CITY of PLACERVILLE

GOLD BUG PARK FIRE SAFE PLAN

This Plan was prepared by the El Dorado County Fire Safe Council for the City of Placerville
And will become an integral part of the Cities future Community Wildfire Protection Plan

Signature Page

for

THE CITY OF PLACERVILLE

GOLG BUG PARK

FIRE SAFE PLAN

Plan Prepared

by

EL DORADO COUNTY FIRE SAFE COUNCIL

_____

Signature Date

Chairperson, El Dorado County Fire Safe Council

Plan Reviewed By

_____

Signature Date

Battalion Chief, El Dorado County Fire Protection District

Plan Approved By

RESOLVED

The City of Placerville, City Council, has reviewed and herby adopts this Fire Safe Plan for Gold Bug Park for the benefit of the City for the purpose of protecting the Parks natural resources and increasing wildfire safety for park visitors and neighbors.

SO RESOLVED

Executed this October 25, 2005 at Placerville, California

_____

Signature Date

Chairperson, City Council

TABLE of CONTENTS

I. EXECUTIVE SUMMARY

The 61-acre Gold Bug Park has steep terrain, heavy fuel loading, and is surrounded by homes. With 100,000 visitor days a year in an area at a high risk for fire starts, this is a formula for a catastrophic wildfire. The City recognized this situation and in May 2005 and requested help from the El Dorado County Fire Safe Council in addressing the wildfire situation in the Park. The Council advised the City that the first step would be the preparation of a Fire Safe Plan for the Park. This would then place the City in position to request grant funding for implementation of mitigation measures recommended in the Plan to make the Park fire safe.

The Fire Safe Council has a Standing Committee of professional wildfire members. Gene Murphy, Committee Chair recommended to the Councils Board of Directors that the Council prepare a Fire Safe Plan for Gold Bug Park at no cost to the City. The Board agreed and Gene volunteered to head up the project and activated the Fire Safe Planning Team.

The Team, Gene Murphy and Doug Leisz assessed the fire situation in the Park with an analysis of the fuels, topography and predicted fire behavior. Then tactically developed fuel reduction zones, a fuelbreak, roadside and trail fuel treatments, Defensible Space for structures and old growth tree protection. These elements were located on a map and fuel treatment guidelines developed.

A Wildfire Ignition Prevention Plan and a Maintenance Plan are recommended for preparation and an Implementation Schedule and Cost Matrix were also prepared.

The Plan was reviewed and approved by the Fire Safe Council, the El Dorado County Fire Protection District and the City of Placerville.

The City of Placerville is designated as a Community At Risk in the Federal Register. This Fire Plan should be an integral part of a future Community Wildfire Protection Plan (CWPP) that will included other subdivisions within the City that have Fire Safe Plans and a Wildfire Urban Interface (WUI) boundary that will encompass the wildfire threat to the City.

II. GOLD BUG PARK

Placerville's (Hangtown) Gold Bug Park is situated within the city limits of Placerville one mile north of Highway 50 on Bedford Avenue. The 61-acre Park is located on the eastern side of the famous Mother Lode vein and is a historic remnant of the gold mining that once took place there. This area yielded untold thousands of dollars in gold. The Park is designated a State Point of Historic Interest and is part of the National Register of Historic Sites.

The main feature of the Park is the Gold Bug Mine with its tours. There is also a scale model of a working Stamp Mill, hiking trails, and museum and gift shop. The Park accommodates approximately 100,000 visitor days a year.

The StampMill

III. ACKNOWLEDGEMENTS

The El Dorado County Fire Safe Council (EDCFSC) commends the City of Placerville for their foresight in requesting help for the development of a Fire Safe Plan for Gold Bug Park. The EDCFSC also thanks Battalion Chief Mark Johnson of the El Dorado County Fire Protection District (EDCFPD) for his time and input in reviewing the plan. Special thanks for the cooperation of the City Public Services Director, Ron Mueller, Recreation Superintendent Steven Youel, Gold Bug Park Manager Frank Jacobi, Hangtowns Gold Bug Park Development Committee, Inc. Chairperson Pat Cook, City Manager John Driscoll and City Mayor Roberta Colvin.

IV. PLAN LIMITATIONS

The EDCFSC makes no guarantee, warranty, expressed or implied and assumes no liability that the Fire Safe Plan for the Gold Bug Park will prevent wildfires from destroying natural resources or threatening adjacent homes and residents. However full implementation and maintenance of the Plans mitigation measures will greatly reduce the exposure of the Park and adjacent homes to losses from wildfire.

V. PURPOSE AND SCOPE

A. Purpose

The Fire Safe Plan for the Gold Bug Park is the EDCFSC's strategy for reducing the damage and loss from wildfires by placing emphasis on what needs to be done before a wildfire starts. The Plan looks to reduce natural resource and property loss, both inside and adjacent to the park, increase firefighter safety and contribute to ecosystem health. The Plan is a cooperative effort with the Councils wildfire specialists, EDCFPD and the City of Placerville.

B. Scope

The scope of the Plan will encompass the following:

1. Fuel Treatment along roads, trails, around structures and mature trees.
2. Construction of shaded fuel reduction zones
3. Construction of a fuelbreak
4. Ignition prevention
5. Fuel treatment maintenance

VI. Background – The Wildfire Threat in El Dorado County

El Dorado County has a Mediterranean type climate which features hot, dry summers and cool moist winters. The June – October dry season produces ideal conditions for wildfires. Annual plants die and perennial plants lose moisture and become highly flammable. Fires burning towards the end of the dry season are intense, resist suppression efforts and threaten lives, property and resources. Drought conditions intensify the wildfire danger. Two additional climatic conditions aggravate this already serious wildfire problem. Periodically, almost every year, the Pacific High Pressure System moves eastward over California and brings very hot, dry weather with low humidity. This "Heat Wave" can occur at any time during the dry season and wildfire can start easily and are difficult to extinguish. The other extreme weather condition, thankfully less frequent, usually occurs in the fall and sometimes in early winter, when north or east strong, dry winds subside from the Great Basin High (Foehn Winds). Under these conditions, a wildfire can quickly escape and create great damage before the winds stop blowing. The Oakland Hills Fire of 1991, which destroyed 3810 homes, burned under these conditions.

Each year, hundreds of homes are destroyed or damaged by wildland fires. El Dorado County is no exception from wildfire losses. In 1985 the Eight Mile Fire destroyed 14 homes and in 1992 The Cleveland Fire destroyed over 40 homes and claimed the lives of two aircraft pilots. People who live in, or plan to move into, an area where homes are intermixed with brush, grass, woodlands or forests may be in jeopardy and their lives may be at risk. Nobody may remember the last wildfire in any given area in the County, but history and tree ring analyses tell us that sooner or later, wildfires will occur. Few who have lived through a wildfire maintain their pre-fire attitudes. Those who have not been through a fire cannot imagine such an experience and are more or less convinced that it will not happen to them. Unfortunately, the control of wildfires is not an exact science. A wildfire responds to the weather, topography, and fuels in its environment. Under extreme burning conditions, the behavior of a wildfire can be so powerful and unpredictable that fire protection agencies can only wait until conditions moderate before suppression actions can be taken.

To best understand the history of wildland fire in the Sierras, it is necessary to look at presettlement fire regimes. The Sierra Nevada Ecosystem Project, Volume 1, Assessment Summaries, 1996,

Wildland Resource Report No. 36 – UC Davis, page 62, "Management Strategies" states the following:

> **"Ecological Functions of Fire**. Fire is a natural evolutionary force that has influenced Sierran ecosystems for millennia, influencing biodiversity, plant reproduction, vegetation development, insect outbreak and disease cycles, wildlife habitat relationships, soil functions and nutrient cycling, gene flow, selection, and, ultimately, sustainability."
>
> "Climatic variation plays an important role in influencing the patterns and severity; fires have been most extensive in periods of dry years."
>
> "In most lower-elevation oak woodland and conifer forest types of the Sierra Nevada, presettlement fires were frequent, collectively covered large areas, burned for months at a time, and, although primarily low to moderate in intensity, exhibited complex patterns of severity."
>
> "Fire suppression in concert with changing land-use practices has dramatically changed the fire regimes of the Sierra Nevada and thereby altered ecological structures and functions in Sierran plant communities."
>
> "**ASSESSMENT**: Fire represents both one of the greatest threats and one of the strongest allies in efforts to protect and sustain human and natural resources in the Sierra Nevada. Residents and visitors alike are well aware of the threats posed by summer wildfires. A growing density of homes and other structures coupled with the increased amount and continuity of fuels resulting from twentieth-century fire suppression have heightened concern about threats to life and property, as well as the health and long-term sustainability of forests, watersheds, and other natural resources. Yet fire has been an integral part of the Sierra Nevada of millennia, influencing the characteristics of ecosystems and landscapes. Today, state, federal, and local agencies put enormous resources into efforts to reduce fire occurrence while at the same time advocating the need to use fire to promote healthy ecosystems. The challenge we face is how to restore some aspects of a more natural fire regime while at the same time minimizing the threat wildfire poses to human and natural resources and values."

The Forty-Niners carried the early perception that the nation's forests and wild lands were obstacles to agriculture and settlement in California. For more than half a century following the Gold Rush, settlers, miners, stockman and others used El Dorado County rather harshly. Often land was abused through indiscriminate burning. Fires were deliberately set for a variety of purposes often raging out of control. The prevailing attitude regarding wildfires, however, was to save lives and protect property and let the wild lands take care of themselves. Wildfires continued in El Dorado County and elsewhere in the state until damages exceeded tolerable limits. This led to the establishment of the precursor of the California Department of Forestry and Fire Protection (CDF) in 1881 and the State Board of Forestry in1885, following the establishment of the Federal Timber Reserves (now the National Forests) and the U. S. Forest Service in 1905.

VII. GOLD BUG FIRE SAFE PLAN

A. Park Description

The Parks 61.45 acre is situated in the headwaters of Big Canyon Creek at the 2000 foot elevation. The legal description is: a portion of the SW1/4 of Section 6, T. 10 N., Range N. 11 E., MDM. City Parcel Number is 05002035. The land form has a generally southwestern aspect with numerous intermittent draws flowing into the headwaters of Big Canyon Creek which is the dominate topographic feature. Basically the topography is up hill, in all directions, from the Parks central gathering area. Elevations range from 1940 to 2120 feet above sea level. Improvements within the Park are: Gold Bug Mine, Maegher House, Gift Shop, Stamp Mill, pavilion, trails power lines, storage building, dump and roads. Homes are located adjacent all Park boundaries. The EDCFPD provides structure and wildfire protection within the City limits. However, through a Mutual Threat Zone Agreement both the California Department of Forestry and Fire Protection (CDF) and the EDCFPD will respond to a wildfire that may threaten City or State Responsibility Area (SRA) lands. There is a fire hydrant system within the Park. A Park Master Plan is being prepared. No environmental documents were available.

B. Vegetation (Fuels) and Fire Behavior

The fuels in the Park are classified into two Fire Behavior Fuel Models; Fire Behavior Fuel Model 10, Timber (70%), and Fire Behavior Fuel Model 4, Chaparral (30%).

The Timber Fuel Model is generally located adjacent the perimeter of the Park, with the largest stand on the steep slopes south of Gold Bug Lane. This timber model is three levels with an overstory of Ponderosa Pine, Native Pine, Incense Cedar, and Douglas Fir. The second level (middle) is oak and conifer, saplings and poles. The third level (ground) is oak, conifer seedlings, brush and annual grasses and weeds.

Wildfires in the Timber Model burn with great intensity due to the large load of -down fuels on the forest floor. There is also a significant fuel ladder consisting of brush, conifer and oak trees under the overstory of mixed conifers. Crowning out, spotting and torching of individual trees is frequent in this fuel type contributing to fire control difficulties.

The Timber Fuel Model rate of spread is approximately ¼ mile in an hour with flame lengths of 5 feet. However rate of spread increases dramatically with increase in slope.

The Brush Model is located on the slopes in the interior of the Park and is a mixture of mature manzanita, chemise, Coyote Bush, Poison Oak and Deer Brush. Within the brush areas are numerous suppressed conifer and oak trees.

The Brush Fuel Model is primarily mature manzanita (up to 20 feet in height). The mature brush has a high (65%) ratio of dead to green material, which contributes to high intensity and fast spreading wildfires.

The rate of fire spread in this fuel model is approximately nine tenths of a mile in one hour with flame lengths of 19 feet. A fire start on the north side of Gold Bug Lane will leave the north Park boundary in less than 30 minutes.

Brush Fuels

Timber Fuels

C. Problem Statements

The fractured steep terrain, vegetation density, and extensive fuel ladders, are key elements for a catastrophic wildfire.

The entire Park complex has moderate to steep slopes and is fractured by drainages which may cause erratic fire behavior.

Big Canyon Creek within the Park has 6 sub branches. Fire spread increases dramatically with the increase of slope. For example, a fire burning on a 45% slope will spread about 4 times faster than a fire burning up a 5% slope.

Risk of wildfire ignitions will increase as public use increase.

The risk of wildfire starts within the Park will increase as visitor use increases. Ignitions will most likely be from human causes and vehicles. Activities from adjacent property owners are also a wildfire risk to the Park.

Provisions must be made to maintain fuel modification measures.

The wildfire protection values of fuel treatments are rapidly lost if they are not maintained.

Access for suppression crews and equipment to undeveloped areas within the Park is limited.

Rapid access by initial attack suppression crews and equipment to a wildfire is the most effective method of containing a fire at a small size.

Burning of slash, storage of property and "dumping" within the Park presents a high risk for fire starts.

Roadside fuel treatment is not completed.

Radiant heat from burning roadside fuels can jeopardize evacuation of visitors and suppression efforts.

D. Goals

1. Reduce the number, size and intensity of wildfires.

2. Modify the existing high hazard fuels.

3. Ensure defensible space is provided around structures.

4. Ensure high risk practices are mitigated.

5. Ensure fuel treatment measures are maintained.

6. Promote land management practices that: maintain a healthy stand of native vegetation, consider wildlife habitat, protect the soil, water, and the visual resources protect Park structures and protect mature trees.

7. This Plan ensue an integral part of the Cities future Community Wildfire Protection Plan.

E. Fuel Reduction Mitigation Measures

Threatened and endangered plant and animal species shall not be removed or treated, or otherwise affected within any fuel treatment area. Cultural resources must be protected whenever found. Best Management Practices (BMP) must be observed when fuel reduction work is preformed.

Wildfire mitigation measures are designed to accomplish the Goals by providing and maintaining defensible space and treating fuels. Fire hazard severity is reduced through these mitigation measures. For planning purposes, fuel treatment is subdivided into the following components: Fuel Reduction Zones, Strategically Placed Area Treatments (SPLATS), Fuelbreaks, Roadside, Trail, Defensible Space and Mature Tree Protection.

1. Fuel Reduction Zones

Three fuel treatment zones are planned.

Zone 1 is adjacent the western park boundary and is designed to help protect the bordering homes and complement and add to the existing homes Defensible Space. This zone includes the Stamp Mill Trail, portions of the Silver Pine Trail and the roadside fuel treatment along Hendy Drive. See Appendix map for location and Appendix C for treatment guidelines.

Zone 2 is the brush field located around Hill 2080 on the south facing slope and is traversed by the Silver Pine Mine and Springhill Trails. The prescribed treatment is machine mastication of the brush plants and release of the suppressed trees (conifers and oaks). See map in Appendix for location and treatment guidelines in Appendix E.

Zone 3 is the terrain above the Gift Shop to the Parks southern boundary. The prescribed treatment is Strategically Placed Area Treatments (SPLATS) creating fuel mosaics designed to intercept fire spread. See map in Appendix for approximate location and Appendix C displays treatment guidelines. Final layout of the SPLATS should be by an experienced fire person.

2. Maegher Fuelbreak

A fuelbreak is planned on the north/south ridge from Bear Rock Road to Gold Bug Lane. This is primarily the brush field adjacent the Fire Road. The prescribed treatment is machine mastication of the brush plants and release of the suppressed trees (oaks and conifers). See map in Appendix for approximate location and treatment guidelines in Appendix. E and C.

Note the fuel on the west side of the Fire Road (hatched area on map) is not masticated but treated to the guidelines in Appendix. C for approximately 50 feet outward.

3. Roadside

Fuel is treated adjacent the following roads within the Park:

a. Gold Bug Lane (from Park entrance to Park boundary).

b. Joshua Hendry Drive

c. Bear Rock Road (portion within Park)

d. Air Shaft Road

Treatment guidelines are displayed in Appendix A.

4. Trails

There are five improved trails within the Park, they are:

a. Stamp Mill Trail – 1/10 mile

b. Silver Pine Trail – 1/3 mile

c. Springhill Trail – ¼ mile

d. Big Canyon Creek Trail – ¼ mile

e. Vulture Claim Trail – 1/2 mile

The Stamp Mill Trail is within the Zone 1 fuel treatment area and no additional fuel reduction will be necessary adjacent the trail

The Silver Pine Trail outside of the Zone 1 and the Springhill Trail will have the brush fuels machined masticated for twenty-five feet on each side of the trail. See Appendix D. for further guidelines.

Silver Pine Trail

(Note easily ignited grass fuels adjacent trial head)

The Vulture Claim Trail will have the fuel treated for 5 feet on each side of the trail to the guidelines displayed in the Appendix D.

Vulture Claim Trail

(Note extensive understory fuel ladder)

The Big Canyon Creek Trail has a paved tread and serves the day use areas adjacent Gold Bug Lane. No fuel treatments are prescribed for this trail.

5. Defensible Space

The following structures are located within the Park; Maegher House, Stamp Mill, Gift Shop, Restroom, Air Shaft, and storage shed.

The Maeger House Defensible Space was completed by the Americorp Crew in June 2005.

The Stamp Mill and Gift Shop Defensible Space is satisfactory.

The Restroom and storage shed should implement Defensible Space Zones 1 and 2. See Appendix B for criteria.

The Air Shaft Shed due to its critical function shall have the fuel treated to the guidelines displayed in Appendix B. for 100 foot in all directions.

6. Overstory Tree Protection

On the slopes north of Big Canyon Creek there are scattered large mature overstory Ponderosa Pine and oaks. A low intensity ground fires could kill these trees due to the heavy fuels at their base. It is recommended that all the vegetation, except grasses, be removed for 10 feet in radius around each tree to help protect the trees from such fires.

F. Maintenance

Maintenance of all fuel treatment areas must be scheduled periodically or the fuel modification values will quickly be lost. Maintenance may be accomplished in the following ways: chemical treatment, machine mastification, handwork, chipping or the combination of the above.

1. A Maintenance Plan should be prepared to insure maintenance work is accomplished.
    a. The Plan should include special actions to control Star Thistle and other noxious species, which are present in the Park, which have a tendency to spread rapidly when vegetation is disturbed.

VIII. Ignition Prevention Plan

Preventable wildfires will occur that may cause substantial damage to the natural resources values of the Park and adjoining property. Currently the Park does not have a plan to prevent wildfires ignitions. It is recommended that the City prepare a Gold Bug Park Ignition Fire Prevention Plan that addresses the following:

A. Administration

Address areas such as: employee responsible for prevention, equipping

City vehicles with fire tools, availability of fire fighting tools in the Park, analysis of past wildfire ignitions in and adjacent the Park, enforcement of power line clearance standards. Development of a policy for closure of the trail system during periods of extreme fire danger, i. e. Red Flag conditions.

B. Information and Education

Wildfire prevention training of employees and volunteers.

C. Engineering

Development of a Wildfire Prevention Sign Plan.

IX. Other Mitigation Measures

1. Cease burning, dumping and storage on the ridge above the Maegher House and clean up the site before construction of the fuelbreak.
2. Consolidate the scattered materials stored adjacent the east side of the Maegher House.
3. Equip all locked gates with a Knox Lock.
4. A Safety Plan be prepared that identifies, on the ground, all shafts, air vents etc. before any fuel treatment work begins.
5. Every 5 years conduct a review of fuel treatment accomplishments with EDCFPD and CDF to evaluate work accomplished etc.

Dump sites on Maegher Fuelbreak

X. Appendices

A. Fuel Reduction Guidelines for Park Roads

B. Defensible Space Guidelines for Structures

C. Fuel Reduction Guidelines for Zones 1 & 2-(SPLATS)

D. Fuel Reduction Guidelines for Park Trails

E. Fuel Reduction Guidelines for the Maegher Fuelbreak

F. Schedule for Accomplishment Matrix

G. About the Council and Authors

H. Maps

Appendix A

FUEL REDUCTION GUIDELINES FOR PARK ROADS

The purpose of this roadside fuel treatment is: reduce radiant heat from a wildfire to facilitate evacuation of visitors and initial attack by reducing the rate of spread from an ignition adjacent the road and, improve the use of the road as a fire line.

General Guidelines:

a. Width – 25 feet on both sides of the roads. Measured from the road centerline.
b. Undulate treatment line, tie into natural openings, and avoid straight fuel treatment lines.
c. Do not treat vegetation, in riparian zones, for 5 feet on each side of the centerline of wet drainages.
d. No treatment in irrigated vegetation.
c. Do not expose soil

Fuel Reduction Guidelines:

1. Remove all dead trees.

2. Prune all trees of dead and green branches approximately 10 feet above the ground level but not more than 1/3 of the tree crown.
    a. Multi stem live oak trees: remove all dead stems, cut off green stems at 10 feet above the ground that arch over and are growing towards the ground.

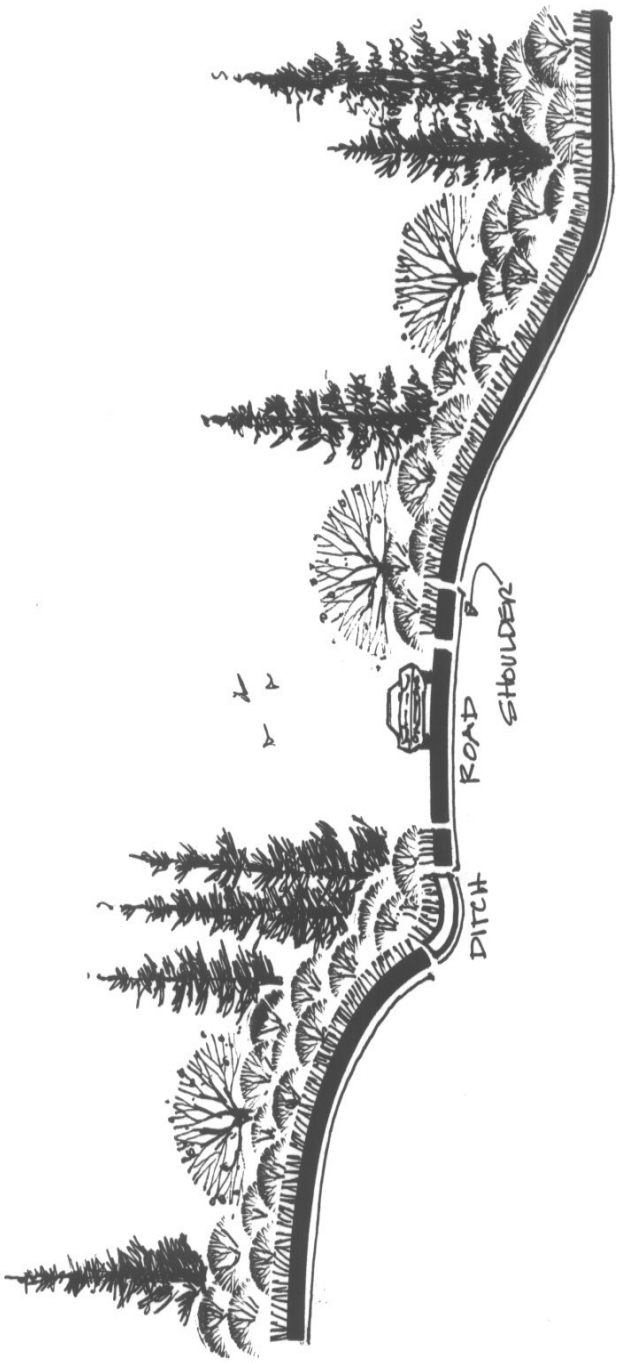
3. Remove all brush, seedlings and saplings to provide a horizontal separation of approximately 20 feet between trees. However, do not remove any of the mature trees over 20” dbh.

4. Remove all down limbs, logs etc that are over 1 inch in diameter but less than 6 inches in diameter. Over 6 inches in diameter may be left if separated by 10 feet.

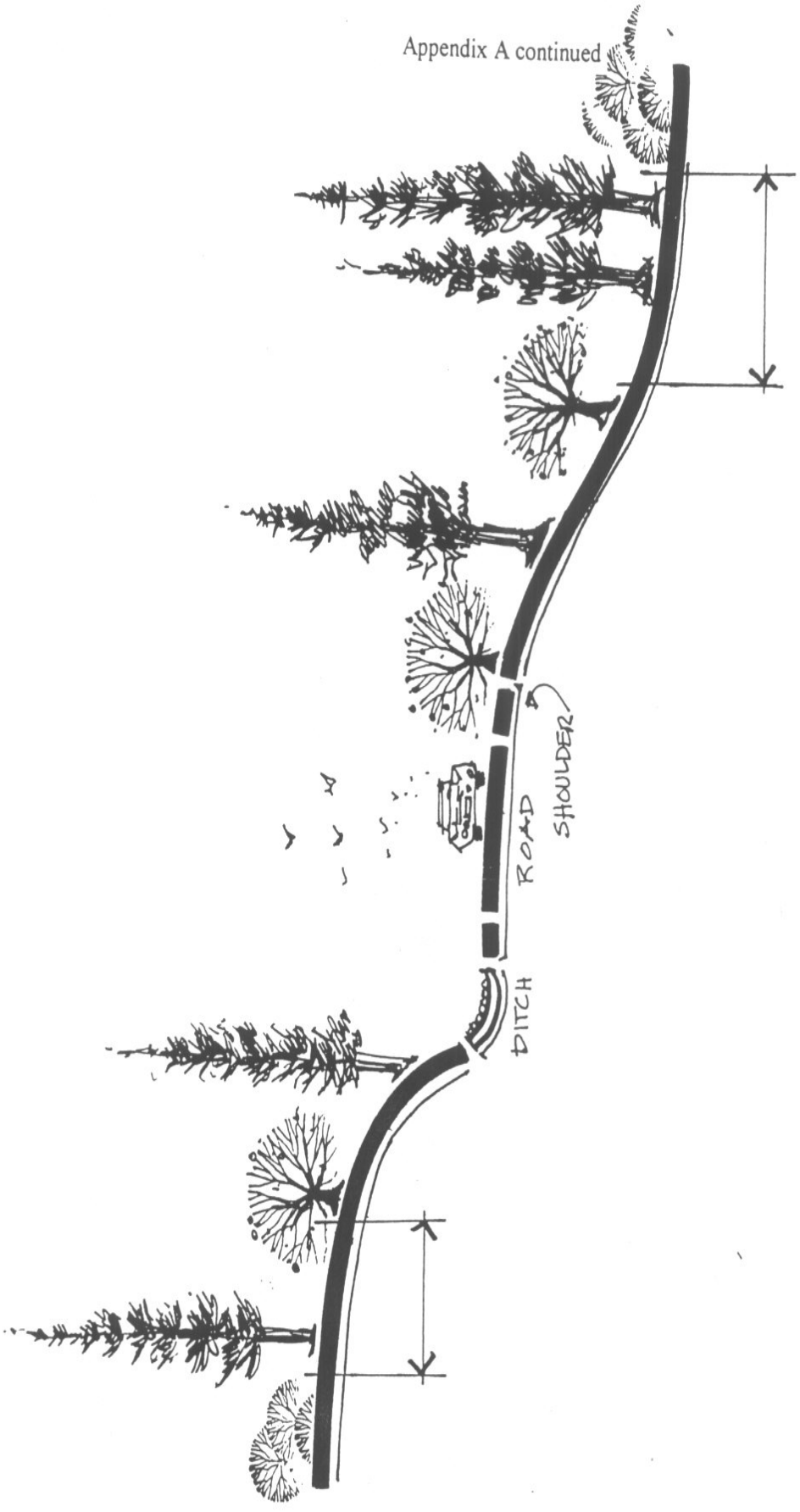
5. All roads must have 15 vertical feet clear of all tree limbs

6. Slash created by the above fuel treatments must be disposed of by burning, chipping, hauling off site or a combination of disposal methods.

Appendix A continued



Appendix A continued



pendix B

DEFENSIBLE SPACE FOR STRUCTURES

Defensible Space is an approach to landscaping to help protect structures from wildfire.
The goal is to create a landscape that will slow the advance of a wildfire and provide the key point for fire fighting agencies to safely defend the structure.

Defensible Space is to extend to 100 feet, in 3 Zones, outward from the structure in all directions.

Zone 1

This Zone extends 5 feet from the structure on all sides. Have nothing flammable, including annual grasses, trees and shrubs under the eaves and no tree branches that over hang the roof, as the heat from a fire can be trapped and ignite the structure. Clean roof of all flammable debris.

Zone 2

This Zone adds 25 feet to Zone 1 and extends outward from the structure in all directions to a minimum of 30 feet. All dead trees, brush, concentration of dead ground fuels (tree limbs, logs, and etc. exceeding 1 inch in diameter) are removed. Green tress (conifers and oaks) are pruned of dead and green branches for 8 to 10 feet above the ground but not more than 1/3 of the tree crown is removed. Tree spacing should be maintained to provide 10 foot horizontal space between crowns. (Do not remove the large overstory trees). Reduce the grass and other herbaceous growth, with this Zone to a 2 inch stubble by June 1 annually.

Zone 3

This Zone adds 70 feet to Zone 2 and extends to the 100 feet from the structure in all directions or to the paved cul-de-sac. As in Zone 2; dead tree and concentrations of dead ground fuels are removed, all trees are pruned of ladder fuels. However brush specimen bushes and small island of brush may be left if spaced 25 feet between islands and diameter of islands do not exceed 10 feet. Annual grasses may be left.

Appendix C

FUEL REDUCTION GUIDELINES FOR ZONES 1, & 3-(SPLATS)

The purpose of this fuel treatment is to prevent a crown fire by removing the ladder and ground fuels causing a wildfire to drop to the ground where suppression forces can more readily contain.

General Guidelines:

a. Width – varies with terrain.
b. Undulate treatment line, tie into natural openings, and avoid straight fuel treatment lines.
c. Do not treat vegetation, in riparian zones, for 5 feet on each side of the centerline of wet or intermittent drainages.
d. Do not expose soil large areas of bare soil.

Fuel Reduction Guidelines:

1. Remove all dead trees
    a. Snags may be left for wildlife purposes if separated by 100 feet, not over 30 feet tall or within 50 feet of a structure.

2. In the overstory, leave all live trees over 24 inches in dbh (diameter breast high) Large exposed mature oaks should not be removed. Overstory trees under 24 inches dbh may be removed to separate crowns by 10 feet. Removal of trees in these diameter classes may require a Timber Harvest Plan

3. In the understory, remove all brush, thin seedlings and saplings to provide a horizontal separation of approximately 10 feet between tree crowns.

4. Prune all trees of dead and green branches approximately 8 to 10 feet above the ground level but not more than 1/3 of the tree crown.
    a. Multi stem live oak trees: remove all dead stems, cut off green stems at 8 to 10 feet above the ground that arch over and are growing towards the ground.

5. On the ground, remove all down limbs, logs etc that are over 1 inch in diameter but less than 6 inches in diameter. Over 6 inches in diameter may be left if Separated by 10 feet.

6. Slash created by the above fuel treatments must be disposed of by burning, chipping, hauling off site or a combination of disposal methods.

Sketch 2

Before and After Fuel Reduction
Fuel Ladders Before and After

Appendix D

FUEL REDUCTION GUIDELINES FOR PARK TRAILS

The purpose of trial fuel treatments is to remove fuels on and adjacent trail tread to prevent fire starts and slow a fires rate of spread. Release suppressed trees in the brush fuels to create a stand of oak and conifers adjacent the trail.

Timber Fuels

1. Reduce all annual grasses and weeds to 2 inch stubble for 5 feet on each of trail tread by June 1, annually.

2. Remove all brush and thin tree seedlings and saplings to create a separation of 5 feet between crowns for five feet on each side of the trail tread.

3. Prune all trees within 5 feet of the trail tread of all live and dead branches for 8 feet above the ground but not more than1/3 of the crown is removed.

Brush Fuels

1. Remove the brush fuels for 25 feet on each side of the trail tread.

2. Release oak and conifer saplings and poles.

3. Prune all trees within treatment zone of all live and dead branches for 8 feet above the ground but not more than1/3 of the crown is removed.

Appendix E

FUEL REDUCTION GUIDELINES FOR THE MAEGHER FUELBREAK

and

Zone 2

The purpose of this fuelbreak is to provide suppression forces with a strategic ridge with fuel reduction to uses as a control point to contain a wildfire.

Brush Fuels

1. Machine masticate the brush fuels.

2. Release oak and conifer saplings and poles that are suppressed under the brush
   (There are numerous oaks and conifers suppressed within the brush fuels.
   Do not masticate these trees.)

3. Leave all overstory trees

4. Prune all overstory trees and released trees of all branches for 10 feet above the ground but not more than1/3 of the crown is removed.

5. Undulate the fuelbreak edges, avoid straight lines to present a more pleasing visual effect.

Timber Fuels

1. Use guidelines displayed in Appendix C.

Note:
The fuels west of the Fire Road are not masticated but treated to the guidelines in Appendix C for 50 feet outward from the road. This is to facilitate a prepared zone with light ground fuels for a rapid "burn out" along the road in advance of an approaching wildfire.

Appendix F
PRIORITZATION AND COST ESTIMATES MATRIX

Plan Elements	Priority Within Elements	Overall Priority	Costs $	Remarks
Fuel Treatments				
Zone 1	1	1	$1200/acre	
Zone 2	3	4	$1500/acre	
Zone 3	2	3	$1000/acre	One contract for all mastication work
Fuelbreak	3	2	$1000/acre	One contract for all mastication work
Mature Trees	4	18		
Roadside				
Gold Bug Lane	1	6		Entrance & east to Park boundary
Hendly Drive	-	-	-	Completed
Bear Rock	2	7	$1000/acre	One contract for all mastication work
Air Shaft	3	8	$1000/acre	
Trails				
Stamp Mill	-	-	-	In conjunction with Zone 1
Silver Pine	3	9	-	One contract for all mastication work
Springhill	2	10	-	One contract for all mastication work
Big Canyon	-	-	-	No treatment
Vulture Claim	1	11		
Defensible Space				
Maegher House	-	-	-	Completed
Stamp Mill	-	-	-	No treatment
Air Shaft	1	12	-	
Restroom	3	13	-	
Storage Shed	4	14	-	
Gift Shop	-	-	-	
Other				
Prevention Plan	3	15	-	
Sign Plan	4	16	-	
Maintenance Plan	5	17	-	
Knox Locks	1	5	-	
Dump Clean Up	2	2	-	In conjunction with fuel break construction

Appendix G
ABOUT THE AUTHORS

The El Dorado County Fire Safe Council

The Councils mission is to protect the people of El Dorado County and their property from the effects of catastrophic wildfire through education, cooperation, innovation and action. The Council was organized in 2001 and has been instrumental in obtaining funding for various fuel management projects throughout the western slope of El Dorado County.

Eugene (Gene) Murphy

Gene is a graduate of the University of Minnesota with a Bachelor of Science degree in Forest Management. He is a Registered Professional Forester in California, has 15 years experience as a Consulting Forester that followed a 30 year career with the U. S. Forest Service. He served on the Plumas (Assistant District Ranger), Stanislaus (District Ranger), San Bernardino (Fire Staff Officer), El Dorado (Deputy Forest Supervisor), and Inyo (Forest Supervisor) National Forests. Fire management was an interracial part of his Forest Service career and was a qualified Incident Commander for 10 years on a Regional Command Team.

His 45 years of professional service covers a broad range of wild land resource management including preparation of approximately 100 Fire Safe Plans.

Douglas (Doug) Leisz

Doug is a Registered Professional Forester in California, has 20 years of Sierra Nevada forestry and fire safe consulting work following a 32 year career with the U. S. Forest Service. His career with the Forest Service includes line (he serves 5 years as the Forest Supervisor of the El Dorado National Forest) and staff positions at every level ending as Associate Chief. With a BS in Forestry from UC Berkley he brings 52 years of professional experience in forest protection and management with a depth of experience in the Sierra Nevada.

His Consulting Forestry work covers a broad range of wild land management. He was science team member for the Sierra Nevada Ecosystem Project. For 2 years he served as a consultant for the California Oregon Transmission Project. Doug's consulting for 10 biomass power plants included work in California and Maine. He also has been involved in the preparation of 100 Fire Safe Plans.