

2012-2014 Proposition 84 Grant
Northstar Fire Department, Fuels Management Maintenance II
Grant Agreement # 619



6-Month Report

Grant Closeout Report

Performance Measures

By

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Northstar Fire Department

Submitted
04-28-2014

Sierra Nevada Conservancy-Progress Report

Sierra Nevada Conservancy Grant Program
Safe Drinking Water, Water Quality and Supply, Flood Control
River and Coastal Protection Act of 2008 (Proposition 84)

Grantee Name: Northstar Fire Department

Project title: Northstar Fuels Management Maintenance 2

SNC Reference Number: Agreement #619

Submittal Date: 12-27-2013

Report Preparer: Joe Barron (NFD)

Phone #: 530-562-1212 x2

Check one:

6-Month Progress Report

Final Report

6-Month Progress Reports should reflect the previous six months. Final Reports should reflect the entire grant period.

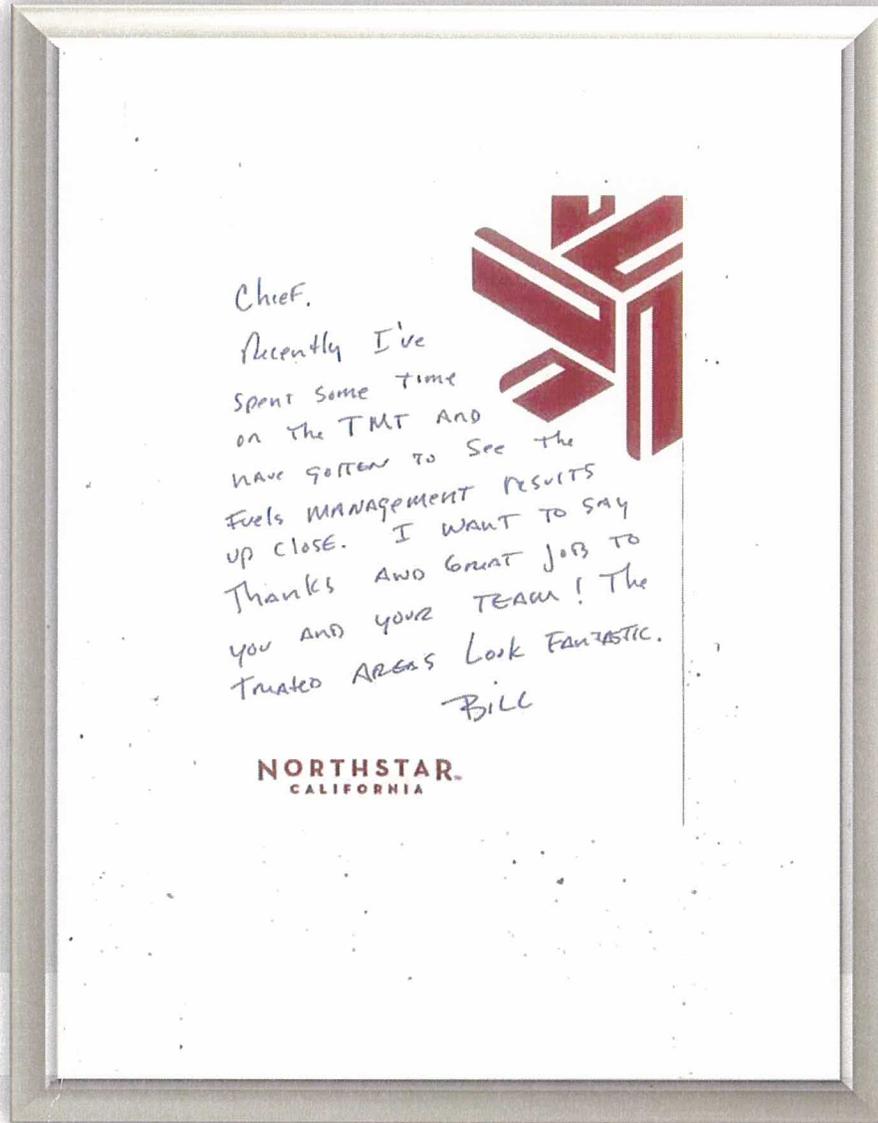
- A. Progress Report Summary:** (Please provide a general description of work completed during this reporting period.)
- From November 1, 2013 to May 15, 2014 in the six month period, project work has been completed for the Proposition 84 grant. Season two project work began on May 17th, 2013 and crew work was performed intermittently throughout the summer and fall, pending other projects. Hand crew treatments were performed by a contracted 6-man hand crew and assisted with the use of the Districts track chipper. Where chipping was not feasible, burn piles were created for fall/winter pile burning.
 - Northstar Fire Department's (NFD) Forestry Supervisor set up, supervised and monitored project work during this final 6-month timespan.
- B. Deliverables or Outcomes completed during this Reporting Period or Milestones Achieved:** (Include specific information, such as public meetings held, agency participation, partnerships developed, or acres mapped, treated or restored.)
- Hand-crew work was completed in October, 2013, thus transitioning into pile which began operations on January 30 & 31. In February, pile burning took place on the 1st, 3rd and 4th - 6th.
 - Pile burning was completed for this progress reporting time and for the final report.
 - Detail and "Touch-Up" work such as additional tree limbing was able to be completed.

- Project task items were completed under budget for a total of (\$3,735.43).
- Included in this final 6-month/final report, the Northstar Fire Department Forester will report data collected for the following:
 - Resources Leveraged in the Sierra Nevada
 - Number and Diversity of People Reached
 - Number and Type of Jobs Created
 - Number and Value of New, Improved or Preserved Economic
 - Linear feet of stream bank protected and or restored
 - Acres of land improved or restored

C. Challenges or Opportunities Encountered: (Please describe what has worked and what hasn't; include any solutions you initiated to resolve problems.

- (Has Worked) – The 2013-2014 Winter/Spring weather had allowed project work to begin early and get an adequate start to ensure hand treatment work to conclude early enough to allow burn piles to cure, be covered and ready for pile burning. This allowed Chipper-31 to operate on project work with acceptable soil conditions. In addition, this allowed other District fuels management projects to be completed in a timely manner.
- (Has not worked) - Following the contracted crew battling a highly aggressive yellow jacket bee season when working on project sites, the project had to deal with an overly dry fall and winter season. Excessively dry and warm conditions mixed with abnormal wind patterns had made pile burning difficult. In some project sites, burn piles were created in areas where it was not feasible to chip due to material size and or quality as well as slope steepness and soil characteristics. Pile burning must be done when weather such as favorable winds and precipitation exists. When favorable weather conditions arrived for burning, it was still performed with a slow, steady methodical approach since the burn piles were excessively dry thus allowing a large flame length and potential for creep along the forest floor. In addition, many impermissible burn days were declared either by Cal Fire and or Placer County Air Pollution Control District.

- D. Unanticipated Successes Achieved:** (Please describe any additional successes beyond completing scheduled tasks or meeting scheduled milestones.)
- As stated in the previous 6-month reporting, the District has received continued compliment from residential property owners, District staff and government agencies has been rewarding. Attached is a memo the Northstar Fire Department, Fire Chief received from the president of Northstar at Tahoe.



E. Compare Actual Costs to Budgeted Costs: (Please refer to your grant agreement to list your deliverables/budget categories and budgeted costs compared to actual costs incurred during this reporting period in the table below.)

PROJECT BUDGET CATEGORIES	Budgeted SNC Dollars	2013-2103 SNC Project Dollars Spent	6-Month Reporting Period Spent	Total Spent
Contractual Labor, Hand Crew Thinning	\$89,280.00	\$85,709.00	\$3,127.00	\$88,836.00
Chipping (hourly rate & Diesel fuel)	\$15,335.56	\$12,105.63	\$315.50	\$12,421.13
Project Contractor/Consultants (Pile Burning)	\$8,352.00	\$696.00	\$7,279.00	\$7,975.00
GRAND TOTAL	\$112,967.56	\$98,510.63	\$10,721.50	\$109,232.13

Explanation: The table above shows how the Proposition 84 grant dollars spent from January through February, 2014. Project work for this 6-month reporting period consisted of hand crew work and pile burning. These are the final numbers for grant dollars spent on the Northstar Fire Department, Proposition 84, Sierra Nevada Conservancy grant.

It should be noted that two invoice errors were found in this 6-month/final reporting period. One pertains to a contracted hand crew invoice that was paid by the District but missed in sending for reimbursement request number two. The second invoice was from an error in tracking Chipper-31 diesel fuel costs. Both invoices are attached in the final reimbursement request with an explanation.

Do you have information to report on the project-specific Performance Measures for your project? (If so, please list the Performance Measures below and describe your progress.)

- Please see Item B on page numbers one and two.

- F. Were there any other relevant materials produced under the terms of this Agreement that are not a part of the budgeted deliverables? If so, please attach copies.** (Include digital photos, maps, media coverage of project, or other work products.)
- Project site photos before and after from all eight sites are included. In addition a Compact Disk (CD) will be attached to this report showing all project work photos taken for this grant.
 - The final project site map that includes the amount of lineal feet of stream bank restoration is included.
- G. Next Steps:** (Work anticipated in the next 6 months, including location and timing of any scheduled events related to the project.)
- The Northstar Fire Department Proposition 84 grant project is completed and all materials requested are being submitted for final completion approval.



Figure 1. – A project vicinity map of the Northstar Fire Department, Proposition 84 grant. The Community of Northstar is a Special District in the rural boundary of Truckee, California.



Figure 2. – A project site location map of the Northstar Fire Department, Proposition 84 grant. Eight project sites, totaling 57 acres were selected for this grant project.

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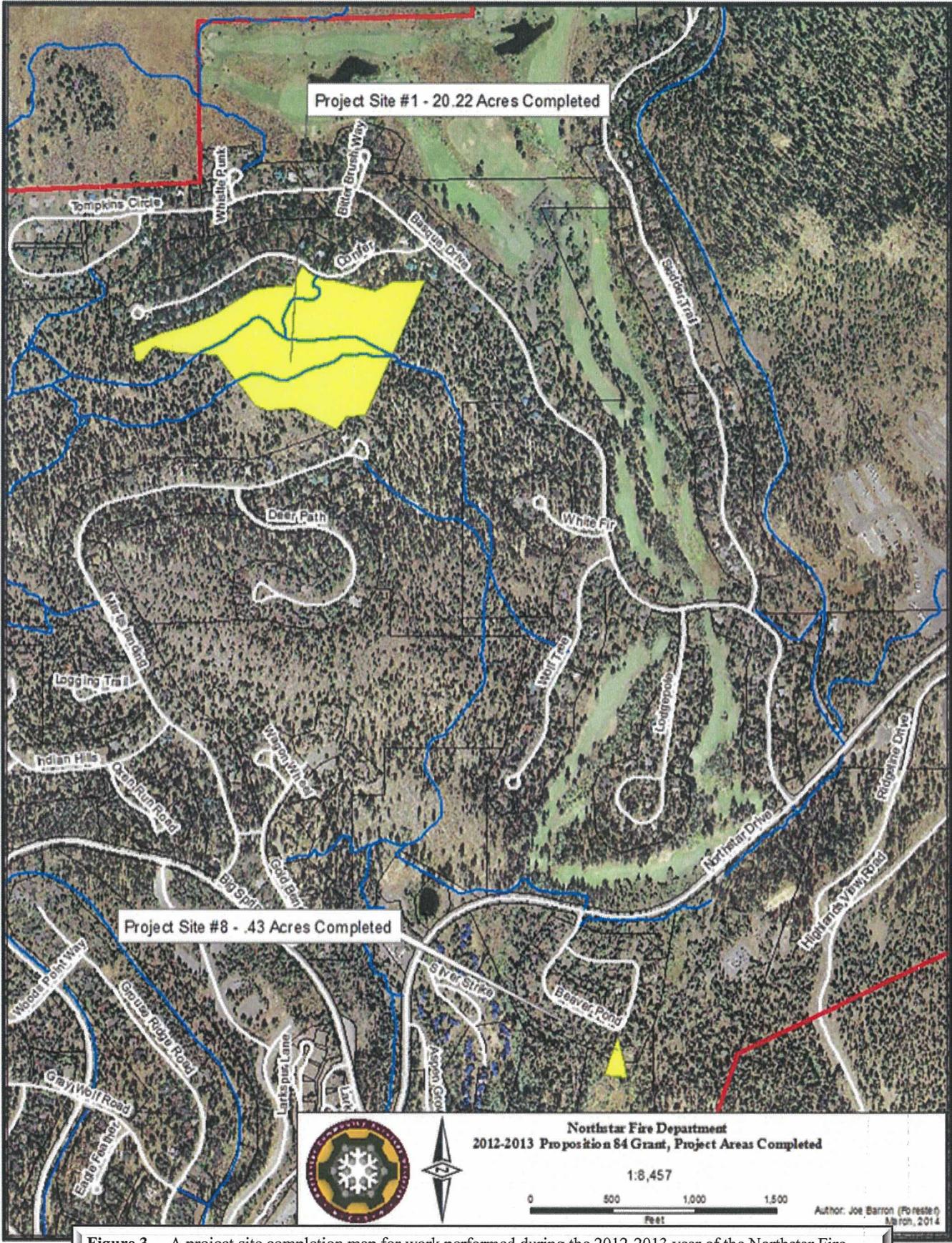


Figure 3. – A project site completion map for work performed during the 2012-2013 year of the Northstar Fire Department, Proposition 84 grant. Work was performed within two project sites for a total of 20.65 acres.

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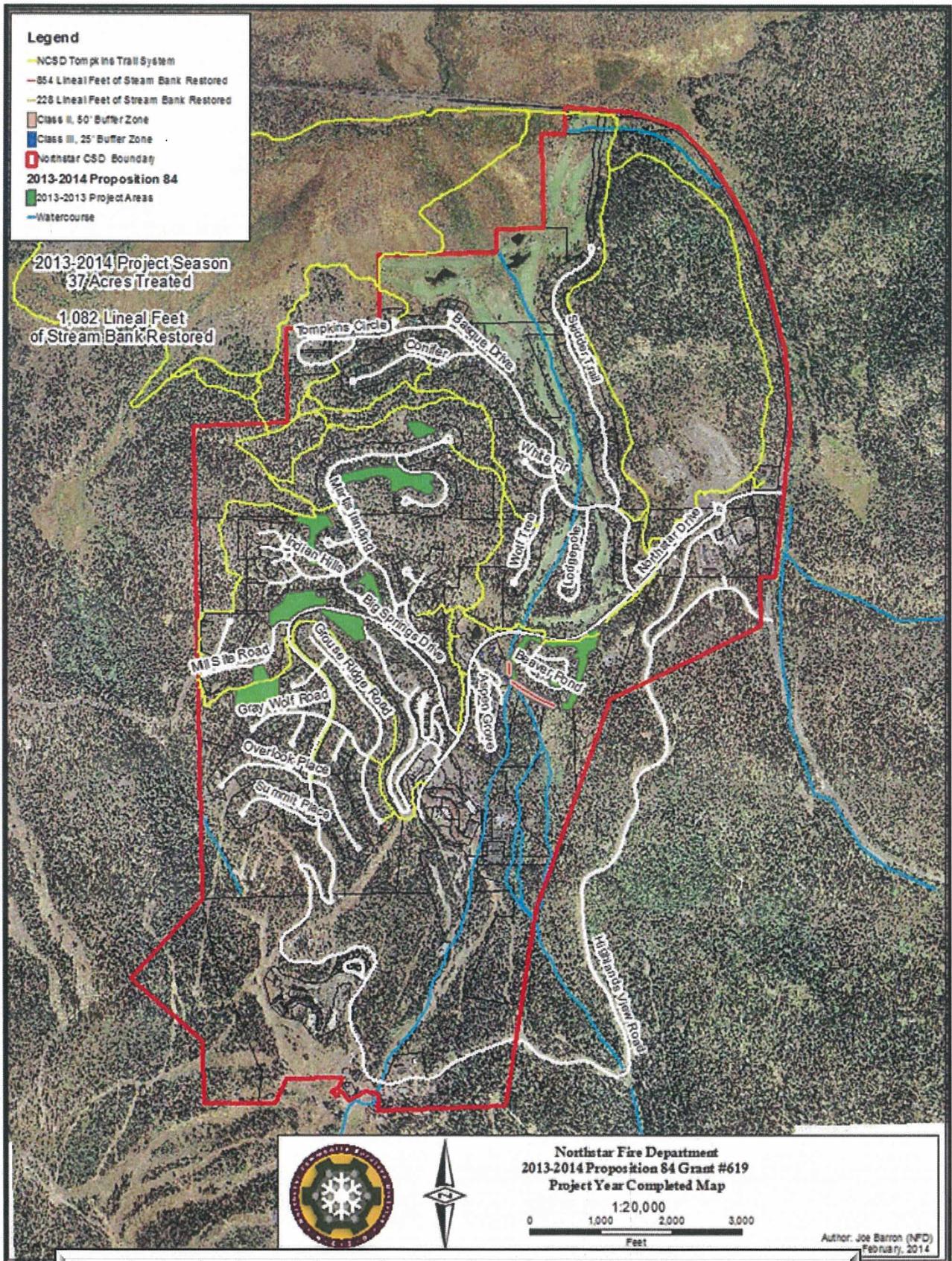


Figure 4. – A project site completion map for work performed during the 2013-2014 project year of the Northstar Fire Department, Proposition 84 grant. Work that was performed for this project year completed 37 acres of work for all eight project sites. In addition, this map shows the Performance Measure of lineal feet of stream-bank restored.

2013 Proposition 84 Project Site Photos

Project Site Number One



This photo shows the chipping of remaining acres on project site number one.



The two photos above demonstrate the remaining work that was needed to be performed to project site number one for the 2013-2014 project year.

Project Site Number Two



The two photos above demonstrate before and after treatment to project site number two.

Project Site Number Three

The three photos to the right show project site number three in the stages of before, during and after the treatment process.

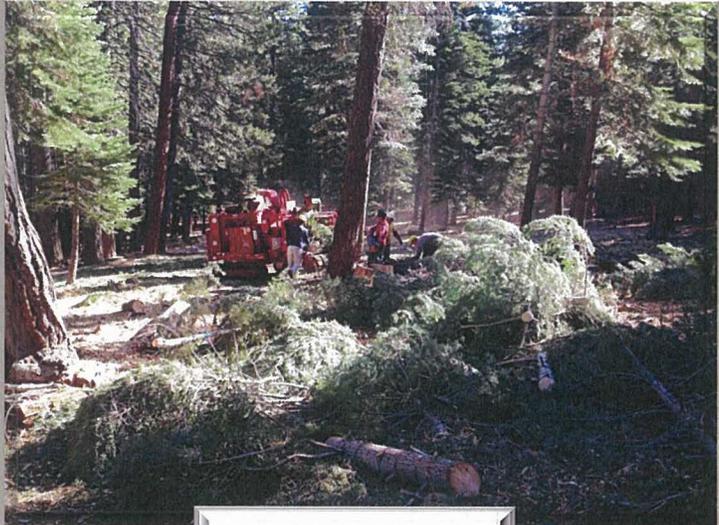
Before - Note that in the before picture the amount of brush and vertical density of conifer trees.

During - Chipper - 31 was used to chip the conifer trees and brush. Larger material was collected and burn piles were established.

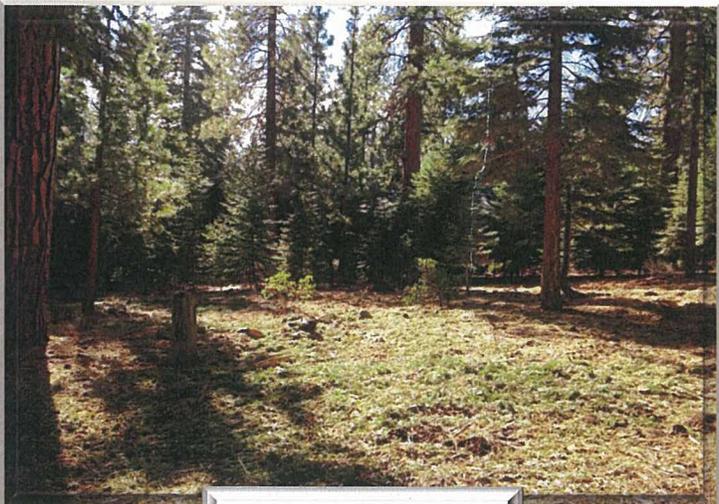
After - Following project work the brush was cut into mosaics and stand density was reduced to allow forest floor sunlight and reduced competition for water, nutrients and sunlight.



Before Treatment

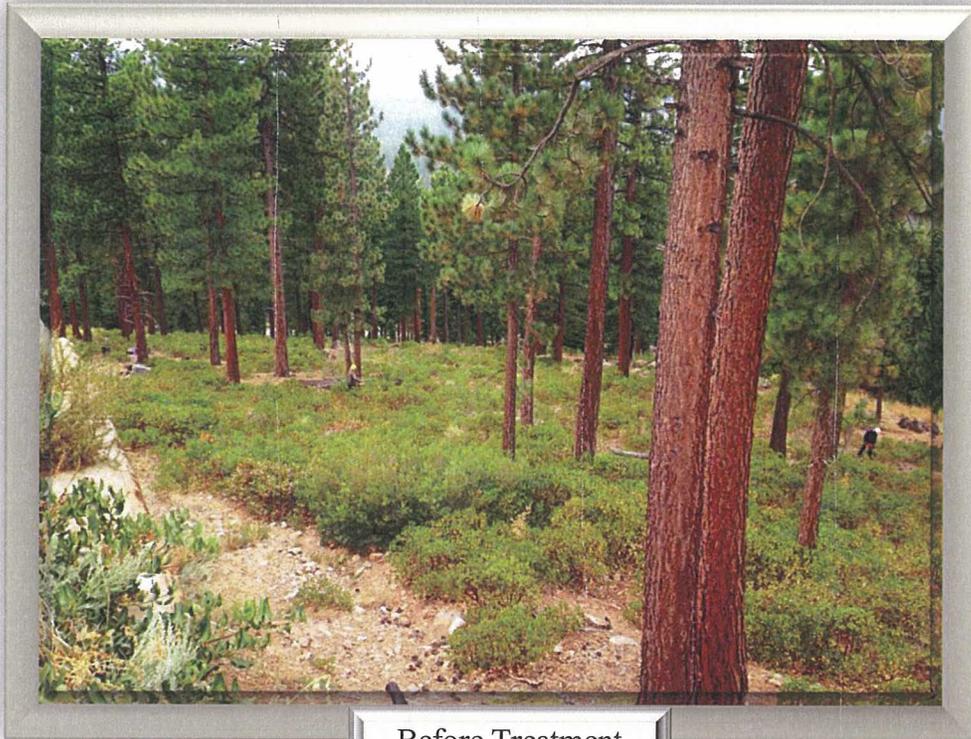


During Treatment

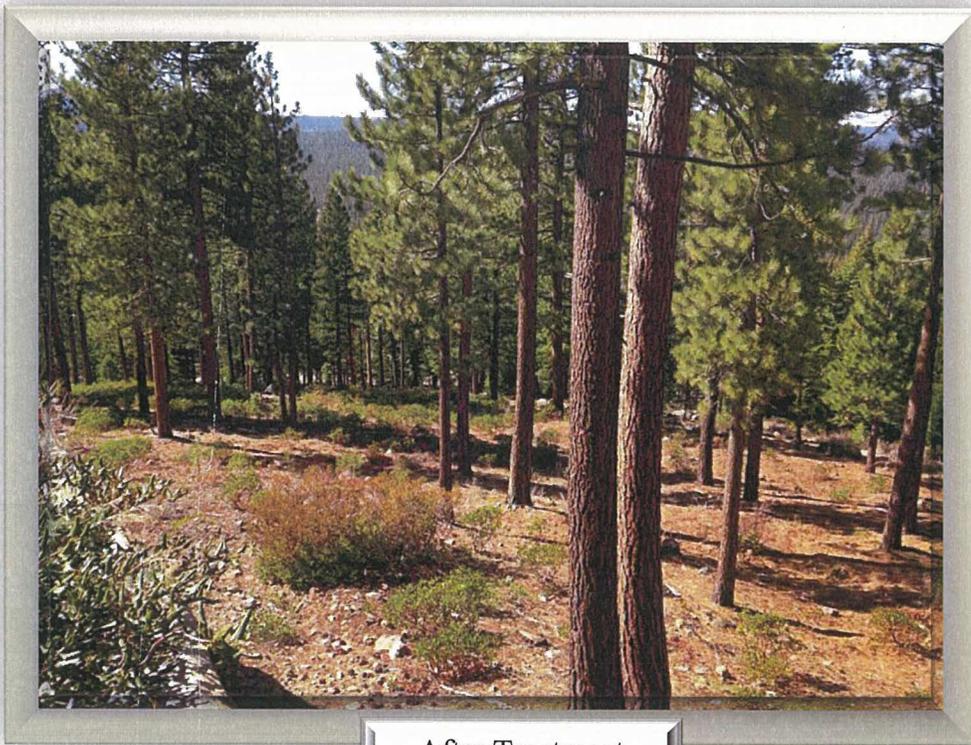


After Treatment

Project Site Number Four



Before Treatment



After Treatment

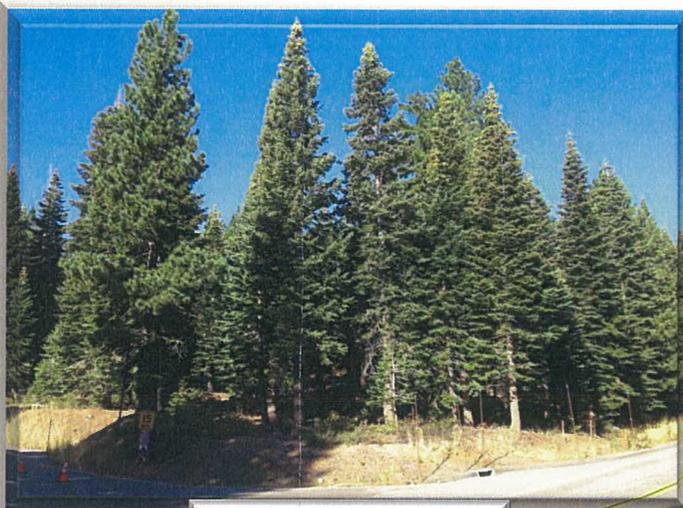
Project Site Number Five

The three photos to the right show project site number five in the stages of before, during and after the treatment process.

Before - Note that in the before picture the amount of vertical density of conifer trees.

During - Chipper - 31 is shown in the background chipping the conifer trees that were thinned to improve canopy spacing and help ensure the historical tree composition exists.

After - Following treatment, the forest stand is healthier allowing more canopy space and less competition.



Before Treatment



During Treatment



After Treatment

Project Site Number Six

The three photos to the right show project site number six in the stages of before, during and after the treatment process.

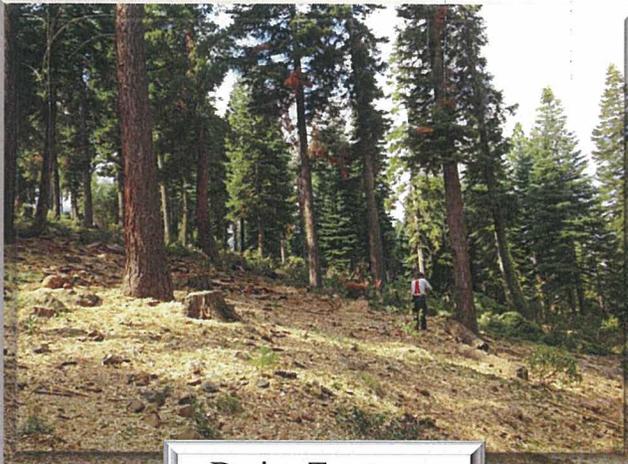
Before - Note that in the before picture the amount of vertical density of conifer trees and tree mortality.

During - Chipper - 31 broadcasted biomass as woodchips as shown in the foreground. In the background the topography was too steep for the chipper and 12 burn piles had to be created.

After - Following treatment, the forest stand is healthier allowing more canopy space and less competition. In the fall of 2014, the Northstar Fire Department is planning to work with the Sugar Pine Foundation to plant sugar pine trees that are historically native to this slope and aspect.



Before Treatment



During Treatment



After Treatment

Project Site Number Seven



Before Treatment

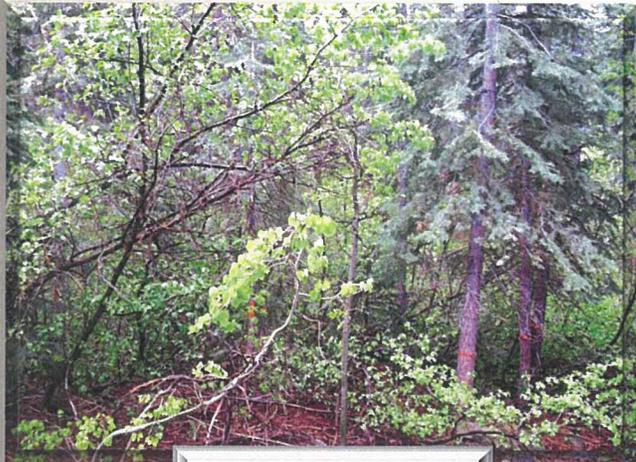


After Treatment

Project Site Number Eight



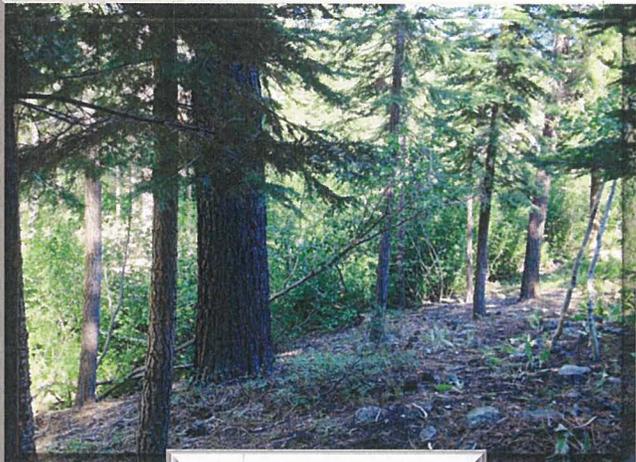
Before Treatment



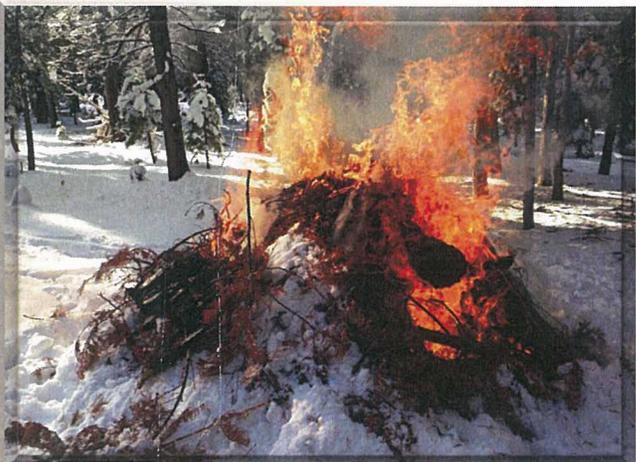
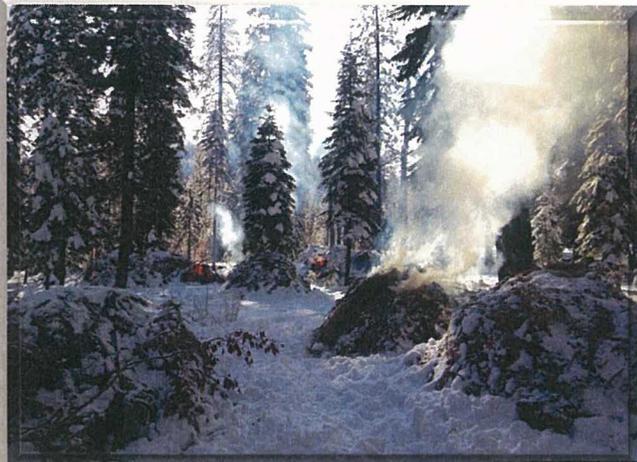
Before Treatment



During Treatment



After Treatment

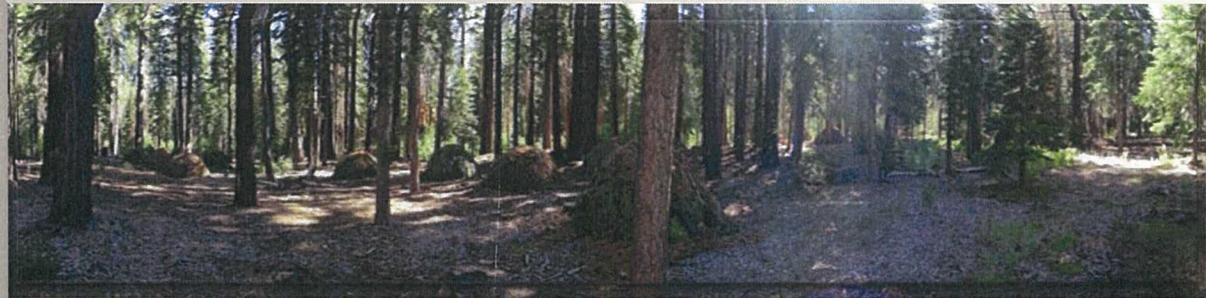


Site Eight Pile Burning

Project Site Number Eight (Continued)



Before and After Treatment



Before and During Pile Burning



Please Complete this Section for FINAL Report ONLY

Capacity-Building Results and Collaboration and Cooperation with Stakeholders:

Q: What partnerships did you initiate or strengthen as a result of this project?

A: The grant involved project work on four different land owners property. The department's relationship with the land owners involved has increased through this project due to what they consider an improvement to the aesthetic value of their property, the statistical reduction of a fire risk and the overall health of the forest and wildlife enhancement.

When projects such as this are so successful, it tends to strengthen our rapport with the landowners. It builds their confidence in an outside entity managing their property with an emphasis beyond fuels management, such as forest health, restoration and water quality improvement.

Q: How did they affect the project outcome?

A: All entities involved in the project have shown their appreciation for the project work and the fact that grants are available in helping assist in an overall improvement of their property. This especially goes to the condominium associations who operate on a fixed annual budget and open common space project work is what they consider a special skill to get work done.

At this point in time all landowners involved are hoping that their land that is involved in the 2014 proposed grant project will be funded and additional improvements can be obtained.

Q: If applicable, how did this grant increase your organization's capacity? What is your plan to sustain this increase?

A: The Northstar Fire's Fuels Management Department has an initiative called Measure E, which allows a certain amount of money to be available every fiscal year for fuels management in open space common areas within District property.

With funding such as what the Proposition 84 grant provided it allows the District to treat larger areas in a shorter amount of time thus allowing open common space areas within the District to become in a "Maintenance Mode" thus in turn will allow Measure E dollars to treat and maintain in a scheduled timeframe.

Description of Project Accomplishments:

1. Most Significant Accomplishment

Q: Describe in one concise, well-written paragraph, the most significant accomplishment that resulted from this grant.

A: The Proposition 40 grant allowed work to be performed beyond fuels management. It allowed riparian areas to be restored, allowing species such as Quaking Aspen (*Populus tremuloides*) to flourish and have their habitat restored, which is diminishing habitat in North America. This in turn allowed wildlife habitat such as salmonid and migratory bird habitat to be improved. It improved recreation within the community, reduced the wildfire component and protected historical and cultural resources within the District. Most of all the Northstar Community Services District takes pride in its water quality and projects such as this protect our most valuable asset.

2. WOW Factor

Q: If applicable, please describe anything that happened as a result of the project or during the project that is particularly impressive.

A: The “wow factor” has been given from all eight project sites from the public and the landowners; however the project work done along the riparian areas and watercourses has been the most satisfying. Seeing areas once inundated with conifer encroachment and now visually seeing a large number of young suppressed Quaking Aspen trees that will now flourish and grow.

In addition, thinning project sites that were once overgrown with brush and high density stands of trees, now visually looking open spaced and healthy has stood out. Especially in areas where the community can drive by and after treatment notice a dramatic improvement.

3. Design and Implementation

Q: When considering the design and implementation of this project, what lessons did you learn that might help other grantees implement similar work?

A: One should consider having a contingency plan for unexpected occurrences. In this case it was a drought season that affected the window of pile burning in order to complete the project. In addition, following project work, some conifer trees died due to existing bark beetles. Fortunately the Northstar Fire Department was operating under budget, and we were able to capture the mortality and complete the work. In summary, the unexpected always happens and a monetary contingency and possibly extending the project work timeframe as a buffer would be beneficial in future planning.

4. Indirect Impact

Q: Please describe any indirect benefits of the project such as information that has been developed as a result of the project is being used by several other organizations to improve decision-making, or a conservation easement funded by this grant that encouraged other landowners in the area to have conservation easements on their property.

A: The project involved multiple landowners coming together and agreeing to participate in a large scaled multi-year grant. The end result has been a unified agreement to allow additional acres through future grants of their open space common areas to be treated for protection and enhancement. The open space common areas owned by these entities will not be developed and it is in their best interests to protect these lands from fire, disease and their wildlife and water quality measures.

5. Collaboration and Conflict Resolution

Q: If you worked in collaboration or cooperation with other organizations or institutions, describe those arrangements and their importance to the project. Also, describe if you encountered conflict in the project and how you dealt with it, or if there was conflict avoided as a result of the project.

A: The project worked in cooperation of the land owners by their agreement and it is demonstrated with a right of entry agreement that the District obtains every year to allow the Northstar Fire Department to perform fuels management projects on their land. With all landowners working together towards a healthy and fire adapted forest, it becomes a win situation for everybody living and working in the community of Northstar.

In addition, grant projects such as this has brought government agencies into the project. For example, Cal Fire who helped determine what type of permitting would be appropriate for this project and California Department of Fish and Wildlife who helped look at riparian and wildlife habitat areas helping to guide the Northstar Fire Department towards creating a diverse and robust habitat for native and migratory animals.

Finally, Lahontan Regional Water Quality Control Board has visited other projects that would tie into this grant providing valuable input on water quality measures to ensure that the District still has some of the best water in the region.

6. Capacity-Building

Q: SNC is interested in both the capacity of your organization, as well as local and regional capacity. Please describe the overall health of your organization including areas in need of assistance. SNC is interested in the strength and involvement of your board, significant changes to your staff, size and involvement of membership. In addition, describe how your project improved capabilities of partners, or the larger community.

A: In 2008, Measure E was passed within the District, allowing the creation of a Fuels Management Department which included a Forester and a track chipper to facilitate all aspects of forestry/fuels management. This program is supported in the District with the Northstar Fire Department's Fire Chief and the Northstar Community Services District Board which consists of five members. The Fire Chief reports monthly to the board on goals and accomplishments of the Fuels Management Department. Since 2008 a strategic approach to project work has been performed within District boundaries as well as outside working with neighboring landowners in meeting the goals of our Community Wildfire Protection Plan.

Overall, the Northstar Fire Department has been successful in meeting the goals of our Community Wildfire Protection Plan, and protecting our forests and the key to the success has been funding assistance such as this Proposition 84 grant. Funding such as this allows the District to perform larger as well as special projects to achieve our goals and get the District into a maintenance mode and protect our assets which includes our forests. Funding allows us to maintain control of insect and diseases that could potentially affect our forests and that we can try and restore our ecosystem as close as possible to historical conditions.

Assistance in Proposition 84 funding has allowed the District to meet its fullest potential with the infrastructure that we have in place.

7. Challenges

Q: Did the project face internal or external challenges? How were they addressed? Describe each challenge and any actions that you took to address it. Was there something that SNC did or could have done to assist you? Did you have to change any of your key objectives in response to conditions "on the ground"?

A: Overall, project work went smooth which pertains to internal and external challenges. All State and local permitting was not an issue nor was obtaining the annual "Right of Entry" permit between landowners.

From project work, the internal challenge was keeping Chipper-31 working without mechanical issues. During project work on sites 4-6, Chipper-31 sustained a hydraulic pump leak which resulted in a part costing \$1,418.44 for repairs. Fortunately, the department was able to keep the chipper in operation until the part arrived to finish the project work.

Externally, was as previously stated, which was the unexpected dry fall/winter. The dry weather created a dry ground which in turn created problems trying to burn. Issues such as spot fires, excessive flame length and convective heat. This created narrow windows for pile burning and the need to ignite fewer piles per operation.

Fortunately, the grants pile burning was completed on time and under budget, but it was uncertain as to if pile burning was going to be completed.

8. Photographs

Q: Grantees are strongly encouraged to submit photos, slides or digital images whenever possible. These images will be used for SNC publications such as annual reports or on the website. Please make sure you clearly identify location, activity, and your project with each submitted image. Images will be credited to the submitting organization, unless specified otherwise.

A: Project photos from all eight project sites have been submitted in the 6-month report and they will be digitally included on a Compact Disk (CD) for reference. The Northstar Fire Department feels that the photographs taken on this project proudly depict the work and efforts put out to help make this grant successful.

9. Post Grant Plans

Q: What are the post-grant plans for the project if it does not conclude with the grant? Include a description of the following (if applicable): (1) Changes in operations or scope; (2) Replication or use of findings; (3) Names of other organizations you expect to involve; (4) Plans to support the project financially, and; (5) Communication plans?

A: The Proposition 84 grant project was completed before the grant deadline and under budget. It is felt that project work was completed meeting and or exceeding the goals of the project.

All eight project areas will now become part of a maintenance schedule which will be funded by the District's Measure E dollars. Areas where brush exists will require future treatment in 3-5 years and areas where conifer treatment occurred, will be treated in 8-10 years. Grant funding such as Proposition 84 allow Measure E funds to be stretched out and further, allowing additional acres to be treated and to help facilitate all project acres within the District to be treated at least once and moving towards being on a maintenance schedule.

The District will work with the landowners and their properties regarding future maintenance schedules, and hold future site walks and meetings to ensure that the goals of the District and the landowners are being met.

10. Post Grant Contact

Q: Who can be contacted a few years from now to follow up on the project? Please provide name and contact information.

A: Contact information:

1. Joe Barron (Northstar Fire Department Forester, RPF #2984)
910 Northstar Drive, Truckee, CA 96161
530-562-1212 x 2 (office) 530-308-0170 (cell)
jbarron@northstarcsd.org
2. Mark Shadowens (Northstar Fire Department, Fire Chief)
910 Northstar Drive, Truckee, CA 96161
530-562-1212 x3 (office)
mshadowens@northstarcsd.org

SNC-approved Performance Measures: (Please list each Performance Measure for your Project, as identified in your Grant Agreement, and the results/outcomes.)

Northstar Fire Department, Performance Measures for the Proposition 84 Grant

1. Resources Leveraged in the Sierra Nevada:

The Northstar Fire Department leveraged all “In-Kind” contributions toward this grant. The contributions were made in the form of department labor, maintenance for use of Chipper-31 and all fuel and equipment towards pile burning.

For this grant project, it was estimated that the Northstar Fire Department would contribute approximately \$17,565.63 towards the grant.

In the two year timeframe, the Northstar Fire Department had made the following “In-Kind” contributions towards the Proposition 84 grant.

Task Item Contributed	Contribution Costs from Reimbursement Request #1	Contribution Costs from Reimbursement Request #2	Contribution Costs from Reimbursement Request #3	Total Amount Contributed
“In Kind” Labor Costs	\$8,566.62	\$23,435.77	\$7,159.23	\$39,161.62
Contractual Labor Costs	\$3,445.00	\$162.50	\$0.00	\$3,607.50
Supply Costs	\$35.24	\$608.10	\$0.00	\$643.34
Travel Costs	\$118.68	\$180.51	\$20.12	\$319.31
Pile Burning Supplies Contributions	\$0.00	\$0.00	\$139.08	\$139.08
Outside Agency Labor Contributions (Cal Fire & California Department of Fish and Wildlife) <i>*(Hours Contributed to the project, hourly rate unknown)</i>	4-hours contributed by California Department of Fish and Wildlife, 2-hours contributed by the Cal Fire Forester I. <i>*(Hours Contributed to the project, hourly rate unknown)</i>	2-hours contributed by California Department of Fish and Wildlife <i>*(Hours Contributed to the project, hourly rate unknown)</i>	1-hour contributed by Cal Fire to monitor pile burning project work. <i>*(Hours Contributed to the project, hourly rate unknown)</i>	6-hours by the California Department of Fish and Wildlife and 3-hours contributed by Cal Fire. Total contributed hours = 9
Total Amount Contributed	\$12,165.54	\$24,386.88	\$7,318.43	\$43,870.85

Results:

As previously stated, the initial estimate of Resources Leveraged was as follows:

Task Item Contributed	Estimated Task Item Cost	Actual Task Item Cost	Cost Difference
"In Kind" Labor Costs	\$13,219.20	\$39,161.62	\$25,942.42 (Over)
Contractual Labor Costs	\$3,000.00	\$3,607.50	\$607.50 (Over)
Supply Costs	\$820.18	\$643.34	\$176.84 (Under)
Travel Costs	\$63.75	\$319.31	\$255.56 (Over)
Pile Burning Supplies Contributions	\$462.50	\$139.08	\$323.42 (Under)

It was unexpected how much time would be contributed towards the grant since it was a multi-year project and a large number of acres were treated. What was learned from the time leveraged in the grant was that time in the field; invoicing and reporting were higher than anticipated.

Contractual labor for protection of historical resources involved more time in the field for on-site meetings and flagging. The survey and reporting time was accurate.

Travel time contributions were more than expected due to issues with Chipper-31 for maintenance and repairs as well as fueling.

Supplies were less than expected to spend since some supplies were already at hand to contribute towards the grant. For example, marking paint & flagging.

Finally, pile burning costs were less than expected due to excessively dry burn piles that ignited easy and the District had a surplus of burn gel mix and plastic.

Outside the District, government agencies contributed their time not necessarily towards enforcement, but towards guidance and input to help the project reach its fullest potential.

No funds were needed from outside sources; no volunteer time was contributed internally or outside the District.

The only major in kind contribution was the Forester labor towards that grant which was \$25,942.42 over what was anticipated to contribute towards the grant.

2. Number and Diversity of People Reached

For this Performance Measure (PM), the District had to reach people within its District through the land representatives. The District's foremost issue was getting information out to the landowners. For example, the Northstar Property Owners Association who participated in the grant represents the residential properties within the Community. The District would approach their board that in turn turned all aspects of the project over to the General Manager, who in turn communicated with the residents of Northstar via e-mail, publications and public speaking.

A breakdown of our tallies of people reached is as follows:

Entity Reached	Method(s) of contact	Estimated number of people reached	Comments
Northstar Property Owners Association (NPOA)	Annual NPOA Homeowners Meeting	250 in 2012 and 200 in 2013	Annual meeting with the residents with a formal update of project work. The update includes description of the Proposition 84 grant, its purpose and timeframe. This is also a day for community education on forestry, defensible space and is our annual Firewise Day.
Northstar Property Owners Association (NPOA)	E-mail to residents	1,480 residences at an average of 2 people / household = 2,960 people	E-mails go to the homeowners annually regarding project work start and completion to keep the community informed. This information covers hand crew work, pile burning. In addition, we cover why and how the work is being done and what the end result will gain the community.
Northstar Property Owners Association (NPOA)	Seasonal NPOA Newsletter	Every residence, plus guests, renters, visitors. Estimated 2,000-3,000 people	Issues of the magazine come every season.

<p>Northstar Property Owners Association (NPOA)</p>	<p>Signage</p>	<p>Signs are placed in front of the community recreation center and along the trails where project work is occurring. Estimates 25 people per week x 162 crew days = Approximately 578 people reached.</p>	<p>Estimated average of people hiking along the trail system within the District that directly went through project work areas during the 2012-2014 project seasons. In addition, the average number of people coming to the NPOA Recreation Center.</p>
<p>Northstar Community Services District Website</p>	<p>Website for Forestry/Defensible Space</p>	<p>1,480 residences in the District and at least one person per District potentially using the website = 1,480 people reached</p>	<p>Estimate since there is no counter on the Districts website to people using the Northstar Fire Department Website.</p>
<p>(California Environmental Quality Act) CEQA</p>	<p>Filing of an Exemption with the State Clearinghouse</p>	<p>It is unknown if any members of the public read the District's project proposal, but it is known that at a State government level at least the following breakdown is known. Cal Fire Personnel = 5, California Department of Fish and Wildlife = 1, Lahontan Regional Water Quality Control Board = 1, Neighboring State Foresters = 3, Total = 10 State employees.</p>	<p>The District has contact with State and private natural resource professionals from start to finish of the project. Contact is to ensure the project is being performed according to the law and as a consultation aspect.</p>

3. Number and Type of Jobs Created

This Performance Measure (PM) is based on tracking full-time equivalent jobs from this Proposition 84 grant.

Occupational Groups: Natural Resources and Mining

- A. Occupational Group (Natural Resources and Mining). In this case the natural resources sub-group group is Forestry and Fuels Management
- B. In this occupational group a female, minority owned company based in Portola, California was hired to perform this grant project. The companies personnel is broken down as follows:
 - Owner of the company (1)
 - Crew Boss of a 6-man crew (1)
 - 5-men 4-ground crew and one saw man (5)
 - Companies contracted bookkeeper keeping all invoices and records for the companies grant project. (1)
 - Total employed for this grant project = ***Peaked at 11 people and had a minimum of 2 people working the grant project.***
 - The Northstar Fire Department hired a Consulting Registered Professional Forester (RPF #1999) on an “As Needed” basis to help facilitate the Cultural Resources protection measures of the grant. Total employed = 1
- Grant project employment breakdown
 - 2012 Proposition 84 Grant Project Season Breakdown
 - 6-man crew worked between the months of September, October and November, 2012 for a total of 21 days at an average of 8-hours per day. Total 21 days, and an average of 168 hours.
 - Consulting RPF worked during the months of June, August, September and October, 2012 for a total of 11 days and 53 recorded hours.
 - The owner of the company worked during the months of September, October and November submitting invoices, accounting and acquiring supplies for a total of 7 days at an average of 9 hours.
 - The company’s book keeper worked during the months of September, October and November for an average of 7 days and an average of 7 hours.
 - Total for 2012 = **46 days, 237 hours**
 - 2013 Proposition 84 Grant Project Season Breakdown
 - 6-man crew worked between the months of May-December, 2013 for a total of 65 days for an average of 520 hours.
 - Consulting RPF worked during the month of August, 2013 for a total of 1 day and 2.5 hours.

- The owner of the company worked during the months of May-December, 2013 submitting invoices, accounting and acquiring supplies for a total of 27 days at an average of 29 hours.
- The company's book keeper worked during the months of May-December, 2013 for an average of 27 days and an average of 13.5 hours.
- Total for 2013 = **120 days, 565 hours**

- 2014 Proposition 84 Grant Project Season Breakdown
 - A 2-8-man crew worked between the months of January and February, 2014 for a total of 9 days and 59 hours.
 - There were no consulting RPF (0-hours) towards the project during this timeframe.
 - The owner of the company worked during the months of January and February submitting invoices, accounting for a total of 4 days at an average of 1 hour.
 - The company's book keeper worked one day and one hour for a total of 1 day and 1 hour.
 - Total for 2014 = **11 days, 61 hours**
- Project labor employment totals:
- Total months worked for this Proposition 84 Grant Project
 - **15 months** were worked for the grant project.
 - **171 days** were worked within the 15-month timeframe.
 - **863 hours** were recorded for this grant project.

area which was the desired result. Initial results showed a reduction in the number of trees per acre from 227 trees per acre (TPA) to 67 (TPA). This was a reduction of 160 trees per acre.

What may be misleading in the data was that the most significant reduction of trees was of white fir (*Abies concolor*) in the 1"-10" diameter range. This range of trees are of a non-merchantable value but was intended to open up the forest stand and help improve residual trees to grow in both height and diameter, thus creating an increase in timber volume to help improve the stands merchantable volume for future timber markets.

A secondary improvement to the stand was to limb the trees where possible to reduce ladder fuel potential and to reduce the amount of knots in the wood, thus helping to create a clear lumber product.

With that data and the overall residual trees in the stand, all eight project areas totaling 57 acres averaged 67 trees per acre (TPA). Of that 67 TPA count the average was as follows:

- 32.7 Jeffrey pine trees per acre
- 34.3 white fir trees per acre
- 67 trees per acre total

Considering that these are the only merchantable species of interest for the project the breakdown was performed to estimate the value of the trees for this project following grant project work. This estimate of board feet is based on merchantable trees that would be able to produce timber value. In this case the trees for this project would be able to produce approximately 40 Scribner board feet with a tree 8" at Diameter Breast height (DBH). The process was repeated per 2" diameter class.

Based on this information, the 32.7 Jeffrey pine trees per acre currently produce about 11,950 board feet per acre. For the 34.3 white fir trees per acre, calculations estimate that 13,420 board feet per acre exists within the project area.

Extrapolated, that amounts to:

- $11,950 \times 57 = 681,150$ board feet for Jeffrey pine
- $13,420 \times 57 = 764,940$ board feet for white fir

As of March 26, 2014 Sierra Pacific Industries, Quincy, California mill was paying the following for timber with an 8" diameter top.

Pine/Sugar Pine -8"-12" @ \$350
 13"-16" @ \$400
 17"-22" @ \$450
 23"+ @ \$500

White Fir with camp run @ \$400/mbf

*mbf = 1,000 Scribner board feet

Gross Volume Value of the timber is as follows:

Tree Species	Diameter Class	# Trees/Acre per Diameter Class	Value of Diameter Class/Acre	Total Gross Value for 57 Acres
Jeffrey pine	8"-12"	12.8	\$4,480.00	\$255,360.00
Jeffrey pine	13"-16"	9.4	\$3,760.00	\$214,320.00
Jeffrey pine	17"-22"	8.1	\$3,645.00	\$207,765.00
Jeffrey pine	23"	2.4	\$1,200.00	\$68,400.00

Total Gross Jeffrey Pine Value = **\$745,845.00**

Tree Species	Diameter Class	# Trees/Acre per Diameter Class	Value of Diameter Class/Acre	Total Gross Value for 57 Acres
White fir	All Diameters	34.3	\$13,720.00	\$782,040.00

Total Gross Jeffrey Pine Value = **\$782,040.00**

The following gross volume estimates are given assuming each tree has perfect form, taper and is without defect. Other factors to consider for harvesting values of the projects timber are:

- Skidding Costs
- Hauling fees
- Property and harvest taxes
- Administrative (Harvest document and RPF) fees

Project work opening the canopy and removing competition will ensure trees in each diameter class move up significantly in the coming years and will allow new and potentially healthier trees to grow in the newly created voids.

With the Districts maintenance schedule planned, following this grant project, it will ensure that timber quality and values will be sustained.

5. Linear Feet of Stream Bank Protected or Restored

This Performance Measure (PM) fulfills the Site Improvement/Restoration aspect of the Proposition 84 Grant Project.

It meets the Linear Feet of Stream bank Restored Category and for this grant the Northstar Fire Department defines stream bank restored by removing encroaching vegetative species such as conifers and allowing native vegetation such as Quaking Aspen to re-establish and flourish a site as per its historical characteristics.

For this grant project, Site #8 had what the California Forest Practice Rules describe as a Class II Watercourse running through the site.

In general, a Class II watercourse is capable of sustaining aquatic habitat for non-fish aquatic species are present, fish are always or seasonally present offsite within 1,000 feet.

The California Forest Practice Rules requires a 50' buffer zone to be applied to each side of the stream bank and that no mechanical treatment or disturbance such as depositing wood chips and or burning is allowed.

In addition a Class III watercourse existed along Site #3. This simply meant that it was a seasonal watercourse and the minimum buffer zone width was to be 25' on each side of the stream bank

By removing encroaching conifer species such as white fir and occasional pine species from the watercourse buffer zone will allow native grasses, forbes, Quaking Aspen and mountain alder to flourish was a primary goal of all project work along both classified watercourses.

Following project work on Site #'s 3 and 8, the project areas linear feet of stream bank restored were measure using two types of methods. The first being a GIS based application that the District uses though employee cell phones. The second is based on a GIS based program in the office.

By combining the two data sources, it was determined that Project Site #3 which was a Class III watercourse had 228 lineal feet of stream bank restored. By removing the encroaching white fir from this site, native grasses such as California Brome (*Bromus carinatus*) were able to flourish and provide stream bank stability to what is typically fast moving snow runoff in this type of stream bank in the spring to early summer periods.

The same measuring methods for Project Site #8 determined that 854 lineal feet of stream bank was restored. Visual observations of project work has shown that removing the encroaching conifers and allowing more sunlight along the stream bank has improved the re-establishment of vegetation along the stream bank which was once not in existence or was suppressed.

Annual visual and photographic monitoring will be performed along these stream banks to measure the success of project work and inventory what vegetative species grows no that the availability is there.

6. Acres of Land Improved or Restored

For this Performance Measure (PM) which meets the Site Improvement/Restoration project criteria, the grant project fulfilled restoring the following and is broken down for the following per an acreage basis.

- I. Natural Disaster Risk Reduction – Fire
- II. Natural Resource Protection – Forest Health
- III. Water Quality
- IV. Habitat both aquatic and terrestrial
- V. Resource Management – Increasing site productivity, vegetation management and forest management
- VI. Recreation

Category Number	Acres Treated (Total of 57 acres treated for the project)	Government Site Importance or Priority Rating	Northstar Community Services District/Northstar Fire Department Priority Rating	Source of Prioritization or Importance Rating	Purpose of the Priority
I	57	1	1	Cal Fire (Severity Rating Mapping System)	To reduce the Districts rating from a Very High Fire Severity Zone to a High Fire Severity Zone. This grant helps the District meet its Community Wildfire Protection Plan objective in reducing this rating and brings the District closer to meeting that goal. Cal Fire's main focus is to reduce State and private lands to a manageable condition where our forestlands are in a manageable state and our eventual focus will be on prevention, not suppression.
II	57	1	2	Forest Health	2014 California Forest Practice Rules, Title 14, California Code of Regulations, Chapters 4, 4.5 and 10. The Forest Practice Act is intended to regulate State and private timberlands to achieve two goals. 1- Productivity of timberlands is restored, enhanced and maintained. 2-maximum sustained production of high quality timber products, taking into consideration recreation, watershed, wildlife, range and forage, fisheries, regional and economic vitality employment and aesthetic enjoyment. The Proposition 84 Grant has met all these objectives.
III	57	1	3	Lahontan Regional Water Quality Control Board (LRWQCB)	The LRWQCB is a part of the California Environmental Protection Agency (EPA) which is in charge of ensuring clean, air, water and soil. For this grant the ensuring clean water in terms of a catastrophic wildfire destroying the watershed, and to enhance watercourses within project areas. If a catastrophic wildfire were to occur in Northstar, potential sediment could impact branches of Martis Creek which in turn flows into Martis Reservoir and ultimately the Truckee River and Pyramid Lake.
IV	2.1	1	4	California Department of Fish and Wildlife	Project site numbers 3 and 8 are potential habitat for (<i>Oncorhynchus clarki henshawi</i>) Lahontan cutthroat trout which is a federally threatened species. This grant project helped enhance their habitat.
V	57	3	5	Northstar Community Services District	2014 California Forest Practice Rules, Title 14, California Code of Regulations, Chapters 4, 4.5 and 10. Part of category II fits in this criteria, however the ranking pertains to the District's interests and that is to improve the open space common areas back to a level where timber grows in a state of perpetuity, our forests are healthy and diverse and in a structure replicating historical standards. Finally, our forests are in a state where they can be placed in a managed timetable for treatment.
VI	20.64	N/A	7.5	Northstar Community Services District	The Northstar Community Services District manages the Tompkins Memorial Trail which runs throughout common areas in the Community of Northstar and in Army Corps of Engineers property in the Martis Valley. Nearly 21 acres of project area enhanced the Districts recreational trail system by providing a healthy, aesthetically pleasing forest system to walk, jog and bicycle through.