



Forest Service

Manti-La Sal National Forest

Supervisor's Office
599 West Price River Drive
Price, UT 84501
435-637-2817
FAX: 435-637-4940

File Code: 2520

Date: September 7, 2018

Route To:

Subject: Coal Hollow Interim #1 BAER Request

To: R4, Regional Forester

The Coal Hollow fire has burned approximately 29,912 acres. On August 29th an Initial BAER request was submitted and approved for \$244,010. A full post fire BAER assessment has been completed and additional critical BAER values were identified during the assessment. Additional treatments were identified and are included in this request for an additional \$233,287. Please find enclosed an Interim #1 Request for additional BAER funding for the Coal Hollow Fire on the Manti-La Sal National Forest in the amount of \$233,287. The total of the Initial and Interim #1 request is \$477,297.

If you have any questions, please call Mat Meccariello Staff Officer, at (435) 636-3509.


RYAN E. NEHL

Forest Supervisor

cc: Jeff Bruggink, Darren Olsen, Kyle Beagley, Mat Meccariello, Mike Natharius, Mark Muir



America's Working Forests – Caring Every Day in Every Way

Printed on Recycled Paper



Date of Report: August 27, 2018

September 7, 2018

Interim #1 is shown in blue

BURNED-AREA REPORT

(Reference FSH 2509.13)

PART I - TYPE OF REQUEST**A. Type of Report**

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

B. Type of Action

- 1. Initial Request (Best estimate of funds needed to complete eligible stabilization measures a full BAER analysis will follow this initial request)
- 2. Interim Report # 1
 - 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:** Coal Hollow**B. Fire Number:** UT-MLF-008333**C. State:** UT**D. County:** Utah**E. Region:** 04**F. Forest:** Manti-La Sal**G. District:** Ferron-Price, San Pete**H. Fire Incident Job Code:** P4L2QV18 (0410)**I. Date Fire Started:** 08/04/2018**J. Date Fire Contained:** 80% Contained as of 9/2/2018**K. Suppression Cost:****L. Fire Suppression Damages Repaired with Suppression Funds**

1. Fireline waterbarred and brush brought back on line (miles): 4 miles completed, 12 miles work in progress
2. Fireline seeded (miles): 4 miles
3. Other (identify): N/A

M. Watershed Numbers and Percentage Burned

6 th Field Sub-Watershed	HUC Number	Total Acres	Acres Burned	Percent Burned
Lower Soldier Creek	160202020107	36,959	9,547	26
Mill Fork	160202020104	10,560	7,385	70
Starvation Creek	160202020101	25,405	3,535	14
Upper Soldier Creek	160202020102	25,096	6,711	27
Lake Fork	160202020106	29,356	2,723	9
Middle Soldier Creek	160202020105	11,010	10	0.09

N. Total Acres Burned: 29,912 acres

Land ownership	Acres burned	Percent of burned area
NFS	23,578	79%
BLM	1,488	5%
State	3,551	12%
Private	1,295	4%

O. Vegetation Types:

Forest cover types that are present across the burn area are spruce, fir, mixed conifer, aspen, mountain brush, snowberry, rabbit brush, and sagebrush.

P. Dominant Soils:

Lithic Haplodyolls, Pachic Haplodyolls, Lithic Eutrocrepts, Calcic Haploxeralfs, Typic Calcixercepts, Pachic Argixerolls

Q. Geologic Types:

Parent material of the burned area is comprised of sedimentary formations, highly dissected shales, sandstones and limestones. Alluvial fans and colluvium are found in the bottoms. Formations found within the burn include North Horn, Indianola Sandstone, Twin Creek Limestone and Flagstaff Limestone.

R. Miles of Stream Channels by Order or Class:

21 miles of perennial, 46 miles of intermittent and ephemeral

S. Transportation System

Trails: 21 miles Roads: 29.1 miles (NFS)

Trails – In discussion with District recreation staff and the District Ranger, all trails within the burned area had not been maintained in years and there are no established trail heads.

PART III - WATERSHED CONDITION

A. Soil Burn Severity for the Whole Burned Area (acres):

Severity	Acres Burned	Percent
High	3,191	11%
Moderate	15,678	52%
Low	8,258	28%
Unburned	2,785	9%

B. Water Repellent Soils Acres: 11,000 acres

C. Soil Erosion Hazard Rating:

Erosion Hazard Rating	Acres
Slight	749
Moderate	3,430
Severe	19,288

D. Erosion Potential: 11 tons/acre this value represents the average soil loss in moderate and high severity across the total burned area of the soil map units modeled on NFS lands.

E. Sediment Potential: 819 cubic yards/square mile this values represents the total sediment delivery in moderate and high severity across the total burned area of the soil map units modeled on NFS lands.

PART IV - HYDROLOGIC DESIGN FACTORS

A. Estimated Vegetative Recovery Period, (years): 5 years

B. Design Chance of Success, (percent): 80%

C. Equivalent Design Recurrence Interval, (years): 10 year

D. Design Storm Duration, (hours): 1 Hour

E. Design Storm Magnitude, (inches): 1.02 inches

F. Design Flow, (cubic feet / second/ square mile): 3.2 csm

G. Estimated Reduction in Infiltration, (percent): 37%

H. Adjusted Design Flow, (cfs per square mile): 16.8 csm

PART V - SUMMARY OF ANALYSIS

Introduction/Background:

The Coal Hollow fire is a lightning caused wildfire that began on August 4, 2018, approximately 15 miles SE of Spanish Fork, UT on the Manti-LaSal National Forest. As of August 27-September 6th, 2018, the fire had burned approximately 29,912 acres and was 80% contained. A BAER team will be starting on August 29 to complete a full burned area assessment. Several forest BAER team members have identified initial values at risk and determined unacceptable risk to those values. This request is to begin protection of BAER values at risk that are high priority for protection as identified by forest BAER team members. High intensity thunderstorms with precipitation rates of approximately 1" per hour are the primary concern for several watersheds within the burned area that have Forest Service transportation infrastructure. Some initial storm damage has already occurred, and additional damaging storms are expected. This initial request is to address continued threats that could occur within the next several weeks prior to a complete BAER assessment.

A BAER team was assembled on August 29th and started the full BAER assessment. A BARC map was also provided to the team on the 29th. Field assessments and soil burn severity mapping occurred between August 30 thru September 1st. A finalized soil burn severity map was completed on September 2nd. The fire burned across numerous land ownerships including Manti-La Sal NF, BLM, State Lands and private properties. The soil burn severity map shows that 63% of the burned area experienced high and moderate soil burn severity. Elevated post fire erosion, deposition and runoff has and will continue to occur within and downstream of the burned area. Field assessments confirmed unacceptable risks to Forest Service road infrastructure within the burned area. Soil burn severity information was shared with the USGS and they will perform a post-fire debris flow hazards analysis for the burned area. Results of this modeling will be available at [USGS post-fire debris flow hazard assessment webpage.](#)

Summary of Watershed Response

Hydrologic Response: The primary watershed responses of the Coal Hollow fire are expected to include: 1) an initial flush of ash and debris, 2) rill and gully erosion on steep slopes within the burned area, and 3) potential flash floods and debris flows during summer monsoonal precipitation events (July – September). Due to the steepness of the topography in drainages with large areas now devoid of vegetation and groundcover after the fire, storms will likely create increased surface flow that could trigger floods or debris flows with high sediment volumes. These responses are expected to be most pronounced during the first 1- 3 years after the fire, and will become less evident as vegetation and soil-hydrologic function recover.

Predicted post-fire peak flows for the 2 year storm event are 6-32 times greater than pre-fire conditions, and 3 – 9 times greater for the 10 year design storm. In addition, field observations have already shown post fire flooding and debris flows from the Coal Hollow fire, even after fairly common rain events (< 2 year recurrence interval). These elevated post-fire flows could lead to plugged culverts, flow over road surfaces, rill and gully erosion of cut and fill slopes, erosion and deposition along road surfaces and relief ditches, loss of long-term soil productivity, and threats to human life and safety.

Soil Burn Severity: Much of the moderate and high burn severity areas visited showed 20 percent or less remaining effective vegetative ground cover. Vegetation burn intensity ranged from the higher end of moderate to high in these locations as well. Soil hydrophobicity ranged from low to moderate in moderate burn severity areas and moderate to high in high burn severity locations. For the most part, it appeared this fire had enough residence time on the ground and in the canopy to consume much of the vegetative cover, but didn't stick around long enough to have considerable impacts to the soil itself. Most locations of both moderate and high severity showed roots, that although charred, were still intact and that soil structure was largely unchanged. Ash was predominantly white and gray and depths were relatively shallow at around 1 – 2 cm where it occurred on sites visited. This bodes well for natural vegetative recovery as less impact of burning to the soil

directly generally indicates that a viable seed bed should still be intact in most places where it existed before. Obviously the success is dependent on the absence of extensive sheeting and rilling occurring in these locations as storms are experienced. The burned area had experienced a number of storms prior to the fieldwork for this assessment and considerable sheet / rill erosion was only observed on a few of the high and moderate soil burn severity areas visited.

A. Describe Critical Values/Resources and Threats:

The forest has began assessing the area for post-fire emergencies. The forest has identified the initial values at risk and post-fire threats. Interim reports may be submitted as complete BAER team assessments are completed and/or the need to repair or maintain BAER treatments emerges.

The risk matrix below, Exhibit 2 of Interim Directive No.: 2520-2010-1 was used to evaluate the Risk Level for each value identified during Assessment.

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

- Human Life and Safety:** There is a potential threat to Forest visitors and agency personnel traveling along the burned watershed within and adjacent to the fire area. Threats included falling trees and debris flows across and on road systems **or people getting caught in low lying areas during flash flood or debris flow events.** Most of the fire area is closed to public access to address these threats. The general area around the burn is heavily used by hunters in late summer and fall.
- High Risk (Possible probability; Major consequence)** that forest visitors and agency personnel could be hit by falling hazard trees, or caught in or behind debris-laden floodwaters when traveling within the burn area. Area closures are in place. This request includes road barrier treatments, and warning sign treatments may be submitted in an interim request.

There is high risk (Possible probability; Major consequence) to travelers along travel routes within the burned area. Travelers could become stranded when roads become impassable due to sediment/debris deposition on roads or loss of sections of roads. Hazard signs will be posted on roads entering the burned area to alert users of the post-fire hazards associated within the burned area.

- Property:** Potential threats to NFS roads exist within and immediately below/downstream of the burn scar. Immediate attention to address threats are needed in Lake Fork, Clear Creek, and Dairy Fork drainages. The existing drainage features on Forest Service Routes 70, 6, and 150 are not functioning. Route 70 is also at risk of scour and failure due to elevated post-fire flood flows in Lake Fork Creek

Very High Risk (Likely probability; Major consequence) that the road infrastructure could be impacted by flash flooding and/ or debris flows during a high intensity precipitation events. If such an event were to occur, the increased watershed response from the post-fire condition is expected to

result in plugging and failure of culverts, stream channel diversion, and erosion and loss of fill material from the road prism. Treatments are recommended.

4. **Natural Resources: High Risk (Likely probability; Moderate consequence) to soil productivity and hydrologic function** due to the threat of increased erosion and watershed response to precipitation events on areas that experienced moderate and high soil burn severity. The loss of ground cover and presence of hydrophobic soils will result in increased soil erosion, debris flow initiation, channel scouring, and sedimentation during runoff producing events.

High risk to native plant communities due to the threat from the spread of noxious weeds and invasive plant species. Known noxious weed and invasive plant populations exist within and immediately adjacent to the burned area. The probability of damage or loss is very likely and the magnitude of consequences is moderate.

5. **Cultural Resources:**

Low risk (Unlikely probability; Moderate consequence) to a cultural resource site located within the burned area.

A complete list of Values at Risk is attached as Appendix A Coal Hollow VAR spreadsheet.

B. Emergency Treatment Objectives:

1. Protection/Safety Treatments:

Hazard Warning Signs The objective of this treatment is to reduce risks to human life and safety by warning Forest visitors/users of existing post-fire threats while traveling within the burned area.

“Entering Burned Area” signs are needed to alert the public of possible threats to their safety that exist within the burned area. The signs contain language specifying items to be aware of when entering a burn area such as falling trees and limbs, rolling rocks, flash floods and debris flows.

The fire area is currently closed to public access. Temporary road barriers will improve closure effectiveness.

Temporary road barricades are intended to keep people out of identified hazardous areas within the burned area.

2. Roads:

- Increase capacity of drainage structures by cleaning out culverts, ditches and removing sediment/debris in existing sediment basins.
- Install debris/sediment catchment structures above roads in 1 order channels. These are to reduce energy and sediment reaching the road infrastructure.
- Minimize or prevent impacts on soil and water resources resulting from increased post fire runoff should the existing structure become plugged and wash out resulting in loss of fill.
- Minimize risk for potential impacts to the life and safety of administrative and public road users.
- Install additional rip-rap or gabion armoring to sections of road where post-fire flooding threatens to undermine the road prism, to avoid lengthy closures and more expensive repairs on a main arterial road in the future.
- **Road Storm Patrol and Response** - The overall objective of this treatment is to reduce the potential for loss and further damage to Forest roads and culverts as a result of storm events.

3. EDRR:

The objective of this treatment is to minimize threats to native and naturalized ecosystems by minimizing the potential for expansion of non-native invasive species (NNIS) into the burned area; minimize expected invasion of NNIS within and adjacent to the area where soils and vegetation was

disturbed as a result of fire suppression activities. Recently burned areas are very susceptible to spread and infestation of invasive/noxious species.

4. Aerial Seeding:

The objectives of this treatment are to maintain site/soil productivity, decrease erosion and overland flow from high soil burn severity areas and reduce expected invasion of noxious weeds within and adjacent to the treatment areas.

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

Land **70** % Channel **NA** % Roads/Trails **90** % Protection/Safety **95%**

D. Probability of Treatment Success

	Years after Treatment		
	1	3	5
Land	65	65	70
Channel	N/A	N/A	N/A
Roads/Trails	75	95	95
Protection/Safety	90	90	95

E. Cost of No-Action (Including Loss): \$2,151,600

F. Cost of Selected Alternative (Including Loss): \$ 490,000

G. Skills Represented on Burned Area Survey Team:

- | | | | | |
|---|--|--|---|---|
| <input checked="" type="checkbox"/> Hydrology | <input checked="" type="checkbox"/> Soils | <input type="checkbox"/> Geology | <input type="checkbox"/> Range | <input checked="" type="checkbox"/> NOAA-NWS |
| <input type="checkbox"/> Forestry | <input checked="" type="checkbox"/> Wildlife | <input checked="" type="checkbox"/> PIO | <input checked="" type="checkbox"/> Engineering | <input checked="" type="checkbox"/> Trails/Recreation |
| <input type="checkbox"/> Contracting | <input type="checkbox"/> Ecology | <input checked="" type="checkbox"/> Botany | <input checked="" type="checkbox"/> Archaeology | |
| <input type="checkbox"/> Fisheries | <input type="checkbox"/> Research | <input type="checkbox"/> Landscape Arch | <input checked="" type="checkbox"/> GIS | |

Team Leader: Mike Natharius Region 3

Email: mnatharius@fs.fed.us

Phone: [575-313-0524](tel:575-313-0524)

Forest BAER Coordinator: Mat Meccariello

Email: mmeccariello@fs.fed.us

Phone: [435-696-3509](tel:435-696-3509)

BAER Team Members

Eric Robertson – Soils
Mark Muir-Hydrology
Kelly Owens-Hydrology
Daniel Luke-Engineer
Angela Etapa-Engineer

Daniel Lay-Botany
Sara Herrera-Heritage
Alex Gonzales-GIS
Austin Hiskey-Recreation
Kevin Albrecht-Wildlife
Brian McInerney-Hydrologist NWS
Rosanne Fillmore-PIO

H. Treatment Narrative:

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

Land Treatments

Early Detection Rapid Response

Location/Suitable Sites: Areas adjacent to existing known weed infestations within and directly adjacent to the Coal Hollow Fire burned area. EDRR BAER treatments will only be applied to native or naturalized communities on NFS where noxious weeds are absent or present only on minor amounts. Focus areas will include areas that subject to new disturbance during suppression activities and high priority natural communities that were subject to moderate and high burn severities.

Design/Construction Specifications: Select herbicide, application rate, and application timing based on specific weed being treated, and access to the location of the infestation; Consideration for TES (listed species) habitat and sensitivity when selecting appropriate herbicide. Thorough reconnaissance will be conducted in and around all sites identified in the Noxious Weed Assessment. These sites will be monitored by crews on foot or by vehicle as appropriate. If noxious weed infestations are identified an appropriate treatment will be implemented to eradicate or control the infestation (i.e. hand pulling, herbicide application, biological agent control, seeding of native species).

Purpose of Treatment: Prevent establishment of new infestations, prevent spread of existing infestations, and prevent increase in weed density in existing infestations

1) Aerial Seeding

The purpose of aerial seeding is to mitigate unacceptable risk to multiple critical BAER values at risk due to post-fire conditions. The primary values identified as having unacceptable risk associated with them and are being addressed with the proposed seeding treatment are maintenance of soil/site productivity, hydrologic function, effects to water quality and risk to native plant communities. The intent of seeding for soil productivity and hydrologic function is to reduce soil erosion rates that may otherwise impact proper functionality of vegetation communities and watersheds. The goal of seeding to address native plant communities is to reduce the potential spread of invasive / noxious weeds such as musk thistle and whitetop into areas that previously did not contain populations.

The location or placement of the proposed seeding areas were prioritized to maximize the potential for added benefits to other critical BAER values at risk that may already be addressed through other proposed BAER treatments.

The following criteria/rule set was developed and used in identifying seeding treatment areas. These treatment areas were identified as having the highest probability of success.

- Seeding areas that were previously high density mixed conifer stands with no aspen component (the forest's mid-scale existing vegetation layer was used in GIS to determine this). Closed canopy, older growth mixed conifer without an aspen component generally has a relatively sparse herbaceous understory. Thus, it typically lacks a sufficient seedbank for natural vegetative recovery.
- Focusing on placement of treatment areas on north-facing slopes as it provides the best chance of success for germination and growth given the cooler, wetter climatic conditions present in these locations. Elevation ranges of 7500 ft to 8900 ft. Higher elevations tend to be increase seeding success.
- Based on discussion with forest personnel, late fall seeding of cool season perennial grasses prior to winter snowpack has been shown to be reasonably successful with germination and growth in the early spring months. So, there exists an adequate timing window to implement this treatment in the following months.
- The use of triticale, that has relatively quick germination and growth response after application will aid in adequate cover and basal area to mitigate against potential soil loss in the first year. It also has the benefit laying down and acting as a mulch in the second year to aid with erosion control. Triticale is the recommended cereal grain being proposed in the seed mix because it has the advantage of being around 90 percent sterile after the first year. This should help reduce competition for native, perennial grasses that should have a good opportunity to establish in the second year.
- Prioritizing seeding those areas that are most at risk of potential soil loss by focusing on high soil burn severity locations within a 30 to 60 percent slope range which contain soils that produced the highest amount of modeled soil loss.

The following table shows the species in the mix and the pounds per acre application rate.

Species		Planting Rate (pls #'s/acre)
Sterile Triticale	Triticosecate	35
Snake River Wheatgrass	Elymus Wawawaiensis	1
Thickspike Wheatgrass	Elymus lanceolatus	1
Big Sandberg	Poa secunda	1
Total		38

Channel Treatments:

None are proposed

Roads Treatments

Treatments include protection of road infrastructure. Existing culverts and ditches in priority road segments are being cleaned of sediment and debris to allow proper road drainage. These basins are adjacent to FS roads. Log debris and sediment structures are being installed on key 1st-order drainages immediately upstream of priority roads at greatest risk. Rip-rap will be used to protect drainage inlets/outlets and used to protect 1st-order channels from down cutting next to critical road segments. Similarly, rip-rap or gabion baskets will be installed at highly vulnerable sections of FSR 70 along Lake Fork Creek. These treatments are expected to mitigate the existing threat to the road prisms, as well as downstream water quality.

This treatment is intended to get culverts and ditchlines cleaned after damaging storms so that the road drainage system is once again functioning properly and ready to handle the next storm event.

Human Life and Safety Treatments

Treatments include posting of temporary road barriers to enforce closure of hazardous road segments.

Warning Signs

This treatment is for the installation of burned area warning signs to warn Forest users of changed conditions and hazards within the burned area. Burned area signs warn the public of the possible dangers associated with a burned area on major entry points into the burned area (roads and trails). It shall contain language specifying items to be aware of when entering a burn area such as falling trees and limbs, rolling rocks, and the likelihood for debris flows and flash floods, don't camp in floodplains. Warning signs will be placed at key access roads and entering the burned area.

Temporary road barricades

This treatment is for placement of temporary road barricades to be placed on roads that lead to areas where known hazards have been identified or where flash flooding/debris flows are likely to occur. If debris flows or sections of roads are lost

Effectiveness Monitoring Treatments

Please see attached monitoring proposal.

This treatment is to monitor the effectiveness of seeding to reduce soil loss and to protect burned areas from invasive plant species. Published and grey literature show mixed success of seeding in reaching BAER protection objectives to BAER values at risk. The results from this monitoring will be used to make better decisions with emergency treatments in the future to reach risk reduction objectives. The monitoring results will be applicable to other areas in the Great Basin and Rocky Mountain provinces.

Part VI – Emergency Stabilization Treatments and Source of Funds

A. Land Treatments								
EDRR	Acre	32	1094	\$35,008	\$0	\$0	\$0	\$35,008
Aerial Seeding	Acre	83	993	\$82,419	\$0	\$0	\$0	\$82,419
				\$0	\$0	\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0	\$0	\$0	\$0
<i>Subtotal Land Treatments</i>				\$117,427	\$0	\$0	\$0	\$117,427
B. Channel Treatments								
				\$0	\$0	\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0	\$0	\$0	\$0
<i>Subtotal Channel Treat.</i>				\$0	\$0	\$0	\$0	\$0
C. Road and Trails								
Cleaning culverts,ditch	Job	83,010	1	\$83,010	\$0	\$0	\$0	\$83,010
1,400 CY rip rap for ba	CY	110	1400	\$154,000	\$0	\$0	\$0	\$154,000
Seed for disturbed con	Ea	1,000	1	\$1,000	\$0	\$0	\$0	\$1,000
Storm inspection & Re	Lump	29,950	1	\$29,950	\$0	\$0	\$0	\$29,950
Culvert Upsize Linear	LF	87	480	\$41,760	\$0	\$0	\$0	\$41,760
300 CY Rip Rap	Ea	110	300	\$33,000		\$0	\$0	\$33,000
Closure Gate	Each	1,200	1	\$1,200		\$0	\$0	\$1,200
Trash Racks Culverts	Ea	500	3	\$1,500		\$0	\$0	\$1,500
<i>Insert new items above this line!</i>				\$0	\$0	\$0	\$0	\$0
<i>Subtotal Road & Trails</i>				\$345,420	\$0	\$0	\$0	\$345,420
D. Protection/Safety								
Temporary road barrie	Ea	300	20	\$6,000	\$0	\$0	\$0	\$6,000
Warning signs	Ea	250	11	\$2,750	\$0	\$0	\$0	\$2,750
				\$0	\$0	\$0	\$0	\$0
<i>Insert new items above this line!</i>				\$0	\$0	\$0	\$0	\$0
<i>Subtotal Structures</i>				\$8,750	\$0	\$0	\$0	\$8,750
E. BAER Evaluation								
Assessment	Team	35,000	1	---		\$0	\$0	\$0
<i>Insert new items above this line!</i>				---	\$0	\$0	\$0	\$0
<i>Subtotal Evaluation</i>				---	\$0	\$0	\$0	\$0
F. Monitoring								
Level II Monitoring				\$5,700	\$0	\$0	\$0	\$5,700
<i>Insert new items above this line!</i>				\$0	\$0	\$0	\$0	\$0
<i>Subtotal Monitoring</i>				\$5,700	\$0	\$0	\$0	\$5,700
G. Totals				\$477,297	\$0	\$0	\$0	\$477,297
Previously approved				\$244,010				
Total for this request				\$233,287				

PART VII • APPROVALS

/s/ Ryan E. Nehl

RYAN E. NEHL
Forest Supervisor

1.

Forest Supervisor (signature)

9-7-18

Date

2.

Regional Forester (signature)

Date