



Forest
Service

National Forests in
North Carolina

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File Code: 2520
Route To: (2520)

Date: July 16, 2012

Subject: Dad Wildfire (P8GX5U) – Initial Burned Area Emergency Response Report

To: Regional Forester

Enclosed is the Initial Burned Area Emergency Response (BAER) report for the 21,331 acre Dad Wildfire (P8GX5U) on the Croatan National Forest. The fire started on June 17, 2012 and was contained on July 6, 2012. The BAER Team determined that critical values were not at risk, and therefore emergency BAER funds are not requested for this wildfire. The Croatan NF will continue the rehabilitation of areas impacted by fire suppression efforts using appropriate funding. Pictures and other survey information associated with the wildfire and BAER analysis are available and will be sent if requested.

KRISTIN M. BAIL
Forest Supervisor

Enclosure

cc: Emanuel Hudson



Date of Report: July 13, 2012

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 # _____
☐ 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: Dad Fire B. Fire Number: NC-NCF-120072
C. State: North Carolina D. County: Craven (95%) & Jones (5%)
E. Region: 08 F. Forest: Croatan National Forest
G. District: Croatan Ranger District H. Fire Incident Job Code: P8GX5U
I. Date Fire Started: June 17, 2012 J. Date Fire Contained: July 6, 2012
K. Suppression Cost: approximately \$1.9 million
L. Fire Suppression Damages Repaired with Suppression Funds
1. Fireline waterbarred (miles): 0
2. Fireline seeded (miles): 0
3. Other (identify): At locations where culverts or water control structures are plugged and vegetation removed, suppression funds will regrade the plug material back onto the shoulder of the road and cover bare soil with downed vegetation. Any locations where the canal was crossed with equipment and bare soil is evident, these areas will also be graded and covered with downed vegetation. All bare soil on the road shoulder and other disturbed areas will be seeded with the designated native seed mixture at the rate of 15 lbs./acre and covered with wheat straw. At the Seaburn Road/Great Lake Road intersection, bare soil will be covered with straw and planted with wiregrass and Muhly grass plugs.
M. Watershed Number: 030202040303, 030202040502, 030203010103, 030203010105, & 030203010202.
N. Total Acres Burned: 21,331
NFS Acres (☒) Other Federal (☐) State (☐) Private (☐)

O. Vegetation Types: The dominant vegetation within the burned area is pocosin (Table 1). The vast majority, 90%, of these acres are dominated by either low or high pocosin. Pocosins occur on domed peatlands, are nutrient-poor, are dominated by shrubs and occur with only scattered trees, primarily stunted pond pine (*Pinus serotina*). High pocosin differs from low pocosin by stature of the shrubby vegetation (greater than 1.5 meters), have shallower organic soil layers, and occur on slightly lower lands when adjacent to each other. Frequently encountered woody species in the pocosin burned areas include fetherbush (*Lyonia lucida*), titi (*Cyrilla racemiflora*), loblolly bay (*Gordonia lasianthus*), inkberry (*Ilex glabra*), (honey-cups (*Zenobia pulverlenta*), wax-myrtle (*Morella cerifera*), and bamboo-vine (*Smilax laurifolia*). Pocosins are particularly abundant, covering over 95% of the landscape within the 8949-acre Sheep Ridge Wilderness. Outside the Sheep Ridge Wilderness, pocosins are slightly less dominant occurring over 85-90% of the landscape. They are less abundant within the North Carolina state (NCDOT)-owned lands, which are dominated by Pond Pine woodlands (Table 1).

Table 1. Plant communities present within the Dad wildlife both on the Croatan National Forest and the acreage (private) owned by the NC Department of Transportation and maintained as a wetland mitigation bank.

| DAD Wildfire 2012 | | | | | | |
|-----------------------------|--------------|--------|------------|-----------|--------------|---------|
| Habitat | USFS | USFS % | NCDOT | Private % | Total PNV | Total % |
| Pocosin | 18414 | 90.5% | 142 | 14.5% | 18556 | 87.0% |
| Pond Pine | 1257 | 6.2% | 525 | 53.6% | 1782 | 8.4% |
| Wet Longleaf Pine Savanna | 252 | 1.2% | 140 | 14.3% | 392 | 1.8% |
| Mesic Longleaf Pine Savanna | 214 | 1.1% | 47 | 4.8% | 261 | 1.2% |
| Cypress Gum Swamp | 200 | 1.0% | 125 | 12.8% | 325 | 1.5% |
| Wet Mixed Pine Savanna | 15 | 0.1% | 0 | 0.0% | 15 | 0.1% |
| Totals | 20352 | | 979 | | 21331 | |

Pine Pond Woodlands are partially forested habitat over temporarily flooded or wetland soils. This type is widely interspersed within the pocosin dominated landscape. Along the ridges wet to mesic Longleaf Pine Savannas occur over 2-3% of the burned area. The two communities differ primarily by moisture regime and the dominant understory vegetation. Wet savannas have higher species diversity and are dominated by longleaf pine (*Pinus palustris*) in the canopy, scattered shrubs such as inkberry, dangleberry (*Gaylussacia fondosa*), and creeping blueberry (*Vaccinium crassifolium*), with a very diverse mix of grasses, sedges and forbs including wiregrass (*Aristida stricta*), toothache grass (*Ctenium aromaticum*), bluestems (*Andropogon* and *Schizachyrium* species), blackroot (*Pterocaulon pycnostachyum*), vanilla-leaf (*Carphephorus odoratissimus*), and Virginia thistle (*Cirsium virginianum*). Mesic savannas also have a diverse species component but tend to be more dominated by bracken fern (*Pteridium aquilinum*), little bluestem, sweet goldenrod (*Solidago odora*), and sunbonnets (*Chaptalia tomentosa*). Within the burned area a minor component of mixed pine (pond, longleaf, and loblolly) savanna and cypress gum swamp occurs along a few of the drains. Various successional stages of these four savanna or marsh types are present with varying density of canopy trees including loblolly pine (*Pinus taeda*).

P. Dominant Soils: The following soils occur in the burned area (see Table 2):

- Dare muck (56.42%) – on broad flats and in depressions or pocosins, on uplands, organic soil, wet to very wet, wetland;
- Croatan muck (29.0%) – on broad flats and in depressions or pocosins, on uplands, organic soil, wet to very wet, wetland;
- Pantego fine sandy loam (6.93%) – upland depressions, very poorly drained;
- Rains fine sandy loam (1.09%) – on broad flats and in depressions on uplands, poorly drained;
- Bayboro mucky loam (1.09) – depressions on uplands, very poorly drained;
- Torhunta fine sandy loam (1.06%) – on broad flats and in depressions on uplands; and
- Several with less than 1% of the area including Dorovan, Leon, Lynchburg , Onslow, Masontown, Murville, Goldsboro, and Leaf.

Table 2. Soil types on the Dad Fire, Croatan NF, July 2012.

DAD Wildfire 2012

| Soils Name | Map Symbol | USFS acres | USFS % | NCDOT acres | Private % | Total acres | Total % |
|---------------|------------|--------------|--------|-------------|-----------|--------------|---------|
| Dare | DA | 12035 | 59.13% | 0 | 0 | 12035 | 56.42% |
| Croatan | CT | 6151 | 30.22% | 36 | 3.68% | 6187 | 29.00% |
| Pantego | Pa | 1054 | 5.18% | 424 | 43.31% | 1478 | 6.93% |
| Torhunta | To | 186 | 0.91% | 41 | 4.19% | 227 | 1.06% |
| Bayboro | Ba | 181 | 0.89% | 51 | 5.21% | 232 | 1.09% |
| Leon | Ln | 159 | 0.78% | 15 | 1.53% | 174 | 0.82% |
| Dorovan | DO | 131 | 0.64% | 33 | 3.37% | 164 | 0.77% |
| Rains | Ra | 107 | 0.53% | 126 | 12.87% | 233 | 1.09% |
| Lynchburg | Ly | 100 | 0.49% | 13 | 1.33% | 113 | 0.53% |
| Onslow | On | 95 | 0.47% | 0 | 0.00% | 95 | 0.45% |
| Masontown | MM | 68 | 0.33% | 93 | 9.50% | 161 | 0.75% |
| Murville | Mu | 49 | 0.24% | 55 | 5.62% | 104 | 0.49% |
| Goldsboro | GoA | 19 | 0.09% | 33 | 3.37% | 52 | 0.24% |
| Leaf | La | 17 | 0.08% | 59 | 6.03% | 76 | 0.36% |
| Totals | | 20352 | | 979 | | 21331 | |

Q. Geologic Types: The Coastal Plain is a wedge of mostly marine sedimentary rocks that gradually thickens to the east. The most common sediment types are sand of varying grain sizes and clay, although a significant amount of limestone occurs in the southern part of the Coastal Plain. The Duplin Formation occurs in the burn area. This formation consists of shelly, medium- to coarse-grained sand, sandy marl, and limestone, bluish gray; mainly in areas south of Neuse River.

R. Miles of Stream Channels by Order or Class: There are about 1.5 miles of natural perennial streams within burn area. Approximately 15 miles of constructed canal and roadside ditch exist as a result of past management and the existing road network. These man-made water courses are affecting the local hydrology, soil, and plant conditions. The area is predominantly influenced by the natural wetlands of the pocosin.

S. Transportation System:

Trails: 4 miles (OHV trail) Roads: 22.8 miles (including State and FS system roads)

PART III - WATERSHED CONDITION

A. Burn Severity (acres): 2,050 (10%) (low), 4,348 (20%) (moderate), & 14,933 (70%) (high), see Figure 1.

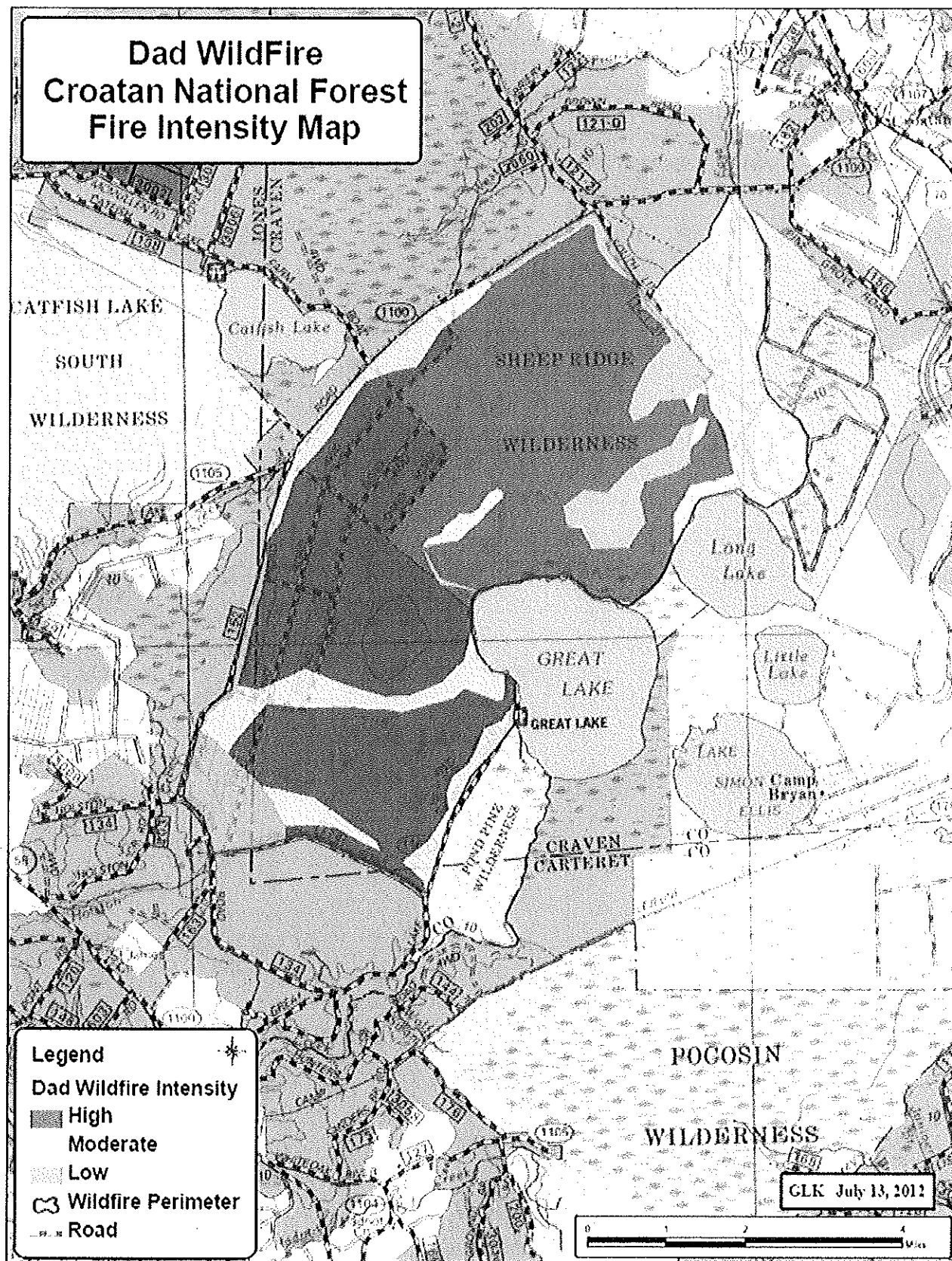


Figure 1. Burned area severity map, Dad Fire, July 13, 2012.

B. Water-Repellent Soil (acres): Not found, sandy soil with organic surface still absorbing well.

C. Soil Erosion Hazard Rating (acres): 21,331 (low) 0 (moderate) 0 (high)

D. Erosion Potential: 0.02 tons/acre (Very low potential)

E. Sediment Potential: 0.3 cubic yards/square mile (assuming a Sediment Delivery Ratio of 5 percent)

PART IV - HYDROLOGIC DESIGN FACTORS

Hydrologic treatments were not determined to be a critical need since the area is relatively flat with predominantly pocosin wetland and other depressional wetlands that are fire adapted. Additionally, new fireline was not constructed. Erosion and sediment hazard is expected to be minimal due to the limited amount of mineral soil exposure and relatively flat terrain. Although no impacts are expected, annual or major storm checks of the culverts are recommended for a couple of years to check for accumulation of fire debris in the channels at the road crossings.

Unused design sections C-H omitted from this form.

A. Estimated Vegetative Recovery Period, (years): 1-2 years for site cover

Note: Full recovery of plant type and structural diversity to pre-burn conditions is expected to take only a year or two in the wetland areas, as well as the small amount of upland areas. Few acres burned very hot and only resulted in dieback of the dense shrub layer. It is anticipated not a lot of plant mortality will result from the fire.

B. Design Chance of Success, (percent): Very High (99 percent)

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

There are no known critical non-native invasive plant species (NNIP) issues within the burn or on adjacent areas that resulted from the fire. Two invasive plant species, Japanese Stilt grass (*Microstegium vimineum*) and Sericea lespedeza (*Lespedeza cuneata*), were observed along portions of Great Lake Road (FSR 126), Seaburn Road (FSR 174), Black Swamp Road (FSR 152), Catfish Lake Road (SR 1100), and South Little Road (FSR 121-3). Both species were only encountered on the roadside shoulder and not seen within the interior of the burn. Typically a buffer existed between the small scattered infestations to the more intensely burned areas. Either the buffer consisted of water-filled canals paralleling the roads or unburned or moderately- burned vegetation at least 50 to 100 feet in width. No exposed soil was noted. As such, the likelihood of any NNIP invasion into the wildfire affected area is remote. The most intensely burned areas consisted of pocosins. Prior to the fire, a dense shrub growth was present. Typically pocosin shrubs re-sprout vigorously which tends to discourage and exclude any NNIP infestations. It is anticipated there will be minimal threat to this habitat from NNIP invasion as a result of the recent burn.

Recurrent burns are a natural part of the Dad Fire ecosystems, and most plants benefit from the low to high intensity fire areas. The pocosins and adjacent interface were consumed at the surface in the high fire intensity but plant mortality is unlikely for most shrub, hardwood, and herb species that sprout from their root systems. Response tends to be rapid, within weeks to months, as most species are adapted to all but the most severe fire in this ecosystem. Several shrubs were seen sprouting in the pocosin when viewed from the air. Wiregrass, where present, was seen to be emerging on the periphery of the burn area as well as bracken fern and other herbs associated with the savanna and the pocosin ecotone. The wildfire-affected area is not known to harbor any federally-listed species. One active red-cockaded woodpecker (RCW) (*Picoides borealis*), a federally endangered species, colony is present nearby a wildfire affected area. Several Region 8 sensitive and NC rare plant species also have been located nearby. Suitable habitat for these species should be improved as a result of the wildfire where a moderate intensity fire occurred across the sparsely distributed pine savannas.

B. Emergency Treatment Objectives: None at this time.

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

Land N/A % Channel N/A % Roads/Trails N/A % Protection/Safety N/A %

D. Probability of Treatment Success: No treatments are proposed for BAER funding.

E. Cost of No-Action (Including Loss): \$0

F. Cost of Selected Alternative (Including Loss): \$0

G. Skills Represented on Burned-Area Survey Team:

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

Team Leader: Brady Dodd

Email: bdodd@fs.fed.us Phone: (828) 257-4214 FAX: _____

H. Treatment Narrative:

(Describe the emergency treatments, where and how they will be applied, and what they are intended to do. This information helps to determine qualifying treatments for the appropriate funding authorities. For seeding treatments, include species, application rates and species selection rationale.)

Land Treatments: none

Channel Treatments: none

Roads and Trail Treatments: none

Protection/Safety Treatments: none

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.)

BAER Monitoring is not requested.

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

| Line Items | Units | Unit Cost | NFS Lands | | Other \$ | Other Lands | | | | All Total \$ |
|--|-------|-----------|------------|---------|----------|-------------|--------|------------|------------|--------------|
| | | | # of Units | BAER \$ | | # of units | Fed \$ | # of Units | Non Fed \$ | |
| A. Land Treatments | | | | | | | | | | |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Insert new items above this line!</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| Subtotal Land Treatments | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| B. Channel Treatments | | | | | | | | | | |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Insert new items above this line!</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| Subtotal Channel Treat. | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| C. Road and Trails | | | | | | | | | | |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Insert new items above this line!</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| Subtotal Road & Trails | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| D. Protection/Safety | | | | | | | | | | |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| <i>Insert new items above this line!</i> | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| Subtotal Structures | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| E. BAER Evaluation | | | | | | | | | | |
| Team Leader/Hydrologist/Soils | day | 550 | 3 | \$1,650 | \$0 | | | | | |
| Botanist/Ecologist | day | 570 | 3 | \$1,710 | \$0 | | | | | |
| Travel Costs | each | 280 | 3 | \$840 | \$0 | | | | | |
| <i>Insert new items above this line!</i> | | | | | | | \$0 | | \$0 | \$0 |
| Subtotal Evaluation | | | | \$4,200 | \$0 | | \$0 | | \$0 | \$0 |
| F. Monitoring | | | | | | | | | | |
| | | | | \$0 | \$0 | | | | | |
| | | | | \$0 | \$0 | | | | | |
| <i>Insert new items above this line!</i> | | | | | | | \$0 | | \$0 | \$0 |
| Subtotal Monitoring | | | | \$0 | \$0 | | \$0 | | \$0 | \$0 |
| G. Totals | | | | \$4,200 | \$0 | | \$0 | | \$0 | \$0 |
| Previously approved | | | | | | | | | | |
| Total for this request | | | | \$4,200 | | | | | | |

* estimated costs as of 7/13/2012

PART VII - APPROVALS

1. Kristin M. Baird
Forest Supervisor (signature)

8/8/12
Date

2. _____
Regional Forester (signature)

Date