

# Colorado State Forest Service

## Emergency Supplemental

### 2010 Grant Application

#### DISTRICT'S: Please Complete

District Submitting Project:	<b>Boulder</b>
Forester Submitting Project:	<b>Bryan Baer</b>
District Priority Number:	
Date Submitted:	<b>8/25/2010</b>
<b>FOR REVIEWER'S USE ONLY:</b>	
Rating:	

Applicant Information	
<b>Applicant:</b>	Carriage Hills Estates HOA
<b>Contact Person:</b>	Paul Domich
<b>Address:</b>	1201 Cutter Lane
<b>City/Zip Code:</b>	Boulder, CO 80302-9473
<b>Phone (Work/Cell):</b>	303-440-8433
<b>Email:</b>	<a href="mailto:domich@cip-consulting.com">domich@cip-consulting.com</a>
<b>Fax:</b>	

Community At Risk Information			
<b>Name of Project:</b>	CHE Roadway Fuels Reduction		
<b>Community Name(s):</b>	Carriage Hills Estates (CHE)		
<b>County:</b>	Boulder	<b>Congressional District:</b>	2 <sup>nd</sup>
<b>Latitude (decimal degrees):</b>	40.09 N	<b>Longitude (decimal degrees):</b>	105.31 W
Threat Description (check all that apply)			
<b>Homes:</b>	<input checked="" type="checkbox"/> X	Number of:	3
<b>Businesses:</b>	<input type="checkbox"/>	Number of:	
<b>Watersheds:</b>	<input type="checkbox"/>	Number of:	
<b>Other (Describe):</b>			

Requested Grant Amount / Project Description	
All information for the project must fit into the space provided below. The review committee will not consider attachments.	
<b>Dollar Amount Requested May Not Exceed \$470 x Number of Acres Proposed For Treatment</b>	
<b>Dollar Amount Requested</b>	\$1,410.00
<b>Will this Project be conducted as a Pass-Through Grant?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Provide a brief overview of the project and the project area. (If applying for a fuels reduction project, identify vegetation types)</b>	
<p>2010 program activities will be used for widening the roadway fuel reduction area along the upslope portion of Cutter Lane and select priority locations on Carriage Hills Drive and West Coach. These roadways are high priority, high risk areas in BMFPD. The Carriage Hills Drive unit is approximately ¼ mile in length along the upper portion of the subdivision. West Coach involves mitigating one downslope ravine with thick tree cover. The Cutter Lane unit is approximately ½ mile on the far eastern edge of the subdivision and includes upslope cliff and steep slope areas. Most units involve steep, heavily wooded slopes.</p>	



### Scope of Work / Project Timeline

All information for the project must fit into the space provided below. Attachments will not be considered by the review committee.

**Provide a brief scope of work that clearly describes how grant funds will be spent. (This should be more specific than the project description)**

- 4 The 2010 program will follow the Colorado State Forest Service guidelines for fuels reduction along roadways, as was performed in 2009. Thinning and limbing of trees will extend a minimum of 150' from the roadway with further allowances depending on slope. Slash material will be chipped or stacked to support wildlife habitat. Chipping costs will be kept to a minimum. Trimmed logs will be contoured on the hillside to prevent soil erosion. The upslope Cutter Lane unit will involve chipping almost exclusively. A private local contractor will perform the forestry work and chipping.

**Describe all planned long-term maintenance (grant funded or other).**

Carriage Hills Homeowner's Association (CHHA) will provide long term maintenance of roadways. Individual homeowners continue to mitigate their properties in excess of 150' from roadway. GPS surveys of the mitigated areas provide the Subdivision and FPD with up-to-date information on mitigation issues and priorities.

Subdivision actively participates in local fire mitigation/pine beetle activities and has a representative attending fire dist. Meetings. These interactions are essential to properly maintaining forest areas and mitigating fire threats.

Increased awareness of the fire mitigation strategy is accomplished through regular email updates to entire community.

**What is the duration of this project? (check one)** ☒ 1 Year ☐ 2 Years ☐ 3Years

**Is this a continuing project from previous year/s? (check one)** ☒ Yes ☐ No

**Provide a timeline for the project**

Specified work will be completed from summer 2010 award date through the end of summer 2011.

### Interagency Collaboration

**Specify the private, local, tribal, county, state, federal and/or non-governmental (501c3) organizations that will contribute to or participate in the completion of this project. Describe briefly the contributions each partner will make (i.e. – donating time/equipment, funding, etc.).**

- 5 CHHA will provide for long term maintenance of all mitigated areas. Individual homeowners continue to mitigate their properties in excess of 150' from the roadway. CHHA will perform a GPS survey of all privately mitigated areas in the subdivision to complement the GPS survey of the mitigated areas performed in 2009 and earlier. A private local contractor will perform the forestry work and chipping.

### Community Wildfire Protection Plan (CWPP)

**Does this community have a wildfire protection plan that follows the Healthy Forest Restoration Act CWPP guidelines? (check one)** ☒ yes ☐ no



	Is this project part of the plan? (check one) <input checked="" type="checkbox"/> yes <input type="checkbox"/> no

6	<b>Project Category</b> (check all that apply and answer related questions)			
	Hazard Fuels Reduction <input checked="" type="checkbox"/> Other Forest Management Treatment <input type="checkbox"/>			
	Number of acres to be treated:	3.0	Estimated cost per acre:	N/A
	<b>Project Type</b> (check all that apply)			
	Defensible Space	<input type="checkbox"/>	Thinning w/o Product	<input type="checkbox"/>
	Fuelbreak	<input checked="" type="checkbox"/>	Mastication	<input type="checkbox"/>
	Thinning w/ Product	<input type="checkbox"/>	Other	<input type="checkbox"/>

7	<b>Total Project Expense (Pass Through)</b>		
	<i>Please fill all fields</i>	<b>Grant Share</b> (\$ Amount Requested)	<b>TOTAL</b>
	<b>Contractual Services:</b>	\$1,410.00	\$ 1,410.00
	<b>TOTAL:</b>	\$1,410.00	\$ 1,410.00

Grant funding may only be used for Contractual Service.

8	<b>Total Project Expense (Non-Pass Through)</b>		
	<i>Please fill all fields</i>	<b>Grant Share</b> (\$ Amount Requested)	<b>TOTAL</b>
	<b>Contractual Services:</b>		\$ 0
	<b>Indirect Costs:</b>		\$ 0
	<b>TOTAL:</b>	\$0	\$ 0

Grant funding may only be used for Contractual Service and Indirect.

*Attach Project Map Showing Specific Treatment Areas*





EMERGENCY SUPPLEMENTAL FUNDS  
LANDOWNER ASSISTANCE PROGRAMS  
APPLICATION

Form A-ES

PROJECT NUMBER: 5308400-80-07  
(For Official Use Only)

NAME: Paul D Domich  
MAILING ADDRESS: 1201 Cutter Lane  
City: Boulder State: CO  
Zip code: 80302  
TELEPHONE NO: 303-440-8433

PROJECT ADDRESS/LEGAL DESCRIPTION: Mitigation Lots 6&37 Carriage Hills Estates

PRACTICES TO BE COMPLETED BY: December 31, 2010  
Date

Landowner and CSFS forester: CSFS forester:

Practice No. & Component Title	Quantity Requested	Quantity Approved
		Total:

Request for financial assistance under the Emergency Supplemental LOA program is to meet the objective stated in the management plan. I will not receive more than the actual cost up to \$470 per acre. I understand that I will not be reimbursed for any expenses incurred prior to approval of my application. Work must be completed according to approved plan and application, and must meet the standard set for each component. Practices must be maintained for a minimum of 10 years. Requests for partial payments will be approved on a case by case basis.

LANDOWNER SIGNATURE: [Signature]  
DATE: 8-24-2010

To be completed by CSFS forester:

CSFS FIELD REVIEW SIGNATURE: [Signature] DATE: 11-15-2010  
(Additional USFWS guidelines addressed)

PROGRAM:

ESF: X

Funding Allocated: [Signature] AMOUNT: \$1,410.00 DATE: 8/25/10  
CSFS District Forester

Program eligibility is without regard to race, color, religion, national origin, age, gender, sexual orientation, veteran status or disability. For more information contact your local Colorado State Forest Service District Office. 01/19/10



COPY



### Colorado State Forest Service Program Payment Request

GRANT PROGRAM (CHECK APPROPRIATE PROGRAM TYPE):	
Bureau of Land Management Task Order Program	
Volunteer or Rural Fire Assistance (a.k.a.: VFA/RFA)	
Forest Land Enhancement Program (a.k.a.: FLEP)	
Insect and Disease Prevention and Suppression Program	
State Fire Assistance (a.k.a.: SFA)	
Front Range Fuels Treatment Partnership (a.k.a.: FRFTP)	
Stevens Fuels Treatment Funds	
Cooperative Fire Agreement (Active Fire Suppression Cooperators; CRS#R-24-103-206-01)	
Emergency Supplemental Funds (a.k.a.: ESF)	X

☒ Checked for Federal suspension and debarment (State Office) <http://www.epls.gov/>

12-09-10

Name: Carriage Hills (Paul Domich)

ke

Address: 1201 Cutter Lane

Boulder, CO 80302-9473

Approved for Payment

C.S.F.S.

1088226

12-09-10

ke

The above named has submitted a project application that has been reviewed and approved by the Colorado State Forest Service for funding from Federal Assistance.

Grant Number: 5308400-B0-07 ~

Approved Funding: \$1,410.00 ~

Total Project: \$3,732.50

CSFS Account Number: 5308400-6693

Amount of Payment: \$1,410.00 ~

'09SUP HAZ FUELS FR B0

Circle one: 1<sup>st</sup> Payment 2<sup>nd</sup> Payment 3<sup>rd</sup> Payment Final Payment ~

Approved by [Signature]  
(Program manager signature)

Date: 12/7/10





## Colorado State Forest Service Program Payment Request

GRANT PROGRAM (CHECK APPROPRIATE PROGRAM TYPE):	
Bureau of Land Management Task Order Program	<input type="checkbox"/>
Volunteer or Rural Fire Assistance (a.k.a.: VFA/RFA)	<input type="checkbox"/>
Forest Land Enhancement Program (a.k.a.: FLEP)	<input type="checkbox"/>
Insect and Disease Prevention and Suppression Program	<input type="checkbox"/>
State Fire Assistance (a.k.a.: SFA)	<input type="checkbox"/>
Front Range Fuels Treatment Partnership (a.k.a.: FRFTP)	<input type="checkbox"/>
Stevens Fuels Treatment Funds	<input type="checkbox"/>
Cooperative Fire Agreement (Active Fire Suppression Cooperators; CRS#R-24-103-206-01)	<input type="checkbox"/>
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Boulder, CO 80302-9473

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Approved by \_\_\_\_\_  
(Program manager signature)

Date: \_\_\_\_\_



**EMERGENCY SUPPLEMENTAL FUNDS  
LANDOWNER ASSISTANCE PROGRAMS  
ACCOMPLISHMENT REPORT FOR REIMBURSEMENT (Page 1)**

Project No. 5308400-BO-07

(For Official Use Only-  
No. from original application)

Applicant name (please print): Carriage Hills (Paul Domich)

	Total Contracted Services <sup>1</sup>	Total Landowner Services <sup>2</sup>	Totals
Labor Cost (Actual)	\$3,732.50		A Labor Cost= \$3,732.50
Operating Exp <sup>3,*</sup> (Actual)			B Oper. Exp.=
Project Cost			C Total Project (A+B) = \$3,732.50
			Amount Originally Approved = \$1,410.00
			Amount to be Reimbursed not to exceed \$470 Per Acre \$1,410.00

<sup>1</sup> Any contracted services where payment was made for services.

<sup>2</sup> Use up to \$ 20.25/hour for Landowner time. This is the maximum allowable.

<sup>3</sup> Equipment rental, supplies, etc. needed to complete project. (Tools and Equipment purchases are not reimbursable.)

<sup>4</sup> Reimbursement amount cannot exceed amount approved. Requests for partial payments will be considered on a case by case basis.

<sup>5</sup> Reimbursement amount cannot exceed \$470/acres for Emergency Supplemental Funds.

\* Attach receipts, Cost Documentation Form D-ES (contractor costs, your time ledger, gas, oil, etc). Keep copies for your files.

Landowner Signature: Paul Domich (B-B) Date: 12-3-10

All expenses are true and accurate and all cost share is true and accurate.

Mailing Address: 1201 Cutter Lane City: Boulder

County: Boulder State: CO Zip: 80302-9473 Phone: 303-440-8433

Practice certified by: B-B  
CSFS forester

Payment Approval: \_\_\_\_\_ Amount: \_\_\_\_\_ Date: \_\_\_\_\_  
CSFS program manager

Return this form, along with your completed Cost Documentation Form to your local **Colorado State Forest Service District Office**. Retain documentation such as receipts and payment for six (6) years. The IRS considers reimbursable funds as ordinary income. Please consult your tax advisor.

01/19/10



EMERGENCY SUPPLEMENTAL FUNDS  
LANDOWNER ASSISTANCE PROGRAMS  
ACCOMPLISHMENT REPORT (page 2)

Project No. 5308400-B0-07

To be completed by CSFS forester:

**PROGRAM:**

WUI Incentives D-space: \_\_\_\_\_ I & D Prevention and Suppression – Bark Beetle: \_\_\_\_\_

FRFTP: \_\_\_\_\_ STEVENS' Fund: \_\_\_\_\_ SFA: \_\_\_\_\_ ESF: X Forest

Restoration Grant (SB71 and HB1199): \_\_\_\_\_

3.0 Acres

**WUI D-space Accomplishment:**

No. of D-spaces = \_\_\_\_\_ Acres slash disposal = \_\_\_\_\_ Acres fuel breaks = \_\_\_\_\_

Acres thinned = \_\_\_\_\_ Acres pruned = \_\_\_\_\_

**I & D Prevention and Suppression Accomplishment:**

No. of infested trees treated: \_\_\_\_\_

Acres inspected and treated: \_\_\_\_\_

Acres thinned: \_\_\_\_\_

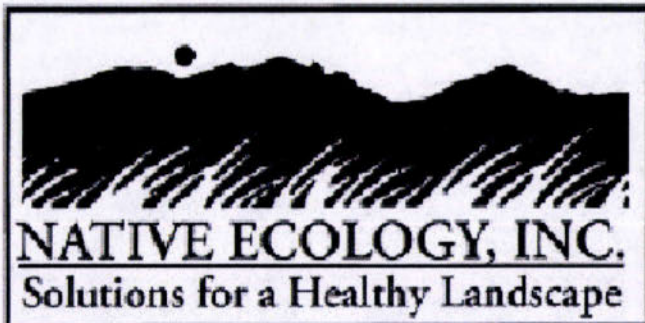
**Accomplishment (Not included above) – LOA Practice Number:**

- |                                     |                          |                                  |
|-------------------------------------|--------------------------|----------------------------------|
| #1 Plan Acres = _____               | #5 Acres = _____         | #9 Acres treated = _____         |
| #2 Acres tree planting = _____      | #6 Acres treated = _____ | #10 Acres of restoration = _____ |
| Acres treated = _____               | #7 Acres treated = _____ | #11 Acres = _____                |
| #3 Acres treated = _____            | #8 Acres treated = _____ |                                  |
| #4 Acres planted/ renovated = _____ |                          |                                  |



# Invoice

10/25/2010



Native Ecology, Inc.  
PO Box 976  
Nederland, CO 80466  
303-258-1753

**Bill to:**

Carriage Hills HOA  
Attn. Paul Domich

Date	Description	Amount
9/28/2010	11 Hrs. Sawyer	\$440.00
	5.5 Hrs. Labor	\$137.50
9/29/2010	12 Hrs. Sawyer	\$480.00
	6 Hrs. Labor	\$150.00
9/30/2010	10 Hrs. Sawyer	\$400.00
	8 Hrs. Labor	\$200.00
10/5/2010	27 Hrs. Labor	\$675.00
10/6/2010	18 Hrs. Labor	\$450.00
	3 Hrs. Chipper	\$300.00
10/7/2010	12 Hrs. Labor	\$300.00
	2 Hrs. Chipper	\$200.00
Total		\$3,732.50



# CARRIGE HILLS MOA

- Paul DOMICH:

- Meet @ Subdivision  
Gate @ 10am

7-12-2016



**#7573**

# Carriage Hills Estates

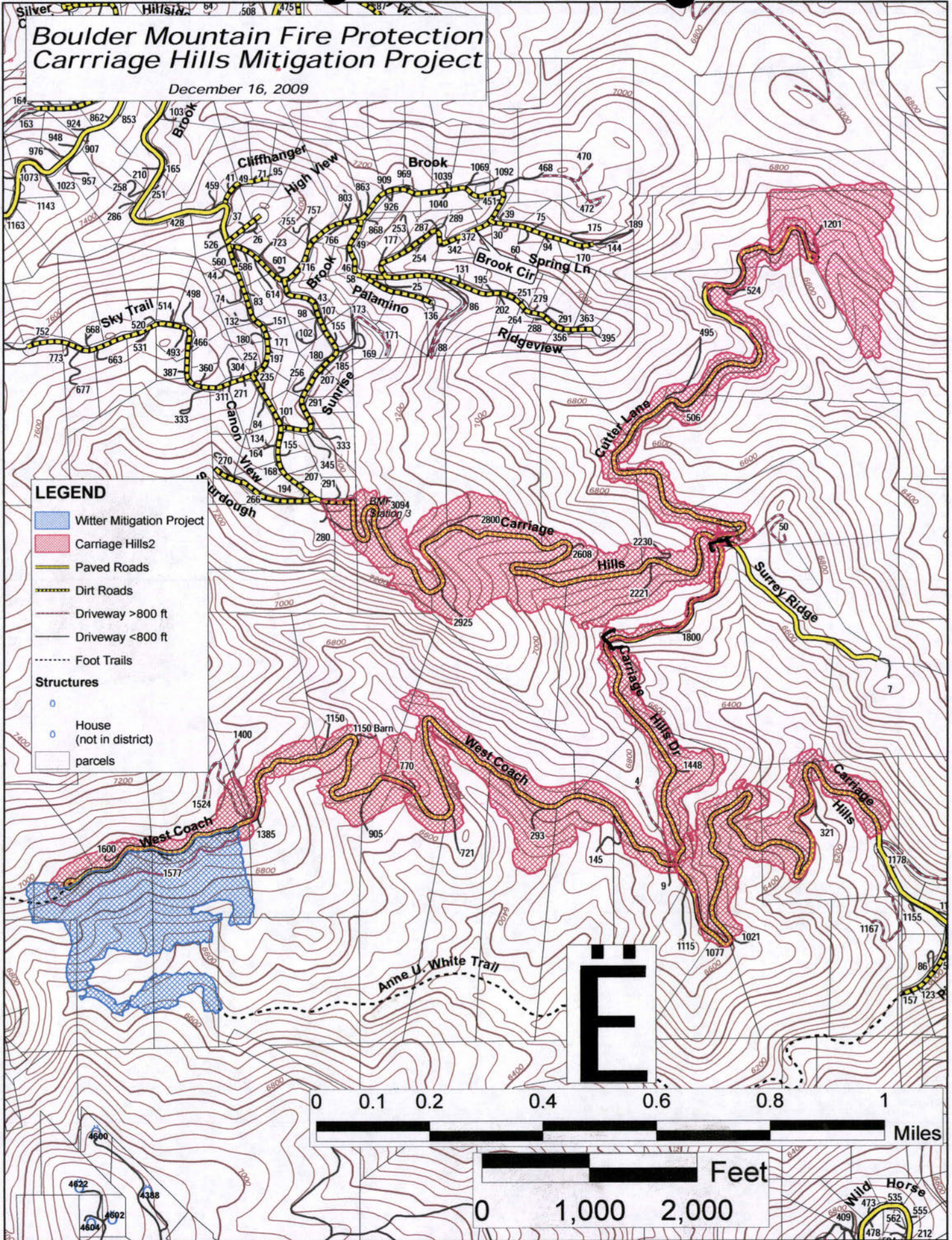


0 0.25 0.5 1 1.5 Miles

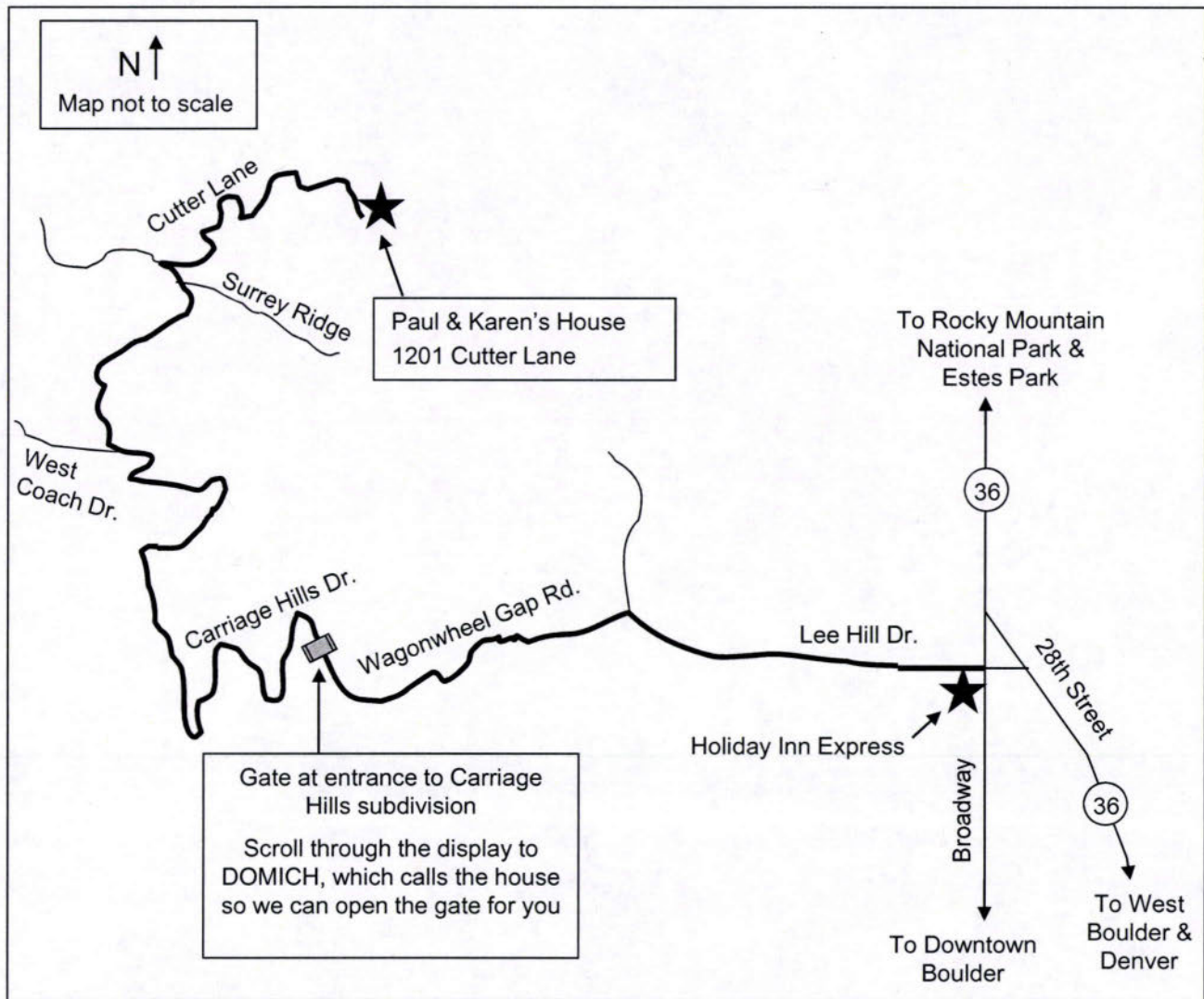


*Boulder Mountain Fire Protection  
Carrriage Hills Mitigation Project*

December 16, 2009







From the Holiday Inn Express to Paul & Karen's House - Total Estimated Time: 10 min

#### DIRECTIONS

- 1: From north Broadway, Turn Left on Lee Hill Dr.
- 2: Follow Lee Hill Dr. to Wagonwheel Gap Rd.
- 2: Turn Left on Wagonwheel Gap Rd.
- 3: Wagonwheel Gap Rd. becomes Carriage Hills Dr. at gate
- 4: Turn Right on Cutter Lane - house is at the end of the road on the left

#### TRAVEL DISTANCE

1.0 miles  
1.3 miles  
2.0 miles  
1.1 miles

From Route 36 (Boulder-Denver turnpike) to Paul & Karen's House

#### DIRECTIONS

- 1: Take Route 36 W to Boulder
- 2: 36 W becomes 28th Street through town
- 3: Turn left on Lee Hill Dr.
- 4: Continue with #2 in Directions above

#### TRAVEL DISTANCE

~ 5 miles  
0.2 miles



# Colorado State Forest Service

## Emergency Supplemental

### 2009 Grant Application

#### DISTRICT'S: Please Complete

District Submitting Project:	<b>BOULDER</b>
Forester Submitting Project:	<b>Bryan Baer</b>
District Priority Number:	
Date Submitted:	
<b>FOR REVIEWER'S USE ONLY:</b>	
Rating:	

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<b>Email:</b>	domich@cip-consulting.com
<b>Fax:</b>	

Community At Risk Information			
<b>Name of Project:</b>	Carriage Hills Estates Roadway Fuel Reduction		
<b>Community Name(s):</b>	Carriage Hills Estates		
<b>County:</b>	Boulder	<b>Congressional District:</b>	2 <sup>nd</sup>
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Threat Description (check all that apply)			
<b>Homes:</b>	<input type="checkbox"/>	Number of:	
<b>Businesses:</b>	<input type="checkbox"/>	Number of:	
<b>Watersheds:</b>	<input type="checkbox"/>	Number of:	
<b>Other (Describe):</b>			

Requested Grant Amount / Project Description	
All information for the project must fit into the space provided below. The review committee will not consider attachments.	
<b>Dollar Amount Requested May Not Exceed \$470 x Number of Acres Proposed For Treatment</b>	
<b>Dollar Amount Requested</b>	<b>Projected Match</b>
<b>Will this Project be conducted as a Pass-Through Grant?</b> YES	
Provide a brief overview of the project and the project area. (If applying for a fuels reduction project, identify vegetation types)	
<p>2010 program activities will be used for widening the roadway fuel reduction area along the upslope portion of Cutter Lane and select priority locations on Carriage Hills Drive and West Coach. These roadways are high priority, high risk areas in BMFPD. The Carriage Hills Drive unit is approximately ¼ mile in length along the upper portion of the subdivision. West Coach involves mitigating one downslope ravine with thick tree cover. The Cutter Lane unit is approximately ½ mile on the far eastern edge of the subdivision and includes upslope cliff and steep slope areas. Most units involve steep, heavily wooded slopes.</p>	



### Scope of Work / Project Timeline

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**Provide a brief scope of work that clearly describes how grant funds will be spent. (This should be more specific than the project description)**

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Subdivision actively participates in local fire mitigation/pine beetle activities and has a representative attending fire dist. Meetings. These interactions are essential to properly maintaining forest areas and mitigating fire threats.

Increased awareness of the fire mitigation strategy is accomplished through regular email updates to entire community.

**What is the duration of this project? (check one)** ☒ 1 Year ☐ 2 Years ☐ 3 Years ☐ 4 Years

**Is this a continuing project from previous year/s? (check one)** ☒ Yes ☐ No

**Provide a timeline for the project**

Specified work will be completed from summer 2010 award date through the end of summer 2011.

### Interagency Collaboration

**Specify the private, local, tribal, county, state, federal and/or non-governmental (501c3) organizations that will contribute to or participate in the completion of this project. Describe briefly the contributions each partner will make (i.e. – donating time/equipment, funding, etc.).**

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### Community Wildfire Protection Plan (CWPP)

**Does this community have a wildfire protection plan that follows the Healthy Forest Restoration Act CWPP guidelines? (check one)** ☒ yes ☐ no



Is this project part of the plan? (check one)	<input checked="" type="checkbox"/> yes	<input type="checkbox"/> no
---	---	-----------------------------

6	<b>Project Category</b> (check all that apply and answer related questions)			
	Hazard Fuels Reduction <input checked="" type="checkbox"/> Other Forest Management Treatment <input type="checkbox"/>			
	Number of acres to be treated:		Estimated cost per acre:	
	<b>Project Type</b> (check all that apply)			
	Defensible Space	<input type="checkbox"/>	Thinning w/o Product	<input type="checkbox"/>
	Fuelbreak	X	Mastication	<input type="checkbox"/>
Thinning w/ Product	<input type="checkbox"/>	Other	<input type="checkbox"/>	

7	<b>Grant Contributors (Matching Share)</b>							
	(Applications will be disqualified if insufficient match is identified; federal dollars DO NOT qualify- see criteria & instructions for exception) Please specify each match contributor and the dollar amount of each contribution. PLEASE FILL ALL FIELDS							
	Contributors: (Please specify)							<b>TOTAL</b>
	Dollars (HardMatch):							\$ 0
	In-Kind (SoftMatch):							\$ 0
	<b>TOTAL:</b>	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

8	<b>Total Project Expense (break down matching share totals from block seven)</b>				
	<i>Please fill all fields</i>	<b>Grant Share</b> (\$ Amount Requested)	<b>Match (from block seven)</b>		<b>TOTAL</b>
			<b>Dollars</b>	<b>In-Kind</b>	
	Personnel / Labor:	N/A*			\$ 0
	Operating:	N/A*			\$ 0
	Travel:	N/A*			\$ 0
	Contractual Services:				\$ 0
	Equipment:	N/A*			\$ 0
	Indirect Costs:				\$ 0
	<b>TOTAL:</b>	\$0	\$0	\$0	\$ 0

\*N/A – Grant funding may only be used for Contractual Services and Indirect (if a non pass through project).

**Attach Project Map Showing Specific Treatment Areas**



**Carriage Hills Drive and Cutter Lane**  
**Shaded Fuel Break - Scope of Work**  
**DRAFT 4-22-09**

**Purpose:**

The project has the following objectives:

- Improve a vital evacuation route along the primary access road to allow for safer travel of the public leaving a wildfire area, and allow firefighters room to safely access the area.
- Cut dead and unhealthy trees along the roadway for aesthetic and safety reasons.
- Create a wildfire defensible zone by building a shaded fuel break with reduced tree densities, removing ladder fuels, and modifying stand structure. Develop a much more open stand character.
- Reduce wildfire hazards for structures by thinning just outside defensible space zones.
- Improve forest health by increasing tree vigor, removing unhealthy trees, enhancing aspen clones, slowing the spread of dwarf mistletoe, and providing for long term mitigation of mountain pine beetles.

**General Prescription/Target Stand:**

The project involves fuels treatment units located along Carriage Hills Drive and Cutter Lane. The fuel break is set up primarily on a ridgetop with slopes ranging from 0 to 35%. The stand consists primarily of dense and unhealthy ponderosa pine with scattered Douglas-fir, juniper. The remaining vegetation emphasis is to retain and manage healthy ponderosa pine and Douglas-fir in excess of 12 inches in diameter. An average of 50-100 trees per acre with 10-15 foot spacing between tree crowns of individual trees and tree clumps will remain over the entire work site. Species and size diversity will be taken into account, but preference on tree selection will focus on crown spacing as well as the elimination of ladder fuels, dead trees, and trees severely affected by mistletoe. The fuel break area is an average of 300 feet wide (150 feet or more on each side of road), depending on slope operability, ownership patterns, permissions, and other natural and man-made features. (Note: The fuel break will tie into defensible space areas. The description of a defensible space consists of the area 100-150 feet from homes in all directions. For this project, I'd recommend that no grant funds go for thinning within 50 feet of homes (this will minimize many potential conflicts and leave that area as the responsibility of each landowner).

**Agreement Specifications and Requirements**

**1. Project Criteria**

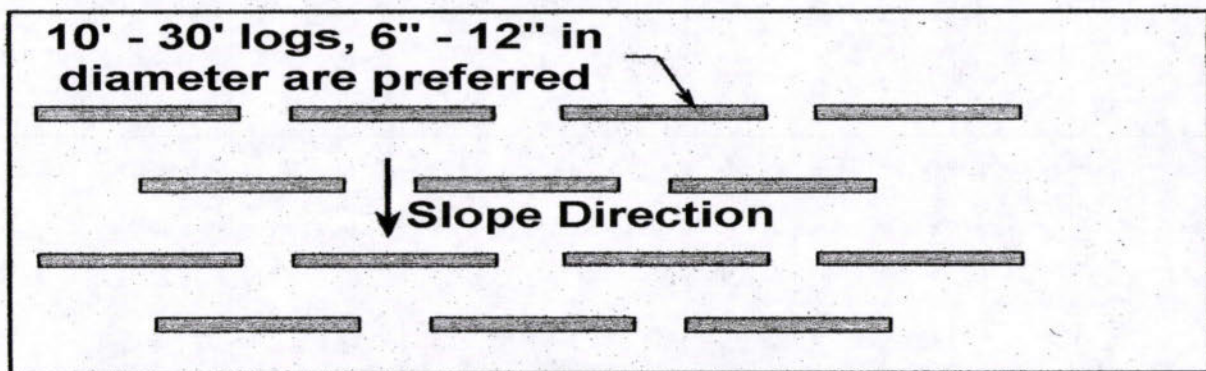
- If required, the project area boundary will be marked with ORANGE flagging.
- If required, the trees to be removed will be marked with a BLUE paint spot a few feet up from the base of the tree (primarily facing toward road).
- Landowners may identify retention trees by flagging on the trees.
- All trees felled will be cut to a stump height of less than 4-inch on the uphill side and severed completely.
- Felled trees must be limbed to a 3-inch or less top diameter.
- All retained trees within the unit must be limbed up to a minimum of 8 feet from the ground or 1/3 the height of the tree (whichever is less).



## 2. Removable Materials and Slash (the less slash processing we can do, the lower the cost):

The objective of slash and materials treatment is to remove enough slash to reduce the fuels buildup to an acceptable level, yet leave enough on site for future soil development and to prevent significant erosion on trails, disturbed areas, and steep slopes. Note that existing dead and downed trees are not outlined for any treatment. Existing dead and down trees often help to fulfill the soil development needs of the site. The following guidelines should be used throughout the project area. The slope and distance from the road determine the method(s) used.

- **Directional Felling Contour Logs:** Directionally felled contour logs are to be left on all slopes greater than 30% within the treatment unit to act as water and erosion barriers. The contour logs are to be placed following the contour and perpendicular to the main direction of the slope in a herring bone pattern with less than 300 lineal feet of boles per acre. The lengths shall be laid discontinuously throughout the unit so as not to touch each other or be stacked. The overall formation of the lengths of wood should alternate their location on the hillside. (Use "Figure 1" below as a guideline). Contour logs must be limbed completely, be greater than 10 feet in length, and greater than 6 inches in diameter on the bottom and 3 inches in diameter on the top. All contour logs must have at least 50% of the log in contact with the ground and have existing anchors (stable rocks or stumps) on the downhill side.

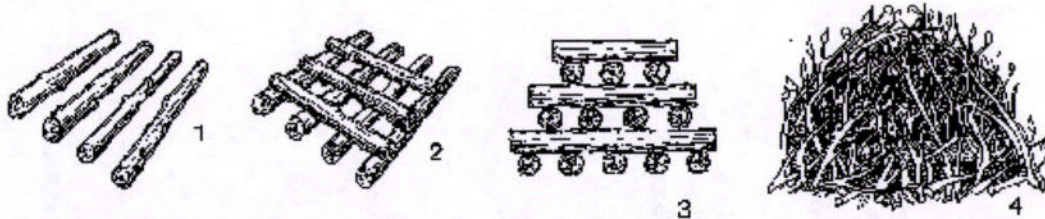


**FIGURE 1 - Theoretical Pattern for Contour Tree Felling**

- **Round Wood:** Round wood over 6 inches in diameter that is not used as part of the contour felling, shall be left for use as firewood when in close proximity to the road. If round wood is near a road or home, it is to be stacked in an accessible location. If round wood is not easily accessible, it is to be consolidated into stacked piles at least 15 feet away from retained trees. All cut trees over 6 feet long and over 6 inches in diameter should be limbed completely and may be bucked into sections measuring 8 feet or less. Full long log lengths are permitted on Cutter Lane in close proximity to the road (75' or less). Felled trees must be limbed to a 3-inch or less top diameter. Private landowners may choose to have additional standards set for firewood, but will be responsible for the excess cost.
- **Chipping:** Chipping will occur within 50 feet of the road. All slash less than six inches in diameter will be stacked neatly along the nearest road or driveway, and chipped within two weeks of being cut. Chipped material that is broadcast back onto the work site should not exceed a depth of 4 inches to ensure proper decomposition and nitrogen recycling. Private landowners may choose to have additional areas chipped, but will be responsible for the excess cost.



- **Wildlife Piles:** Ideally, two to three wildlife piles should be left per acre where chipping is not required. This can be flexible, based on the requests of landowners. Piles should use small logs four to six inches in diameter, and four to eight feet long. The logs should be placed in a “cross-hatch” pile at least two feet high. The piles should be covered thoroughly with various lengths of slash. (see diagram below). In deep gorge areas, the cut material may be stacked contiguously in the base of the ravine to provide erosion control.



- **Burn Piles:** Up to ten wildlife piles may be left per acre where chipping is not required (over 50 feet from the road). Burn piles should consist of slash less than six inches in diameter. Piles shall be located in clearings at least 15 feet away from residual trees and 75 feet away from the main roads and houses. Piles shall be built no larger than 8ft high x 8ft long x 8ft wide. Piles shall be as compact as possible so that they do not topple, to prevent snow from entering them, and to facilitate complete combustion in the event that they are burned. Piles shall not be placed on rock outcroppings, in ditches, near culverts, in streambeds, on roads, on stumps, or on down woody material greater than 6 inches in diameter. All material in piles shall not exceed 6 inches in diameter. On steep slopes, burn or wildlife piles may not be possible.
- **Lop and Scatter:** Small amounts of slash may be left on the forest floor in areas where chipping is not required (greater than 50 feet from roads). Lop and scatter slash should be done with smaller branches. Scattered slash should not exceed 8 inches in depth, six feet in length, or cover more than 50% of the ground in a discontinuous pattern. Scattered slash should not be within 10 feet of wildlife/burn piles or retained trees. This slash should be used to compliment the contour felling and erosion control, but should be minimized so as not cover the contours completely. Lop and scatter is permitted in this project.

### 3. Bark Beetle Recognition and Prevention

- The contractor is responsible for treating any cut material in a timely fashion. Slash or round wood should never be left within five feet of trees.
- The contractor is responsible for treating any trees with bark beetle infestation within the project area. The infested trees must be cut down then chipped, debarked, or undergo solar treatment.
- If significant beetle activity results from cutting, treatment in the unit may be postponed by the judgment of the contractor, FPD, or CSFS representative.