

Date of Report: December,12 2016

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

This 2500-8 report is for six fires on the Nantahala National Forest, in North Carolina. These fires include Boteler, Camp Branch, Dick's Creek, Knob, Maple Springs, and Tellico.

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 Names: Boteler, Camp Branch,
Dick's Creek, Knob, Maple Springs,
Tellico

B. Fire Number:
Boteler – NC-NCF-160247
Camp Branch – NC-NCF-160378
Dick's Creek – NC-NCF-160242
Knob – NC-NCF-160275
Maple Springs – NC-NCF-160295
Tellico – NC-NCF-160280

C. State: North Carolina

D. County: Macon, Clay, Graham, Jackson, Swain

E. Region: South (8)

F. Forest: Nantahala National Forest

G. District: Nantahala, Tusquittee, Cheoah

H. Fire Incident Job Code:
Boteler - P8KSX017 (0811)
Camp Branch – P8KT6217 (0811)
Dick's Creek – P8KSN417 (0811)
Knob – P8KS4V17 (0811)
Maple Springs – P8KS6P17 (0811)
Tellico – P8KS5P17 (0811)

I. Date Fire Started: Most started around late
October/early November

J. Date Fire Contained: Camp Branch – 85%
All others – 100%

K. Suppression Cost: As of Dec 3, 2016;

Boteler - \$12,832,275 Camp Branch - \$1,045,939 Dick's Cr – \$890,726 Knob - \$225,633

Maple Springs – \$6,994,380 Tellico \$5,725,502

L. Fire Suppression Damages Repaired with Suppression Funds

1. Fireline waterbarred (miles): see table below
2. Fireline seeded (miles): see table below
3. Other (identify): Safety zones, staging areas and drop points are in the process of being repaired. Road work (i.e. blading, cleaning culverts and adding drainage) was installed where suppression activities warranted so, which included approximately 95% of the roads within the fires.

Fire Name	Miles of fire line (hand and dozer) to be repaired and seeded. A portion of the line repair has been completed.
Boteler	49.6
Camp Branch	24.5
Dick's Creek	10.6
Knob	9.6
Maple Springs	29.4
Tellico	61.4

M. Watersheds:

HUC 6 subwatersheds affected by the Nantahala NF fires. Percent of watersheds burned are reported in parentheses.

Fire and Subwatershed Names	Total Subwatershed Acres (Percent Burned)	Soil Burn Severity			
		Unburned or Very Low Acres	Low Acres	Moderate Acres	High Acres
Boteler Fire (9,022 Acres)		4,099 (45%)	4,833 (54%)	90 (<1%)	0
• Buck Creek	971 (11%)	713	258	<1	0
• Nantahala Lake-Nantahala River	52 (1%)	52	<1	0	0
• Shooting Cr	5,082 (56%)	1,746	3,279	56	0
• Tusquitee Cr	2,917 (32%)	1,588	1,296	33	0
Camp Branch Fire (3,419 Acres)		1,235 (36%)	2,050 (60%)	111 (3%)	23 (<1%)
• Burningtown Cr	955 (28%)	466	484	5	<1
• Lower Cartoogechaye Cr	2,218 (65%)	672	1,418	106	23
• Nantahala Lake-Nantahala River	47 (1%)	10	37	0	0
• Whiteoak Cr-Nantahala River	198 (6%)	87	111	0	<1
Dick's Cr Fire (729 Acres)		402 (55%)	325 (44%)	0	2 (1%)
• Conley Cr-Tuckasegee River	676 (93%)	379	295	0	2
• Scott Cr-Tuckasegee River	53 (7%)	23	30	0	0
Knob Fire (1,128 Acres)		219 (19%)	909 (80%)	1 (<1%)	0
• Headwaters Nantahala River	498 (44%)	55	443	<1	0
• Upper Cartoogechaye Cr	630 (56%)	164	466	<1	0
Maple Springs Fire (7,777 Acres)		3,420 (44%)	4,323 (55%)	34 (<1%)	0
• Santeetlah Cr	3,764 (48%)	804	2,928	32	0

• Slick Rock Cr	0 (<1%)	<1	0	0	0
• Yellow Cr-Cheoah River	4,013 (52%)	2,616	1,395	2	0
Tellico Fire (13,877 Acres)		4,352 (31%)	9,235 (66%)	280 (2%)	11 (<1%)
• Big Cr-Nantahala River	5,078 (37%)	2,457	2,518	101	2
• Brush Cr-Little Tennessee River	3,234 (23%)	728	2,439	58	8
• Fontana Lake-Nantahala River	2,799 (20%)	959	1,779	60	<1
• Tellico Cr-Little Tennessee River	1,416 (10%)	81	1,296	38	0
• Whiteoak Cr-Nantahala River	1,350 (10%)	127	1,201	22	0
Grand Total	35,953	13,727 (38%)	21,674 (60%)	516 (1%)	36 (<1%)

N. Total Acres Burned: 35,953 total acres

OWNERSHIP BY FIRE				
FIRE NAME	FOREST SERVICE	STATE	NON-FS	GRAND TOTAL
Boteler	8,457	0	565	9,022
Camp Branch	3,196	0	223	3,419
Dicks Creek	402	0	327	729
Knob	1,119	0	9	1,128
Maple Springs	7,699	0	78	7,777
Tellico	9,745	288	3,844	13,877
GRAND TOTAL	30,616	288	5,340	35,953

O. Vegetation Types: The vegetation types were determined based on current and previous field reconnaissance, previously mapped rare plant communities, mapped forest vegetation types, modeled and plotted plant communities, and aerial imagery. Within the burn perimeters the elevation range varies from around 1300 feet west of the Cheoah River to 5350 feet on Wayah Bald. While the two smallest wildfires, Dick's Creek and Knob, differed in elevation from their lowest to highest point from 1200 to 1300 feet, the other four wildfires all had at least a 2800 foot elevation gain. Maple Springs differed in elevation by 3900 feet. Recent timber management does not dominate the wildfire area. Stands harvested within the last 20 years are present within all the wildfires except Dicks Creek. They represent less than 3% of the wildfires. Greater than 60% of the burn areas are 80 years of age or older. The most recent activity was in 2012 within a east-facing rich cove forest in the Knob wildfire.

The dominate plant communities within all the wildfires were rich cove and mesic oak forests, consisting of 30% and 24%, respectively (see table below). The former type is primarily dominated by tulip poplar and has the greatest diversity of herbaceous understory, in particular within the Nantahala Gorge where parent geology provides a higher nutrient and base content. Red oak, white oak, and a diversity of hickories dominate mesic oak forest. Acidic cove forest represented 13% of the wildfire perimeter habitats. Like rich cove forest it is often dominated by tulip poplar but covered in the midstory and shrub layer with a dense evergreen *Rhododendron maximum* component and a sparse herb layer. Eastern hemlock dominated coves is scattered within the acidic cove type, although many of the hemlocks have succumbed to the exotic pest hemlock wooly adelgid. All three of these mesic types primarily experienced low fire severity or were unburned. An exception is part of the area near Tellico Gap in the Tellico wildfire.

Vegetation for six wildfires on the Nantahala National Forest.

Wildfire	Maple Springs	Tellico	Dicks	Knob	Camp Branch	Boteler
Elevation Range (feet)	1300-5200	1800-4630	2400-3600	3200-4500	2600-5350	2000-5010
Shortleaf Pine	11	16	0	0	0	1
Acidic Cove	1255	1519	42	31	173	753
Rich Cove	2183	3057	30	452	529	2650
Mesic Oak	1185	1484	330	438	1316	2393
Dry-Mesic Oak	1222	753	0	0	99	1042
Dry Oak	327	943	0	10	312	660
Pine-Oak/Heath	587	1303	0	0	84	309
Northern Hardwood	327	300	0	25	218	133
High Elevation Red Oak	393	270	0	12	449	497
Heath Bald	2	4	0	0	7	15
Rocky Summit	1	3	0	0	0	0
Montane Cliffs	4	0	0	0	10	4
Montane Seeps	2	1	0	0	tr	tr
Totals	7499	9653	402	968	3197	8457

Dry-mesic oak forest occurs across about 11% of the burned area. It is dominated by chestnut oak, red oak, white pine, and various hardwoods. Portions of this type are currently dominated by white pine, thought to be a result of prior land use management and the lack of recent prescribed burns or wildfires. Numerous heath shrubs occur in the understory, in particular huckleberry. Primarily a low intensity burn occurred across this habitat resulting in patchy consumption of the leaf litter and partial scorching of tree bases and shrub leaves. In a few locations on the Maple Springs wildfire, the burn scorched the white pine needles to the top of their crown. These individuals may not recover.

Dry oak, chesnut oak and scarlet oak primarily, and pine-oak/heath forests occur on the steepest south and west-facing ridge and slopes. The presence of either pitch pine, table mountain pine, shortleaf pine, or Virginia pine indicates fire-adpated plant communities. About 10% of the wildfire burn perimeter consists of these two dry types. Both types have a scattered to dense mountain laurel shrub layer. The fire intensity within this area was low to moderate. Mountain laurel was completely top-killed in scattered patches while only singed within other burn areas. A portion of these areas, about 1.5% in total, are dominated by white pine, having been planted for their timber value.

Within the lowest elevation of several of the wildfires, a minor component, less than 1%, of shortleaf pine forest occurs. It resembles dry oak and pine-oak/heath forests in structure and diversity. On the highest elevations, above 4000 feet, both northern hardwood and high elevation red oak forests are present. The former type is dominated by yellow birch, sugar maple, and yellow buckeye. It represents about 3% of the wildfire areas. Often stunted and wind-swept red oaks dominate high elevation red oak forest. It consists of about 5% of the wildfires. The two high elevation types did not experience high fire activity except for the Wayah Bald area, where high to moderate soil severity occurred within the two types. It is anticipated many of the extreme scorched red oaks along the slopes of Wayah Bald will die as a result of the wildfire.

Scattered occurrences of rare communities occurred in all of the wildfires except for Dicks Creek and Knob. Rock outcrops, including montane acidic cliffs, acidic shale slope woodlands and rocky summits, occurred across less than 0.5% of the landscape. These rare communities, which harbor rare plant and animal species

were minimally affected by the wildfire. Heath balds are densely dominated by shrub members within the ericaceous family. It was typically unaffected by the wildfires except perhaps in the Camp Branch wildfire. Seeps are present from low to high elevations within the wildfires. Given their very moist surroundings, the wildfires had little impact on them.

P. Dominant Soils:

Map Unit	Parent Material	Acres
Sylco-Cataska complex, 50 to 95 percent slopes, very rocky	loamy-skeletal residuum weathered from phyllite and/or slate that is affected by soil creep in the upper solum	3259
Cataska-Sylco complex, 50 to 95 percent slopes	affected by soil creep in the upper solum over residuum weathered from phyllite and/or slate and/or other metasedimentary rock	2034
Ditney-Unicoi-Rock outcrop complex, 50 to 95 percent slopes, very stony	residuum weathered from metaconglomerate and/or meta graywacke and/or meta sandstone that is affected by soil creep in the upper solum	1921
Edneyville-Chestnut complex, high precipitation, 30 to 50 percent slopes, stony	residuum weathered from granite and gneiss that is affected by soil creep in the upper solum	1309
Junaluska-Tsali complex, 50 to 95 percent slopes	residuum weathered from phyllite and/or slate that is affected by soil creep in the upper solum	1208
Spivey-Santeetlah complex, 30 to 50 percent slopes, very bouldery	skeletal colluvium derived from phyllite and/or slate and/or meta sandstone and/or meta graywacke	1105
Edneyville-Chestnut complex, high precipitation, 50 to 95 percent slopes, stony	residuum weathered from granite and gneiss that is affected by soil creep in the upper solum	1097
Chestnut-Cleveland-Rock outcrop complex, windswept, 50 to 95 percent slopes, stony	residuum weathered from granite and gneiss that is affected by soil creep in the upper solum	1044
Cheoah-Jeffrey complex, 50 to 95 percent slopes, very rocky	residuum weathered from metaconglomerate and/or meta graywacke and/or meta sandstone that is affected by soil creep in the upper solum	961
Soco-Stecoah complex, 50 to 95 percent slopes	coarse-loamy residuum weathered from phyllite and/or meta sandstone that is affected by soil creep in the upper solum	909

Q. Geologic Description: In the Blue Ridge Province, erosion of uplifted mountains of resistant metamorphic and igneous rocks has produced a rugged landscape. The overall southwest to northeast trend of the landscape results from a similar pattern in the underlying rocks and structures imparted during Paleozoic mountain building events. Streams and rivers cut down through the mountains along less resistant rock types, and along faults and fracture zones. A prime example is the long, linear topography along the Brevard fault zone. Many streams that flow northwest or southeast follow trends of post-Paleozoic fracture zones in the bedrock that favor preferential down cutting and erosion by water.” (North Carolina Mountain Resources Commission, 2012).

R. Miles of Stream Channels by Order or Class: See Table Below

Stream Miles by Fire			
Fire Name	Intermittent	Perennial	Grand Total
Boteler	21	3	24
Camp Branch	0	12	12
Dick's Creek	0	4	4
Knob	0	3	3
Maple Springs	0	52	52
Tellico	0	77	77
Grand Total	21	151	172

S. Transportation System

Trails: See Table Below

Fire Name	Miles
Boteler	5
Camp Branch	9
Dick's Creek	0
Knob	6
Maple Springs	25
Tellico	23
Grand Total	69

Roads: See Table Below

Roads by Maintenance Level							
Maintenance Level	Boteler	Camp Branch	Dicks Creek	Knob	Maple Springs	Tellico	Grand Total
1 – Basic Custodial Care (Closed)	5.1	8.6	0.0	2.3	6.6	0.2	22.7
2 – High Clearance Vehicles	6.4	2.8	0.0	3.8	2.8	1.8	17.7
3 – Suitable for Passenger Cars	7.7	0.2	0.0	0	1.8	3.2	12.9
4 – Moderate Degree of User Comfort	0.0	2.6	0.0	0.0	0.0	0.0	2.6
5 – High Degree of User Comfort	0.0	0.0	0.0	0.0	0.4	0.0	0.4
Major State and County Roads	0.2	2.3	0.6	2.1	8.3	22.7	36.2
Grand Total	19.4	16.5	0.6	8.2	19.8	27.9	92.4

PART III - WATERSHED CONDITION

A. Burn Severity (acres): TOTAL: 35,953

(unburned/very low); 13,727 (38%) (low); 21,674 (60%) (moderate); 516 (1%) (high) 36 (<1%)

B. Water-Repellent Soil (acres): 45% of the fire area. Loss of vegetation and increased soil hydrophobicity will likely cause an increase in peak flows over the short-term. However, overland flow and mobilization of sediment is expected to be minimal due to ample surface cover of leaf litter and residual organic layer. Peak flow responses are expected to be short lived as vegetation and soil cover becomes reestablished.

C. Soil Erosion Hazard Rating (acres): Soil erosion modelled with ERMiT.

Pour Point Watersheds in Assessment	2 year event		10 year event	
	Unburned tons/acre	Burned tons/acre	Unburned tons/acre	Burned tons/acre
Boteler- Jackie Cove	0.0	0.0	2.2	6.3
Boteler- Pounding Mill Creek at HWY	0.0	0.1	1.9	6.9
Boteler- Vineyard Creek	0.0	0.0	2.1	6.8
Boteler- Vineyard Creek at HWY	0.0	0.0	1.7	5.6
Camp Branch- Camp Branch at HWY	0.0	0.1	2.4	8.5
Camp Branch- LBJ Job Corps	0.0	0.0	0.8	2.9
CampBranch-Bear Cove	0.0	0.0	3.1	9.8
Dicks Creek- Backside	0.0	0.0	0.7	2.0
Dicks Creek- Frontside	0.0	0.0	1.6	4.2
Knob- Poplar Cove Creek	0.0	0.0	0.8	2.4
MapleSprings- Horse Cove CG	0.0	0.1	2.7	9.7
MapleSprings- JoyceKilmerParking	0.0	0.1	1.2	4.3
Noonday Globe	0.0	0.0	1.2	3.4
Tellico- Silvermine Drainage	0.0	0.0	0.8	2.5
Tellico- Structures	0.0	0.0	1.2	4.0
Tellico-Rattlesnake Creek	0.0	0.1	2.7	8.0

D. Erosion Potential: See Table above. Pre-fire background erosion rates are mostly undetectable. A 10- year event has a 10% chance of occurring in any given year. Erosional processes are expected to be short-lived as vegetation and soil cover becomes established. One ton per acre is approximately the thickness of a standard sheet of paper.

E. Sediment Potential: Sediment potential is expected to be 5% of erosion potential due to ample surface cover due to leaf litter and residual organic layer.

F. Debris Flow Potential: The USGS Post-Fire Debris Flow Hazard Model was used to assess the stream segment probability of debris flow at values at risk. These ratings took into consideration both the likelihood of occurrence and volume of mobilized sediment. For the most part, the debris flow probability for a 10 year 15 minute intensity (28 mm/hr) event is low (0-20%) for all Values at Risk except on the Boteler Fire where Jackie Cove and Pounding Mill Creek are Moderate (20-40%). The drainages in these areas are deep enough where structures do not appear threatened. Although the

south side of Dick's Creek is mapped as Low probability, LiDAR indicates deep debris flow scour originating at a High Soil Burn Severity slope. Much of the fire area is at a pre-fire risk of landslides. Because there is little tree mortality, any elevated risk is likely to be short-lived as understory vegetation and ground-cover rapidly recovers.

G.

PART IV - HYDROLOGIC DESIGN FACTORS

A	Estimated Vegetative Recovery Period	2 Years
B	Design Chance of Success	90%
C	Equivalent Design Recurrence Interval	2 years
D	Design Storm Duration	24 hours
E	Design Storm Magnitude	4.65 in
F	Design Flow	110 cfs/mi ²
G	Estimated Reduction in Infiltration	34%
H	Adjusted Design Flow	148 cfs/mi ²

Summary of Watershed/Erosion Response

Loss of vegetation and increased soil hydrophobicity will likely cause an increase in peak flows over the short-term. However, overland flow and mobilization of sediment is expected to be minimal due to ample surface cover of leaf litter and residual organic layer. Peak flow responses are expected to be short lived as vegetation and soil cover becomes reestablished.

Watershed and erosion response are strongly dependent on storm characteristics, infiltration and soil cover. Post-fire peak-flow modeling suggest an increase between 22 to 55 percent for potential values at risk for the 2 year storm. Erosion modeling indicated that erosion rates are very low even for a 10-year storm. During the BAER assessment the fire areas received over 4 inches of rain with no observed increases in turbidity and rills had not formed. Short distance movement of soil was observed without connectivity to streams.

Mass Wasting Response: Heavy rainfall events are the most common trigger for landslides in western North Carolina, especially rapidly moving debris flows and debris slides. Seven and probably eight major storm events that triggered numerous landslides across western North Carolina have occurred since 1916. These regional storm events occurred in 1916 (3), 1940 (2), 1977 (1), and 2004 (2). Reports of landslides triggered by the early July 1916 storm have not been located; however, that storm did increase moisture on slopes prior to the July 15-16, 1916 storm. Other rainfall events have triggered landslides in more localized areas. Localized landslides are expected in areas where there is around 5 inches of rainfall within a 24-hour period. Less rainfall, on the order of 3 inches within 24-hours, may be required to trigger landslides slopes where human activity has had a destabilizing effect. More widespread landslides are expected in areas where there is around 10 inches or more of rainfall within a 24-hour period. Storms within periods of above-normal rainfall is a weather scenario prone to induce landslides, as was the case when record rainfall amounts from January through July 2013 triggered over 300 landslides in western North Carolina.

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

Values at Risk:

The table below is Exhibit 02 from FSM 2523.1. This matrix was used to evaluate the risk level for each value identified during this BAER assessment. See FSM 2523.1 for additional information.

Probability of Damage or Loss	Magnitude of Consequences		
	Major	Moderate	Minor
	RISK		
Very Likely	Very High	Very High	Low
Likely	Very High	High	Low
Possible	High	Intermediate	Low
Unlikely	Intermediate	Low	Very Low

The table below is a summary of the values (some of which were not identified as 'critical' per Exhibit 01 from FSM 2523.1) within and along the Nantahala National Forest Fires, as well as, the threats to those values, the probability of damage or loss, magnitude of consequences and the resulting level of risk. Red shaded cells are those values that rated out as "very high" or "high" risk. Yellow shaded cells rated out "intermediate" risk and white cells rated out "low" or "very low". **This assessment was based on those risks associated with the 2 year design storm (50% chance of occurrence in any given year) over the burned areas. This risk assessment is not applicable to other larger storm events.**

Nantahala NF BAER - Forest Service Values At Risk Tracking Table

High / Very High Risk	
Intermediate Risk	
Low / Very Low Risk	

Value (Life/ Property/ Resources)	Value at Risk	Threat to Value at Risk	Probability of Damage or Loss	Magnitude of Consequence	Risk	Treatment	
Boteler Fire							
Property	Roads within and immediately adjacent to the fire on NFS lands	Increased post-fire flood magnitude and hydrologic response resulting in loss or damage to roads	Possible	Moderate	Intermediate	No Treatment	Roads
Property	Nelson Ridge Road (351) and Vineyard Road (6226)	Increased post-fire flood magnitude and hydrologic response resulting in loss or damage to roads	Likely	Moderate	High	Storm Patrol (B-R1)	Roads increased short
Human Life and Safety / Property	Human life/safety and properties adjacent to and downstream of the fire area	Increased post-fire potential for mass wasting and hydrologic response resulting in loss or damage to life and property	Unlikely	Major	Intermediate	Interagency Coordination. (B-P1)	There is a need to coordinate
Human Life and Safety	Human life and safety along Trail TR77 (Chunky Gal Trail)	Hazard trees adjacent to trail pose threat to life and property	Unlikely	Major	Intermediate	Hazard Signs (B-P2)	There is a need to coordinate within
Natural Resources	Federally listed Threatened Northern Long-Eared Bat (<i>Myotis septentrionalis</i>)	Degradation to populations and habitats from post-fire conditions	Possible	Moderate	Intermediate	No Treatment	The
Natural Resources	Soil Productivity and Hydrologic Function	Loss of soils from post-fire erosion with flashier hydrologic response	Possible	Moderate	Intermediate	No Treatment	Loss in productivity and sediment litter

Value (Life/ Property/ Resources)	Value at Risk	Threat to Value at Risk	Probability of Damage or Loss	Magnitude of Consequence	Risk	Treatment	
Natural Resources	Fishprong and Chestnut Branches and Barnards Creek drainages/FSR 350 road system native plant communities where invasive plants are absent, previously controlled or documented in minor amounts.	Spread of invasive plants into special native habitats. Known mesic species posing threat in area are Japanese Spiraea (<i>Spiraea japonica</i>), Oriental bittersweet (<i>Celastrus orbiculatus</i>), kudzu (<i>Pueraria lobata</i>) and multiflora rose (<i>Rosa multiflora</i>)	Unlikely	Moderate	Low	No Treatment	Conduct FSR risk comm
Natural Resources	Native plant communities where invasive plants are documented in minor amounts on xeric slopes of Arch Ridge, Vineyard Ridge and Big Pine;	Spread of invasive plants into upland and riparian native plant communities. Known upland species posing threat include, but not limited to, princess tree (<i>Paulownia tomentosa</i>), Chinese Silvergrass (<i>Miscanthus sinensis</i>), and tree-of-heaven (<i>Ailanthus altissima</i>).	Likely	Moderate	High	Early Detection Rapid Response Treatment (B-L1)	Coordinate infes
Camp Branch Fire							
Human Life and Safety / Property	Wayah Road 1310	Increased post-fire potential for mass wasting and hydrologic response resulting in loss or damage to life and property	Possible	Moderate	Intermediate	Interagency Coordination. (CB-P1)	This and

Value (Life/ Property/ Resources)	Value at Risk	Threat to Value at Risk	Probability of Damage or Loss	Magnitude of Consequence	Risk	Treatment	
Cultural Resources	Cultural Resource Sites - Classified information-	Damage or loss of archaeological resource from erosion or unauthorized removal	Unlikely	Major to Moderate	Intermediate to Low	No Treatment	For the little the
Cultural Resources	Wayah Bald Tower	Post Fire degradation	Unlikely	Moderate	Low	No Treatment	Fire c
Property	Roads within and immediately adjacent to the fire on NFS lands	Increased flood magnitude and hydrologic response resulting in loss or damage to roads	Possible	Moderate	Intermediate	No Treatment	R prop
Property	Locust Tree Road 316, Crawford Cove Rd 7165, Wayah Bald Rd 69.	Increased post-fire flood magnitude and hydrologic response resulting in loss or damage to roads	Likely	Moderate	High	Storm Patrol (CB-R1)	Wayah to V cross hydro
Property	Wilson Lick Historic Site	Post Fire degradation	Unlikely	Major	Intermediate	No Treatment	
Natural Resources	Left Prong Ray Branch and Little Laurel Creek drainages/ Ray Branch Road (FSR 7279) and Shingletree Branch Road (FSR 713) native plant communities	Spread of invasive plants into native and sensitive plant habitats. Known species posing threat include, but not limited to, Oriental bittersweet	Unlikely	Moderate	Low	No Treatment	In

Value (Life/ Property/ Resources)	Value at Risk	Threat to Value at Risk	Probability of Damage or Loss	Magnitude of Consequence	Risk	Treatment	
Dick's Creek Fire							
Human Life and Safety / Property	Human life/safety and properties adjacent to and downstream of the fire area	Increased post-fire potential for mass wasting and hydrologic response resulting in loss or damage to life and property	Unlikely	Major	Intermediate	Interagency Coordination. (DC-P1)	The fire.
Natural Resources	Soil Productivity and Hydrologic Function	Loss of soils from post-fire erosion with flashier hydrologic response	Possible	Moderate	Intermediate	No Treatment	Loss in p sedi litter
Cultural Resources	Cultural Resource Sites - Classified information-	Damage or loss of archaeological resource from erosion or unauthorized removal	Unlikely	Major to Moderate	Intermediate to Low	No Treatment	For th little t
Knob Fire							
Human Life and Safety / Property	Human life/safety and properties adjacent to and downstream of the fire area	Increased post-fire potential for mass wasting and hydrologic response resulting in loss or damage to life and property	Unlikely	Major	Intermediate	Interagency Coordination (K-P1)	Ther It asse
Human Life and Safety	Human Life and Safety along the Appalachian Trail (AT)	Hazard trees, debris, rolling rocks pose threat to human life on roads and trails	Possible	Major	High	Hazard Signs (K-P2)	Appr along Sigr
		Loss of soils from post fire					Loss i

Value (Life/ Property/ Resources)	Value at Risk	Threat to Value at Risk	Probability of Damage or Loss	Magnitude of Consequence	Risk	Treatment	
Property	Poplar Cove 7281 Road	Increased potential for post-fire mass wasting, flood magnitude and hydrologic response resulting in loss or damage to roads	Likely	Moderate	High	Storm Patrol (K-R1)	S hydro

Maple Springs							
Life/Safety and Property	25 miles over 6 different trails. TR46 Deep Creek, TR46a Deep Cr connector, TR52 Belding, TR 53 Haoe Lead, TR53A Jenkins Meadow, TR55 Naked Ground	Increased post-fire potential for hydrologic response and mass wasting resulting in loss or damage to human life and property. Hazard trees, debris, rolling rocks pose threat to human life on trails	Possible	Moderate	Intermediate	Hazard Signs (MS-P2)	
Life/Safety and Property	Santeetla road 1127	Increased post-fire potential for hydrologic response and mass wasting resulting in loss or damage to property. Hazard trees, debris, rolling rocks pose threat to human life on trails	Possible	Moderate	Intermediate	Interagency Coordination (MS-P1) Hazard Signs (MS-P2)	This coc
Life/Safety and Property	Roads off NFS lands (1134 and 1129)	Increased post-fire potential for hydrologic response and mass wasting resulting in loss or damage to property. Hazard trees, debris, rolling rocks pose threat to human life on trails	Possible	Moderate	Intermediate	Interagency Coordination (MS-P1)	It
	Life and Safety at the	Boardwalk and overlook					This

Value (Life/ Property/ Resources)	Value at Risk	Threat to Value at Risk	Probability of Damage or Loss	Magnitude of Consequence	Risk	Treatment	
Life and Safety / Property	Deep Creek Hunt Camp	Increased post-fire potential for hydrologic response and mass wasting resulting in loss or damage to life and safety / property	Possible	Moderate	Intermediate	Hazard Signs (MS-P2)	Ident
Natural Resources	Federally listed Threatened Virginia Spiraea plant (<i>Spiraea virginiana</i>)	Spread of invasive plants into native riparian and adjacent upland habitats that were/are occupied by Virginia Spiraea.	Unlikely	Minor	Very Low	No Treatment	Popu Pre poten
Natural Resources	Federally listed Endangered Appalachian Elktoe mussel (<i>Alasmidonta raveneliana</i>)	Degradation to populations and habitats from post-fire conditions, primarily sediment input.	Possible	Minor	Low	No Treatment	Pop Most lov
Natural Resources	Federally listed Threatened Spotfin Chub fish (<i>Ermonax monachus</i>)	Degradation to populations and habitats from post-fire conditions, primarily sediment input.	Possible	Minor	Low	No Treatment	Pop Th Basin
Natural	Avey and Atooga Creek drainages / Joyce Kilmer Road (SR 1134) and Maple Spring Road (SR 1159) native plant	Spread of invasive plants into native habitats. Known mesic species posing threat in area are Chinese yam (<i>Diosocorea polystachya</i>),	Unlikely	Moderate	Low	No Treatment	Con stat

Value (Life/ Property/ Resources)	Value at Risk	Threat to Value at Risk	Probability of Damage or Loss	Magnitude of Consequence	Risk	Treatment	
Property	Roads within and adjacent to the fire on NFS lands	Increased flood magnitude and hydrologic response resulting in loss or damage to roads	Possible	Moderate	Intermediate	No Treatment	Roads
Property	Roads within and adjacent to the fire on NFS lands	Increased flood magnitude and hydrologic response resulting in loss or damage to roads	Possible	Moderate	Intermediate	No Treatment	2413, however
Tellico Fire							
Life and Safety / Property	Downstream communities and State Hwy 19, 1365, 1409, 1415	Increased post-fire potential for hydrologic response and mass wasting resulting in loss or damage to life and safety / property. Hazard trees, debris, rolling rocks pose threat to human life on trails	Possible	Moderate	Intermediate	Interagency Coordination (T-P1)	It asse
Life and Safety	Winding Stairs Road (FSR 422) in Nantahala Gorge	Increased post-fire potential for hydrologic response and mass wasting resulting in loss or damage to life and safety. Hazard trees, debris, rolling rocks pose threat to human life.	Possible	Major	High	Hazard Signs (T-P2)	Has pri
Property	Roads within and adjacent to the fire on NFS lands	Increased flood magnitude and hydrologic response resulting in loss or damage	Possible	Moderate	Intermediate	No Treatment	Roads

Value (Life/ Property/ Resources)	Value at Risk	Threat to Value at Risk	Probability of Damage or Loss	Magnitude of Consequence	Risk	Treatment	
Life and Safety / Property	Wesser Creek Trail	Increased post-fire potential for hydrologic response and mass wasting resulting in loss or damage to life and safety / property. Hazard trees, debris, rolling rocks pose threat to human life on trails	Possible	Moderate	Intermediate	Hazard Signs (T-P2)	3 m
Natural Resources	Soil Productivity and Hydrologic Function	Loss of soils from post-fire erosion with flashier hydrologic response	Possible	Moderate	Intermediate	No Treatment	Loss in p sedi litter
Cultural Resources	Cultural Resource Sites - Classified information-	Damage or loss of archaeological resource from erosion or unauthorized removal	Unlikely	Major to Moderate	Intermediate to Low	No Treatment	For th little t
Natural Resources	Federally listed Threatened Spotfin Chub fish (<i>Ermonax monachus</i>)	Degradation to populations and habitats from post-fire conditions, primarily sediment input	Possible	Minor	Low	No Treatment	Popu Riv Riv rema inp
Natural Resources	Federally listed Endangered Appalachian Elktoe mussel (<i>Alasmidonta raveneliana</i>)	Degradation to populations and habitats from post-fire conditions, primarily sediment input	Possible	Minor	Low	No Treatment	Popu unk
Natural Resources	Federally listed Endangered Littlewing Pearly Mussel (<i>Pegius</i>	Degradation to populations and habitats from post-fire conditions, primarily	Possible	Minor	Low	No Treatment	Popu w

Value (Life/ Property/ Resources)	Value at Risk	Threat to Value at Risk	Probability of Damage or Loss	Magnitude of Consequence	Risk	Treatment	
Life and Safety / Property	Queens Creek Lake and Dam	Increased post-fire potential for hydrologic response and mass wasting resulting in loss or damage to life and safety / property (i.e dam).	Unlikely	Moderate	Low	No Treatment	Ups
Resources	Nantahala River Gorge habitat within north facing slope with endemic federally listed noonday snail (<i>Patera clarki Nantahala</i>) occupied habitat.	Loss or degradation of habitat for entire range of snail	Very Likely	Moderate	Very High	Interagency Coordination (T-P1)	The the N p of t con h trea
Resources	Tellico Gap native plant communities and scenic Appalachian Trail where invasive plants are absent or documented in minor amounts.	Spread of invasive plants into native and riparian habitats. Known species with documented control is garlic mustard (<i>Aillaria petiolata</i>)	Likely	Moderate	High	Early Detection Rapid Response Treatment (T-L1)	Con cont nati

B. Emergency Treatment Objectives:

The primary objective of this Burned Area Emergency Response Report is to recommend prompt actions deemed reasonable and necessary to effectively protect, reduce or minimize significant threats to human life and property and prevent unacceptable degradation to natural and cultural resources. The application of these BAER treatments are expected to minimize on-site and downstream damages to the identified values at risk previously mentioned. The emergency treatments being recommended by the BAER Team are specifically designed to achieve the following results.

Proposed Land Treatments

The objective of the land treatments are to:

1. Promote and protect native and naturalized vegetative recovery by reducing the spread of noxious weeds (**Treatments B-L1, CB-L1, T-L1**).

Proposed Road and Trail Treatments

The objective of the road and trail treatments are to:

1. Protect road investments from becoming clogged, impassible and damaged due to post-fire flooding and debris (**B-R1, CB-R1, K-R1, T-R1**).

Proposed Protection/Safety Treatments:

The objective of the protection/safety treatments are to:

1. Protect human life and safety by raising awareness through posting hazard warning signs at recreation sites, trailheads, and when entering the burned area. (**B-P2, CB-P2, K-P2, MS-P2, T-P2**)
2. Coordinate with other entities and partners to ensure risks are communicated (**B-P1, CB-P1, DC-P1, K-P1, MS-P1, T-P1**)
3. Ensure public safety through administrative closure. (**MS-P2**)

Proposed Channel Treatments

There are no proposed channel treatments

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

Land 80 % Channel NA % Roads/Trails 75 % Protection/Safety 75 %

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	70	80	90
Channel	NA	NA	NA
Roads/Trails	90	90	90
Protection/Safety	85	90	95

E. Cost of No-Action (Including Loss): Critical values identified in Section A needing treatment would be damaged or lost. Cost of the no action is estimated to be \$645,000.

F. Cost of Selected Alternative (Including Loss): Total cost of the action alternative (including loss) is \$106,000

G. Skills Represented on Burned-Area Survey Team:

Team Leader - Rob Tanner – Asst. Forest Hydrologist/BAER Coordinator, Deschutes and Ochoco NF
Asst. Team Leader – Kyle Wright - Zone Hydrologist, Deschutes NF

Email: rtanner@fs.fed.us **Phone:** 541-383-5566 / 503-812-3221 (c)
kylewright@fs.fed.us 559-359-2261 / 458-292-6027 (c)

Short Team

[X] Hydrology – Hilda Kwan [X] GIS – Dorothy Thomas
[X] Soils – Eric Nicita [X] Botany/Invasives – Gary Kauffman

Contributing Local Resources

[X] Fisheries – Jason Farmer	[X] Wildlife - Johnny Wills
[X] Research (Coweeta)	[X] Engineering – Tim Southard
[X] Recreation – Brian Browning	[X] Archaeology – Andrew Triplett
[X] Fire Mgmt – Greg Brooks	[X] Public Affairs Officer – Cathy Dowd
[X] Forest BAER Coordinator – Brady Dodd	[X] Geology – Tom Collins

H. Treatment Narrative:

Land Treatments:

L1 - Invasive Weed Detection and Treatment:

Several non-native invasive plant species are located within the perimeter of some of the six wildfires assessed in this report. Previous wildfires on xeric sites have been invaded by princess tree (*Paulownia tomentosa*) and Chinese silvergrass (*Miscanthus sinensis*) following the reduction in the duff layer and removal or partial removal of the overstory layer. Tree-of-heaven (*Ailanthus altissima*), a rhizomatous species that spreads if burned, may also be in the wildfire area. In mesic sites the removal of leaf litter have resulted in the spread of oriental bittersweet (*Celastrus orbiculatus*), Japanese Spiraea (*Spiraea japonica*), privet (*Ligustrum sinense* and *L. japonica*), and multiflora rose (*Rosa multiflora*).

The burned areas, in particular those with duff consumption, the moderate severity burn sites, could provide invasion from wind-dispersed seed or from buried seed or re-sprouting stems, if a few individuals are present. If these invasive species increased post burn, the result would diminish the level of plant species diversity and the integrity and resilience of the natural community. Several of the wildfires have some areas of moderate soil severity and adjacent or nearby infestations that will result in a greater risk of invasion. The proposed treatments for early detection and rapid response are individually outlined below. **Total treatment and survey request is \$41,450.**

Tellico Fire (T-L1)

A known infestation of garlic mustard (*Alliaria petiolata*) occurs on the periphery of the Tellico fire south of Tellico Gap. Several herbicide treatments have been applied during the last five years with an overall reduction in the infestation. A contract across 53 acres has been let for a treatment in late winter/early spring of 2017.

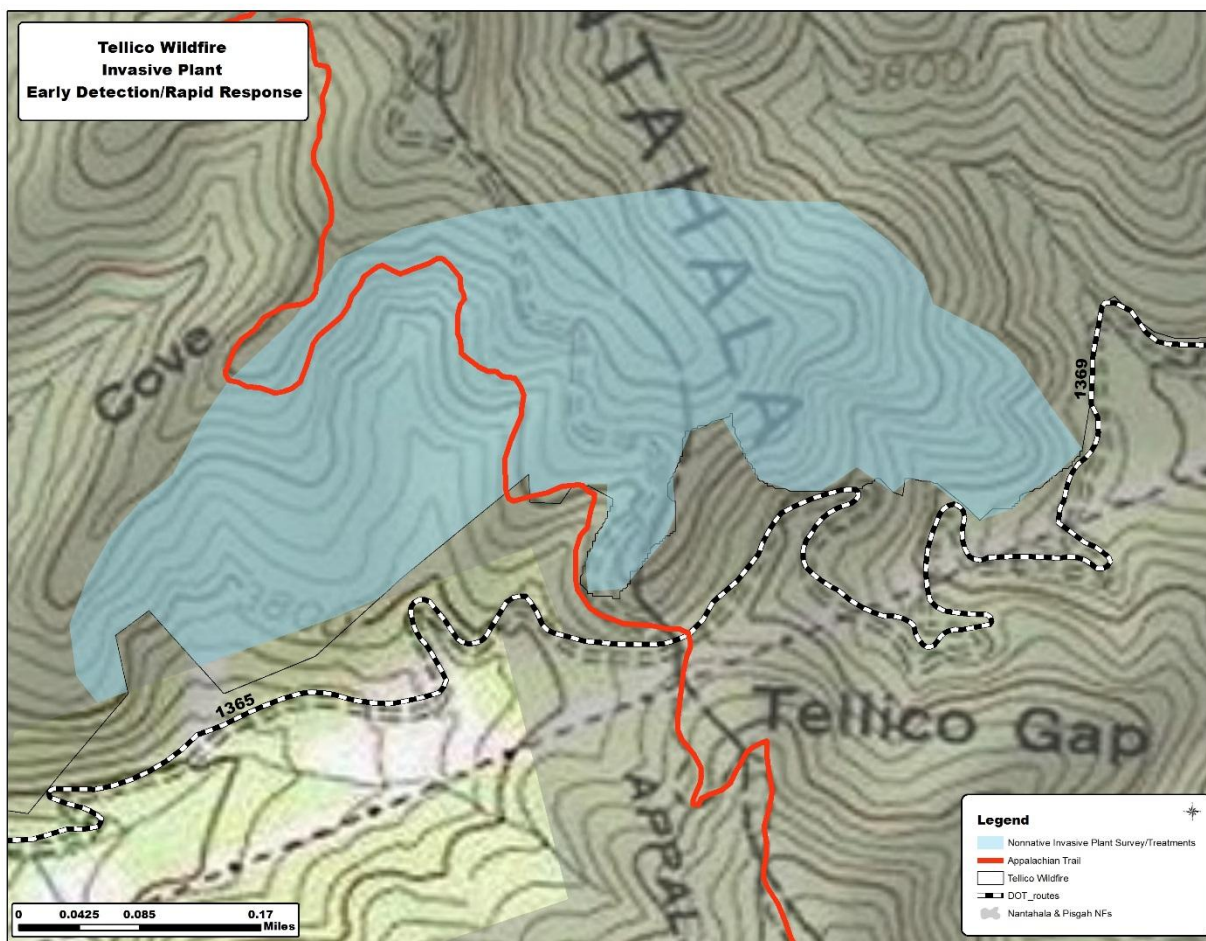
Garlic mustard is a biennial species with significant seed production which can rapidly establish seedlings. Seeds can remain viable in the soil up to 5-6 years. It is important to ensure seeds do not germinate in any exposed mineral soil or reduced leaf litter.

Survey and potential treatments will focus on 0.5 mile of the Appalachian trail and the rich cove and mesic oak forest surrounding it as well as the rich cove further east of the gap where it is adjacent to the known garlic

mustard infestation. A total of 81 USFS acres will be surveyed and treated if garlic mustard or any other non-native invasive plant species is located. Total treatment and survey request for Tellico is \$9,500.

Treatment	Units	Unit Cost	# of Units	Total Cost
Invasive Plant Surveys/detection	acres	\$31.25	80	\$2,500
Invasive Plant Treatments	acres	\$120	40	\$4,800
Herbicide	gallons	\$100	2	\$200
COR contract development/review	acres	\$25	80	\$2,000

Nonnative plant early detection and rapid response for the Tellico Wildfire.



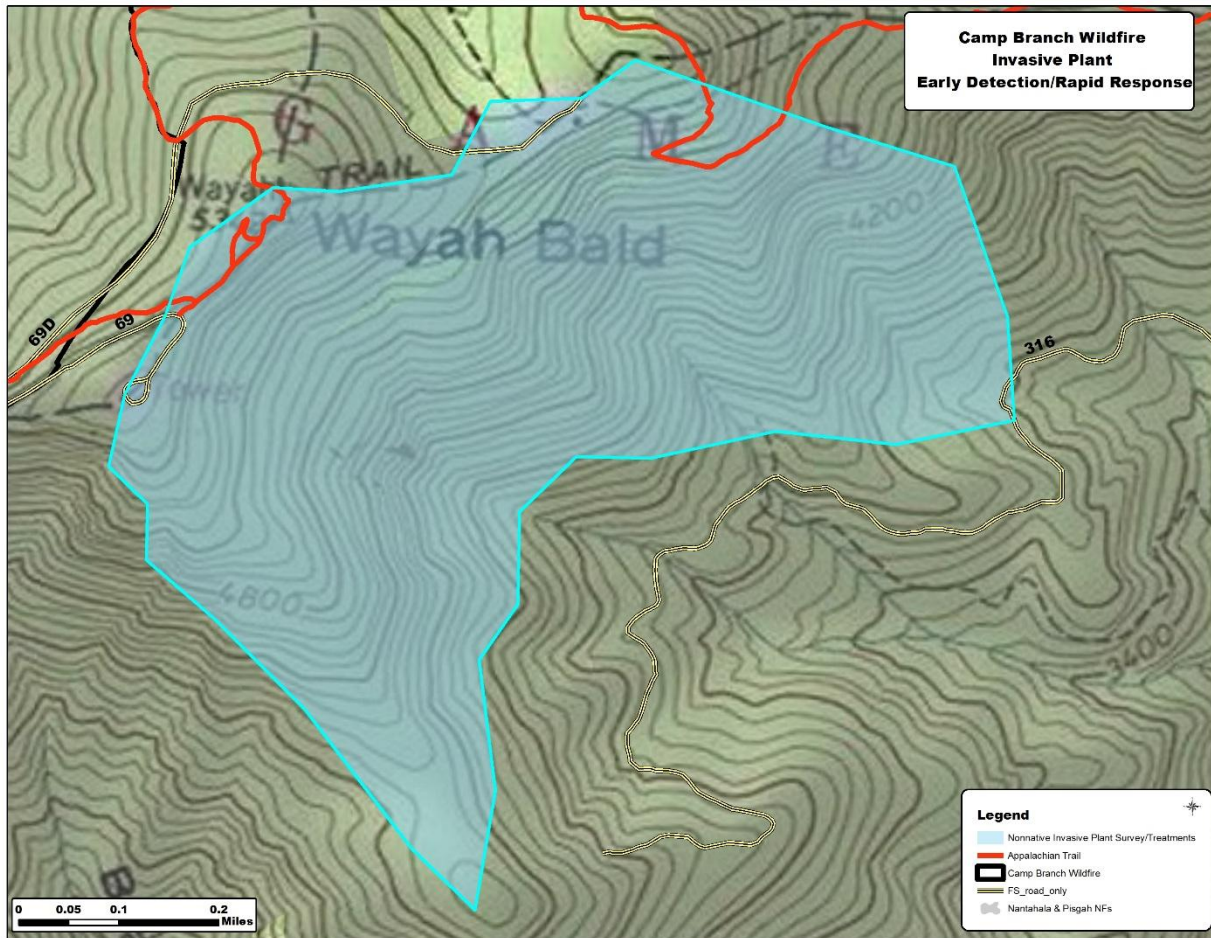
Camp Branch Wildfire (CB-L1)

Scattered occurrences of princess tree, Chinese silvergrass, Oriental bittersweet, and privet are known to occur along Macon County road # 1310 and within some nearby forest service roads. These species can be known to rapidly establish in areas with more exposed soil. Wayah Bald and the steep slopes to the east were found to have the highest soil severity of any of the wildfires. Many of the red oaks in the surrounding high elevation red oak forest were charred for their entire length 50-100 feet. Most of these will probably die. It is important to assess any new invasions in these open areas before any invasive becomes established.

Survey and potential treatments will focus on Wayah Bald and the steep areas to the southeast to about 3600 feet in elevation and west of forest service road # 316. A total of 230 USFS acres will be surveyed and treated if any other non-native invasive plant species is located. Total treatment and survey request for Camp Branch is \$20,150.

Treatment	Units	Unit Cost	# of Units	Total Cost
Invasive Plant Surveys/detection	acres	\$25	230	\$5,750
Invasive Plant Treatments	acres	\$150	80	\$12,000
Herbicide	gallons	\$100	4	\$400
COR contract development/review	acres	\$25	80	\$2,000

Nonnative plant early detection and rapid response for the Camp Branch Wildfire.



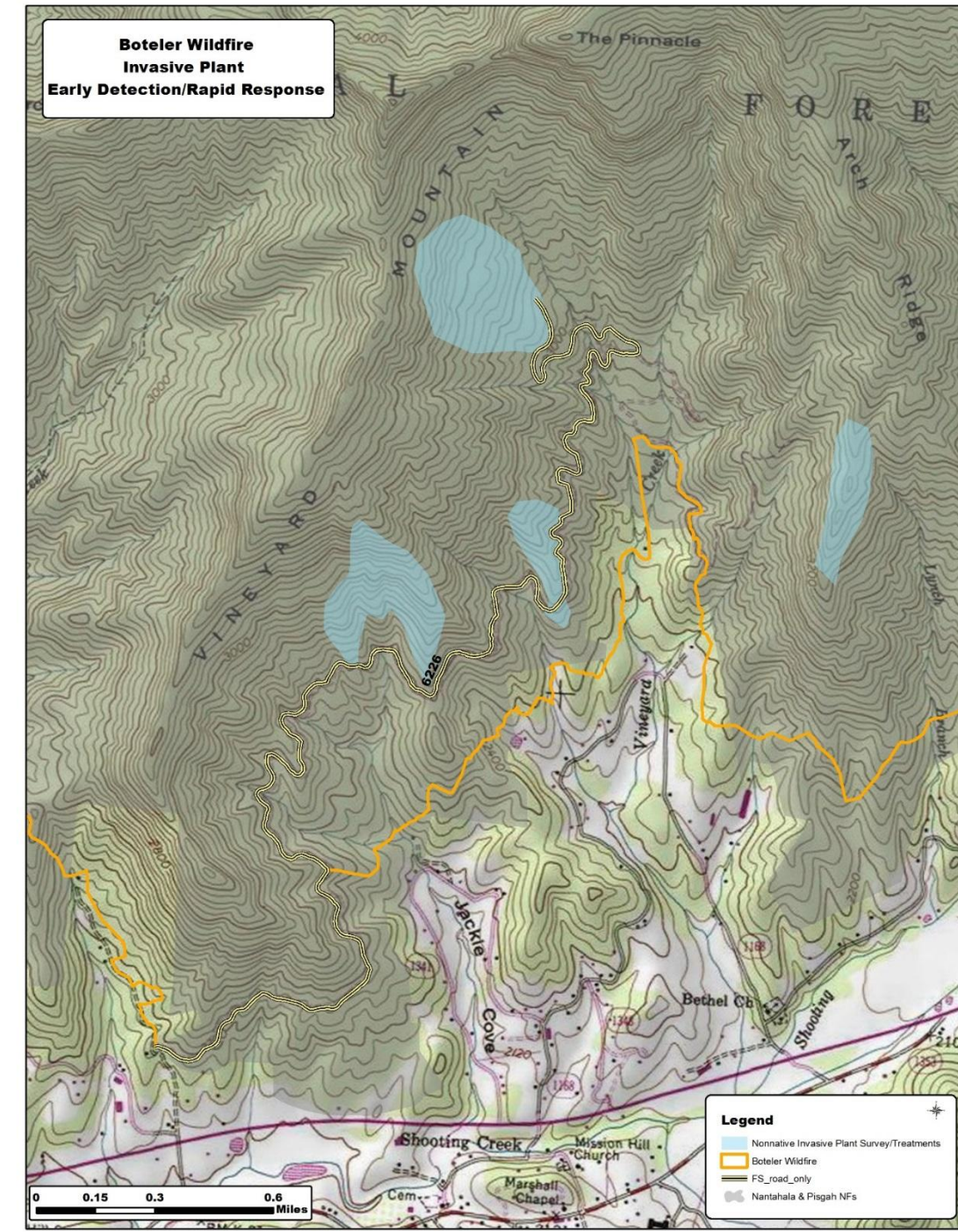
Boteler Wildfire (B-L1)

Scattered occurrences of princess tree, Chinese silvergrass, and tree of heaven are known to occur along Clay County road #s 1339, 1341, and 1342 as well as US 64. These species are known to rapidly establish in areas with more exposed soil. Several ridges north and south of Vineyard road, FSR 6226, experienced moderate soil severity and had ¼ to ½ acre gaps with consumption of the canopy. It is important to assess any new invasions in these open areas before any invasive becomes established.

Survey and potential treatments will focus on Vineyard road for 4.8 miles and the dry ridges north of the road with scattered occurrences of moderate soil severity. A total of 135 USFS acres will be surveyed and treated if any other non-native invasive plant species is located. Total treatment and survey request for Boteler is \$11,800.

Treatment	Units	Unit Cost	# of Units	Total Cost
Invasive Plant Surveys/detection	acres	\$26	135	\$3,500
Invasive Plant Treatments	acres	\$150	40	\$6,000
Herbicide	gallons	\$100	3	\$300
COR contract development/review	acres	\$25	40	\$2,000

Nonnative plant early detection and rapid response for the Boteler Wildfire.



Road and Trail Treatments:

R1- Storm Patrol: Roads within the Boteler, Camp Branch, Knob, Maple Springs, and Tellico Fires contain drainage structures that cross streams located in watersheds that have burned. These streams now have the potential for increased runoff and debris flows, which pose a threat to the existing crossings from plugging drainage structures or exceeding their maximum flow capacity. Storm patrol would include inspection/response to keep culvert and drainage structures functional by cleaning sediment and debris (mostly leaves) from inlets between and/or during storms. This work would be accomplished through the use of Forest Service Personnel, equipment, and general labor. **Total request is for \$12,000.**

Boteler (B-R1):

- Vineyard Road 6226 (9.6 mi.)
- Nelson Ridge 351 (6.1 mi.)

Treatment	Units	Unit Cost	# of Units	Total Cost
Laborer/ Vehicle	Days	\$800	5	\$4,000

Dick Creek:

- None

Camp Branch (CB-R1):

- Locust Tree 316 (5.8 mi.)
- Crawford Cove 7165 (.6 mi.)
- Wayah Bald 69 (4.5 mi.)

Treatment	Units	Unit Cost	# of Units	Total Cost
Laborer/ Vehicle	Days	\$800	2.5	\$2,000

Knob (K-R1):

- Poplar Cove 7281 (.5 mi.)

Treatment	Units	Unit Cost	# of Units	Total Cost
Laborer/ Vehicle	Days	\$800	2.5	\$2,000

Maple Springs:

- None

Tellico (T-R1):

- Winding Stairs 422 (3.1 mi.)
- Partridge Ridge 7030 (2.5 mi.)

Treatment	Units	Unit Cost	# of Units	Total Cost
Laborer/ Vehicle	Days	\$800	5	\$4,000

Total Cost:

Treatment	Units	Unit Cost	# of Units	Total Cost
Laborer/ Vehicle	Days	\$800	15	\$12,000

Protection/Safety Treatments:

P1- Interagency Coordination: On-going interagency coordination for the Nantahala NF Fires is considered essential for keeping city, county, state, and other agencies informed on the findings of the BAER assessment and coordinating potential emergency response actions. **Total request is for \$8,000.**

Treatment	Units	Unit Cost	# of Units	Total Cost
Boteler: Interagency Coordination (B-P1)	Days	\$400	3	\$1,200
Camp Branch: Interagency Coordination (CB-P1)	Days	\$400	5	\$2,000
Dick's: Interagency Coordination (D-P1)	Days	\$400	1	\$400
Knob: Interagency Coordination (K-P1)	Days	\$400	1	\$400
Maple Springs: Interagency Coordination (MP-P1)	Days	\$400	4	\$1,600
Tellico: Interagency Coordination (T-P1)	Days	\$400	6	\$2,400
Total:	Days	\$400	20	\$8,000

P2 – Road/Trail/Recreation Site Hazard Signs: Inform users of the hazards associated with entering/recreating within the burned areas. **Total request is for \$6,580**

Hazard Sign Locations:

Boteler (B-P2):

- Nelson Ridge Road at Fire Boundary
- Junction of Perry Gap (350) and Buck Creek (350A)
- Both ends of the Chunky Girl Trail at Burn Perimeter (2x)

Treatment	Units	Unit Cost	# of Units	Total Cost
Laborer/ Vehicle	Days	\$400	1	\$400
4x4 Posts and Hardware	Each	\$35	4	\$140
Hazard Signs	Each	\$100	4	\$400
Total Cost:				\$940

Camp Branch (CB-P2):

- Both ends of Appalachian Trail at Burn Perimeter (2x)
- Wayah Bald Road (69)
- Sign near Wayah Bald Picnic/ Lookout
- Before confluence of Shingle Tree Branch Road (713) and Locust Tree Gap (713C)
- Wilson Lick Historic Ranger Station

Treatment	Units	Unit Cost	# of Units	Total Cost
Laborer/ Vehicle	Days	\$400	2	\$800
4x4 Posts and Hardware	Each	\$35	6	\$210
Hazard Signs	Each	\$100	6	\$600
Total Cost:				\$1,610

Knob (K-P2):

- Both ends of Appalachian Trail at Burn Perimeter (2x)

Treatment	Units	Unit Cost	# of Units	Total Cost
Laborer/ Vehicle	Days	\$400	1	\$400
4x4 Posts and Hardware	Each	\$35	2	\$70
Hazard Signs	Each	\$100	2	\$200
Total Cost:				\$670

Maple Springs (MS-P2):

- Horse Cove Campground
- Joyce Kilmer Memorial Forest
- Jenkins Meadow Trail
- Santeetlah Road (1127)
- Hae Lead Trailhead
- Hae Lead Trail at Fire Boundary
- Maple Springs Overlook
- CLOSED sign at Maple Springs Boardwalk/Overlook
- Belding Trailhead near Footbridge
- Slick Rock Road at Bridge
- Slick Rock Creek Trailhead

Treatment	Units	Unit Cost	# of Units	Total Cost
Laborer/ Vehicle	Days	\$400	2	\$800
4x4 Posts and Hardware	Each	\$35	11	\$385
Hazard Signs	Each	\$100	11	\$1,100
Total Cost:				\$2,285

Tellico (T-P2):

- Appalachian trail near Silver Mine Road
- Appalachian Trail at Tellico Gap
- Winding Stairs Road (2x)
- Wesser Creek Trailhead

Treatment	Units	Unit Cost	# of Units	Total Cost
Laborer/ Vehicle	Days	\$400	1	\$400
4x4 Posts and Hardware	Each	\$35	5	\$175
Hazard Signs	Each	\$100	5	\$500
Total Cost:				\$1,075

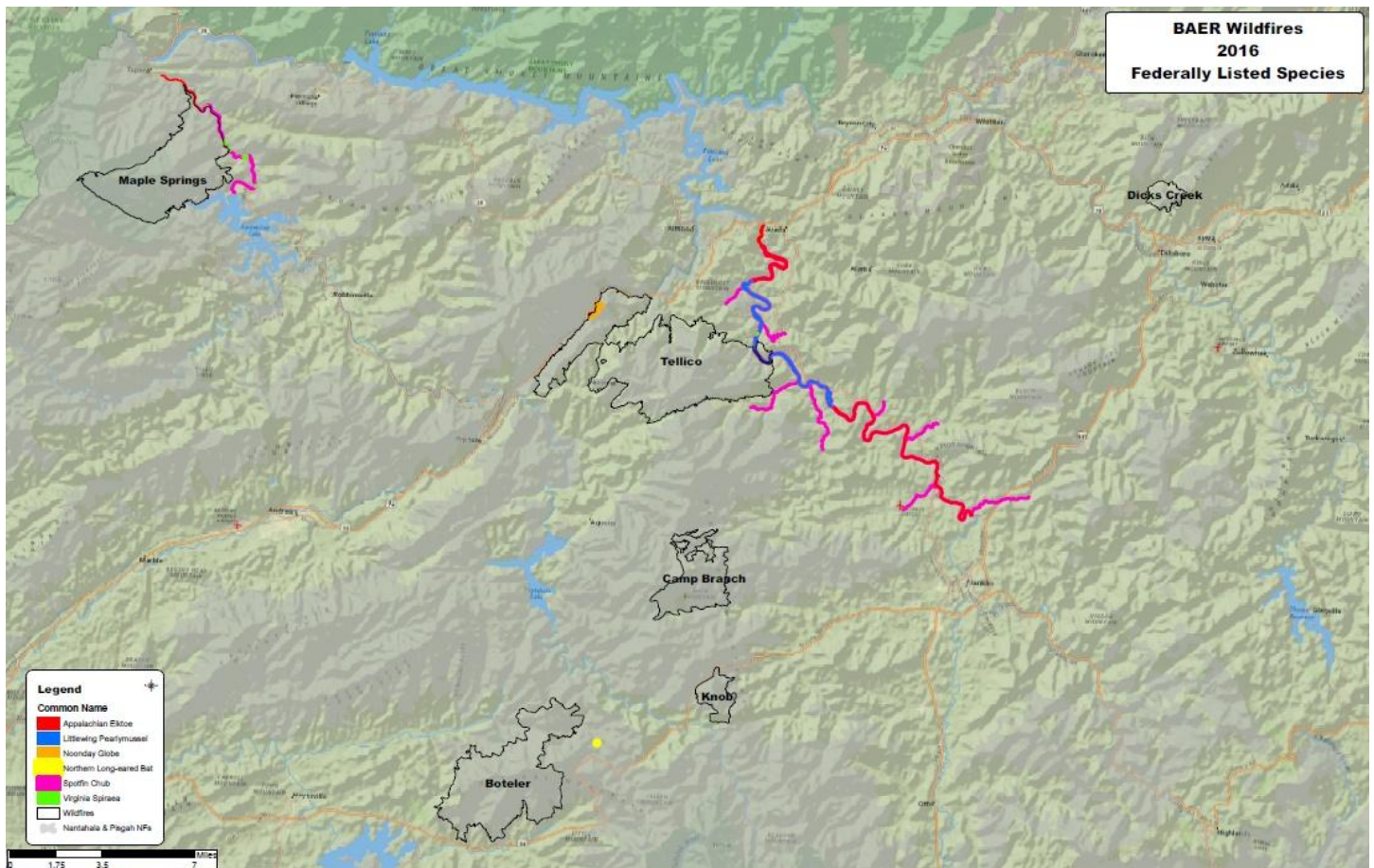
Total Treatment:

Treatment	Units	Unit Cost	# of Units	Total Cost
Laborer/ Vehicle	Days	\$400	7	\$2,800
4x4 Posts and Hardware	Each	\$35	28	\$980
Hazard Signs	Each	\$100	28	\$2,800
Total Cost:				\$6,580

Channel Treatments:

None

Location of Threatened and Endangered Species in relation to the fires assessed.



I. Monitoring Narrative: None

Part VI – Emergency Stabilization Treatments and Source of Funds for ALL FIRES assessed

NFS Lands						All Total \$
Line Items	Units	Unit Cost	# of Units	BAER \$	Other \$	
<i>Boteler Fire</i>						
B-P1: Interagency Coordination	Days	\$400	3	\$1,200		
B-P2: Hazard Signs	Signs	\$135	4	\$540		
B-P2: Hazard Signs	Days	\$400	1	\$400		
B-R1: Storm Patrol	Laborer/Vehicle	\$800	5	\$4,000		
B-L1: Weeds (EDRR)	See pg 21-23	-	-	\$11,800		
<i>Boteler Total:</i>				\$17,940		
<i>Camp Branch Fire</i>						
CB-P1: Interagency Coordination	Days	\$400	5	\$2,000		
CB-P2: Hazard Signs	Signs	\$135	6	\$810		
CB-P2: Hazard Signs	Days	\$400	2	\$800		
CB-R1: Storm Patrol	Laborer/Vehicle	\$800	2.5	\$2,000		
CB-L1: Weeds (EDRR)	See pg 21-23	-	-	\$20,150		
<i>Camp Branch Total:</i>				\$25,760		
<i>Dick's Creek Fire</i>						
DC-P1: Interagency Coordination	Days	\$400	1	\$400		
<i>Total Dick's Creek Total:</i>				\$400		
<i>Knob Fire</i>						
K-P1: Interagency Coordination	Days	\$400	1	\$400		
K-P2: Hazard Signs	Signs	\$135	2	\$270		
K-P2: Hazard Signs	Days	\$400	1	\$400		
K-R1: Storm Patrol	Laborer/Vehicle	\$800	2.5	\$2,000		
<i>Knob Total:</i>				\$3,070		
<i>Maple Spring Fire</i>						
MS-P1: Interagency Coordination	Days	\$400	4	\$1,600		
MS-P2: Hazard Signs	Signs	\$135	11	\$1,485		
MS-P2: Hazard Signs	Days	\$400	2	\$800		
<i>Maple Springs Total:</i>				\$3,885		
<i>Tellico Fire</i>						
T-P1: Interagency Coordination	Days	\$400	6	\$2,400		
T-P2: Hazard Signs	Signs	\$135	5	\$675		
T-P2: Hazard Signs	Days	\$400	1	\$400		
T-R1: Storm Patrol	Laborer/Vehicle	\$800	5	\$4,000		
T-L1: Weeds (EDRR)	See pg 21-23	-	-	\$9,500	\$5,000	
<i>Tellico Total:</i>				\$16,975		
BAER Evaluation:				\$87,700		
Totals						
Previously approved:				0		
Total for this request:				\$68,030		

PART VII - APPROVALS

1. /s/ Hurston A. Nicholas December 12, 2016
Forest Supervisor (signature) Date

2. /s/ Kara L. Chadwick (for) December 20, 2016
Regional Forester (signature) Date