

## Bob Bundy

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**From:** Bob Bundy [Bob.Bundy@colostate.edu]  
**Sent:** Thursday, July 30, 2009 6:55 PM  
**To:** 'thirtyninenorth@comcast.net'; 'Roger Terry'  
**Cc:** Allen Owen; Scott Woods  
**Subject:** Last Eldo/DW invoice

Hello Jerry and Roger,

I reviewed all of the past billing information. Below is what I found:

1 <sup>st</sup> billing: 15 acres on DW 60A:	\$8,625
2 <sup>nd</sup> billing: 17 acres on DW 60A:	\$9,775
3 <sup>rd</sup> billing: 3.5 acres on DW 60A & 7 acres DW 103B:	\$8,474.06
4 <sup>th</sup> billing: 35 acres on Eldo 7B & 22 acres Eldo 4B:	<u>\$35,075</u>
TOTAL:	\$61,949.06 ✓

As of 7-30-09:

All 42.5 acres on Denver Water Units are done.

70 of 87.5 acres on Eldorado SP Units are done. The remaining won't be completed.

Therefore, you can send me a final invoice for:

6 acres on DW 103B x \$925 =	\$5,550 ✓
13 acres on Eldo 4B x \$600 =	<u>\$7,800</u> ✓
TOTAL:	\$13,350 ✓

Please note that I have received many copies of a bill from 5/22/09. As we discussed, the invoice's exact quantities of the unit's completed acreage were incorrect. Please review the information above and resubmit the final bill with this updated information. I will process the invoice as soon as possible.

Thank you. I will talk with you soon about officially ending the contract.

Bob Bundy  
Fuels Treatment Partnership & Wildfire Mitigation Forester  
Colorado State Forest Service - Boulder District  
5625 Ute Highway Longmont, CO 80503  
(303) 823-5774  
(303) 823-5768 fax  
[Bob.Bundy@colostate.edu](mailto:Bob.Bundy@colostate.edu)

## **Bob Bundy**

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**From:** Mike McHugh [mike.mchugh@state.co.us]  
**Sent:** Friday, July 24, 2009 12:34 PM  
**To:** 'Ben Pedrett'  
**Cc:** 'Bob Bundy'; 'Schulz, Matt'  
**Subject:** Crescent Meadows

Ben:

The contractor and a crew were at Crescent Meadows today. They removed the dirt from the spill area, backfilled, and then smoothed over a number of ruts.

As far as I'm concerned, the area is satisfactorily repaired. We can discuss seeding this fall.

Mike McHugh  
Park Resource Technician  
Eldorado Canyon State Park  
303.494.3943



# The Forestry Services Group

## Memo

To Whom It May Concern,

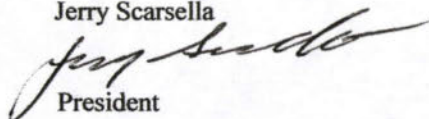
I want to apologize for this request being so late but I was out of town and the disposal request was faxed to the wrong office. We have a crew and various officials showing up this morning on site to collect the material and load it for transport to your facility. As a back ground we broke a hydraulic pump that required a major repair to one of our machines. This resulted in a minor hydraulic loss to the ground under the machine of about two and a half gallons. This occurred about 3 months ago now and we need to remove the stained material and dispose of it per the wishes of Colorado State Parks. The total volume should be around 1/2 to 1/3 of a cy. Again it is weathered hydraulic oil mixed with sandy loam and top soil. We intend to haul it in bulk to your facility for disposal. If it is humanly possible to expedite an acceptance response to the numbers listed below we will contact the crew in the field and the representatives from the State and inform them of such so we can complete the operation and we would be very grateful for your help. Again we are truly sorry for such a short notice. Should you have any questions please contact Roger Terry at (303 520-1557 Roger will be on site with the crew beginning at 9:00 am.

Acceptance authorization to: Bob Bundy  
Fax Line 303 823-5768

Roger Terry  
Fax Line 303 806-0868

Phone: 720 272-5627  
Fax: 720 200-4441  
E-Mail: thirtyninenorth@comcast.net

Jerry Scarsella



President

The Forestry Services Group Inc



**REPUBLIC**  
SERVICES**EXPRESS WASTE PROFILE**Requested Disposal Facility: **--- Select a Facility ---**

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

Waste Profile #

Sales Rep #.

**I. Generator Information**

Generator Name: The Forestry Services Group Inc.			
Generator Site Address: Eldorado State Park			
City: Boulder	County: Adams	State: Colorado	Zip: 80503
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS #.
Generator Mailing Address (if different): 5475 Preserve Drive			
City: Greenwood Village	County: Arapahoe	State: Colorado	Zip: 80121
Generator Contact Name: Jerry Scarsella		Email: thirtyninenorth@comcast.net	
Phone Number: (303) 771-3126		Ext:	Fax Number: (720) 200-4441

**IIa. Transporter Information**

Transporter Name: The Forestry Services Group Inc.		Contact Name: Jerry Scarsella	
Transporter Address: 5475 Preserve Drive			
City: Greenwood Village	County: Arapahoe	State: Colorado	Zip: 80121
Phone Number:	Fax Number:	State Transportation Number: N/A	

**IIb. Billing Information**

Bill To: The Forestry Services Group Inc.		Contact Name: Jerry Scarsella	
Billing Address: 5475 Preserve Drive		Email: thirtyninenorth@comcast.net	
City: Greenwood Village	State: Colorado	Zip: 80121	Phone: (303) 771-3126

**III. Waste Stream Information**

Name of Waste: (Petroleum products-applies only to contaminated media and debris).	<input type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Friable and Non Friable Asbestos
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass	
	<input checked="" type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	
<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris		
Process Generating Waste: Broken Hydraulic Line resulting in 2.5 gal of fluid to the ground. fluid is aprox 3 months old			
Method of Shipment: <input checked="" type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input type="checkbox"/> OTHER: and mixed with sandy loam and top soil.			
Estimated Annual Volume: 1 Cubic Yards			
Frequency: <input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ANNUAL			

**IV. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

Gerard Scarsella	The Forestry Services Group inc.
Authorized Representative Name/Title (Type or Print)	Company Name
	07/20/2009
Authorized Representative Signature	Date





Allied Waste Systems of  
Colorado LLC

## DISPOSAL SERVICES AGREEMENT

☐ New Account # \_\_\_\_\_  
☐ New Service Location \_\_\_\_\_

☐ Tower Landfill

☐ Foothills Landfill

<b>BILLING NAME</b>		<b>SERVICE NAME, if applicable</b>		<b>HAULER/TRANSPORTER</b>	
The Forestry Services Group Inc.				The Forestry Services Group Inc.	
<b>ADDRESS</b>		<b>SERVICE LOCATION</b>		<b>ADDRESS</b>	
5475 Preserve Drive				5475 Preserve Drive	
<b>CITY/STATE/ZIP</b>		<b>CITY/STATE/ZIP</b>		<b>CITY/STATE/ZIP</b>	
Greenwood Village, Colorado 80121				Greenwood Village, Colorado 80121	
<b>PHONE</b>	<b>CONTACT</b>	<b>PHONE</b>	<b>CONTACT</b>	<b>PHONE</b>	<b>CONTACT</b>
3037713126	Jerry Scarsella			3037713126	Jerry Scarsella
<b>FAX</b>	<b>VOLUME</b>	<b>UNITS</b>	<b>RATE</b>	<b>FREQUENCY</b>	<b>HAUL RATE</b>
7202004441	1cy		Gate Rate	1 time only	
<b>WASTE DESCRIPTION</b>		<b>OTHER CHARGE DESCRIPTION</b>		<b>DROP FEE</b>	<b>DEMURRAGE</b>
<b>WCD FEE</b>		\$1.30/invoice administration fee; fuel recovery % (varies monthly); \$7.50/load environmental fee; HSRF (Hazardous Substance Recovery Fee) - \$0.27/yard, \$0.90/ton, or \$1.35/1000 gallons			

### TERMS AND CONDITIONS

**DESIGNATED WASTES:** During the term of this Agreement, subject to availability of airspace or any periodic quantity limitations imposed by applicable law, regulation, permits or otherwise, Allied Waste Systems of Colorado, LLC shall receive and dispose of all the solid waste, excluding radioactive, volatile, highly flammable, explosive, toxic, infectious, pathological or hazardous waste (hereinafter said solid waste shall be referred to as the "Solid Waste") delivered to Allied Waste Systems of Colorado, LLC's disposal site set forth above ("Disposal Site"), up to the amounts of Solid Waste set forth above. The term "hazardous waste" as used herein shall include, but not be limited to, any amount of waste listed or characterized as hazardous by the United States Environmental Protection Agency or any state agency pursuant to the Resource Conservation and Recovery Act of 1976, as amended, and including future amendments thereto, and applicable state law.

**TITLE:** Title to the Solid Waste delivered by Customer shall be transferred to and vest in Allied Waste Systems of Colorado, LLC at the time the Solid Waste is fully unloaded at the working face of the Disposal Site and the Customer's vehicle has departed such working face. Prior thereto, title to the Solid Waste shall be in, and all risks and responsibilities therefore shall be borne by, Customer.

**COMPLIANCE WITH LAWS:** Allied Waste Systems of Colorado, LLC and Customer shall comply with all applicable local, state and federal laws pertaining to the delivery and disposal of the Solid Waste. Customer shall also comply with work and safety rules which have been promulgated by Allied Waste Systems of Colorado, LLC to govern operations at the Disposal Site.

**DISPOSAL RATES:** The rates for disposal of the Solid Waste are set forth above. Allied Waste Systems of Colorado, LLC, in its sole discretion, may at any time adjust the rates hereunder to fully cover increases in fuel and insurance costs, increases in costs (including, without limitation, overhead and profit) resulting from (i) changes in any laws, ordinances, regulatory requirements or guidelines (including changes in construction or interpretation thereof or changes in the manner or method of enforcement thereof), (ii) orders, judgments or directives of any court or governmental body or instrumentality thereof, (iii) revocation, suspension, denial or modification of any permit, license or approval regarding use, operation or closure of the disposal site, and (iv) other contingencies beyond Allied Waste Systems of Colorado, LLC's reasonable control. Allied Waste Systems of Colorado, LLC may adjust rates from time to time for other reasons, but any such other adjustment, to the extent such adjustment results in a percentage increase greater than the percentage increase in the local (or if none, "U.S. City Average") Consumer Price Index for Urban Consumers (all items) published by the United States Department of Labor, Bureau of Labor Statistics since the date of the last such adjustment (or since the date of execution of this Agreement in the case of the first such adjustment), shall be subject to Customer's approval upon notice thereof from Allied Waste Systems of Colorado, LLC thirty (30) days prior to the effective date of the adjustment. A monthly administrative fee is applicable to all credit accounts.

**TERM:** The term of this Agreement shall continue hereafter until terminated by either party effective upon thirty (30) days prior written notice.

**PAYMENT:** Customer agrees to make payment within thirty (30) days after receipt of Allied Waste Systems of Colorado, LLC's statement at the address of Allied Waste Systems of Colorado, LLC specified on such invoice. A 1.5% late fee shall apply to payments received 30 days after the date of the invoice.

**INDEMNITY:** Customer hereby agrees to indemnify and hold Allied Waste Systems of Colorado, LLC harmless from and against any and all loss, damage, suits, liability and expenses (including, but not limited to, reasonable investigation and legal expenses) arising out of any claim for loss of or damage to property, including Allied Waste Systems of Colorado, LLC's property, and injuries to or death of persons, including Customer's or Allied Waste Systems of Colorado, LLC's employees, caused by or resulting from the negligence or willful misconduct or violation of any federal, state or local laws or regulations of Customer, its employees or agents or Customer's delivery to BFI of waste excluded from the definition of Solid Waste. BFI hereby agrees to indemnify and hold Customer harmless from and against any and all loss, damage, suits, liability and expenses (including, but not limited to, reasonable investigation and legal expenses) arising out of any claim for loss of or damage to property, including Customer's property, and injuries to or death of persons, including Allied Waste Systems of Colorado, LLC's or Customer's employees, to the extent caused by or resulting from the negligence or willful misconduct of Allied Waste Systems of Colorado, LLC its employees or agents.

**FORCE MAJEURE:** Except for the obligation to pay for services rendered, neither party hereto shall be liable for its failure to perform hereunder due to contingencies beyond its reasonable control, including, but not limited to, strikes, riots, war, fire, acts of God, compliance with any law, regulation or order, whether valid or invalid, of the United States of America or any other governmental body or any instrumentality thereof, whether now existing or hereafter created, or the revocation, suspension, denial or modification of any permit, license or approval regarding use, operation or closure of the disposal site.

**ASSIGNMENT:** Neither party shall assign this agreement without the prior written consent of the other party, except that Allied Waste Systems of Colorado, LLC without Customer's consent may assign this Agreement to any corporation affiliated with Allied Waste Systems of Colorado, LLC.

**ENTIRE AGREEMENT:** This Agreement constitutes the entire understanding between Allied Waste Systems of Colorado, LLC and Customer hereto, and cancels and supersedes all prior negotiations, representations, understandings and agreements, either written or oral, with respect to the subject matter hereof. No changes, alterations or modification to this Agreement will be effective unless in writing and signed by Allied Waste Systems of Colorado, LLC and Customer hereto.

EXECUTED as of the day and year first above written.

Allied Waste Systems of Colorado, LLC

Signature: \_\_\_\_\_

Title: Inside Sales

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

CUSTOMER NAME: The Forestry Services Group Inc.

Authorized Signature: \_\_\_\_\_

Printed Name: BEARD SCARSELLA

Title: President

Date: 7/20/09



## Bob Bundy

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**From:** Schulz, Matt [Matt.Schulz@state.co.us]  
**Sent:** Thursday, July 23, 2009 3:45 PM  
**To:** Bob Bundy  
**Subject:** RE: Friday at 9.

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Red Category

Bob –

Thanks for setting this up, I will be there tomorrow. Can you email me back a description of what you found out from Allied Waste? You briefly mentioned on the phone the other day about not needing to send the soil sample to the lab. I am just wondering why and what documentation we (or the contractor) has to provide to satisfy whatever Allied Waste's requirements are. As we have talked about, the one critical thing tomorrow and before this contract ends is to get a receipt from Allied Waste (through the contractor) that confirms the soil was dropped off there – this is something that we absolutely must have.

Thanks

Matt

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**From:** Bob Bundy [mailto:Bob.Bundy@colostate.edu]  
**Sent:** Wednesday, July 22, 2009 6:46 PM  
**To:** mike.mchugh@state.co.us; Schulz, Matt  
**Cc:** Allen Owen  
**Subject:** Friday at 9.

Mike and Matt,

Friday at 9am seems to work for you two and the contractor/sub. I believe the contractor will be bringing an additional crew of two to help out. My goal is to have this spill and the couple ruts further down the project fixed that morning. This should only take a couple hours. I am working to end this contract after Friday mornings work. I don't have a detailed plan for this work, but with all three of us present, we can get it done to your specs.

After Friday morning, this nine week long fiasco needs to be put out to pasture.

Bob Bundy  
Fuels Treatment Partnership & Wildfire Mitigation Forester  
Colorado State Forest Service - Boulder District  
5625 Ute Highway Longmont, CO 80503  
(303) 823-5774  
(303) 823-5768 fax  
[Bob.Bundy@colostate.edu](mailto:Bob.Bundy@colostate.edu)

## Bob Bundy

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**From:** Bob Bundy [Bob.Bundy@colostate.edu]  
**Sent:** Tuesday, July 21, 2009 1:48 PM  
**To:** 'dotmyster@hotmail.com'  
**Subject:** FW: Republic Services Forms  
**Attachments:** Interactive\_Gen\_Waste\_Express\_Profile.pdf; A Blank Disposal Services Agreement\_1.rtf

Jerry,

I'll give you a call to confirm you get this. We are looking to do this on Friday morning at around 10am or before. I will get you an exact time as I confirm with the Parks folks.

Bob Bundy  
Fuels Treatment Partnership & Wildfire Mitigation Forester  
Colorado State Forest Service - Boulder District  
5625 Ute Highway Longmont, CO 80503  
(303) 823-5774  
(303) 823-5768 fax  
[Bob.Bundy@colostate.edu](mailto:Bob.Bundy@colostate.edu)

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**From:** Bob Bundy [mailto:Bob.Bundy@colostate.edu]  
**Sent:** Thursday, July 16, 2009 2:52 PM  
**To:** 'Robert Brudenell'  
**Cc:** 'Roger Terry'; 'thirtyninenorth@comcast.net'  
**Subject:** FW: Republic Services Forms

Robert,

I recently received the attached email and attachments from Republic Services. Please fill out the forms and email them, and the MSDS sheet, back to Lisa Gomez and I. Lisa stated that it would take them a couple days to approve it, then they would provide a manifest. This manifest would then be needed as the soil was delivered to the Allied Waste Foothills Landfill south of Golden.

Please keep me in the loop and CC me on the processing of the forms. I will talk with the State Parks folks to figure out which day we should have the work done. Jerry said he was flexible. I'm thinking we should look towards the second half of next week. I'll get back to you with dates that would work for everyone.

Thanks. If you would like to talk more about his, I'll be at the office briefly tomorrow afternoon, and all day Monday.

Bob Bundy  
Fuels Treatment Partnership & Wildfire Mitigation Forester  
Colorado State Forest Service - Boulder District  
5625 Ute Highway Longmont, CO 80503  
(303) 823-5774  
(303) 823-5768 fax  
[Bob.Bundy@colostate.edu](mailto:Bob.Bundy@colostate.edu)

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**From:** Gomez, Lisa [mailto:LADAM@republicservices.com]  
**Sent:** Thursday, July 16, 2009 12:19 PM  
**To:** bob.bundy@colostate.edu  
**Subject:** Republic Services Forms

Bob,



Per your voice mail I am emailing you a copy of our forms that will need to be filled out, signed and returned to me. These forms will need to be approved with a profile # and a manifest (that will upon approval be printed by me) will need to accompany each load into the landfill. I will not require any testing for this waste stream if you know that it is only hydraulic oil cont. soil. If you should have any additional questions you are welcome to give me a call, I would be happy to help.

Thank You,  
Lisa Gomez  
Special Waste  
Republic Services  
Ph: 303-371-5115 Ext. 111  
E-Fax: 1-480-718-4140  
Fax: 303-766-4969  
[www.specialwaste.info](http://www.specialwaste.info)



## Bob Bundy

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**From:** Ben Pedrett [Ben.Pedrett@state.co.us]  
**Sent:** Monday, July 13, 2009 11:43 AM  
**To:** 'Schulz, Matt'; rbundy@lamar.colostate.edu; mike.mchugh@state.co.us  
**Cc:** scotwood@lamar.colostate.edu; gsund@lamar.colostate.edu; 'Billerbeck, Rob'  
**Subject:** RE: Eldorado - Fuel Spill  
**Attachments:** A Blank Disposal Services Agreement\_1.rtf; New Interactive Profile form.pdf; Third Party Authorization Form.doc

**Categories:** Red Category

Bob,  
Please see message below and attachments. Landfill in Golden will accept with documentation.

All,  
I am usually available Mon. and Tue. and Mike is usually available Thur. and Fridays – both early in the morning (not after noon).

Thanks,

Ben

**From:** "Gomez, Lisa" [LGomez@republicservices.com](mailto:LGomez@republicservices.com)  
**Sent:** Thursday, July 2, 2009 11:38:08 AM  
**Subject:** Republic Services Forms

Ben,

Per our conversation attached you will find a copy of our profile form, disposal agreement and our third party form. All forms will need to be filled out in full, be sure to sign them and return them to me for the approvals process. The costs involved in disposal of the waste are:

\$75.00 profile fee  
\$12.50 per cubic yard (\$200.00 per load minimum)  
\$7.50 per load environmental fee  
4.65% fuel recovery fee  
\$0.27 per yard HRSF (state fee)

If you should have any further questions please give me a call, I would be happy to help. Thank you and have a great weekend!!

Thank You,  
Lisa Gomez  
Special Waste  
Republic Services  
Ph: 303-371-5115 Ext. 111  
E-Fax: 1-480-718-4140  
Fax: 303-766-4969  
[www.specialwaste.info](http://www.specialwaste.info)

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**From:** Schulz, Matt [<mailto:Matt.Schulz@state.co.us>]  
**Sent:** Monday, July 13, 2009 10:55 AM  
**To:** Pedrett, Ben; rbundy@lamar.colostate.edu; mike.mchugh@state.co.us

**Cc:** Quintana, Kristi; scotwood@lamar.colostate.edu; gsund@lamar.colostate.edu; Billerbeck, Rob  
**Subject:** RE: Eldorado - Fuel Spill

All -

Bob, Scott, Rob and I met with the contractor and the subcontractor on site last Wednesday and looked at the spill area. The contractor provided us with a letter (attached) that explains the situation from his perspective. We all agreed that the contaminated soil should be cleaned up as soon as possible, once the testing has been completed and we have found an appropriate disposal facility. Bob took a sample of dirt for testing and will let us know when he gets word from the lab. Bob also agreed to call Allied Waste to determine their requirements for this type of solid waste, as that will determine what type of testing the lab will need to complete.

Once a disposal location is found, we will schedule a day when Mike, Bob, and I will all be available for the contractor to complete the work. Mike - what is your schedule for the next 2 weeks? I am not available on July 22.

It appears as though the spill is not extensive enough to warrant bringing in soil from off-property - we identified several high spots along the two track, where small amounts of dirt could be taken from without noticeable visual impact. Also, from talking with our revegetation expert, Steph, we would like the contractor to purchase a 5 lbs bag of Slender Wheatgrass, San Luis variety, from Arkansas Valley Seed, for us to put down in the fall.

Thanks

Matt

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**From:** Ben Pedrett [mailto:ben.pedrett@state.co.us]  
**Sent:** Tuesday, July 07, 2009 7:43 AM  
**To:** Billerbeck, Rob; rbundy@lamar.colostate.edu; gsund@lamar.colostate.edu; Barker, Paul  
**Cc:** mike.mchugh@state.co.us; Pedrett, Ben; Quintana, Kristi; Schulz, Matt; scotwood@lamar.colostate.edu  
**Subject:** Re: Eldorado - Fuel Spill

Rob,  
Mike and I both worked this weekend and will not be available on Wed.  
If you provided a time-line for clean-up and restoration, that would be helpful.  
Thanks,  
Ben

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**From:** "Billerbeck, Rob" <Rob.Billerbeck@state.co.us>  
**To:** rbundy@lamar.colostate.edu; gsund@lamar.colostate.edu  
**Cc:** mike.mchugh@state.co.us; "Pedrett, Ben" <pedrettb@parks-mx.state.co.us>; "Quintana, Kristi" <Kristi.Quintana@state.co.us>; "Schulz, Matt" <Matt.Schulz@state.co.us>; scotwood@lamar.colostate.edu  
**Sent:** Monday, July 6, 2009 3:25:42 PM  
**Subject:** FW: Eldorado - Fuel Spill

Bob,



Based on our phone conversation today, here are the main points for working through the next steps at Eldorado:

1. Since Ben found out that CDPHE will not do the cleanup since it was less than 25 gallons, then the responsibility for the cleanup still rests on the contractor. So we would like you to continue to pursue the cleanup through the contractor.
2. As we discussed on the phone this time and previously, we'd like you to make it very clear to the contractor that they can't be present on the site without you there to oversee them. Kristi wanted you to be clear with the contractor that we would be prepared to press charges with the contractor of a felony nature if they access the site and do the work without your and our explicit permission and oversight. She also wanted to be clear that we would like to specify that either Matt Schulz or Mike McHugh also be present on site when the work occurs.
3. We would like the soil to be removed by hand with shovels. It needs to be removed from site and disposed of properly. There is information below from Paul Barker, our civil engineer about how to figure out where it can be disposed. It may require taking a soil sample and sending it for testing prior to the actual removal. That testing takes a few days. It would be good Bob, if you found out what they need and we could take a sample this Wed to send off. We will need you to ensure we get the receipts from the disposal of the soil. Our civil engineer explained that we are responsible for the soil even after it leaves our land, so we have to ensure it is properly disposed of. If it was illegally dumped elsewhere, then we could be held responsible.
4. For reveg, I think we might need to make a rough plan, but then look at it after its dug out to make the final call. If it turns out to not be too deep or too big, then the best course for reveg will likely be to move around a small amount of the surrounding soil and rake duff over it and allow natives to come back on their own. If it turns out to be deeper or bigger, then we will want them to bring in some sterilized top soil (sterilized to be weed free). Reseeding right now will probably not make sense as we'll be hitting mid-summer heat and seed will not do well. However, we will need a bag of seed so we can put some down in fall. We will provide a seed spec, but it will probably be a simple 2 species grass mix like blue grama and squirrel-tail. Stephanie on my staff will provide that spec later today and I'll forward it.
5. Matt and I are available to meet on site Wed afternoon – 3:00 at the Crescent Meadows parking lot. Ben – if Mike McHugh is available that day, Kristi requested that he be present as well. We can look at the area, talk over the topsoil/seeding and take a soil sample if needed. Bob, you said you could have the contractor present – Kristi agreed that would be good if you can get them. As we discussed having the actual contractor rather than the sub is what we'd like to request at this point.

So thanks – who knew this project would turn out to be so much fun. Bob - hang in there and we really appreciate your work on this. We'll all get done with this soon.

As we said, overall our cooperation with CSFS is going very well, we are very happy with all the point people we are working with and have great confidence in them. We think there has been amazing progress toward addressing fuel/fire issues and addressing major beetle issues in the last few years. In short things are going pretty smoothly overall. This situation at Eldo just suggest that we will look for ways to decrease the chance of problems in the future, so these seem like the long-term fixes:

1. The changes that Scott Woods proposed to the contracting model should help us avoid this sort of subcontractor problem.
2. We will want to write in a few more specs on the contracts for fuel spills (i.e. instead of report to parks immediately, it should say report to CSFS, Parks and CDPHE within 1 working day, etc.) and make it clear that major equipment maintenance (changing gear oil, etc.) cannot be performed on site.
3. When Matt corresponds about contract issues, particularly about moisture conditions that seem 'iffy', we will ask for correspondence back to clarify when contractors have stopped work and have removed equipment.

Again thanks and see you Wednesday.

Rob Billerbeck  
Stewardship and Natural Areas Program Manager  
Colorado State Parks  
1313 Sherman St. Room 618  
Denver, CO 80203  
Off: 303-866-3203 x 4341



Cell: 303-548-6169

Email: [rob.billerbeck@state.co.us](mailto:rob.billerbeck@state.co.us)

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**From:** Barker, Paul  
**Sent:** Monday, July 06, 2009 1:32 PM  
**To:** Billerbeck, Rob; Kristi Quintana  
**Subject:** Eldorado - Fuel Spill

Kristi & Rob,

As I mentioned on the phone we typically have the contractor remove the contaminated soil and replace it with clean soil. The contaminated soil is taken to a site that will handle the cleanup of the soil and dispose it. I talked to Amy Hobbs of Allied Waste and they would accept the soil if it meets certain testing requirements. They have a landfill on Highway 93 about 10 miles south of Golden. She was supposed to send me their testing requirements, but I haven't received them yet. Her phone number is 303-459-8752 and email address: [amy.hobbs@awin.com](mailto:amy.hobbs@awin.com).

Last time I used their landfill I had Pace Laboratories to test the soil. I took the grab samples and they tested it. Here is their contact information:

Pace Analytical:

Currently, the service center is not staffed full time, so if you would like to arrange for a bottle pickup or sample drop off, please continue to call Katie at 303-522-9706 or email [katie.thompson@pacelabs.com](mailto:katie.thompson@pacelabs.com).

We have also used Evergreen Analytical in Evergreen, Colorado to do this work, too.

Thanks  
Paul





# The Natural Way, Inc.

1952 W. Dartmouth Ave.  
Englewood, CO 80110

Ph: (303) 347-0988  
Fax: (303) 806-0868

A Tree Care Industry Association Accredited Company CO - 01

**Robert Brudenell**  
ISA Board Certified Master Arborist RM-0605B  
ASCA Registered Consulting Arborist #417

*"Environmentally Conscious Tree, Shrub & Lawn Care"*

July 7, 2009

Bob Bundy  
Fuels Treatment Partnership & Wildfire Mitigation Forester  
Colorado State Forest Service - Boulder District  
5625 Ute Highway Longmont, CO 80503

Dear Bob Bundy:

In response to your letter of July 1, 2009, we are providing detailed information on the minor fluid leak that occurred in Eldorado State Park in section 4B and the two leaks that occurred on unit 60A and 103B on the Denver Water property of the fuels reduction project. We are committed to full transparency of any incident that occurred.

Around May 20<sup>th</sup> the Timber Pro 620E with a mastication head had a hydraulic pump failure. No fluid loss occurred at the time of the failure. The whole machine was moved to a different location for repair along a road within the work zone. The site is identified on the attached map, labeled "A". The repair required disassembly of the cutting head and removal of hydraulic lines, which loose fluid as they are removed. Absorption materials, catch buckets, and hydraulic caps for the lines were all used to reduce leakage of fluid onto the ground. We estimate no more than 5 gallons of Valvoline Quality ANT-WR Hydraulic oil ISO 32 was released onto the ground during the entire repair process which lasted approximately a week due to parts availability. The majority of the fluid released was due to vandalism. The vandals turned over a 5 gallon catch bucket which was about half full. The repair site was vandalized one night in which equipment was damaged (windows broken), excrement left on seats, attempted cutting of hydraulic hoses, graffiti, tires punctured, and other damages. Actions were taken after the vandalism to clean up the site with absorption materials. The hydraulic fluid that was captured during the repair was recycled. Tony and Jerry Scarsella, Mike Welty (mechanic) were present during the repair process. We were also informed that Colorado State Parks and Colorado State Forestry personnel were aware of the repair.

As an experienced fuels reduction contractor, we are familiar with the Oregon Forestry Practices Act which most western states have adopted as standard procedures and guidelines. Hydraulic fluid spills are reportable under that act if hydraulic fluid has the potential to enter a water course or water and a leeway of up to 30 gallons is allowed. This leakage did not fall within this guideline. The contract does not state a baseline amount of leakage as a threshold for reporting. The leakage was not reportable under the Oregon Forestry Practices Act and therefore we did not take any additional action. In addition, we assumed that all parties had been verbally notified.

Our mission is to be "an environmentally conscious" company and as such we were planning on removing any soil that contained hydraulic fluid as agreed upon within our contract. Due to the bird migration hiatus, we were required to leave the property with all the equipment between the dates of June 1 thru July 15<sup>th</sup>.

We did experience two other small hydraulic leakage events on the Denver Water portion of the project during our operations in May. The same kind of hydraulic fluid was leaked. The locations are marked on the map as sites "B" and "C". Site "B" is on unit 60A and the leak occurred approximately on March 5<sup>th</sup> and 1 gallon

**DEPENDABLE - PROFESSIONAL - ACCOUNTABLE**





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1952 W. Dartmouth Ave.  
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**Robert Brudenell**  
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**ASCA Registered Consulting Arborist #417**

*"Environmentally Conscious Tree, Shrub & Lawn Care"*

was released. Site "C" is within unit 103B and occurred approximately on April 16<sup>th</sup> and 3 gallons of hydraulic fluid were released. The same containment methods were employed as the Eldorado hydraulic fluid leak. Absorption materials were put over the leak areas, then scooped up and disposed of. Jerry Scarsella and Dale (with Denver Water) were present and aware of these leakages and we have every intention of removing additional contaminated soil, if needed, as per our contract.

The Natural Way, Inc. is committed to the environment and forest health. We are willing to perform any remediation that Colorado State Parks and Colorado Forest Service deems necessary to restore the sites. It is our assessment of the situation that the contaminated soil should be removed and properly disposed of as per our contract. We would like the opportunity to complete the remediation according to contract.

We will also inform in writing Colorado State Parks, Denver Water, and Colorado Forest Service of any leakage of fluids in the future. We have created an incident reporting form to use in case of any future events with your agency or others. We request that all parties and contact information be notified be provided to us so if another event were to occur the reporting criteria will be clear to all involved.

The Natural Way, Inc. has had a stellar track record in Fire Mitigation and Fuels Reduction work with other private, city, and state agencies and we wish to maintain that record and reputation. We are also very willing to hear suggestions from your agency and others on how we can better serve your needs and meet your management objectives.

Enclosed please find maps, MSDS for the hydraulic oil, list of references, and all of our contact information.

We look forward to the opportunity to correct any issues with this leakage and discuss how we can avoid any issues in the future. We look at this as an opportunity to better our company and our dialogue with all the agencies involved.

Please contact us if you need any additional information.

Thank you for the opportunity to respond.

**Robert Brudenell**  
ASCA Registered Consulting Arborist  
ISA Board Certified Master Arborist

**DEPENDABLE - PROFESSIONAL - ACCOUNTABLE**



## Bob Bundy

---

**From:** Billerbeck, Rob [Rob.Billerbeck@state.co.us]  
**Sent:** Monday, July 06, 2009 3:26 PM  
**To:** rbundy@lamar.colostate.edu; gsund@lamar.colostate.edu  
**Cc:** mike.mchugh@state.co.us; Pedrett, Ben; Quintana, Kristi; Schulz, Matt; scotwood@lamar.colostate.edu  
**Subject:** FW: Eldorado - Fuel Spill

**Importance:** High

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

**Categories:** Red Category

Bob,

Based on our phone conversation today, here are the main points for working through the next steps at Eldorado:

1. Since Ben found out that CDPHE will not do the cleanup since it was less than 25 gallons, then the responsibility for the cleanup still rests on the contractor. So we would like you to continue to pursue the cleanup through the contractor.
2. As we discussed on the phone this time and previously, we'd like you to make it very clear to the contractor that they can't be present on the site without you there to oversee them. Kristi wanted you to be clear with the contractor that we would be prepared to press charges with the contractor of a felony nature if they access the site and do the work without your and our explicit permission and oversight. She also wanted to be clear that we would like to specify that either Matt Schulz or Mike McHugh also be present on site when the work occurs.
3. We would like the soil to be removed by hand with shovels. It needs to be removed from site and disposed of properly. There is information below from Paul Barker, our civil engineer about how to figure out where it can be disposed. It may require taking a soil sample and sending it for testing prior to the actual removal. That testing takes a few days. It would be good Bob, if you found out what they need and we could take a sample this Wed to send off. We will need you to ensure we get the receipts from the disposal of the soil. Our civil engineer explained that we are responsible for the soil even after it leaves our land, so we have to ensure it is properly disposed of. If it was illegally dumped elsewhere, then we could be held responsible.
4. For reveg, I think we might need to make a rough plan, but then look at it after its dug out to make the final call. If it turns out to not be too deep or too big, then the best course for reveg will likely be to move around a small amount of the surrounding soil and rake duff over it and allow natives to come back on their own. If it turns out to be deeper or bigger, then we will want them to bring in some sterilized top soil (sterilized to be weed free). Reseeding right now will probably not make sense as we'll be hitting mid-summer heat and seed will not do well. However, we will need a bag of seed so we can put some down in fall. We will provide a seed spec, but it will probably be a simple 2 species grass mix like blue grama and squirrel-tail. Stephanie on my staff will provide that spec later today and I'll forward it.
5. Matt and I are available to meet on site Wed afternoon – 3:00 at the Crescent Meadows parking lot. Ben – if Mike McHugh is available that day, Kristi requested that he be present as well. We can look at the area, talk over the topsoil/seeding and take a soil sample if needed. Bob, you said you could have the contractor present – Kristi agreed that would be good if you can get them. As we discussed having the actual contractor rather than the sub is what we'd like to request at this point.

So thanks – who knew this project would turn out to be so much fun. Bob - hang in there and we really appreciate your work on this. We'll all get done with this soon.

As we said, overall our cooperation with CSFS is going very well, we are very happy with all the point people we are working with and have great confidence in them. We think there has been amazing progress toward addressing



fuel/fire issues and addressing major beetle issues in the last few years. In short things are going pretty smoothly overall. This situation at Eldo just suggest that we will look for ways to decrease the chance of problems in the future, so these seem like the long-term fixes:

1. The changes that Scott Woods proposed to the contracting model should help us avoid this sort of subcontractor problem.
2. We will want to write in a few more specs on the contracts for fuel spills (i.e. instead of report to parks immediately, it should say report to CSFS, Parks and CDPHE within 1 working day, etc.) and make it clear that major equipment maintenance (changing gear oil, etc.) cannot be performed on site.
3. When Matt corresponds about contract issues, particularly about moisture conditions that seem 'iffy', we will ask for correspondence back to clarify when contractors have stopped work and have removed equipment.

Again thanks and see you Wednesday.

Rob Billerbeck  
Stewardship and Natural Areas Program Manager  
Colorado State Parks  
1313 Sherman St. Room 618  
Denver, CO 80203  
Offc: 303-866-3203 x 4341  
Cell: 303-548-6169  
Email: [rob.billerbeck@state.co.us](mailto:rob.billerbeck@state.co.us)

---

**From:** Barker, Paul  
**Sent:** Monday, July 06, 2009 1:32 PM  
**To:** Billerbeck, Rob; Kristi Quintana  
**Subject:** Eldorado - Fuel Spill

Kristi & Rob,

As I mentioned on the phone we typically have the contractor remove the contaminated soil and replace it with clean soil. The contaminated soil is taken to a site that will handle the cleanup of the soil and dispose it. I talked to Amy Hobbs of Allied Waste and they would accept the soil if it meets certain testing requirements. They have a landfill on Highway 93 about 10 miles south of Golden. She was supposed to send me their testing requirements, but I haven't received them yet. Her phone number is 303-459-8752 and email address: [amy.hobbs@awin.com](mailto:amy.hobbs@awin.com).

c 720-490-0230  
Last time I used their landfill I had Pace Laboratories to test the soil. I took the grab samples and they tested it. Here is their contact information:

Pace Analytical:

Currently, the service center is not staffed full time, so if you would like to arrange for a bottle pickup or sample drop off, please continue to call Katie at 303-522-9706 or email [katie.thompson@pacelabs.com](mailto:katie.thompson@pacelabs.com).

BKX

We have also used Evergreen Analytical in Evergreen, Colorado to do this work, too.

Thanks  
Paul

Foothills Land Visa  
371-5115



The Forestry Services Group Inc.  
5475 Preserve Drive  
Greenwood Village, Colorado 80121

July 2, 2009

Roger Terry  
The Natural Way Inc.  
1952 West Dartmouth Avenue  
Englewood, Colorado 80110

Re: Eldorado Canyon Project

Dear Roger,

I want to follow up on our conversation this morning regarding the repair we did to our equipment that was used on Unit 4B of the Eldorado Canyon state park project. I would also like to address the comments and concerns that you relayed to me from State Forestry and from State Parks regarding the hydraulic oil stains that they observed around the repair area. I hope this will clarify any misconceptions and confusion surrounding this repair.

As you are aware while we were prosecuting our work our Timber Pro suffered a catastrophic main hydraulic pump failure. This failure was to the main implement pump which controls all of the boom functions. Fortunately the machine is designed so that the drive pumps are on a separate circuit and this design allowed us to shut down the implement portion of the machine and still be able to move it. After determining what the problem was we decided it was more prudent to move the machine to an area that was better suited to affect the necessary repairs. We moved the machine to a flat area on unit 4B next to the existing access road we were told we could use and began the repair. This repair was not an easy one and required a lot of disassembly to get to the affected component. This disassembly resulted in the removal of many hydraulic lines that unfortunately loose oil as part of the process. As we are not without experience in these matters we take all necessary precautions to minimize the amount of oil that is spilled. As a result of this experience our shop truck carries oil absorption materials as well as line caps in an effort to reduce this loss. Additionally we carry catch buckets as a final attempt to protect the surrounding area. All of these methods were employed during this repair. This same method was employed when we broke two hydraulic hoses during operations on the Denver Water portion of this project as well.

At this point it is important to note that we take pride in trying to be a responsible operator and self govern by experience in the absence of proper direction. As you may be aware Colorado does not have a Forest Practices Act to follow and to circumvent this unfortunate fact we voluntarily follow the Oregon and Washington Forest Practices Acts that many surrounding states have adopted as the industry standard to follow. We also follow the federal guidelines governing our operations. By following these guidelines we did all that we could to minimize the impact to the area we were working in knowing it would not be possible to eliminate all spills. The state and federal guidelines are aware of this as well and contractors are allowed a lee way on the amount gallons of hydraulic oil spilled before it



becomes an issue. In this particular instance we lost less than five gallons to the surrounding area as a result of our repair. As a side note due to our efforts this would have been less had it not been for some "concerned citizen" who tipped over one of our catch buckets during our absence one evening. This act is responsible for about two to two and a half gallons of the total that ended up on the ground. This type of vandalism which included nasty notes, human excrement left in the operators seats, messages scribbled on the sides of the machines, verbal chastising by citizens, broken windows and attempted hose slashing was something we experienced almost daily since we started the project due to the public opposition to "tree cutting" in the park.

To your comment about not reporting the spill and subsequent cleanup there are two explanations for this. First and foremost, we completed the repair just in time to honor State Parks request to suspend operations until after the bird migration. At their direction through Colorado State Forestry and The Natural Way, we removed all of our equipment from the work zone and concentrated our efforts on Denver Water Board lands. We did all that we could with our oil absorption materials to clean the surface around the repair area in the time allotted and reserved any further cleanup needed for when we were to return to work around the 15<sup>th</sup> of July. Secondly, our belief at the time was that we were under no obligation to report such a minor incident by following the guidelines mentioned above. Specifically section 629-620-0100 of the Oregon Forest Practices Act that says we are supposed to report spills only if they were to enter a water course or water. Again because of our experience we specifically chose the repair site so this would not be possible. But in our zeal to complete the State Parks portion of our contract before the June hiatus we failed to catch the clause in the contract that we were to specifically "report all spills to State Parks immediately" for this we are embarrassed and sincerely sorry for this unintentional oversight. We made a further error in assuming that because everyone was fully aware of the repair and its location that all was well and no further action was required.

We take full responsibility for our portion of the communication break down but I do feel that we have acted responsibly in this matter and stand ready and willing to complete any necessary cleanup of the repair area once we are allowed to resume operations. This is a very minor incident and we estimate that it should take less than one hour of machine and labor time to remove the stained soil and restore the affected area. Should you need any further assistance you may reach me at any of the numbers listed below.

Sincerely,



Gerard Scarsella

President

The Forestry Services Group Inc.

Cc: File, Roger Terry The Natural Way  
Bob Bundy Colorado State Forestry  
Greg Sunstrom Colorado State Forestry



## Bob Bundy

---

**From:** Bob Bundy [Bob.Bundy@colostate.edu]  
**Sent:** Tuesday, June 30, 2009 5:26 PM  
**To:** Scott Woods  
**Cc:** Allen Owen  
**Subject:** FW: oil spill issue

Scott,

Things are getting ugly up in Eldo. See email below. There is a 6'x10' fluid spills on the Park. I've heard rumors that there are a few on Denver Water (where the equipment is being parked). The contract states that the contractor is supposed to report spills, then use RamSorb or remove in drums. None of this has happened. Since this developed late last week, I have not spoken to the contractor or subcontractor.

First off, tomorrow morning I'm going to send a 'cease and desist all activities' letter barring the contractor further access without permission/supervision. I will follow up immediately with a phone call. Then, after getting recommendations on a treatment, I'll send a clean-up plan to the contractor (implementation to be supervised). Do you know anyone who might have had experience with spills (Chuck, Kristin)?

At this point, no one at Parks is happy, and I've had my fill. I consider the "rut incident" no big deal. Parks is now talking to Hazmat people, and referencing criminal behavior based on the fluid spills. Although the end result on a majority of the project looks great, I've now lost confidence. We're starting to talk about ending the contract. I think we should consider cutting our losses at this point. There is less than 20 acres left, and based on the last six and a half months, I can't imagine it ending well.

Scott, please give me a call if you get a chance tomorrow.

Bob Bundy  
Fuels Treatment Partnership & Wildfire Mitigation Forester  
Colorado State Forest Service - Boulder District  
5625 Ute Highway Longmont, CO 80503  
(303) 823-5774  
(303) 823-5768 fax  
[Bob.Bundy@colostate.edu](mailto:Bob.Bundy@colostate.edu)

---

**From:** Schulz, Matt [mailto:Matt.Schulz@state.co.us]  
**Sent:** Tuesday, June 30, 2009 4:51 PM  
**To:** Bob Bundy  
**Cc:** Billerbeck, Rob; Quintana, Kristi; Pedrett, Ben  
**Subject:** oil spill issue

Bob –

To reiterate what we just talked about, you agreed to send the contractor a letter (cc to the park and us) stating that until further notice they will not access the park or conduct any work on the park without the presence of either you, someone from the park, Rob or myself. You should tell them that if they conduct any cleanup of the oil spill without our presence that they will receive a felony citation for damage to state property.

Based on our conversation with Kristi, she suggested that Ben talk with the county to see what they know or what requirements they have for cleanup of hazardous material and Ben will also file an incident report.



We agreed that we will wait until we hear what the county has to say before sending a formal cleanup plan to the contractor. So far that plan includes:

Hand shoveling up contaminated soil

Placing the soil in appropriate containers for transport

Transporting the soil to Cheyenne, WY to a company that deals with contaminated soil

Moving soil around near the area to fill back in the hole and, if necessary, moving soil from other parts of Crescent Meadows or bringing in off-site "sterilized" soil to fill in.

Putting seed down in a manner similar to the first revegetation project – using slender wheatgrass seed – or other approved seed.

Once we have the plan formulated, we will want the contractor to move quickly.

Thanks

Matt

Matt Schulz

Forest Management and GIS Coordinator

[Colorado State Parks](#)

303-866-3203 x4345

970-302-4428 (cell)



The Forestry Services Group Inc.  
5475 Preserve Drive  
Greenwood Village, Colorado 80121

June 11, 2009

Bob Bundy  
Colorado State Forestry Service  
5625 Ute Highway  
Longmont, Colorado 80503

Re: Eldorado Canyon Project

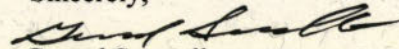
Dear Bob,

I want to follow up on our meeting this morning with Colorado State Parks representative Steve Sheridan about the soil disturbance repair on unit 4B. First let me thank you, Colorado State Forestry and Colorado State Parks for your patience and co operation during the resolution of this unfortunate incident. Secondly I would like to address the minor concerns that Steve has raised. I would also like to confirm that the repair was completed per the specifications that were issued after the field inspection of last week.

Although Steve has given his verbal acceptance of the repair he did express his concern about a few minor ground "Scuffs" that occurred when we diverted the machine around the spring. Additionally he wanted to know if we were going to fill in the minor ruts in the road below the repaired area and new water bar. I believe he was satisfied with the agreement, that due to the excess moisture because of the heavy rains, it would be better to wait on these items until we came back to complete the project after the hiatus.

Attached are copies of the seed mix verifications that State Parks ordered, the receipt and weed free certification for the erosion control mats used to protect the repair. If there is anything else you need just let me know.

Sincerely,



Gerard Scarsella  
President

The Forestry Services Group Inc.

Cc: File, Roger Terry The Natural Way



**Bob Bundy**

---

**From:** Schulz, Matt [Matt.Schulz@state.co.us]  
**Sent:** Friday, June 05, 2009 4:01 PM  
**To:** Bob Bundy  
**Cc:** Pedrett, Ben; mike.mchugh@state.co.us; Neid, Stephanie; Billerbeck, Rob; Quintana, Kristi  
**Subject:** Eldo reveg

**Categories:** Red Category

Bob –

I have obtained the final seed spec and process from Steph. We still need to know what type of seed they already have, but it is likely that it would not be appropriate for a wetland area though it could save them from buying the upland seed.

They will need Baltic rush seed for the wet areas (minimum purchase is .5 lb bag). They will need a 2 lb bag of slender wheatgrass (San Luis variety) for the upland areas.

Here is the vendor they need to purchase it from – they have two locations nearby:

Arkansas Valley Seed  
4333 Hwy. 66  
Longmont, CO 80504  
(877) 907-3337  
(970) 535-4522 Fax

Arkansas Valley Seed  
4625 Colorado Blvd.  
Denver, CO 80216  
(877) 957-3337  
(303) 320-7516 Fax

If they can let us know which location they prefer, we could call and order it for them – if that would make it easier.

Here is the process:

For the wet areas -

1. Smooth the area
2. Hand broadcast the Baltic rush seed evenly over the area using 1/10 of the .5 pound bag
3. Rake in seed (either by hand or machine) horizontally across the road
4. Cover with Very Thin layer of wood chips (0.5 inch preferable) or certified weed free hay or straw

For the areas that are not wet -

1. Smooth the area
2. Hand broadcast the slender wheatgrass seed evenly over the area using 1 pound
3. Rake in seed (either by hand or machine) horizontally across the road
4. Cover with Very Thin layer of wood chips (0.5 inch preferable) or certified weed free hay or straw

While the contractor is completing repair work on the major disturbance, I will use the other 1 pound of slender wheatgrass to distribute seed over the other less disturbed areas (away from the road).

The seed bags will come with tags identifying what they are and where they were purchased from. We will need to verify these tags before seed is put down – I know it sounds extreme but we have been bitten on past reveg projects.



## Bob Bundy

---

**From:** Bob Bundy [Bob.Bundy@colostate.edu]  
**Sent:** Monday, June 08, 2009 3:52 PM  
**To:** 'Roger Terry'  
**Subject:** Oil and garbage

Roger,

We have another small issue that's developing. There is a box of equipment parts on site near the top of the access road/trail. Tony was going to pick it up last week, but said it was very heavy, so we didn't try to carry it back to the parking lot. Some rangers went out to look at the site and brought everyone's attention to the garbage. Apparently, there is a ~5 sq. ft. area where oil has soaked into the ground. But the rumors are that it is a large oil spill. I think I've walked past it many times, and not noticed. Normally, not too big of a deal, but we have to make sure this gets cleaned up soon as well. There are a lot of people keeping close eyes on the project now, and a lot of fuel stoking the fire. If it really is only 5 sq. ft, this oil spill can be fixed by taking out a bucket and shoveling up the saturated dirt. If it is a lot bigger, it will have to be mix with an absorbent. I haven't seen this, but was cc'd in an email.

And we need to ensure everything is removed from the site as soon as possible. I believe the fuel trailer is out there still.

Thanks.

Bob Bundy  
Fuels Treatment Partnership & Wildfire Mitigation Forester  
Colorado State Forest Service - Boulder District  
5625 Ute Highway Longmont, CO 80503  
(303) 823-5774  
(303) 823-5768 fax  
[Bob.Bundy@colostate.edu](mailto:Bob.Bundy@colostate.edu)

Roger@thenaturalwayinc.net

520-1557

Jerry 771-3126  
Tony (575) 377-1293

thirty nine  
north @  
connect.  
net



## Bob Bundy

---

**From:** Bob Bundy [Bob.Bundy@colostate.edu]  
**Sent:** Monday, June 08, 2009 11:58 AM  
**To:** 'Roger Terry'  
**Subject:** FW: Eldo reveg

Hello Roger,

I have attached the information from the park on the seed mix required. Have you heard back from Tony on what he has? We are still tentatively looking at Wednesday-Friday for doing this. Not sure exactly which day will be best for weather.

Let's catch up when you get a chance. I'll be around the office the rest of today, and out tomorrow. I'll try and catch you by the end of the day, or call me when you get a chance.

We have a lot of eyes on the project now, so I'm going to try to keep everyone in the loop as much as possible. Please ensure any equipment used is freshly washed and weed free.

Thanks for all the help on this. I know it has grown to much bigger of an issue than it really should be.

Bob Bundy  
Fuels Treatment Partnership & Wildfire Mitigation Forester  
Colorado State Forest Service - Boulder District  
5625 Ute Highway Longmont, CO 80503  
(303) 823-5774  
(303) 823-5768 fax  
[Bob.Bundy@colostate.edu](mailto:Bob.Bundy@colostate.edu)

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**From:** Schulz, Matt [mailto:Matt.Schulz@state.co.us]  
**Sent:** Friday, June 05, 2009 4:01 PM  
**To:** Bob Bundy  
**Cc:** Pedrett, Ben; mike.mchugh@state.co.us; Neid, Stephanie; Billerbeck, Rob; Quintana, Kristi  
**Subject:** Eldo reveg

Bob –

I have obtained the final seed spec and process from Steph. We still need to know what type of seed they already have, but it is likely that it would not be appropriate for a wetland area though it could save them from buying the upland seed.

They will need Baltic rush seed for the wet areas (minimum purchase is .5 lb bag). They will need a 2 lb bag of slender wheatgrass (San Luis variety) for the upland areas.

Here is the vendor they need to purchase it from – they have two locations nearby:

Arkansas Valley Seed  
4333 Hwy. 66  
Longmont, CO 80504  
(877) 907-3337  
(970) 535-4522 Fax

Arkansas Valley Seed  
4625 Colorado Blvd.



Denver, CO 80216  
(877) 957-3337  
(303) 320-7516 Fax

If they can let us know which location they prefer, we could call and order it for them – if that would make it easier.

Here is the process:

For the wet areas -

1. Smooth the area
2. Hand broadcast the Baltic rush seed evenly over the area using 1/10 of the .5 pound bag
3. Rake in seed (either by hand or machine) horizontally across the road
4. Cover with Very Thin layer of wood chips (0.5 inch preferable) or certified weed free hay or straw

For the areas that are not wet -

1. Smooth the area
2. Hand broadcast the slender wheatgrass seed evenly over the area using 1 pound
3. Rake in seed (either by hand or machine) horizontally across the road
4. Cover with Very Thin layer of wood chips (0.5 inch preferable) or certified weed free hay or straw

While the contractor is completing repair work on the major disturbance, I will use the other 1 pound of slender wheatgrass to distribute seed over the other less disturbed areas (away from the road).

The seed bags will come with tags identifying what they are and where they were purchased from. We will need to verify these tags before seed is put down – I know it sounds extreme but we have been bitten on past reveg projects.

Let me know if there are questions.

Thanks

Matt

Matt Schulz  
Forest Management and GIS Coordinator  
[Colorado State Parks](#)  
303-866-3203 x4345  
970-302-4428 (cell)



## Bob Bundy

---

**From:** Schulz, Matt [Matt.Schulz@state.co.us]  
**Sent:** Thursday, June 04, 2009 9:51 AM  
**To:** Bob Bundy; Neid, Stephanie; mike.mchugh@state.co.us  
**Cc:** Barker, Paul; Billerbeck, Rob; Pedrett, Ben  
**Subject:** Eldorado Restoration and Revegetation Project  
**Attachments:** P6030078.JPG

**Importance:** High

**Categories:** Red Category

All,

Here is a summary of the notes I took of the immediate plan of action that we discussed and agreed on. Please let us know if I am missing anything. Bob – please pass along this information to the contractor and email me back when that has been done.

1. Contractor will let Bob know the details of the seed they currently have. We will need to know:
  - a. What species are included at what percentages
  - b. Where the seed was purchased from and what their phone number is
  - c. When the seed was purchased
  - d. We will need a copy or fax of the seed tag as well.
2. Steph will determine if this seed mix is appropriate for this area and if we are 100% confident it is weed free. If not she will find a vendor that can provide an appropriate seed mix and order the proper amount for the Contractor to pick up.
3. At the first opportunity with 3 dry days in a row the Contractor will bring in a small piece of machinery with a excavator type arm and head. The weather report currently shows Thurs and Fri of next week as being rainy. We should shoot for having this completed by then.
4. Bob will inform Matt and Mike when the Contractor will be on site.
5. Contractor will smooth out everything from the wetland to the bend in the road downhill and bring any soil that has washed down the road back up to fill in the holes near the wetland.
6. Contractor will create waterbar. The top of the waterbar should be at the rock in the middle of the road (see attached picture)
7. Contractor will spread approved seed over the area adjacent to the wetland and down the hill to the bend. Mike will try to be on site to verify seed tag.
8. Contractor will cut adjacent trees and run through a chipper to use as mulch/erosion control – as an alternative the Contractor could use certified weed free hay or straw (with proof of certification).
9. Bob will inform Matt and Mike when the Contractor has completed the work and is ready for inspection.
10. Mike will bring up some buck and rail fence and his reveg/restoration signs to post.
11. Contractor will need to find alternative access for future work in areas of the Unit that would have been accessed by this road.

Other less heavily disturbed areas within the Units will be raked out by hand or machine when the Contractor returns in mid-July.

A new path for the access road will be re-evaluated at a later date. Paul's recommendation is that a new path be cut in to the south of the current road.

I appreciate everyone's help on this and am looking forward to a good final product.



The Forestry Services Group Inc.  
5475 Preserve Drive  
Greenwood Village, Colorado 80121

May 22, 2009

Allen Owen  
Colorado State Forestry Service  
5625 Ute Highway  
Longmont, Colorado 80503

Re: Eldorado Canyon Project

Dear Allen,

I want to follow up on our conversation this morning about the soil disturbance on unit 4B and address the concerns that have been raised. I want to thank you for forwarding the picture of the area of concern as it confirmed where it was on the project. As we discussed this area was reported to our project manager, Bob Bundy and a plan of resolution was reached last week. I will do my best to bring you up to speed on this issue and explain the circumstances surrounding it.


As you know we began working on Units 7B and 4B since February of this year. We have been prosecuting our work to the best of our ability, weather permitting, since that time. We have coordinated our efforts with Bob on a weekly basis to resolve any operational and weather related issues that may have come up and as part of that process we discussed areas of work that were a priority and access to them. One of those areas was on Unit 4B and specifically the area to the far northeast corner. After conferring with Bob about the severe slope that we needed to traverse it was decided to utilize the existing old fire trail that went out to the area rather than build a new one. This road is depicted in black on the aerial photo of the project. We used this access route successfully until one day when we were walking one of the machines out to get fuel, the ground gave way under the machine. This was a complete surprise and out of character for the area. Evidently the road was put through a spring and all was well as long as the ground was frozen. The rapid spring thaw this year must have caused the crust to give way as our machine passed over it. We backed the machine out of the area to minimize any further disturbance and found another route around it. We have not attempted any further use of the road and found another route along the far north boundary on the ridge to access the work area. As you know we have suspended operations for the wild life migration until July and after conferring with Bob about the situation it was decided to let the spring drain and then repair the area when return to finish our contract. The actual area of disturbance is relatively small and will be very easy to repair. We did not want to take a chance at this time that the surrounding area is wet as well and cause a bigger issue.

I hope this sheds some light on this unfortunate but unavoidable incident. We take extra care to cause the least amount of soil disturbance we can during the commission of our work and voluntarily suspend our operations on all of our projects when weather conditions may cause unacceptable damage.



If a fire access road to the northeast corner is still desirable, I would recommend that a small culvert be installed across this portion of the road to alleviate this problem in the future. If you any questions or I can be of any further assistance please don't hesitate to call

Sincerely,



Gerard Scarsella

President

The Forestry Services Group Inc.

Cc: File, Roger Terry The Natural Way



## Bob Bundy

---

**From:** Ben Pedrett [ben.pedrett@state.co.us]  
**Sent:** Tuesday, April 21, 2009 5:38 AM  
**To:** Bob Bundy  
**Cc:** Ben Pedrett  
**Subject:** Re: Crescent Meadow's Thinning

Bob,  
I agree, get them out this week. We can reassess July in another month or so. I am highly concerned about the amount of resource damage this crew has done.  
Ben Pedrett

---

**From:** Bob Bundy <Bob.Bundy@colostate.edu>  
**To:** Ben Pedrett <Ben.Pedrett@state.co.us>; "Schulz, Matt" <Matt.Schulz@state.co.us>  
**Sent:** Monday, April 20, 2009 5:16:32 PM  
**Subject:** RE: Crescent Meadow's Thinning

Ben,  
Sorry I didn't get back to you sooner. I was snowed in and in the dark since Thursday. I talked with the contractors and Matt late last week. As of right now, the contractors are essentially 2/3rds done. All the work has occurred on the east end and out of site from the parking lot. Since the work continues to go slowly due to maintenance and weather, we're looking to get them out of there. The plan now is to hold off on the 11 acre dense section along the trail to the north of the parking lot. They are going to have to come back in during July to finish that. I wanted them to get it all done soon, but work continues to drag.

They have held off on doing any low-lying and north facing sections due to moisture and potential to do major ground disturbance. I support that, but it is pushing the timetable back. I have another call into the contractors, and plan to visit the site on Wednesday. I told them to make a push through Friday, then move out. They may get everything, other than the 11 acres, done by then. Otherwise, they'll leave the current work areas in good shape and finish any other incomplete acres in July.

Let me know your thoughts on this. I'd really like it to get done now, but at this rate, it seems it could be another month's worth of operation.

Bob Bundy  
Fuels Treatment Partnership & Wildfire Mitigation Forester  
Colorado State Forest Service - Boulder District  
5625 Ute Highway Longmont, CO 80503  
(303) 823-5774  
(303) 823-5768 fax  
[Bob.Bundy@colostate.edu](mailto:Bob.Bundy@colostate.edu)

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**From:** Ben Pedrett [mailto:Ben.Pedrett@state.co.us]  
**Sent:** Thursday, April 16, 2009 12:29 PM  
**To:** 'Schulz, Matt'; 'Bob Bundy'  
**Subject:** RE: Crescent Meadow's Thinning

Bob.  
Can you give us any updates?  
Ben



**From:** Schulz, Matt [mailto:Matt.Schulz@state.co.us]  
**Sent:** Friday, April 03, 2009 1:28 PM  
**To:** Pedrett, Ben; Bob Bundy  
**Subject:** RE: Crescent Meadow's Thinning

Ben and Bob –

I got up to the project site yesterday and took a quick look around. It was a little hard to get an accurate assessment of what had been completed and how it looked since there is still quite a bit of snow up there. I don't think the contractor was on site, which was a little surprising considering that it was a nice day and we have more snow coming.

From what I could tell, it looks pretty good. There are a couple areas that would have been good to see with no snow. See the white circles on the map. The larger circle had some damaged trees and a few trees that should be taken – not knowing where the contractor is at, I am assuming they are still working in that area. The smaller circle was where they had their small machine parked and even with the snow it looked as if they had been using that area for a few days – multiple tracks up and down the hill. I would recommend that they not use the same route to get to any area where they would like to park their machine – this should cut down on any significant damage to veg.

Obviously, our main concern is the trail. They had not started on those areas yet, but I think that Bob should mention to them something about not travelling back and forth across the trail. We had that problem at Roxborough to the point where you couldn't make out the trail any longer. This is especially important because it will continue to be wet up there. They should only really cross the trail once or twice per day and should not use it as a road or travel corridor.

Let me know if you have questions. Also, Bob, let us know when they are about half done with the trail corridor areas – I would like to get up there to check it out.

Thanks

Matt

---

**From:** Ben Pedrett [mailto:Ben.Pedrett@state.co.us]  
**Sent:** Thursday, April 02, 2009 1:38 PM  
**To:** Schulz, Matt  
**Subject:** RE: Crescent Meadow's Thinning

Matt,  
I won't be able to make it today.  
How did it go? Get any pics?  
Thanks,  
Ben

---

**From:** Schulz, Matt [mailto:Matt.Schulz@state.co.us]  
**Sent:** Thursday, April 02, 2009 11:11 AM  
**To:** Bob Bundy  
**Cc:** Pedrett, Ben  
**Subject:** RE: Crescent Meadow's Thinning

Ben –

I am still planning on being up there today at 1pm-ish, if you are interested in taking a look with me.

Bob – FYI in case your plans have changed.



Thanks

Matt

---

**From:** Bob Bundy [mailto:Bob.Bundy@colostate.edu]  
**Sent:** Tuesday, March 31, 2009 5:37 PM  
**To:** Schulz, Matt  
**Cc:** Pedrett, Ben  
**Subject:** RE: Crescent Meadow's Thinning

As of right now, I don't think I'll be able to make it on Thursday. We are looking to do more pile burning. I'll be up tomorrow morning to check on everything. I'll let you know if anything comes up.

Thanks.

Bob Bundy  
Fuels Treatment Partnership & Wildfire Mitigation Forester  
Colorado State Forest Service - Boulder District  
5625 Ute Highway Longmont, CO 80503  
(303) 823-5774  
(303) 823-5768 fax  
[Bob.Bundy@colostate.edu](mailto:Bob.Bundy@colostate.edu)

---

**From:** Schulz, Matt [mailto:Matt.Schulz@state.co.us]  
**Sent:** Tuesday, March 31, 2009 1:55 PM  
**To:** Bob Bundy  
**Cc:** Pedrett, Ben  
**Subject:** RE: Crescent Meadow's Thinning

Bob –

You are correct in that we will not be impacting any endangered species or violating the terms of the BE by extending this project in to April. The bird breeding dates are basically set up for any "regular" species that are in the area as well as any endangered species that we don't know about – but the dates are an internal guideline that doesn't need to be followed closely in every instance.

We are fine with the operator continuing into mid-April.

As of today I am planning on checking on the project at Crescent Meadows from 1-3:30pm on Thursday. Sounds like Ben can make it then, let us know if you will be around.

Thanks

Matt

---

**From:** Bob Bundy [mailto:Bob.Bundy@colostate.edu]  
**Sent:** Monday, March 30, 2009 7:12 PM  
**To:** Schulz, Matt; Pedrett, Ben  
**Subject:** Crescent Meadow's Thinning



Ben and Matt,

Since Thursday ended up being a blizzard, would either of you like to head up to the project area this week? Depending on whether you would like to meet, I'm planning to go up either tomorrow (Tuesday) around 2pm, or can change my plans to go anytime Wednesday, or on Thursday after 1pm. The contractors now have a large majority of the work finished. They have some cleanup work to do on acreage around the "rock gardens", and have to do the acreage along the trail.

I did a lot of homework on the initial timeline that was set for project implementation. I looked into the Biological Evaluation requirements to avoid Crescent's T&E species habitat. Preble's Mouse requires no work within 150m of identified riparian, and Mexican Spotted Owl requires no trees over 9" dbh to be cut on steep dense slopes. The project boundaries and specs meet that requirement. Although I'm not a Wildlife Biologist, neither of these threatened species seem to have thinning timelines associated with the work nearby their potential habitat.

The PRS for the project states that:

"The project should be started in mid summer (July 16<sup>th</sup>), and finished by the end of March (31<sup>st</sup>) avoiding the high use times of year and the wet spring drainage season. This will also ensure that bird breeding and nesting times (April 1<sup>st</sup> through July 15<sup>th</sup>) will be avoided."

The USFWS approval letter didn't mention this timeline, and I couldn't find any mention of it in the Biological Evaluation. Therefore, I'm assuming this was based on observations and overall recommendations? In regards to that, I'd like to ensure that it is okay with the Park to allow the contractor up to eight additional operating days. The contractor said that by April 10<sup>th</sup> all work should be completed. I'd prefer to get things done now, so they won't have to come back in July to complete a few acres. Is that okay with you folks?

Bob Bundy

Fuels Treatment Partnership & Wildfire Mitigation Forester

Colorado State Forest Service - Boulder District

5625 Ute Highway Longmont, CO 80503

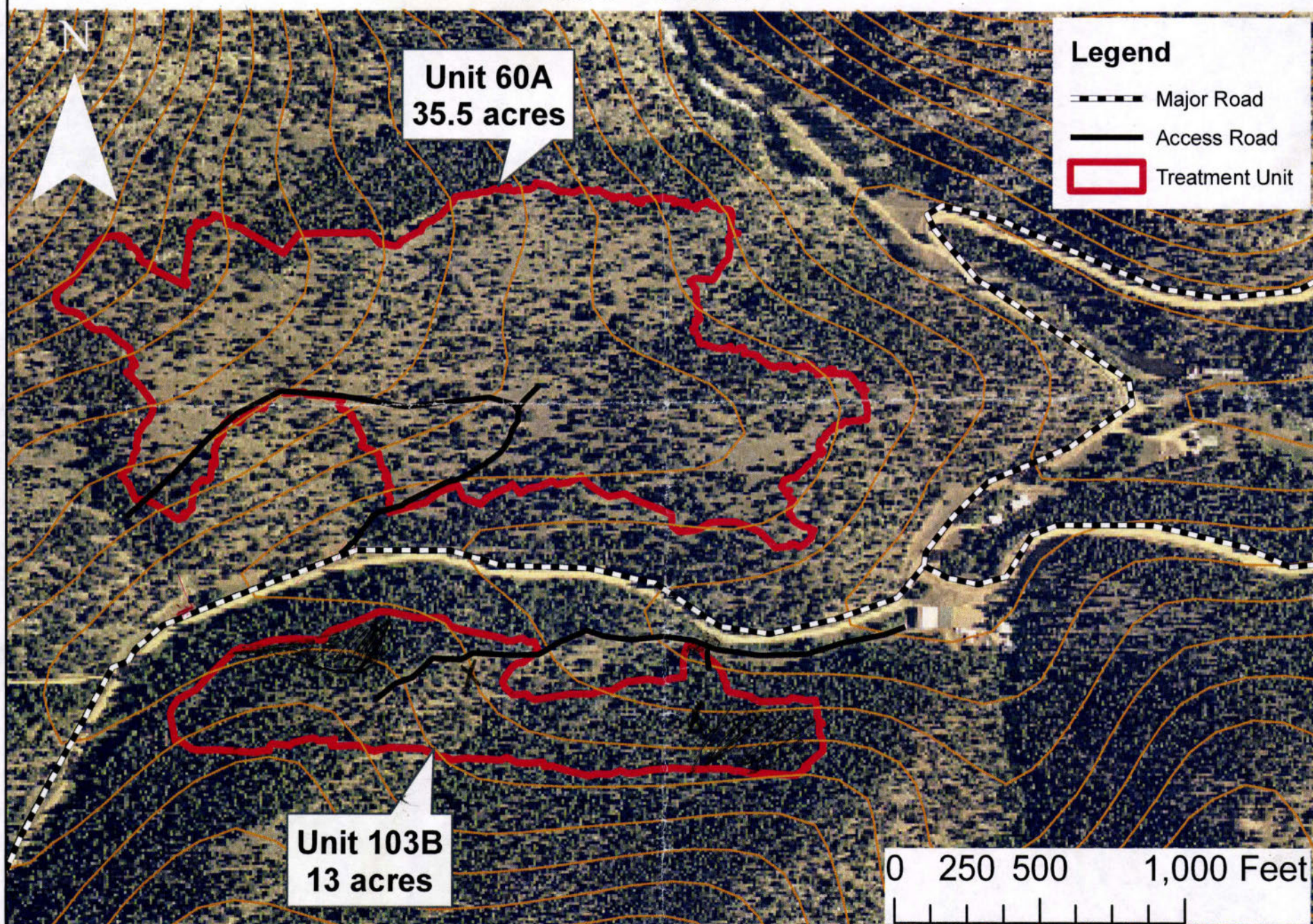
(303) 823-5774

(303) 823-5768 fax

[Bob.Bundy@colostate.edu](mailto:Bob.Bundy@colostate.edu)



# Denver Water - Gross Reservoir Fuels Reduction Project 2008 - 2009





**Eldorado Canyon State Park  
(3 Treatment Blocks)**

MAP A









Unit 4A  
11 acres

Unit 4B  
37 acres

REPAIR SITE

Access off of Gross Dam Rd  
north of railroad tracks

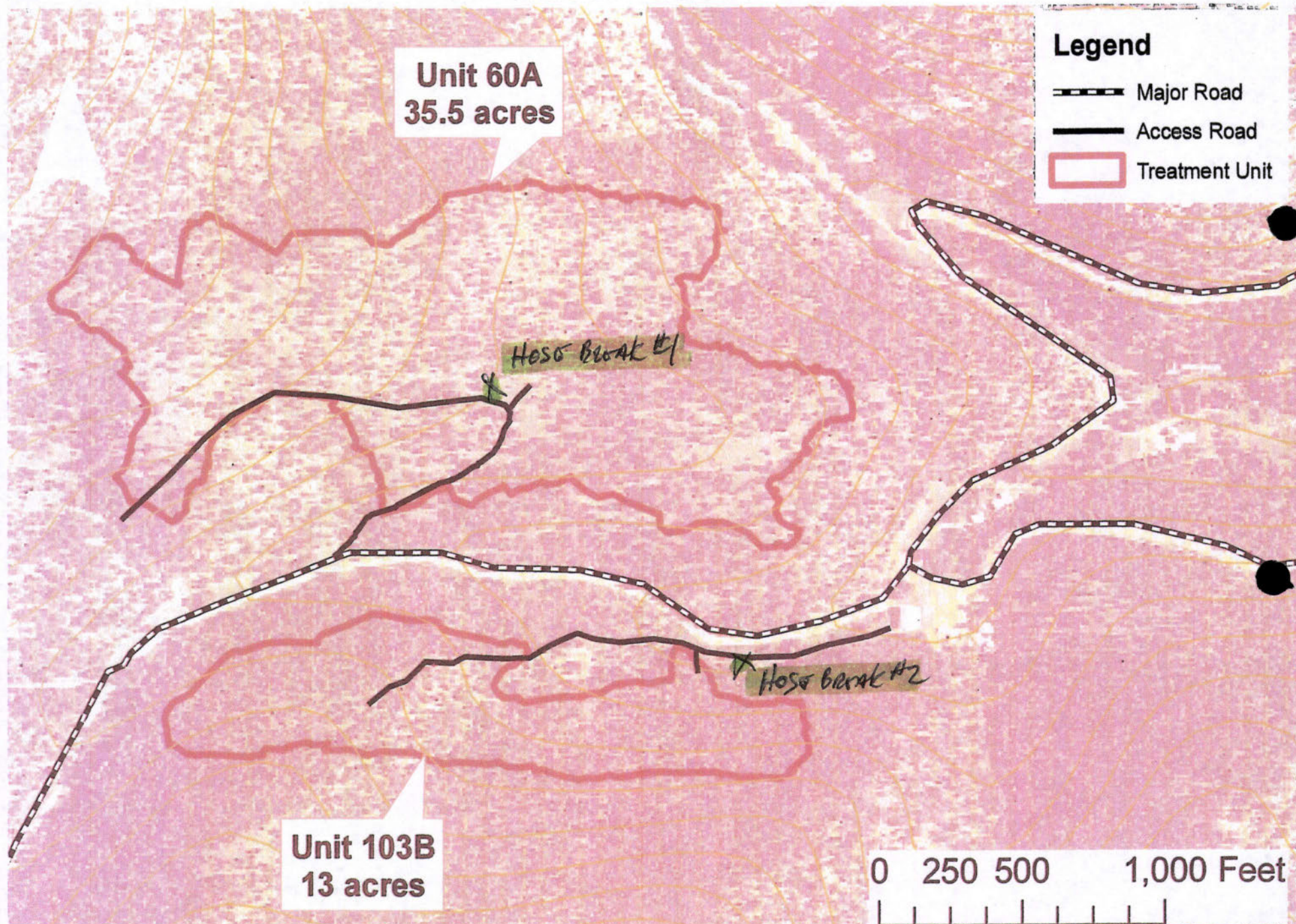
Unit 7b  
39.5 acres

-  Major Road
-  Forest Road
-  Single Track Trail
-  Railroad Tracks
-  Unit Access Point
-  Contours (40ft)
-  Power Lines
-  Treatment Unit

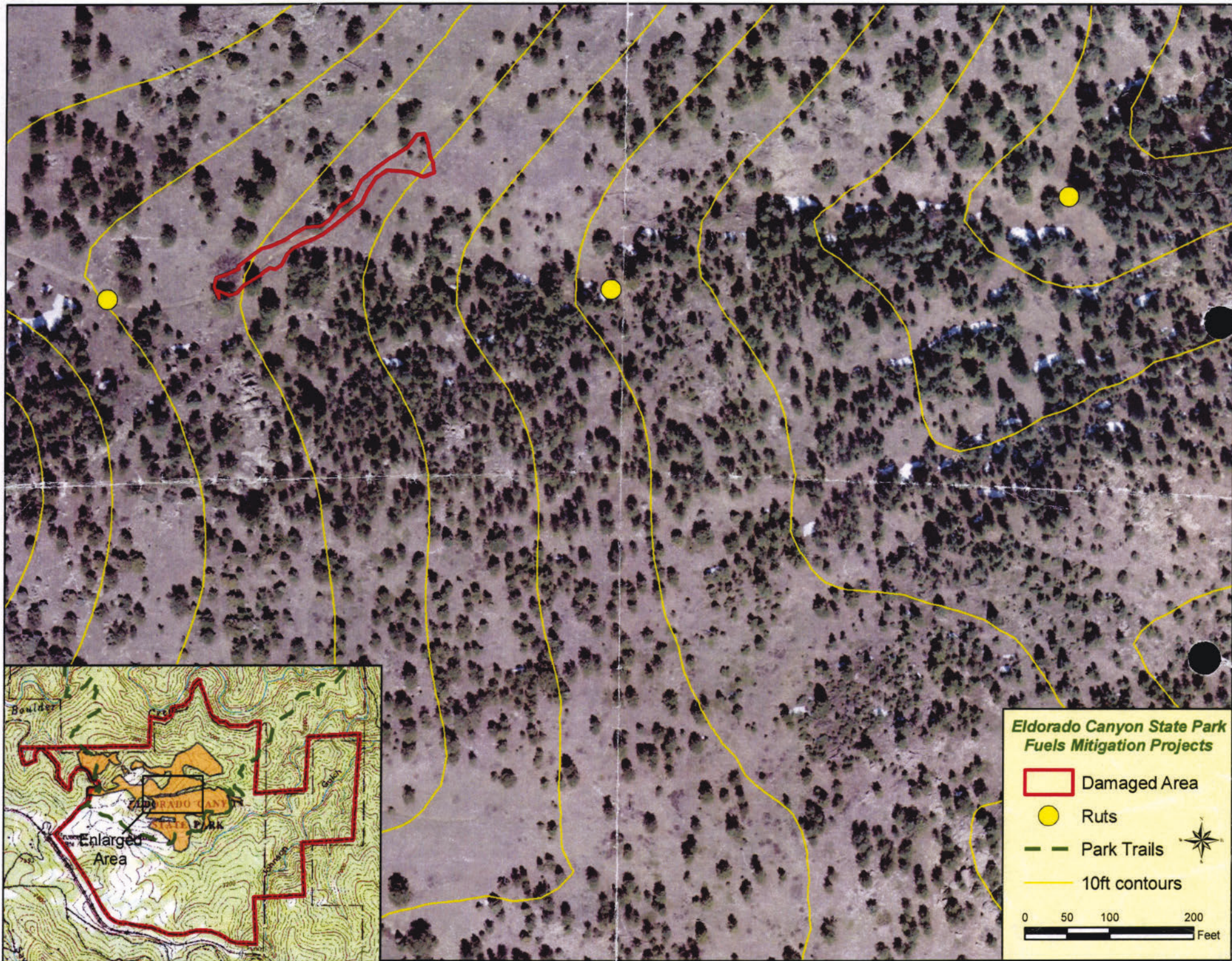
500 1,000 2,000 Feet



# Denver Water - Gross Reservoir Fuels Reduction Project 2008 - 2009









05021  
00511  
0552  
SE  
052

Red = Mastication  
Yellow = Hand Work

0.5992  
00522  
0521  
052  
SE  
C

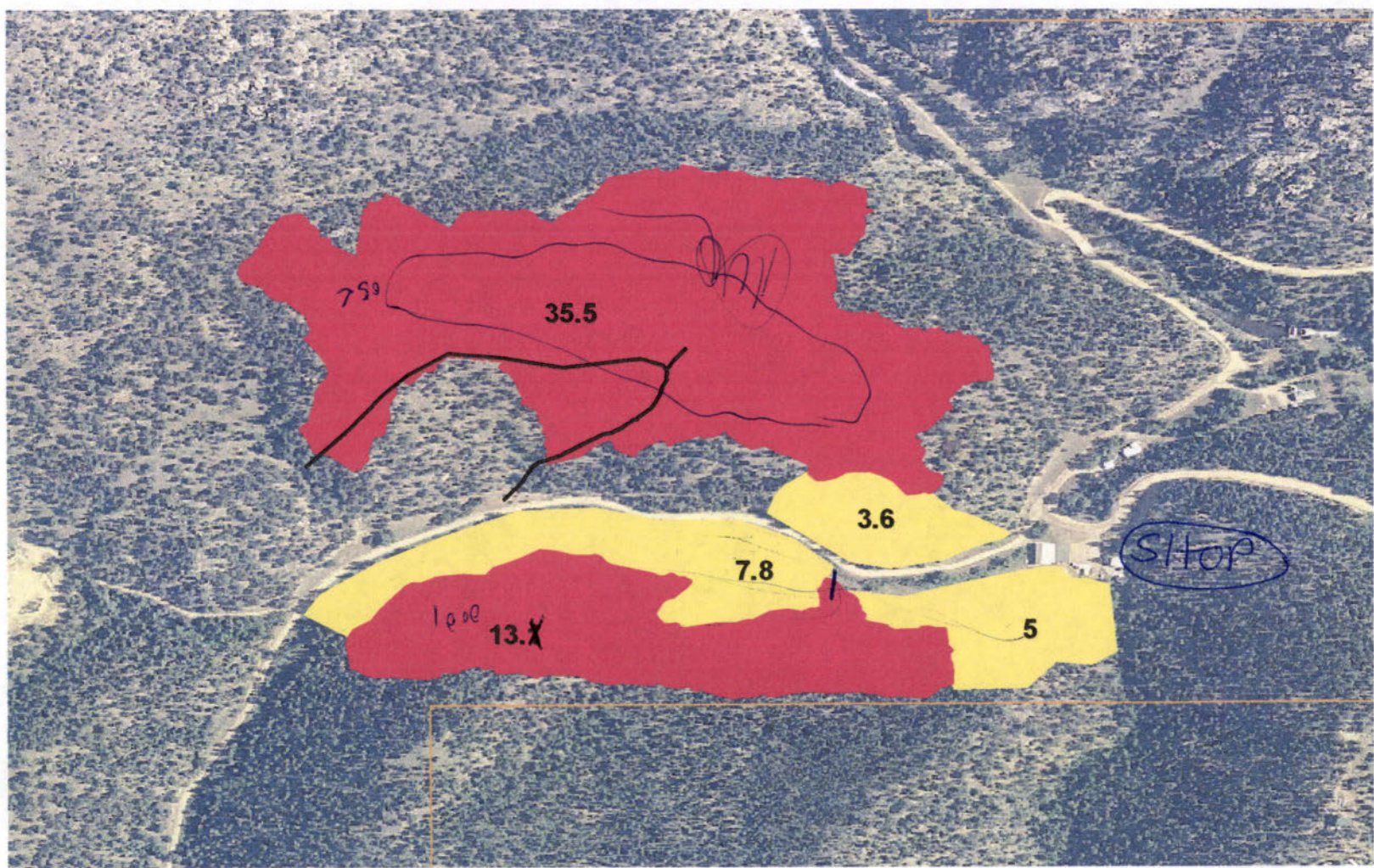
000'11 071  
8  
050'52  
000'51

48

110% indirect

000'05  
005'01  
005'02

01



35.5  
13.1  
48.6  
87.29  
135.9

29,900  
20,500  
10,500



Eldorado 2007 Layout



**Legend**

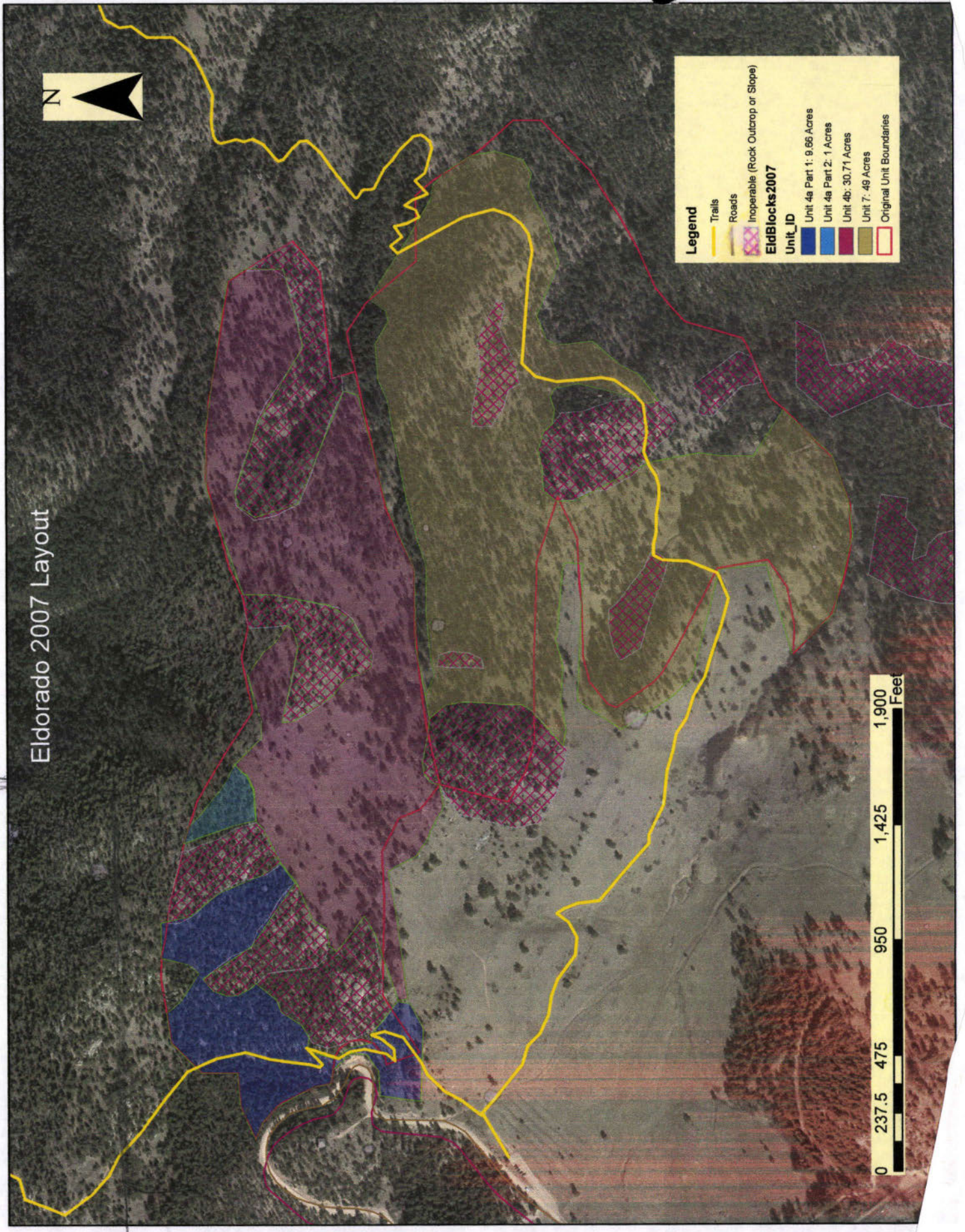
- Trails
- Roads
- Inoperable (Rock Outcrop or Slope)

**EldBlocks2007**

**Unit\_ID**

Unit_ID	Acres
Unit 4a Part 1	9.66 Acres
Unit 4a Part 2	1 Acres
Unit 4b	30.71 Acres
Unit 7	49 Acres

Original Unit Boundaries





Ma 130 BA  
↓ 85 BA

4b pms  
keep it open

# ELD Overall Map: 100.5 acres

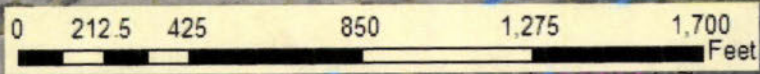


**Legend**

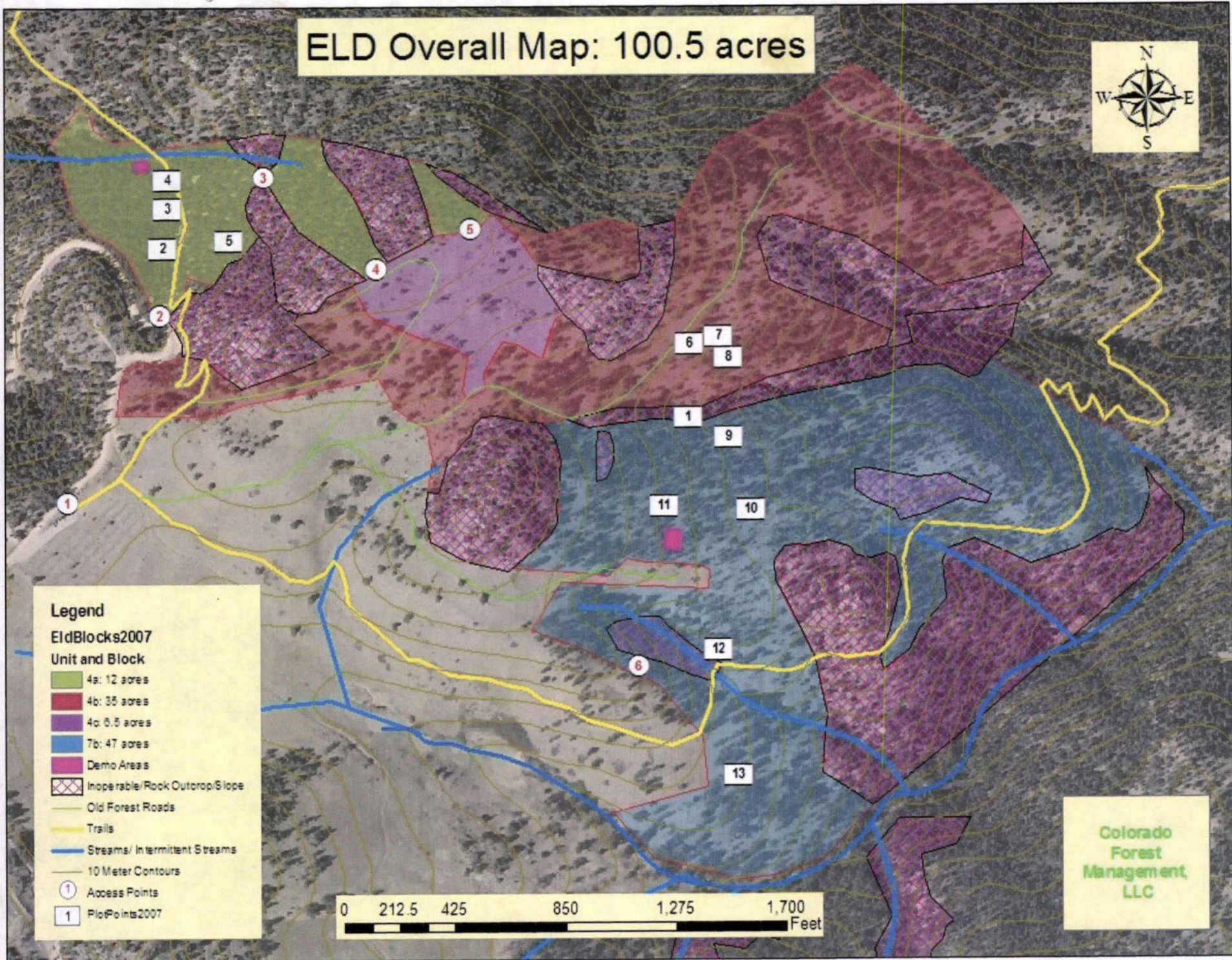
**EldBlocks2007**

**Unit and Block**

- 4a: 12 acres
- 4b: 35 acres
- 4c: 6.5 acres
- 7b: 47 acres
- Demo Areas
- Inoperable/Rock Outcrop/Slope
- Old Forest Roads
- Trails
- Streams/Intermittent Streams
- 10 Meter Contours
- Access Points
- PloPoints2007



Colorado  
Forest  
Management,  
LLC





# ELD Unit 4: 53.5 acres



## Legend

### EldBlocks2007

#### Unit and Block

- 4a: 12 acres
- 4b: 35 acres
- 4c: 6.5 acres
- Demo Areas
- Inoperable/Rock Outcrop/Slope
- Old Forest Roads
- Trails
- Streams/Intermittent Streams
- 10 Meter Contours
- Access Points

0 180 360 720 1,080 1,440 Feet

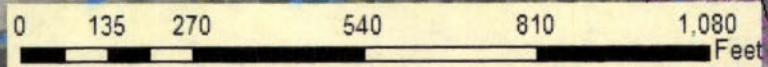
Colorado  
Forest  
Management,  
LLC



# ELD Unit 7b: 47 acres



- Legend**  
EldBlocks2007  
Unit and Block
- 7b: 47 acres
  - Demo Areas
  - Inoperable/Rock Outcrop/Slope
  - Old Forest Roads
  - Trails
  - Streams/ Intermittent Streams
  - 10 Meter Contours
  - Access Points
  - PlotPoints2007



Colorado  
Forest  
Management  
LLC



alowen

---

**From:** sp@research.colostate.edu  
**Sent:** Thursday, October 15, 2009 3:30 PM  
**To:** kfrasier@colostate.edu; mary.atella@colostate.edu; Allen.OWEN@colostate.edu  
**Subject:** 5-3 project update (Blue sheet notification) 10/14/2009

Project number 5-30387 has been created or updated

**Investigator:** Owen Jr, David Allen

Eldorado FFuels-Colorado Watershed Mitigation

**Sponsor Name:** Colorado Office of Emergency Management

**Contract No:** 7EM75CSFS

**Brief description of this action:**

10/13/2009

jwadma/return funds

For more details see the Research Project Status screen on the web at URL:

[https://pass.research.colostate.edu/rps/rps.asp?p\\_proj=0387](https://pass.research.colostate.edu/rps/rps.asp?p_proj=0387)

**Project Start:** 10/11/2006

**Project End:** 9/29/2010

[http://purgatory.research.colostate.edu/reports/rwservlet?RPS\\_Proj+0387+PDF](http://purgatory.research.colostate.edu/reports/rwservlet?RPS_Proj+0387+PDF)



# Research Project Status for 5303870

**Sponsored Programs**  
Fort Collins, CO 80523-2002  
(970) 491-6355  
FAX: 491-6147

**Administrator** Chris Getzelman  
**Technician** Judi Wadman  
**Title** Eldorado FFuels-Colorado Watershed Mitigation

**Department** 5060 Colorado State Forest Service  
**Dept Tech Name** Frasier, Kathleen P  
**Contract #** 7EM75CSFS  
**Sponsor** Colorado Office of Emergency Management  
**Investigator** Owen Jr, David Allen  
**Department** 5060 Colorado State Forest Service  
**Phone** (303)823-5774

**Technical Rept**

**Property Title** not allowed

**Budget Remarks** 10/13/09 return \$28,605 to 530385  
8/3/09 no cost extension  
5/29/08 add \$62,370 from 530385  
2/18/08 CM Update OE Status to 1  
1/31/08 CM Update OE Status to 2  
12/19/07 add funds from 530385  
11/29/07 CM Update OE Status to 2  
11/3/06 start. The Grantee shall follow prior approval requirements for budget revisions found in 44 CFR 13.30. Transfer of funds between total direct cost categories in the approved budget shall receive the prior approval of FEMA when such cumulative transfers among those direct cost categories exceed 10% of the total budget. Quarterly financial and performance reports are due 1/30, 4/30, 7/30 and 10/30. The report shall consist c

**Status** 06 Active  
**PASS ID**  
**Prior Project**  
**Continuing Project #**  
**Project Start** 11-OCT-06  
**Project End** 29-SEP-10  
**Budget Start** 11-OCT-06  
**Budget End** 29-SEP-10  
**Last Update** 15-OCT-09  
**IC Base** TO  
**IC Rate** 5.00%  
**IC Limit**  
**Payment Method** COST REIMBURSABLE (03)  
**FDP** No  
**SNAP** No  
**Final Dept Entries Due** 29-OCT-10  
**Final Sponsor Report Due** 28-NOV-10  
**Technical Report Due** 28-NOV-10  
**Closed Date**  
**Record Retention Date**  
**Equipment Threshold** \$5000 or more  
**Tuition** 0

**NOTE:** Financial information may **not** be accurate during fiscal year end processing (June 30 through August 3).

<u>Description</u>	<u>Budget Change</u>	<u>Budget</u>	<u>MTD</u>	<u>YTD</u>	<u>PTD</u>	<u>ENC</u>	<u>Balance</u>
20 Personnel	\$0	\$0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
30 Domestic Travel	\$0	\$0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
32 International Travel	\$0	\$0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
34 Materials & Supplies	\$0	\$0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
40 Other Direct	\$0	\$99,476	\$0.00	\$99,476.25	\$99,476.25	\$3,759.38	-\$3,759.63
75 Subcontracts	\$0	\$0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
80 Equipment	\$0	\$0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Direct	\$0	\$99,476	\$0.00	\$99,476.25	\$99,476.25	\$3,759.38	-\$3,759.63
90 Indirect	\$0	\$4,975	\$0.00	\$4,973.81	\$4,973.81	\$0.00	\$1.19
Total	\$0	\$104,451	\$0.00	\$104,450.06	\$104,450.06	\$3,759.38	-\$3,758.44
<b>Total Received</b>		\$98,307.56					

October 15, 2009



## Additional Information for 5303870

<u>Investigators</u>			<u>Equipment Accounts</u>	<u>Cost Share Accounts</u>	<u>Related Accounts</u>
<u>Investigator</u>	<u>Role</u>		<u>Account</u>	<u>Account</u>	<u>Account</u>
Owen Jr,David Allen	Primary Principal Investigator			530379	0391
<u>CSU Commitment</u>					0390
<u>Pool</u>	<u>Description</u>	<u>Budget</u>			0388
20	Personnel	\$0			0389
30	Domestic Travel	\$0			0386
32	International Travel	\$0			0387
34	Materials and Supplies	\$0			0385
40	Other Direct	\$20,400			0461
75	Subcontracts	\$0			0381
80	Equipment	\$0			0380
	<b>Total Direct</b>	<b>\$20,400</b>			0379
90	Indirect	\$2,040			0378
	<b>Total</b>	<b>\$22,440</b>			0383
					0382
					0248
					0508
					0509
					0520

### Cost Share Comments



### AGREEMENT TO END CONTRACT

This agreement, made this 24<sup>th</sup> day of July, 2009, by and between The Natural Way, Inc. hereinafter referred to as the CONTRACTOR, and Colorado State University System in behalf of the Colorado State Forest Service - Boulder District, hereinafter referred to as the CSFS; and

Whereas, the CONTRACTOR and CSFS agree to end the "*Eldorado Canyon State Park Crescent Meadows & Denver Water Gross Reservoir*" contract (PO# SO20559) as the specifications below are met.

1. The CONTRACTOR will complete the fluid spill and rut restoration work on Eldorado Canyon State Park to the specifications of the CSFS and Colorado State Parks. A CSFS representative will be present to verify the restoration work is completed to specifications.
2. The CONTRACTOR will complete the remaining acres on the Denver Water Unit 103B, and attend to any identified and existing restoration needs.
3. The CSFS will GPS all completed acres of the contract, and provide this information to the contractor. This information will be used as the final determination of the total completed and billable acreage.
4. The CSFS will send a letter to the CONTRACTOR, signifying the completion and approval of all remaining work outlined in this document.

When the above criteria are met, the CONTRACTOR will resubmit the fifth and final project invoice (#45902) based upon the completed GPS acreage that has yet to be reimbursed. The CONTRACTOR will be refunded the full amount of the damage deposit and performance bond. As the above specifications are met, and outstanding funds are paid, each party will no longer have any debt or obligation to the other party. If the contractors responsibilities, listed above, are not met, CSU reserves the right to terminate the contract.

Due to the unforeseen challenges, issues, and property owner concerns that have arisen on the Eldorado Canyon State Park portion of the project, the remaining untreated acres for that property will not be treated. The contract agreement will end and treatment on the contract's remaining acres will not be the responsibility of the CONTRACTOR.

The following parties mutually agree to end the contract:

Name: The Natural Way, Inc.  
(Contractor)

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

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

Name: Bob Bundy  
(CSFS)

Signature: Bob Bundy

Title: Assistant District Forester

Date: 7-24-09





# NON-HAZARDOUS WASTE MANIFEST

351508

Please print or type

1. Generator's US EPA ID Number		Manifest Document Number		2. Page 1 of					
3. Generator's Name and Mailing Address 10000 20th St St. Louis, MO 63114 Phone (314) 771-1100				5. Generating Location (if different) The Polymer Services Group 2000 N. 1st St St. Louis, MO 63107 Phone (314) 771-1100					
4. Phone ( )		6. Phone ( )		7. Transporter #1 Company Name		8. US EPA ID Number		9. Transporter #1's Phone	
10. Transporter #2 Company Name		11. US EPA ID Number		12. Transporter #2's Phone		13. Designated T/S/D Facility Name and Site Address 10000 20th St St. Louis, MO 63114 Phone (314) 771-1100		14. US EPA ID Number	
15. Facility's Phone		16. Waste Shipping Name and Description		17. Allied Waste Approval # and Exp. Date		18. Containers		19. Total Quantity	
						No. Type		20. Unit Wt/Vol	
a.									
b.									
c.									
d.									
21. Additional Descriptions for Materials Listed Above									
22. Special Handling Instructions and Additional Information									
23. GENERATOR'S CERTIFICATION: I certify the materials described on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.									
Printed/Typed Name Tony Scarsella				Signature <i>[Signature]</i>				Month Day Year 7 24 07	
24. Transporter #1: Acknowledgement of Receipt of Materials									
Printed/Typed Name Tony Scarsella				Signature <i>[Signature]</i>				Month Day Year 7 24 07	
25. Transporter #2: Acknowledgement of Receipt of Materials									
Printed/Typed Name				Signature				Month Day Year	
26. Discrepancy Indication Space									
27. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest (except as noted in Item 19)									
Printed/Typed Name Jessica Wiers				Signature <i>[Signature]</i>				Month Day Year 7 24 07	

TRANSPORTER #1

COM000033



Tower Landfill  
The Forestry Service  
acct# 961248

4549609

SITE	TICKET	GRID
	band	
WEIGHMASTER		
DATE IN	7/24/09	TIME IN
DATE OUT	7/24/09	TIME OUT
VEHICLE		ROLL OFF
REFERENCE	351508	ORIGIN
		Y99231

in: 21,100  
out: 12,040

QTY.	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
5	yds	hydraulic fluid cont. soil				

NET AMOUNT
TENDERED
CHANGE
CHECK NO.



SIGNATURE Taylor




**REPUBLIC  
SERVICES**
**EXPRESS WASTE PROFILE**

Requested Disposal Facility: — Select a Facility —

Sevenside fill in form. Restricted printing until all required (yellow) fields are completed.

**I. Generator Information**

 Generator Name: THE FORESTY SERVICES GROUP INC.

Generator Site Address:

City: County: State: — Select a State — Zip:

State ID/Reg No: State Approval/Waste Code: (If applicable) NAICS #:

 Generator Mailing Address (if different): 5475 PRESERVE DRIVE

 City: GREENWOOD VILLAGE County: ADAMS State: — Select a State CO Zip: 80121

 Generator Contact Name: JERRY SCARSETTA

 Email: thirty-nine-zero@comcast.net

 Phone Number: 303 771-3126 Ext: Fax Number: 720-200-4441
**IIa. Transporter Information**

 Transporter Name: THE FORESTY SERVICES GROUP

 Contact Name: JERRY SCARSETTA

 Transporter Address: 5475 PRESERVE DRIVE

 City: GREENWOOD VILLAGE County: ADAMS State: CO Zip: 80121

 Phone Number: 771-3126 Fax Number: 720-200-4441 State Transportation Number:

**IIb. Billing Information**

 Bill To: SAME AS ABOVE

 Contact Name: SAME

 Billing Address: SAME

 Email: SAME

 City: SAME

 State: SAME

 Zip: SAME

 Phone: SAME
**III. Waste Stream Information**

Name of Waste:

(Petroleum products-applies only to contaminated media and debris).

- ☐ Diesel Fuel  
☐ Home Heating Fuel #1-6  
☐ Kerosene  
☐ Aviation Fuel  
☒ Hydraulic Fluid  
☐ Unleaded Gasoline (UST Corrective Action)

- ☐ Weathered Wood  
☐ RCRA Empty Containers  
☐ Treated Medical Waste  
☐ Animal Carcass  
☐ Plant Trash  
☐ Meth Contaminated Debris

- ☐ Friable Asbestos  
☐ Non Friable Asbestos  
☐ Friable and Non Friable Asbestos

 Process Generating Waste: BROKEN HYDRAULIC LINE CAUSED SANDY LOAM CONTAMINATION

 Method of Shipment: ☒ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:

 Estimated Annual Volume: 1/2 CY — Select Volume Type — 1/2 CY

 Frequency: ☒ ONE TIME ☐ ANNUAL

**IV. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

GERARD SCARSETTA  
 Authorized Representative Name/Title (Type or Print)

[Signature]  
 Authorized Representative Signature

THE FORESTY SERVICES GROUP  
 Company Name

7/20/09  
 Date



The Valvoline Company

Date Prepared: 01/14/02

MSDS No: 505.0273691-002.0101

VALVOLINE QUALITY ANT-WR HYDR OIL ISO 32

---

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: VALVOLINE QUALITY ANT-WR HYDR OIL ISO 32

General or Generic ID: PETROLEUM BASED-LUBRICATING OIL

Company

The Valvoline Company  
P.O. Box 14000  
Lexington, KY 40512

Telephone Numbers

Emergency: 1-800-274-5263

Information: 1-859-357-7206

---

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)
-----	-----	-----
HYDRAULIC OIL		100.0

---

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye

Unlikely to cause eye irritation or injury.

Skin

May cause mild skin irritation. Prolonged or repeated contact may dry and crack the skin.

Swallowing

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful.

Inhalation

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

Symptoms of Exposure

stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), pain in the abdomen.

Target Organ Effects

No data

Developmental Information

No data

Cancer Information



No data

Other Health Effects

No data

Primary Route(s) of Entry

Skin contact.

---

4. FIRST AID MEASURES

Eyes

If symptoms develop, move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.

Skin

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

Swallowing

Do not induce vomiting. Give one glass of milk or water, and get medical attention immediately. If possible, do not leave victim unattended.

Inhalation

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

Note to Physicians

Preexisting disorders of the following organs ( or organ systems) may be aggravated by exposure to this material: skin.

---

5. FIRE FIGHTING MEASURES

Flash Point

350.0 F (176.6 C) COC

Explosive Limit

No data

Autoignition Temperature

No data

Hazardous Products of Combustion

May form: carbon dioxide and carbon monoxide, oxides of sulfur, nitrogen and phosphorus, various hydrocarbons.

Fire and Explosion Hazards

Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Dense smoke may be generated while burning.



#### Extinguishing Media

regular foam, carbon dioxide, dry chemical.

#### Fire Fighting Instructions

Water or foam may cause frothing which can be violent and possibly endanger the life of the firefighter. Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

#### NFPA Rating

Health - 1, Flammability - 1, Reactivity - 0

---

### 6. ACCIDENTAL RELEASE MEASURES

#### Small Spill

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

#### Large Spill

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers.

---

### 7. HANDLING AND STORAGE

#### Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

#### Storage

Not applicable

---

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Eye Protection

Not required under normal conditions of use. However, if misting or splashing conditions exist, then safety glasses or chemical splash goggles are advised.

#### Skin Protection

Not normally required. However, wear resistant gloves such as nitrile rubber to prevent irritation which may result from prolonged or repeated skin contact with product., Wear normal work clothing covering arms and legs..

#### Respiratory Protections



Not required under normal conditions of use. However, if oil mists are generated above recommended PEL/TLV of 5 mg/m<sup>3</sup>, then a NIOSH/MSHA approved respirator is advised in absence of proper environmental control. (See your industrial hygienist.)

#### Engineering Controls

Not required under normal conditions of use. However, if unusual operating conditions exist, then provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below PEL/TLV (s).

#### Exposure Guidelines

Component

-----

#### HYDRAULIC OIL

No exposure limits established

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Boiling Point

Not applicable

#### Vapor Pressure

Not applicable

#### Specific Vapor Density

> 1.000 @ AIR=1

#### Specific Gravity

.913 @ 60.00 F

#### Liquid Density

7.610 lbs/gal @ 60.00 F

.913 kg/l @ 15.60 C

#### Percent Volatiles (Including Water)

No data

#### Evaporation Rate

SLOWER THAN ETHYL ETHER

#### Appearance

No data

#### State

LIQUID

#### Physical Form

No data

#### Color

CLEAR TO LIGHT YELLOW

#### Odor

No data

#### pH

Not applicable



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10. STABILITY AND REACTIVITY

Hazardous Polymerization

Product will not undergo hazardous polymerization.

Hazardous Decomposition

May form: carbon dioxide and carbon monoxide, oxides of sulfur, nitrogen and phosphorus, various hydrocarbons.

Chemical Stability

Stable.

Incompatibility

Avoid contact with: strong oxidizing agents.

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11. TOXICOLOGICAL INFORMATION

No data

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12. ECOLOGICAL INFORMATION

No data

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13. DISPOSAL CONSIDERATION

Waste Management Information

Dispose of in accordance with all applicable local, state and federal regulations.

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14. TRANSPORT INFORMATION

DOT Information - 49 CFR 172.101

DOT Description:

Not Regulated

Container/Mode:

CASES/SURFACE - NO EXCEPTIONS

NOS Component:

None

RQ (Reportable Quantity) - 49 CFR 172.101

Not applicable

---

15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status



TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4  
None

SARA 302 Components - 40 CFR 355 Appendix A  
None

Section 311/312 Hazard Class - 40 CFR 370.2  
Immediate(X)    Delayed( )    Fire( )    Reactive( )    Sudden  
Release of Pressure( )

SARA 313 Components - 40 CFR 372.65  
None

International Regulations  
Inventory Status  
Not determined

State and Local Regulations  
California Proposition 65  
None

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16. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

Last Page





Supplying **QUALITY** Seed  
With **INTEGRITY** Since 1945

Limitation of Warranty and Finance Charge  
Agreement are part of the terms and conditions  
of this sale. See back of this invoice.

www.avseeds.com  
rabbitears@seedsolutions.com

# PRELIMINARY INVOICE

Page Number - 1  
Date - 06/10/09  
Customer - 464087  
Brn/Plt - DEN  
Related P/L -  
Order Nbr - 2477678 50  
Invoice -

Sold To: CASH SALES AVE DWR CASH  
4625 COLORADO BLVD  
DENVER CO 80216

Ship To: eldorado state park  
4625 COLORADO BLVD  
DENVER CO 80216

Tax ID:  
Tax Cert:

V 010991

Request Date	Customer P.O.	F.O.B.	Ship :		
06/09/09			Inst :		
Description	Lot Number	Quantity Shipped UM	Price	Extended Price	Tax
San Luis Slender Whitgrs.50-CRT San Luis Slender Whitgrs.50-CRT Whitgrs.50	L181D-8-SLB	5.0000 LB	2.1500	8.45	Y
Exotic Rush-BULK Exotic Rush-BULK	JB-108	.2500 LB	140.0000	35.00	Y
3-75 Single Straw Blanket (5.67"x108") 3-75 Single Straw Blanket	575STOCK6/09	4.0000 EA	38.0000 Per EA	152.00	Y
Stables 11 BA 6X1X6 (500ct) Stables 11 BA 6X1X6 (500ct) JOB: ELDORADO CANYON STATE PARK	DENVER 1-09	1.0000 EA	23.0000	23.00	Y

Terms	Due upon receipt of in	Net Due Date 06/20/09	Tax Rte 2.900	Salad Tax	Total Order
					216.45

Arkansas Valley Seed  
4333 Hwy. 66  
Longmont, CO 80504  
877/ 907-3337  
970/ 535-4522 Fax

Arkansas Valley Seed  
4625 Colorado Blvd.  
Denver, CO 80216  
(877) 957-3337  
(303) 320-7516 Fax

Arkansas Valley Seed  
12th & Santa Fe Tracks  
Rocky Ford, CO 81067  
(719) 254-7469  
(719) 254-4115 Fax

Colorado Seed  
195 N. Washington  
Monte Vista, CO 81144  
(719) 852-3505  
(719) 852-4942 Fax

Wilbers Seed  
809 N. Broadway  
Miller, SD 57362  
(800) 952-2233  
(605) 853-7639 Fax



Kind: SLENDER W/G, SAN LUIS  
Lot: LMND-8-SLB

Pure: 98.27%	Germ & Hard: %
Crop .00%	Germination: 95%
Inert: 1.59%	Hard/Dormant: %
Weeds: .14%	Net Wt.: 3#
	Tested: 02/09
	Origin: WA

Noxious Weeds: NONE FOUND

---

Kind: BALTIC RUSH  
Lot: JB-108

Pure: 99.09%	Germ & Hard: %
Crop .00%	Germination: 87%
Inert: .91%	Hard/Dormant: %
Weeds: .00%	Net Wt.: .25#
	Tested: 09/08
	Origin: CO

Noxious Weeds: NONE FOUND

---



# EROSION CONTROL PRODUCTS

## S75® Single Net Straw Blanket

- Comprised of 100% agricultural straw stitched with degradable thread to a single photodegradable polypropylene netting
- Provides erosion protection for up to 12 months on 4:1 to 3:1 slopes and low flow channels
- Dimensions: 6.67 ft by 108 ft (covers 720 square feet or 80 square yards)

*THIS PRODUCT IS WEED FREE.*

*Cathy Horne*

## S150® Double Net Straw Blanket

- Comprised of 100% agricultural straw stitched with degradable thread between two degradable polypropylene nettings
- Provides erosion protection for up to 12 months on 3:1 to 2:1 slopes and moderate flow channels
- Dimensions: 6.67 ft by 108 ft (covers 720 square feet or 80 square yards)

## SC150® Double Net Straw-Coconut Blanket

- Comprised of 70% agricultural straw/30% coconut fiber matrix stitched with degradable thread between a UV stabilized top netting and a standard polypropylene bottom netting
- Provides erosion protection for up to 24 months on slopes up to 1:1 and medium flow channels
- Meets Douglas County specifications for erosion control
- Dimensions: 6.67 ft by 108 ft (covers 720 square feet or 80 square yards)

## DS75™ Single Net Straw Blanket

- Comprised of 100% agricultural straw stitched with degradable thread to a single UV accelerated photodegradable polypropylene netting
- Designed to assist in rapid vegetation establishment of turf & native areas and will degrade in up to 45 days
- Provides erosion protection on 4:1 to 3:1 slopes and low flow channels
- Dimensions: 6.67 ft by 108 ft (covers 720 square feet or 80 square yards)

## Futerra® Green Turf Blanket

- Comprised of wood fiber and crimped interlocking synthetic fibers laminated by an accelerated photodegradable polypropylene netting
- Assists in the establishment of seeded turf while the netting degrades within 6 weeks and the wood matrix within 10 months
- Bonds to the soil surface and provides erosion protection on slopes up to 1:1
- Dimensions: 6.83 ft by 135 ft (covers 922 square feet or 102.5 square yards)

## 6" Wire Staples – Blanket Fastener

- 11 gauge wire staple
- 500 count box secures 5 blankets or 1000 count box secures 10 blankets
- For long-term applications in native and reclamation sites

## 6" BioSTAKES® – Blanket Fastener

- Sturdy and rigid stake that will break down over a period of 1 to 3 years
- 576 count box secures 5 to 6 blankets
- For home/residential applications where close mowing is necessary

## Recommendations:

Add 10% for overlap and waste when calculating blanket needs

Approximately 100 staples required for each blanket

*Arkansas Valley Seed Solutions is proud to partner with Nilex Corporation to carry the line of North American Green® Erosion Control Products to meet your erosion control needs. Pricing and availability on these products are available upon request and subject to change. Please contact Dave Weigand for more information.*

Dave Weigand  
Reclamation Sales Manager  
Toll Free 877-95-SEEDS  
dlweigand@seedsolutions.com





**MASTICATION**  
**BEST MANAGEMENT PRACTICES**  
**and**  
**OPERATIONAL CONSIDERATIONS**

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Best Management Practices (BMPs) are a combination of practices determined by a state or a designated planning agency to be the most effective and practicable means (including technological, economic, and institutional considerations) for controlling point and nonpoint source pollutants at levels compatible with environmental quality goals. (Note: BMPs were originally conceptualized in the 1972 US Federal Water Pollution Control Act.)

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The Colorado State Forest Service and Colorado Timber industry Association published "Colorado Forest Stewardship Guidelines – To Protect Water Quality" in February 1998. This publication is considered the Best Management Practices for Colorado. It contains sections on watersheds, roads, streamside management, wildfire, timber harvesting, hazardous substances and stream crossings.

Since 1998 mastication of forest growth for wildfire hazard reduction and forest health improvement has expanded dramatically across the state. The BMPs in this document are meant to supplement existing published BMPs. They focus on mastication activities and expand the scope of BMPs beyond point and non-point pollutants to include wildlife, public safety and vegetative health concerns also.

Regardless of the mastication method the following items should be considered during any such project:

1. Conspicuously post signs on roads and trails in the project area warning people of the hazards of flying debris.
  - a. Temporarily close roads or post flagmen to control traffic when working adjacent to roads and trails open to the public.
2. Conduct mastication activities in a way that projects mastication debris away from buildings and other things that may be damaged by flying chunks of biomass, rock or machine operation.
  - a. Different combinations of machine carriers and mastication heads affect how and where mastication debris are projected.
  - b. Consider requiring specific equipment combinations if significant "target areas" are part of an individual project.
3. Avoid depositing mastication by products (chips and chunks) in the following areas:
  - a. Perennial streams
  - b. Intermittent streams
  - c. Road surfaces, drainage ditches and culvert basins

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- i. Remove mastication by products larger than 1-inch diameter and/or 1-foot long from the surface of roads and trails on a periodic basis appropriate to the level of road or trail use.
4. Clearly mark or otherwise identify project area boundaries with paint, flagging or by description.
  - a. If work will not begin immediately boundaries should be marked with paint and not just flagging.
  - b. It has proven useful to "refresh" boundaries with new flagging just prior to project startup. This is especially helpful in very dense and very open stands.
  - c. Flag all property corners, survey monuments and witness trees prior to beginning work on a treatment unit and make sure equipment operators are aware of their presence.
  - d. Clearly mark and identify any specific trees *not* to be removed. Examples include wildlife trees, "character" trees, etc.
5. Mastication projects are best conducted using an "end results contract" that defines conditions desired at the completion of the project. Avoid using "marked tree" contracts.
  - i. Provide a desired target and an acceptable range for basal area or tree spacing.
  - ii. Specify if existing down and/or dead materials are to be treated.
  - iii. Define realistic maximum chip/chunk depths and piece size and lengths. Understand that smaller piece sizes directly affect project cost per acre.
6. Avoid damaging the residual stand of trees during mastication process.
  - a. Ensure that target basal area or tree spacing is adequate to allow sufficient room for equipment to operate.
  - b. Carefully review the operator's proposal for the type(s) of equipment to be used to ensure that it is appropriately scaled to desired basal area or tree spacing.
  - c. Most common are "bump" or "rub" trees.
  - d. It is often best to require mastication of bump and rub trees if this will not significantly affect the desired basal area or tree spacing.
7. Consider valuable shrubs response to mastication. Avoid species that are not likely to respond well to mastication. (i.e. bitter brush)
8. Schedule mastication treatments in a way that compliments important wildlife nesting, fawning, calving and breeding seasons.
9. Collect all liquids, containers and packaging associated with equipment fueling and maintenance and dispose of it properly off site. Collect any soil

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contaminated with spilled liquids or grease and dispose of it properly off site.

10. Use appropriate caution to avoid starting a forest fire when welding or cutting metal during equipment maintenance.

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11. Provide significant levels of administration during project startup to ensure achievement of desired results.

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a. Some have found it useful to designate a demonstration area for project startup. Here, desired leave trees, clumps of trees and other desired features are very clearly marked to illustrate desired end results.

b. In either situation the project administrator must allow the contractor adequate time and sufficient area within which to operate before "corrective instructions" are given. Avoid tree-by-tree instructions.

c. Certain types of mastication equipment can move quickly through project areas. Schedule administrative visits frequently enough to match project progress.

12. Match equipment to the slopes and other terrain features found within the project area. Rules of thumb are:

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a. Wheeled equipment is generally effective on slopes  $\leq 35\%$ .

b. Tracked equipment is generally most effective on slopes  $> 35\%$ . Maximum slopes for operation of tracked equipment are  $\pm 55\%$ .

c. Broken terrain, areas where numerous drainages bisect the project area, are best operated using tracked machinery equipped with a mastication head mounted on a boom or arm. An example is a Timbco equipped with a Quadco mastication head.

d. On relatively consistent, un-broken terrain, wheeled equipment has been used on slopes up to 45%.

13. Depending upon the type of equipment being used, chips and chunks can be thrown up to 300 feet. Approaching operating equipment is generally best done from the rear of the machine.

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a. Some operators use small radios for communicating between machines. Often they will provide the project administrator a radio to contact them when face-to-face discussions are needed.

14. Tracked equipment will create berms whenever they turn. This can be accentuated on steeper slopes. Specify a maximum allowable height for berms within the contract. Require that berms exceeding this height be smoothed prior to acceptance of an operational unit. Berms can often be smoothed by dragging a boom-mounted mastication head across the area during normal operations.

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15. Equipment will often use the same access trail when traveling from equipment staging or service areas to the project area.

- a. Reseed if necessary and install waterbars or other water-diversion treatments.
- b. Close such trails by brushing-in and/or by installing gates or temporary fencing.

16. Rehabilitate staging and equipment serving areas if necessary. Consider ripping compacted soils, reseeding and mulching requirements.

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# CSFS VEGETATION MANAGEMENT INSPECTION REPORT

PROJECT NAME: \_\_\_\_\_

INSPECTION DATE: \_\_\_\_\_

LANDOWNER: \_\_\_\_\_

LAST INSPECTION DATE: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

INSPECTING FORESTER: \_\_\_\_\_

PROJECT WORK	Not Applicable	Satisfactory	Not Satisfactory	Past Problems Corrected
<b>A. UTILIZATION and/or CONTRACT SPECIFICATIONS:</b>				
1. Minimum tree and product specifications being met; residual BA within specifications for mastication projects				
<b>B. TRANSPORTATION:</b>				
1. Right of Way material utilized and/or disposed of				
2. No excessive damage from wet weather hauling or access				
3. Required maintenance performed				
4. Temporary Roads/Trails - constructed per contract specs.				
5. Temporary Roads/Trails - closed per contract specifications				
<b>C. CONTROL OF OPERATION:</b>				
1. Representatives - supervising operation and available				
2. Following operations plan and conducted safely				
3. Refuse/trash properly disposed of				
4. Existing improvements protected				
5. Work on schedule				
<b>D. CONDUCT OF LOGGING or MASTICATION/MULCHING:</b>				
1. Felling & bucking/mastication meets contract specifications				
2. Skidding - skid/access trails approved and properly cleared				
3. Skidding/Mastication - damage to residual trees within specs				
4. Skidding - YUM removal meeting contract specifications				
5. Landings - appropriate locations, construction, and size				
6. Slash Disposal - current & as required by contract specs				
<b>E. BEST MANAGEMENT PRACTICES:</b>				
1. Stream Course Protection - meets contract specifications				
2. Erosion - no excess damage due to weather, equipment				
3. Erosion - proper/current control measures installed				
4. Erosion - streams, wet meadows and springs avoided				
<b>F. FIRE PRECAUTIONS:</b>				
1. Fire plan is being used				
2. All logging equipment inspected and meets contract specs.				
3. Fire tool cache meets contract specifications				
<b>G. GENERAL:</b>				
1. Payments/Invoicing on schedule and meets contract specs.				

Inspecting Forester: \_\_\_\_\_ Company Representative: \_\_\_\_\_

(Use back of form for comments, sketch maps, etc.)



**COMMENTS, SKETCH MAPS and ADDITIONAL INFORMATION:**

**INITIALS:**

\_\_\_\_\_  
\_\_\_\_\_



# VEGETATION MANAGEMENT INSPECTION REPORT

**PROJECT NAME:** \_\_\_\_\_

**INSPECTION DATE:** \_\_\_\_\_

**LANDOWNER:** \_\_\_\_\_

**LAST INSPECTION DATE:** \_\_\_\_\_

**CONTRACTOR:** \_\_\_\_\_

**INSPECTING FORESTER:** \_\_\_\_\_

PROJECT WORK	Not Applicable	Satisfactory	Not Satisfactory	Past Problems Corrected
<b>UTILIZATION and/or CONTRACT SPECIFICATIONS:</b>				
1. Minimum tree and product specifications being met; residual BA within specifications for mastication projects				
<b>TRANSPORTATION:</b>				
1. Right of Way material utilized and/or disposed of				
2. No excessive damage from wet weather hauling or access				
3. Required maintenance performed				
4. Temporary Roads/Trails - constructed per contract specs.				
5. Temporary Roads/Trails - closed per contract specifications				
<b>CONTROL OF OPERATION:</b>				
1. Representatives - supervising operation and available				
2. Following operations plan and conducted safely				
3. Refuse/trash properly disposed of				
4. Existing improvements protected				
5. Work on schedule				
<b>CONDUCT OF LOGGING or MASTICATION/MULCHING:</b>				
1. Felling & bucking/mastication meets contract specifications				
2. Skidding - skid/access trails approved and properly cleared				
3. Skidding/Mastication - damage to residual trees within specs				
4. Skidding - YUM removal meeting contract specifications				
5. Landings - appropriate locations, construction, and size				
6. Slash Disposal - current & as required by contract specs.				
<b>BEST MANAGEMENT PRACTICES:</b>				
1. Stream Course Protection - meets contract specifications				
2. Erosion - no excess damage due to weather, equipment				
3. Erosion - proper/current control measures installed				
4. Erosion - streams, wet meadows and springs avoided				
<b>FIRE PRECAUTIONS:</b>				
1. Fire plan is being used				
2. All logging equipment inspected and meets contract specs.				
3. Fire tool cache meets contract specifications				
<b>GENERAL:</b>				
1. Payments/Invoicing on schedule and meets contract specs.				

*(Use back of form for comments, sketch maps, etc.)*

**Inspecting Forester:** \_\_\_\_\_ **Company Representative:** \_\_\_\_\_



**COMMENTS, SKETCH MAPS and ADDITIONAL INFORMATION:**

**INITIALS:**

\_\_\_\_\_  
\_\_\_\_\_



**MEMORANDUM**

---

**DATE:** 10/2/2009

**TO:** Valerie Heady or Karen Carlin

**FROM:** Bob Bundy

**SUBJECT:** Purchase Order S020559 close out

Please see the attached purchase order form. I would like to close out this purchase order, as the contract has ended. It should be noted that the full amount of the purchase order has not been expended. The CSFS and contractor agreed to end the contract prior to full completion. The following information outlines the paid and unused budget originally set aside for the project:

<u>Account</u>	<u>Original PO amount</u>	<u>Amount Paid</u>	<u>Leftover</u>
530387 (FEMA):	\$41,765.63	\$32,156.25	\$9,609.38
530520 (GOCO):	\$13,921.87	\$10,718.75	\$3,203.12
223530 (District):	\$32,407.50	\$32,424.06	-\$16.56 *
<b>TOTAL:</b>	<b>\$88,095.00</b>	<b>\$75,299.06</b>	<b>\$12,795.94</b>

\* Note: The awarded contractor's bid sheet required a bid for each unit, as well as a bid for being awarded all units. The contractor was awarded to do all units at a \$30 discount to the CSFS. The overpayment from the 22 account is due to the oversight of not taking the contractor's \$30 discount into account, but using the individual unit bid amount for payments. Please call me if further clarification is necessary.

**Please unencumber the remaining \$12,795.94 from the three accounts listed above. Also, please reimburse the full performance bond in the amount of \$44,047.50, as well as the damage deposit in the amount of \$2,000.00.**

Please contact me if you have any questions. Thank you.

Bob Bundy  
Assistant District Forester  
CSFS – Boulder District  
(303) 823-5774  
[Bob.Bundy@Colostate.edu](mailto:Bob.Bundy@Colostate.edu)



# COPY

## REQUEST FOR PAYMENT

CSFS #820

INSTRUCTIONS: Make all purchases in the name of COLORADO STATE FOREST SERVICE. Attach this completed form to each invoice for payment and forward to the State Office for processing. Payment will be mailed to address on vendor invoice, unless otherwise noted. Include Social Security Number if requesting payment to an individual. Authorized signature must be completed before payment can be processed.

Payment To: The Natural Way, Inc.

Prepared By: Bob Bundy

Date Prepared: 8/5/09

Comments: 1952 W. Dartmouth Ave.  
Englewood, CO 80110

Resale to Cooperator:

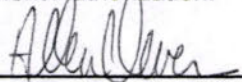
Final (5th) Project Invoice

CSFS Invoice #:

Description	Amount	Account	Subcode	Other
Payment for 6 acres on DW Unit 103B				
& for 13 acres on E100 Unit 4B.				
ECSP & DW Gross Fuels Reduction				
E100 75%	5,850.00	5-30387	6637	
PO 5020559				
E100 25%	1,950.00	5-30520	6637	
DW 100%	5,550.00	2-23530	6637	

\$13,350.00

Payment Authorization:



8/13/09

Account Manager or Designee Signature

Date



**COPY****STATEMENT**

Printed 8/11/2009

Customer # 11961

**The Natural Way, Inc.**  
(303)347-0988Colorado State Forestry Service  
Bob Bundy  
5625 Ute Highway  
Longmont CO 80503

Res. 970-491-6303

Bus.

Description	Ck # / Inv #	Date	Amount	Tax	Balance												
unit 7B, 4B, 103B Eldorado Canyon- INV #45902. Orig. Amount \$13,350.00.		05/22/2009	13,350.00		13,350.00												
<table><tr><td>Current</td><td>1-30 Days</td><td>31-60 Days</td><td>61-90 Days</td><td>Over 90 Days</td><td>Amount Due</td></tr><tr><td>0.00</td><td>0.00</td><td>0.00</td><td>13,350.00</td><td>0.00</td><td>\$13,350.00</td></tr></table>						Current	1-30 Days	31-60 Days	61-90 Days	Over 90 Days	Amount Due	0.00	0.00	0.00	13,350.00	0.00	\$13,350.00
Current	1-30 Days	31-60 Days	61-90 Days	Over 90 Days	Amount Due												
0.00	0.00	0.00	13,350.00	0.00	\$13,350.00												
Please pay within 10 days. Net 30 days 2.5% thereafter. Please call with any questions about your services.																	

**The Natural Way, Inc.**  
1952 W Dartmouth Ave. Englewood CO 80110*Billing Address*  
Colorado State Forestry Service  
Bob Bundy  
5625 Ute Highway  
Longmont CO 80503**The Natural Way, Inc.**  
1952 W Dartmouth Ave  
Englewood, CO 80110

PLEASE INDICATE PAYMENT AMOUNT &amp; CHECK NUMBER

AMOUNT	CHECK NO.

Charge My: ☐  ☐  ☐  ☐  Exp: \_\_\_\_\_

Card #:

Signature: \_\_\_\_\_

CUSTOMER # 11961

PLEASE REMIT

\$13,350.00

PRINTED

8/11/2009

PLEASE RETURN THIS PORTION WITH YOUR PAYMENT. BE SURE ADDRESS SHOWS THROUGH WINDOW.



# REQUEST FOR PAYMENT

CSFS #820

INSTRUCTIONS: Make all purchases in the name of COLORADO STATE FOREST SERVICE. Attach this completed form to each invoice for payment and forward to the State Office for processing. Payment will be mailed to address on vendor invoice, unless otherwise noted. Include Social Security Number if requesting payment to an individual. Authorized signature must be completed before payment can be processed.

Payment To: The Natural Way, Inc.

Prepared By: Bob Bundy

Date Prepared: 4/16/09

Comments: 1952 W. Dartmouth Ave.

Englewood, CO 80110

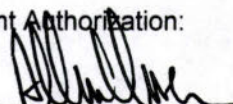
4th Project Invoice

Resale to Cooperator:

CSFS Invoice #:

Description	Amount	Account	Subcode	Other
Payment for 35 acres on Eldo Unit 7B				
& for 22 acres on Eldo Unit 4B.				
ELSP & DW Gross Fuels Reduction				
75%	26,306.25	5-30387	4550	
PO 5020559				
25%	8,768.75	5-30520	4550	

Payment Authorization:



Account Manager or Designee Signature

4/17/09

Date

**\$35,075.00**





The Natural Way, Inc.  
1952 W. Dartmouth Ave.  
Englewood, CO 80110

# The Natural Way, Inc.

"Environmentally Conscious Tree, Shrub and Lawn Care"

Phone: (303) 347-0988

Fax: (303) 806-0868

**INVOICE** 45176

**DATE** 3/27/2009

Colorado State Forestry Service  
Bob Bundy  
5625 Ute Highway  
Longmount CO 80503

SERVICE ADDRESS		NOTES: PO S020559		
DESCRIPTION		QTY	RATE	AMOUNT
Prune - Thinning and brush clearing Unit 7B		35	625.00	21,875.00
Prune - Thinning and brush clearing Unit 4B		22	600.00	13,200.00
ALL INVOICES ARE DUE UPON RECEIPT REFER TO PROPOSAL FOR TERMS AND CONDITIONS		<b>Total</b> \$35,075.00		
Are you satisfied with the service you received? <input type="checkbox"/> YES <input type="checkbox"/> NO		<b>Payments/Credits</b> \$0.00		
		<b>Balance Due</b> \$35,075.00		

55,500



# REQUEST FOR PAYMENT

CSFS #820

INSTRUCTIONS: Make all purchases in the name of COLORADO STATE FOREST SERVICE. Attach this completed form to each invoice for payment and forward to the State Office for processing. Payment will be mailed to address on vendor invoice, unless otherwise noted. Include Social Security Number if requesting payment to an individual. Authorized signature must be completed before payment can be processed.

Payment To: *The Natural Way, Inc.*

Prepared By: *Bob Bundy*

Date Prepared: *3/6/09*

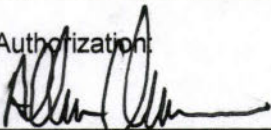
Comments: *3rd project invoice*

Resale to Cooperator:

CSFS Invoice #:

Description	Amount	Account	Subcode	Other
<i>Payment for final 3.5 acres on DW unit 60A</i>				
<i>&amp; first 7 acres on DW unit 103B of</i>				
<i>ECSP &amp; DW Gross Res. Fuels Reduction</i>				
<i>PO SO20559</i>	<i>\$8,474.06</i>	<i>2-23530</i>	<i>4550</i>	

Payment Authorization:



Account Manager or Designee Signature

*3-6-09*

Date

*\$8,474.06*





The Natural Way, Inc.  
1952 W. Dartmouth Ave.  
Englewood, CO 80110

# The Natural Way, Inc.

"Environmentally Conscious Tree, Shrub and Lawn Care"

Phone: (303) 347-0988

Fax: (303) 806-0868

**INVOICE**

44752

**DATE**

2/23/2009

Colorado State Forestry Service  
Bob Bundy  
5625 Ute Highway  
Longmount CO 80503

SERVICE ADDRESS		NOTES: PO S020559		
DESCRIPTION		QTY	RATE	AMOUNT
Thinning and brush Clearing Eldorado Canyon Brush Removal Project Unit 60-A		3.5	575.00	2,012.50
Thinning and brush Clearing Eldorado Canyon Brush Removal Project Unit 103-B		7	923.08	6,461.56
ALL INVOICES ARE DUE UPON RECEIPT REFER TO PROPOSAL FOR TERMS AND CONDITIONS		<b>Total</b>		
		\$8,474.06		
		<b>Payments/Credits</b>		
		\$0.00		
		<b>Balance Due</b>		
		\$8,474.06		



# REQUEST FOR PAYMENT

CSFS #820

INSTRUCTIONS: Make all purchases in the name of COLORADO STATE FOREST SERVICE. Attach this completed form to each invoice for payment and forward to the State Office for processing. Payment will be mailed to address on vendor invoice, unless otherwise noted. Include Social Security Number if requesting payment to an individual. Authorized signature must be completed before payment can be processed.

Payment To: The Natural Way, Inc.

Prepared By: Bob Bundy

Date Prepared: 2/2/09

Comments: 2nd project invoice

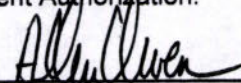
Resale to Cooperator:

CSFS Invoice #:

Description	Amount	Account	Subcode	Other
Payment for 17 acres on DW unit 60-A of ECSP & DW Gross Fuels Reduction				
PO 5020559	\$9,775.00	2-23530	4550	

Payment Authorization:

\$9,775.00



2/3/09

Account Manager or Designee Signature

Date





The Natural Way, Inc.  
1952 W. Dartmouth Ave.  
Englewood, CO 80110

# The Natural Way, Inc.

"Environmentally Conscious Tree, Shrub and Lawn Care"

Phone: (303) 347-0988

Fax: (303) 806-0868

**INVOICE** 44473

**DATE** 1/28/2009

Colorado State Forestry Service  
Bob Bundy  
5625 Ute Highway  
Longmount CO 80503

SERVICE ADDRESS		NOTES: PO S020559		
DESCRIPTION		QTY	RATE	AMOUNT
Thinning and brush Clearing Eldorado Canyon Brush Removal Project Unit 60-A			9,775.00	9,775.00
ALL INVOICES ARE DUE UPON RECEIPT REFER TO PROPOSAL FOR TERMS AND CONDITIONS		<b>Total</b>		\$9,775.00
		<b>Payments/Credits</b>		\$0.00
		<b>Balance Due</b>		\$9,775.00



# REQUEST FOR PAYMENT

CSFS #820

INSTRUCTIONS: Make all purchases in the name of COLORADO STATE FOREST SERVICE. Attach this completed form to each invoice for payment and forward to the State Office for processing. Payment will be mailed to address on vendor invoice, unless otherwise noted. Include Social Security Number if requesting payment to an individual. Authorized signature must be completed before payment can be processed.

Payment To: The Natural Way, Inc.

Prepared By: Bob Bundy

Date Prepared: 1/16/09

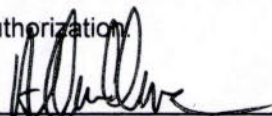
Comments: 1st project invoice

Resale to Cooperator:

CSFS Invoice #:

Description	Amount	Account	Subcode	Other
Payment for 15 acres on DW unit 60-A of ECSP : DW Gross Fuels Reduction				
PO SO20559	\$8,625.00	2-23530	4550	

Payment Authorization



Account Manager or Designee Signature

1-16-09

Date

\$8,625.00





The Natural Way, Inc.  
1952 W. Dartmouth Ave.  
Englewood, CO 80110

# The Natural Way, Inc.

"Environmentally Conscious Tree, Shrub and Lawn Care"

Phone: (303) 347-0988

Fax: (303) 806-0868

**INVOICE** 44319

**DATE** 1/14/2009

Colorado State Forestry Service  
Bob Bundy  
5625 Ute Highway  
Longmount CO 80503

SERVICE ADDRESS		NOTES: PO S020559		
DESCRIPTION		QTY	RATE	AMOUNT
Thinning and brush Clearing Eldorado Canyon Brush Removal Project Unit 60-A "Partial Payment"		15	575.00	8,625.00
ALL INVOICES ARE DUE UPON RECEIPT REFER TO PROPOSAL FOR TERMS AND CONDITIONS		<b>Total</b>		\$8,625.00
		<b>Payments/Credits</b>		\$0.00
		<b>Balance Due</b>		\$8,625.00



# CSFS REQUEST FOR SUPPLIES OR SERVICES (other than GSA)

Date: 10-10-08		Requested By: Bob Bundy		Resale to:		CSFS Invoice #:		
Vendor: The Natural Way, Inc. 1952 West Dartmouth Ave. Englewood, CO 80110  _____ (PLEASE PROVIDE COMPLETE ADDRESS)				Ship To: Colorado State Forest Service Boulder District 5625 Ute Highway Longmont, CO 80503  _____ (PLEASE PROVIDE COMPLETE DELIVERY ADDRESS)				
Reason for Vendor Selection: <input type="checkbox"/> Sole Source (attach completed Sole Source Justification Form) <input type="checkbox"/> Previous Supplier <input checked="" type="checkbox"/> Other (State Bid System)						Terms:  As per attached Independent Services Agreement		
Shipping Instructions: <input type="checkbox"/> FOB Fort Collins, Colorado <input type="checkbox"/> FOB			Delivery Date: TBD See contract		Deliver to:  Initials____ Bldg____ Room____ Phone____			
#	Account	Subcode	Qty	UOM	Description of Supplies or Services	Unit Price	Item Total	
1					Eldorado Canyon State Park & Denver Water Gross Reservoir – Forest Treatment on 136 acres. Part of CSFS FEMA PDM grant project.			
2	5-30387	4550			75% of cost for ECSP units (FEMA)		\$41,765.63	
3	5-30520	4550			25% of cost of ECSP units (GOCO)		\$13,921.87	
4	2-23530	4550			100% of cost for Denver Water units		\$32,407.50	
5								
6								
SPECIAL INSTRUCTIONS:  Contact Bob Bundy (CSFS-Boulder District) upon issuance of a PO# (303) 823-5774				Expenditure Approval:  Authorized Signature: <u>/s/ Bob Bundy</u> Date: <u>10/10/08</u>			Subtotal: \$ <u>88,095.00</u> Discount: \$ _____  TOTAL: \$ <u>88,095.00</u>	





RECEIVED  
CSU PURCHASING DEPARTMENT  
555 S. Howes Street  
FORT COLLINS, CO 80523-6010

DATE

09/10/08

**DOCUMENTED QUOTE**

@SN

QUOTE NUMBER: D401233  
RESPONSE DUE BY: 10/1/2008 DATE 1:00 PM TIME  
EXPECTED DELIVERY DATE: 8/31/2009 or BEFORE  
PURCHASING CONTACT / PHONE: KATHI LAFOLLETTE (970) 491-0763  
FAX: (970) 491-5523

THIS IS NOT AN ORDER

PLEASE TYPE VENDOR NAME AND ADDRESS

IT IS EQUALLY IMPORTANT THAT YOU SIGN THIS FORM  
IN ORDER FOR THE UNIVERSITY TO CONSIDER YOUR  
BID.

V  
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R

**The Natural Way, Inc.**  
1952 W. Dartmouth Ave.  
Englewood, CO 80110

NO.	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	EXTENSION
			Colorado State Forest Service is soliciting qualified vendors to complete the Eldorado Canyon State Park 136 Acre Mechanical Forest Treatment Project by 8/31/09 per the attached terms, conditions, & specifications.		
			A mandatory Site Visit will be held on Thursday, September 25th at 11:00 AM. See attached instructions & map for directions.		
			Fax Responses To: (970) 491-5523 Attn: Kathi LaFollette, Purchasing Agent Before: Wed., October 1st, 2008 at 1:00pm		

ALL BIDS SHALL BE F.O.B. COLORADO STATE UNIVERSITY, FORT COLLINS, COLORADO UNLESS OTHERWISE INDICATED.  
BIDS MAY BE AWARDED EITHER BY ITEM OR BY LOT, WHICHEVER IS TO THE ADVANTAGE OF THE UNIVERSITY.

TO BE COMPLETED BY VENDOR	SUPPLIER'S TERMS	PRINTED/TYPED NAME OF SIGNER	TELEPHONE NUMBER
	Same as RFB	Robert S. Anderson	303-347-0988
	SUPPLIER'S DATE OF DELIVERY	AUTHORIZED SIGNATURE (REQUIRED)	TITLE
	11/1/2008	Robert S. Anderson	Operations Manager
	F.E.I.N. #	EMAIL ADDRESS	
	84-1307376	bob@thenaturalwayinc.net	



**Documented Qt D401233**

**COST and INFORMATION PAGE**

**Eldorado Canyon State Park: Crescent Meadows Fuel Reduction - Units 4a, 4b, 7b  
&  
Denver Water: Gross Reservoir - Units 60a & 103b**

CSFS's desire is to bid the project to a single entity. However, should bidders be unwilling or unable to bid on all units/blocks, CSFS reserves the right to select whatever combination of treatment units/blocks, bid prices, and contractors is most beneficial to the State.

All bidders must submit the following information:

- Bid price
- Equipment and crew size to be used
- Timing (when can work begin/projected end date)
- Past examples of similar work

**Costs/Bids for Unit Prescriptions and Requirements**

Bid out each unit/block separately:

**Eldorado Canyon State Park (87.5 acres):**

Block 4A = 11 acres Price/acre: \$ 800.- Total: \$ 8800.-

Block 4B = 37 acres Price/acre: \$ 600.- Total: \$ 22,200.-

Unit 7B = 39.5 acres Price/acre: \$ 625.- Total: \$ 24687.50

**Denver Water (48.5 acres):**

Unit 60A = 35.5 acres Price/acre: \$ 575.- Total: \$ 20,412.50

Unit 103B = 13 acres Price/acre: \$ 925.- Total: \$ 12,025.-

**TOTAL FOR ALL UNITS (please allow for any discount due to economies of scale):**

All Units = 136 acres Price/acre: \$ 647.76 Total: \$ 88,095.00

**TIMING-** CSFS has specified operational start date requirements and an order in completing the project within Exhibit A – Scope of Work of the service contract. Please allow up to 4 weeks to allow time to write a contract and issue a Purchase Order. Please estimate start and end dates for entire project.

Start Date: Nov. 1, 2008

End Date: Before May 2009

**CREW SIZE & EQUIPMENT TO BE USED**

Attach a memo explaining the size of crew and type of equipment that will be used for this project.

**PAST EXAMPLES OF SIMILAR WORK**

Attach a memo explaining past examples of work.





*Environmentally Conscious Tree, Shrub & Lawn Care*

**Eldorado Canyon State Park: Crescent Meadow Fuel Reduction – Units 4a, 4b, 7b  
&  
Denver Water: Gross Reservoir – Units 602a, 103b**

Bid Solicitation Number: D401233

The Natural Way, Inc.  
1952 West Dartmouth Avenue  
Englewood, Colorado 80110  
303-347-0988 Office

Tax ID # 84-1307376  
DUNS# 92-958-9385  
CAGE code# 5OES7

Company Representative:  
Bob Anderson  
720-840-3423 Cell  
[bob@thenaturalwayinc.net](mailto:bob@thenaturalwayinc.net)



## **Contract Proposal Overview**

- Large masticating equipment with experience operators will reduce project duration, reducing impact to park users, leaves higher quality of remaining chipped material and reduces administration time for Park Officials.
- Crews are composed of Certified Wildland Firefighters, Certified Arborist and Experienced Professional Foresters.
- Equipment has high ground clearance that reduces damage to terrain and plants not including in the prescription.
- The Natural Way, Inc. and The Forestry Services Group, Inc. have a proven track record of quality work for Governmental and Private sector clients throughout Colorado, the United States and Canada.
- Chips will not exceed 4" deep to prevent proliferation of noxious weed and prevent smoldering spot fires following prescribed burns.
- The Natural Way, Inc. is fully insured and can meet the bonding requirements for this bid. The business is licensed by the State Board of Agriculture, the City of Denver, and The City of Colorado Springs and in all Denver Metro communities.
- Pricing reflects completing work to contract specifications and in a timely manner.
- A Safety observer will be on site to keep public at a distance and to act as another set eyes for the large equipment operator



## Company Overviews

**The Natural Way, Inc.** is an "Environmentally Conscious Tree, Shrub and Lawn Care" company started in 1995. Among its employees The Natural Way has several ISA Certified Arborists, ISA Certified Tree Worker Climber Specialists, Professional Foresters, and Certified Wildland Firefighters. Our company provides a full range of services including: fire mitigation, technical tree removals, pruning, pest control, plant health care and landscape construction. As a member of the Better Business Bureau (BBB) and the Tom Martino Trouble Shooter Network, The Natural Way has a proven track record of satisfied customers. The Natural Way, Inc. is the winner of a Gold Star Certificate from BBB Denver/Boulder, 2007. Proud to be the first Accredited Tree Care Company in Colorado and the third in the nation by the Tree Care Industry Association (TCIA). The Natural Way, Inc. puts a high emphasis on employee's education, qualifications and maintains a drug free work place requiring pre-employment criminal background checks and on-going mandatory drug testing for employees.

The Natural Way, Inc. is fully insured and can meet the bonding requirements for this bid. The business is licensed by the State Board of Agriculture, the City of Denver, and The City of Colorado Springs and in all Denver Metro communities.

The Natural Way, Inc. has established itself as a leader in land management through utilizing the most current science and best management practices. Our quality, customer service, honesty and professional image are the driving forces of our growth and reputation. We constantly increase our knowledge through internal company training, teaching and attending professional seminars and obtain professional certifications and continuing education credits through national industry associations.

For the Eldorado Canyon State Park and Denver Water project The Natural Way, Inc. will subcontract masticating equipment and operators to The Forestry Services Group, Inc. We will provide our well trained and experienced staff for all handwork as well as the chippers and all hand held power tools. Forestry Services Group has completed forest fire mitigation projects throughout the United States for Federal, Military, State, County and private clients. The Natural Way, Inc. and The Forestry Services Group, Inc. are contracted together on the Garden of the Gods Oak Removal Project for the City of Colorado Springs beginning this year and lasting for 3 years.

### Examples of Past Work:

The Natural Way, Inc. has been awarded the contract for fire mitigation in The Garden of the Gods by the City Colorado Springs. Completed fire mitigation projects for Denver Water Board in South Platte, Colorado and at the Flying J Ranch in Sadalia, residential mitigation projects in Roxborough Park, Larkspur, Castle Pines, Franktown, and Parker.

**The Forestry Services Group Inc.** (TFSG) is a fuels reduction company, specializing in Ladder Fuels Reduction, Forest Fire Mitigation, Thinning and Fire Line Construction. Our Staff is trained in a strict Forest management discipline to mitigate fire danger and promote forest health and future growth. TSFG feels this departure from the conventional "logging mentality" is the correct way to insure a health, sustainable forest. TSFG is an S corporation based in Denver, Colorado (EIN # 20-1190771, Duns # 148970069).



TSFG has successfully completed a wide variety of projects that demonstrated our expertise in the field. A few examples are:

1. Hidden Lake Subdivision: This was a series of private owners totaling 450 acres. The purpose of the project was to reduce severely overstocked ladder fuels that were endangering the community.
2. US and Canadian Border Commissions: Clear cut security clearance of the US and Canadian border in North Dakota and Minnesota.
3. Warm Springs Indian Reservation: 150 acres mulching project demonstrating the effects and benefits of mulching verses slashing and burning on Reservation land in Warm Springs, Oregon.
4. The Express UU Bar: A 125,000 acre fire mitigation and wildlife enhancement project and the installation of a Co Generation plant that will be placed in Angel Fire, New Mexico

### **Equipment List**

- ~ 2004 Timber Pro 620 E with a DAH 150 Denis Brush Cutter
- ~ 2005 Valmet 425 EXL with a Waratah 622B Processor Head
- ~ 2004 Valmet Forwarder
- ~ 2005 Hydro Ax 871 with a Fecon BAH 250Masticating Head
- ~ 2006 Caterpillar 265B with a Caterpillar HM315 mulching head
- ~ 2002 Caterpillar 322CFM Track Mounted Log Loader
- ~ 1998 Caterpillar 525 Grapple Skidder
- ~ 2005 Vermeer 2000XL Chipper
- ~ 2003 Kenworth Tractor
- ~ 2004 Fountain 50 ton Lowboy Trailer
- ~ 1995 Peterbuilt Mule Train Log Truck
- ~ 2000 Ford F-550 Service
- ~ 2007 Liberty 24,000 lb gooseneck trailer

### **Date of Delivery**

The Natural Way, Inc. can schedule the start and completion dates based on the award of the contract and complete work by May 2009; before the beginning of the 2009 Fire season, barring any extreme acts of God.

**Crew Size:** One large equipment operator and one or two ground workers doing hand work or acting as safety observer.

### **Methods and Equipment Used**

Mechanical grinding and chipping on site utilizing a Timco Timber Pro with a Denis Climaf head and Hydro-Ax with a Fecon head. This large high efficiency and output equipment will reduce the total project time, interruption of park activities and allow greater flexibility with meeting project specifications (see photos).

Hand work will be completed with a Stihl MS260 , MS460 and Stihl MS361 Chainsaws equipped with spark arrestors. Chipping will be completed either by masticating piles or chipped with a Morbark 15" Brush Chipper.

**Erosion Control.** Timco Timber Pro has a 4 foot clearance; this reduces damage to vegetation and soils along access points as it drives over non-target vegetation. Along steep slopes or areas prone to erosion, chips will be



cut to the largest size allowable to mitigate erosion. Streams and drainages will be crossed at right angles and equipment ruts will be repaired before moving to the next area.

**Archaeological Artifacts.** The Natural Way realizes that the park may have Native American and historical significance. Crews will look out for any artifacts and contact Park Officials immediately upon detecting any artifacts. Crews are instructed not to pick up or keep any thing that they find. In addition, crew will look out for barbed wire and remnants of former ranches.

**Endangered Species Considerations.** This hazardous fuels reduction projects "will not result in the taking of the Canada Lynx, slender moonwort, Mexican Spotted Owl, the greenback cutthroat trout, or any Federally listed threatened or endangered species. The Natural Way, Inc. will comply with all Endangered Species Act (ESA) regulations.

**Public Safety.** Flaggers will be used on all work performed along paved roads and parking lots and trails. Each flagger will wear a yellow safety vest and is equipped with a Stop/Slow sign. The Natural Way, Inc. will provide all signage as necessary for street and trail closures. We shall work with Park and Denver Water Officials to mark all utilities and underground pipes to avoid and damage and interruption of service and will repair any damage to roads. All crew members posses current American Red Cross First Aid and CPR Certification (certificates available on request).

**Hazardous Materials Handling.** On-site fuel storage will not exceed 600 gallons. Equipment will be refueled using a spill pan and a standard of 110% secondary containment will be met. Spill containment kits are equipped in each vehicle and crews are trained to quickly recognize, stop the source and contain hazardous materials and fuel Spills. Fuel, hydraulic fluid or other chemical spills will be reported to State Parks immediately. Soil contaminated by loss of fuel, oil, grease, hydraulic fluid, coolant, or other fluids will either be removed and placed in covered drums or other acceptable containers for proper disposal by the Natural Way, Inc. or left in place and mixed with an encapsulating product such as RamSorb I, depending on the amount of contamination.

**Fire Prevention.** The Natural Way has a long standing policy of no smoking on any jobsite. Crews will be equipped with shovels and 2.5 pound ABC fire extinguishers. In addition, several crewmen and supervisors are trained and experienced wildland firefighters. Each has cell phones to contact local agencies for quick fire fighting response. We expect and understand the possibility that the jobsite may be shut down during periods of high fire hazard but plan to complete the project before the beginning of the 2009 fire season. All vehicles and motorized equipment utilize effective manufacturer-certified spark arresters and muffler systems.

#### **General Description of Work:**

- Mastication of timbered areas to achieve target stand to reduce risk of wildfire and pine beetle.
- The maximum mastication chunk is 4" in diameter and 2' in length.
- Trees 10" and less will be masticated. All mulched material will be less than 4" above ground level. Stump height shall be less than 4" unless prohibited by rocks. Chunk depth will not exceed 4".
- The Natural Way, Inc. will masticate along all boundaries in a "feathered pattern". No straight lines or corridors will be created.
- No dead standing or dying trees will be left within 1.5 times its height of a trail or access road. This may require felling trees larger than the prescription. These trees will be felled, de-limbed, and masticated. If tree cannot be fully masticated, the remaining bole will be dragged out of site of any trail or road, and the cut faces will not face any trail or road. No work will be completed within 15 feet of an ephemeral drainage.
- 2 to 3 snags greater than 8" will be retained per acre for wildlife purposes



**Block 4A Prescription:**

- 90% of Douglas- fir less than 10" dbh and 90% of ponderosa pine less than 6" dbh will be treated.
- The remaining regeneration sized trees (+/- 10%) should be left in open areas > 15 feet from retention trees.
- All Ponderosa pine found in the unit with a Hawksworth Dwarf Mistletoe rating of 3 or greater will be removed. (See Figure 1 below)
- The target basal area for this block ranges between 75 to 85 ft<sup>2</sup> per acre. Downed woody debris that is 12" or less will be treated where possible.
- If there are some slash piles from previous management actions, and these piles will be masticated to prescription.
- 50 to 60% of shrubs will also be masticated to promote new growth. These shrubs will be treated in swaths as The natural Way, Inc. approaches trees under prescription.
- The section of aspen in the Western portion of Block 4A that is along the drainage will remain unless cutting is needed to reach conifers which are under prescription.

**Block 4B Prescription:**

- 90% of Douglas- fir less than 10" dbh and 90% of ponderosa pine less than 6" dbh will be treated.
- The remaining regeneration sized trees (+/- 10%) should be left in open areas > 15 feet from retention trees.
- All Ponderosa pine found in the unit with a Hawksworth Dwarf Mistletoe rating of 3 or greater will be removed. (See Figure 1 below)
- 33% of Ponderosa pine 8" and less present in dense overstory will be treated.
- Ladder fuel juniper 12" or less will be treated.
- The target basal area for this block ranges between 50 to 60 ft<sup>2</sup> per acre. Downed woody debris that is 12" or less will be treated where possible.
- 50 to 60% of shrubs will also be masticated to promote new growth. These shrubs should be treated in swaths as trees under prescription are approached.
- The main Walker Ranch loop trail will be cleared of debris at the end of every work day.

**Unit 7B Prescription:**

- 90% of Douglas- fir less than 8" dbh and 90% of ponderosa pine less than 6" dbh will be treated.
- The remaining regeneration sized trees (+/- 10%) should be left in open areas > 15 feet from retention trees.
- All Ponderosa pine found in the unit with a Hawksworth Dwarf Mistletoe rating of 3 or greater will be removed. (See Figure 1 below)
- Ladder fuel juniper 12" or less will be treated.
- The target basal area for this block ranges between 45 to 55 ft<sup>2</sup> per acre. Downed woody debris that is 12" or less will be treated where possible.
- The main Walker Ranch loop trail will be cleared of debris at the end of every work day.

**Block 60A Prescription:**

- Since the unit was hand treated in 2004. The prescription on this unit is to focus on masticating the existing downed material, while expanding the boundaries to include untreated areas on surrounding accessible land.
- All accessible downed woody debris that is 12" or less will be treated.
- 90% of Douglas- fir less than 10" dbh and 90% of ponderosa pine less than 6" dbh will be treated.
- 33% of Ponderosa pine 6-10" will be treated. Isolated regeneration sized trees will be left in open areas >15 feet from any retention trees.
- All Ponderosa pine found in the unit with any signs of Dwarf Mistletoe will be removed.
- All ladder fuel will be treated.
- The target basal area for this unit is 50 ft<sup>2</sup> per acre.
- 50 to 60% of shrubs will also be masticated to promote new growth. These shrubs will be treated in swaths as the trees under prescription are approached.



**Additional Performance Standards:**

- Soil disturbance will be as minimal as possible. Ruts and/or depressions in the soil caused by equipment will be less than six inches deep. In areas where machines have used a path repeatedly, waterbars will be installed if the Contract Administrator deems necessary.
- Ephemeral drainage areas will not be used as primary travel routes.
- Damaged gates, fences, or signs will be repaired or replaced, at the discretion of the Contract Administrator or State Parks staff.
- Neither trash nor litter will be left by the Contractor anywhere on the Park, access route, or vicinity.
- The Natural Way, Inc. will follow all rules and regulations established for Eldorado Canyon State Park. Ben Pedrett of Colorado State Parks is the manager for Eldorado Canyon State Park and will be contacted at (303) 494-3943 x13. No dogs or camping will be allowed on the site.
- All issues and concerns of adjacent property owners and others shall be referred to the Contract Administrator.
- Site will be left in a safe manner at the end of every work day.
- No rootballs should be created however any exposed rootballs created during this project will be tipped back into an upright position or masticated.
- We understand the Project Administrator may suspend or limit operations if excess damage is occurring due to mud, snow, extreme fire danger, etc., or due to the following situation(s): failure to meet contract specifications.
- The Natural Way, Inc. shall wash the undercarriage of all trucks and equipment before entering the stands to reduce the spread of noxious weeds from other projects.



**Daily Jobsite and Safety Meeting.** Per American National Safety Institute Safety Standards for Tree Care Operations, The Natural Way crews conduct daily job site safety meetings to discuss the Following:

Communication

- Methods of: verbal, hand signals, call and response, signage
- Clear intent and understanding
- Command structure

Safety Equipment

- Required PPE, clothing and spares
- Spill kits, shovel and fire extinguishers
- Emergency contact procedures and numbers
- First aid procedures and equipment location

Jobsite Access

Production Standards

Quality Standard

- Chip size, depth
- Conifer limbing
- Swath width
- Erosion control

Working Near Heavy Equipment

- Safe approachable distance
- Emergency shut down procedure

Chainsaw Safety

Riverbed Crossing, Drainage and Working with Friable Soils

Signage and Communicating with the Public

- Explaining project history and benefits

Job Assignments

- Equipment Operators
- Crew Leader
- Sawyers
- Brush handlers

Breaks

End of shift Time



## Key Personnel

### Jerry Sarcella of Forestry Services Group

- Has completed fire mitigation for military, federal, state and private entities throughout the United States.

### Roger Terry, Manager

- Wildland Urban Interface Specialist/Urban Forester Colfax County, NM
  - Led the formation of 5 firewise communities
  - Completed fire safety education, firefighter training, fire dept. compliance inspections
- Fire Fighter Sarasota, FL,
- Fire Service Instructor, Paramedic
- First Aid/CPR Certified Instructor
- Director of Research and Training, Advance Fire Control Technologies
- Colorado State Ag. Qualified Supervisor Forest Pest Management, others

### Bob Anderson, Operations Manager

- University of Maine Forest Management Technology, A.S. 1990
- Colorado State University Landscape Horticulture, B.S. 1994
- Certified Wildland Firefighter S130, S190, S220
- Wyoming State Forestry Division, Inventory Forester and Wildland Firefighter
- Completed utility wildland fire mitigation survey for Pacific Gas and Electric for Northern half of California
- Fire mitigation training through CSFS and ISA
- ISA Certified Arborist and Certified Tree Worker RM0896AT, 10 years
- Colorado State Ag. Qualified Supervisor: Forest Pest Management, others.

### Robert Brudenell, Owner

- Purdue University, Forestry/Urban Forest Concentration, B.S. 1992
- Board Certified Master Arborist and a Registered Consulting Arborist.
- Qualified Supervisor license in Ornamental and Turf pest control.
- ISA-RMC Board of Directors and Education Chairperson.

### Dave Stevenson, Technician

- University of Montana Forest Resource Management, B.S. 2004
- Wildland Fire Fighter, ISA Certified Arborist
- Red Card, Type-6 engine, hand crew experience

### Jared Kuhn, Pruning Manager

- ISA Certified Arborist and Certified Tree Worker RM2489AT
- Studied Forest Science at Pennsylvania State University  
Courses included: Forest Biology, Forest Fire Management, Forest Ecology, Dendrology, Biometrics, and Wildlife Management.



## References:

From Roger Terry:

Linda Ford, Hidden Lake HOA  
[Mtnvoice1@msn.com](mailto:Mtnvoice1@msn.com)

Jody Grey, HOA President  
[donn@ispwest.com](mailto:donn@ispwest.com)

Larry Osborn, Fire Marshal Colfax County, NM  
575-447-1639

Jerry Sarcella, Forestry Services Group, Lakewood Colorado.  
720-272-5627

The Natural Way, Inc. References:

Rob, Manager, Double J Ranch, Sedalia Colorado  
303-881-7636

Keith, Manager, Turner Estate, Parker Colorado  
303-805-8405

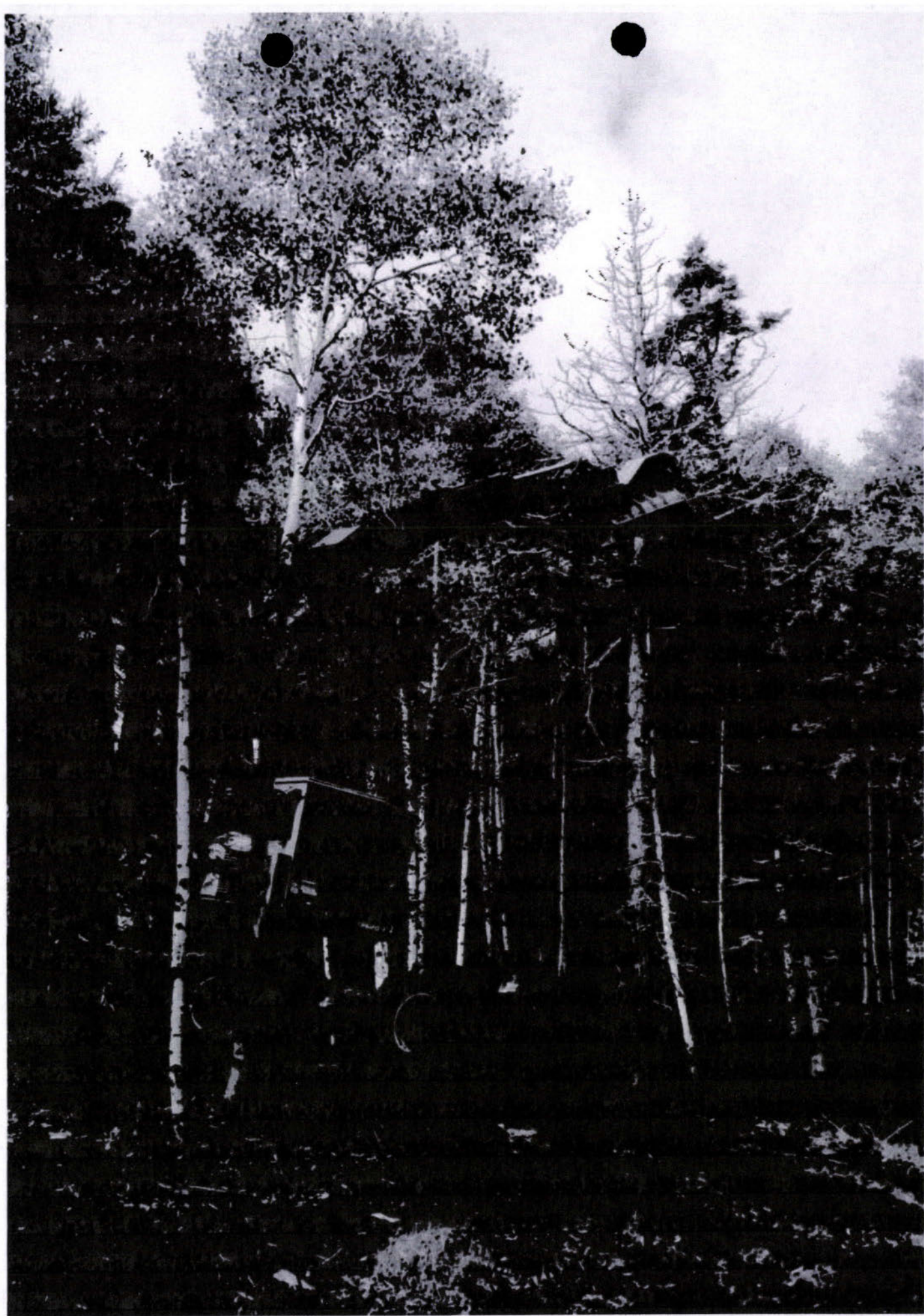
Tree Care Industry Association  
[www.tcia.org](http://www.tcia.org)

Denver Better Business Bureau  
<http://denver.bbb.org>

The Natural Way, Inc. website  
[www.thenaturalwayinc.net](http://www.thenaturalwayinc.net)

Trouble Shooter Network  
[www.troubleshooter.com](http://www.troubleshooter.com)













































	<b>Colorado Department of Personnel and Administration</b> <b>State Purchasing Office</b> <b>Colorado BIDS for Goods and Services</b> <b>The Natural Way, Inc.</b>	
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**Contact Information****Company:** The Natural Way, Inc.**Point of Contact:** Robert Anderson**DBA Name:****Phone:** (303) 347-0988**Address:** 1952 W Dartmouth ave  
Englewood CO 80110-1311 USA**FAX Number:** (303) 806-0868  
**Email Address:** bob@thenaturalwayinc.net**M/WBE Self-Certification****Gender:** Male**Ethnicity:** White (non-Hispanic)**Small Business?** Yes**Line of Business:** Environmental Services**Push Sols To?** Yes**Registration Status:** Current**Registration Method:****Web****Registration Type:** BIDS**Last Fee Paid Date:** 08/21/2008**Fee Expires Date:** 08/21/2009



**BID SUMMARY COMPARISON SHEET**

DATE: 10/1W/08 TIME: 1:00 PM BID #: D401233  
 BID TITLE: ELDORADO CSP Forest TX DEPT: CSFS BOULDER DEPT. CONTACT: BOB BUNDY  
 OPENED BY: Kath Lafollette WITNESSED BY: [Signature]  
 RANK: (5) (1) (3) (6) (8)

VENDORS:	DOVE CREEK ENTERPR	THE NATURAL WAY, INC.	DOUBLE TREE FOREST MNGMT	RDS ENVIRONMTL INC	CECIL LOGGING
CONTACT:	JEFF FRANKEN	BOB ANDERSON	JESTON + JULIE SMITH	MARK LINTON	JUSTIN CECIL
BLK 4A	11A \$1,100 A \$12,100	\$800 A \$8800	\$747 A \$8217	\$1000 A \$11,000	\$1125 A \$12,375
BLK 4B	37A \$777 A \$28,750	\$600 A \$22,200	\$747 A \$27,639	\$850 A \$31,450	\$1125 A \$41,625
UNIT 7B	39.5A \$786 A \$31,047	\$625 A \$24,687.50	\$747 A \$29,506.50	\$850 A \$33,575	\$1125 A \$44,437.50
UNIT 60A	35.5A \$786 A \$27,903	\$575 A \$20,412.50	\$747 A \$26,518.50	\$850 A \$30,175	\$1125 A \$39,937.50
UNIT 103B	13A \$1,100 A \$14,300	\$925 A \$12,025	\$747 A \$9,711	\$1000 A \$13,000	\$1125 A \$14,625
* TOTAL ACRES:	AV #1A 136 \$838.92 A \$114,100	\$647.76 A \$88,095	\$747 A \$101,592	\$920.58 A \$125,200	\$1125 A \$153,000
START DT:	@ contract sign/complete	11/1/08	WEATHER PERMIT 11/15/08 OR SOONER	10.20.08	—
END DT:	Continue on proj til complete By 8/31/09	2/5/09	WEATHER PERMIT 2/15/09 OR BEFORE	9.20.09	2/8/31/09
Sign DQ? Cover?	yes	yes	yes	yes	yes
@ SV?	yes	yes	yes	yes	yes
BIDS Reg	yes	yes	yes	yes	yes
CREW/EX MEMO?	yes	yes + Pict's	yes	NO -- 10:30AM KL CAUSE DISCT TR OFF \$130,200 PC TO FALLS	yes
TOTAL \$\$ AMOUNT					
DELIVERY DATE(S)					
INVOICE TERMS				1 DRAW PER 34 ACRES COMPLETED	
COI invld?	NO	NO	NO	NO	yes - all
FOB POINT					
FREIGHT- INCLD/PPA					
STATE	CO	CO	CO	CO	CO

ECSP  
DW/GR  
\*

REQ END 8/31/09

MUST

BUDGET TOTAL: \$115,200



**BID SUMMARY COMPARISON SHEET**

DATE: 10/1W/08 TIME: 1:00 PM BID #: D 401233  
 BID TITLE: ELDORADO CSP Forest DEPT: CSFS BOULDER CONTACT: BOB BUNDY  
 OPENED BY: Kath LaFollette WITNESSED BY: [Signature]

VENDORS:		SEED MASTERS INC	RUE LOGGING	EARTH IMPROVMENTS	SUMMIT FORESTS
CONTACT:		TIM RINEHOLT	BRIAN RUE	GREG LARSON	
ECSP DW/GR *	BLK 4A 11A	\$ 704 A \$ 7,744	\$ 1,435 A \$ 15,785	\$ 1,000 A \$ 11,000	\$ A
	BLK 4B 37A	\$ 704 A \$ 26,048	\$ 850 A \$ 31,450	\$ 700 A \$ 25,900	\$ A
	UNIT 7B 39.5A	\$ 704 A \$ 27,808	\$ 850 A \$ 33,515	\$ 700 A \$ 27,650	\$ A
	UNIT 60A 35.5A	\$ 704 A \$ 24,992	\$ 1,030 A \$ 36,742	\$ 750 A \$ 26,625	\$ A
	UNIT 103B 13A	\$ 704 A \$ 9,152	\$ 1,435 A \$ 18,655	\$ 900 A \$ 11,700	\$ A
* TOTAL 136 ACRES:		\$ 704 A \$ 95,744	\$ 992.64 A \$ 134,990	\$ 756.63 A \$ 102,902	\$ A
START DT:		NOV. '08	FEB '09	11/1/08	NO
END DT:		By 8/31/09	8/31/09	8/1/09	
Sign DQ ? Cover:		yes	yes	yes	
@ SV ?		yes	yes	yes	
BIDS Req		yes	yes	yes	
CREW/EX MEMO?		yes	yes	yes	NO
TOTAL \$\$ AMOUNT					
DELIVERY DATE(S)					
INVOICE TERMS		N20	-	N30	
COI insd?		NO	NO	NO	
FOB POINT					OR
FREIGHT- INCLD/PPA					
STATS		CO	CO	CO	

BUDGET TOTAL: \$ 115,200



## Site Visit Sign-In Sheet

Documented Qt D401233

**Eldorado Canyon State Park: Crescent Meadows Fuel Reduction - Units 4a, 4b, 7b**

&

**Denver Water: Gross Reservoir - Units 60a & 103b**

**Date: Sept. 25<sup>th</sup>, 2008 at 11:00 am**

COMPANY NAME	REPRESENTATIVE	PHONE NUMBER	E-MAIL
Double Tree Forest Mgt	Jeston Smith	209-206-0179	<del>Doubletree</del> Doubletree FMC <del>msn.com</del>
Rue Logging Inc.	Brian Rue	719-850-0151	ruelogging@yahoo.com
RDS EUM.	MATT PAULA	720 244 4465	
Earth Improvements	Greg Larson	970-379-4737	golarson@comcast.net
Dove Creek Ent	Jeff Franken	303 840-1096	Dove Creek 1@AOL.com
The Natural Way Inc	Roger Terry	303 520 1557	Rogerc@TheNaturalWayInc.net
THE FORESTRY SERVICES GROUP	Tony (son) JEFF SCASELLA	303-771-3126	thirtynine north@comcast.net
Seedmasters Inc.	Juergen Backes	719-243-7390	JUERGEN.SEEDMASTERS@GMAIL.COM
Global Loggers	BORRTH, SNOW	909-684-8781	dueladot@yahoo.com
Cecil Logging	Steve Johnson	909-289-0130	Cecillogginginc@aol.com
★ Fred Erickson	RE construx	303-642-0121	efrickson@gmail.com ★

NOTE: Upon completion of the Site Visit, please FAX sign in sheets to: Kathi LaFollette, CSU Purchasing at (970 491-5523. Thank You!

→ Did not attend enough of the Site Visit to have his bid considered. ←




**970-491-5105**

6010 Campus Delivery  
Purchasing Department  
555 S. Howes Street  
Fort Collins, CO 80523

Purchase Order		
Purchase Order Date	PO/Reference No.	Revision No.
<b>12/2/2008</b>	<b>S020559</b>	<b>original</b>
<b>Purchaser Information</b>		
Purchasing Agent	Kathi LaFollette	
Purchasing Agent Phone #	no value	
Requestor Name	Valerie Heady	
Requestor Email	Valerie.Heady@ColoState.EDU	
Requestor Phone	+1 (970) 491-6303	

Order acceptance instructions:

### Purchase Order Terms and Conditions

<http://www.purchasing.colostate.edu/pages/pdf/potermconditions.pdf>

Supplier Information	Delivery Information
<b>NATURAL WAY INC THE</b> 1952 W DARTMOUTH AVE ENGLEWOOD, CO 80110 US Phone +1 (303) 347-0988 Fax +1 (303) 806-0868 F.O.B. Destination Payment Terms 0% 0, Net 30	<b>Delivery Address</b> Colorado State University Attention: Bob Bundy Building: CSFS BOULDER DISTRICT Room Number: 5625 UTE HIGHWAY Department: LONGMONT, CO 80503 Colorado State University 200 West Lake Street 5060 Campus Delivery Fort Collins, CO 805235060 United States ShipTo Address Code 5060-1 <b>Delivery Information</b> Delivery 8/31/2009 Expedite No Ship Via Best Carrier-Best Way

WHEN YOU RECEIVE THE ABOVE ITEM(S)  
COMPLETE, SIGN, DATE & RETURN THIS  
COPY W/COPY OF PACKING SLIP TO S.O.  
SIGNED *Bundy* 8/13/09  
DATE REC'D

Shipping Instructions	
Note to Supplier	Per terms, conditions, and specs of DQ D401233
Attachments for supplier	
TNW.ISC.PDF (1,900k)	
Supplier Terms and Conditions	

Line No.	Product Description	Catalog No.	Size / Packaging	Unit Price	Quantity	Ext. Price
1 of 1	Service Agreement for Eldorado Canyon State Park & Denver Water Gross Reservoir - Forest Treement grant project per attached contract and terms of DQ D401233.	ISC	LO	88,125.00 USD	1 LO	88,125.00 USD
<b>ADDITIONAL INFO</b> Taxable No Capital Expense No PO Clauses Refer below						
Shipping, Handling and Tax charges are calculated and charged by each supplier.				Total	<b>88,125.00 USD</b>	

Billing Information	Billing Address
Charge to PO Listed Above	Colorado State University
530387 = \$41,765.63	Accounts Payable
530520 = 13,921.87	
223530 = 32,437.50	



EXHIBIT A TO INDEPENDENT SERVICES CONTRACT  
STATEMENT OF WORK

**Eldorado Canyon State Park—Crescent Meadows Units 4A, 4B, & 7B  
&  
Denver Water—Gross Reservoir Units 60A & 103B**

**2008/9 Fuels Reduction Project  
FEMA/GOCO/DENVER WATER  
136 ACRES**

**Purpose:**

The project has several primary objectives:

- Develop as much as possible, "restored" ponderosa pine forest conditions
- Reduce wildfire hazards by reducing tree densities, removing ladder fuels, and modifying stand structure
- Develop a much more open, "clumpy" stand character
- Reduce the threat of insect and disease attacks by reducing stand densities

**Legal Description and Location:**

Eldorado Canyon State Park and Gross Reservoir are located in Boulder County. The project areas lie 8 miles southwest of the city of Boulder near the eastern edge of the Front Range of the Rocky Mountains. Units are located in portions of Sections 27, 28, and 29 of Township 1 South, Range 71 West.

**General Description of Work:**

A mandatory site inspection is required for this project.

- Mastication of timbered areas to achieve target stand to reduce risk of wildfire and pine beetle. Contractor may request to be shown similar treatments in the area.
- Use of equipment that is comparable in performance to a Hydro-ax with a rotary ax mower and/or a Timbco with a Quadco or Fecon mulching attachment is specified for the project. The Contractor is responsible for determining the proper equipment mix necessary to achieve the desired results.
- Trees 10" and less will be masticated. All mulched material will be less than 10" above ground level. Stump height shall be less than 4" unless prohibited by rocks. Chunk depth will not exceed 10". Maximum mastication chunk size is 4" in diameter by 2 feet in length.
- The contractor will masticate along all boundaries in a "feathered pattern". No straight lines or corridors shall be created.
- No dead standing or dying trees will be left within 1.5 times its height of a trail or access road. This may require felling trees larger than the prescription. These trees should be felled, de-limbed, and masticated. If tree cannot be fully masticated, the remaining bole will be dragged out of site of any trail or road, and the cut faces will not face any trail or road. No work should be completed within 15 feet of an ephemeral drainage.
- 2 to 3 snags greater than 8" should be retained per acre for wildlife purposes.

\$647.98 per  
acre

**Unit Description and Prescription:**

This project is composed of 4 treatment blocks totaling 136 acres. ECSP Unit 4 consists of two blocks (4A and 4B).

**Eldorado Canyon State Park Block 4A Description:**

Block	Acreage	Aspect	Species	Basal Area (sq ft)	Average DBH	Trees per Acre	Average Slope	Other Info.
4A	11	NW	DF, PP, AS	127	5.3	821	25%	Abundance of ladder fuels

**Block 4A Prescription:**

- 90% of Douglas- fir less than 10" dbh and 90% of ponderosa pine less than 6" dbh should be treated.
- The remaining regeneration sized trees (+/- 10%) should be left in open areas > 15 feet from retention



trees.

- All Ponderosa pine found in the unit with a Hawksworth Dwarf Mistletoe rating of 3 or greater should be removed. (See Figure 1 below)
- The target basal area for this block ranges between 75 to 85 ft<sup>2</sup> per acre. Downed woody debris that is 12" diameter or less should be treated where possible.
- There are some slash piles from previous management actions, and these piles should be masticated to prescription.
- 50 to 60% of shrubs will also be masticated to promote new growth. These shrubs should be treated in swaths as contractor approaches trees under prescription.
- There is a section of aspen in the western portion of Block 4A that is along the drainage. Aspen is a desired species, but can be cut if needed to reach conifers which are under prescription.

#### Eldorado Canyon State Park Block 4B Description:

Block	Acreage	Aspect	Species	Basal Area (sq ft)	Average DBH	Trees per Acre	Average Slope	Other Info.
4B	37	ESE	PP,DF	88	6.2	431	25%	Dwarf Mistletoe, ladder fuels

#### Block 4B Prescription:

- 90% of Douglas- fir less than 10" dbh and 90% of ponderosa pine less than 6" dbh should be treated.
- The remaining regeneration sized trees (+/- 10%) should be left in open areas > 15 feet from retention trees.
- All Ponderosa pine found in the unit with a Hawksworth Dwarf Mistletoe rating of 3 or greater should be removed. (See Figure 1 below)
- 33% of Ponderosa pine 8" dbh and less present in dense overstory should be treated.
- Ladder fuel juniper 12" dbh or less should be treated.
- The target basal area for this block ranges between 50 to 60 ft<sup>2</sup> per acre. Downed woody debris that is 12" diameter or less should be treated where possible.
- 50 to 60% of shrubs will also be masticated to promote new growth. These shrubs should be treated in swaths as contractor approaches trees under prescription.

#### Eldorado Canyon State Park Unit 7B Description:

Unit	Acreage	Aspect	Species	Basal Area (sq ft)	Average DBH	Trees per Acre	Average Slope	Other Info.
7B	39.5	ESE	PP,DF	77	5	431	30%	Dwarf Mistletoe, rocky

#### Unit 7B Prescription:

- 90% of Douglas- fir less than 8" dbh and 90% of ponderosa pine less than 6" dbh should be treated.
- The remaining regeneration sized trees (+/- 10%) should be left in open areas > 15 feet from retention trees.
- All Ponderosa pine found in the unit with a Hawksworth Dwarf Mistletoe rating of 3 or greater should be removed. (See Figure 1 below)
- Ladder fuel juniper 12" dbh or less should be treated.
- The target basal area for this block ranges between 45 to 55 ft<sup>2</sup> per acre. Downed woody debris that is 12" diameter or less should be treated where possible.

#### Denver Water Unit 60A Description:

Unit	Acreage	Aspect	Species	Basal Area (sq ft)	Average DBH	Trees per Acre	Average Slope	Other Info.
60A	35.5	E	PP,DF	Varied 40-100	5	282	20%	Lop & Scatter/ Roundwood from 2004



### Block 60A Prescription:

- The unit was hand treated in 2004. The prescription on this unit is to focus on masticating the existing downed material, while expanding the boundaries to include untreated areas on surrounding accessible land.
- There is lop and scatter slash and roundwood scattered throughout the unit. All accessible downed woody debris that is 12" diameter or less should be treated.
- 90% of Douglas- fir less than 10" dbh and 90% of ponderosa pine less than 6" dbh should be treated.
- 33% of Ponderosa pine 6-10" dbh should be treated. Isolated regeneration sized trees should be left in open areas > 15 feet from any retention trees.
- All Ponderosa pine found in the unit with any signs of Dwarf Mistletoe should be removed.
- All ladder fuel should be treated.
- The target basal area for this unit is 50 ft<sup>2</sup> per acre.
- 50 to 60% of shrubs will also be masticated to promote new growth. These shrubs should be treated in swaths as contractor approaches trees under prescription.

### Denver Water Unit 103B Description:

Unit	Acreage	Aspect	Species	Basal Area (sq ft)	Average DBH	Trees per Acre	Average Slope	Other Info.
103B	13	N	PP,DF	~130	6	717	30%	Dense North Facing Slope

### Block 103B Prescription:

- 90% of Douglas- fir less than 10" dbh and 90% of ponderosa pine less than 6" dbh should be treated.
- 33% of Ponderosa pine 6-10" dbh should be treated.
- Isolated regeneration sized trees should be left in open areas > 15 feet from any retention trees.
- All Ponderosa pine found in the unit with any signs of Dwarf Mistletoe should be removed.
- All ladder fuel should be treated.
- The target basal area for this block ranges between 50 to 60 ft<sup>2</sup> per acre. Downed woody debris that is 12" diameter or less should be treated where possible.
- 50 to 60% of shrubs will also be masticated to promote new growth. These shrubs should be treated in swaths as contractor approaches trees under prescription.

Figure 1

### The Hawksworth six-class dwarf mistletoe rating system

#### Instructions

**Step 1** Divide live crown into thirds.

**Step 2** Rate each third separately.

Each third should be given a rating of 0, 1, or 2 as described below:

- (0) no visible infections
- (1) light infection (1/2 or less of total number of branches in the third infected)
- (2) heavy infection (more than 1/2 total number of branches in the third infected).

**Step 3** Add ratings of thirds to obtain rating for total tree.

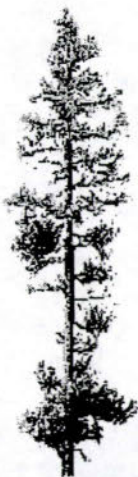
#### Example

If this third has no visible infections, its rating is (0).

If this third is lightly infected, its rating is (1).

If this third is heavily infected, its rating is (2).

The tree in this example gets a rating of:  $0 + 1 + 2 = 3$ .



On a tree or stand basis, light infection is a rating of 1 to 2; moderate is 3 to 4; and severe is 5 to 6.



Project boundaries are described and/or marked as follows:

Block Number	North Boundary Designation	East Boundary Designation	South Boundary Designation	West Boundary Designation
ECSP 4A	Orange Flagging/Orange Paint	Orange Flagging/Orange Paint	Orange Flagging/Orange Paint	Orange Flagging/Orange Paint
ECSP 4B	Orange Flagging/Orange Paint	Orange Flagging/Orange Paint	Drainage	Orange Flagging/Orange Paint
ECSP 7B	Drainage	Trail	Orange Flagging/Orange Paint	Meadow/Rock
DW 60A	Orange Flagging/Steep North Slope	Orange Flagging/Steep East Slope	Orange Flagging/Steep South Slope	Orange Flagging/Rocky East Slope
DW 103B	Orange Flagging/Steep North Slope	Orange Flagging/Steep North Slope	Orange Flagging/Blue Paint	Orange Flagging/Blue Paint

**Contract Period and Operational Period:**

Unit	Operational Period 1	Operational Period 2	Work Days
ECSP Units	July 16, 2008 - March 31, 2009	July 16, 2009 - August 31, 2009	Weekdays
DW Units	July 16, 2008 – August 31, 2009		7 days a week

- Start date and schedule must be coordinated with contract administrator.
- Daily Operational Period: Limited to 7:00 a.m. to dusk.
- No equipment warm up before 7:00 a.m.
- No contract extensions will be allowed for this project.

**Endangered Species Considerations:**

Based on the above Biological Assessment (BA) the US Fish and Wildlife Service in a letter of Dec 23, 2005, determined the proposed hazardous fuels reduction projects “will not result in the taking of the Canada Lynx, slender moonwort, Mexican Spotted Owl, the greenback cutthroat trout, or any Federally listed threatened or endangered species. This letter notwithstanding, the Contractor is required to comply with all Endangered Species Act (ESA) regulations.

**Additional Performance Standards:**

- Soil disturbance will be as minimal as possible. Ruts and/or depressions in the soil caused by Contractor equipment will be less than six inches deep. In areas where machines have used a path repeatedly, water-bars will be installed by the contractor if the Contract Administrator deems necessary.
- Ephemeral drainage areas will not be used as primary travel routes.
- Fuel, hydraulic fluid or other chemical spills will be reported to State Parks immediately. Soil contaminated by loss of fuel, oil, grease, hydraulic fluid, coolant, or other fluids shall either be removed and placed in covered drums or other acceptable containers for proper disposal by the Contractor or left in place and mixed with an encapsulating product such as RamSorb I, depending on the amount of contamination.
- The Contract Administrator may require the Contractor to mulch leave trees that have been significantly damaged (broken top, multiple equipment scars, equipment scarring in excess of 12” x 6” on the trunk, or an area encompassing more than two-thirds of the trunk circumference) by the Contractor. The Contractor must minimize damage to residual trees.
- Damaged gates, fences, or signs will be repaired or replaced by the Contractor, at the discretion of the Contract Administrator or State Parks staff.



- Smoking will only be allowed in vehicles. Each vehicle must have a properly serviced Class A, 2.5 pound fire extinguisher and a minimum of one fire tool per cutting crew member. All vehicles and motorized equipment must utilize effective manufacturer-certified spark arresters and muffler systems.
- Neither trash nor litter will be left by the Contractor anywhere on the Park, access route, or vicinity. Daily hauling of any trash generated by the Contractor is the Contractor's responsibility.
- It is the responsibility of the Contractor to follow all rules and regulations established for Eldorado Canyon State Park. Ben Pedrett of Colorado State Parks is the manager for Eldorado Canyon State Park and can be contacted at (303) 494-3943 x13. No dogs and no camping will be allowed on the site.
- All issues and concerns of adjacent property owners and others shall be referred to the Contract Administrator.
- Site should be left in a safe manner at the end of every work day. The main Walker Ranch loop trail must be cleaned of debris at the end of every day of work. (Loop trails through Units 4A & 7B)
- No rootballs should be created by the contractor however any exposed rootballs created during this project will be tipped back into an upright position or masticated by the Contractor.
- The Project Administrator may suspend or limit operations if excess damage is occurring due to mud, snow, extreme fire danger, etc., or due to the following situation(s): failure to meet contract specifications.
- The contractor shall wash the undercarriage of all trucks and equipment before entering the stands to reduce the spread of noxious weeds from other projects.

#### **Plan of Operations:**

- The Contractor shall prepare a *Plan of Operations* for the Project Administrator prior to the start of any work. Upon completion and approval by the Project Administrator, this *Plan of Operations* shall be attached hereto and incorporated herein, the same as if set forth in full. Contractor shall not commence any work until the *Plan of Operations* has been approved. Among other things, the plan shall describe projected start and end dates for the project, the order of work among the various blocks, projected times to complete each block, etc.

#### **Administration:**

- At the time of signing a written Operational Plan shall be agreed to between the Contractor and the Contract Administrator. Work must be started within 21 working days of the date agreed upon in the Operational Plan, except as may be approved by the Contract Administrator. For each day past this 21-day window, the Contractor may be assessed a \$250 fine.
- Contractor shall notify the Contract Administrator prior to moving any equipment into the project area and also prior to the start of work. No work will begin without the presence of the Contract Administrator.
- CSFS expects that as many acres within the treatment block will be completed as possible. CSFS recognizes however, that portions of some units may not be treatable due to operability restrictions from slope, rock, and topography. If 90% or more of the project is completed, the Contractor will be paid for 100% of the contract. If the Contractor completes less than 90% of the project, the Contractor will be paid only for the acreage actually completed. If Contractor does not complete acres within each unit due to inability, the Contractor will submit a detailed invoice to Project administrator, displaying complete and incomplete acres. Project administrator will GPS completed acres to determine final completed acreage.

#### **Damage Penalty:**

The Contractor shall conduct all operations in a timely manner and in accordance with the Plan of Operations which is attached hereto and incorporated herein, the same as if set forth in full, and shall take all necessary precautions to protect the remaining forest stand, soils, and any improvements. Excessive damage to the remaining forest stand, or the removal of undesignated products will be paid for at the rate of \$50.00 for each significantly-damaged tree that is 4 inches DBH or greater. Penalties may also be assessed for damages to soils, improvements or other elements of the forest stand. Determination of damage is at the sole discretion of the Project Administrator.



**Performance Bond and Damage Deposit:**

A performance bond in the amount of 50% of the Project Value or \$25,000.00, whichever is greater, shall be deposited by the **PURCHASER** upon signing of this agreement. The bond shall be in the form of cash, certified check or a certified bond from a qualified bonding company. The performance bond shall be used, in part or in full for non-performance of any of the terms or conditions of this Independent Services Contract and/or to correct deficiency in any work not completed to agreement specifications. The bond may be used to cover expenses incurred by the Colorado State Forest Service to complete contract obligations, including re-bidding the entire project if necessary.

A Damage Deposit in the amount of \$ 2,000.00 shall be deposited by the **PURCHASER** upon signing of this contract. The deposit shall be in the form of cash or certified check. Any damage penalties and charges for damages to soils, improvements or other elements of the forest stand not repaired or corrected by the Contractor shall be deducted from the Damage Deposit. If at any time during the performance of this agreement the Damage Deposit balance falls below \$ 500.00, it shall be brought back to the original full amount through additional payments by Contractor.

Any remaining bond and deposit balances will be released to **PURCHASER** promptly upon satisfactory completion of this agreement.

*The balance of this page has been left blank intentionally*



**EXHIBIT B TO INDEPENDENT SERVICES CONTRACT  
PRICE, COST AND PAYMENT PROVISIONS**

Incorrect payments by the State to the Contractor due to omission, error, fraud, or defalcation shall be recovered from the Contractor by deduction from subsequent payments under this contract or other contracts between the State and the Contractor or as a debt due to the State.

The University reserves the right to withhold payment, without interest or penalty, for charges that are unsubstantiated or as to which a dispute exists, pending further documentation from the Contractor supporting such charges, or dispute resolution. Any late payment, interest, penalty, or other payment provisions contained in any other exhibit, attachment, invoice, statement or demand, shall be null and void. The University shall be liable for the payment of interest at the rate of 1.0% per month until paid, on all amounts past due, commencing 45 days after the due date, in accordance with C.R.S. sec. 24-30-202(24).

Invoices shall be sent to:  
CSFS—Boulder District  
Attn: Bob Bundy  
5625 Ute Highway  
Longmont, CO 80503  
(303) 823-5774

Payments shall be sent to:  
The Natural Way, Inc.  
1952 West Dartmouth Avenue  
Englewood, Colorado 80110  
Office (303) 347-0988  
Bob Anderson Cell (720) 840-3423

☒ [Optional—check here if required]: [Fixed Price] The contract total price is \$88,095.00.  
Payments shall be made as follows:

DATE OR EVENT	AMOUNT PAYABLE
Completion of ECSP Block 4A	\$8,800.00
Completion of ECSP Block 4B	\$22,200.00
Completion of ECSP Unit 7B	\$24,687.50
Completion of DW Unit 60A	\$20,407.50
Completion of DW Unit 103B	\$12,000.00





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State Poles  
2-13-08

PRS should flow easily into contract -  $\frac{1}{2}$  contract verbatim,  $\frac{1}{2}$  for parks

Possible budget of additional position for GOSP

Part time help may be available for summer project work

\* I transfer into to Ben Pfohl (+ tree spraying)

- 901 m-1 roller (3/04) - Loop mty roller

- Contract fairing - perf bond vs. damage deposit

Poles - damage trees & hand crew - mention in show-me, very strict

↳ limit damage hrs, amounts of slash on road, small equip

- Talk with park dir every block completion

May do some tree naty along Eldo trail

\* Eldo Rx pix to Joe Duda

\* Finalize Eldo ~~Contract~~ Contract into by July 16th, talk to BCPOS

\* New parcel info from county

\* Email Dave F. request for Chuck's standardized contract

Geo IT

3080

x3 IT

x1 help desk

CHills  
1031 → Old connect to Pinto

Rick Standard 303-443-9468



# **Eldorado Canyon State Park 2007 Fuels Management Program Project Review Sheet**

**Project Name:** Eldorado Canyon, Crescent Meadows, Units 4 and 7b

**Date Prepared:** June 30, 2007

**Prepared by:** Colorado Forest Management, LLC

**Type of Project:**

<input checked="" type="checkbox"/>	<i>Vegetation Treatment</i>	<input type="checkbox"/>	<i>Prescribed Fire</i>
<input type="checkbox"/>	<i>Tree/Shrub Planting</i>	<input type="checkbox"/>	<i>Defensible Space</i>
<input type="checkbox"/>	<i>Re-vegetation</i>	<input type="checkbox"/>	<i>Other (describe)</i>

**Good Neighbor Project:** ☐ Yes ☒ No

**Property or Parcel Name:** Eldorado Canyon State Park (hereinafter referred to as park)

**County:** Boulder County

**Total acreage:**

<b>Unit 4</b>	<b>= 47.84 acres</b>
Block 4A	= 10.97 acres
Block 4B	= 36.87 acres
<b>Unit 7b</b>	<b>= 39.45 acres</b>
<b>Total:</b>	<b>= 87.29 acres</b>

## **Project Description:**

### **Project Location:**

Eldorado Canyon State Park is located in Boulder County. The Park is along the eastern edge of Front Range of the Rocky Mountains and lies 8 miles southwest of Boulder, Colorado. Projects are located in portions of Sections 33 and 34 of Township 1 South, Range 71 West.

### **General Description of Work:**

Work involves fuel reduction & restoration thinning via mechanical mulching/mastication. Thinning from below will be completed to reach the treatment objectives

### **Purpose:**

**Treatment Goal:** The primary goal is to decrease hazardous fuels and increase overall forest health within the project areas. Secondary goals will be to decrease meadow encroachment by



conifers, to improve forest wildlife habitat, to reduce levels of dwarf mistletoe, to improve park aesthetics and to increase forest resistance to insect and disease outbreaks.

**Treatment Objectives:** There are multiple objectives that will be implemented to reach the desired goals. These objectives are general and will be more detailed in the prescription below.

- Remove ladder fuels from the understory by thinning from below.
- Target Douglas-fir as the removal species due to its ladder fuel characteristics.
- Remove heavily infected dwarf mistletoe trees to minimize its spread.
- Choose dead, dying, diseased and poor form trees over healthy trees.

**Existing Conditions:**

- There are two Units for this project.
- Both Units are forested while there are occasional open areas and more dense clumps of trees.
- Both Units are operable, with slopes less than 35% in most places. All of the noticeable rock outcrops and steep slopes have been removed from acreage determinations (Refer to maps).
- Access to all units is from the Crescent Meadows parking area utilizing old 2 track roads. There is gate access at this parking lot. One portion of Unit 4 will require driving equipment down a portion of Gross Dam Road. This is detailed in the Access section below.
- Unit 4 is split into two blocks with different existing conditions and recommended prescriptions.
- Both Units are at a stage where there is a large influx of small diameter trees. These trees act as ladder fuels and increase the risk of catastrophic wildfires. The ladder fuels can lead a ground fire into the canopy causing tree crowning which could lead to a devastating crown fire.
- Both Units also have active mistletoe and beetle populations. Presently these populations are at endemic levels, but treatment can help prevent epidemic levels from being reached.

**Unit Descriptions:**

This project is composed of **2 treatment units** totaling approximately **87.29 acres**. The Units are separated by a drainage that runs west to east.

**Unit 4** is made up of two blocks which differ based on existing conditions; the entire Unit is approximately 47.84 acres. The slope averages 25%, ranging from 0 to 35%.

- **Block 4A** is a very dense northwest facing slope which makes up approximately 10.97 acres, it is found in two non-contiguous areas. These areas are separated by rock outcrops. Douglas-fir dominates the unit, but a strong ponderosa pine presence is found. Spruce and juniper were seen in limited quantities in the block. The unit has a basal area of 127 ft<sup>2</sup> per acre and an average Dbh of 5.3" (this average includes regeneration sized (2 and 4") classes). Trees greater than 5" have an average dbh of 9.5". There are approximately 821 trees per acre with 246 of these being greater than 5" in diameter. Most of the trees within the unit are fairly healthy, but there is some density related mortality occurring. There is however an abundance of ladder fuels within this unit, mostly in the form of small Douglas-fir. This block poses a serious fire hazard to the rest of the park. No mistletoe was noticed in this unit, but there is a good possibility it exists.
- **Block 4B** is more open with east and southeast facing slopes. It makes up about 36.87 acres. This block is dominated by ponderosa pine with some juniper and



Douglas-fir found in pockets near the northern boundary of the block. The unit has a basal area of 88 ft<sup>2</sup> and an average Dbh of 6.2" (including regeneration sized trees). Trees greater than 5" average 8.6 inches. There are approximately 431 trees per acre with 197 of these being greater than 5" in diameter. This unit has some dwarf mistletoe found in pockets throughout the stand. This mistletoe poses a threat to spread to healthy trees while also providing a ladder fuel into tree canopies. There is also a good amount of ponderosa pine regeneration in pockets throughout the stand. The northeast portion of this block has pockets of Juniper and pockets of Douglas-fir. When these species appear underneath larger conifers they also pose as a ladder fuel threat.

**Unit 7** is approximately 39.45 acres but is considered one block. Slope averages 30% and ranges from 0-35%. The unit has a basal area of 77 ft<sup>2</sup> per acre and an average Dbh of 5.0". Trees greater than 5" average 8.2 inches. There are approximately 431 trees per acre with 197 of these being greater than 5" in diameter. This unit has equal amounts of ponderosa and Douglas-fir, but most of the Douglas fir is found in the small diameter classes 6" or less. There are moderate amounts of fuel ladders due to the Douglas fir regeneration. The presence of dwarf mistletoe was moderate, but it was mostly found in one isolated clump near plot location 10. There are a few small rock outcrops that limit operability within the unit.

**Table 1: Existing Conditions of Units and Blocks**

UNIT -BLOCK	BASAL AREA (ft <sup>2</sup> /ACRE)	STEMS PER ACRE > 5"/REGEN	AVG DBH (IN) W/WO (REGEN)	AVG HEIGHT (FT)	STAND VARIABILITY
<b>Unit 4A Dense</b>	127	246/575	5.3/9.5	39.2	MED
<b>Unit 4B Open</b>	88	197/234	6.1/8.6	32.8	HIGH
<b>Unit 7</b>	77	179/397	5.0/8.2	30.5	MED

**Unit Prescription:**

- All of the units should be treated by masticating the vegetation which is targeted for treatment/removal.
- The contractor will masticate in a "feathered pattern" along the boundaries (not delineated by fence or road) according to the tree stand characteristics and operability. If a clump of trees is along the boundary the whole clump will be cut or not cut, it will not be cut in half.
- No dead standing or dying trees will be left within 1.5 times its height of a trail or access road. This may require felling trees larger than the prescription. These trees should be felled, delimbed, and masticated. If tree cannot be fully masticated, the remaining bole will be dragged out of site of any trail or road, and the cut faces will not face any trail or road.
- All stumps will be cut as close to the ground as possible. Unless there is rock near the base of the removed tree stump, height will not exceed 4 inches.
- All trees to be removed that are less than 12 inches dbh shall be mechanically masticated and no mulched material shall be larger than four feet long and eight inches in diameter.
- Chunk depth will not exceed 10 inches and should average 8 inches or less.
- No work should be completed within 15 feet of an ephemeral drainage. Crossing of these drainages is allowed, however the number will be limited to what is necessary for project completion.



**Unit 4:**

**Block 4A:** This block should be thinned from below to treat 90% of Douglas fir 10" and below, removing the understory ladder fuel in this Ponderosa pine/Douglas fir stand. 90% of ponderosa pine 6" or less should also be treated. The remaining 10% of these regeneration sized trees should be left in open areas where they are not directly found underneath (at least 15 feet from) desired retention trees. All Ponderosa pine found in the unit with a Hawksworth Dwarf Mistletoe rating of 3 or greater should be removed. Dead standing trees 12" or less should be masticated however enough snags should be left as outlined in the snag section for wildlife purposes. The treatment should leave a basal area between 75 to 85 ft<sup>2</sup> per acre. Downed woody debris that is 12" or less should be treated to prescription leaving no more than 100 linear feet per acre. However, rotten logs do not have to be masticated and are not considered part of these 100 linear feet. There are some slash piles from previous management actions, and these piles should be masticated to prescription. 50 to 60% of shrubs will also be masticated to promote new growth. These shrubs should be treated in swaths as contractor approaches trees under prescription. There is a section of aspen in the western portion of Block 4A that is along the drainage. Aspen in this area can be cut if needed to reach conifers which are under prescription. Aspen however is a desired retention species in this stand. **Table 2a** demonstrates removal guidelines for the different size classes. This information is an estimate and the descriptive prescription should prevail over any discrepancies.

**Table 2a: Tree Removal Guidelines for Block 4A**

Size Class (DBH)	# Trees (per ac)	Basal Area ft <sup>2</sup> (per ac)
2"	315	.6
4"	67	3.3
6"	22	4.5
8"	16	4.5
10"	31	18
<b>Total</b>	451	30.9

**Block 4B:** This block is already fairly open, but has pockets of dwarf mistletoe and pockets of regeneration sized classes increasing the ladder fuels and encroaching on naturally open areas. The target for removal in this sub unit will be small ponderosa pine, Douglas-fir, and juniper species. The stand should be thinned from below to remove 90% of the encroaching regeneration sized classes (6" or less) of ponderosa pine. If an area has only 6" or less ponderosa, some trees can be left to leave a forested appearance. These trees should be left with at least 15 foot spacing between retention crowns. At least 33% of ponderosa pine in the 8" diameter class should also be treated in areas with dense ponderosa in the understory. 90% of Douglas fir 10" or less should be removed, although none was found in the inventory data. Douglas-fir was seen through ocular data in the northeastern portion of the Unit. Juniper 12" or less found underneath any other conifer



should be treated, however Juniper species can be left if at least 15 feet from the nearest retention tree crown. Dead standing trees 12" or less should be masticated however enough snags should be left as outlined in the snag section for wildlife purposes. The treatment should leave a basal area of 50 to 60ft<sup>2</sup>. Downed woody debris that is 12" or less should be treated to prescription leaving no more than 100 linear feet per acre. However rotten logs do not have to be masticated and are not considered part of this 100 linear feet. 50 to 60% of shrubs should also be masticated to promote new growth. **Table 2b** demonstrates removal guidelines for the different size classes. This information is an estimate and the descriptive prescription should prevail over any discrepancies.

**Table 2b: Tree Removal Guidelines for Block 4B**

Size Class (DBH)	# Trees (per ac)	Basal Area ft <sup>2</sup> (per ac)
2"	150	2
4"	60	5.4
6"	75	9
8"	32	11
<b>Total</b>	317	27.4

**Unit 7:** This unit will be thinned from below to treat 90% of small Douglas-fir 8" or less in diameter and 90% of ponderosa 6" or less in diameter. Ponderosa pine (12" or less) found in the unit with a Hawksworth Dwarf Mistletoe rating of 3 or greater should be treated to prescription. All juniper trees 12" or less that are in the understory of other conifers will be treated, however Juniper species can be left if at least 15 feet from the nearest retention tree. The treated trees will be masticated on site. Dead standing trees 12" or less should also be masticated, however enough snags should be left as outlined in the snag section for wildlife purposes. The desired basal area should average 45 to 55ft<sup>2</sup> per acre. Downed woody debris that is 12" or less should be treated to prescription leaving no more than 100 linear feet per acre. However rotten logs do not have to be masticated and are not considered part of this 100 linear feet. **Table 2c** demonstrates removal guidelines for the different size classes. This information is an estimate and the descriptive prescription should prevail over any discrepancies.

**Table 2c: Tree Removal Guidelines for Unit 7**

Size Class (DBH)	# Trees (per ac)	Basal Area ft <sup>2</sup> (per ac)
2"	240	1
4"	75	5
6"	70	12
8"	10	10
<b>Total</b>	395	28



### **Snag Prescription:**

Presently the units have a good amount of existing snags. Maintenance of existing wildlife snags for roosting provides habitat for raptors and other tree bound animals. No new snags need to be created. Dead standing trees will need to be treated if less than 12" dbh, or any size within 1.5 tree height of roads or trails. However at least 2 to 3 snags 8" or greater (preferably 16" or greater) should be left meeting the below criteria. Live trees with broken tops, dead tops, or mechanical damage are likely candidates to become future wildlife trees. Criteria for selecting existing wildlife snags are as follows:

- Trees already with signs of woodpecker, or other raptors (nests, holes, cavities, etc)
- Trees with dead or broken tops which are likely to have cavities.
- All wildlife snags should be at least 8 inches and have their bark intact.

## **PROJECT IMPLEMENTATION:**

### **Contract period & Operational Period:**

- The project should be started in mid summer (July 16<sup>th</sup>), and finished by the end of March (31<sup>st</sup>) avoiding the high use times of year and the wet spring drainage season. This will also ensure that bird breeding and nesting times (April 1st through July 15<sup>th</sup>) will be avoided.

Unit	Operational Period 1	Operational Period 2
Unit 4	July 16 <sup>th</sup> through Dec 31 <sup>st</sup>	Jan 1 <sup>st</sup> through March 31 <sup>st</sup>
Unit 7b	July 16 <sup>th</sup> through Dec 31 <sup>st</sup>	Jan 1 <sup>st</sup> through March 31 <sup>st</sup>

- Start date and schedule must be coordinated with contract administrator.
- Daily Operational Period: Limited to 7:00 a.m. to dusk, five days a week. This will be done to limit conflicts with neighboring landowners and recreational visitors.
- No equipment warm up before 7:00 a.m.
- No contract extensions will be allowed for this project.

### **Marking:**

- The contractor will determine which trees to remove based on the management prescription, unless otherwise specified by the contract administrator. Trees will not be marked over the entire project area, instead the units will be marked accordingly:
- BOUNDARY – (Orange flagging) All unit boundaries will be marked with orange flagging and a vertical orange paint slash on take trees unless otherwise specified. The paint slash will face the interior of the unit. There will be no flagging or paint in Between Units 4 and 7b since an ephemeral drainage delineates the boundary. The contractor will treat as much as possible in this boundary leaving at least 15 feet on either side of the drainage. The eastern portion of Unit 7b which is bounded by the trail, will also not be flagged or marked. There is also a small meadow area on the western boundary of Unit 7b which was not marked. This area was removed from the total acreage but the boundary flagging includes the meadow.
- DEMO AREAS – (Blue flagging) Demo areas serve as a location where contractors and park staff can get a feel for the desired residual look. There are 2 Demo areas, one in Unit 4a and one in Unit 7b. Demo areas will be marked with blue flagging on all take trees. Corners of the demo area will be marked with double blue flagging.



- Occasionally a flag may be found on a large tree that does not fall under prescription, this is typically done when it is difficult to locate or follow a boundary. These flags should be removed and the tree retained if possible. All paint marked trees must be treated.

#### **Operation Restrictions:**

The Contract Administrator may suspend or limit operations in the case of extreme fire danger, excessive damage due to mud or snow, excessive residual tree damage, or failure to meet contract specifications.

#### **Treatment Methods and Equipment**

- The treatment method for all units is mastication with a hydro-ax or similar piece of machinery. No product removal is allowed.
- Areas near trails or forest access roads may need to be treated by hand to ensure masticated material stays clear, and these trails/roads remain passable.

#### **Access:**

- Access to the main project area will be gained from the trailhead parking lot at Crescent Meadows (Access Point 1). There are multiple old forest roads that can be used for equipment access only.
- Access to the western portion of Unit 4a will be from Access Point 2. Equipment will need to be driven down Gross Dam Road to this access point.
- On the map, Access Point 3 is a way to access. The section to the east.
- Access Point 4 and Access Point 5 are the way to treat the eastern and middle spurs of Unit 4a.
- Access Point 6 is the easiest way to get to the southern portion of Unit 7b.
- No skid trails will be needed.
- No equipment shall be parked on the private roads at any time.
- All access roads will be kept passable at all times. Any significant accumulations of mulch on the access roads and trails will be removed by the Contractor at the end of each day.
- Trail closure and signs must be coordinated with contract administrator and park staff. This will be required as part of the contractors operational plan to minimize the number of days a trail needs to be closed.
- Roads and other improvements will be repaired to the same condition as found prior to the start of work. This repair may include repairing or replacing drainage control features. Significant damage to existing roads or other improvements caused by the Contractor must be repaired by the Contractor as soon as possible. The Contract Administrator will determine if road repair is necessary.

#### **Additional Performance Standards:**

- Soil disturbance will be as minimal as possible. Ruts and/or depressions in the soil caused by Contractor equipment will be less than six inches deep. In areas where machines have used a path repeatedly, water-bars will be installed by the Contractor if the Contract Administrator deems necessary.
- Ephemeral drainage areas will not be used as primary travel routes.
- Fuel, hydraulic fluid or other chemical spills will be reported to State Parks immediately. Soil contaminated by loss of fuel, oil, grease, hydraulic fluid, coolant, or other fluids shall either be removed and placed in covered drums or other acceptable containers for proper disposal by the



Contractor or left in place and mixed with an encapsulating product such as RamSorb I, depending on the amount of contamination.

- The Contract Administrator may require the Contractor to mulch leave trees that have been significantly damaged (broken top, multiple equipment scars, equipment scarring in excess of 12" x 6" on the trunk, or an area encompassing more than two-thirds of the trunk circumference) by the Contractor. The Contractor must minimize damage to residual trees. The Contractor will be charged \$50 for each significantly damaged tree that is 4 inches dbh or greater.
- Damaged gates, fences, or signs will be repaired or replaced by the Contractor, at the discretion of the Contract Administrator in coordination with State Parks staff.
- Boundary fences must not be damaged and the mastication debris must not be propelled onto the adjoining county road. No woody material may be left on or piled up in site of county road. **Work may need to be completed by hand near county road boundary in order to meet this standard.**
- Smoking will only be allowed in vehicles. Each vehicle must have a properly serviced Class A, 2.5 pound fire extinguisher and a minimum of one fire tool per cutting crew member. All vehicles and motorized equipment must utilize effective manufacturer-certified spark arresters and muffler systems.
- Neither trash nor litter will be left by the Contractor anywhere on the Park, access route, or vicinity. Daily hauling of any trash generated by the Contractor is the Contractor's responsibility.
- It is the responsibility of the Contractor to follow all rules and regulations established for Eldorado Canyon State Park. Ben Pedrett of Colorado State Parks is the manager for Eldorado Canyon State Park and can be contacted at (303) 494-3943. No dogs and no camping will be allowed on the site.
- All issues and concerns of adjacent property owners and others shall be referred to the Contract Administrator.
- Site will be left in a safe manner at the end of every work day.
- No rootballs should be created by the contractor; however any exposed rootballs created during this project will be tipped back into an upright position or masticated by the Contractor.
- There will be no salvage rights granted to the Contractor for this project.

**Performance Bond and Damage Deposit:**

- A Damage Deposit in the amount of \$1000.00 will be required upon contract award. The deposit shall be in the form of cashier's check, certified check, money order, or irrevocable letter of credit payable to the CSFS. One deposit per Contractor is required. The deposit shall be used in part or in full, to correct deficiency in any work not completed to agreement specifications. The deposit will be retained in full should the Contractor fail to complete the contracted work in the time frame specified in the Independent Services Contract. The deposit or its balance will be released to Contractor promptly upon satisfactory completion of the contract.
- The Contractor will be required to furnish a Performance Bond executed by a corporate Surety authorized to do business in the State of Colorado and in the full amount of the contract sum. The expense of this bond shall be borne by the Contractor and bond shall be filed with Colorado State University. **A sample Bid Bond, State Form SC-6.22, is attached to this Invitation for Bid.** If, at any time, the Surety on such a bond is found to be, or ceases to be in strict compliance with any qualification requirements of the Contract of the bid documents, or loses its right to do business in the State of Colorado, another Surety will be required, which the Contractor will



furnish to Colorado State University within ten (10) days after receipt of notice from Colorado State University or after the Contractor otherwise becomes aware of such conditions.

**Subcontracting:**

- All subcontractors must be approved by CSFS in writing prior to contract signing and bid approval.

**Administration:**

- All treatment units together have a gross acreage of approximately 87.29 acres. All operable areas will be treated. However, Colorado State Forest Service (CSFS) recognizes that portions of some blocks may not be treatable due to operability restrictions from slope, rock and topography. If 90% (78.56 acres) or more of the project is completed, the Contractor will be paid for 100% of the contract. If the Contractor completes less than 90% of the project the Contractor will be paid for the acreage completed. If the Contractor does not complete acres within each unit due to inability, the Contractor will submit a detailed invoice to Contract Administrator, displaying complete and incomplete acres. Contract Administrator will GPS completed acres to determine final completed acreage and appropriate payment.
- At the time of contract signing a written Operational Plan shall be agreed to between the Contractor and the Contract Administrator. Among other things, the plan shall describe projected start and end dates for the project, the order of work among the various blocks, projected times to complete each block, etc.
- Work must be started within 21 working days of the date agreed upon in the Operational Plan, except as may be approved by the Contract Administrator. For each day past this 21-day window, the Contractor may be assessed a \$250 fine.
- Contractor shall notify the Contract Administrator prior to moving any equipment into the project area and also prior to the start of work. No work will begin without the presence of the Contract Administrator.
- *This paragraph will be completed by CSFS: Due to funding constraints, meeting time requirements in all phases of this project is critical.* Upon project completion, the Contractor must request a final inspection by the Contract Administrator. This final inspection will be no later than December 3, 2008. Any additional work to correct deficiencies identified in this final inspection must be completed by December 12, 2008. Final invoicing for the work must be submitted to the Contract Administrator by December 19, 2008. Final payment will be processed upon successful completion of the project and after final inspection is complete.

**ENVIRONMENTAL & OTHER ISSUES:**

**Weed prevention / Rehabilitation / Reclamation:**

- The undercarriage and tires of all trucks and equipment must be washed offsite before entering the project area to reduce the spread of noxious weeds from other projects. Machine operations should avoid driving through weed areas.
- No major reseeding effort is expected to be necessary for this project; however reseeding may be required of the Contractor in areas where work has exposed bare soil and in areas as may be deemed necessary by the Contract Administrator. Any and all reseeding will be done with seed mix specifications provided by the State Parks Resource Stewardship Coordinator.



**Sensitive Areas to Avoid:**

- Use caution to not damage boundary fence or propel mastication debris onto the neighboring property. This is only a problem along the county road.
- Use caution to not drive equipment into ephemeral streams (if running) found in the west portion of Unit 4a and the southern portion of Unit 7b. If no water is running, then the minimal number of crossings will be used to successfully complete the project.
- Be aware that old barb wired fencing is found throughout the property.
- Powerlines go through portions of Unit 4, care should be taken to avoid any damage to these lines, but more importantly are noted for contractor safety. Please refer to map for approximate location.

**Endangered and Sensitive Species:**

- Based on the attached Biological Assessment (BA) the US Fish and Wildlife Service in a letter stamped April 6<sup>th</sup>, 2005, determined the proposed hazardous fuels reduction projects “will not result in the taking of the bald eagle, Preble’s meadow jumping mouse, or any federally listed threatened or endangered species.” This letter notwithstanding, the Contractor is required to comply with all Endangered Species Act (ESA) regulations.

**Archaeological/Cultural Resources to Avoid:**

- If unidentified cultural resources are discovered during project activities, work must be halted by the Contractor until the resources have been evaluated in terms of Federal Register criteria, 36 CFR 60.4, in consultation with the Colorado Historical Society.



## **For State Parks management purposes – not part of contract scope**

### **Rationale for recommended management treatments:**

- Fire exclusion in the area has allowed Douglas-fir to become more dominant within these units, along with an increase of ponderosa pine in the lower diameter classes. This has increased ladder fuels, fuel continuity, and fuel loading. The proposed thinning projects will simulate natural fire disturbances that should have maintained the area as an open ponderosa pine forest with a smaller representative component of Douglas fir.
- Removal of conifers in the understory will decrease ladder fuels, and alter fuel continuity and fuel loading. This will decrease the risk of severe fire behavior within the stand. Removal of middle diameter classes will serve to increase the spacing between remaining tree crowns avoiding potentially hazardous crown fires.

### **Long-term benefits:**

- **Fire Hazard Reduction:** The work completed in these units will decrease hazardous ladder fuels and alter the vertical fuel structure. An initial increase in ground fuels will be apparent for the first two to three years; however these fuels will no longer act as ladder fuels. If a prescribed burn is scheduled during 3 to 5 years post treatment many of these fuels will be consumed
- **Wildlife Habitat:** Opening up the forest stands will increase forage for ungulates. The open areas will allow more grasses and shrubs to grow, by increasing sunlight, and decreasing competition for resources. The removal of conifers will allow aspen to sprout in some areas which will provide additional forage.
- **Forest Succession:** The suppression of wildfires has altered the natural succession process in much of the area being treated. Wildfires were a natural part of the ecosystem and they kept meadows open while also allowing ponderosa pine forests to stay open and withstand low intensity fires. Douglas-fir has begun to invade Ponderosa pine forests, increasing ladder fuels and densities. The proposed treatment will help maintain the meadows and keep the Ponderosa pine forests open where work is completed. Due to fire suppression, conifers have begun to invade meadows, decreasing the amount of natural landscape variability, and increasing the dangerous (wildfire prone) homogeneous landscape structure.
- **Forest Condition:** Forest Health presently is okay within this area; however the overall density is high and increasing which makes the forest susceptible to insect and disease outbreaks, and catastrophic wildfires. Treatment will help return the mosaic structure to the landscape which is better apt to survive these outbreaks. The thinning will also allow the remaining stems to increase in size and vigor, resulting in a more fire resistant and healthy stand.
- **Insect and Disease:** Dwarf mistletoe and Mountain Pine Beetle are two pathogens that are found in endemic proportions in the treatment areas. With large areas of stressed/weakened (density related) trees, the possibility of epidemic outbreaks is real. The treatments proposed will allow the remaining trees to increase in vigor and health, allowing insect and diseases to remain at endemic levels. Dead, diseased, or dying trees will be preferred for removal allowing the additional resources to be utilized by residual trees.

### **Future treatment maintenance:**

- The first few years post mechanical treatment will need to see noxious weeds treated. Newly disturbed areas are always at risk for noxious weeds to take hold.



- Some of the areas being treated should be followed up by a prescribed fire in the next 3 to 5 years. This will remove some of the present and created ground fuels while also promoting a healthier rejuvenated understory.
- After about ten years (post cutting, or post prescribed fire) the area will begin to see some increased Douglas-fir regeneration. Repeated mechanical treatments or prescribed burns every 25 to 20 years will mimic the natural fire regime of 20 to 40 years keeping this regeneration from becoming fully established. This will keep the stand healthy and better able to withstand wildfire.

#### **Impacts to Recreation:**

- The treatment units are all located in low use areas so impacts will probably be negligible.
- The timing of operations is also designed to avoid high use times (i.e. weekends, busy summer months)
- The work being completed can serve as an educational piece for park visitors.

#### **Other:**

- None

#### **Permits Needed:**

- No permits are needed at this time.

#### **Attachments:**

1. USFWS Approval Letter of April 6<sup>th</sup>, 2005
2. CHS/SHIPO letter of June 19<sup>th</sup>, 2006
3. Map(s)
4. Plot Summary Tables
5. CSFS Cost Worksheet }
6. Parks Budget Match }

to be added by  
CSFS and CSP



\* \* \*

<b>Proposal Submitted by:</b>	_____, <b>Bob Bundy, CSFS Forester</b>
<b>Reviewed by:</b>	_____, <b>Ben Pedrett, Park Manager</b>
	_____, <b>Rob Billerbeck, Stewardship Program Manager</b>
	_____, <b>Dave Giger, Region Manager</b>
	_____, <b>Larry Kramer, Deputy Director</b>

**Action Items:**

\_\_\_\_\_ Project is consistent with the management objectives of this State Park and no additional review is required.

\_\_\_\_\_ Colorado State Parks and CSFS will meet to review the project. Modification to the project design and plan may be needed before the project can proceed.



FVE Run: ELAprelim  
Stand: Unit7  
Mgmt Id: NONE  
Year: 2007

FOREST VEGETATION SIMULATOR  
STAND AND STOCK TABLES  
Per acre values are based on total stand area

DATA FROM  
STEPHAN FOR  
ELDO UNITS #2

TREES PER ACRE					Year: 2007					Mgmt Id: NONE					Stand: Unit7				
DIAM. CLASS	LIVE				HARVESTED				MORTALITY				ALL	DF	PP	JU			
	ALL	DF	PP	JU	ALL	DF	PP	JU	ALL	DF	PP	JU							
2	300.0	200.0	66.7	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
4	83.3	16.7	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
6	151.1	77.9	73.2	0.0	0.0	0.0	0.0	0.0	0.0	73.3	0.0	73.3	0.0	0.0	0.0	0.0			
8	11.5	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
10	7.5	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
12	9.3	0.0	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
16	2.5	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
18	1.9	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
20	1.5	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
22	2.6	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
24	4.3	1.2	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
TOTAL	575.7	295.7	239.1	40.9	0.0	0.0	0.0	0.0	0.0	73.3	0.0	73.3	0.0	0.0	0.0	0.0			

BASAL AREA PER ACRE					Year: 2007	Mgmt Id: NONE				Stand: Unit7			
DIAM. CLASS	LIVE				HARVESTED				MORTALITY				
	ALL	DF	PP	JU	ALL	DF	PP	JU	ALL	DF	PP	JU	
2	1.3	0.8	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	5.7	1.8	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	26.7	13.3	13.3	0.0	0.0	0.0	0.0	0.0	10.0	0.0	10.0	0.0	
8	3.3	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	3.3	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	6.7	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	3.3	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18	3.3	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	3.3	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	6.7	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
24	13.3	3.3	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	77.0	19.3	54.4	3.3	0.0	0.0	0.0	0.0	10.0	0.0	10.0	0.0	

TOTAL CUBIC FEET PER ACRE					Year: 2007	Mgmt Id: NONE				Stand: Unit7			
DIAM. CLASS	LIVE				HARVESTED				MORTALITY				
	ALL	DF	PP	JU	ALL	DF	PP	JU	ALL	DF	PP	JU	
2	3.3	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	46.7	21.7	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	375.8	196.4	179.5	0.0	0.0	0.0	0.0	0.0	110.0	0.0	110.0	0.0	
8	56.2	0.0	56.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	70.2	0.0	0.0	70.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	154.8	0.0	154.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	88.8	0.0	88.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18	92.3	0.0	92.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	94.5	0.0	94.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	190.0	0.0	190.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
24	400.5	114.8	285.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	1573.0	334.5	1168.3	70.2	0.0	0.0	0.0	0.0	110.0	0.0	110.0	0.0	

MERCH CUBIC FEET PER ACRE					Year: 2007	Mgmt Id: NONE				Stand: Unit7					
DIAM. CLASS	LIVE				JU	HARVESTED				JU	MORTALITY				JU
	ALL	DF	PP			ALL	DF	PP			ALL	DF	PP		
2	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
4	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6	249.0	124.2	124.8		0.0	0.0	0.0	0.0	0.0	0.0	66.0	0.0	66.0	0.0	
8	40.1	0.0	40.1		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
10	70.2	0.0	0.0	70.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
12	119.3	0.0	119.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
16	77.6	0.0	77.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
18	80.3	0.0	80.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
20	81.0	0.0	81.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	174.0	0.0	174.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
24	364.2	104.1	260.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL	1255.8	228.3	957.3	70.2	0.0	0.0	0.0	0.0	0.0	0.0	66.0	0.0	66.0	0.0	

BOARD FEET PER ACRE					Year: 2007	Mgmt Id: NONE	Stand: Unit7							
LIVE					HARVESTED					MORTALITY				
DIAM. CLASS	ALL	DF	PP	JU	ALL	DF	PP	JU	ALL	DF	PP	JU		
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8	229.4	0.0	229.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
12	466.2	0.0	466.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
16	381.6	0.0	381.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
18	419.5	0.0	419.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
20	444.9	0.0	444.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
22	945.7	0.0	945.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
24	2011.3	577.5	1433.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
TOTAL	4898.6	577.5	4321.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		



FVS Run: ELDprelim  
Stand: Unit4Dense  
Mgmt Id: NONE  
Year: 2007

FOREST VEGETATION SIMULATOR  
STAND AND STOCK TABLES  
Per acre values are based on total stand area

TREES PER ACRE									
LIVE			HARVESTED			MORTALITY			
DIAM. CLASS	ALL	DF	PP	ALL	DF	PP	ALL	DF	PP
2	475.0	350.0	125.0	0.0	0.0	0.0	50.0	50.0	0.0
4	100.0	75.0	25.0	0.0	0.0	0.0	25.0	25.0	0.0
6	86.8	25.5	61.3	0.0	0.0	0.0	58.3	58.3	0.0
8	44.8	18.2	26.7	0.0	0.0	0.0	14.0	14.0	0.0
10	35.5	35.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	57.4	57.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	4.7	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	14.1	3.6	10.5	0.0	0.0	0.0	0.0	0.0	0.0
18	2.6	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	820.9	569.8	251.1	0.0	0.0	0.0	147.3	147.3	0.0

BASAL AREA PER ACRE									
LIVE			HARVESTED			MORTALITY			
DIAM. CLASS	ALL	DF	PP	ALL	DF	PP	ALL	DF	PP
2	2.0	0.7	1.2	0.0	0.0	0.0	0.6	0.6	0.0
4	4.9	3.7	1.2	0.0	0.0	0.0	2.2	2.2	0.0
6	15.0	5.0	10.0	0.0	0.0	0.0	10.0	10.0	0.0
8	15.0	5.0	10.0	0.0	0.0	0.0	5.0	5.0	0.0
10	20.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	40.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	20.0	5.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0
18	5.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	126.9	84.4	42.5	0.0	0.0	0.0	17.7	17.7	0.0

TOTAL CUBIC FEET PER ACRE									
LIVE			HARVESTED			MORTALITY			
DIAM. CLASS	ALL	DF	PP	ALL	DF	PP	ALL	DF	PP
2	7.5	2.5	5.0	0.0	0.0	0.0	2.5	2.5	0.0
4	30.0	22.5	7.5	0.0	0.0	0.0	22.5	22.5	0.0
6	205.4	78.9	126.5	0.0	0.0	0.0	147.8	147.8	0.0
8	276.5	89.1	187.4	0.0	0.0	0.0	99.2	99.2	0.0
10	467.4	467.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	997.5	997.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	140.0	140.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	553.9	149.7	404.2	0.0	0.0	0.0	0.0	0.0	0.0
18	140.1	0.0	140.1	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	2818.3	1947.6	870.6	0.0	0.0	0.0	272.0	272.0	0.0

MERCH CUBIC FEET PER ACRE									
LIVE			HARVESTED			MORTALITY			
DIAM. CLASS	ALL	DF	PP	ALL	DF	PP	ALL	DF	PP
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	135.8	53.5	82.3	0.0	0.0	0.0	88.4	88.4	0.0
8	215.8	70.9	144.8	0.0	0.0	0.0	72.7	72.7	0.0
10	376.6	376.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	831.0	831.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	119.6	119.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	482.0	128.6	353.4	0.0	0.0	0.0	0.0	0.0	0.0
18	119.1	0.0	119.1	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	2279.8	1580.2	699.6	0.0	0.0	0.0	161.0	161.0	0.0

BOARD FEET PER ACRE									
LIVE			HARVESTED			MORTALITY			
DIAM. CLASS	ALL	DF	PP	ALL	DF	PP	ALL	DF	PP
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	896.9	363.7	533.2	0.0	0.0	0.0	279.4	279.4	0.0
10	1561.4	1561.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	3765.4	3765.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	522.0	522.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	2327.6	680.4	1647.2	0.0	0.0	0.0	0.0	0.0	0.0
18	615.8	0.0	615.8	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	9689.1	6892.9	2796.2	0.0	0.0	0.0	279.4	279.4	0.0

FVS Run: ELDprelim  
Stand: Unit4Open  
Mgmt Id: NONE  
Year: 2007

FOREST VEGETATION SIMULATOR  
STAND AND STOCK TABLES  
Per acre values are based on total stand area



TREES PER ACRE			Year: 2007		Mgmt Id: NONE		Stand: Unit4Open	
LIVE			HARVESTED		MORTALITY			
DIAM.	ALL	PP	ALL	PP	ALL	PP		
CLASS								
2	166.7	166.7	0.0	0.0	0.0	0.0		
4	66.7	66.7	0.0	0.0	0.0	0.0		
6	43.5	43.5	0.0	0.0	0.0	0.0		
8	96.8	96.8	0.0	0.0	0.0	0.0		
10	34.2	34.2	0.0	0.0	0.0	0.0		
12	23.0	23.0	0.0	0.0	0.0	0.0		
TOTAL	430.9	430.9	0.0	0.0	0.0	0.0		

BASAL AREA PER ACRE			Year: 2007		Mgmt Id: NONE		Stand: Unit4Open	
LIVE			HARVESTED		MORTALITY			
DIAM.	ALL	PP	ALL	PP	ALL	PP		
CLASS								
2	2.2	2.2	0.0	0.0	0.0	0.0		
4	6.0	6.0	0.0	0.0	0.0	0.0		
6	6.7	6.7	0.0	0.0	0.0	0.0		
8	33.3	33.3	0.0	0.0	0.0	0.0		
10	20.0	20.0	0.0	0.0	0.0	0.0		
12	20.0	20.0	0.0	0.0	0.0	0.0		
TOTAL	88.2	88.2	0.0	0.0	0.0	0.0		

TOTAL CUBIC FEET PER ACRE			Year: 2007		Mgmt Id: NONE		Stand: Unit4Open	
LIVE			HARVESTED		MORTALITY			
DIAM.	ALL	PP	ALL	PP	ALL	PP		
CLASS								
2	10.0	10.0	0.0	0.0	0.0	0.0		
4	56.7	56.7	0.0	0.0	0.0	0.0		
6	82.7	82.7	0.0	0.0	0.0	0.0		
8	602.6	602.6	0.0	0.0	0.0	0.0		
10	436.0	436.0	0.0	0.0	0.0	0.0		
12	488.4	488.4	0.0	0.0	0.0	0.0		
TOTAL	1676.4	1676.4	0.0	0.0	0.0	0.0		

MERCH CUBIC FEET PER ACRE			Year: 2007		Mgmt Id: NONE		Stand: Unit4Open	
LIVE			HARVESTED		MORTALITY			
DIAM.	ALL	PP	ALL	PP	ALL	PP		
CLASS								
2	0.0	0.0	0.0	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.0	0.0		
6	47.9	47.9	0.0	0.0	0.0	0.0		
8	446.8	446.8	0.0	0.0	0.0	0.0		
10	351.4	351.4	0.0	0.0	0.0	0.0		
12	428.8	428.8	0.0	0.0	0.0	0.0		
TOTAL	1274.9	1274.9	0.0	0.0	0.0	0.0		

BOARD FEET PER ACRE			Year: 2007		Mgmt Id: NONE		Stand: Unit4Open	
LIVE			HARVESTED		MORTALITY			
DIAM.	ALL	PP	ALL	PP	ALL	PP		
CLASS								
2	0.0	0.0	0.0	0.0	0.0	0.0		
4	0.0	0.0	0.0	0.0	0.0	0.0		
6	0.0	0.0	0.0	0.0	0.0	0.0		
8	1851.9	1851.9	0.0	0.0	0.0	0.0		
10	1245.8	1245.8	0.0	0.0	0.0	0.0		
12	2219.2	2219.2	0.0	0.0	0.0	0.0		
TOTAL	5316.9	5316.9	0.0	0.0	0.0	0.0		