Date of Report: <u>08 / 03 /2016</u>

BURNED-AREA REPORT

(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

А. Туре	of Report		
[]	 Funding request for estimated er Accomplishment Report No Treatment Recommendation 	mergency stabilization	funds
В. Туре	of Action		
[X]	Initial Request (Best estimate stabilization measures)	e of funds needed	to complete eligible
[]2	2. Interim Report # [] Updating the initial funding or design analysis [] Status of accomplishments	•	ore accurate site data
[]3	s. Final Report (Following completion	of work)	
	PART II - BURNED-A	AREA DESCRIPTION	
A. Fire N	Name: War Creek	B. Fire Number: NBF	-160565
C. State	: SD	D. County: Jones	
E. Regio	on: 02	F. Forest: Nebraska	NF and Grasslands
G. Distri	ct: Fort Pierre Ranger District	H. Fire Incident Job C	Code: P2EKU3
. Date	Fire Started: 07/23/2016	J. Date Fire Containe	d : 7/30/2016
K. Supp	ression Cost: \$150000		
1. Fi 2. Fi	suppression Damages Repaired with reline waterbarred (miles): 0 reline seeded (miles): 0 ther (identify): 0	Suppression Funds	
M. Wate	rshed Number: <u>HUC #1014010218</u>		
	Acres Burned: <u>633</u> 01] NFS Acres [0] Other Federal	[0] State	[132] Private
O. Veae	tation Types: Grass		

Ρ.	Dominant Soils: Clay
Q.	Geologic Types : Upper cretaceous Niobrara formation (http://pubs.usgs.gov/ha/ha730/ch_i/gif/l010.GIF).
R.	Miles of Stream Channels by Order or Class: 0.3 mile 1st order, 0.3 mile 2nd order
S.	Transportation System
	Trails: 0 miles Roads: 0 miles
	PART III - WATERSHED CONDITION
A.	Burn Severity (acres): _633 ac. (low) _0_ (moderate) _0_ (high)
В.	Water-Repellent Soil (acres): _0
C.	Soil Erosion Hazard Rating (acres): 633 ac. (low)(moderate) (high)
D.	Erosion Potential:Unknown but very low tons/acre
E.	Sediment Potential: N/A cubic yards / square mile
	PART IV - HYDROLOGIC DESIGN FACTORS
A.	Estimated Vegetative Recovery Period, (years): Less than 1 year.
В.	Design Chance of Success, (percent):100%
C.	Equivalent Design Recurrence Interval, (years):
D.	Design Storm Duration, (hours):
E.	Design Storm Magnitude, (inches):
F.	Design Flow, (cubic feet / second/ square mile):
G.	Estimated Reduction in Infiltration, (percent):
Н.	Adjusted Design Flow, (cfs per square mile):

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats: The War Creek Fire was started by lightning on July 23, 2016. A week after this fast moving grass fire started, a heavy rain (1.8") occurred on site. An interdisciplinary team field inspection was conducted two days after the heavy rain.

<u>Water</u> – No emergency conditions were identified for drinking water quality. Potential impacts were rated as low risk.

<u>Soil Productivity and Hydrologic Function</u> – At the time of the field assessment grass regrowth was ~1" high (photo 1). On some, but not all, of the steepest slope we saw "rills" of fine material (photo 2). No excessive erosion was noted or is anticipated. No emergency conditions were identified and impacts to these resources were rated as low risk.

<u>Threatened / Endangered Species</u> – No impacts were identified.

<u>Plant Communities</u> - Currently, there are known infestations of Canada thistle, musk thistle, bull thistle, and sulfur cinquefoil within and adjacent to the Glenn, Richland (Southwest), Far West and Sheriff (West) Pastures, which were all within the perimeter of the War Creek Fire. Based on previous experience from disturbances such as prescribed fire and wildfire, an increase in weed infestations of at least 10% can be expected in this area. Inventory and treatment following these disturbances can be effective if it is done in a timely manner (this fall or next spring) before any new infestations can become established. Treatment of these noxious weed infestations can also minimize the encroachment of the infestations onto adjacent private lands. If these weeds are not treated in a timely manner, negative impacts to wildlife habitat, forage production, and rangeland health are anticipated. Due to the timing of the burn and the subsequent precipitation, we do expect new establishment and extensive expression yet this summer of musk and Canada thistle.

Cultural and Heritage – No impacts to FS eligible heritage sites were identified.

- **B.** Emergency Treatment Objectives (narrative): _Our objective would be to map and treat newly established stands of musk and Canada thistle in the burned area.
- C. Probability of Completing Treatment Prior to Damaging Storm or Event:

Land __100__% Channel ____% Roads/Trails ____% Protection/Safety ____%

D. Probability of Treatment Success

	Years	Years after Treatment							
	1	1 3 5							
Land	100	100 80							
Channel	NA	NA							

Roads/Trails	NA	NA	NA
Protection/Safety	NA	NA	NA

E.	Cost of No-Action (Including Loss):5% loss of forage (monitary val	ue nominal on NFS
	land due to low grazing fee; monitary value ~\$2.50/acre on private land). weed treatment would be higher.	Political cost of no
	weed treatment would be higher	

	F.	Cost of	Selected	Alternative	(Including	Loss)): \$3,000
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G.	Skills	Represented on	Burned-Area	Survey T	eam:

		Hydrology Forestry Contracting Fisheries	[X] Wildlife [X] Ecology	[] [X]	Geology Fire Mgmt. Botany Landscape Arch	[]	Range Engineering Archaeology GIS
Team	Lea	der : _Dan Svi	ngen, District Ra	ange	r		
	Em	ail: <u>dsvinger</u>	n@fs.fed.us_Ph	one:	: _(605) 224-5517	FA	X : _(605) 224-6517

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.)

<u>Land Treatments</u>: ____We would apply herbicide (Milestone) to newly established stands of non-native invasive thistle. We estimate treatment will be needed on ~10% of the burned area. Treatment costs on NFS land (\$50/acre) would include both herbicide and application.

<u>Channel Treatments</u> :None noted as necessary							
Roads and Trail Treatments:	_ None noted as necessary						
Protection/Safety Treatments:	_ None noted as necessary						

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.)

Monitoring would consist of mapping thistle stands during initial treatment. Field inspection of sprayed stands would be assessed 2 weeks later to visually estimate kill rates. Thistles would be remapped in the burn area 1 year later to determine longer-term effectivness.

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

Line Items	rait vi – Emer	gency	Stabilization Treatment		is and S) (interim #		
Line Items					nds						<u> </u>	All
A. Land Treatments Post-burn weed control acres								# of				
Post-burn weed control acres 50 50 \$2,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0	Line Items	Units	Cost	Units	BAER \$	\$		units	\$	Units	\$	\$
Post-burn weed control acres 50 50 \$2,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0												
S0	A. Land Treatments											
S0 S0 S0 S0 S0 S0 S0 S0	Post-burn weed contro	acres	50	50	\$2,500	\$0			\$0		\$0	\$2,500
Southotal Land Treatments Southotal Channel Treatment Southotal Channel Tre					\$0	\$0					\$0	
Subtotal Land Treatments					\$0	\$0			\$0		\$0	
B. Channel Treatments	Insert new items above this line!											\$0
SO SO SO SO SO SO SO SO	Subtotal Land Treatments				\$2,500	\$0			\$0		\$0	\$2,500
SO SO SO SO SO SO SO SO	B. Channel Treatmen	ts										
SO SO SO SO SO SO SO SO					\$0							
Subtotal Channel Treat. So So So So So So So S					\$0	\$0						
Subtotal Channel Treat. SO SO SO SO SO SO SO S												
C. Road and Trails	Insert new items above this line!				\$0							
\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	Subtotal Channel Treat.				\$0	\$0			\$0		\$0	\$0
SO	C. Road and Trails											
SO					\$0	\$0						
Insert new items above this line SO					\$0							
Subtotal Road & Trails					\$0	\$0						
D. Protection/Safety S0 S0 S0 S0 S0 S0 S0 S	Insert new items above this line!				\$0	\$0			\$0		\$0	
\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	Subtotal Road & Trails				\$0	\$0			\$0		\$0	\$0
SO SO SO SO SO SO SO SO	D. Protection/Safety											
SO SO SO SO SO SO SO SO					\$0	\$0			\$0		\$0	
Subtotal Structures					\$0	\$0			\$0		\$0	\$0
Subtotal Structures					\$0	\$0						\$0
E. BAER Evaluation	Insert new items above this line!				\$0	\$0			\$0		\$0	
So So So So So So So So	Subtotal Structures				\$0	\$0			\$0		\$0	\$0
Insert new items above this line!	E. BAER Evaluation											
Subtotal Evaluation									\$0		\$0	
F. Monitoring \$0 \$2,500 \$0 \$2,500 \$0 \$2,500 \$0 \$2,500 \$0 \$2,500 \$0 \$0 \$2,500 \$0	Insert new items above this line!											
SO SO SO SO SO SO SO SO	Subtotal Evaluation					\$0			\$0		\$0	\$0
Insert new items above this line!	F. Monitoring											
Subtotal Monitoring \$0 \$0 \$0 \$0 G. Totals \$2,500 \$0 \$0 \$2,500 Previously approved \$2,500 \$0 \$2,500												
G. Totals \$2,500 \$0 \$0 \$0 \$2,500 Previously approved	Insert new items above this line!				\$0	\$0			\$0			
Previously approved	Subtotal Monitoring				\$0	\$0			\$0		\$0	\$0
Previously approved	G Totals				\$2 500	\$0			\$0		\$0	\$2 500
		 	 		Ψ2,000	ΨΟ			ΨΟ		Ψ0	Ψ2,000
, I Utal IUI tillo I EQUESTI #4.700	Total for this request				\$2,500							

PART VII - APPROVALS

1.	Forest Supervisor (signature)	•	<u>8/4/2</u> 016 Date
2.			
	Regional Forester (signature)		Date

Richland Southwe Sheriff West War Creek Fire Fort Pierre National Grassland Nebraska National Forests & Grasslands Legend US Forest Sen County Road Tribal Land Forest Designated Road Seasonal 12/1-8/31

Figure 1. Map of War Creek Fire, Fort Pierre National Grassland, Jones County, SD. Map July 2016 by Kelly Fuoss.

Photo 1. Landscape view of War Creek Fire, Fort Pierre National Grassland, Jones Co., SD. Note grass regrowth. Photo 2 August 2016 by Dan Svingen.



Photo 2. "Rills" of fine material transported downslope by 1.8" rain event on the War Creek Fire, Fort Pierre National Grassland, Jones Co., SD. Photo 2 August 2016 by Dan Svingen.

