USDA-FOREST SERVICE FS-2500-8 (6/06)

Date of Report: 6/14/2012
Date of Interim #1: 6/18/2012
Date of Interim #2: 07/09/2012

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[X] 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 #1
[ ] Update of the initial funding requrest based on more accurate site data or design Analysis Changes are shown in BLUE

[X] 3. Interim Report # 2
[X] Updating the initial funding request based on more accurate site data or design Analysis Changes are shown in RED
[X] Status of accomplishments to date

[ ] 4. Final Report (Following completion of work)

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Whitewater Baldy Complex

B. Fire Number: NM-GNF-000143

C. State: NM

D. Counties: Catron, Grant

E. Region: 03

F. Forest: Gila NF

G. Districts: Wilderness, Glenwood, Reserve, Black Range

H. Fire Incident Job Code: P3GU3S

I. Date Fire Started: 05/9/2012

J. Date Fire Contained: 87% contained as of 06/29/2012

K. Suppression Cost: $22.7M as of 06/15/2012

L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred and brush brought back on line (miles): Work is ongoing. No mile estimate at this time.

2. Fireline seeded (miles): Work is ongoing. No mile estimate at this time.
3. Other (identify): Work is ongoing. No mile estimate at this time.

M. Watersheds – Affected 5th Codes

Row Labels	WWBC 5th Code Acre	WWBC 5th Code %
Deep Creek-San Francisco River	**22,989**	**14.99**
1504000404	22,989	14.99
Duck Creek	**3,967**	**2.74**
1504000202	3,967	2.74
Middle Fork Gila River	**78,955**	**36.08**
1504000105	78,955	36.08
Mule Creek-San Franciso River	**13,738**	**5.62**
1504000408	13,738	5.62
Outlet Tularosa River	**23,944**	**13.00**
1504000402	23,944	13.00
Pueblo Creek-San Francisco River	**46,055**	**20.34**
1504000406	46,055	20.34
Sapillo Creek-Gila River	**51,367**	**27.06**
1504000109	51,367	27.06
West Fork Gila River	**39,057**	**37.57**
1504000106	39,057	37.57

N. Total Acres Burned: 297,845 as of 6/29/2012
NFS Acres: (289,520) Other Federal: (0) State: (0) Private: (1,109)

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

P. Dominant Soils/Map Units: 107; 556; 572; 583; 622; 662; 678; 684; 686; 694; 698

Q. Geologic Types: Andesite/Basalt, Rhyolite/Tuff, Conglomerate

R. Miles of Stream Channels by Order or Class:
Perennial: 207 miles
Intermittent: 36 miles
Ephemeral: 832 miles

S. Transportation System
Trails: 307 miles
Roads: 278 total FS miles. ML 5 - 1.6mi; ML 4 – 8.8mi; ML 3 – 24.2mi; ML 2 – 151.8mi
ML 1 (closed) 91.6mi

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 56,120 (low) 33,068 (moderate) 37,817 (high) Acres reflected in the burn severity map from 6/5/2012 do not cover the entire final burn area.

B. Water-Repellent Soil (acres): 28,000ac (mod and high severity)

C. Soil Erosion Hazard Rating (acres):
11,588 (low) 31,787 (moderate) 227,568 (high)

D. Erosion Potential: 12 tons/acre (average across fire, low mod, and high severity)

E. Sediment Potential: 802 cubic yards / square mile (average total)

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years):	5
B. Design Chance of Success, (percent):	80%
C. Equivalent Design Recurrence Interval, (years):	25
D. Design Storm Duration, (hours):	1
E. Design Storm Magnitude, (inches):	1.9"
F. Design Flow, (cubic feet / second/ square mile):	82
G. Estimated Reduction in Infiltration, (percent):	50+
H. Adjusted Design Flow, (cfs per square mile):	292

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

The Whitewater Baldy Complex started as two separate lightning strike fires in the Gila National Wilderness. The Baldy fire started on May 9th and the Whitewater fire on May 16th 2012. The two fires combined during extreme fire behavior on May 23rd. The burned area is located east of Glenwood NM. The majority of the fire is on National Forest System lands

managed by the Glenwood, Reserve, Wilderness and Black Range Ranger Districts of the Gila National Forest. Approximately 600 acres of the burn is on privately owned lands.

The burn area is comprised of very steep and rugged terrain reaching from pinyon-juniper scrub around 6500 ft to mixed conifer and alpine grasslands over 10,400 ft elevation. The vast majority of high severity burn was a result of extreme fire behavior in stand replacing burns in mixed conifer. Numerous steep and short drainages will transport significant water and debris flows during subsequent rain events.

The Whitewater Baldy Complex continued to actively burn during the BAER assessment. Soil burn severity was based on BARC imagery from 6/5/2012 and adjusted by team scientists after field assessments to reflect observed conditions. At this point the fire was 263,577 acres and was 20% contained. The fire continued to spread in the south and southwest as well as back slowly to the east. Additionally several burn-outs were successfully accomplished. These changes resulted in the total acres reported in this request to 280,071ac. At this point no additional BARC map has been made available to assess burn activity after 6/5/12.

The Whitewater Baldy Complex Fire severely burned large tracts of land across the Gila Wilderness, including the headwaters of Whitewater Creek, Mineral Creek, and Gilita Creek that drain directly into the communities of Glenwood, Alma, and Willow Creek respectively. All of these population centers are situated in the floodplain. The vegetation, duff and soil that once served to slow and hold water were eliminated as a result of the fire. Steep slopes further aggravate the situation. In fact, the Whitewater Baldy Complex Fire BAER team has modeled and predicted post-fire peak flows for a 25 year 6 hour precipitation event at 140 times the pre-fire flow in Willow Creek. Post-fire flows from a 25 year precipitation event are expected to increase 2-4 times in most of the affected drainages. Additionally, pre-fire erosion rates commonly less than one ton per acre have been modeled post-fire to range from between 20 to over 100 tons per acre. Changes in runoff response compounded by sediment bulking are issues of serious concern for downstream values of human life and property.

Severe damage to critical natural resources, including soil productivity, water quality, watershed health, threatened and endangered species, and critical habitat has resulted from this fire and irreversible damage is expected if management action is not taken in the three watersheds mentioned above, as well as in the Headwaters of the West Fork Gila River, Canyon Creek-Middle Fork Gila River, and Upper Mogollon Creek sixth code watersheds. The range of post-fire erosion rates greatly exceeds the dominant tolerable soil loss of 1 to 3 tons per acre. The West Fork and Middle Fork of the Gila River, as well as Whitewater Creek and Mogollon Creek, are in nonattainment of water quality standards (303(d) listed) and designated as Outstanding National Resource Waters (ONRW) which are subject to higher water quality standards. There are an additional sixteen ONRW streams in these watersheds and at least ten ONRW wetlands.

Critical Values Identified

Critical Values identified (FSM 2523.1 Exhibit 01) during the BAER assessment are: Human life and safety, property, natural resources and cultural/heritage resources. The BAER team evaluated the risk to those critical values using the BAER Risk Assessment (FSM 23235.1 Exhibit 02).

The following risk matrix shown on the next page, Exhibit 2 of Interim Directive No.: **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.

A full list of the values at risk that were analyzed during this assessment can be found in Appendix A

Human Life and Safety

There is high risk of loss of life on Forest Service and private land downstream of the burned area. Individuals who may find themselves in any of the drainages or on many of the roads affected by fire upstream are at risk during storm events. The drainages affected by high burn severity will be subject to higher than usual run-off and debris flows which could cause injury or death. Hazardous materials released from burned homes in the Willow Creek subdivision could be washed downstream towards the Middle Fork Gila River.

Property

There is a high risk of public and private property damage due to storm runoff and debris flows. Hydrologic modeling predicts extreme runoff in Willow Creek with post fire flows being generated at **140 times** higher than pre-fire flows from a 6 hour 25-year storm event.

Flows were modeled to be 2.7 times higher in Whitewater Creek and 2.3 times higher in Mineral Creek. Peak flows of 2-4 times pre-fire can be expected in drainages associated with high burn severity across the burn area. The increase in peak flows resulting from areas of high burn severity, and the loss of channel structure pose a significant threat of flood waters and debris flows that will impact downstream property and infrastructure (e.g. homes, businesses, roads, culverts, bridges and low water crossings). The Willow Creek subdivision will be severely impacted as well as the community of Glenwood and private property adjacent to Alma. Several bridges along U.S. Highway 180 between Cliff NM and Reserve NM are likely to be damaged. Some downstream effects may be experienced at the outlet of Mogollon Creek and near the confluence of West Fork and Middle Fork Gila River.

Natural Resources

Site Productivity and Water Quality

Soils

There is a high risk of increased levels of surface soil erosion and sediment delivery predicted to result as an effect of the burn severity within the Whitewater Baldy Complex burned area. Modeling shows that erosion will increase from pre-fire levels just over 0 tons per acre to 20-30 tons per acre average across high and moderate burn areas, with the highest modeled values reaching over 100 tons per acre. The initiation of new surface erosion sources from moderately steep and steep slopes pose an extreme threat to long-term soil productivity, increased risk of water quality impacts, and threats to downstream resources and property from bulking of flood flows.

Several areas of Whitewater Creek were identified as being prone to mass wasting and landslide in a 1995 watershed analysis report. The analysis states that "If there is enough loss of stored channel deposits or down cutting of the channel, it may lead to renewed landslide activity." These findings were based on current conditions and normal stream flows. With the 2.3 times 25 year flood increase in flow modeled post fire, the potential for landslides greatly increases.

Water Quality

Water quality will be greatly degraded due to ash and sediment deposition post fire in all HUC 6 drainages affected by the burn.

Outstanding National Resource Waters

ONRW's are water bodies designated to receive special protection by the Water Quality Control Commission under New Mexico State water quality standards and the federal Clean Water Act. Degradation must be minimized in terms of degree and duration. 18 designated wetlands and 54 streams (294 miles) have been burned in the fire and will be impacted by ash, sediment, and debris flows in subsequent rain events.

Hydrologic Function

Hydrologic function will be greatly degraded due to the loss of vegetative ground cover and erosion. Recovery of watershed condition can take up to 25 years to stabilize.

Riparian Habitats

Riparian areas are at high risk on NFS lands due to changes in peak flows, which will result in channel erosion and damage or loss of the riparian vegetation. Riparian habitat

within the stream drainages are expected to be subject to increased channel erosion and scour as well as deposition of ash, sediment and debris from upstream areas of high burn severity. Loss of streamside shade will result in warming of surface waters which will result in impacts to or loss of aquatic habitat for fish and macro- invertebrates.

Fish and Wildlife Species

Mexican Spotted Owl

The Mexican spotted owl is a threatened species. A total of 101 Mexican spotted owl protected activity centers (PACs) occur within the burn perimeter. Eighty-six percent of the burned area is within designated critical habitat for the species.

Mexican Gray Wolf

The Mexican gray wolf is an endangered species. The population on the Gila National Forest is an experimental non-essential population. Three wolf packs are denning in close proximity to the fire perimeter. All of the burn area is considered habitat and has been utilized by wolves in the past.

Gila trout

The Gila trout is listed as an threatened species. The species occurs in small, high mountain streams in the headwaters of the Gila and San Francisco river basins and is the only native trout in these systems. Most extant populations lack connectivity and are unable to be naturally repopulated if lost. Eight of fourteen occupied streams on the Gila NF occur within the fire perimeter. All eight of these streams are at high risk of population loss and long term habitat degradation and loss.

Gila chub

The Gila chub is listed as endangered species with designated critical habitat. There is one population on the Forest located in Turkey Creek. The entire occupied reach and all designated critical habitat is within the fire perimeter.

Loach minnow

The loach minnow is listed as endangered with designated critical habitat. The species was recently reclassified from threatened to endangered due to continuing declines. Present populations are geographically isolated and inhabit the upstream ends of their historical range. The populations on the Gila NF are the largest and most robust populations remaining. Occupied critical habitat is located downstream of the burned area. Populations are at high risk of significant fish loss and habitat degradation.

Spikedace

The spikedace is listed as endangered with designated critical habitat. The species was recently reclassified from threatened to endangered due to continuing declines. The species presently inhabits less than 15% of its historic habitat. Populations on the Gila NF are the largest and most robust populations remaining. Occupied critical habitat is located downstream of the burned area. Populations are at high risk of significant fish loss and habitat degradation.

Headwater chub

Headwater chub are a candidate species for listing. Headwater chub populations have declined due to a combination of habitat loss and degradation. On the Gila NF the species occurs in the East, Middle, and West forks of the Gila River. The species and occupied habitat occurs within and downstream of the burned area. Populations are at high risk of significant fish loss and habitat degradation.

Chiricahua Leopard Frog

The Chiricahua leopard frog is listed as endangered with designated critical habitat. The species' current range is generally similar to its historical range, but populations are often small and isolated, and the frog has apparently disappeared from some drainages and mountain ranges. Occupied critical habitat occurs within and downstream of the burned area. Critical habitat is at high risk of long term loss and populations at risk of individual frog loss.

Narrow-headed gartersnake

The narrow-headed gartersnake is an R3 sensitive species that has been petitioned for listing. The species is one of the most aquatic of the gartersnakes. On the Gila NF the species is known to occur in the Middle Fork Gila River, Iron Creek, Gilita Creek, Clear Creek, Whitewater Creek, San Francisco River and the Tularosa River. Occupied habitat occurs within and downstream of the burned area. Occupied habitat at risk of significant degradation and loss.

Gila Springsnail

The Gila Springsnail is an R3 sensitive species that is endemic to the Gila NF and only occurs within the Gila Nation Forest. There are 13 occupied sites that have been identified. Two occupied sites are within the burned area and one site is located downstream of the burned area. The Gila springsnail and its geographically restricted distribution makes the species vulnerable to natural or human caused events that could extirpate the species.

Recreational Fishing Streams

Both cold and warm water recreational fishing opportunities are somewhat limited on the Gila NF. Higher elevation cold water streams that are not inhabited by native Gila trout are occupied by nonnative brown, rainbow, and brook trout. Use of these streams is variable due to level of access with those that have road access receiving heavier use. Many of these fisheries provide some economic input to local communities such as Glenwood, Gila Hot Springs, and Reserve. Game fish populations in these streams, especially trout, require clean water and sufficient stream cover and pool habitat for survival. Many of these streams will be negatively affected by post fire runoff and angling opportunities will be diminished.

Invasive Plants

Bullthistle

The existing bullthistle population located in the 1997 BS Fire poses a high risk to new adjacent fire disturbance areas, as a seed source and specific threat. Generally a 25% increase in non-native invasive plant species is seen after a major wildfire event.

Cultural Resources

The Gila National Forest contains high densities of cultural resources, however, much of the Whitewater-Baldy Complex burn area is in higher elevations (7500 feet and above) which are considered low density. Sites in higher elevation tend to be historic properties. Increased flows of sediments and hazard trees pose a threat to archaeological sites and historic properties.

There are approximately 168 archaeological sites located within the burn perimeter and 15 archaeological sites or historic properties that are eligible or considered eligible for the National Register of Historic Places and have a high risk value associated with them. The types of sites associated with the high risk category include historic cemeteries, historic cabins, prehistoric roomblocks, and cliff dwellings.

B. Emergency Treatment Objectives:

1. Within the Catwalk Recreation area remove infrastructure (bridges, walkways, handrails and picnic ground structures) that are likely to catch floatable debris. Monitor debris jams that may result in further risk to the downstream community of Glenwood.
2. Place high severity burn areas and affected roads and trails in an administrative closure status to prevent injury to the public from hazard trees, flooding, debris flows, and potential entrapment within the burn area.
3. Place closure gates and post warning signs at key access points of the burn area to protect the public from entering the burned area and preventing exposure to the hazards of the burned area.
4. Mitigate damage to Forest System roads within the burn area by installing additional drainage features such as rolling dips, armoring outslopes, and preparing roads to handle increased modeled storm runnoff.
5. Ensuring access to the fire lookout and associated Forest Service radio repeater on Mogollon Baldy. This repeater is an essential component to the communication network within the Gila Forest Service, providing for the safety of FS employees.
6. Pump 10 vault toilets along streams that will be affected by post fire flows. This is intended to prevent contamination of waterways and prevent risk to public health.
7. Stabilize Heritage sites that consist of archaeological sites, historic buildings, and traditional cultural properties (TCPs) from post fire conditioins relating to storm runoff and hazard tree impacts.
8. Stabilize soil and provide immediate protection from rainfall by aerial mulching high severity burn areas in three watersheds where elevated runoff events pose an imminent risk to life, property, cultural resources, and critical natural resources. This will assist in reducing erosion and maintaining long term soil productivity.
9. Seed high burn severity areas to promote short and long term soil stability against erosion and soil productivity loss and protect critical natural resources.

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

Land NA % Channel 90 % Roads/Trails 90 % Protection/Safety 95 %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	85	90	95
Channel	60	80	90
Roads/Trails	75	90	95
Protection/Safety	90	95	95

E. Cost of No-Action (Including Loss): $413,743,689

F. Cost of Selected Alternative (Including Loss): $95,063,453

G. Skills Represented on Burned-Area Survey Team:

[x] Hydrology	**[x] Soils**	**[x] Geology**	[ ] Range
[x] Forestry	**[x] Wildlife**	[ ] Fire Mgmt.	**[x] Engineering**
[x] Contracting	**[x] Ecology**	**[x] Botany**	**[x] Archaeology**
[x] Fisheries	[ ] Research	[ ] Landscape Arch	**[x] GIS**

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The full team roster can be found in Appendix B

H. Treatment Narrative:

Land Treatments:

Mulch

Areas of high burn severity and moderate burn severity with highly erosive soils, that drain to the communities of Glenwood, 50+ homes located in Willow Creek, and residences in Mineral Creek would be mulched. Mulch is the most effective treatment for controlling erosion and reducing runoff as it provides immediate ground cover (Robichaud,et al, 2010, Napper, 2006, Larsen, et al, 2009). Areas proposed for mulching would be treated at a rate of one ton per acre. Mulch would be applied by helicopters at locations identified on the attached treatment maps. Mulch would be applied to reduce erosion and peak flows. It would be effective for reducing loss of soil productivity and hydrologic function and would also provide some reduction in peak flows that threaten downstream life and saftey, downstream property and infrastructure, and critical aquatic resources.

Treatment Status: 0% completed.

Interim #1 was based on an estimated aerial mulching cost of $625 per acre at an application rate of 1 ton per acre for 16, 000 acres. Bids came in at $718.75 per acre. Interim #1 was approved at $10,000,000. Request for additional $1,500,000.

Seeding

Areas of high burn severity would be seeded to provide vegetative ground cover where the soil seedbank has been eliminated. Most of the high burn severity that occurred as a result of the Whitewater Baldy Complex Fire burned in mature mixed conifer. This dense, closed canopy accumulated a thick layer of duff over approximately a 150-250 year period, essentially excluding forb or graminoid cover. The tree seeds are often destroyed in the organic duff layer, as are grass and forb seeds. Seeds are consumed in the fire or heat sterilized. Therefore, these soils do not have a viable seed bank of their own and will not stabilize naturally without sacrificing site potential. A quick germinating nonpersistent annual species would provide rapid ground cover and native perennial species would provide longer term ground cover. Seeding would reduce impacts to soil productivity and hydrologic function and reduce threats to downstream life and safety, and to downstream property and infrastructure by reducing erosion and runoff. Seeding would also provide benefits for critical natural resources by accelerating vegetative recovery that would reduce erosion and sedimentation into streams with critical TES aquatic species, spring snails, and by accelerating habitat recovery for spotted owl prey species. Treatment areas are identified on the attached seeding map. The proposed seed mixes are identified in the tables below.

Seed mix for use in combination with straw mulch. This mix has a reduced level of annual barley. Areas treated with straw mulch will provide immediate ground cover and a lighter seeding rate is prescribed.

For Seed and Mulch Treatment Area

Species	Planting Rate (pls #'s/acre)	Seeds/ft2 Contribution from Planting Rate
Barley (Hordeum vulgare)	34.90	10.00
Arizona fescue (Festuca arizonica)	0.02	0.25
Muttongrass (Poa fedleriana)	0.05	~~1.00~~ **2.90**
Prairie junegrass (Koeleria macrantha)	0.02	1.00
Mountain brome (Bromus marginatus)	1.86	~~2.75~~ **0.82**
Total	36.85	15.00

Seed mix for use in treatment areas that will **not** receive mulch. This mix includes a higher concentration of barley in the absence of straw mulch.

For Seed Only Treatment Area

Species	Planting Rate (pls #'s/acre)	Seeds/ft2 Contribution from Planting Rate
Barley (Hordeum vulgare)	52.30	15.00
Arizona fescue (Festuca arizonica)	0.02	0.25
Muttongrass (Poa fedleriana)	0.05	~~1.00~~ 2.90
Prairie junegrass (Koeleria macrantha)	0.02	1.00
Mountain brome (Bromus marginatus)	1.86	~~2.75~~ 0.82
Total	54.25	20.00

Treatment Status: 0% completed

Further investigation on the part of the seed company found that there was insufficient mountain brome available for this seeding effort. Consequently, muttongrass was increased to compensate for the insufficient supply of mountain brome.

Interim #1 was based on an estimated aerial seeding cost of $50 per acre. Bids came in at $66.48 per acre. Interim #1 was approved at $1,310,000. Request for additional $431, 870.

Wilderness Treatments:
Due to the extreme nature of the burn in the headwaters of several watersheds in the Gila Wilderness and the risks to life, property, cultural and natural resources the BAER team is reccomending that the seeding and mulching treatments listed above be utilized within the wilderness as well. In addition the trail work recommended for accessing the lookout and FS repeater at Mogollon Baldy will require chainsaw work. Minimum Requirements Decision Guides have been ~~prepared~~ approved to authorize the proposed work in the Gila Wilderness.

Channel Treatments:

- Portions of the catwalk structures will be removed In order to reduce the threat to downstream life and property to:
  - Prevent dislodged Forest Service facilities from become projectiles during a flood event.
  - Reduce the threat of breached debris jams that are caused by Forest Service Facilities.
  - Reduce the threat of severe damage to valuable Forest Service facilities.
- Hand rails, chain link fabric, bridge decking, toilet and storage buildings will be dismantled and removed by hand crews. Up to 4 bridges will be removed entirely ~~use~~ through hand crew disassembly and extraction.
- Stabilize Heritage Sites by installing water diversion barriers including jersey barriers ~~and gabion baskets~~ where appropriate and contour felling or removing dead standing trees on or near archaeological features in order to use the logs as erosion control barriers.
- Stabilization of levies located on FS lands within Whitewater Creek and Mineral Creek

Treatment Status: 100% complete

- The entirety of the above identified infrastructure at the Catwalk has been removed.
- Point protection of Heritage Sites in Whitewater Creek and Mineral Creek has been completed.
- The levy stabilization and channel clearing activities in Whitewater Creek and Mineral Creek have been completed.

Roads Treatments:

- Armor the fill slope of a half mile section of Brusum Road (FR 28) accessing the Willow Creek Subdivision with large riprap and geotextile fabric to lessen damage to the road from storm runoff flows.
- Prepare 50 existing culverts in, or downslope from high severity burn areas to handle increased runoff flows.
- Enhance ditch blocks at 50 culverts by excavating culvert inlets and using this material to ensure ditch flow is directed into culvert.
- Install 5 overflow drains (4 on FR 141, 1 on FR 28) to prevent ditch overflow from running down the road.
- Install a total of 1164 low standard rolling dips. The existing roadway would be excavated and lead out ditches or sediment traps constructed.
- Install riser pipes on 4 culverts affected by high burn severity to handle high flows with heavy sediment.
- Prepare 11.7 miles of road side ditch for increased runoff flows.
- Remove trees and brush from the channel of Gilita Creek for approximately one-half mile upstream from the culverts at the crossing of FR 28 to prevent the culverts from being blocked and resulting in flows overtopping the road.
- Clean vegetation and debris from channel at South Negrito Creek Bridge and place riprap at wingwalls at crossing of FR 141
- Clean vegetation and debris from channel upstream of the Gila River crossing of FR 970 and reconstruct riprap diversion.

Treatment Status: 0% complete

Trails and Recreation Treatments:

- Installation and repair of waterbars and retaining walls and removal of hazard trees along three main artery trails accessing the Mogollon Baldy communications site and fire lookout: Crest Trail #182, Gobbler Route, and Holt-Apache Trail #181. This work is essential to guard against storm runoff flow damage and maintain access to the Mogollon Baldy Fire Lookout and radio repeater site. The fire lookout and radio repeater site are vital to communications and FS employee safety.
- Removal of all hazard trees from fire impacted recreation sites to protect life and property.
- Removal of wooden toilet at Gilita Campground. This toilet has been compromised in the past and poses a risk to wilderness values when increased flow dislodges the toilet and carries it downstream into wilderness.

Treatment Status: 0% complete

Wildlife Treatments:

No treatments at this time. Critical populations of Gila trout are being evacuated as part of emergency fire suppression action in two streams where catastrophic loss of population is imminent. Seeding and mulching as proposed for land treatments will help protect critical aquatic habitat.

Gila Trout evacuations are 100% complete.

Protection/Safety Treatments:

- Enact closure orders for the burn area, as well as key roads and trails accessing the burn. Install approximately 75 hazard warning signs and closure orders at key entry points around the burn area. Install locked closure gates on access routes to the burn area. 10 vault toilets located in areas that have the potential to be inundated by flood waters will be pumped to prevent downstream contamination.
- Ensure access along two trail routes to key communications repeater site at the fire lookout on Mogollon Baldy. This work would include hazard tree felling along the route to protect FS personel using the trail and tread work to prevent trail washout from storm events which are likely to impact access to this important communication site for the Forest.
- Hazard trees will be felled along 18 miles of Forest Service roads.
- Jersey barriers will be placed around the Willow Creek guard station to protect from flooding.

Treatment Status:

- Closure orders are in place and signage is on order.
- Vault toilets have been pumped.
- Hazard tree removal along 18 miles of Forest system roads is in progress and is approximately 70% complete.

I. Monitoring Narrative:

Seed and Mulch Effectivenes Monitoring
Field monitoring visits to evaluate the effectiveness of mulch and seed treatments. This will be accomplished through pace transects, occular ground cover estimates, and photo points.

Noxious Weed Monitoring
Field monitoring visits for the spread of invasive noxious weed species will take place post monsoon season and again in the spring. Visits will focus on areas around known populations of bullthistle associated with the BS Fire (1997) and disturbance areas from fire suppresion activities on the Whitewater Baldy Complex.

Storm Inspection and Response
Roads within the Whitewater-Baldy Complex Fire contain drainage structures that cross streams located in watersheds that have a high to moderate burn severity. These streams now have the potential for increased runoff and debris flows. The patrols are used to identify road problems such as plugged culverts and washed out roads and to clear, clean, and/or block those roads that are damaged.

Hazard Debris Monitoring

Due to the high probablility of burned and damaged homes traveling downstream on to FS lands and into the Wilderness along Willow Creek, the channel will be monitored after storm events when danger of flooding has past. Monitoring trips will evaluate and locate any hazardous material that have entered Forest Service lands. Initial funding would cover up to ten monitoring trips within the first year post fire.

Recreation

Direct observation of recreation sites and trails will be accomplished (at a minimum) each spring prior to the area formally opening for the traditional recreation season. Inspections will be for any and all potentially hazardous conditions, with emphasis placed on identifying fire-related overhead and ground hazards and to evaluate performance of erosion control structures.

Aquatics

Critical populations/Habitat - Conduct stream surveys after monsoon season and spring runoff in 2013 to determine if treatments were effective in preventing loss of critical fish populations. Monitor general habitat to determine if treatments precluded damage that would render habitat unsuitable (i.e. sedimentation, bank stability, shade, pool to riffle ratio). Baseline is known for most streams.

Fish Barrier - Conduct site visit and establish photo point of barrier prior to first major precipitation event, revisit barrier after first, and subsequent major precipitation events during 2012 monsoon season and spring 2013 runoff to determine treatment effectiveness in protecting barriers.

Part VI – Emergency Stabilization Treatments and Source of Funds Interim # 2

			NFS Lands				Other Lands				All
		Unit	# of		Other		# of	Fed	# of	on F	Total
Line Items	Units	Cost	Units	BAER $	$		units	$	Units	$	$
A. Land Treatments											
Aerial Seeding	acres	50	26200	$1,310,000	$0			$0		$0	$1,310,000
Aerial Seeding adj.		66.48		$431,870							$431,870
Aerial Mulch 1 ton/ac	acres	625	16000	$10,000,000							#########
Aerial Mulch adj.		718.75		$1,500,000							$1,500,000
Subtotal Land Treatments				$11,321,000	$0			$0		$0	#########
Adjusted Subtotal				$13,241,870							#########
B. Channel Treatments											
Channel Clearing Catv	miles	40,000	2	$80,000	$0			$0		$0	$80,000
Stabilize Arch Sites	per	2400	11	$26,400	$0			$0		$0	$26,400
Heritage site protection											
Subtotal Channel Treat.				$106,400	$0			$0		$0	$106,400
C. Road and Trails											
Armor Road FR 28	miles	95,000	1	$95,000	$0			$0		$0	$95,000
Trail work to NF Repe	miles	7,500	19.5	$146,250	$0			$0		$0	$146,250
Culvert Preperation	per	150	50	$7,500							
Enhance Culv Ditches	per	150	50	$7,500							
Overflow Drains	per	3,000	5	$15,000							
Rolling Dips	per	250	760	$190,000							
Riser Pipes on Culvert	per	600	4	$2,400							
Ditch Cleaning	miles	200	11.7	$2,340							
Riprap/Debris Remova	per	75,000	1	$75,000							
Subtotal Road & Trails				$540,990	$0			$0		$0	$241,250
D. Protection/Safety											
Hazard/Closure Signs	per	125	75	$9,375	$0			$0		$0	$9,375
Closure gates	per	5,000	10	$50,000	$0			$0		$0	$50,000
Hazard Tree Felling	miles	3,000	18	$54,000							
Vault Toilet Pumping	per	643	28	$18,000	$0			$0		$0	$18,000
Toilet Removal	per	2,000	6	$12,000							
Admin site protection	per	10,000	1	$10,000							
Subtotal Structures				$153,375	$0			$0		$0	$77,375
E. BAER Evaluation											
assessment	per	173,911	1	---	$173,911			$0		$0	$173,911
Subtotal Evaluation				---				$0		$0	$173,911
F. Monitoring											
Storm Patrol	visits	600	15	$9,000	$0			$0		$0	$9,000
Noxious Weed	days	525	20	$10,500							
Seed and Mulch	days	2200	5	$11,000							
Subtotal Monitoring				$19,500	$0			$0		$0	$9,000
G. Totals				$14,083,135				**$0**		**$0**	#########
Initial approved				$486,375							
Interim #1 approved				$11,664,890							
Total for this request				**$1,931,870**							

PART VII - APPROVALS

1. Kelly Russell
Forest Supervisor (signature) — Date: 7-9-12

2.
Regional Forester (signature) — Date