Date of Report: 10/18/2016

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

8. Type of Action

[X] 1. Initial Request (Best estimate of funds needed to complete eligible stabilization measures)
[ ] 2. Interim Report *ti.*_____
[ ] 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 - BURNEQ-AREA QESCRIPTION

A. Fire Name: Tincup

B. Fire Number: ID-CNF-003197

C. State: Idaho

D. County: Caribou. ID

E. Region: Intermountain (R4)

F. Forest: Caribou-Targhee NF

G. District: Soda Springs Ranger District

H. Fire Incident Job Code: P4EK1N. P4KN3Q

I. Date Fire Started: 8/29/2016

J. Date Fire Contained: 10/7/2016

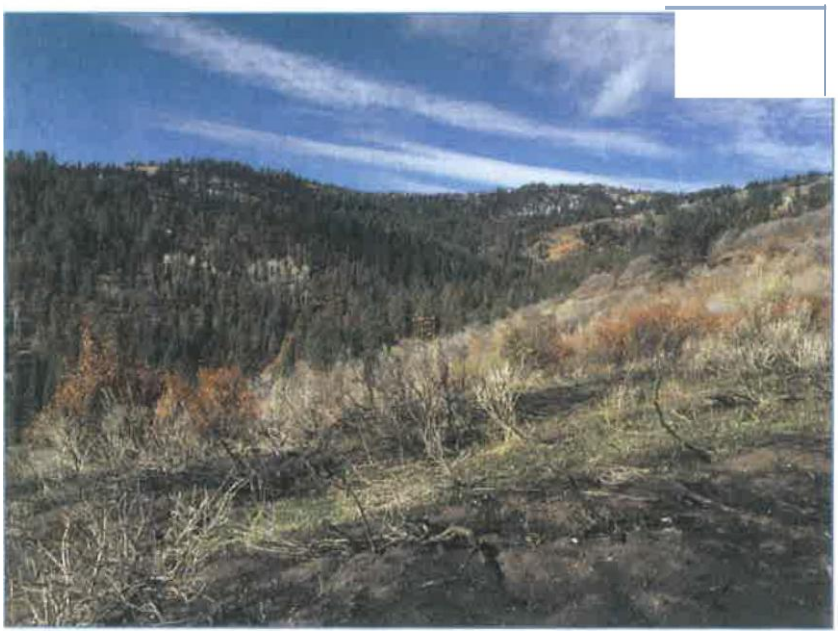

Figure 1 Tinrnp fir e at containment; October 7, 2016.

K. Suppression Cost: Approximately $500.000

L. Fire Suppression Damages Repaired with Suppression Funds (NFS lands only)

1. Fireline waterbarred (miles): 0.3 mile of hand line shaped to avoid concentrating water.
2. Fireline seeded (miles): Q_
3. Other (identify):

M. Watershed Numbers: Primarily Lower Tincup Creek HUC 12 (170401050306) with a small acreage of slop-over into Jackknife Creek (170401050308).

M. Total Acres Burned: 542 acres of National Forest System lands.

0. Vegetation Types: Douglas fir forest, mixed conifer forest, shrublands, Bigtooth maple; aspen, and aspen/conifer mixed forest (Source: C-T mid-level existing vegetation GIS layer).

P. Dominant Soils: Most of the moderate-severity fire occurred in forested areas in the following map unit: Davtone-Ezbin family complex, 20-50% slopes. These soils are in hydrologic group C, which is an interpretation of the inherent infiltration and runoff potential (Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed [10/03/2016).

Q. Geologic Types: Preuss Redbeds and Wayan Formation (Mitchell, V.E. and Bennett, E.H., 1979, Geologic map of the Driggs quadrangle, Idaho: Idaho Geological Survey, Geologic Map GM-6, scale 1:250,000). Both of these formations are known to be potentially unstable. During field reconnaissance, BAER personnel identified a sag pond (photo below), indicating mass movement has occurred in the past.

R. Miles of Stream Channels by Order or Class: 1.0 mile perennial

S. Transportation System: Non-Motorized Trails: 1.6 miles Roads: 0 miles infire perimeter

The Tincup Driveway (Marshall Canyon) non-motorized trail follows the ridgeline for the 1.6 miles within the fire perimeter.

PART 111 - WATERSHEQ CONQ!TION

A. Burn Severity: 242 acres (31% unburned); 447 acres (61% low); 64 acres (8% moderate); O acres (0% high)

B. Water-Repellent Soil (NFS acres only): O acres (high burn severity)

C. Soil Erosion Hazard Rating (Burned NFS acres only):
477 acres or 88% (low) 64 acres or 12% (moderate)

D. Erosion Potential (tons/acre): In the first year post-fire, burned areas have about a 50% probability of less than 2 tons/acre. There is a lesser chance, about a 10% probability, than erosion rates could well exceed soil loss tolerance values of 3-5 tons/acre.

E. Sediment Potential (cubic yards/square mile): Not calculated

PART IY - HYQROLOG!C QES!GN FACTORS

No hydrologic-related treatments are proposed due to soil burn severity and lack of hydrologic-related values at risk.

A. Estimated Vegetative Recovery Period, (years): 1-3 grass. 20-25 shrubs. 20-50 conifers

B. Design Chance of Success, (percent): N/A no hydrologic related treatments prescribed.

C. Equivalent Design Recurrence Interval, (years): *NIA* no hydrologic related treatments prescribed.

D. Design Storm Duration, (hours): N/A no hydrologic related treatments prescribed.

E. Design Storm Magnitude, (inches): *NIA* no hydrologic related treatments prescribed.

F. Design Flow, (cubic feet / second/ square mile): N/A no hydrologic related treatments prescribed.

G. Estimated Reduction in Infiltration, (percent): N/ A no hydrologic related treatments prescribed.

H. Adjusted Design Flow, (cfs per square mile): N/A no hydrologic related treatments prescribed.

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

Areas of moderate soil burn severity have created a high risk to native ecosystems from invasive species and noxious weeds. The team assessed the following critical values and resources.

- Public Recreation (Human Life & Safety): Hazard trees, post-fire flooding, and other burned area conditions are unlikely to be a threat to public safety in the area. The Tincup Driveway (Marshall Canyon) non-motorized trail (Trail #463) is located on the ridgeline through the fire perimeter in low and unburned conditions, so threats to the public on this trail are unlikely. No treatment is recommended.

- FS System Trails (Human Life. Safety. & Property): The Tincup Driveway (Marshall Canyon) non-motorized trail (Trail #463) is located on the ridgeline through the fire perimeter in low and unburned conditions, so threats to the trail infrastructure on this trail are unlikely. No treatment is recommended.
  The Forests will likely need clear any downed trees across the trail in the spring of 2017, but it unknown at this time how big of a task that will be. It is likely that task can be handled through regular trail maintenance.

- Native Ecosystems - Invasive species and noxious weeds: Invasive species and noxious weeds are present only in minor amounts, but populations do exist around the fire perimeter. Early detection rapid response (EDRA) monitoring and treatments are needed to protect native ecosystems.

  Access to a majority of the burned area is limited to the Tincup Driveway livestock trail up Marshall Canyon or toot and horse travel. Therefore, noxious weeds either are absent or exist as single plants or small patches scattered along the authorized travel routes. Single plants of Canada thistle, Scotch Thistle, and hounds tongue have been observed near the fire area, predominantly to the south and west of the fire, with single plant occurrences within the fire area.
  Canada and Scotch thistle are present along the non-motorized trail, and in single plant occurrences throughout the area. Infestations of Hounds tongue have not been documented within the fire area but are in close enough proximity to assume that potential for spread throughout the fire area by wildlife is feasible.

  About 0.8 mile of game trail and 2.3 miles of non-motorized system trails were used within and around the fire to access the burned area during monitoring and suppression efforts. Firefighters traveled through known areas of infestation to access areas of the fire that were previously known to be weed free. New infestations could develop along these travel routes within the first year of the fire, and easily spread throughout the rest of the burn area within 2-3 years.

- Soil Productivity & Hydrologic Function: There is a minor potential tor post-fire flooding, erosion, or sedimentation throughout and downstream of the 64 acres that burned with moderate severity.

- Water Quality: Marshall Canyon is fully supporting the identified beneficial uses of cold water aquatic life, salmonid spawning, and secondary contact recreation (Idaho DEQ). There is a minor potential tor post-fire flooding, erosion, or sedimentation as most the burned area in the watershed is low severity.

The table below summarizes the risks associated with each critical value. The risk was evaluated based on Interim Directive No. 2520-2014-1 guidance. The Forest recommends treatments to mitigate high risks.

Table 2 Risk assessment table display results of critical values risk evaluation

Critical Value	Critical Value Type	Probability of Damage or Loss	Magnitude of Consequences	Risk
Hazardous Condition Warning	Human Life and Safety	Unlikely	Major	Intermediate
Native and Naturalized Ecosystems (Noxious & Invasive weeds)	Natural Resources	Likely	Moderate	High
FSTrail #463-Marshall Canyon	Human Life & Safety; Property	Unlikely	Moderate	Low
Soil Productivity & Hydrologic Function	Natural Resources	Unlikely	Moderate	Low
Water Quality	Natural Resources	Unlikely	Moderate	Low

B. Emergency Treatment Objectives:

- EDRR for Invasive Species & Noxious Weeds – Prevent the spread of noxious plant species into previously unoccupied locations. Reduce the risk from expansion of existing weed seed beds into the burned area and to allow burned plant communities to recover more rapidly.

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

Invasives 90% (prior to seed) Channel N/A Trails N/A Protection/Safety N/A

D. Probability of Treatment Success

Table: Probability of Treatment Success

	Years after Treatment		
	1	3	5
Invasives	90	75	N/A
Channel	N/A	N/A	N/A
Trails	N/A	N/A	N/A
Protection/Safety	N/A	*NIA*	N/A

E. Cost of No-Action (Including Loss): $64,680

Weeds: The values-at-risk with no action include potential loss of native communities and degraded ecological conditions that cause further departure from natural disturbance regimes, including loss of soil productivity over the long term. The effects of no action were determined by assuming fire suppression activities would contribute to the invasion of noxious weed species into highly susceptible burned areas where they were absent or in minor amount prior to the fire. This is a reasonable assumption after observing the burned area.

If the invasive noxious weeds are not immediately controlled, these undesirable species could become established within 1 year. At least 2 years of additional treatments would be needed on the initial 105 acres identified, plus the potential for spread may infect an additional 105 acres if the initial invasion is not successfully controlled. The average cost to treat noxious plants that have become established is $140/acre. Assuming the treatments are 90% effective, the total cost for

control of newly established noxious weed infestations, including loss, is estimated to be $67,200. ((105 acres x 3 years) + (105 acres) X $140/acre X 1.1 prob. treatment success) = $64,680.

F. Cost of Selected Alternative (Including Loss): Total = $6,160 EDRR = $5,600

Cost estimate for EDRR - invasive plants and noxious weeds.

	Units	Unit Cost	# Units	BAER $
Detection/mapping/rapid response	Days	$300	2	$600
Treatment: Labor, equipment, & supplies	Days	$300	10	$3,000
Treatment: Chemical and supplies	Acres	$200	10	$2,000
Total =				$5,600

G. Skills Represented on Burned-Area Survey Team:

[] Hydrology [X] Soils [] Geology [X] Range [] Forestry [] Wildlife [] Fire Mgmt [] Engineering [] Contracting [] Ecology [] Botany [] Archaeology [] Fisheries
[] Research [] Landscape Arch [] GIS [X] Invasive Species/Noxious Weeds [] Trails

Team Leader
Kara Green, Soil Scientist, Caribou-Targhee NF klgreen@ fs.fed.us Phone: 208-547-1110

Other Core Team Members:
- Jake Siar - Rangeland Resource, invasive Species, and Noxious Weeds

H. Treatment Narrative:

- EDRR for Invasive Species and Noxious Weeds: First year weed monitoring should include 50 feet on each side of the 2.3 miles of the Marshall Canyon non-motorized trail (to the ridge); 0.3 mile of hand line, and 0.8 mile of game trail that are either within the fire perimeter or used to access the fire area. This would amount to roughly 40 acres of trail corridors. Weed Crews would also monitor within the burn area itself, especially the 64 acres of moderate severity areas for new infestations. Monitored acres along travel corridors and within burn area are estimated at around 105 acres (See map).

  Treating invasive plants and noxious weeds prevents the serious threat these plants have on ecosystem. The BAER team surveyed the fire area and identified four invasive species nearby. All three species were on the Federal and/or Idaho State Noxious Weed List. These species were prioritized depending on the plant type and its response to fire.
  1. Scotch thistle
  2. Canada thistle
  3. Hounds tongue

  The District Weed Crews have implemented an integrated Management System using all appropriate available methods or a combination of methods that are economical and effective. The affected area is located within and all treatments are covered by the Caribou National Forest - Environmental Assessment for Noxious Weeds and Poisonous Plants. This plan will be followed to implement the proposed EDRR treatment.

  1. Prevent the introduction, reproduction and spread of designated noxious weeds and invasive plants into and within the Peterson Hollow Fire.
     Objectives:
     A. Develop and maintain and integrated inventory of noxious weeds and invasive plants

B. Prevent the establishment of Potential Invaders through EDRR.
C. Eradicate New Invaders (EDR A).
D. Promote and support the use of certified weed free seed, and/or weed free feeds.

2. Reduce the extent and density of established noxious weeds. Objectives:
   A. Establish control priorities for the noxious weed list.
   B. Coordinate the use of resources and manpower to treat designated weed infestations
   C. Treat transportation corridors and areas of concentrated activities, such as roads, dozer lines; fire lines, trails, campgrounds, trailheads parking lots. Control satellite infestations of Established Invaders.
   D. Treat stream corridors to limit spread of new and established invaders in riparian habitats.
   E. Contain and slow the spread of widespread established invaders.

3. Monitoring (Short and Long Term Monitoring)
   A. Monitoring and Evaluation will focus on four general questions:
      - Isthe plan being implemented?
      - Are the objectives and priorities realistic and achievable?
      - Are the treatments effective in meeting the planned objectives?
      - Are the weeds continuing to spread beyond our control actions?

I. **Monitoring Narrative:**

Implementation monitoring is proposed and will occur as the treatments are completed. District staff (Weeds and Trails) will monitor all treatments to ensure proper implementation. The cost of the implementation monitoring is included in the treatment costs.

Part VI -Emergency Stabilization Treatments and Source of Funds

Treatment Cost Summary

Line Items	Units	Unit Cost	NFS Lands # of Unit	NFS Lands BAER $	Other $	All Total $
—						
A. Land Treatments						
EDRR	Each	$5 600	1	$5,60(	$(	$5, 600
B. Channel Treatments						
				$0	$(	$0
l11se1tnewite111s al.Jove this line/				$0	$ (	$0
Subtotal Channel Treat.				$(	$(	$0
C. RoadandTrails						
				$0	$(	$0
Insert newitems above//Jis line!				$(	$ (	$0
Subtotal Road & Trails				$(	$(	$0
D. Protection/Safetv						
Insert new items above t11is line!				$(	$(	$0
Subtotal Structures				$ (	$(	$0
E. BAER Evaluation						
C-T Evaluation	Each	$1 ,325	1	$1, 325	$(	$0
Insert new items above t/Jis line/					$(	$0
Subtotal Evaluation				---	$(	$0
F. Monitoring						
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Subtotal Monitoring				$(	$(	$0
G. Totals				$5, 600	$(	**$5,600**
Previously approved						
Total for this request				**$5,600**		

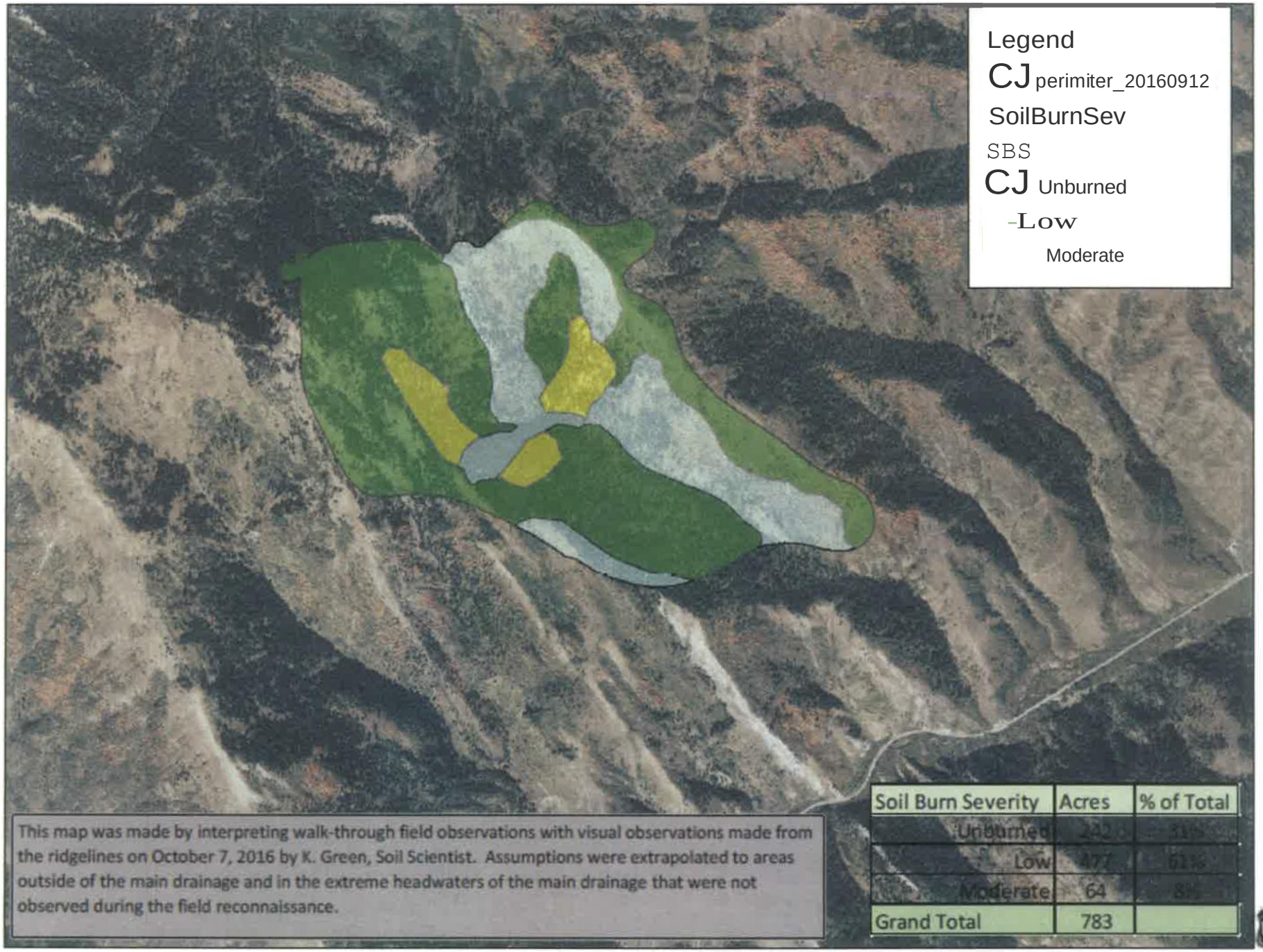
PART VII - APPROVALS

1. _____ 10 20 2016
Forest Supervisor (signature) date

2. /s/ Mary Farnsworth (for) Nora Rasure 10/31/16
Regional Forester (signature) date

Tincup Fire BAER- Soil Burn Severity Map

K. Green 10/14/2016 1:24,000



This map was made by interpreting walk-through field observations with visual observations made from the ridgelines on October 7, 2016 by K. Green, Soil Scientist. Assumptions were extrapolated to areas outside of the main drainage and in the extreme headwaters of the main drainage that were not observed during the field reconnaissance.

Soil Burn Severity	Acres	% of Total
Unburned	242	31%
Low	477	61%
Moderate	64	8%
Grand Total	783	

Tincup Fire BAER- EDRR Map

0 0.1 0.2 0.4 0.6 0.8 Miles

K. Green 10/18'2016