each campsite with focus on hazardous fuels within 30 ft radius.
- Create priority list for leased site treatment and notify lease holder before project begins.
- Create a list of procedures to rehabilitate any vacant sites and develop new sites with regards to fire prevention.

Goal 3: Protect Twin Creek drainage

- Continue monitoring water quality in ponds and treat as necessary.
- Continue maintenance to prevent erosion along stream and pond banks wherever possible and preserve structural integrity of dams.
- Monitor runoff from roads and campsites to prevent contamination of ponds.

Objective 2: Improve emergency evacuation and safety of resorts guests.

Goal 1: Evaluate current fire suppression capabilities and emergency procedures.

- Invite local fire district for tour and inspection to determine priority projects.
- Review resort evacuation policy and procedures and modify as necessary.
- Publish emergency procedures and distribute to all members and guests.

Goal 2: Investigate cooperative emergency egress with adjacent landowners

- Contact owners of potential locations for egress for either party in an emergency.
- Discuss grade/width/height requirements for emergency equipment with local fire district. Implement mitigation in critical areas.

Goal 3: Increase water availability and access for fire suppression agencies.

- Investigate providing legal access to pond water for fire suppression.
- Investigate the need for “dry hydrant” access and install if necessary.

Objective 3: Provide current information to staff and guests regarding fire prevention at Lost Dutchman Resort

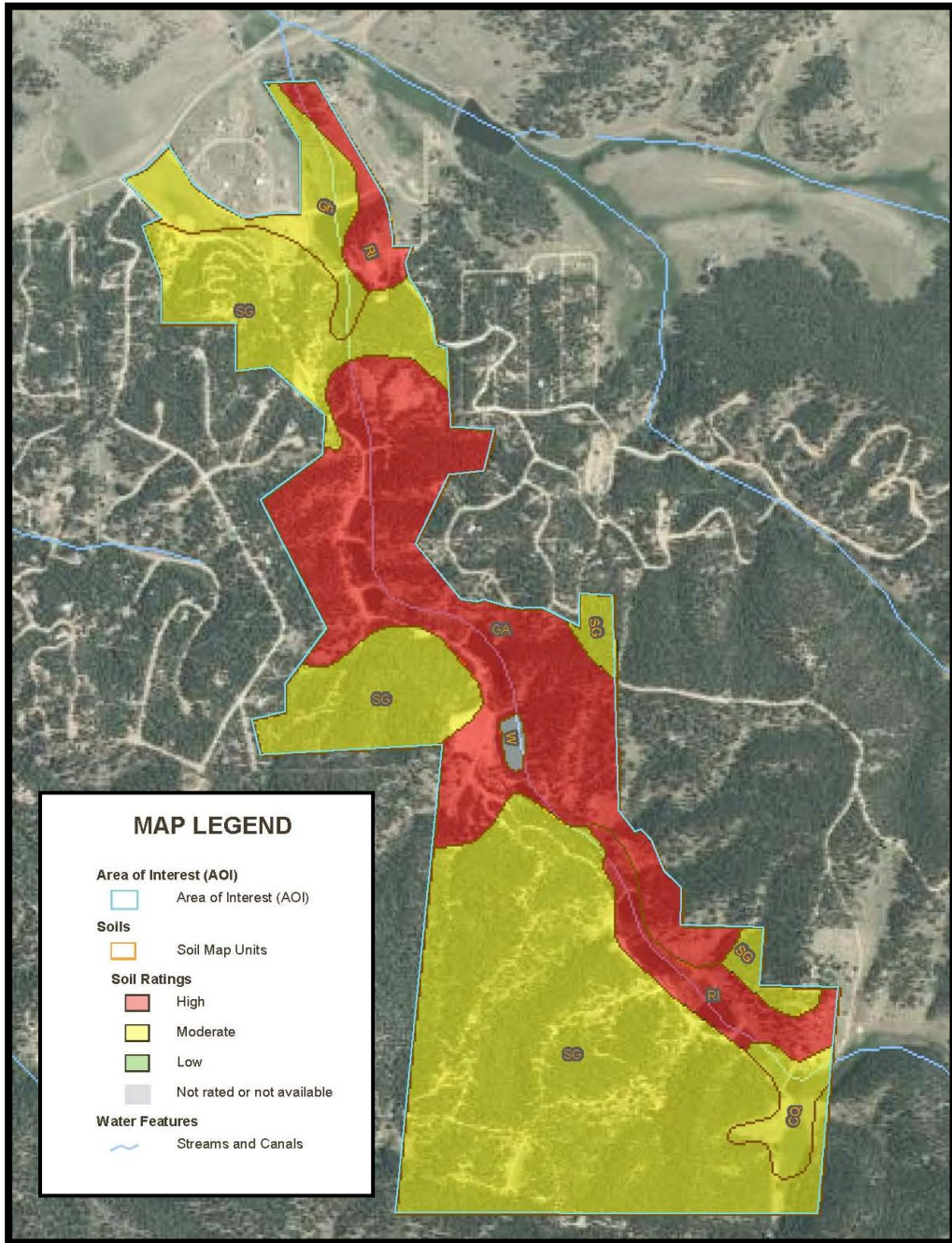
Goal 1: Reduce the likelihood of a human caused fire within the property

- Inspect fire rings and pits for safety at least twice a year.
- Provide or require all campsites to have water, bucket and shovel available and provide “outdoor Fire Safety” brochure.
- Continue display of current fire danger/fire ban signs at entrance

Goal 2: Increase awareness of wildfire hazards and forest health.

- Maintain a supply of fire/forest health related handouts at store for dispersal.
- Provide specific information regarding campfire safety to each guest at least once a year through lease, newsletter or brochure. Provide information directly to groups renting facilities.
- Invite fire prevention or forest health professional (Federal, State or Local) to address one member meeting per year.

Lost Dutchman Resort Potential for Damage by Fire



Potential for Damage by Fire

Potential for Damage by Fire— Summary by Map Unit — Teller-Park Area, Colorado, Parts of Park and Teller Counties						
Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
CQ	Adderton-Rosane taxadjunct complex, 0 to 6 percent slopes	Moderate	Adderton (65%)	Texture/rock fragments (0.50)	9.4	2.4%
				Texture/rock fragments (0.10)		
GA	Guffey-Herbman association, 5 to 50 percent slopes	High	Guffey (50%)	Texture/rock fragments (1.00)	104.9	27.2%
Gh	Goth gravelly loam, 8 to 40 percent slopes	Moderate	Goth (90%)	Texture/rock fragments (0.50)	19.5	5.1%
				Texture/rock fragments (0.10)		
RI	Herbman gravelly sandy loam, 5 to 55 percent slopes	High	Herbman (90%)	Texture/slope/surface depth/rock fragments (1.00)	27.1	7.0%
				Texture/slope/surface depth/rock fragments (0.50)		
SG	Catamount-Guffey complex, 15 to 40 percent slopes	Moderate	Catamount (60%)	Texture/surface depth/rock fragments (0.50)	222.9	57.8%
				Texture/surface depth/rock fragments (0.50)		
				Texture/surface depth/rock fragments (0.10)		
W	Water	Not rated	Water (95%)		1.6	0.4%
Totals for Area of Interest					385.4	100.0%

Potential for Damage by Fire— Summary by Rating Value		
Rating	Acres in AOI	Percent of AOI
Moderate	251.8	65.3%
High	132.0	34.3%
Null or Not Rated	1.6	0.4%
Totals for Area of Interest	385.4	100.0%

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 13N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Teller-Park Area, Colorado, Parts of Park and Teller Counties
 Survey Area Data: Version 5, May 19, 2008

Date(s) aerial images were photographed: 7/3/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Appendix B

Contacts For More information:

Colorado State Forest Service, Woodland Park Office
113 South Boundary St., PO Box 9024
Woodland Park, CO 80866
phone: 719-687-2921

Divide Fire Protection District
103 County road 51
Divide, CO 80814-9143
Phone: 719-687-8773 *non emergency only*

US Forest Service, Pike District
601 S. Weber Ave.
Colorado Springs, CO 80903
phone: 719-636-1602

Coalition for the Upper South Platte
P.O.Box 726
Lake George, CO 80827
Phone 719-748-0033

Websites For More Information:

“Fuel Break Standards for Forested Subdivisions & Communities”: www.csfs.colostate.edu.

“Creating Wildfire Defensible Zones”: www.csfs.colostate.edu/pdfs/6302.pdf

“Firewise Construction” : www.csfs.colostate.edu/pdfs/construction_booklet.pdf

“Forest Home Fire Safety”: www.csfs.colostate.edu/pdfs/6304.pdf

“Firewise Plant Materials”: www.csfs.colostate.edu/pdfs/6305.pdf

Other Information: www.csfs.colostate.edu (*use search box at upper right*)

Ute Cultural Trees: www.pikespeakmuseum.org/Museum/Main/Headings/Ute

Firewise Communities, www.firewise.org