

Date of Report: 12/08/2011

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

- 1. Funding request for estimated emergency stabilization funds
- 2. Accomplishment Report
- 3. No Treatment Recommendation

B. Type of Action

- 1. Initial Request (Best estimate of funds needed to complete eligible stabilization measures)
- 2. Interim Report # 6 . Changes are noted in **brown**.
 - Updating the initial funding request based on more accurate site data or design analysis
 - Status of accomplishments to date
- 3. Final Report (Following completion of work)

PART II - BURNED-AREA DESCRIPTION

- A. Fire Name:** Las Conchas Fire
- B. Fire Number:** NM-N6S-000451
- C. State:** NM
- D. County:** Sandoval, Los Alamos, Rio Arriba
- E. Region:** 3
- F. Forest:** Santa Fe
- G. District:** Jemez/Espanola/Coyote RDs
- H. Fire Incident Job Code:** PNF5PS
- I. Date Fire Started:** June 26, 2011
- J. Date Fire Contained:** August 2, 2011
- K. Suppression Cost:** \$40.9M (as of 7/16/2011)
- L. Fire Suppression Damages Repaired with Suppression Funds**
 - 1. Fireline waterbarred and slashed (miles): ongoing at this time
 - 2. Fireline seeded (miles): ongoing at this time
 - 3. Other (identify): n/a
- M. Watershed Number:**
- N. Total Acres Burned:** 156,592 acres (from 10/6/2011 Severity Map)

| Own/Admin | Acres | % |
|----------------------------------|--------|-------|
| BIA - Jemez | 4,750 | 3.0% |
| BIA - Santa Clara | 16,622 | 10.6% |
| BIA - Santo Domingo | 263 | 0.2% |
| County - Los Alamos | 44 | 0.0% |
| Dept of Energy | 118 | 0.1% |
| National Park Service | 20,808 | 13.3% |
| Private | 3,348 | 2.1% |
| State | 1,705 | 1.1% |
| USFS - SFNF- Coyote | 22 | 0.0% |
| USFS - SFNF- Espanola | 27,221 | 17.4% |
| USFS - SFNF- Jemez | 51,652 | 33.0% |
| Valles Caldera National Preserve | 30,039 | 19.2% |

as of 7/15/11 156,592

Total administered by the Santa Fe National Forest – 51%

O. Vegetation Types: Pinyon/Juniper, Ponderosa Pine, Mixed Conifer

P. Dominant Soils: Mollic Eutroboralfs/Andic Ustochrepts/Typic Ustorthents, viltrandic hapludalfs, viltrandic eutrocryepts, pachic argiustolls

Q. Geologic Types: Rhyolite/andesite/pumice/tuff/basalt

R. Miles of Stream Channels by Order or Class: Ephemeral/Intermittent – 272, Perennial - 110

S. Transportation System

Trails (miles): 100

Roads (miles): Level 1 – 117, Level 2 – 154, Level 3 - 56

PART III - WATERSHED CONDITION

A. Burn Severity (acres):

Low – 47,640

Moderate – 53,904

High – 32,992

Unchanged – 22,056

B. Water-Repellent Soil (acres): 35,000

C. Soil Erosion Hazard Rating (acres):

Low – 69,696

Moderate – 53,904

Severe – 32,992

D. Erosion Potential: 14 tons/acre

E. **Sediment Potential:** 972 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. **Estimated Vegetative Recovery Period, (years):** 5

B. **Design Chance of Success, (percent):** 20 - 90

C. **Equivalent Design Recurrence Interval, (years):** 25

D. **Design Storm Duration, (hours):** 1

E. **Design Storm Magnitude, (inches):** 1.7"

F. **Design Flow, (cubic feet / second/ square mile):** 100

G. **Estimated Reduction in Infiltration, (percent):** 20

H. **Adjusted Design Flow, (cfs per square mile):** approximately 700

PART V - SUMMARY OF ANALYSIS

A. **Describe Critical Values/Resources and Threats (narrative):**

The Las Conchas fire began on June 26, 2011 as the result of a windthrown tree striking and shorting out a powerline. The burned area is located southwest, west, north and northwest of the town of Los Alamos, NM. The burned area is on National Forest System lands managed by the Jemez, Espanola, and Coyote Ranger Districts of the Santa Fe National Forest, Jemez Pueblo, Santa Domingo Pueblo, and Santa Clara Pueblo lands, Bandelier National Monument, Valles Caldera National Preserve lands, Department of Energy lands, as well as numerous tracts of private lands.

Slopes within the burned area are predominantly moderately steep-to-steep, with lesser amounts of flat mesas. The tuff and pumice derived soils are productive but have very high erosion potentials due to low bulk density of extrusive volcanic parent material. Many channels have not experienced high flows in many years and consequently have large amounts of stored sediments that could entrain easily under peak flows.

Burn severity mapping for the Las Conchas burned area was done using an initial BARC map obtained from RSAC from a Landsat image on July 3, 2011 and a spot image on July 5, 2011. Field verification and assessment of the BARC image was done.

Please see Appendix A for an executive summary on the resources and threats.

Critical Values Identified

Critical Values identified (FSM 2523.1 Exhibit 01) during the Las Conchas BAER assesment are:

1. Human Life and Safety,
2. Property,
3. Cultural Resources, and
4. Natural Resources.

The Las Conchas BAER team evaluated the risk to those critical values per FSM 2523.1 Exhibit 02.

The risk matrix (below), Exhibit 2 of Interim Directive **2520-2010-1** was used to evaluate the Risk Level for each value at risk identified during Assessment:

| Probability of Damage or Loss | Magnitude of Consequences | | |
|-------------------------------|---|--|--|
| | Major | Moderate | Minor |
| | Loss of life or injury to humans; substantial property damage; irreversible damage to critical natural or cultural resources. | – Injury or illness to humans; moderate property damage; damage to critical natural or cultural resources resulting in considerable or long term effects | Property damage is limited in economic value and/or to few investments; damage to natural or cultural resources resulting in minimal, recoverable or localized effects |
| | RISK | | |
| Very Likely (>90%) | Very High | Very High | Low |
| Likely (>50% to <90%) | Very High | High | Low |
| Possible (>10% to <50%) | High | Intermediate | Low |
| Unlikely (<10%) | Intermediate | Low | Very Low |

The Very High and High Risk are unacceptable risk levels due to threats to human life, property, infrastructure and resources, therefore treatments should be applied. An Intermediate Risk could be unacceptable if human life or safety is the critical value at risk.

| Value at Risk: Property | | | |
|-------------------------|-----------------------|---------------------------|--|
| Risk | Probability of Damage | Magnitude of Consequences | Value at Risk |
| Very High | Very likely | Major | Dixon Apple Orchard/ State Land, Cochiti Mining District in Bland Cyn, West Road Bridge on Los Alamos Cyn (Flooding) |
| Very High | Very Likely | Moderate | FR 89 in Cochiti Cyn, FR 268 in Bland Cyn, Armijo Ranch Homes (Flooding) |
| Very High | Likely | Major | Los Alamos Dam, Ice Rick in Los Alamos Canyon (Flooding) |
| High | Likely | Moderate | LANL gas line, Cochiti golf course (Flooding) |
| High | Possible | Major | Bland Cemetery, Los Alamos Water Wells (Flooding) |
| Intermediate | Possible | Moderate | Cochiti Pueblo, Pueblo route 85 crossing of Peralto, Sewage lagoon at Cochiti Pueblo, San Ildefonso water wells (Flooding) |
| Low | Likely | Moderate | Pvt. Land near Tent Rocks (Flooding) |
| Low | Unlikely | Moderate | Los Alamos wastewater, Bland Historic Structures, NM State Highway 4 (Flooding) |
| Low | Possible | Minor | Cochiti at Rio Grande (Debris delivered to the Lake) |
| Very Low | Unlikely | Minor | Tent Rock Facilities, Town of Cochiti Lake, Pvt. Property (Flooding) |

| Value at Risk: Life | | | |
|---------------------|-----------------------|---------------------------|---|
| Risk | Probability of Damage | Magnitude of Consequences | Value at Risk |
| Very High | Likely | Major | Ice Rink in Los Alamos Canyon, Los Alamos Dam (Flooding) |
| Very High | Very Likely | Moderate | Abrigo Communication Repeater VCNP (Communications/ Safety) |
| High | Possible | Major | Natural Gas Pipeline VCNP, Cochiti Pueblo (Flooding) |

| Value at Risk: Resources | | | |
|--------------------------|-----------------------|---------------------------|--|
| Risk | Probability of Damage | Magnitude of Consequences | Value at Risk |
| Very High | Very Likely | Major | Historic Sites/ Ancestral Pueblo Ruins, (Flooding)Rio Grande cutthroat trout (Habitat) |
| Very High | Very Likely | Moderate | Soil Productivity (Loss Downstream) |
| High | Likely | Moderate | Mexican Spotted Owl PAC (Habitat), Jemez Mountain Salamander (FS/ VCNP) (Habitat) , Trails (Flooding) , Road Infrastructure (FS/ VCNP) (Flooding) , Water Quality (FS/ VCNP) (Contaminants/ Sediment) , Traditional Cultural Properties (Flooding), Historic Sites VCNP (Flooding), Soil Productivity (FS/ VCNP) (Loss Downstream) |
| Intermediate | Possible | Moderate | Non-Native and Invasive Weeds (FS/ VCNP) (Introduction/ Spread) , East Fork Springs (Debris Cover) |
| Low | Likely | Minor | Mexican Spotted Owl VCNP (Habitat) |
| Low | Possible | Minor | Developed Recreation Sites (Flooding) , Range (Forage), Aquatic Habitat and Species VCNP (Loss of Habitat) |

B. Emergency Treatment Objectives (narrative):

1. Treatments include the following activities.
 - a. Work with NWS and partner agencies to establish an early-warning system to notify downstream residents of impending storm runoff.
 - b. Remove road infrastructure (e.g. culverts, bridges) that might fail from post-fire flows.
 - c. Protect culvert inlets on critical road segments.
 - d. Provide point protection with seed and mulch for the Pajarito nordic ski trails.
 - e. Provide point protection with hazard tree removal and mulch at ancestral communities and one historic cemetery.
 - f. Install armored drainage dips to protect strategic culverts.
 - g. Remove in-stream debris that might be transported downstream and cause debris jams.
 - h. Treatment actions to protect one recreation site.
 - i. Post warning signs on potential flooding and debris flow concerns.
 - j. Install gates to effectively close the burn area.
 - k. Improve drainage along the pipeline access road (VC09), and install a low water crossing on the VC09a and San Antonio Creek.
 - l. Remove road infrastructure (e.g. culverts,) on VC02 and VC 13, replace with low water crossings).
 - m. Repair or replace Abrigo repeater.
 - n. Remove hazard trees and rocks from roads and other treatment areas.
 - o. Notify local government officials about the post-fire flood risk through certified letters.
 - p. Remove the recreation bridge on Peralta Creek to prevent it from collecting debris and then breaching.
 - q. Stabilize 12 miles of trails in order to minimize erosion from post-fire runoff.
 - r. Seed approximately 6700 acres in two watersheds with considerable amounts of high and moderate burn severity in order to minimize the loss of soil productivity.
 - s. Mulch approximately 1100 acres of high and moderate burn severity within the Bland drainage in order to minimize effects to water quality from runoff out of the historic Cochiti Mining District.
 - t. Phase 1: Remove large fill and culvert on FR 289. Stockpile fill locally. This will temporarily close FR 289. Phase 2: Replace the culvert and fill to reopen FR 289.
 - u. Detect and treat noxious weeds within the fire perimeter.

C. Probability of Completing Treatment Prior to Damaging Storm or Event:

Land 10 % Channel 20 % Roads/Trails 20% Protection/Safety 60%

D. Probability of Treatment Success

| | Years after Treatment | | |
|-------------------|-----------------------|----|----|
| | 1 | 3 | 5 |
| Land | 50 | 90 | 90 |
| Channel | 60 | 80 | 90 |
| Roads/Trails | 60 | 60 | 60 |
| Protection/Safety | 90 | 95 | 95 |

E. Cost of No-Action (Including Loss): to be determined

F. Cost of Selected Alternative (Including Loss): to be determined

The economic analysis is still being conducted and will be submitted on a future 2500-8.

G. Skills Represented on Burned-Area Survey Team:

- | | | | |
|---|--|---|---|
| <input checked="" type="checkbox"/> Hydrology | <input checked="" type="checkbox"/> Soils | <input checked="" type="checkbox"/> Geology | <input checked="" type="checkbox"/> Range |
| <input type="checkbox"/> Forestry | <input checked="" type="checkbox"/> Wildlife | <input type="checkbox"/> Fire Mgmt. | <input checked="" type="checkbox"/> Engineering |
| <input type="checkbox"/> Contracting | <input checked="" type="checkbox"/> Ecology | <input checked="" type="checkbox"/> Botany | <input checked="" type="checkbox"/> Archaeology |
| <input checked="" type="checkbox"/> Fisheries | <input type="checkbox"/> Research | <input type="checkbox"/> Landscape Arch | <input checked="" type="checkbox"/> GIS |

BAER Assessment Team Members: see Appendix B

Team Leader: Greg Kuyumjian, Okanogan-Wenatchee National Forest

Email: gkuyumjian@fs.fed.us

Phone: (509) 664-9330

FAX:

H. Treatment Narrative:

1. Remove an estimated 50 culverts from Level 1 and 2 Forest Roads to protect the roads from increased damage or loss as a result of increased flows. **Only fifteen of the 50 culverts were removed. These remain a maintenance problem and require maintenance and replacement due to plugging to prevent damage to infrastructure.**
2. Improve drainage on pipeline access road and remove one culvert above the pipeline and replace it with a low water crossing on the VCNP.

3. Remove an estimated 3 culverts and replace with low water crossings from Level 1 and 2 VCNP Roads to protect the roads from increased damage or loss as a result of increased flows. **Low water crossings require maintenance due to continued sediment and debris flow during rain events.**
4. Install 12 (10 small and 2 large) trash racks to protect culvert inlets on Level 3 and 4 Forest Roads to protect the roads from increased damage or loss as a result of increased flows. **These trash racks requirement clean out and maintenance in order to continue to protect infrastructure.**
5. Install 10 armored drainage dips alongside existing culverts to protect strategic road segments.
6. Clear 25 miles of stream channels of large woody debris that could mobilize and create debris jams at culvert inlets.
7. Pump, sanitize, and lock one toilet at Las Conchas Picnic Recreation Area. This will ensure there will be no release of sewage if there is overland flow from nearby burned hillsides.
8. Purchase and install 230 signs to warn forest users about potential flood and debris flow danger.
9. Seed the Pajarito Nordic Ski Trails. Seed would be applied at a target rate of 25 Pure Live Seed (PLS) per square foot (18 lbs/acre x 20 acres = 360 lbs PLS). Proposed weed free seed mix is slender wheatgrass (40%), cereal barley (40%), and little blue stem (20%).
10. Mulch the Pajarito Nordic Ski Trails with certified weed free straw. Mulch would be applied at a rate of 1 ton per acre. This treatment is intended to provide point protection by providing immediate ground cover to high burn severity areas.
11. Remove trees from 420 acres at ancestral communities (SFNF and VCNP) and one historic cemetery (SFNF). This treatment is intended to reduce the risk of wind thrown trees uprooting and damaging these sites. The interim #4 request is for an additional 300 acres to the previously approved 120 acres. The extra 300 acres would be 200 acres on the SFNF and 100 acres on the VCNP.
12. Mulch 120 acres of high burn severity areas with certified weed free straw at 5 ancestral communities (4 SFNF and 1 VCNP) and one historic cemetery (SFNF). Mulch would be applied at a rate of 1 ton per acre. This treatment is intended to provide point protection by providing immediate ground cover to high burn severity areas.
13. Install 7 gates (5 on SFNF and 2 on VCNP) in order to adequately close the burned perimeter. These gates will prevent Forest visitors from entering areas that are unsafe following the fire.
14. Repair or replace Abrigo repeater on VCNP. It is unknown at this time how much damage the Abrigo repeater sustained from the fire, but it is likely that full replacement will be needed.

15. Remove hazard trees and rocks from roads and other treatment areas. For the safety of those implementing treatments and employee safety, hazards need to be removed from the area.
16. Notify local government officials about the post-fire flood risk through certified letters. Letters would outline pre- and post-fire conditions and values at risk.
17. Remove the recreation bridge on Peralta Creek to prevent it from collecting debris and then breaching. The bridge will be removed and stored on high ground until it is deemed safe to reinstall it.
18. Stabilize 18 miles of trails in order to minimize erosion from post-fire runoff. Segments of trail that are out of the drainages would have waterbars installed in order to try to protect the trail tread from further erosion. The interim #5 request is for an additional 6 miles of trail work (waterbars/tread work) to the previously approved 12 miles.
19. Seed approximately 6700 acres in two watersheds with considerable amounts of high and moderate burn severity in order to minimize the loss of soil productivity. Using criteria; areas outside of Jemez Mountains Salamander, sensitive soils (those with highest modeled erosion rates), and soil productivity. Areas of Bland at Cochiti Pueblo and the Cochiti at Rio Grande watersheds were identified as candidates for seeding resulting from this filtering exercise.
20. Mulch approximately 1100 acres of high and moderate burn severity within the Bland drainage in order to reduce effects to water quality from runoff out of the historic Cochiti Mining District.
21. There is a culvert with a large fill (approximately 40') at the south end of FR289. Removal of this culvert is necessary to reduce the risk of fill failure. The first phase would consist of the fill and culvert being removed and stockpiled locally. The second phase would consist of replacing the fill and culvert when the risk of failure has been reduced.
22. There are known populations of noxious Canada thistle, Nodding plumeless thistle, Bull thistle, Oxeye daisy, and Siberian elm within the fire perimeter and it is expected they will have spread due to the fire. Treatment of these populations would include the detection and treatment before the anniversary date of the fire's containment.
23. Aerial seed two large cultural site complexes on two mesa tops within the Dome Wilderness (750 acres). If cover is not established within this monsoon season, the qualities that make these sites eligible for the National Register of Historic Places would be lost. Seed would be applied at a target rate of 25 Pure Live Seed (PLS) per square foot (18 lbs/acre x 20 acres = 360 lbs PLS). Proposed weed free seed mix is slender wheatgrass (40%), cereal barley (40%), and little blue stem (20%).

I. Monitoring Narrative:

(Describe the monitoring needs, what treatments will be monitored, how they will be monitored, and when monitoring will occur. A detailed monitoring plan must be submitted as a separate document to the Regional BAER coordinator.)

1. Monitoring of land treatments (e.g. culvert removal, seeding/mulching) will be conducted after the first damage-inducing storm to determine the effectiveness of the treatments. **Monitoring is still needed as storm events continue to impact treatments and infrastructure.**
2. Monitoring of point protection on ancestral pueblos and lithic landscapes will be conducted during implementation of treatments.

Part VI – Emergency Stabilization Treatments and Source of Funds Interim #6

Please see enclosed Excel spreadsheet for treatments and requested funding.

PART VII - APPROVALS

1. /s/ Maria T. Garcia
Forest Supervisor (signature)

 11/19/2012
Date

2. /s/ C.L. Newman, Jr.
Regional Forester (signature)

 December 18, 2012
Date

Appendix A: Executive Summary for Resources and Threats

The Las Conchas fire started on June 26, 2011. The fire is located on portions of the Espanola, Coyote, Jemez Districts of the Santa Fe National Forest, Bandelier National Monument, Los Alamos National Laboratory, Los Alamos County, Valles Caldera National Preserve, Jemez Pueblo, Santo Domingo Pueblo, Santa Clara Pueblo, and numerous private inholdings. The fire was situated in an area bounded by the Sierra De los Valles to the east, on the western side by the Pajarito Plateau, Polvadera Peak to the north and Cochiti on the south. As of July 16, 2011, the fire had burned more than 150,000 acres with large patches of high and moderate severity burns. The size and intensity of this fire has resulted in considerable threats to life and property, natural resources and created values at risk.

Currently there is an unacceptable risk, particularly in regards to life and property related to watershed response. Post-fire discharge calculations range between 280 and 3600 cfs. Within the burn perimeter, critical values at risk were identified in 6 of 33 watersheds. Values at risk were evaluated using a risk matrix. Bland and Cochiti drainages were found to have the greatest risks with calculated maximum runoff estimated at 1900 and 3200 cfs respectively. Bland Canyon contains a historic mining district that poses risk of debris jams at road crossings and contamination of flood waters. Cochiti Canyon contains state land and lease-holder facilities and assets such as the Dixon Apple Orchard.

Approximately 23% (28,470 acres) of the fire burned with high severity and 25% (39,910 acres) burned with moderate severity. Combined, the high and moderate severity accounted for 48% (68,380 acres) of the burned area. From a soils and watershed condition standpoint, these burned acres will account for a majority of the erosion and sedimentation in the burned area. In high burn severity areas soils may become water repellent (hydrophobic tendency) that impacts the potential runoff hazard and predicted sediment production of the burned area. Results of hydrophobicity tests from 30 sites throughout the burn area indicate highly variable soil conditions. Even though there may be somewhat limited fire induced hydrophobic tendency within the burn (30-40% of moderate and high burn severity with the aerial extent), watersheds will realize significant increased hydrologic response and loss of control of water. The soil hydrophobic tendency in areas of high and moderate burn severity may result in emergency conditions such as loss of control of water, particularly in drainages of Frijoles Canyon, Cochiti Canyon, Medio dia Canyon, Bland Canyon, Peralta Canyon and Santa Clara Canyon; accelerated soil erosion; potential flooding, sedimentation and debris flows and torrents onto private properties below areas of the burn; and loss of long-term site productivity.

Eight roads were identified that had potentially critical values at risk. Treatments to address threats to life and property were identified for these priority roads and include removal of hazard trees, culvert cleaning or removal, posting warning signs for flooding and falling rock hazards, installing gates, closing areas, and addressing road drainage issues.

As a result of the fire's severity and extent, little can be done to mitigate losses to wildlife and fisheries resources. Fire effects to the Mexican spotted owl (Federally listed) and Jemez Mountain Salamander (Federal candidate species) may result in the long term loss or reduced habitat suitability for both species.

Four populations of Rio Grande cutthroat trout (USFS Region 3 Sensitive Species and Federal candidate species) are within the burn area. Of these populations, one is a recreation population (Peralta Canyon), two are conservation populations (Medio Dia Canyon and Rio del Oso and tributaries), and one is a core

population (Capulin Creek). Because of the size, severity, steepness of slopes, and proximity of the wildfire aquatic habitats and Rio Grande cutthroat trout are at a very high risk of impact. Impacts include changes in peak flows and deposition of ash and sediment which negatively alter fish and macro-invertebrate habitat and water quality. Fish deaths due to fire are also associated with ash flows, which can obstruct gill membranes and cause asphyxiation.

Cultural and archeological resources are abundant within the area burned by the Las Conchas fire. Values at risk include sensitive and irreplaceable Traditional Cultural Properties for the Pueblos of Jemez, Santa Domingo, Cochiti, San Ildefonso, Santa Clara, and Ohkay Owingeh; irreplaceable archeological sites of tremendous scientific and cultural significance; and historic sites of both Puebloan and non-Puebloan origin.

Recreation values at risk include the Dome Wilderness, East Fork of Jemez Wild and Scenic River, 100 miles of trail, developed recreation sites such as trailheads and picnic areas, Pajarito Nordic Ski Trail, and views along the State Road 4 Scenic Byway.

Changed environmental conditions resulting from the fire are conducive to non-native invasive plant species (NNIS) introduction and establishment, especially areas of high and moderate burn severity. NNIS can dramatically reduce biodiversity, alter ecosystem processes that provide surface water and benefits to other natural resources, reduce habitat and forage for native wildlife, increase soil erosion, and change the fire return interval. These alterations are not easily healed. Depending on the scale, duration, and frequency of the invasion, restoring the ecosystem to its original condition may not be technically or financially feasible.

Ten National Forest System grazing allotments and the Chicoma Wild Horse and Dome Wild Burro Territories are wholly or partially within the burned area. The area within each allotment that was affected by the Las Conchas fire and the degree of the burn severity was variable for each of the allotments. In addition, range structures such as fences and water developments may have been directly affected by the fire or are likely to be affected by post-fire run off events.

Treatments proposed to minimize values at risk include:

- Removing culverts and installing structures to protect culverts or road segments.
- Clearing stream channels.
- Addressing flooding issues associated with toilets at the Las Conchas Picnic Recreation Area.
- Install hazard warning signs about potential flood and debris flow danger.
- Seeding and mulching around the Pajarito Nordic Ski Trails.
- Protecting cultural sites with tree removal and mulching.
- Installing gates to close the forest within the burn perimeter.
- Repairing or replacing the Abrigo repeater on VCNP.
- Remove hazard trees and rocks from roads and other treatment areas.
- Notifying local government officials about the post-fire flood risk through certified letters.
- Remove the recreation bridge on Peralta Creek.
- Stabilize recreation trails in order to minimize erosion from post-fire runoff.
- Seeding in two watersheds with considerable amounts of high and moderate burn severity.
- Mulching in high and moderate burn severity within Bland Canyon.

Appendix B: South BAER Team Roster

| South BAER Team Position | Name | Title |
|---------------------------------|-----------------|--|
| Archeology | Anna Steffen | Cultural Resources Coordinator, Valles Caldera National Preserve |
| Infrastructure LEAD | Anne Apodaca | Acting Forest Recreation/Trails/Wilderness Program Manager, Santa Fe National Forest, R3 |
| NPS Representative | Barbara Judy | Chief of Resources, Bandelier National Monument |
| Ecology | Beth Gastineau | Biological Technician - Fire Effects, Bandelier National Monument |
| Vegetation | Brian Jacobs | Vegetation Specialist, Bandelier National Monument |
| Agencies Liaison | Bruce Sims | Regional Hydrologist and BAER Coordinator, R1 |
| Wildlife, Fish, Vegetation LEAD | Chantel Cook | Fisheries Biologist, Santa Fe National Forest, R3 |
| Hydrology | Collin Haffey | Biological Science Technician, Bandelier National Monument |
| Public Information Officer | Craig Martin | Open Space Specialist, Los Alamos County |
| Tribal Liaison | Daryl Martinez | Southwest ESR Coordinator, National Interagency Fire Center, Bureau of Indian Affairs |
| Hydrology | Eric Moser | Hydrologist, TEAMS Enterprise Unit |
| Team Lead (Trainee) | Erica Nevins | Watershed Program Manger, Santa Fe National Forest, R3 |
| Archeology | Heath Bailey | Archeological Technician, Bandelier National Monument |
| BAER Team Planning LEAD | Jennifer Cramer | Forest Planner, Santa Fe National Forest, R3 |
| Soils | Jennifer Hill | Forest Soil Scientist, Lincoln National Forest, R3 |
| GIS LEAD | John Hutchison | GIS Specialist, Santa Fe National Forest, R3 |
| Forest Representative | Julie Bain | Environmental Coordinator, Santa Fe National Forest, R3 |
| GIS | Kay Beeley | Information Specialist, Bandelier National Monument |
| Hydrology | Kyle Wright | Hydrologist, Sequoia National Forest, R5 |

| | | |
|--------------------------|------------------|---|
| Soils and Hydrology LEAD | Mike Natharius | Soil Scientist, Gila National Forest, R3 |
| ICP Liaison | Pete Grinde | Range Program Manager, Santa Fe National Forest, R3 |
| Recreation | Phyllis Martinez | Recreation Foreman, Jemez Ranger District, Santa Fe National Forest, R3 |
| Fish | Rene Galindo | Fisheries SCEP, Santa Fe National Forest, R3 |
| Team Lead (Deputy) | Rich Schwab | National BAER Coordinator, National Park Service |
| Lands | Roger Norton | Realty Specialist, Santa Fe National Forest, R3 |
| Archeology | Rory Gauthier | Archeologist, Bandelier National Monument |
| Wildlife | Steve Fetting | Wildlife Biologist, Bandelier National Monument |
| Soils | Steve Strenger | Supervisory Soil Scientist, R3 Regional Office |
| GIS | Tim Downing | GIS Specialist, Santa Fe National Forest, R3 |
| Soils | Vince Archer | Soil Scientist, TEAMS Enterprise Unit |
| Wildlife | Will Amy | Wildlife Program Manager, Santa Fe National Forest, R3 |
| Archeology LEAD | Will Reed | Regional Heritage Program Manager, R4 Regional Office |
| ICP Liaison | Yolynda Begay | Assistant Regional Social Scientist, R3 |