FIRE PROTECTION PLAN

Monserate Winery

North County Fire Protection District



North County Fire Protection District
330 S. Main Ave.
Fallbrook, California 92028
(760) 723-2010

APPROVED
SUBJECT TO CONDITIONS NOTED BELOW
Date: 7-17-19
By: _____
Fire Marshal or Designee

OBTAIN FIRE AGENCY APPROVAL
PRIOR TO THE FOLLOWING INSPECTIONS:

Underground Plumbing _____
Frame _____
Final _____
Other _____

It is unlawful to make any changes or alterations on this set of plans and specifications.

June 28, 2018

Prepared for the County of San Diego, on behalf of the Owner,
Jade Work
2757 Gird Road, Fallbrook, CA 92028

Prepared by: Sid Morel

Sid Morel, President
Santa Margarita Consulting, LLC.
PO Box 2124
Fallbrook, CA 92088

ENV. LOG NO. PDS 2018-ER-18-02-003

Table of Contents

EXECUTIVE SUMMARY 3

1. INTRODUCTION 3

1.1 Project Description, Location, and Environmental Setting 3
1.1.1 Project Location 3
Figure 1: Regional Location 4
Figure 2: Site Plan with topo 5
1.1.2 Project Description 6

1.1.3 Environmental Setting 8
Inspection Dates 8

2. GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE 9

3. ANTICIPATED FIRE BEHAVIOR IN THE VICINITY 10

4. ANALYSIS OF PROJECT EFFECTS 11

4.1 Adequate Emergency Services 11

4.2 Fire Access 11
4.2.1 Bridge 11

4.3 Water Supply 12

4.4 Ignition Resistant Construction and Fire Protection Systems 12
4.4.1 Additional Fire Resistance 12
Figure 5: Fire resistant weep screed detail 13
4.4.2 Fire Sprinkler Requirements 14

4.5 Fire Fuel Assessment 14
Figure 6 Aerial of site / Off -site vegetation 15

4.6 Fire Behavior Modeling 16

4.7 Defensible Space and Vegetation Management 17

4.8 Cumulative Impact Analysis 17

5. MITIGATION MEASURES AND DESIGN CONSIDERATIONS 17

6. CONCLUSION 18

7. LIST OF PREPARERS, PERSONS, AND ORGANIZATIONS CONTACTED 19

8. REFERENCES 20

9. TECHNICAL APPENDICES 21
APPENDIX A Behave Plus Fire Behavior Calculations 22

EXECUTIVE SUMMARY

The Monserate Winery project is located just north of the community of Bonsall in unincorporated San Diego County. The site has been operated as Fallbrook Golf Course since 1962 with nine holes on the east side of Gird Road and nine holes on the west side. Monserate Winery will provide wedding, wine tasting and special event buildings. The site sits in Gird Valley on 23.7 acres. The west side has a 47-acre open space property that became part of the Fallbrook Land Conservancy in 2015. Fire Protection is provided by North County Fire Protection District. The proposed buildings are situated on the west side of Gird Road with the wedding sites west of a seasonal creek. Anticipated fire behavior is low due to the complete removal of flammable vegetation and planting of wine vineyards and fire resistive landscaping.

CHAPTER 1 INTRODUCTION

This Fire Protection Plan has been prepared for the Monserate Winery Special event site, MUP. The purpose of the FPP is to assess the potential impacts resulting from wildland fire hazards and identify the measures necessary to adequately mitigate those impacts. As part of the assessment, the plan has considered the property location, topography, geology, combustible vegetation (fuel types), climatic conditions, and fire history. The plan addresses water supply, access, structural ignitability and fire resistive building features, fire protection systems and equipment. The plan identifies and prioritizes areas for hazardous fuel reduction treatments and recommends the types and methods of treatment that will protect one or more at risk communities and essential infrastructures. The plan recommends measures that property owners will take to reduce the probability of ignition of structures throughout the area addressed by the plan.

The primary purpose of this plan is to offer mitigation and address the requested reduction in property line setback from 100 feet to 75 feet. The requested setback variance is for the northwest venues labeled Venue 2 and Venue 3.

1.1 Project Location, Description and Environmental Setting

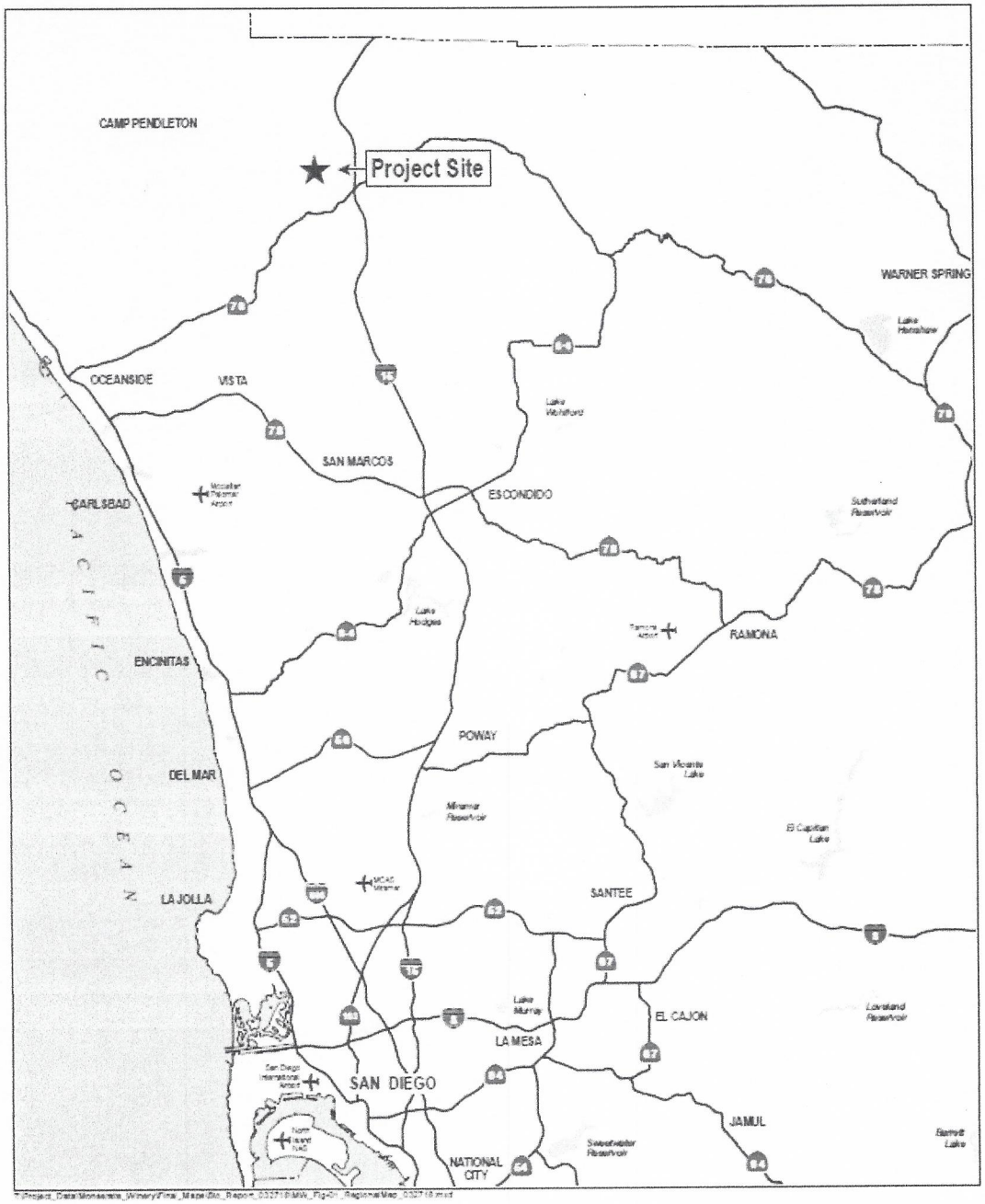
1.1.1 Project Location

Assessor Parcel Numbers (APNs) are 124-182-01 and -02, and 107-420-51 (not a part of the Major Use Permit Modification) and 107-420-16 and -17; 124-330-04, -14, -15 and -20, together totaling approximately 116 acres. The site is located approximately 1.6 miles northwest of the intersection of California State Route 76 (SR-76) and Interstate 15 (I-15) within the community of Fallbrook in the County of San Diego The Site is divided by Gird Road into western and eastern sections and surrounded by residential development except to the west of the western section of the property where the land is undeveloped.

REGIONAL LOCATION

The Site is located just south of the community of Fallbrook. The community of Fallbrook consists of 36,000 acres and is located south of Riverside County and east of

Camp Pendleton. Its neighboring communities are Bonsall to the south, Pala to the east and Rainbow to the northeast. Most of the area is characterized by rolling hills covered in avocado and citrus orchards. The San Luis Rey River is approximately 1.5 miles (2.5 kilometers) to the south (Figures 1 and 2).



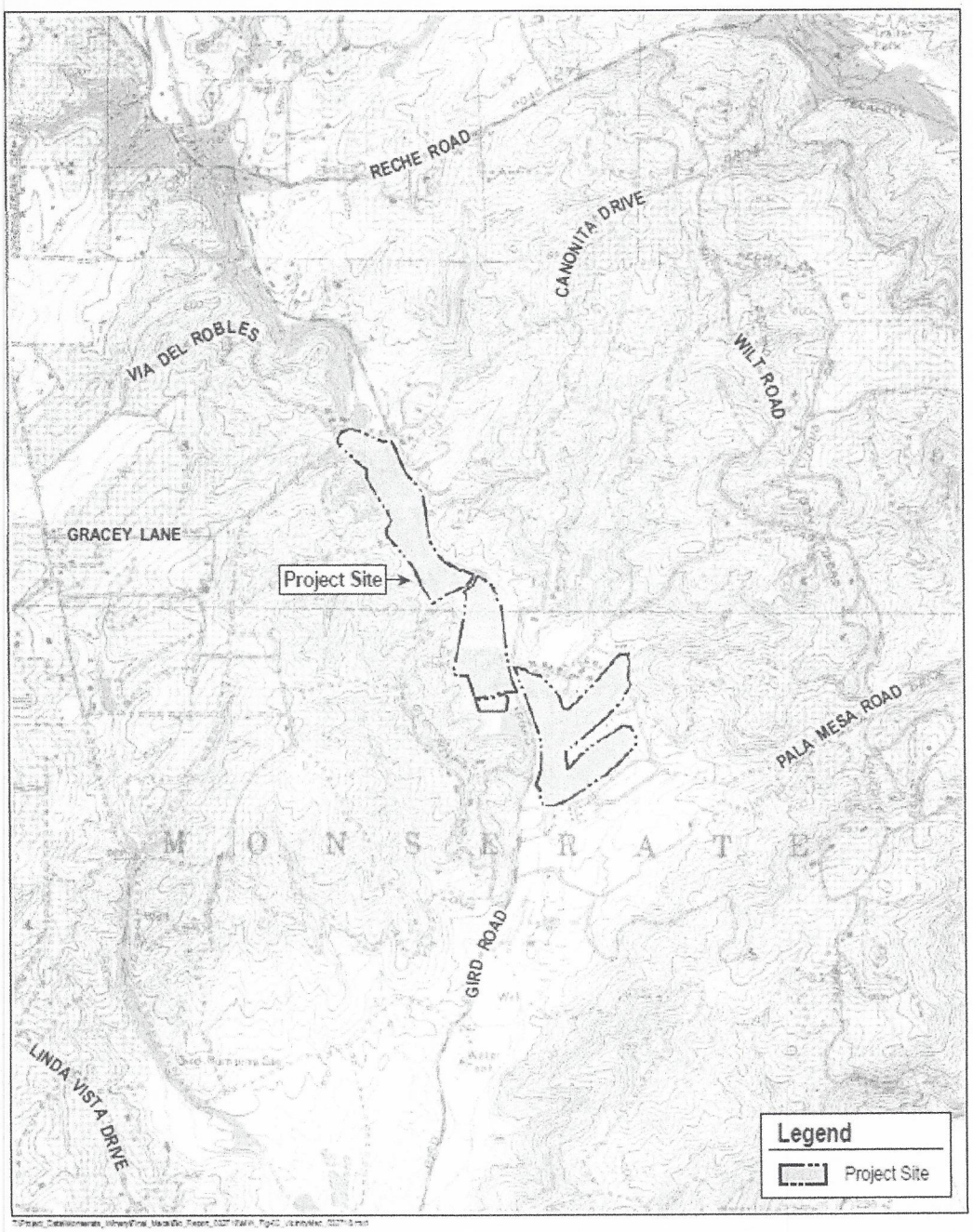
Regional Location

Miles 0 3 6

FIGURE 1

MONSERATE WINERY

Source: County of San Diego SanGIS Database, 2016. May 2016



Vicinity Map

0 1,000 2,000 Feet

Source: Esri UDSD Basemap, 2018.

FIGURE 2

MONSERATE WINERY

May 2018

1.1.2 Project Description

Project Description

The project applicant is requesting County approval of a Major Use Permit (MUP) modification to authorize a winery/passive open space with event/venues or similar gathering and/or spa facilities on the subject site. The affected County Assessor Parcel Numbers (APNs) are 124-182-01 and -02, and 107-420-51 (not a part of the Major Use Permit Modification) and 107-420-16 and -17; 124-330-04, -14, -15, and -20, together totaling approximately 116 acres. The land area associated with the winery and event facility (portions of 107-420-16 and -17 and portions of 124-330-04, -14, -15, and -20 is comprised of an approximately 23.7 acre portion of the 116 acre property. The remaining land area not affected by the proposed MUP modification would be placed within a dedicated open space/agricultural easement to prohibit future development; however, portions of this land area is currently planted with vineyards. New vineyards will be planted to the north of the existing project entrance on Gird Road.

Additionally, a portion of the overall 116 acre property (APNs 124-182-01 and -02) located to the east of Gird Road (previously a portion of the former golf course that operated on the subject site) has been planted as a vineyard since 2017. This area is not part of the current Major Use Permit modification authorizing the winery and event center and is being removed from the previous golf course Major Use Permit authority.

The proposed structures within the MUP area would total approximately 56,040 square feet (s.f.). This includes the main tasting room and restaurant as well as three additional event/venue areas with supporting facilities, and administrative space; refer to the Major Use Permit Plot Plan (Modification), available under separate cover.

The proposed architectural style would reflect an old-world style with buildings constructed of stucco, tile roofing and wooden and tile accents. All structures would be of muted, earth toned colors to reflect the natural setting and to blend in visually with the surrounding rural character.

The main facility would include a large tasting room and several outdoor patios for use in serving wine tasting guests and members and to support accessory events held at the property. This building would also offer a restaurant for public dining. A commercial catering kitchen, staff lounge, meat curing room, and dishwashing room are proposed in support of the wine tasting activities and restaurant. Several offices, restrooms, janitor storage, and storage areas would also be accommodated within this structure. The main facility contains a total of 17,644 s.f. of structure.

Venue 1 would be located just to the southwest of the tasting room/restaurant building and would consist of the indoor production area (approximately 3,600 s.f.) with wine making facilities, bottle storage room, barrel room, crushing rooms, and a covered outdoor patio for ingress/egress and initial processing activities, as well as several offices, a break room, a laboratory, storage areas, and restroom. Separate bridal/groom suites (approximately 3,200 s.f.), each with lockers, restrooms, grooming areas, and patios for the bride and groom and their guests are also proposed. A central courtyard would separate the bridal/groom suites from the wine making facilities. A pavilion is also proposed adjacent to the courtyard for hosing of weddings or other events. Several

additional offices, including two sales offices, and a lobby/reception area would also be accommodated within this structure. Venue 1 contains a total of 22,673 s.f. of structure.

Venue 2 would be located to the west side of the onsite drainage, west of the main facilities, and would consist of an approximately 3,400 s.f. sprinklered barn for holding events. Separate bride and groom suites, each with a changing/grooming area, lockers, restrooms, janitor storage, and a patio are proposed for this venue. A separate building is proposed just to the west of the main venue that would offer restrooms, storage and other supporting uses. Venue 2 contains a total of 7,349 s.f. of structure.

Venue 3 would be located to the northwest of the tasting room building and would offer bride/groom suits similar to those proposed for Venue 2. A central courtyard would separate the bride/groom facilities and would serve to host scheduled events. A second building would adjoin the bride/groom suites to the south, along with men's and women's restrooms, for the hosting of events. Venue 3 contains a total of 8,374 s.f. of structure.

Operations

Hours of operations for the entire project would be 10:00 am to 10:00 pm (12 hours a day) every day of the year (with exception of select holidays). More specifically, the tasting room/restaurant would operate 10:00 am to 6:00 pm and the venues would operate from 12:00 pm to 10:00 pm. All events (indoor and outdoor) will be held within the hours of operations stated above.

Limited background music would be played during normal business hours in the tasting room and on the immediately adjacent outdoor patio. All venue sites would have fully contained indoor music systems to avoid any potential noise effects on adjoin properties.

It is anticipated that wine production will commence in the year 2020 following construction of the proposed improvements. Additional vineyards will be planted near the venues.

The winery would be capable of producing an estimated 10,000 cases of wine annually in its initial stages, with production ultimately expanding to a maximum of approximately 25,000 cases of wine (annually) over time. Initial production at the winery would be significantly below the 120,000 gallon production limit, as regulated and allowed by County ordinance.

Winery production activities would largely occur during the months of August, September, and October. During these months, the winery would generally operate from morning to later evening to accommodate fruit as it is ready to be used in production. Wine production would generally occur within the interior of the winery building, with occasional crushing and processing occurring outside under the covered patio. Any wastewater produced in the building would be captured and treated in accordance with applicable County of San Diego Department of Environmental Health (DEH) requirements. In addition, an evaporation pond plan (or other DEH approved

system) for treatment of wastewater generated by winery production activities is proposed.

The proposed use of the site as a winery would reduce water demands for irrigation, as well as the use of chemicals (e.g., fertilizers, pesticides) as compared to the former golf course use. A new state-of-the-art drip irrigation system has been installed on the property for irrigation purposes. All water used in maintaining the vineyard and onsite landscaping would be water from existing onsite groundwater wells. The well water used to support the proposed vineyard operations would total approximately 15% of historical onsite well water use for operation of the former golf course. Water for the restaurant, winery, and venues would be provided via public water service from the Rainbow Municipal Water District (RMWD). Historical golf course water usage compared to the proposed water usage of the winery and event facility is available under separate cover.

The proposed use of the site as a winery would also reduce overall vehicle trips as compared to former use of the site as the Fallbrook Golf Course.

Events and Weddings

It is anticipated that the site would host weddings and/or events on average three times a week, for a total of up to 170 events per year, per venue. Any event would accommodate a maximum of 250 guests. Most events would be held on Friday, Saturday, or Sunday and would be scheduled to occur when the tasting room is closed so that overlap in the arrival and/or departure of guests and parking with the other general visitors of the winery does not occur.

Outdoor sound for weddings would be limited to light ceremony music and officiants. Any wedding ceremony or event where music is not played may be held in the proposed adjacent open field (to be located west of the tasting room) or at the vineyard; events with loud amplified music would be held in the barrel room and/or barns. Accessory events would otherwise be held in the tasting room or on the outdoor covered patio. Pursuant to the San Diego County Noise Ordinance all events would be conditioned to meet the 45 dB interior noise level after 10:00 pm.

1.1.3 Environmental Setting

The site sits in a valley and is relatively flat. Onsite elevation ranges from approximately 305 feet (93 meters) above mean sea level (AMSL) in the southwestern corner of the eastern section of the Site 365 feet (111 meters) AMSL in the northeastern corner of the eastern section of the Site.

- April 4, 2017. Initial site visit with Jade Work and review of requirements.
- May 21, 2018 Site visit with North County Fire, Fire Marshal Patty Koch.
- May 31, 2018 Site visit with North County Fire, Assistant Fire Marshal Cliff Hunter.
- August 20, 2018, Fire Protection Plan approved by North County Fire Marshal Patty Koch.

Chapter 2 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE.

A Fire Protection Plan evaluates the potential adverse environmental effects that Monserate Winery may have from wildland fire and proposes appropriate mitigation for any adverse impacts to ensure that this development does not unnecessarily expose people or structures to a significant risk of loss, injury or death to wildland fire. The following guidelines for the determination of significance are used:

1. Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

   The 2007 Rice Fire burned to the sites east side. In 2007 the property was owned by the Fallbrook Golf Course and was kept in pristine condition. Since 2007, the Golf Course fell on tough times and eventually the water was shut off. The course had numerous dead pine trees, Mexican Fan Palms and weeds were growing on the banks. The golf course previously dumped all their trimmings on the Fallbrook Land Conservancy site. Monserate Winery has removed over 50 Dead Pine trees, 70 Mexican Fan Palms and approximately 100 tons of dead trees, weeds and down material including all that was on the Fallbrook Land Conservancy site. They have replanted with grape vineyards and are adding water features on the west side near the new wedding venues.

2. Would the project result in inadequate emergency access? No, see 4.2 Fire Access Roads.

3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance service objectives for fire protection?

   A. No, the project is adequately served by existing fire protection services from three agencies. North County Fire Protection District provides fire protection and emergency medical service and has automatic aid agreements with Cal-Fire and north zone fire departments.

4. Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

   A. Monserate Winery is currently being served by the Rainbow Municipal Water District and additional water lines and hydrants will be constructed to support Monserate Winery.

Chapter 3 ANTICIPATED FIRE BEHAVIOR IN THE VICINITY

The October 2007 Rice Fire burned to the eastern edge of what was then Fallbrook Golf Course. The fact that the Rice Fire was held on the eastern edge without much fire intervention proves that the healthy Golf Course worked as a fire break. I oversaw the Division along Gird road and used the Golf Course Parking lot as a staging area for fire engines. Since 2007 numerous new homes have been built north and east of the project resulting in a reduced threat of a Santa Ana wind driven fire affecting Monserate Winery. Monserate Winery has also removed 50 dead Pine Trees, 70 Mexican Fan Palms and cleared the trimming debris dumped by Fallbrook Golf Course on the Fallbrook Land Conservancy property.

December 7, 2017 the Lilac fire burned south of the project along highway 76. The site is in a valley with a north / south alignment that provides additional protection from a wind driven Santa Ana fire as well as an on-shore typical prevailing wind fire. The 2017 Lilac Fire proceeded to the west and did not affect the gird valley or the site.

The plan is to construct two wedding buildings on the west side of the seasonal creek. The east side is surrounded by residential homes and would not be as desirable as a venue for events. The western location is the safest location based on the greatest amount of clearance from a wind driven Santa Ana fire event. The 100-foot set back, however, restricts construction in this ideal location. Monserate Winery's plan rectifies this issue by simply reducing the set back from 100 feet to 75 feet and taking extra measures to ensure safety.

A wildland fire starting west of the development in the open space would burn uphill away from the site. Monserate Winery's vineyards, fire resistive landscaping and additional water features limit the potential of ignition from a fire burning uphill to the west away from the site. The fire modeling for the Coastal Sage and non-native grasses on the sloped property predicts a maximum flame length of 43.8 feet during a Santa Ana wind event. Venue 1 and Venue 2 have a 75-foot set back from the property line and native Oak trees. The native Oak trees, if left untreated and w Santa Ana wind, worst-case scenario flame length model at 4.4 feet. This is highly unlikely because the plan is to keep the Oaks limbed up and complete ground clearing.

The code allows fuel modification zoning with a 100-foot set-back to have the last 50 feet to be 50% thinned native vegetation. Our proposal includes complete clearing and planting with fire resistive landscaping and vineyards and a 20-foot clearing bordering the site and open space. The 75-foot setback creates 300 to 400 feet of set back to the east and 500 to 600 feet to the north. The current proposed location provides the most defensible space and protection for not only the wedding sites, but access to the open space to the west as well. The current plan keeps the parking of vehicles on the east of the seasonal creek, more than 200 feet away from the property lines to the west. The location of the parked vehicles reduces the threat of a vehicle fire threatening the off-site vegetation.

Chapter 4. ANALYSIS OF PROJECT EFFECTS

4.1 Adequate Emergency Services

North County Fire Protection District provides fire and emergency medical response for the area. Monserate Winery is situated between North County Fire Station 2 located at 2180 Winterwarm Drive, Station 4 located at 4375 Pala Mesa Drive, and Station 5, located at 5906 Olive Hill Road. Along with North County Fire, Cal-Fire has the Red Mountain Fire Station, located at 3660 East Mission Road is also located in the North County fire district and they would respond as automatic aid to a vegetation fire. According to NFPA 1142 these 4 stations could arrive at Monserate Winery within 8 minutes.

4.2 Fire Access

Permanent access to the site would occur from the existing main access point along Gird Road; refer to the Major Use Permit Plot Plan (available under separate cover). The main (public) access to the site would occur at the existing driveway that formerly provided access to the golf course clubhouse. This access point is connected to an existing acceleration and deceleration land along Gird Road constructed with the Golf Course. No improvements are required to utilize the existing entrance drive for access purposes. Adequate sight distance is available, via a sight distance certification was prepared by MBi, dated April 2019. A second access driveway (existing) would be located to the north of the main access drive. This driveway will access venue 3 and features a 35 foot wide low water bridge that will be certified and or improved to meet the 75,000 lb. standard. A third access point (existing) would be located to the south of the main access drive. All driveways that are intended to provide access for emergency services vehicles would be gated with a Knox Box entry system.

Interior access to all venues and the main winery structure and parking areas would be all-weather surfacing material (Granite-Crete, decomposed granite (d.g.), Class II Base, gravel or permeable pavers). The fire access routes will have a minimum carrying capacity of 75,000 lbs. A series of internal pathways would be used by winery staff to transport foods and materials to the various venues and for maintenance related activities. Additionally, these paths would be used by guests to walk from the surface parking lot and testing room/restaurant facilities to the event venues, as needed; refer to the Major Use Permit Plot Plan (available under separate cover).

4.2.1 Bridges

One 24-foot steel bridge with concrete and one 16-foot steel bridge with concrete will be installed over the seasonal creek and provide access to Venue 2.

- The Bridges will meet Sec. 503.2.6 Bridges and elevated surfaces of the San Diego County Consolidated Fire Code: Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with AASHTO HB-17. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus (75,000 lbs). Engineered bridge plans will be submitted with building plans.

4.3 Water Supply / Hydrants

The water supply for this proposed project will come from existing and proposed water mains from the Rainbow Municipal Water District. Existing and new water mains and fire flows will meet the North County Fire Protection District (2500 GPM with 20 psi residual). Monserate Winery shall work with North County Fire Protection District and Rainbow Municipal Water District to determine exact type and location of fire hydrants. The hydrants shall be installed to meet the most current San Diego Consolidated Fire Code standards:

Sec. 507.5.7.1 Signing of fire hydrants. The fire code official shall require fire hydrants to be identified. Fire hydrants may be identified by a reflectorized blue marker with a minimum dimension of 3 inches, in the center of the travel lane adjacent the water source, or by other methods approved by the fire code official.

Sec. 2808.16.1 Public water supply. The operator shall provide and maintain approved fire hydrants and waterline mains as required by the fire code official. Water lines may be approved aboveground lines supplied from a reliable water supply with adequate protection against impact and fire flow reaction. Hydrant spacing shall be at 400-foot intervals along primary fire access roadways.

Based on information provided by the Rainbow Municipal Water District, the hydrant at the corner of Gird Road and Laketree has a static pressure of 250 psi and is an 8 inch main. The civil engineer is currently working with Rainbow Municipal Water District on the water line design and will prepare and submit plans for review once design is finalized.

A fire hydrant shall be installed within 100 feet of a Fire Department Connection.

4.4 Ignition-Resistant Construction and Fire Protection Systems

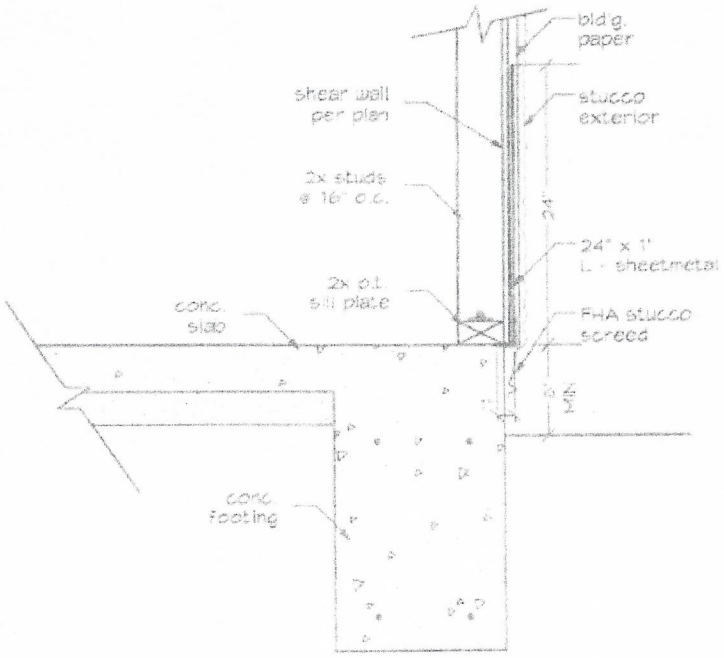
"All new structures shall comply with the ignition resistive construction requirements: Wildland-Urban Interface areas of Chapter 7A San Diego County Consolidated Fire Code and the County Building Code"

- Roofs will be a Class "A" noncombustible material and shall meet current San Diego County building code standards.
- Eaves will be of noncombustible material or ignition resistant and meet San Diego County building code standards.
- Exterior walls will be of noncombustible or ignition resistant materials and meet San Diego Building Codes and chapter 7A.

4.4.1 Additional Fire Resistance

- **West and south sides of Venue 1 and Venue 2**: All windows facing the west and south shall have two panes of tempered glass. The stucco shall be 7/8-inch-thick, and doors shall be metal clad to improve resistance to fire. Behind the weep screed, and stucco will be placed with a 24-inch x 1-inch piece of L metal flashing. The 1-inch L will be placed under the bottom plate. The metal will allow the stucco weep screed to work while keeping any embers from penetrating the bottom plate, sheer panel, and studs. All vents shall be ember resistant types.
- **Inspection**: Monserate Winery recognizes that additional inspections will be

required to ensure the additional fire-resistant measures are installed correctly. Monserate Winery agrees to pay North County Fire for the additional inspections. Detail provided in Figure 5.



F1 FIREBLOCK

1" = 1'-0"

4.4.2 Fire Sprinkler Requirements

All proposed new buildings shall be equipped with a NFPA 13 sprinkler system. Sprinkler plans, and design shall be approved by North County Fire Protection District.

4.5 Fire Fuel Assessment

The off-site western border of the project site is Native Live Oaks. To the west of the Oaks is a mixture of unmanaged natural vegetative fuels and non-native grasses. There is a 47-acre dedicated open space area owned by the Fallbrook Land Conservancy. The Land Conservancy site is named the Gird Road property and contains significant Southern Coast Live Oak Riparian Forest, as well as Diegan Coastal Sage Scrub sensitive plant communities. In addition Valley Needlegrass Grassland and Southern Willow Scrub habitat is found onsite. The Gird Road property has installed trails around the site. The vegetation inside the Open Space eventually will become Fuel Model SH-5, Very High Load Dry Climate Shrub (Figure 6).



AerialL Photograph of Site and Vicinity

FIGURE 6

MONSERATE WINERY

4.6 Fire Behavior Modeling

BehavePlus Fire Behavior Inputs

Model Variable	Summer Weather Condition (Onshore Wind)	Peak Weather Condition (Offshore Wind/Santa Ana)
1 h fuel moisture	3%	2%
10 h fuel moisture	6%	3%
100 h fuel moisture	8%	5%
Live herbaceous moisture	60%	30%
Live woody moisture	90%	50%
20 ft. wind speed	19 mph	41 mph (50 mph peak gusts)
Wind direction	225 degrees	45 degrees
Wind adjustment factor (BehavePlus)	0.4	0.4
Slope Steepness	5-25%	5-25%

Weather

Fire behavior modeling conducted utilized the guidelines and standards presented by the County of San Diego, Department of Planning and Land Use. The County analyzed and processed fire weather from Remote Automated Weather Stations (RAWS) between April 15 to December 31 to represent the general limits of the fire season. The temperature, relative humidity, and wind speed data for the Transitional weather zone were utilized for modeling the fire behavior for this area.

Fuel Models

Coast Live Oak Woodland (untreated)	Gs2
Coast Live Oak Woodland (fuel modification/cleanup)	Tl6
Diegan Coastal Sage Scrub (untreated)	Sh5
Grasslands/adjacent vacant lots	Gr4
Grasslands/ruderal	Gr1
Orchards/Vineyards (maintained)	Gr1
Southern Riparian Scrub (untreated)	Sh2
Southern Riparian Scrub (maintained)	Sh1

Wildland fire behavior calculations have been projected for the hazardous vegetative fuels on the undeveloped open space west of the project and inside the existing on-site oak woodland. The open space consists of sparse coastal sage scrub and is recovering from the golf course having dumped years of trimmings and debris in the drainages. Monserate Winery has cleaned the drainages out and the Land Conservancy is managing the property to support native vegetation returning. A fire starting in the open space under worst case scenario Santa Ana wind condition could produce flame lengths of 44 feet and would burn uphill away from the site. See Appendix A – Fire Modeling.

The managed on-site vineyard area will not be expected to burn and the stakes holding the wire are metal.

4.7 Defensible Space and Vegetation Management

The 75 feet between Venue 1 and 2 will be completely cleared of flammable vegetation and planted with turf and fire-resistant vegetation. No mulch will be allowed, and the landscape plans will be submitted to North County Fire for approval. Monserate Winery will maintain the vineyards and the landscaping around the proposed buildings. The nature of the proposed events and weddings will ensure the site is maintained in an impeccable fire-resistant manner.

4.8 Cumulative Impact Analysis

The Fallbrook Golf Course was the previous owners of the property. The Golf Course's Major Use Permit allowed them to host weddings and special events and they also had a club house / bar and restaurant. Monserate Winery will be used similarly as the Golf Course and host weddings and events. The difference will be there could be two weddings going on along with wine tasting. The Golf Course typically had golfers out on the course simultaneous with weddings and events. The amount of people utilizing the venues will probably be comparable to what the Golf Course had but the events will be closely monitored by Monserate Winery security and staff.

Chapter 5 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

The two wedding venue sites are located on the west side of property. Due to the seasonal creek east of the wedding sites and grading issues Monserate Vineyards is requesting a set back from 100 feet to 75 feet.

Mitigation: Mitigation is being offered in the form of complete on-site removal of dead and down vegetation and extra fire resistive building components.

- Over 50 dead and dying Pine trees were removed, 70 Mexican Fan Palms have been removed as well as over 100 tons of flammable vegetation. The drainages on the land conservancy property had years' worth of Golf Course trimmings dumped in them. Monserate Winery has worked with Fallbrook Land Conservancy to remove the debris.
- Extra fire resistive building components are proposed for the two wedding venues that need the setback variance. See Section 4.4.1, Additional Protection.

The Land Conservancy property and the offsite open space property to the west, slopes up and away from the building sites. The coastal sage and grasses are beyond the Native live oaks that have been limbed up with complete ground clearing. The entire 75 feet from the edge of the building to the property line will have all flammable vegetation removed. The entire clearing along with the buffer of the Oaks extends the set back to flammable vegetation, (coastal sage and grasses) to over 100 feet.

- **Site**: All dead and down vegetation has been removed from the site and the Oak trees will be limbed up 6 to 10 feet from the ground. The clearings to the north and east include well over 300 feet of clearing with scattered vineyards and water features.
- **Landscaping**: Will include turf and approved plants from North County Fire Protection and San Diego County approved list. No mulch will be allowed within

6 feet of the building. A separate landscaping plan will be submitted for approval later. Monserate Vineyards recognizes the approval for the setback variance does not mean approval of the landscaping.

Extra Fire-Resistant building construction

- **West and South sides of proposed buildings**: All windows facing the west and south shall have two panes of tempered glass. The stucco shall be 7/8-inch-thick, and doors shall be metal clad to improve resistance to fire. Behind the weep screed and stucco will be placed a 24-inch x 1-inch piece of L metal flashing. The 1-inch L will be placed under the bottom plate. The metal will allow the stucco weep screed to work while keeping any embers from penetrating the bottom plate, sheer panel and studs. All vents shall be ember resistant types such as Brandquard or O'hagin, Fire and Ice vents.

Chapter 6 CONCLUSION

The Rice Fire of 2007 stopped at the Fallbrook Golf Course. At that time, the Fallbrook Golf Course was well-maintained. The trees were properly cared for with the dead branches removed. Weeds were not allowed to accumulate, and the seasonal creek area was kept clear of flammable vegetation. Since that time, the golf course had fallen on tough times and irrigation was cut back severely; trees were dying, and weeds accumulated on the banks and riparian areas. Eventually water was completely shut off and the golf course closed. The ability for the Golf Course to work as a fuel break was gone. Since Monserate Winery has taken over they have removed approximately 100 tons of flammable vegetation. All dead pine trees were removed along with the Mexican fan Palms. The flammable vegetation has been removed and re-planted with vineyards on the east side. The Monserate Winery is now, and will be once completed, a great fuel break thanks to the efforts in removing the flammable vegetation and dead trees.

The plan is to construct two event buildings on the west side of the seasonal creek. The east side is surrounded by residential homes and would not be as desirable as a venue for events. The western location is the safest location based on the greatest amount of clearance from a wind driven Santa Ana fire event. The 100-foot set back, however, restricts construction in this ideal location. Monserate Winery's plan rectifies this issue by simply reducing the set back from 100 feet to 75 feet and taking extra measures to ensure safety.

Monserate Vineyards shall install increased fire-resistant techniques to the south and west side of the two event sites. These elements will provide additional thermal protection as well as ember protection for the buildings. The plan for the event site does allow parking for 20 guests on the west side of the seasonal creek. There will be times when other vehicles are dropping off supplies and guests at the wedding venues. The Land Conservancy property and the hill sides to the west of the seasonal creek have always been landlocked without adequate access. The bridge and paved access to Venue 2 and Venue 3 will provide access to multiple emergency vehicles to suppress a wildland fire or perform a rescue on the Land Conservancy hiking trails.

The amount of defensible space on-site, the ignition resistant buildings and the amount of agricultural land to the north and east reduce the wildland fire threat to less than significant.

Chapter 7 LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED

Preparer:
Sid Morel of Santa Margarita Consulting, LLC.
PO Box 2124
Fallbrook, CA 92088
(760)-644-1104

Persons contacted:

Patty Koch
Fire Marshal
North County Fire Protection District
(760)-723-2010

Cliff Hunter
Assistant Fire Marshal
North County Fire Protection District

Jade Work
Owner
Monserate Winery

Approved By:

Dated: 7-17-19

Jade Work
Owner, Monserate Winery

Chapter 8. REFERENCES

Anderson, Hal E. 1982. Aids to Determining Fuel Models for Estimating Fire Behavior. USDA Forest Service Gen. Tech. Report INT-122. Intermountain Forest and Range Experiment Station, Ogden, Utah.

County of San Diego Report Format and Content Requirements – Wildland Fire and Fire Protection (August 31, 2010). On-line at http://www.sdcounty.ca.gov/dplu/docs/Fire-Report-Format.pdf

Scott, Joe H. and Robert E. Burgan. 2005. Standard fire behavior fuel models: a comprehensive set for use with Rothermel's surface fire spread model. Gen. Tech. Rep. RMRS-GTR-153. Fort Collins, Colorado: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 72 p.

County of San Diego Consolidated Fire Code – 2017 Consolidated Fire Code for the 14 Fire Protection Districts,6th edition (April 14, 2017). On-line at http://www.sdcounty.ca.gov/dplu/docs/Firecode2017

TECHNICAL APPENDICES

Appendix A

Appendix A
BehavePlus Fire Behavior Inputs

Model Variable	Summer Weather Condition (Onshore Wind)	Peak Weather Condition (Offshore Wind/Santa Ana)
1 h fuel moisture	3%	2%
10 h fuel moisture	6%	3%
100 h fuel moisture	8%	5%
Live herbaceous moisture	60%	30%
Live woody moisture	90%	50%
20 ft. wind speed	19 mph	41 mph (50 mph peak gusts)
Wind direction	225 degrees	45 degrees
Wind adjustment factor (BehavePlus)	0.4	0.4
Slope Steepness	5-25%	5-25%

Weather

Fire behavior modeling conducted utilized the guidelines and standards presented by the County of San Diego, Department of Planning and Land Use. The County analyzed and processed fire weather from Remote Automated Weather Stations (RAWS) between April 15 to December 31 in order to represent the general limits of the fire season. The temperature, relative humidity, and wind speed data for the Transitional weather zone were utilized for modeling the fire behavior for this area.

Fuel Models

Coast Live Oak Woodland (untreated)	Gs2
Coast Live Oak Woodland (fuel modification/cleanup)	Tl6
Diegan Coastal Sage Scrub (untreated)	Sh5
Grasslands/adjacent vacant lots	Gr4
Grasslands/ruderal	Gr1
Orchards/Vineyards (maintained)	Gr1
Southern Riparian Scrub (untreated)	Sh2
Southern Riparian Scrub (maintained)	Sh1

Inputs: SURFACE, SPOT

Description		Peak Fire Weather (Santa Ana)
Fuel/Vegetation, Surface/Understory		
Fuel Model		gr1, gr4, gs2, sh1, sh2,
Fuel/Vegetation, Overstory		
Downwind Canopy Height	ft	3
Fuel Moisture		
1-h Moisture	%	2
10-h Moisture	%	3
100-h Moisture	%	5
Live Herbaceous Moisture	%	30
Live Woody Moisture	%	50
Weather		
20-ft Wind Speed	mi/h	41
Wind Adjustment Factor		0.4
Wind Direction (from north)	deg	90
Terrain		
Slope Steepness	%	5,25
Aspect	deg	270
Ridge-to-Valley Elevation Difference	ft	139
Ridge-to-Valley Horizontal Distance	mi	.17
Spotting Source Location		ML

Run Option Notes

Maximum reliable effective wind speed limit IS imposed [SURFACE].

Calculations are only for the direction of maximum spread [SURFACE].

Fireline intensity, flame length, and spread distance are always for the direction of the spread calculations [SURFACE].

Wind and spread directions are degrees clockwise from north [SURFACE].

Wind direction is the direction from which the wind is blowing [SURFACE].

Output Variables

Surface Rate of Spread (maximum) (ch/h) [SURFACE]

Fireline Intensity (Btu/ft/s) [SURFACE]

Flame Length (ft) [SURFACE]

(continued on next page)

Input Worksheet (continued)

Spot Dist from a Wind Driven Surface Fire (mi) [SPOT]

Notes

Peak Fire Weather (Santa Ana)

Surface Rate of Spread (maximum) (ch/h)

Fuel Model	Slope Steepness %	
	5	25
gr1	37.6	37.6
gr4	836.5	823.0
gs2	257.7	253.4
sh1	99.3	97.5
sh2	64.9	63.6
sh5	446.3	437.7
tl6	50.1	49.2

Peak Fire Weather (Santa Ana)

Fireline Intensity (Btu/ft/s)

Fuel Model	Slope Steepness %	
	5	25
gr1	67	67
gr4	8669	8529
gs2	2900	2852
sh1	780	766
sh2	1844	1807
sh5	16917	16591
tl6	533	523

Peak Fire Weather (Santa Ana)

Flame Length (ft)

Fuel Model	Slope Steepness %	
	5	25
gr1	3.1	3.1
gr4	29.2	28.9
gs2	17.6	17.5
sh1	9.6	9.6
sh2	14.3	14.2
sh5	39.6	39.3
tl6	8.1	8.0

Peak Fire Weather (Santa Ana)

Spot Dist from a Wind Driven Surface Fire (mi)

Fuel Model	Slope Steepness %	
	5	25
gr1	0.3	0.3
gr4	1.6	1.6
gs2	1.1	1.1
sh1	0.7	0.7
sh2	1.0	1.0
sh5	2.0	1.9
tl6	0.6	0.6

Discrete Variable Codes Used
Peak Fire Weather (Santa Ana)

Fuel Model

gr1	Short, sparse, dry climate grass (D) (101)
gr4	Moderate load, dry climate grass (D) (104)
gs2	Moderate load, dry climate grass-shrub (D) (122)
sh1	Low load, dry climate shrub (D) (141)
sh2	Moderate load, dry climate shrub (S) (142)
sh5	High load, dry climate shrub (S) (145)
tl6	Moderate load broadleaf litter (S) (186)

Spotting Source Location

ML	Midslope, Leeward

Inputs: SURFACE, SPOT

Description		Peak Fire Weather (Santa Ana)
Fuel/Vegetation, Surface/Understory		
Fuel Model		gr1, gr4, gs2, sh1, sh2,
Fuel/Vegetation, Overstory		
Downwind Canopy Height	ft	3
Fuel Moisture		
1-h Moisture	%	2
10-h Moisture	%	3
100-h Moisture	%	5
Live Herbaceous Moisture	%	30
Live Woody Moisture	%	50
Weather		
20-ft Wind Speed	mi/h	50
Wind Adjustment Factor		0.4
Wind Direction (from north)	deg	90
Terrain		
Slope Steepness	%	5,25
Aspect	deg	270
Ridge-to-Valley Elevation Difference	ft	139
Ridge-to-Valley Horizontal Distance	mi	.17
Spotting Source Location		ML

Run Option Notes

Maximum reliable effective wind speed limit IS imposed [SURFACE].

Calculations are only for the direction of maximum spread [SURFACE].

Fireline intensity, flame length, and spread distance are always for the direction of the spread calculations [SURFACE].

Wind and spread directions are degrees clockwise from north [SURFACE].

Wind direction is the direction from which the wind is blowing [SURFACE].

Output Variables

Surface Rate of Spread (maximum) (ch/h) [SURFACE]

Fireline Intensity (Btu/ft/s) [SURFACE]

Flame Length (ft) [SURFACE]

(continued on next page)

Input Worksheet (continued)

Spot Dist from a Wind Driven Surface Fire (mi) [SPOT]

Notes

Peak Fire Weather (Santa Ana)

Surface Rate of Spread (maximum) (ch/h)

Fuel Model	Slope Steepness %	
	5	25
gr1	37.6	37.6
gr4	1115.2	1101.7
gs2	343.5	339.2
sh1	122.7	122.7
sh2	85.1	83.8
sh5	564.0	555.4
tl6	67.3	66.4

Peak Fire Weather (Santa Ana)

Fireline Intensity (Btu/ft/s)

Fuel Model	Slope Steepness %	
	5	25
gr1	67	67
gr4	11557	11417
gs2	3866	3817
sh1	964	964
sh2	2420	2383
sh5	21379	21053
tl6	715	706

Peak Fire Weather (Santa Ana)
Flame Length (ft)

Fuel Model	Slope Steepness %	
	5	25
gr1	3.1	3.1
gr4	33.3	33.1
gs2	20.1	20.0
sh1	10.6	10.6
sh2	16.2	16.1
sh5	44.2	43.8
tl6	9.3	9.2

Peak Fire Weather (Santa Ana)

Spot Dist from a Wind Driven Surface Fire (mi)

Fuel Model	Slope Steepness %	
	5	25
gr1	0.4	0.4
gr4	2.0	2.0
gs2	1.4	1.4
sh1	0.9	0.9
sh2	1.2	1.2
sh5	2.4	2.4
tl6	0.8	0.8

Discrete Variable Codes Used
Peak Fire Weather (Santa Ana)

Fuel Model

gr1	Short, sparse, dry climate grass (D) (101)
gr4	Moderate load, dry climate grass (D) (104)
gs2	Moderate load, dry climate grass-shrub (D) (122)
sh1	Low load, dry climate shrub (D) (141)
sh2	Moderate load, dry climate shrub (S) (142)
sh5	High load, dry climate shrub (S) (145)
tl6	Moderate load broadleaf litter (S) (186)

Spotting Source Location

ML	Midslope, Leeward

Inputs: SURFACE, SPOT

Description		Summer Fire Weather (Onshore Wind)
Fuel/Vegetation, Surface/Understory		
Fuel Model		gr1, gr4, gs2, sh1, sh2,
Fuel/Vegetation, Overstory		
Downwind Canopy Height	ft	3
Fuel Moisture		
1-h Moisture	%	3
10-h Moisture	%	6
100-h Moisture	%	8
Live Herbaceous Moisture	%	60
Live Woody Moisture	%	90
Weather		
20-ft Wind Speed	mi/h	19
Wind Adjustment Factor		0.4
Wind Direction (from north)	deg	270
Terrain		
Slope Steepness	%	5,25
Aspect	deg	90
Ridge-to-Valley Elevation Difference	ft	262
Ridge-to-Valley Horizontal Distance	mi	.29
Spotting Source Location		ML

Run Option Notes

Maximum reliable effective wind speed limit IS imposed [SURFACE].

Calculations are only for the direction of maximum spread [SURFACE].

Fireline intensity, flame length, and spread distance are always for the direction of the spread calculations [SURFACE].

Wind and spread directions are degrees clockwise from north [SURFACE].

Wind direction is the direction from which the wind is blowing [SURFACE].

Output Variables

Surface Rate of Spread (maximum) (ch/h) [SURFACE]

Fireline Intensity (Btu/ft/s) [SURFACE]

Flame Length (ft) [SURFACE]

(continued on next page)

Input Worksheet (continued)

Spot Dist from a Wind Driven Surface Fire (mi) [SPOT]

Notes

Summer Fire Weather (Onshore Wind)

Surface Rate of Spread (maximum) (ch/h)

Fuel Model	Slope Steepness %	
	5	25
gr1	20.7	20.7
gr4	152.9	145.5
gs2	45.9	43.6
sh1	2.5	2.5
sh2	12.9	12.2
sh5	105.0	100.0
tl6	14.4	13.6

Summer Fire Weather (Onshore Wind)

Fireline Intensity (Btu/ft/s)

Fuel Model	Slope Steepness %	
	5	25
gr1	35	35
gr4	1507	1434
gs2	423	402
sh1	4	4
sh2	306	288
sh5	3398	3237
tl6	140	132

Summer Fire Weather (Onshore Wind)

Flame Length (ft)

Fuel Model	Slope Steepness %	
	5	25
gr1	2.3	2.3
gr4	13.0	12.7
gs2	7.3	7.1
sh1	0.9	0.9
sh2	6.3	6.1
sh5	18.9	18.5
tl6	4.4	4.3

Summer Fire Weather (Onshore Wind)

Spot Dist from a Wind Driven Surface Fire (mi)

Fuel Model	Slope Steepness %	
	5	25
gr1	0.2	0.2
gr4	0.5	0.5
gs2	0.4	0.3
sh1	0.1	0.1
sh2	0.3	0.3
sh5	0.7	0.7
tl6	0.2	0.2

Discrete Variable Codes Used
Summer Fire Weather (Onshore Wind)

Fuel Model

gr1	Short, sparse, dry climate grass (D) (101)
gr4	Moderate load, dry climate grass (D) (104)
gs2	Moderate load, dry climate grass-shrub (D) (122)
sh1	Low load, dry climate shrub (D) (141)
sh2	Moderate load, dry climate shrub (S) (142)
sh5	High load, dry climate shrub (S) (145)
tl6	Moderate load broadleaf litter (S) (186)

Spotting Source Location

ML	Midslope, Leeward