Appendix E
CWPP: Fountain Grove II

FOUNTAINGROVE II
COMMUNITY WILDFIRE PROTECTION PLAN
October 2, 2009

Prepared for

The Fountaingrove II Open Space Maintenance Association
Fountaingrove II Board and Fire Safety Working Team

Report Prepared by
Peter Martin Pre-Fire & Vegetation Management Planning
Sonoma County Department of Emergency Services – Fire Division

See Special Acknowledgements for those providing cooperative assistance with the Report

Declaration of Agreement

The Healthy Forests Restoration Act requires that the applicable local government, the local fire department, and the state entity responsible for forest management agree to the Community Wildfire Protection Plan of the Fountaingrove II Open Space Maintenance Association. The undersigned have reviewed this plan and agree to the completed document.

_____ _____
Date

City of Santa Rosa

_____ _____
Bruce Varner, Fire Chief Date
City of Santa Rosa Fire Department

_____ _____
District Forester Date
Ernie Loveless, Cal Fire Chief, Sonoma-Lake-Napa Unit

Fountaingrove II is a nationally recognized Firewise Communities/USA site

SPECIAL ACKNOWLEDGEMENTS

Dennis Searles, Open Space Maintenance Association (OSMA) Board member, for his cooperative effort in preparing this report.

Kim Nielsen-Glynn, OSMA Board member, for her editing and proofing of the drafts of this report and its Exhibits.

Bill Andrews, former OSMA Board member, who started the initial 2004 review of fire safety issues in FGII with Sonoma Fire.

ACKNOWLEDGEMENTS

• Fountaingrove II Open Space Maintenance Association

Board Members	Dennis Searles, President	
	Dan Cummins, Vice President	
	J-Paul Dumont, CFO	
	Kim Nielsen Glynn, Secretary	
	Bruce McConnell, Member at Large	

• City of Santa Rosa Fire Department

Fire Chief	Bruce Varner	707 543-3531
Deputy Chief - Fire Marshall	Mark McCormick	707 543-3500
Sr. Fire Inspector, Fire Prevention Bureau	Scott Moon	707 543-3543
Fire Inspector II & Weed Abatement	Toby Rey	707 543-3546
Community Development		
Parks Department		
City of Santa Rosa Utilities Department		
Public Works Department		

• Sonoma County Department of Emergency Services / Fire

Director / Fire Chief	Mark Aston
Fire Marshal	Robert Macintyre
Pre-Fire & Vegetation Planning Management	Peter Martin

• Cal Fire

Unit Chief Representative, Sonoma-Lake-Napa	Ernie Loveless
Unit Battalion Chief, Fire Prevention	George Morris III

• Fire Safe Sonoma — Caerleon Safford

* Federal Agencies — Little or no BLM or USFS lands within Sonoma County

Other Interested Parties That Will Be Invited to Attend Stakeholder Meetings of the CWPP
Develop a Power Point Show (Kim)

• Members of the Fire & Safety Team of Fountaingrove II
• Homeowners with residences in Fountaingrove II
• Native Plant Society
• Fountaingrove Master Ranch Association Board, a Neighboring Home Owners Association with Open Space
• Members of the City Council of Santa Rosa
• PG&E
• Press Democrat

TABLE OF CONTENTS FOR DECLARATION OF AGREEEMENT AND ACKNOWLEDGEMENTS

TABLE OF CONTENTS OF REPORT

EXHIBITS

Forest Management Practices of Fountaingrove II Open Space Maintenance Association .....
Fire Safety Brochure developed by FGII OSMA.....
.....

APPENDIX

This CWPP incorporates or reference various studies and reports, including those appended below:

Fountaingrove II Wildland/Urban Interface Fire Threat and Mitigation Recommendations Prepared For The Fountaingrove II Open Space Management Association by Peter Martin, April 2004 .....

Fountaingrove II Design Program – Design Guidelines Open Space Management, April 1992 .....

Sonoma County Community Wildfire Protection Plan Prepared by Caerleon Safford, Fire Safe Sonoma, May 2009 .....

Santa Rosa Hazard Fuel Risk Assessment prepared October 2004 by Fire Management Concepts, Inc. With the objective to identify, classify and prioritize areas within and surrounding the City of Santa Rosa, California that represent the highest risk related to wildland fire in the urban interface. ....

Assessment of Douglas-fir Establishment in Woodlands at Austin Creek State Recreation Area by Joe. R. McBride and Steve Barnhart, Consulting Forest Ecologists, Berkley, CA – July 2005.....
.....
.....
.....

PURPOSE OF THIS COMMUNITY WILDFIRE PROTECTION PLAN

The purpose of the Fountaingrove II Community Wildfire Protection Plan (CWPP) is to:

• Improve the community's ability to prepare for, respond to, and recover from wildland fires;

• Empower residents, adjacent neighborhoods and businesses, and public agencies to work collectively toward greater protection of life and property through pre-fire planning;

• Emphasize the duty of the public to take personal responsibility for taking preventive actions such as creating and maintaining defensible space;

• Increase public understanding of living in a fire-adapted ecosystem;

• Improve the fire resilience of the landscape while protecting social, economic and ecological values;

• Outline the future priorities, strategies and action plans for fuel reduction treatments in the Fountaingrove II wildland urban interface;

• Report the work the Open Space Maintenance Association (OSMA) has accomplished from our recommendations suggested in 2004 and which are also outlined as objectives in the 1992 FGII Design Guidelines for the Community;

• Emphasize the continuing need for OSMA, property owners and the City of Santa Rosa to focus on reducing fire fuel along the interface areas, both within and on the perimeter of the community;

• Address special areas of concern and make recommendations for reducing structural vulnerability and creating defensible spaces in communities at risk;

• Be a living reference for fuels reduction, an educational tool, and an outline for projects to decrease overall risks of loss from wildland fire, and as such the plan should be updated and revisited at least semi-annually to address its purpose;

• Set forth a continuing course of action to reduce the risk of a catastrophic wildland fire in the Fountaingrove II Area;

• Serve as a guide to the City of Santa Rosa Fire Department, Cal Fire, Mutual Aid Response, and area residents in the identification of surrounding lands at risk from wildfire; and

• Identify strategies for reducing hazardous wildland fire fuels, and actions and responsibilities individuals can take to help protect themselves and their neighborhoods against the threat of wildland fires**.**

OBJECTIVES OF THIS COMMUNITY WILDFIRE PROTECTION PLAN (CWPP):

• Provide Fountaingrove II Open Space Maintenance Association (OSMA) guidance and recommendations from 2009 forward.

• Obtain Cal Fire approval/certification of the Fountaingrove II Community Wildfire Protection Plan (CWPP) for inclusion in the Sonoma Countywide Community Wildfire Protection Plan.

• Meet certification requirements to become a "Firewise Community" and document a plan for annual renewal of this status.

• Comprehensive Forest Management Practices will be in place, and a plan will exist with priorities to manage them.

• Annual meetings that offer the Community the opportunity for open debate regarding the management options.

• A flexible and understandable plan that the community can share their input into the details of it.

• A plan to merge the goals and objectives of the landowners with the needs and expectations of a FireWise Community regarding the need to reduce the risk of fire.

• A strategy to coordinate fire protection across property boundaries.

• Assist in complying with eligibility requirements for grant funding from state and federal programs.

COMMUNITY BASE MAP(S) of Fountaingrove II and adjacent landscapes of interest are highlighted on the maps provided throughout this document

• The Wildland Urban Interface forming the perimeter of the various developed units of Fountaingrove II which is located in the City of Santa Rosa, California **(see page 17)**
• Areas containing critical human infrastructure, **(see pages 22 and 23)**
    • Areas of Community importance, including:
    • City Parks within Fountaingrove II boundaries **(see page 31)**
    • Street side planting areas **(see page 23) revise map and color code FGII street planting strips**
    • Protected Native Plants within Fountaingrove II Open Space and the Rincon Ridge Park **(see page 25)**

CONCLUSION: Fountaingrove II Open Space Maintenance Association has the necessary Forest Management Practices and Plan in place to meet the objectives of a Community Wildfire Protection Plan, and has instituted the recommended Steps as outline above.

BACKGROUND INFORMATION ON FIRE HISTORY AND PRESENT FOREST PROBLEM

Historically, wildland fires have shaped the forests valued by residents and visitors. Forests and other wildlands surrounding Fountaingrove II, however, are now significantly altered due to fire prevention efforts, modern suppression activities and a general lack of large scale fires, resulting in overgrown forests with closed canopies and decadent fuels that burn more intensely than in the past. In addition, the recent explosion in population has led to increased residential development in the Wildland Urban Interface (WUI) of Fountaingrove II. To address these issues, members of fire agencies, organizations and individuals collaborated with the Open Space Maintenance Association (OSMA) to develop the Fountaingrove II Community Wildfire Protection Plan.

FOUNTAINGROVE II SUBDIVISION BACKGROUND

The Fountaingrove II Open Space Maintenance Association (OSMA) is responsible for 201.7 acres of Wildland Urban Interface Open Space that is forested land in the Fountaingrove II (FGII) development in Northeast Santa Rosa, California (see attached Map on page 23). Firebreaks now approximate 61 acres, or 30% of that area. Most of the wildland in the Open Space is kept in its natural state. Firebreaks are maintained adjacent to FGII residential properties where OSMA owns the property. Most Firebreaks are 100’ or more from the rear property line of the residences. The governing legal documents require OSMA to manage the property with a balance toward both the environment and fire prevention. The legal documents require that all plantings within such major open space areas be native plants.

In addition to the forested Open Space, OSMA has 25 acres of drip irrigated areas that focuses on establishing a healthy population of native plants along the Fountaingrove Parkway and some interior streets of the FGII Development. Considerable effort is devoted to eradication of invasive species that are not native to the area, such as Scotch broom which is also a major fire hazard.

In 2004, The Fountaingrove II Open Space Maintenance Association contracted with Sonoma County Department of Emergency Services to review the wildfire threat in the wildland urban interface surrounding the community and recommend measures to reduce that risk. A review of the entire area of responsibility of OSMA (Fountaingrove II Open Space Maintenance Association) was conducted. The entire perimeter of Fountaingrove II was walked and/or assessed. Additionally, "islands" of vegetation and park sites centrally situated within the community were also assessed.

The result was a document "**FOUNTAINGROVE II WILDLAND / URBAN INTERFACE FIRE THREAT AND MITIGATION RECOMMENDATIONS**" that identified the fire risk to the community and provided guidelines for mitigation. Coincidentally the City of Santa Rosa commissioned a study in October of 2004, by Fire Management Concepts Inc., entitled "Wildland Urban Interface Hazard Fuel Risk Assessment: City of Santa Rosa, California, which is referenced in this document and appended in full as an exhibit.

The 1992 Fountaingrove II Design Guidelines for Open Space Management, which contain Fire and Fuel Management requirements, was also reviewed, and sixteen pre-designated areas comprising 23,066 lineal feet of potential fuel break were assessed. The designated areas were comprised of 14 OSMA fuel breaks and 2 City Parks bordering OSMA land. Each firebreak contained both similarities and differences including slope, aspect and fuel type, but the common denominator always remained heavy untreated fuel buildup and distance from structure. An action plan was established to begin addressing fuel reduction within the 16 fuel break areas that had been designated. Since most homes have deep rear yards averaging approximately 70 - 100 feet to the rear fence line, it was determined that the first course of action would be to extend the WUI to 100 feet (from the structures). This would require the annual treatment of an existing 30 feet wide fuel break beyond the rear fence lines of most properties bordering the wildland urban interface (WUI). In many areas, the annual treatment of the existing 30 foot wide fuel break outside developed lots provided a greater than 100 foot fuel break.

GOALS WERE ESTABLISHED IN 2004 BY OSMA WITH THREE TIMELINES

• **Short-Term Goals - Year One:** Maintain the existing 30' Fuel Breaks of 15.88 acres by weed whacking them twice per year, and start implementing plans to: (1) remove invasive species and non-native plants such as fir seedlings and saplings, French broom, thistle, poison oak and pampas grass and (2) develop plans to extend the 30' Fuel Breaks to 100'.

• **Intermediate Goals - Years two through five:** Extend all fuel breaks in open space behind improved lots to an average of 100', continue to: (1) remove invasive species, (2) treat extended fuel breaks for regrowth on a cycled basis, and (3) weed whack the extended fuel breaks twice per year.

• **Long Range Goals and recommendations - Beyond Five Years:** Consider need to extend firebreaks beyond the extension of 100' from the rear of the residences, and continue to maintain annual maintenance of treating firebreaks on a cycled/rotation basis for regrowth and weed whacking all firebreaks twice a year.

OSMA ACCOMPLISHMENTS AGAINST GOALS SET IN 2004

• **Year One:** **Short Term Goals** were achieved and approximately 17 acres of additional firebreak were created by widening selected areas to an average 100' from the rear yards of WUI homes.

• **Years two through five:** **Intermediate Goals** led to the completion of 14 additional acres of firebreaks that created 26,197 feet of 100' average fuel break outside rear fence lines of private backyards through fire fuel reduction. The entire acreage of two interior firebreak "islands" was also treated for fuel reduction. Treatment of the islands, although only a 30' foot fuel break around the perimeter was recommended, have been 100% thinned throughout creating park-like areas in the adjacent interface neighborhoods. In retrospect, this was a good move and provides a more realistic distance in terms of fire safety.

• **Status of Year Five and 2009 Fuel Break Treatment:** ***All fire breaks have been viewed or walked for compliance with five-year goals of the 2004 Report, and the requirements in Section 8 of the Fountaingrove II Design Program for Design Guidelines Open Space Maintenance.*** Each firebreak table below that indicates 100' of firebreak width meets 2009 five-year goals. There was one Firebreak Island (FB15) added since the 2004 Report, and this was treated for fuel reduction in early 2009 and is now a park-like setting. *All measurements are approximate but believed to be accurate.*

• **Other accomplishments since 2004:** In addition to the funds that OSMA will have spent for Fire Safety between 2004 and 2009 summarized below, it also spent $760,000 for landscape improvements along the Fountaingrove Parkway and some interior streets that currently aggregates approximately 25 acres. In addition, OSMA spends about $100,000 on annual landscaping maintenance and repairs. The improvements and maintenance make Santa Rosa a more attractive place, and are enjoyed by thousands of persons each day who use the Parkway to commute to and from their daily work.

• **Goals for Year Five & Beyond: See below**

FGII SUBDIVISION STRUCTURES AND THEIR "WUI" INTERFACE

• There are 585 residential structures within the boundaries of Fountaingrove II Open Space Maintenance Association (OSMA) and six vacant lots of the 591 homes approved for development, so the development is nearly built out.

• There are approximately 170 residential structures bordering OSMA Open Space/Wildland Urban Interface Zones where 100' firebreaks now exist and which are treated annually for weed abatement and once every three years for regrowth of vegetation.

• Approximately 41 residential structures border two interior "islands" that are fully treated for vegetation management.

• Approximately 50 homes along the perimeter of the FG II do not abut OSMA maintained open space and therefore do not have OSMA maintained firebreaks in the WUI. These residential structures border either improved properties to the rear, or undeveloped wildland. The WUI behind these homes is on lands of others and is therefore difficult to treat. However, many border rear yards of homes on other streets and have a degree of fire safety.

• Approximately 45 residential structures border City of Santa Rosa designated parks, one of which is a partially developed park. Half of the P-1 Rincon Ridge developed park contains a wild area of rare or endangered plants that exist as a completely un-maintained area in terms of fire fuel reduction. **OSMA's governing rules specify that OSMA can only spend money on OSMA lands.** This means that even if OSMA wished to participate with the City, they are not permitted to do so.

• Of the two city parks, the undeveloped one has had some selective fuel reduction but does not appear to be maintained on a regular cycle. The partially developed Park borders Fountaingrove Parkway in the area of Units 6 & 8 and has had no vegetation management whatsoever.

FIRE SAFETY STATISTICAL OVERVIEW BY OSMA FROM 2004 – 2009

From 2004 – 2009, the FGII Open Space Maintenance Association (OSMA) will have spent an approximate $734,000 for fuel reduction. The firebreak acreage has increased from the 15.9 acres in place at the time of the 2004 FGII assessment by our Department to the present 61 acres of firebreak. Of these 61 acres, OSMA has created 40 acres of firebreak and the developers created the remaining 21 acres (5.1 acres were added in the 2006/2007 timeframe by developers). In addition to the 61 plus acres of firebreak, OSMA also treats 2.4 acres of natural areas and 1.6 acres of fire roads for abatement of weeds and grasses, twice per year. Firebreaks are treated for vegetation regrowth on a three (3) year rotation cycle. Following is an analysis of the actual expenditures from 2004 – 2008 and the projected ones for 2009.

Annual Year	Total $'s	Firebreak $	FB Acres	Firebreak Abatement $	Invasive & Tree $	Regrowth $
Year 2004	$139,000	$119.000	17.1	$ 20,000	$	$
Year 2005	147,000	98,000	14.2	49,000		
Year 2006	78,000			59,000	2,000	17,000
Year 2007	72,000			55,000	5,000	12,000
Year 2008	115,000	33,000	3.6	58,000	2,000	22,000
Year 2009	183,000	68,000	5.1	60,000	35,000	20,000
Totals	$734,000	$318,000	40.0	$301,000	$42,000	$72,000

FGII PROJECTED WUI MAINTENANCE PROJECTED FOR 2010 AND BEYOND

2009 Fuel Reduction Budget for OSMA: Firebreak abatement for fuel reduction and maintenance of the WUI fuel breaks is $60,000, and this expenditure has risen over the years because of the increase in acreage treated, however, the cost per acre has declined somewhat. OSMA has budgeted $20,000 for removal of dead trees and $15,000 for removal of invasive species such as broom and Douglas fir seedlings and saplings. Most of the 2009 budget has been expended or is under contract as of the date of this report.

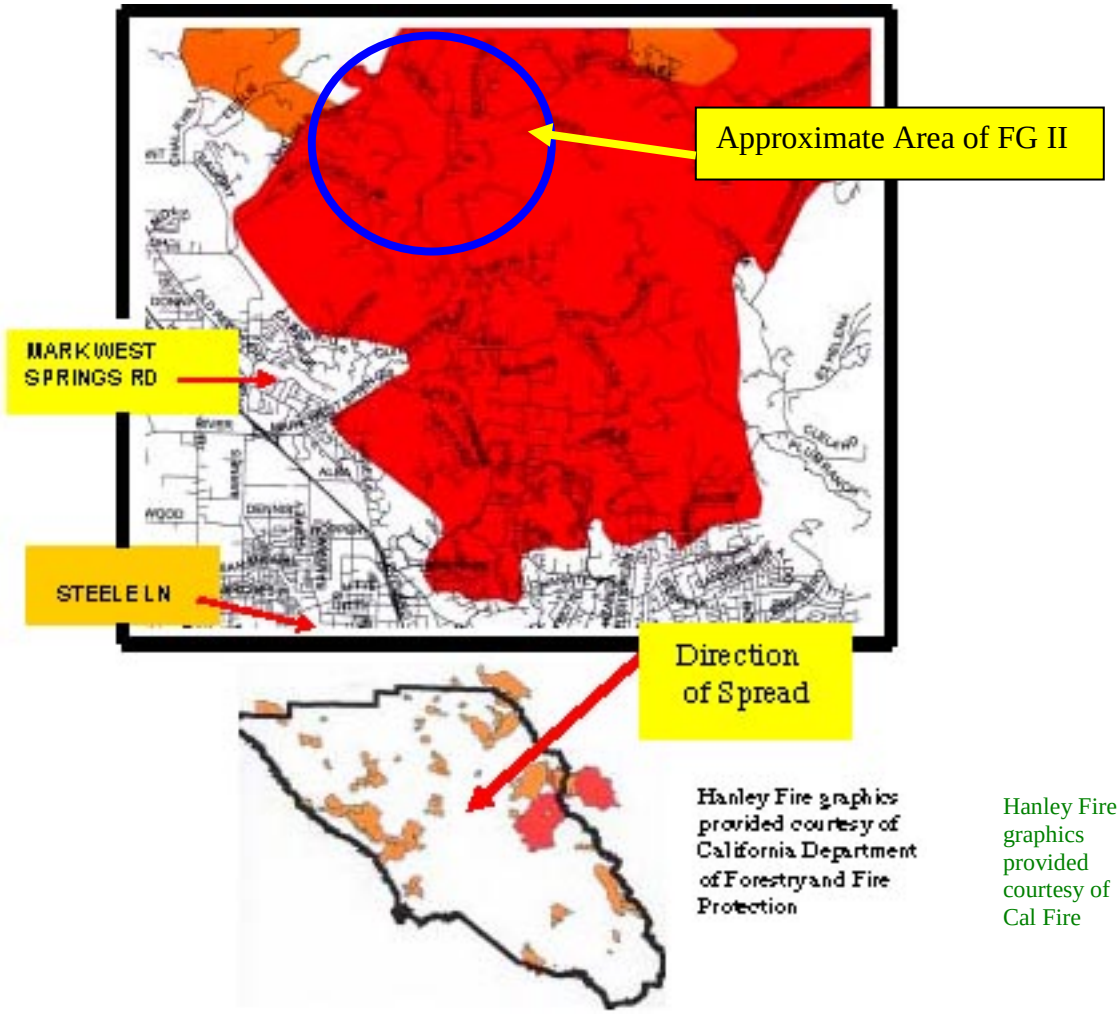
The projected 2010 comprehensive firebreak maintenance budget is estimated to be approximately $175,000 - $200,000. It will consist of weed abating 66.4 acres twice per year, annual regrowth treatment of about one-third of the firebreaks, removal of invasive plants, plus an increase in spending to remove dead trees that have increased in number. Removal of dead trees will be prioritized with safety being a primary issue. The exact actions to be taken will be obtained from the input of this report and OSMA's annual assessment of the issues that evolve or surface on a sudden nature. The OSMA Board has discussed developing a five (5) year plan to help it set priorities and forecast its cash needs.

Fountaingrove II OSMA funding is derived from a $58.00 monthly assessment from each property within the Community. WUI Maintenance expenditures beyond 2010 are anticipated to approximate the 2010 forecasts, adjusted for inflation and any special or specific target areas that may require prompt action.

FIRE HISTORY

Fire history can be an indicator of future fires and can also define the age and composition of fire fuels in the study area.

SEPTEMBER 19, 1964 HANLEY FIRE, 55,960 ACRES



Hanley Fire graphics provided courtesy of Cal Fire

In 1964, the Hanley Fire burned 55,960 acres from Calistoga to the Sutter Hospital in Santa Rosa. This fire was probably driven during a Foehn wind event. Often called “Santa Ana Winds,” these north and east winds are strong, hot and dry, and usually occur in late fall. Historically major fires have probably visited the area on a fifty to one hundred year cycle. Smaller fires occur with greater frequency. However with the impact of human activity, historic fire periodicity cannot be relied upon for future predictions. The Fountaingrove II Subdivision is designated as being within a “High Fire Hazard Severity Zone”.

The Fountaingrove II Subdivision lies within the Santa Rosa City Limits. The tentative subdivision map indicates that the subdivision is approximately twelve years old and appears to be reaching build out. Fountaingrove II is divided into three areas: East, West & the Summit, and is adjacent to the Fountaingrove Ranch Subdivision on the west. There is adjacent unincorporated county area that contains similar wildland urban interface fire threat. Both Fountaingrove II and Fountaingrove Ranch have concerns regarding the threat of wildfire from the surrounding environment.

FACTORS INFLUENCING FIRE BEHAVIOR WITHIN AND SURROUNDING FOUNTAINGROVE II

Topography

Fountaingrove II is essentially a ridge top subdivision. It is a complex of a main ridge and a number of spur ridges that the planners appear to have taken advantage of to maximize the usable amount of land available for construction and to provide a scenic viewscape to the greatest number of homes. Nearly every home constructed along the perimeter of the subdivision boundary/wildland urban interface zone is sited on a down slope parcel off the edge of the ridge top.

Slope is a major component in the rate of spread in wildland fires. The areas outside and below the subdivision contain steep down slope areas averaging 30% to 50% and greater. A fire will spread twice as fast on a 30% slope than it will on level ground.

Defensible Space on Slopes – Structures adjacent to slopes over 30% will need additional vegetation management clearances in order to mitigate the radiant and convective heat currents and flame lengths. The slope area should be type converted to drought and fire resistant plantings. A minimum clearance of 100 - 200 feet of defensible space fuel break between the structure and any vegetation are indicated. A total of 200 feet outside the fence lines is recommended in combination with up to 100 feet rear yard defensible space treatment by the homeowner.

Building sites located around the perimeter of Fountaingrove II are situated downslope from the ridge tops. As discussed elsewhere, this was done probably to maximize land use and provide additional scenic viewscapes. Fire planners are aware that homes built on slopes are at greater risk than those built back 30 feet or more from the top edge of a ridge. This must be considered as a negative component in the overall wildland fire hazard assessment equation.

Canyons & Drainages - There are a number of canyons and drainages leading up to the subdivision. Canyons and drainages typically act as “chimneys” during a wildland fire and tend to channel or direct the fire up them.

Aspect * is another topographic feature that influences fire behavior. A large portion of the subdivision located at the head of a large, wide valley that has a south facing aspect ranging southwest to southeast. Aspect relates to solar radiation and the rate at which the vegetation dries during the “Fire Day.” Fire fuels tend to dry earlier in the year and earlier in day when situated on a southerly aspect.

* See effects of aspect on fire fuels under “Fuel.”

Weather – Remember that the Hanley Fire was wind driven on an easterly (Devil) wind event that burned through what is now Fountaingrove II and its neighbors.

Sonoma County enjoys a Mediterranean climate, one that has long hot, summers without significant moisture often lasting for seven or eight months. This climate type is ripe for wildland fire.

Prevailing winds are another factor in fire behavior and rate of spread. During the summer months, on-shore westerly winds are prevalent in the afternoons. They can carry marine moisture (fog) inland but it is probably not a significant factor in Fountaingrove.

More importantly, the summer afternoon westerlies influence fire spread, particularly on the northwest to southwest facing slopes below Fountaingrove. In the afternoon, the land has heated and we expect upslope, up canyon winds as the air heats. In the fall of the year, Foehn (Devil /Santa Ana) winds that bring hot dry north and easterly offshore winds, and associated high fire danger in the area may be expected to occur on average during five to fifteen periods usually of two or three days in duration that bring “Red Flag Warnings” for high fire danger. These winds develop due to a high-pressure area over the great basin in Utah and heat as they flow toward a Pacific low over the ocean. Foehn winds further dry already tinder dry fire fuels and often cause catastrophic fires such as those seen recently in Southern California.

Global Warming – *Per Cal Fire*

Current climate models for forests and rangelands predict that California will soon be experiencing many changes as a result of climate change. These include increased wildfire frequency and intensity; longer fire seasons; declines in distribution, productivity and health of conifers and some range species; changes in ecosystems, wildlife habitat and populations; potential increases in drought, insects and disease in Southern California; and increased spread of invasive species.

Fire Fuel

Vegetation as fire fuel is the third factor in the fire behavior triangle, and the one that we can have influence over. The native plants in our region are adapted to the climate and compensate for the lack of moisture during the dry months in various ways. What we need to understand is that many of those native plants are inevitably "pyrophytic" or "fire" plants. These are plants that tend to be high in volatile oils, ignite easily, burn readily.

Structure, arrangement, and volume are important features to evaluate in terms of flammability, and modification of fire fuels. Volume of fire fuel in this area can be described as being several tons per acre or more depending on the type being measured. Much of that volume is available to burn.

***Aspect** plays a role in the type of fire fuels that might be encountered in various areas of the Fountaingrove Subdivision. For example, on south facing slopes we tend to find lighter flashier fuels ranging from grass to brush. On north facing slopes, slopes that enjoy somewhat greater amounts of moisture and lesser amounts of solar radiation, we typically find heavier fuels including greater concentrations of trees.

Dominant Vegetation Types - We are concerned with five major vegetation types, or "Fuel Models":

Chaparral - For the purposes of this report is characterized as dense tall brush ranging from four to fifteen feet in height, typically older and in a decadent state. It contains a significant amount of dead material within the crowns and the litter layer on the ground.

Conifer with undergrowth – Consists of conifer, predominantly fir, with mixed evergreens such as bay, oak, madrone, heavy brush, fir saplings. The Douglas fir is an invasive species that in time will crowd out other plant types.

Pyrophytic and other Hardwoods - Consists of various oak types, old growth mature California Bay Laurel, immature bay, madrone, and other broadleaf species with a heavy understory of brush and ladder fuel arrangement. This lends itself to the construction of shaded fuel breaks once the understory fuels have been removed and trees have been limbed up.

Invasive Species of Plants - Within the study area, we have observed a number of exotic and invasive plants and trees that require aggressive treatment and control. Plants observed include Douglas fir, French broom, pampas grass, plants of the thistle family and poison oak. All of these invasive, opportunistic plants enjoy the newly changed environment of sunny grass covered or disturbed soils to establish themselves in. Additionally, the Douglas fir, if not controlled will eventually crowd out other more desirable plants. Douglas fir, if left unattended, will eventually convert the entire area to a heavy Douglas fir forest. Douglas fir in its juvenile stages is particularly flammable – a pyrophyte!

Rare or Endangered Plants – Rare and endangered plants exist in several areas under OSMA influence.
Rincon Ceanothus and Manzanita have been identified and OSMA is aware of their locations. Appropriate steps will be taken to ensure the protection of these and other sensitive species.

FIRE BREAKS

“Fire breaks are generally constructed to separate communities from native vegetation (WUI) in order to protect both the developing area and the adjacent wildlands.” Fuels within firebreaks are reduced in volume through thinning or pruning, or are changed to vegetative types that burn with lower intensity and offer less resistance to fire control efforts.” (*Fire Safe Guides for Residential Development in California, California Department of Forestry & Fire Protection, 1993)*

Note: The term "Fire Break" as used in this document is the same as "Fuel Break" and conversely Fuel Break is synonymous with Fire Break. Forest is used herein to describe a plant community that includes wooded areas that range from a mix of trees to chaparral and brush.

OSMA OVERVIEW OF ITS FIRE SAFETY PRACTICES

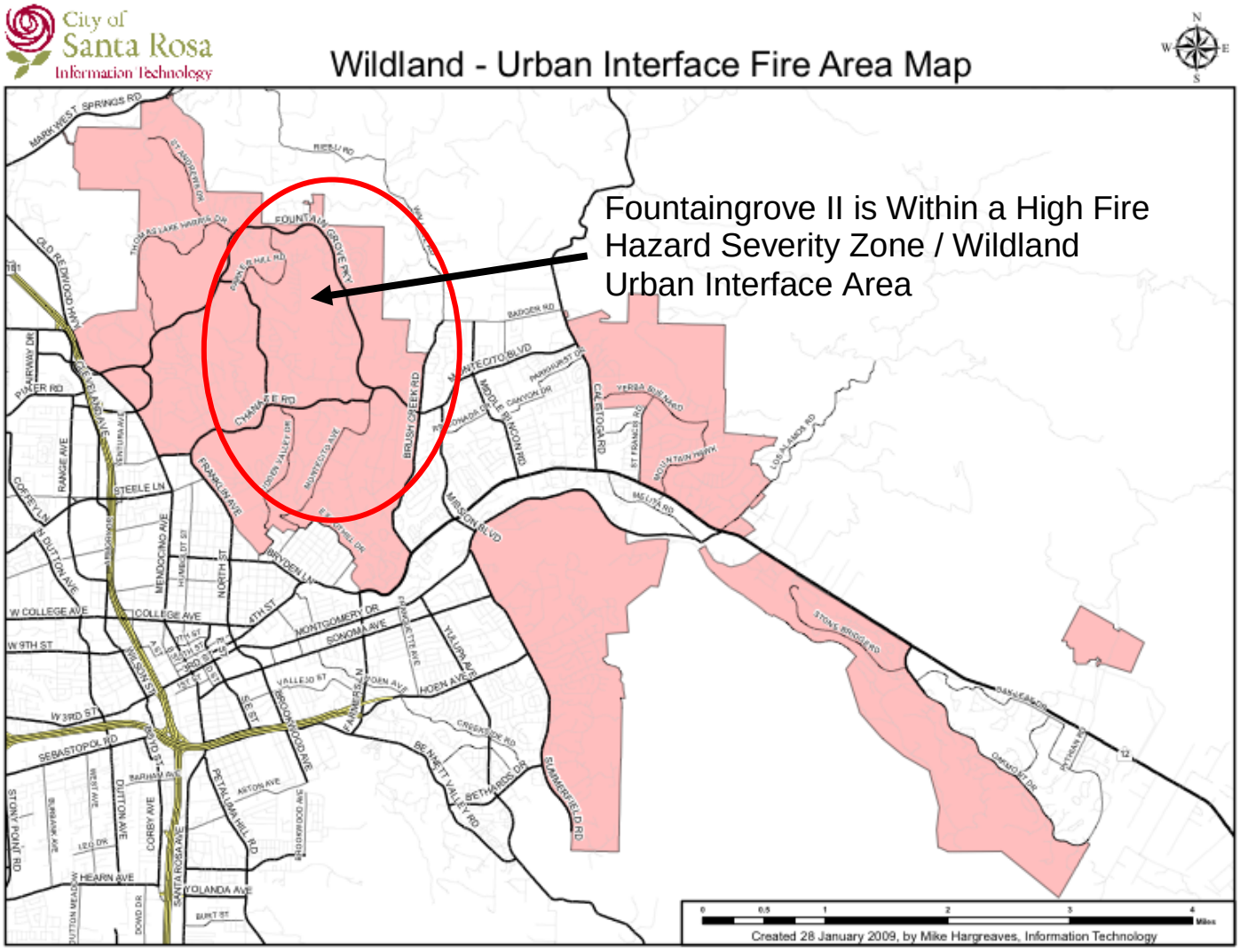
The Fountaingrove II Open Space Maintenance Association (OSMA) was incorporated in 1996 with the authority to assess individual homeowners a fee to be used to oversee and manage wildland vegetation within the boundaries of its open space and maintain planting strips within its designated the boundaries.

The OSMA Board, from our (Sonoma County Department of Emergency Survives/Fire) first meeting in 2004 and again in 2009 has taken their responsibility seriously and they have developed what can only be classified as a model for other similar communities. OSMA is following the mandates of the 1992 Fountaingrove II Design Program "Design Guidelines and Open Space management" as it implements and manages its Forest Management Practices.

OSMA members have developed site specific guidelines for 15 various fire breaks that have been constructed on their open space lands, crafted detailed "RFP - Requests for Proposal" documents for annual maintenance and fuel reduction, developed inventories of dead and dying trees and more. OSMA members regularly walk the open space areas to survey issues to incorporate into their RFP’s, ensure the work completed by their contractors has been accomplished as specified and agreed upon, and to prioritize goals for the next "round" of annual vegetation treatment or maintenance.

All of the firebreaks meet the 1992 Design Guidelines Mandate for Open Space Management as approved by the City of Santa Rosa on April 17, 1992, and our (Sonoma County Department of Emergency Services/Fire) 2004 - 2009 recommendations.

FOUNTAINGROVE II LOCATED WITHIN A HIGH FIRE HAZARD SEVERITY ZONE



BASIS, CONCLUSIONS AND RECOMMENDATIONS OF THIS CWPP FOR OSMA

Other broad reaching studies have been conducted that relate specifically to Fountaingrove II and the High Fire Hazard Severity Zones within and surrounding the community. Data from those studies have been utilized to reach the guiding conclusions of this document. These studies that are included in the appendices should be viewed as a significant reference source and as such, should be reviewed periodically.

This document does not attempt to go beyond meeting requirements for the establishment of a Firewise Community Certification, inclusion within the Sonoma County-Wide CWPP, and future direction for Fountaingrove II OSMA.

From 2009 forward, a refinement/prioritization of the treatment areas will be necessary. The Douglas fir trees throughout the wildland/urban interface areas and within the internal open space islands have become an invasive nuisance plant that is competing with more desirable plants and trees for sunlight. They often crowd or shade out beautiful oaks, for example, causing them to become mal-formed and eventually leading to stressed and weakened trees that are then susceptible to disease.

It should be noted that much of the information contained within this report is from data developed by the OSMA members, all of which has been found to be accurate and correct. OSMA has developed so much information, RFPs, guidelines and the like, that is not feasible to incorporate all of it in this document. Should the reader desire specific information; they should contact a member of the OSMA Board.

OSMA RECENT FINDINGS AND FIRE SAFETY MEAUSURES UNDER STUDY

The OSMA members have located abandoned access roads that are now weed whacked annually. This creates additional areas of reduced vegetation with a sort of checkerboard effect that serves to reduce rapid spread of wildfires. In 2009, OSMA commenced abating these roads estimated at 1.6 acres, twice per year.

OSMA has reviewed the location and possible use of these fire roads with Santa Rosa Fire and will schedule a meeting with Cal Fire to determine if they want to walk these roads and evaluate their possible use in case of a fire. OSMA is working with Carlile Macy, Civil Engineers, Santa Rosa, to map their locations better. If the roads are usable for fighting fires, OSMA will consider clearing 10’ along either side them for better access. If these roads have gates, OSMA obtains Knox Locks for use by the Fire Department.

PRIORITY RATING REFLECTING FOUNTAINGROVE II COMMUNITY VALUES

FOUNTAINGROVE II COMMUNITY RISK ASESSMENT

As designated on the base map, the following table lists the associated wildfire risk, as viewed by this (these) community(s).

Community, structure or area at risk	Fuel Hazard	Risk of Wildfire Occurrence	Structural Ignitability	Firefighting capability
Fountaingrove II Bordering WUI	High	High	Moderate	**HIGH**
Fountaingrove II Interior homes	Moderate	Moderate	Moderate	**HIGH**
Fountaingrove II homes adjacent to WUI island	High Moderate w/continuing maintenance treatment	High	Moderate	**HIGH**

PRIORITY RATING REFLECTING FOUNTAINGROVE II COMMUNITY VALUES

Community, structure or area at risk	Overall Risk	Community Value	Cultural Value	Overall Priority
Fountaingrove II WUI	High	High	High	**HIGH**
Fountaingrove Interior Homes	Moderate	High	High	**HIGH**
Santa Rosa City parks	High	High	High	**HIGH**

PRIORITY RATINGS OF FOUNTAINGROVE ON TREATMENT METHODS

Based on the results of the community risk assessment, priority ratings have been selected for the community and areas of community importance. The community recommendations for the type and method of treatment for the surrounding vegetation are listed in the following table.

Community, structure or area at risk	Type of Treatment	Method of Treatment	Overall Priority
Fountaingrove II ALLFIREBREAKS FB-1 thru FB 15 Including Interior Islands	Hand labor Fuel Breaks are currently complete Annual maintenance cycle is 3-years	Hand loppers and small gasoline tools chainsaw and weed whackers Cuttings hauled off-site	**HIGH**
Fountaingrove II P-1 City Park	Hand labor Annual maintenance cycle is 3-years No herbicides used	Hand loppers and small gasoline tools chainsaw and weed whackers Cuttings hauled off-site	**HIGH**
Fountaingrove II P-2 City Park	Hand labor Annual maintenance cycle is 3-years No herbicides used		**HIGH**

LOT SIZES

Most all lots have minimal side yards separating homes by ten to fifteen feet in many cases. Most homes are built fronting the road with deep rear yards. All homes along the WUI have deep rear yards of 100-feet or more. These deep rear yards have been calculated to contain a portion of the WUI defensible space, and thus should not be heavily planted.

RESIDENTIAL BUILDING CONSTRUCTION IN FOUNTAINGROVE II

• Most homes within the various units of Fountaingrove II were built after 1998, are of modern construction, and have many fire resistant features built into them. This includes stucco siding, tile or other fire resistant roofs, double pane windows and so forth. The Community is built out with the exception of six vacant lots.

• All homes are of modern construction. Some have wood siding, but most are stucco. Roofing material is a mix of asphalt shingles and cement or clay tile materials.

• Venting does not meet the most recent building code upgrades. Foundation/crawl space venting observed appears to be in good condition and is consistent throughout the community with multiple vents of galvanized 1/8 inch screening. Gable vents are predominant for attic ventilation and are at both ends of the roofing system. They appear to be of galvanized 1/8 inch screening.

• Most homes have gable venting to provide attic circulation. Fountaingrove II homes do not meet the most recent venting requirements that have been added to the building codes to reduce ember and brand intrusion into open spaces within the structure. However, checking the vent screening for its size and integrity will probably assure that ember and brand penetration will be prevented from entering into those spaces.

ROADS AND TRAFFIC PATTERNS

All roads within Fountaingrove II are of modern construction. Road widths are wide enough to allow to two-way traffic. All cul-de-sacs are close to intersecting roads and do not pose an evacuation problem. There are usually "two ways out."

EVACUATION

***Emergency Alert System (EAS)*:** The City of Santa Rosa and Sonoma County have access to the Emergency Alert System, the partnership with local media in which emergency messages are broadcast giving emergency instructions for citizens over local and regional media outlets.

Shelter-in-place involves simply staying in your house or other building, in order to avoid harm. In the event of a chemical spill or release you may be instructed to remain indoors and shut off outside air intake to avoid harmful fumes that may have been dispersed into the air. Listen to local radio and TV for emergency instructions.

If **Evacuation** of certain areas of the city or county becomes necessary due to an emergency situation, you will be instructed to leave your home and neighborhood and seek a location of safety. Shelter sites and evacuation routes will be designated. Listen to local radio and TV for emergency instructions.

Because of the "looping" road system in most areas of FG II, evacuation should not present a problem other than conflict with smoke disorientation (assuming evacuation by auto) and incoming emergency apparatus. These comments are superficial and do not intend to replace any official fire or police policies established by the City of Santa Rosa. Copies of the official evacuation plan should be obtained from the City. (Excerpted from: COPE City of Santa Rosa "Citizens Organized to Prepare for Emergencies")

FIRE FIGHTING WATER SUPPLY

A modern municipal water supply with adequate fire flow & fire hydrant spacing exists throughout all units of Fountaingrove II.

FIRE DEPARTMENT EMERGENCY RESPONSE

Fire Department response is adequate with initial attack engines, mutual aid backup, and Cal Fire with State Responsibility Lands adjacent to Fountaingrove II. City of Santa Rosa has recently announced their plans to construct a fire station in the area that would further improve initial response time. This new fire station is proposed to be constructed at Newgate Court. On November 18, 2008, the City Council set aside $150,000 in funds to install a stoplight at the intersection of Newgate and the Fountaingrove Parkway.

MATERIALS OR REPORTS CITED, EXHIBITED OR APPENDED

• FOUNTAINGROVE II WILDLAND/URBAN INTERFACE FIRE THREAT and MITIGATION RECOMMENDATIONS, Prepared for Fountaingrove Open Space Maintenance Associations, Prepared by Peter Martin, Vegetation Management Specialist, Sonoma County Department of Emergency Services/Fire Division – April 2004

• FOUNTAINGROVE II DESIGN PROGRAM DESIGN GUIDELINES OPEN SPACE MANAGEMENT, Prepared for Watt Homes of Northern California Dividend Fountaingrove Partners, April 1992

• OSMA Forest Management Practices showing their standard terms, illustrations and guidelines governing work of OSMA vendors on Open Space.

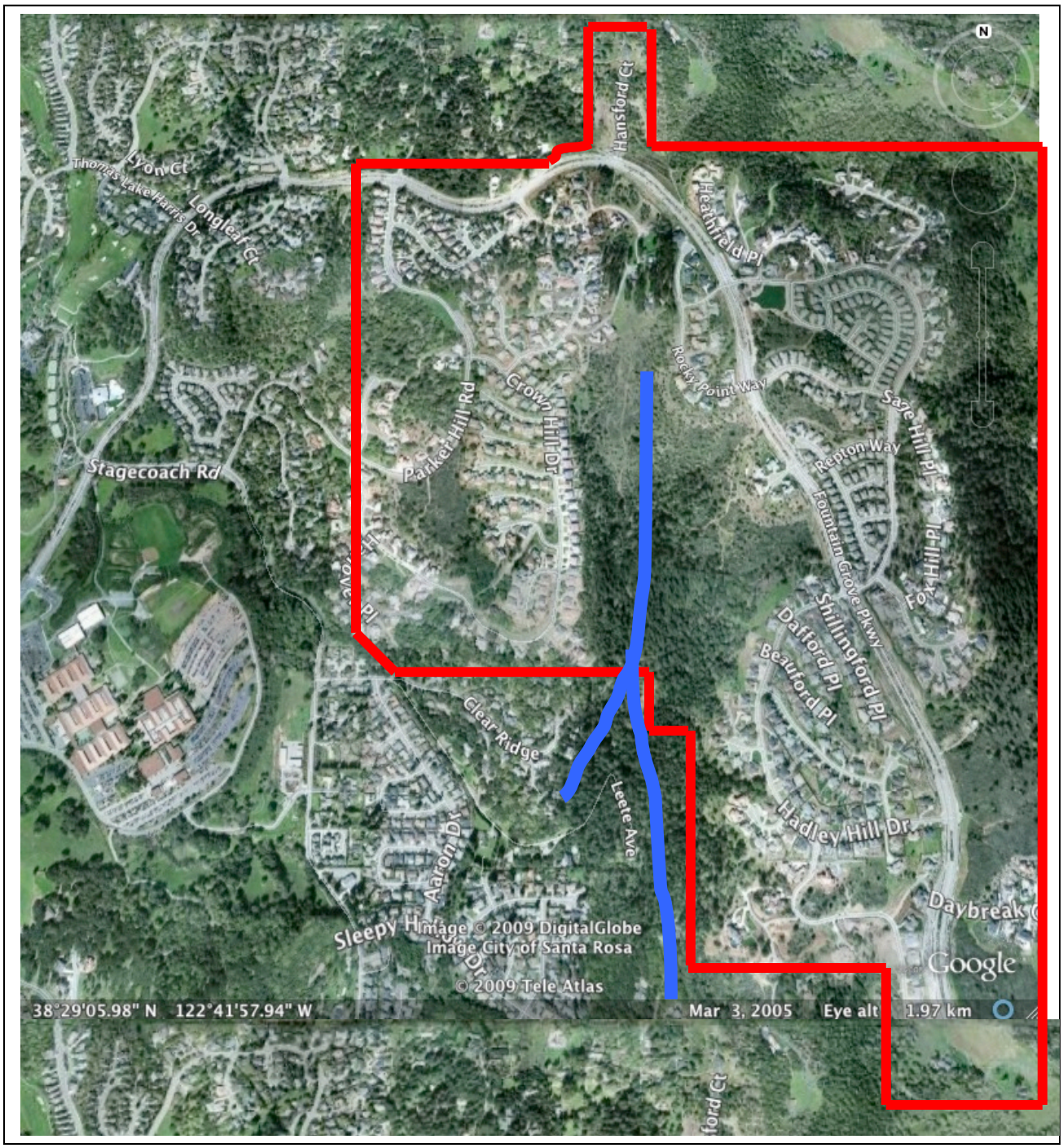
• Cal Fire - Global Warming

• Wildland Urban Interface Hazard Fuel Risk Assessment: City of Santa Rosa, California, Prepared By: Fire Management Concepts Inc. October, 2004 Coniferous Forest (Fuel Model 10)

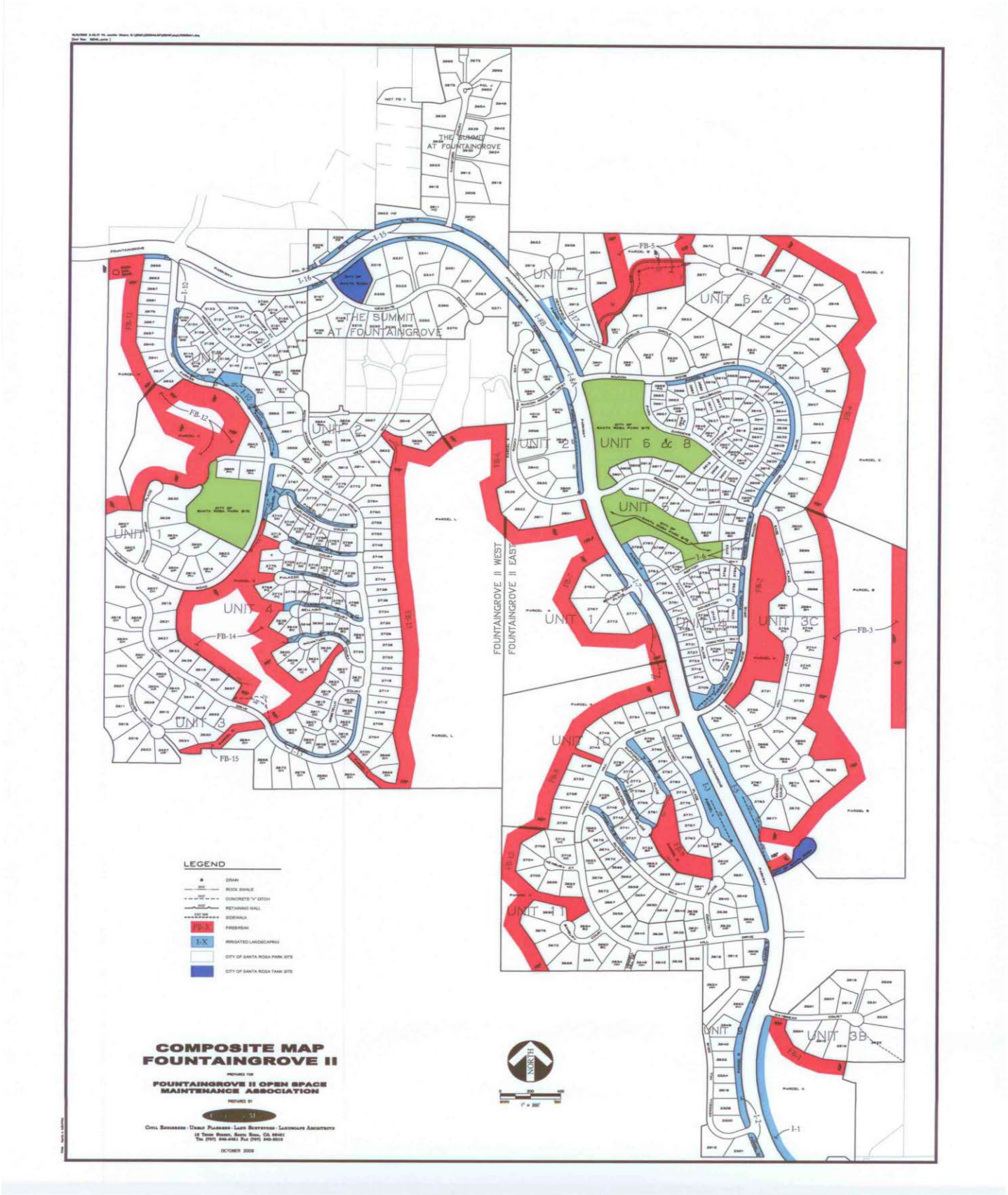
• Excerpts from the Assessment of Douglas-fir Establishment in Woodlands at Austin Creek State Recreation Area by Joe R. McBride and Steve Barnhart, Consulting Forest Ecologists, Berkeley, CA

• Excerpts from "Wildland Urban Interface Hazard Fuel Risk Assessment: City of Santa Rosa, California", Prepared By: Fire Management Concepts Inc. October, 2004 Coniferous Forest (Fuel Model 10)

SATELLITE IMAGE DEPICTING APPROXIMATE WUI BOUNDARIES AND OSMA RESPONSIBILITY *Blue line(s) indicate major canyon drainage. This type of land feature tends to act as a chimney when a fire occurs from below.*



MAP OF FOUNTAINGROVE II WILDLAND URBAN INTERFACE FIREBREAKS *red shaded areas of the map below indicate WUI Defensible Space Firebreaks constructed and maintained by OSMA.*



Map provided by OSMA

FOREST / OPEN SPACE / WILDLAND URBAN INTERFACE MANAGEMENT BY OSMA - FROM 2009 FORWARD

Going forward OSMA should consider taking the following action:

• Contact the City Community Development Department to establish a program where OSMA can manage trees within Open Space by obtaining a use permit. This use permit would update existing guidelines to reflect changes in forest conditions and circumstances that were not envisioned when the original guidelines were established nearly two decades ago when the area was all wildlands. OSMA has a demonstrated track record of knowledge and sensitivity when it comes to managing its open space areas, and has documented their practices for current and future OSMA volunteers to manage the Open Space and monitor its issues. This documentation is also available to interested parties to demonstrate that OSMA has acceptable Forest Management Practices in place for compliance to any guidelines, plus assist with possible federal or state grants for fuel management in FGII.

• OSMA's Forest Management Practices are unique with its forest of 201 acres and 25+ acres of landscape area that border or are close to the WUI. To prevent a possible catastrophe it must have authority to operate in an environment for which no logical ordinances or rules apply. There is also the issue of changed circumstances, such as the issues with the fire danger that excessive Douglas Firs or dead trees present in a large forest located in an urban environment such as Fountaingrove II. Better to take action now, than face a fire that threatens FGII and the surrounding communities.

• The Guidelines as outlined in the Fountaingrove II Design Program for Guidelines Open Space Management and included as an Exhibit need to be supplemented/updated for the changed circumstances outlined herein with regards to Douglas firs and increased fuel loads from lack of natural fires.

• Continue to review and upgrade the Requests For Proposal (RFP) documents that are the "BIBLE" that provides specific treatment for the various treatment regimens required to fulfill treatment and maintenance. See Appendix for Specific RFPs.

• Continue aggressive control of invasive and noxious plants within fuel breaks. In 2009, OSMA experimented with a broad leaf chemical to kill thistles located in two firebreaks. The program was very successful. The application of chemicals was focused on the thistles and applied on windless days. The thistles were killed and no damage was done to native plants or grasses. OSMA plans to expand this practice in future years, and will study the use of chemicals for reducing poison oak, pampas grass, broom, and Harding grass in its firebreaks. OSMA should consider the application of herbicides to control large manageable areas.

• Maintain a Zero Tolerance Policy against infractions of OSMA Rules.

• OSMA should work with the Santa Rosa Fire Prevention Bureau to enforce a Zero Tolerance Policy for weed abatement and maintenance on private property and the publicly owned City parks. This should include notifications to their Community about the weed abatement policies and encourage reporting violations of such policy by the residents of the community and/or OSMA acting upon behalf of the residents' best interests.

• Sensitive Plants that exist in five areas and consist of 15 acres of Rincon Ceanothus and Manzanita

Continue to exercise sensitivity and awareness of valued and rare native plants by taking action that will not disturb EIR environment and allow them to flourish and expand their boundaries as per the Design Guidelines.

• Forest Management Procedures

OSMA should operate as a stand-alone for tree management planning per its documented Forest Management Practices, and not be governed by the requirements of the City of Santa Rosa prohibiting the cutting of trees (dead or alive) with a diameter at breast height of 4-inches or greater without a permit.

The Open Space managed by OSMA is a unique property. It has procedural guidelines for managing the Open Space and OSMA has adopted this as the foundation of their authority and objectives. It has met the 100' specification for firebreaks, and its RFP specifications for work on Open Space strictly protect the native plants, hillsides from erosion, habitat for animals and birds, and the many waterways from improper use of chemicals or destruction by vehicles used by vendors. Vehicle usage is severely restricted, as is powered equipment that might destroy the plants or spark fires. In the recent years, all pruning and regrowth treatment has been done with handsaws, loppers, pruners and chain saws when the size of the limbs reaches a specified size.

THE DOUGLAS FIR PROBLEM

Unfortunately, Douglas fir was the predominant tree chosen for replacement for mitigation of trees removed for development of lots throughout Fountaingrove II, and is a permitted and often a designated heritage tree (by the City of Santa Rosa) in FG II.

Although it is not as tall as the Coast Redwood, the Coast Douglas-fir is considered as the second tallest tree in the conifer family.

While this requirement may once have been valid when drafted in the Design Guidelines, it does not fit good forest management practices that are demanded by a changing forest eco system unique to Fountaingrove II. What has occurred is the law of unintended consequences. Douglas fir trees were planted per permit requirements and the result is fir reproduction of exponential proportions. In the opinion of this author, Douglas fir should be regarded as an invasive species, not only in Fountaingrove, but also throughout the entire county. Douglas fir is displacing many other native species that once were abundant prior to the arrival of the fir tree from the North.

Douglas fir reproduction develops through a number of steps. First multiple seedlings per given area appear. As the seedlings grow they become a dense highly fire prone brush model type and a ladder fuel. As they increase in size and height they begin to compete with other (broad leaf) species for sunlight and then begin to shade out many desirable species leading to disease and/or death. Conifers burn much hotter than an Oak of similar size, and their mass dwarf more desirable smaller natives with less fuel loads.

The Douglas fir's aggressive growth habits and density are creating the following documented problems for both fire safety and maintaining a balance of other desirable native plants:

The following is an excerpt from the Assessment of Douglas-fir Establishment in Woodlands at Austin Creek State Recreation Area by Joe R. McBride and Steve Barnhart, Consulting Forest Ecologists Berkeley, CA

"Throughout the north-coast region, deciduous oak woodlands are being invaded and replaced by Douglas-fir as a result of fire suppression and other land-use practices (Barnhart, et al., 1996). This encroachment of Douglas fir into deciduous oak woodlands is of concern to land resource managers for several reasons including loss of local biodiversity and wildlife habitat. Management techniques for controlling Douglas-fir invasion including prescribed burning, hand removal and girdling of seed trees have been reviewed by Hastings, et al., 1997." The full report appears in the Appendix to this Report.

The following is an excerpt from the "Wildland Urban Interface Hazard Fuel Risk Assessment: City of Santa Rosa, California", Prepared By: Fire Management Concepts Inc. October, 2004, Coniferous Forest (Fuel Model 10) states:

The distribution of coniferous forest surrounding Santa Rosa has been altered from historic distribution and stand density primarily due to the effects of logging and fire suppression. Very few relic stands of the old growth redwood – Douglas fir association were detected or observed in the Santa Rosa interface zone in either the aerial photograph analysis or subsequent field surveys. Most of the coniferous forest in the vicinity of Santa Rosa is represented by early to mid successional stages of second or third growth Douglas fir, redwood and white fir. Stand density is very high in comparison to historic basal areas distribution primarily due to the elimination of natural fire as a thinning agent. As a result, white fir has become a major component of stand composition in comparison to pre-fire suppression densities. Fuel loading in these overstocked forests is very heavy and is also a result of fire exclusion. White fir in overstocked stands is very susceptible to root and heart rot (Amilliaria sp.) and the high mortality rates of this species contribute to extreme levels of dead and down branches and boles on the forest floor. Fuel complexity is further magnified by extensive amounts of shrubs and hardwoods in the subcanopy of some stands which provide ladder fuels which can contribute to crown fires under the right weather and fuel moisture conditions.

Fire behavior in the coniferous forests surrounding Santa Rosa can reach extreme intensity due to the fuel conditions described previously. The combination of steep slopes, heavy dead fuel loading and ladder fuels can easily create crown fire conditions and long range spotting even without the influence of high winds. The potential for smaller fires (100 to 1000 acres) in the proximity of developed areas to create significant threats to adjacent structures increases in probability with the passage of time.

RECOMMENDATIONS AND OBSERVATIONS

• LIVE TREES

Douglas fir trees ranging from seedlings to diameters at breast of 12 inches and occasionally greater size requires aggressive forest management throughout the Fountaingrove open space area to ensure other native species are protected and there will be a desirable distance (crown separation) between the Douglas Firs and other primarily deciduous trees. The City of Santa Rosa should consider the above factors with Douglas Firs as supplemental guidelines to the existing 1992 FGII Design Program Guidelines. At the same time these Guidelines should be clarified where issues have surfaced that were not addressed in the original document such as the safety issues that have become acute with regards to the management of trees.

• DEAD AND DYING TREES:

There is notable evidence of tree mortality, primarily Douglas fir. These excess dead trees should be cut and removed where practical to reduce fuel loads. See reference section for documentation of this change in circumstances. In 2008, OSMA members identified and inventoried over 150 dead or diseased trees within their open space responsibility in or near the edge of firebreaks. Many of these trees require removal from the standpoint of safety and/or spread of disease. This in no way suggests that wildlife trees should be removed. Habitat should be a strong consideration in making any final decisions regarding removal. That said, if safety or disease issues exist, reasonable removal programs should commence as soon as possible with a select number of trees chosen for removal each year. Dead trees near residences or streets should be removed as soon as practicable for safety reasons. Trees that have fallen in firebreaks should be removed for access to facilitate fighting fires and elimination of fuel. If accessibility makes removal impractical, the trees should be cut into sections and embedded into the ground in a way to leave access in the firebreaks.

• TREE MANAGEMENT

OSMA has a demonstrated record of knowledge and sensitivity when it comes to managing its open space areas and should be permitted to exercise their skills in managing the trees within its forested areas. OSMA should establish an agreement with the City of Santa Rosa for an open management Permit to allow OSMA to manage trees without a requirement of overwhelmingly oppressive paperwork.

• INVASIVE PLANTS

Control invasive and noxious plants within fuel breaks and consider those outside this area as well. Treatment should be aggressive and may be required on a different review and treatment cycle than that of the firebreak maintenance cycles.

• OSMA FIREBREAK MAINTENANCE CYCLES

Following is a summary of the Firebreak statistics that currently exist in Fountaingrove II and their maintenance cycle:

FB ID	Description/ Access	Regrowth ID/ Schedule	Parcel Area	Slope	FB Length	FB Width	FB Area 8/31/09	Current Break %	Last Fuel Mgmt Project	Next Fuel Mgmt
FB 1	East Parcel A Unit 3B	East Ridge	11.6	30%	630	100	1.4	12%	Year 2007	2010
FB 2	East Parcel A Unit 3C	Interior Island	5.6	30% to 40%	1,845	100	5.1	90%	Year 2008	2011
FB 3	East Parcel B Unit 3C SRFD/OSMA Fire Access Gate	East Ridge	36.2	25% to 40%	2,890	100	6.6	18%	Year 2007	2010
FB 4	East Parcel C Unit 6/8	East Ridge	25.2	35% to 40+%	2,460	100	5.6	22%	Year 2007	2010
FB 5	East Parcel B Unit 7/6	East Ridge	5.9	30% to 40%	1,420	100	3.5	59%	Year 2007	2010
FB 6	East Parcel A Unit 2	West Ridge	0.6	35%	400	50	0.6	100%	2009	2012
FB 7	East Parcel A Unit 1	West Ridge	18.2	30% to 40+%	1,745	100	4.0	22%	2009	2012
FB 8	East Parcel K Unit 10	West Ridge	14.0	25% to 30%	1,340	100	3.1	22%	2009	2012
FB 9	East Parcel M Unit 10	Interior Island	3.0	20% to 25%	1,600	83	3.0	100%	2009	2011
FB 10	East Parcel A Unit 11	West Ridge	5.4	20%	1,467	100	3.4	63%	2009	2012
FB 11	West Parcel N Unit 1	Parker Hill/Crown Hill	8.5	50+%	1,670	100	4.8	57%	Year 2008	2011
FB 12	West Parcel V Unit 1 Two SRFD/OSMA Fire Access Gates	Parker Hill/Crown Hill	11.2	20%	1,840	100	4.8	43%	Year 2008	2011
FB 13	West Parcel L Unit 4 Fire Access Gate, no OSMA or SRFD locks	Parker Hill/Crown Hill	42.1	35% to 50%	3,590	100	8.5	20%	Year 2008	2011
FB 14	West Parcel K Unit 4 SRFD/OSMA Fire Access Gate	Interior Island	13.4	30% to 35%	2,700	100	6.2	46%	Year 2008; Plus 2009 Widening	2011
FB 15	West Parcel Q Unit 3	Parker Hill/Crown Hill	0.8	30 to 35%	600	60	0.8	100%	Jan-09	2011
	Fire Break Totals		201.7		26,197		61.4	30%		

Note: All statistics are estimates or approximations. OSMA Contractors must rely upon their own surveys to determine the actual dimensions and descriptions noted above

Annual Maintenance Cycle Plan for Firebreaks - The Annual Maintenance Cycle weed whacks all firebreaks and fire roads twice in spring and early summer. It requires 14 days with a 6 man crew for each treatment to weed whack the 66 plus acres. OSMA plans the annual grassland mowing cycle to correspond with City of Santa Rosa Weed Abatement Requirements. Grassland maintenance is a part of the overall firebreak maintenance program. The 2009 grassland maintenance costs about $900 per acre for the two weed whacking treatments.

OSMA should consider negotiating annual weed abatement deadlines with Santa Rosa Fire Marshal to allow some flexibility in start dates. In some years the spring and summer growth cycles are earlier or later. If annual weed abatement is conducted too early, it can create an (possibly unnecessary) additional expense. Additionally, contracting for the work, often weeks or months prior to the weed abatement deadline becomes difficult if the dates set by the city are not firm.

Three-year maintenance cycle for firebreaks - Every firebreak is assessed every three years and appropriate maintenance work is conducted. This includes removal of dead woody material within the plants and on the ground. Light pruning is conducted as necessary to maintain the proper plant spacing and volume. There is a golden lining as a result of the fuel break treatment; often struggling, light-deprived plants and trees flourish when they receive appropriate sunlight. A flourishing forest (forest is defined as a plant community) is a healthy forest and one that tends to resist fire.

Firebreak Maintenance Cycles: Continue to monitor the effectiveness of the three-year maintenance cycles and adjust accordingly if indicated. Regular Maintenance is a key to fire break management. If not conducted on a regular cyclical basis, previous treatment soon reverts to a fire prone state and the entire effort may be lost.

Disposal of Cut Vegetative Material: The current policy is that all cut vegetation with certain exceptions such as grass cuttings is hauled off-site for disposal. This slows reproduction and/or spread of undesirable plants to other areas within FG II.

EXPAND FUEL BREAKS AN ADDITIONAL 100', CREATING A 300' FUEL BREAK WITH THECOOPERATIVE EFFORTS OF HOMEOWNERS BORDERING THE WILDLAND URBAN INTERFACE

OSMA should evaluate the Wildlands (forested and chaparral) areas outside the current 100' firebreaks, and establish priorities to do fuel reduction in those areas which have the highest concentrations of fuel. The objective should be to reduce the fuel in the next 100' beyond the present firebreaks. This would have the effect of providing up to 300' of fuel reduced area, when counting the present 100' firebreaks and the 100' defensible space that most lots (homeowners) along the WUI have available to manage for their personal fire safety. Other areas that could be fuel reduced are areas next to the accessible fire roads within the Wildlands, or areas located in canyons that can be fuel reduced to have less fuel available in case there is a fire.

This fuel reduction outside the firebreaks would not have to be as aggressive as that performed in the existing firebreaks. Steps taken to reduce fuel should include; clearing the dead fuel from shrubs, Limbing trees up to 10', cutting excessive dead trees and disposing of them per OSMA's Forest Practice Procedures, removing invasive plants, treating the Douglas fir as an invasive plant by removing seedlings, saplings and trees up to 12" that are crowding other plants and creating a fire safety issue because of inadequate crown or plant separation.

With OSMA's Community Wide Protection Plan in place, its documented Forest Practices to follow, and maintaining an active FireWise Community status; it is possible that local fire organizations will be able to leverage OSMA's dollar contribution to fire safety, to obtain federal and/or state grants to assist in this fuel reduction process.

SANTA ROSA CITY PARKS:

Recommendations from Years 1 - 5 have only partially been met. These are a city- owned properties and the city should Honor its responsibility for vegetation management of this parcel. The city cannot expect the adjacent property owners to meet the high standards they require of others and not maintain their own property to the same standards.

Green Shaded Areas are Fountaingrove II Parks that are not maintained by OSMA. Map provided by OSMA

Secure agreement with City Parks for annual maintenance of their property within Fountaingrove II.
Recommendations from Years 1 - 5 have only partially been met by the city. These are a city-owned properties and the city should honor its responsibility for vegetation management of this parcel. The city cannot expect the adjacent property owners to meet the high standards they require of others and not maintain their own property to the same standards.

These city-owned open space islands designated as parks should be included in the cooperative firebreak and fire fuel reduction project being undertaken jointly by OSMA and the adjacent management organization, the Fountaingrove Ranch Master Association. Failure of cooperation by the city will significantly jeopardize the effectiveness of fire fuel treatment in this wildland/urban interface area.

P-1 – Rincon Ridge Park - City of Santa Rosa Owned Park
P-2 - Parker Hill Park - City of Santa Rosa Owned Park.

Vegetation Management and Fuel Treatment Modification Goals within parks (City of Santa Rosa Responsibility):

- Protect threatened plant species.
- Create a 100-foot firebreak perimeter adjacent to all roads and all private property lines.
- Reduce total fuel volume in remaining vegetation by 50%.
- Remove invasive species including French broom, fir seedlings and saplings, thistles, poison oak
- Provide aggressive annual maintenance at the same level FGII is held to by the city Fire Marshal
- Provide continuing control and remove invasive species, French broom, fir seedlings and saplings, thistles, poison oak annually.

CONTRACTORS

Continue to use well-trained and seasoned crews with on-going supervision and guidance provided by company managers. All work should be conducted with sensitivity toward the native vegetation. Most of the work is handwork using loppers, etc, but some work is conducted with small chainsaws and gasoline powered weed whackers. All oak varieties may be trimmed but not removed. Manzanita is retained and dead wood removed. Trees are trimmed according to recommended forest standards.

CONTRACTOR'S FIRE PLAN - FIRE SAFE WORKING REQUIREMENTS

• All crewmembers understand fire safe requirements Of the City of Santa Rosa, County of Sonoma, and specific requirements of Fountaingrove II Open Space Maintenance Association

• Cell Phone with direct emergency Santa Rosa Fire Department number verified and programmed in phones; NOT 9-1-1

• No small engine operated tools permitted on Red Flag Days Check in the morning prior to start of work

• No small engine operated tools permitted after noon from June 1 to the end of fire season

• Exception: Weed whackers in green grass or second cuttings for weed abatement of firebreaks and fire roads

• Documented "Approved Spark Arrestors" on all gasoline powered engines

• Maintain the following emergency equipment within 50-feet of any gasoline powered tools
    - Five-gallon back pump.
    - Five-pound dry chemical extinguisher
    - One shovel
    - One McLeod

COMMUNICATION

VIA: Website / Newsletter / Annual Meeting / Direct Mailers / Email – see comments below on these topics

MAINTAINING DEFENSIBLE SPACE IN FOUNTAINGROVE II

It is the duty and responsibility of <u>every</u> Fountaingrove II homeowner to their family, neighbors and community, to comply with legal codes regarding vegetation management that provides defensible space around their home. <u>This message must be communicated to every member of the community, by every means available!</u>

Fountaingrove II is situated in an area which the City Council of Santa Rosa has designated as a "Wildland Urban Interface Fire Area". This designation was enacted on March 3, 2009 with the adoption of Ordinance 3907, based upon the recommendation of the Chief of the Fire Department. <u>This Ordinance requires that all FGII residences comply with California Public Resource Code sections 4201 – 4204 and Government Code sections 51175 – 51189.</u> This Code mandates all FGII residences comply with defensible space and fuel / vegetation management that governs a dwelling located within a VERY HIGH FIRE HAZARD SEVERITY ZONE that borders a "WILDLAND URBAN INTERFACE," OR WUI. See section 4291 of the applicable California Code below:

Public Resources Code 4291. (a) A person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material, shall at all times do all of the following:

(1) Maintain defensible space no greater than 100 feet from each side of the structure, but not beyond the property line unless allowed by state law, local ordinance, or regulation and as provided in paragraph (2). The amount of fuel modification necessary shall take into account the flammability of the structure as affected by building material, building standards, location, and type of vegetation. Fuels shall be maintained in a condition so that a wildfire burning under average weather conditions would be unlikely to ignite the structure. This paragraph does not apply to single specimens of trees or other vegetation that are well-pruned and maintained so as to effectively manage fuels and not form a means of rapidly transmitting fire from other nearby vegetation to a structure or from a structure to other nearby vegetation. The intensity of fuels management may vary within the 100-foot perimeter of the structure, the most intense being within the first 30 feet around the structure. Consistent with fuels management objectives, steps should be taken to minimize erosion.

(2) A greater distance than that required under paragraph (1) may be required by state law, local ordinance, rule, or regulation.

In Order for this Wildland Urban Interface Firebreak System to provide the planned maximum protection, every homeowner must cooperate by establishing and / or maintaining low volume, fire resistant plantings. Every yard in Fountaingrove II is a significant part of the Community's Firebreak System. EVERYONE MUST COOPERATE, OR A WEAK LINK WILL BE ESTABLISHED.

FIREWISE REQUIREMENTS FOR ALL FOUNTAINGROVE II YARDS

• OSMA should strongly emphasize to all FGII homeowners the importance of FireWise rear yards. In the event of residences bordering firebreaks, these yards are the first line of defense in the WUI. Most homes bordering the WUI have deeper rear yards than do their neighbors within the "interior." Yards must be lightly planted, well spaced, preferably with no conifers, well irrigated or drought tolerant fire-resistant plants.

• Weed and Trash Abatement – Santa Rosa enforces a Weed and Rubbish Abatement Ordinance and the residents of the City must comply with its legal requirements. The City has authority to inspect properties and fine and assess the owner for not complying with the removal of weeds, grass or rubbish. These costs include, but are not limited to, the investigation of complaints, the inspection of properties, the preparation, service, and/or publication of administrative notices and other related clerical costs, as well as the actual removal of weeds and/or rubbish from the property. Costs related to abatement of properties will be billed to the property owner by invoice from the City. Unpaid costs will be assessed to the tax rolls as a lien against the property.

• **Communicate that Douglas fir seedlings or saplings SHOULD NOT BE permitted to grow within any yard.**

• OSMA Communication to FGII residents - Utilize the FGII community newsletter, e-mail alerts and the website to emphasize the need and requirements for meeting the Santa Rosa Fire Department vegetation management and weed abatement ordinance.

ADJACENT NEIGHBORS & STAKEHOLDERS

Fountaingrove II has created a reasonably fire safe environment through aggressive vegetation management of its property, particularly in the wildland urban interface surrounding the community. As such, Fountaingrove II is a good neighbor by reducing fire fuels significantly.

It takes cooperation to address the wildfire problem that is one that recognizes no boundaries.

It is recommended that adjacent neighboring properties be evaluated for fire threat and vegetation management and/or treatment. Should any of the adjacent neighbors be neglectful of their community-wide responsibility, it is recommended that a letter from OSMA be drafted and sent to each offending neighbor seeking mutual cooperation, and copied to the City of Santa Rosa Fire Prevention Bureau for action. It is believed that Fountaingrove Ranch Master Association has and uses such a document.

ANNUAL MEETING

An annual meeting should be held each year to raise FIRE HAZARD awareness of the community and report on what measures have been taken by OSMA, the Santa Rosa Fire Department and other interested agencies

END OF RECOMMENDATIONS AND OBSERVATIONS

OSMA Fuel Reduction History Years 2004 - 2015

OSMA Parcels							
Year	Total WUI	Fuel Reduced WUI	Fuel Reduced Acre Increase	% WUI Fuel Reduced	Landscape Acres	Total Acres Managed	% Area Fuel Managed
2004	202	24		12%	16	218	18%
2005	202	41	17	20%	16	218	26%
2006	202	55	14	27%	16	218	33%
2007	202	55	0	27%	16	218	33%
2008	202	56	1	28%	16	218	33%
2009	202	60	4	30%	16	218	35%
2010	202	65	5	32%	16	218	37%
2011	202	72	7	36%	16	218	40%
2012	202	90	18	45%	18	220	49%
2013	202	96	6	48%	18	220	52%
2014	202	102	6	50%	18	220	55%
2015	202	103	1	51%	18	220	55%
			Parks Wildlands				
2012	14	0	0	0%		14	0%
2013	14	10	10	74%		14	74%
2014	14	10		74%		14	74%
2015	14	12	2	85%		14	85%
			Total OSMA and Parks				
2013	216	106	16	49%	18	234	53%
2014	216	112	2	52%	18	234	56%
2015	216	115	3	53%	18	234	57%

Prepared 11/9/2015