Date of Report: 08/24/2018

BURNED-AREA REPORT
(Reference FSH 2509.13)

PART I - TYPE OF REQUEST

A. Type of Report

[X] 1. Funding request for estimated emergency stabilization funds
[ ] 2. Accomplishment Report
[ ] 3. No Treatment Recommendation

B. Type of Action

[X] 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: Cove Creek

B. Fire Number: 2018-UTFIF-180318

C. State: Utah

D. County: Millard, Beaver, Sevier

E. Region: 4

F. Forest: Fishlake National Forest

G. District: Beaver

H. Fire Incident Job Code: P4L00218 (0408)

I. Date Fire Started: July 17, 2018

J. Date Fire Contained: Anticipated 10/1/18

K. Suppression Cost: $4,100,000 as of August 08, 2018 which was the last cost update.

L. Fire Suppression Damages Repaired with Suppression Funds
1. **Fireline waterbarred (miles)**: 25 miles
2. **Fireline seeded (miles):** 19 miles scheduled for seeding this fall.
3. **Other (identify):**

M. Watershed Number: 160300070501 Sulpher Creek (35.9 acres), 160300070502 Bear Canyon (1534.9 acres, 160300030102 Headwaters Clear Creek (988.3 acres) (HUC6)

N. Total Acres Burned: 2,620 Acres (final fire perimeter); 2559 Acres (adjusted BAER team perimeter) National Forest System (100%)

O. Vegetation Types: Mountain Mahogany (506.6 acres), Mixed Conifer—Ponderosa/White Fir/Douglas Fir (324.0 acres), Aspen—Seral/Stable (76.1 acres), Pinyon-Juniper (186.3 acres), Sagebrush—Black/Mountain Big (41.9 acres), Gambel Oak (1415.4 acres), Riparian Woody (8.8 acres).

P. Dominant Soils: Soils dervied from the Miocene volcanic geologic type include map symbol (MS) 208 (1,087 acres) valley bottoms-argic cryoborolls, fine-loamy; 122 (328 acres) Condie family-mollic cryoboralfs loamy-skeletal; 124 (280 acres) Singletree-Dacore families-aridic calcic argixerolls, fine-loamy-skeletal; 137 (244 acres) typic argicryolls, clayey skeletal, smetitic loam; 140 (201 acres) pachic cryoborolls, loamy-skeletal; 109 (148 acres)–unvarified; 176 (143 acres) tpic argixerolls, loamy-skeletal, mixed, suparative, frigid; 112 (99 acres) Bickmore-Condie families-pachic cryoboralls, loamy-skeletal.

Q. Geologic Types: Tmv - Miocene volcanic rocks, undivided (2469.8 acres), Qa – Alluvium and Colluvium (89.3 acres).

R. Miles of Stream Channels: Perennial – 3.1 miles; Intermittent – 5.3 miles

S. Transportation System

Trails: 3.70 miles **Roads:** 6.09 miles

PART III - WATERSHED CONDITION

A. Burn Severity: U**nburned** – 647.7 acres (25%); **low** – 410.8 (16%); **moderate –** 1,116.2 acres (44%); **high –** 384.4 acres (15%)

B. Water-Repellent Soil (acres): 1,150 (44%)

C. Soil Erosion Hazard Rating (acres): 920 (35%)

D. Erosion Potential: 7.0 tons/acre

E. Sediment Potential: 4,000 cubic yards / square mile

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years):	5
B. Design Chance of Success, (percent):	70%
C. Equivalent Design Recurrence Interval, (years):	10
D. Design Storm Duration, (hours):	1.0
E. Design Storm Magnitude, (inches):	1.0
F. Design Flow, (cubic feet / second/ square mile):	16.0
G. Estimated Reduction in Infiltration, (percent):	50%
H. Adjusted Design Flow, (cfs per square mile):	32.0

PART V - SUMMARY OF ANALYSIS

A. Describe Critical Values/Resources and Threats:

COVE CREEK WILDFIRE

BAER / CRITICAL VALUES-AT-RISK SUMMARY TABLE

The lightning caused Cove Creek Fire was discovered July 17, 2018. The fire was burning in very steep, rugged country south of I-70 in Sevier, Millard, and Beaver Counties. Despite very high temperatures (near 100F) and low relative humidies, initial fire behavior was moderate and the fire grew to 200 acres over the first week. To ensure firefighter safety, the Type 3 incident management team looked for opprtunities to construct indirect fire line in anticipation of burn-out operations. On July 30th, firing operations added approximately 1,000 acres to the burned area—fire behavior was more intense as the fire burned though stands of Gambel oak, mountain mohogany, and white fir. By the first full week of August, these tactics had effectively "built a box" around the fire and the management team began to demobilize. It is important to note, however, that, due to the inaccessible nature of many remaining hot-spots, the fire is not expected to be fully "contained" or "controlled" until there is a season ending snow event in September or October. The BAER critical values and level of associated risk to loss or damage include:

- Human life and safety for forest users – Intermediate Risk
- Human life and safety for users on Interstate 70 – Intermediate Risk
- Native or naturalized plant communities – Very High Risk
- Utility infrastracture – High Risk
- Forest and State lands road infrastructure – High Risk
- Forest trail infrastructure – High Risk
- Soil productivity – High Risk
- Hydrologic function – High Risk
- Livestock improvements – Low Risk
- Critical big game winter and summer range – High Risk
- Sensitive species habitat – Very High Risk
- Cultural and heritage resources – Low Risk

HUMAN LIFE AND SAFETY

Human Life and Safety on NFS lands.

Users of NFS Transportation System (Roads and Trails) – The road network is accessed and used by recreationists, hunters, outfitters and guides, firewood gatherers, and livestock permittees. Because there is no physical way to prevent access to the area it is possible that a user may be in the area during a flood event, and that personal injury or damage to vehicles could occur. – Possible Probability of Damage or Loss / Moderate Consequences…
INTERMEDIATE RISK

Human Life and Safety on lands other than NFS.

Users of Interstate 70 and County frontage road – While not technically a critical BAER value as per FSM 2523.1, the possibility of ash and/or debris impacting the county frontage road or the freeway is possible, with moderate consequences for human health and safety. – Possible Probability of Damage or Loss/ Moderate Consequences…
INTERMEDIATE RISK

PROPERTY

Buildings, water systems, utility systems, road and trail prisms, residences, ponds, dams, wells or other significant investments on NFS lands.

Utility corridor – The fire burned through a designated Fishlake National Forest utility corridor. The corridor includes a communications site, a fiber optic line, and at least three power lines—one of which is a high-voltage transmission line of national importance. Though this infrastructure is well constructed and protected, the consequences of loss or damage could be severe - Possible Probability of Damage or Loss / Major Consequence… **HIGH RISK**

Livestock management improvements (spring exclosures, boundary, allotment, and pasture fences, cattle guards) – Approximately 1.7 miles of livestock management fences are within the burn perimeter. - Very Likely Probability of Damage or Loss / Minor Consequences… **LOW RISK**

Forest Roads - There are approximately 6.07 miles of transportation surfaces in the burn perimeter (roads & motorized trails) occurring on NFS Lands. The existing roads and trails are considered to be at-risk from flooding hazards, and debris flows. Most of the roads and drainage structures require normal maintenance, cleaning or repairs to function properly and accommodate anticipated additional runoff. – Likely Probability of Damage or Loss / Moderate Consequences… **HIGH RISK**

Forest Trails – 2.5 miles of non-motorized trails and 2.0 miles of 50" motorized ATV trails are at risk from debris flows and accelerated erosion rates associated with rain events. Effects to trail surfaces from erosion will remain for 2 to 4 years until soils stabilize. - Likely Probability of Damage or Loss / Moderate Consequences… **HIGH RISK**

Property at Risk off NFS Lands

Forest Access Roads downstream from NFS lands – Three forest access roads are downstream from the fire. These roads start at the county frontage. Minimal waterbarring and drainage improvement would provide adequate protection to maintain forest access. - Likely Probability of Damage or Loss / Moderate Consequences… **HIGH RISK**

NATURAL RESOURCES

Soil Productivity - Potential loss of soil due to post fire runoff events. Following the wildfire, erosive conditions exist due to the burning of ground cover, coarse woody debris and soil subsurface organic material. Loss of topsoil negatively affects ecological function for:

- native seed bank and native species recovery
- root growth and soil stability

With BARC imagery and on the ground assessments and verification the BAER team concluded that nearly 60% of this incident burned at moderate to high severity. Approximately 384 acres were mapped as high burn severity and 1,116 acres burned at moderate severity. The lack of ground cover and hydrophobic soils will likely increase surface runoff, flooding, and erosion during typical summer monsoon rain events. - Likely Probability of Damage or Loss/ Moderate Consequences… **HIGH RISK**

Hydrologic function on burned NFS lands – An adverse change to hydrologic function is expected due to contiguous areas burned at moderate and high severity. According to ERMIT model runs, seven tons per acre of sediment delivery is possible during the first year following the fire.- Likely Probability of Damage or Loss/ Moderate Consequences … **HIGH RISK**

Native or naturalized plant communities on NFS land where invasive species or noxious weeds are absent or present in only minor amounts - The naturalized plant community that existed prior to the fire contained a mix of native and non-native grass species. The mixed conifer, oak, and mahogany dominated areas of the fire had a minimal herbaceous understory. Opportunities for reseeding from existing populations of grasses and forbs are limited in these areas which were also the areas that burned at high and moderate intensities. The majority of the fire area is currently **noxious weed free**. There is a very high risk of cheatgrass spread into the burn because of the inherent dry nature of the area and surrounding proliferation of cheatgrass in untreated areas near the fire. The aggressive nature of this invasive species adds to the high potential to spread further into the fire area especially where pre-burn vegetation understory was limited. Also, it is possible that equipment used during suppression activities transported noxious and/or invasive weed species into the area. Areas that were prepped for contingency lines, roads, parking areas, drop points and spike camps are areas of primary concern for introduction. The adjacent populations of noxious weeds have a high potential to spread further into the fire area. - Very Likely Probability of Damage or Loss / Moderate Consequences …**VERY HIGH RISK**

Critical big game habitat. Approximately 250 acres of critical big game winter range were affected by the fire. This loss of habitat will impact wildlife during the remainder of this summer, fall and winter seasons. Effects to the native and naturalized plant communities and soil resources will determine future uses of the area for wildlife. Establishing vegetation to stabilize soil and provide wildlife forage and browse would contribute to the maintenance of wildlife population numbers in the area. - Likely Probability of Damage or Loss / Moderate Consequences …**HIGH RISK**

Sensitive species habitat – The Cove Creek Fire burned nearly 1,000 acres in the Headwaters of Clear Creek (HUC 6) watershed. This watershed provides key habitat for the Bonneville Cutthroat Trout (BCT), a Forest Service sensitive species. While just half of the burned area (around 500 acres) has been rated as high or moderate severity, the potential loss of expensive habitat improvements is substantial. In fact, since 2010, the Forest Service and the State of Utah have spent more than $400,000 on BCT habitat restoration and improvement projects in both Shingle and Clear Creeks. To stabilize (up to six) small tributaries by seeding or mulching would help to protect these investments. - Likely Probability of Damage or Loss / Major Consequences …**VERY HIGH RISK**

CULTURAL AND HERITAGE RESOURCES

Cultural resources on NFS lands which are listed on or potentially eligible for the National Register of Historic Places. – There are three mapped prehistoric sites within the burned area, totalling slightly less than three acres. Two of these have been identified as sites that are not eligible for recognition under the National Register, but the third site is potentially eligible and should be protected from any ground disturbing activities. - Possible Probability of Damage or Loss / Minor Consequences… **LOW**

C. Probability of Completing Emergency Stabilization Treatments Prior to a Storm Damaging Event:

Land	**70 %**	**Channel**	**NA**	**Roads / Trails**	**85 %**	**Protection / Safety**	**90 %**

D. Probability of Treatment Success: (on NFS lands)

	← Years After Treatment →

Treatment Types:	1	3	5
Land Treatments (seeding and mulching)	75%	80%	85%
Channel Treatments (None)	NA	NA	NA
Road / Trail Treatments (drainage)	85 %	85 %	85 %
Protection / Safety Treatments (signs)	90 %	90 %	90 %

E. The Cost of Taking No - Action: $ 591,412

Monetary analysis of the cost of taking no action considered loss of and effects to; road and trail infrastructure, conversion of native or naturalized plant communities to invasive/noxious weedy species, replacement and loss of use costs for key infrastructure in I-70 and major power grid. Further effects were considered to key partners with loss of habitat improvements in sensitive species areas and effects to human life and safety and possible property damage while on NFS lands. While still extremely valuable, monetary values were not considered in the cost of taking no action, for hydrologic function, soil productivity, off forest infrastructure, and human life and safety on county and state roads. Cost estimates were obtained through consultation with Forest Service engineers, hydrologists, soil scientists, botanists, ecologists, Pacificorp power company, and public safety experts with the Utah Highway Patrol and include repair/reconstruction costs and where appropriate replacement costs.

F. The Cost of the Selected Alternative: $ 165,050 (including loss)

Values-At-Risk: See VAR Spreadsheet

G. Skills Represented on Burned-Area Survey Team:

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

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H. Treatment Narratives: Describe the emergency treatments, where and how they will be applied-and, what they are intended to do. This information helps to determine qualifiying treatments for the appropriate funding authorities. For seeding treatments include species, application rates and species selection rationale.

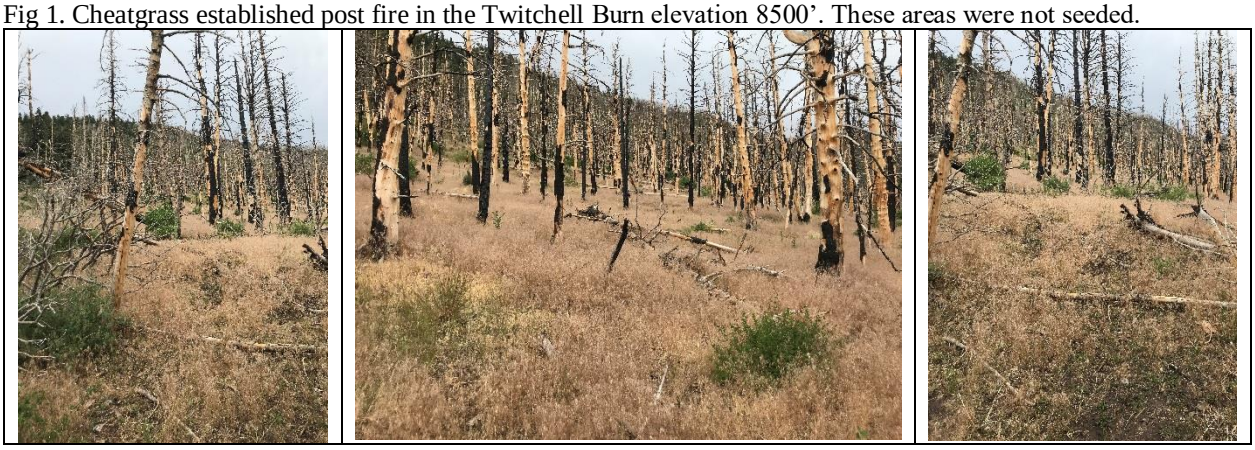
LAND TREATMENTS

Broadcast Seeding

Findings
The initial assessment of the burned area and its surrounding landscape identified risks to the **Native or naturalized plant communities on NFS land where invasive species or noxious weeds are absent or present in only minor amounts**. The same assessment identified risks to **Critical and Substantial Big Game Habitat on NFS land**. Critical and Substantial Big Game habitat is not a critical BAER value and restoration of this habitat is not the sole purpose for the seeding proposal. It has been brought forward to disclose the values of partnering agencies concerned with the area. Soil stabilization and invasive/noxious weed exclusion are the main objectives of the proposed treatment.

Risk 1- Threat of expanding infestations of noxious weeds:
The adjacent landscape, as well as along road and trail corridors within the fire, contain undesirable plant species. There is a high probability of rapid invasion and/or expansion of noxious weeds and other invasive, undesirable species in and around the burned area. Because of inherent dry conditions and proximity to existing populations of invasive species and noxious weeds the entire burn area is prone to infestation. Burn areas on this part of the Fishlake National Forest are highly susceptible to Cheatgrass invasion if left untreated. Recent publications have shown that seeding with perennial bunchgrasses has been successful at competitively excluding Cheatgrass (JFSP Project ID: 15-2-01-22).
The restoration that would be recommended if the burn area is converted to an undesirable annual grass system is similar to the treatments the BAER team is requesting post fire. However, the cost to restore this system, once Cheatgrass is established, exceeds the proposed post fire treatment because of the added cost to chemically remove it. That cost is estimated to be approximately $250,000 more than the seeding proposed below.

Fig 1. Cheatgrass established post fire in the Twitchell Burn elevation 8500'. These areas were not seeded.



Risk 2 – Soil Erosion and loss: Utilization of cereal grains and perennial grasses will stabilize hillslopes and augment revegetation where seed sources are limited due to the pre-burn conditions of a limited understory. The Forest has experienced success with stabilizing hillslopes with past seeding treatments i.e. Sawmill and Clay Springs fires with perennial grass seed mixes.

Monitoring data from past BAER seeding treatments on the Forest, both qualitative and quantitative, supports the recommendation of seeding as an effective year 1 treatment for soil stabilization and noxious weed prevention.

- Year 1 results on the Sawmill BAER reseeding. Seeded in April of 2010, first reading in June of 2010 – 31% ground cover. Second reading July of 2010 – 53% ground cover. In 2011 the plots recorded 65% ground cover all from an increase in vegetation and litter (Tait 2015)
- Year 1 results on the Clay Springs BAER reseeding. Seeded in the fall of 2013 with native and non-native grasses. Qualitative estimates of 50-70% ground cover observed.

Proposed Treatments

For these reasons, we propose a seeding of 15lbs. per acre with a combination seed mix of native grass and cereal grain species that are intended to supplement the post fire response of the existing plant species and compete well with noxious weeds. The seeding will take place by means of an aerially broadcast.seed mix. This seeding, should counter the potential establishment, and spread of noxious weeds and invasive species. The burned area is essentially free of noxious weeds; however, the area is on the receiving edge of noxious weeds coming in from all directions. The burn area will require use of an early detection/rapid response strategy with the noxious weed program for several years.
The Utah Division of Wildlife Resources (UDWR) has a high interest in the successful restoration of the burned area as the bench areas are Big Game winter range. In addition, the remainder of the fire is Substantial summer range for Big Game. Because of this vested interest, the UDWR is willing to supplement our seed mix with forb, shrub and additional grass species in an effort to speed up the recovery of highly used wildlife species.

The recommended seed mix is "of species known to be effective for erosion control, adapted to the target area and compatible with future management objectives". (FSH 2509.13,20 p. 13) The seed mix contains native species and cereal grain to help restore ecosystem function by reducing erosion with the early germinating cereal grains and protecting against the invasion of noxious weeds through the establishment of native grasses.

The seed purchased will be certified to the variety claimed. Also the mix will be certified that No noxious weed seeds are present. Actual costs may vary depending on availability at time of purchase from successful bidder.

The following table shows the pounds per acre that is used in the seed mix.

	Application-lbs./acre	Cost $/lbs. Estimate
Sandberg Bluegrass	1.5	5.37
Bottlebrush Squirreltail	1	9.20
Bluebunch Wheatgrass	1	7.25
Western Wheatgrass	1.5	3.90
Winter Wheat	10	0.35
	Total = 15 lbs./acre	

This seed mix includes the recommendations of District and Forest Specialists. We referred to seed mixes previously used on the Forest and the Intermountain Planting guide, from Utah State University Cooperative extension Service, while designing these seed mixes to achieve the FSM objectives listed above.

The seeding is being pursued as a partnership project with the state of UT. Opportunities to utilize available seed from the state seed warehouse in Ephraim as well as other sources are being considered.

Aerial Seeding Monitoring
Implementation monitoring of the seeding application will include inspections of the seed distribution by known area markers on the ground to verify adequate seed density/sq. ft.
Adequate winter or spring moisture will be key to the success of the aerial seeding treatment. It will be important to monitor the establishment of seeded species during the 2019 growing season.

Noxious Weed Monitoring and Spot Treatment

The Beaver Ranger District weed crew will implement this strategy in 2019 and 2020 to detect and treat any new infestations of noxious weeds in the burned area. Two aggressive weeds need immediate attention: Scotch Thistle and Leafy Spurge. Musk Thistle is also found on areas adjacent to the fire. In addition to ensuring the existing noxious weed populations do not spread into the burned area, work needs to be completed to monitor, detect, and treat any new weed infestations brought in on suppression equipment. The suppression response to the fire installed approximately 16 miles of dozer line on direct and indirect line construction efforts. The recently burned area is a prime disturbed site for noxious weeds to occupy.

The treatment provides for a weed crew to monitor ~~a 600 foot buffered area around~~ dozer lines. This includes the motorized system that was widened with equipment for suppression efforts. Also points of entry such as helispots, sling sites, and spike camps will be monitored. In total ~~1,200~~ 82 acres will be monitored and treated as needed.

Storm Patrols

Following large storm events or as reports are received about debris flows on roads and trails Forest staff will patrol the area and address the problem. This may involve equipment use to grade road surfaces for proper drainage and reinforce water-bars. Additionally, staff will make recommendations for interim BAER funding requests that may be needed.

ROAD AND TRAIL TREATMENTS

Road Stabilization

Purpose of Treatment: To protect the road infrastructre from erosion damage by ensuring proper drainage through installing culverts and ditching to direct water off the road surface, installing rolling dips at low crossings, installing waterbars and adequate run out areas to reduce or eliminate the possibility of the road becoming a channel.

General Description: Upsize culverts at 3 sites where fire affected drainages cross forest system roads. Waterbar and install runout areas on roads that are within or directly adjacent to the burned areas. These roads are susceptible to increased erosion as they are within the fire perimeter. Roads will not be altered to a higher improvement maintenance level..

Location (Suitable) Sites: 3 culverts are to be installed in 3 different sites. One at FR1136 and FR2326 intersection, and two on the FR1026/1024 intersection. This last site is on private land and the FS has the

maintenance responsibility for these roads that cross private land. The FS has existing easements for these roads. (see Roads Treatment Map).

Trail Stabilization

Purpose of Treatment: Grade dips, and waterbars will divert water off of the trail preventing erosion and debris flows from degrading the trail. These methods will keep the trail from becoming a stream channel and prevent the loss of the trail network. These methods apply to motorized and non-motorized trails.

General Description: Install drainage structures to prevent erosion, mass wasting and mud flows that are predicted to occur, or that have occurred, following the burn. Motorized trails would be treated with a SWECO trail cat/dozer to construct adequate waterbars and grade dips. Non-motorized trails will be treated with handcrews. These measures would reduce the risk to trail infrastructure.

Location (Suitable) Sites: Locate drainage structures along 2.5 miles of non-motorized and along 2 miles of motorized trail within the fire perimeter that are adjacent to or will be influenced by overland flows off of water repellant soils. (see Road/Trail Treatments Map).

PROTECTION AND SAFETY MEASURES

Road and Trail Burned Area Warning Signs

Purpose of Treatment: The purpose of the BURNED-AREA signs is to warn the public of potential hazards resulting from the effects of the fire, such as rolling rocks, falling trees, road washouts, and flash floods.

General Description: This treatment is for the installation of burned-area warning signs. Burned-area signs consist of a warning to the public identifying of the possible dangers associated with a burned-area. It shall contain language listing items to be aware of when entering a burn area such as falling trees and limbs, rolling rocks, and flash floods.

Location (Suitable) Sites: These signs shall be installed at all entries into the fire perimeter. The location of these signs shall be along roads and trails that access the burned area (4 signs in total). All signs will be placed facing the direction of travel entering the burn area.

Implementation Monitoring:
Determine if the following proposed treatments were implemented as outlined in the BAER report:

- **Broadcast Seeding:** Are the seed mixtures applied to the intended sites with the proper rates of application?
- **Explanatory Signs:** Are the signs installed at the designated locations with the intended messages? Are the signs clear and legible? Was the installation timely? Did costs approximate budgeted allocations?
- **Road and Trail:** Are drainage structures installed correctly? Were culverts cleaned and are grade dips and water bars functioning properly?

I. Effectiveness 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.

Interim Evaluations
The Implementation Team Leader will conduct periodic evaluations with the District and Forest / Implementation Team to assess implementation progress, effectiveness monitoring and to determine if parameters measured and sampling frequency meet the planned objectives. The BAER team understands that monitoring funds could be available for effectiveness monitoring in years 2 and 3 provided that the Fishlake National Forest submits interim reports to request additional funding and provided that the Forest documents and shares their findings.

Monitoring Reports
The overall results will be presented in a detailed summary report during 2019. This report will be submitted to the Forest Supervisor, District Rangers, the Regional Office and all cooperating agencies and other interested parties.

Annual Financial Requirements
Report cost of monitoring by year.

Part VI – Emergency Stabilization Treatments and Source of Funds

			NFS Lands				Other Lands			All
		Unit	# of		Other	# of	Fed	# of	Non Fed	Total
Line Items	Units	Cost	Units	BAER $	$	units	$	Units	$	$
A. Land Treatments										
Seed Purchase	acres	45	990	$44,451	$0		$0		$0	$44,451
Aerial Application	acres	20	990	$19,800	$0		$0		$0	$19,800
Weed Treatment-ac	acres	36.7	82	$3,009	$0		$0		$0	$3,009
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$67,260	$0		$0		$0	$67,260
B. Channel Treatments										
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Channel Treat.				$0	$0		$0		$0	$0
C. Road and Trails										
Trail Drainage-mile	mile	1197	4.5	$5,387	$0		$0		$0	$5,387
Road Drainage - mile	mile	2627	4.2	$11,033	$0		$0		$0	$11,033
Warning Signs	each	320	4	$1,280	$0		$0		$0	$1,280
		0	0	$0			$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Road & Trails				$17,700	$0		$0		$0	$17,700
D. Protection/Safety										
	0	0	0	$0	$0		$0		$0	$0
Storm Patrol	Job	3000	1	$3,000	$0		$0		$0	$3,000
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Structures				$3,000	$0		$0		$0	$3,000
E. BAER Evaluation										
Asess. & Report	1	10,000	1	$10,000			$0		$0	$10,000
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				$10,000	$0		$0		$0	$10,000
F. Monitoring										
monitoring plan	Job	0	0	$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Monitoring				$0	$0		$0		$0	$0
G. Totals				$87,960	$0		**$0**		**$0**	**$87,960**
Previously approved										
Total for this request				**$87,960**						

PART VII - APPROVALS

1. /s/DAN CHILD_ 08/24/18
   Acting Forest Supervisor (signature) Date

2. /s/___
   Regional Forester (signature) Date