Date of Report:

9/19/2022

BURNED-AREA REPORT

PART I - TYPE OF REQUEST

A. Type of Report

☒ 1. Funding request for estimated emergency stabilization funds

☐ 2. No Treatment Recommendation

B. Type of Action

☒ 1. Initial Request (Best estimate of funds needed to complete eligible stabilization measures)

☐ 2. Interim Request #___

☐ Updating the initial funding request based on more accurate site data or design analysis

PART II - BURNED-AREA DESCRIPTION

A. Fire Name: Potter Fire

B. Fire Number: OR-WIF-220170

C. State: Oregon

D. County: Douglas

E. Region: Region 6 – Pacific Northwest

F. Forest: Willamette

G. District: Middle Fork

H. Fire Incident Job Code: P6PX6A 0618

I. Date Fire Started: 7/31/2022

J. Date Fire Contained: 99% as of 9/13/2022

K. Suppression Cost: $15.8M as of 9/14/2022

L. Fire Suppression Damages Repaired with Suppression Funds (estimates):

1. **Fireline repaired (miles): 40 miles road as fire line, 3 miles hand line, 0.5 miles dozer line – includes contingency line - repair in progress 9/14/22**
2. **Other (identify): Cleared areas and pushouts – repair in progress 9/14/22**

M. Watershed Numbers:

Table 1: Acres Burned by Watershed

HUC #	Watershed Name	Total Acres	Acres Burned	% of Watershed Burned
170900010105	Staley Creek	25,965	640	2.5

N. Total Acres Burned:

Table 2: Total Acres Burned by Ownership

OWNERSHIP	ACRES
NFS	641
OTHER FEDERAL (LIST AGENCY AND ACRES)	0
STATE	0
PRIVATE	0

OWNERSHIP	ACRES
TOTAL	641

O. **Vegetation Types:** The vegetation type within the 640-acre Potter Fire is predominantly managed forest composed of a mixture of conifers. Dominant trees include Douglas-fir *(Pseudotsuga menziesii)*, mountain hemlock *(Tsuga mertensiana)*, western hemlock (*Tsuga heterophylla)* and noble fir *(Abies procera)*. The understory has a large shrub component, including huckleberry *(Vaccinium spp.)*, vine maple *(Acer circinatum)*, California hazel *(Corylus cornuta)*, salal *(Gaultheria shallon)* and dwarf Oregon grape *(Berberis nervosa)*. Three and a half percent of the area with in or intersecting he fire perimeter is comprised of unique, non-forested habitats (23 acres), most of which are mesic meadows(5 areas, 13.5 acres), 3 acres dry rock gardens, and 1.5 acres of Sitka alder thickets.

P. Dominant Soils: Soils are predominantly shallow, cobbly to sandy loams derived from volcanic parent material, and occupy steep side-slopes and ridgetops. Areas of shallow, gravelly loams, and deep, glacially-derived soils with surficial pumice are also present.

Q. Geologic Types: Basalts and andesites of the late Western Cascades; glacial till; pumice and other volcanic ejecta; landslide deposits

R. Miles of Stream Channels by Order or Class:

Table 3: Miles of Stream Channels by Order or Class

STREAM TYPE	MILES OF STREAM
PERENNIAL	0.7
INTERMITTENT	1.1
EPHEMERAL	0
OTHER (DEFINE)	0

S. **Transportation System:**
Trails: *National Forest (miles):* 0 *Other (miles):* 0
Roads: *National Forest (miles):* 3.5 *Other (miles):* 0

PART III - WATERSHED CONDITION

A. Burn Severity (acres):

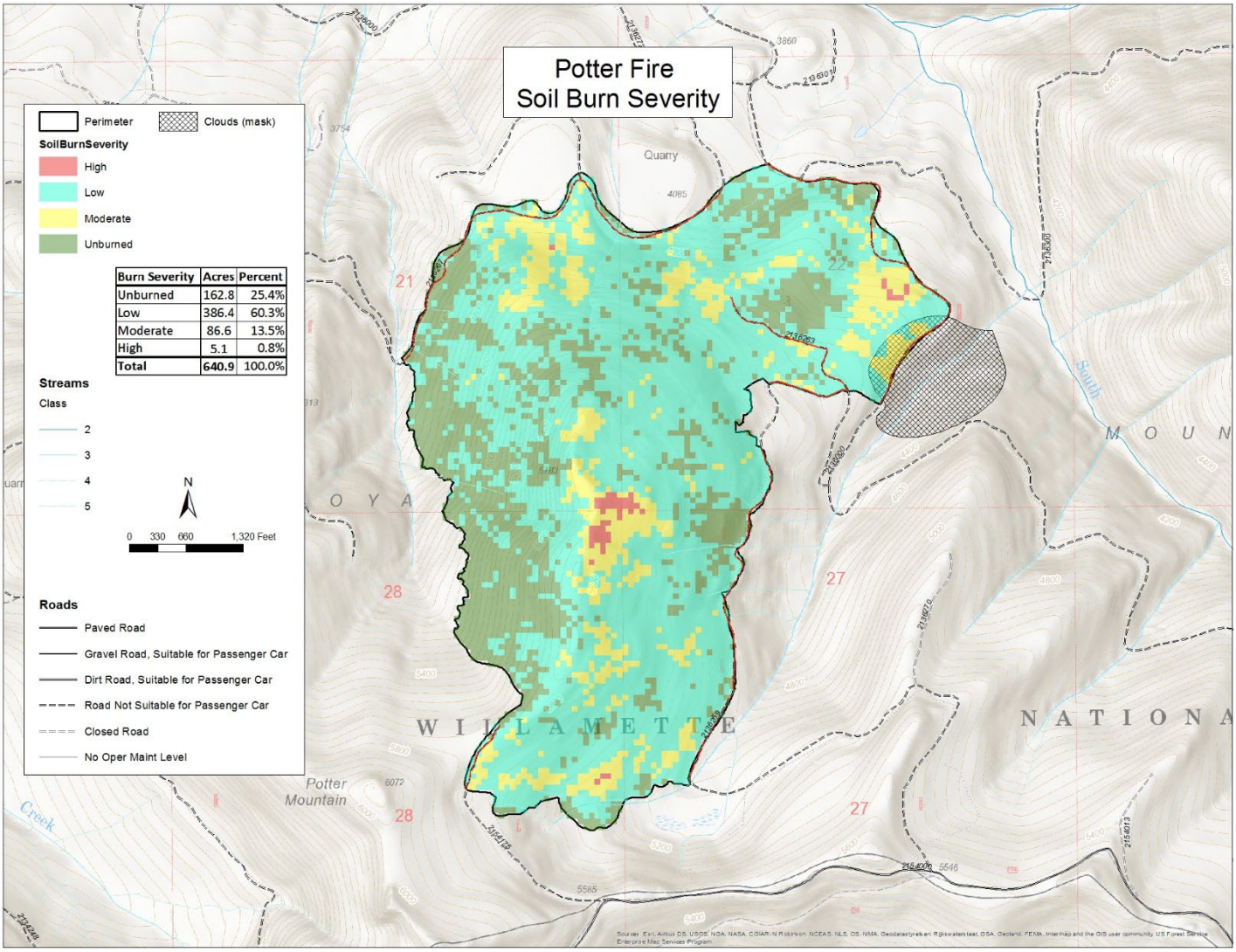

Table 4: Burn Severity Acres by Ownership

Soil Burn Severity	NFS	Other Federal (List Agency)	State	Private	Total	% within the Fire Perimeter
Unburned	163	0	0	0	163	25
Low	386	0	0	0	386	60
Moderate	87	0	0	0	87	14
High	5	0	0	0	5	1
Total	**641**	0	0	0	**641**	**100**

B. Water-Repellent Soil (acres): 20

C. Soil Erosion Hazard Rating: NA

D. Erosion Potential: NA

E. Sediment Potential: NA

F. Estimated Vegetative Recovery Period (years): 3-5 years

G. Estimated Hydrologic Response (brief description): Streams within the burned area are short, steep first-order channels. Increased sediment delivery, because of loss of soil cover, is expected to lower-gradient Class 3 channels immediately outside the burned area, and to an extent to Class 2 South Fork of Staley Creek northeast of the burned area, for 1-3 years post-fire. Litter fall from green and burned trees, and ground cover from revegetation should rapidly mitigate any increased surface erosion. The minor proportion of moderate and high soil burn severity will keep peak flow increases to a minimum. Overall effects at the 6th-field (HUC12) level are forecast to be negligible, as only 2.5% of the subwatershed burned.

PART V - SUMMARY OF ANALYSIS

Introduction/Background

A. Describe Critical Values/Resources and Threats (narrative):

Evaluation of threats to critical values is performed according to a risk assessment matrix (see below), with accompanying definitions. Treatments to mitigate unacceptable risk are generally only considered when risk levels are assessed to be high or very high; treatments for intermediate risk may be considered where human life and safety are threatened.

Table 5: Critical Value Matrix

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**

Select Resource Narratives – other resources are described in Critical Values table

Natural Resources (NR):

a. Native Plant Communities

Where invasive species or noxious weeds are absent or present in minor amounts, native plant communities are at risk of invasion by documented and newly introduced non-native invasive species. These invasive species are on the Willamette National Forest priority invasive weed list as well as on Oregon Department of Agriculture's noxious weeds list (B-listed). They are found adjacent to areas disturbed by suppression activities. Because prior information about invasive species within the burned area is lacking, precautions should be taken in case there were undetected infestations of invasive species that could expand following fire-generated disturbance. Surveys should be conducted for early detection of potential invaders. The Willamette National Forest high priority invasive weeds meadow knapweed (*Centaurea debeauxii ssp. thuillieri*) and African wiregrass (*Ventenata dubia*) were abundant at the fire camp on the Umpqua National Forest as well as at a spike camp and areas with bulldozer activity, from where they could have been transported to many areas disturbed by fire suppression activities. The likelihood that invasive plant propagules were transported during fire suppression activity is high, especially because there was no weed wash during the first week of fire suppression. Forest roads within and adjacent to the burned area were in a closed and overgrown state and required blading and other mechanical ground disturbance for suppression access and to prepare for use as containment lines. This ground disturbance has created new opportunities for the establishment and spread of invasive plant propagules.

Noxious weed infestations pose a serious threat to the composition, structure, diversity and function of native plant communities. Areas where canopy or ground cover was significantly decreased or soil was disturbed are now highly vulnerable to invasive weed colonization from existing infestations or adjacent sources, or to the introduction of new invaders brought in by suppression equipment and activities. Invasive plants of concern known from the vicinity include African wire grass, meadow knapweed, spotted knapweed (*Centaurea stoebe* ssp. *micranthos*), slender false brome (*Brachypodium sylvaticum*), Himalayan blackberry (*Rubus armeniacus*), Scotch broom (*Cytisus scoparius*), and sweetclover (*Melilotus alba*).

b. Threatened and Endangered Species – Wildlife

Critical habitat, suitable occupied habitat, and nesting territories for ESA-listed northern spotted owl (NSO) (*Strix occidentalis caurina*) are the Critical BAER Values for wildlife in the Potter Fire burned area. Threats to these values are stresses from the fire and post-fire conditions, including increased risk of blowdown, mass soil movement, flooding, and insects and disease, which could result in additional mortality to remaining live trees and further reduce NSO suitable habitat and usable Critical Habitat. Three northern spotted owl territories were impacted by the fire; however all three territories have high rates of suitable habitat, and none are expected to fall below viability thresholds for NSO occupation with projected post-fire loss of suitable habitat.

A secondary focus was to assess if proposed BAER activities could affect spotted owl nest sites. Proposed BAER activities include surveys and manual and chemical treatment of invasive plant populations, and are not expected to disturb or disrupt nesting spotted owls during the critical breeding period (March 1 – July 15).

Value	Life/ Property/ Resources	Critical Value	Threat to Value	Probability of Damage or Loss	Rationale for Probability	Magnitude of Consequence	Rationale for Magnitude	Risk	Treatment Options Considered	Recommended Treatment
BAER critical value	Natural Resources	Native and Naturalized Plant Communities - Invasives within Burned Area	Native Plants-Invasive plant colonization of undisturbed (weed-free) areas within the burned area	Likely	Areas of high and moderate vegetation mortality (estimated here by soil burn severity) are highly susceptible to invasion by high priority noxious weed species. Road system in fire perimeter has periodic, small infestations of high priority weed species which provide seed sources into newly fire disturbed areas.	Moderate	Judged moderate because prior information about invasive species within the burned area is lacking, but noxious weed presence is believed to be minimal away from system roads. Precautions should be taken in case there were undetected infestations of invasive species that could expand following fire-generated disturbance.	High	P1a. Invasives EDRR - BAER	P1a. Invasives EDRR - BAER – areas of high and moderate burn severity and adjacent to FS system roads in 2023.
BAER critical value	Natural Resources	Native and Naturalized Plant Communities - Fire suppression disturbance areas	Native Plants-Invasive plant colonization of areas disturbed by suppression	Very Likely	High priority noxious weed populations occur patchily along the road systems developed as primary and contingency line for the Potter fire. These plants were in full seed at the time of mechanical treatment along these road systems and the disturbance created by the large equipment spread seed as well as opened areas for invasion to high priority noxious weeds. Firefighter equipment and gear likely carried seed from other locations, including	Moderate	Current low degree of infestation is likely to increase to chronic unacceptable levels without detection and treatment in suppression-disturbed areas.	**Very High**	P1b. Invasives EDRR - Suppression	P1b. Invasives EDRR - Suppression

					known populations at fire camp.					
BAER critical value	Natural Resources	T&E Habitat – Wildlife - Northern Spotted Owl Critical Habitat, Suitable Habitat, and NSO Territories	Continued loss of habitat from post-fire stress, wind and storm events and post-fire insect and disease; disturbance from implementation of BAER activities during the nesting season (none planned).	Likely	Additional post-fire tree mortality is likely in areas of high and moderate burn severity, and possible in some areas of low severity fire.	Minor	Fire and post-fire impacts to critical habitat, suitable habitat and NSO territories are judged to be minor because the overall fire severity was low and additional post-fire tree mortality should not significantly affect the ability of affected territories to support nesting spotted owls. There is abundant unburned suitable habitat within the surrounding area, and all affected spotted owl territories retain high percentages of quality suitable habitat.	Low	No treatment	No treatment
BAER critical value	Natural Resources	T&E Habitat – Fisheries – Bull Trout and Spring Chinook Salmon Critical Habitat and Occupied Suitable Habitat	Effects to threatened species (bull trout, spring Chinook) from increased sedimentation; effects to habitat, riparian plant communities and water quality from increases in temperature, flows and sediment and spread of noxious weeds.	Unlikely	Occupied habitat is several miles downstream from the burned area, and any post-fire effects will be diluted and inconsequential. Overall, post-fire inputs of sediment, nutrients, and wood are natural processes that help replenish and create complex, high-quality fish habitat.	Minor	Minimal direct effects to organisms or fire-related habitat changes are expected.	Very Low	No treatment	No treatment

BAER critical value	Natural Resources	Soil Productivity	Loss of long-term soil productivity	Likely	Areas of moderate and high soil burn severity on steep slopes are likely to experience soil loss due to loss of ground cover, changes to soil structure from heating and loss of organic material, and increased erosion.	Minor	Minimal, patchy nature of M-H SBS; vegetative recovery will minimize loss of soil productivity.	Low	No treatment	No treatment
BAER critical value	Natural Resources	Hydrologic Function	Altered hydrologic function	Possible	Where moderate and high soil burn severity is present, surface runoff rates will increase, enhancing peak flows and increasing erosion and sediment delivery.	Minor	Areas of M-H SBS are limited to unchanneled upper slopes and patchy lower-gradient areas. Changes in peak flows and erosion rates should be minimal and rapidly mitigated by litter fall and vegetation regrowth.	Very Low	No treatment	No Treatment
BAER critical value	Property - Roads	FS Roads 2136, 2136623, 2136267, 2136269, 2136275, 2154175	Increased flow and water-borne debris causing road prism and drainage structure failures	Possible	Any flow increases or debris impacts from areas of moderate or high burn severity will be very localized due to their minimal area.	Minor	Any damage would be localized and not likely to exceed routine maintenance.	Very Low	No Treatment	No Treatment
BAER critical value	Life and Safety	FS Roads 2136, 2136623, 2136267, 2136269, 2136275, 2154175	Danger trees, rolling debris within striking distance of roads.	Possible	Unmitigated fire-killed and -weakened trees, and mobilized post-fire debris may fall or roll onto on roads and threaten stationary targets (parked vehicles, visitors). Many hazards were mitigated during suppression and repair. Debris-flow and rockfall risk is low due to overall low burn severity and minimal geohazards.	Major	Any impacts to occupied vehicles or persons likely to cause injury or death.	High	No Treatment; Warning Signs; Closure	Closure (Forest Order) – standard post-fire closure order, and effects of first winter snowfall will mitigate hazards sufficiently within the BAER emergency period. Traffic on burned area roads is light.

BAER critical value	Cultural Resources	Eligible sites within fire perimeter	Looting; erosion	Unlikely	No known sites within the fire perimeter. Site discovered outside perimeter (so not BAER-eligible) can be protected by barricading road opened during suppression – not on MVUM (suppression repair on P-code).	Minor	Area of M-H SBS is small, and most is not adjacent to roads; undiscovered sites unlikely to receive damaging impacts.	Very Low	No treatment	No treatment

B. Emergency Treatment Objectives: Prevent new infestations of invasive weeds; protect the safety of forest users.

C. Probability of Completing Treatment Prior to Damaging Storm or Event:
Land: 90
Channel: N/A
Roads/Trails: N/A
Protection/Safety: 100

D. Probability of Treatment Success

Table 6: Probability of Treatment Success

	1 year after treatment	*3 years after treatment*	*5 years after treatment*
Land	90%	80%	80%
Channel	NA	NA	NA
Roads/Trails	NA	NA	NA
Protection/Safety	100%	100%	100%

E. Cost of No-Action (Including Loss):

F. Cost of Selected Alternative (Including Loss):

G. Skills Represented on Burned-Area Survey Team:

☐ Soils ☒ Hydrology ☐ Engineering ☐ GIS ☐ Archaeology
☒ Weeds ☐ Recreation ☐ Fisheries ☒ Wildlife
☐ Other:

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Forest BAER Coordinator: Fred Levitan
Email: frederick.levitan@usda.gov **Phone(s):** 541-731-2593

Team Members: *Table 7: BAER Team Members by Skill*

Skill	**Team Member Name**
Team Lead(s)	Fred Levitan
Soils	Fred Levitan
Hydrology	Fred Levitan
Engineering	
GIS	
Archaeology	Molly Kirkpatrick (consulted)
Weeds	Jenny Moore
Recreation	
Wildlife	Sarah Ward
Fisheries	Doug Larson (consulted)
Geology	Fred Levitan

H. Treatment Narrative: The following descriptions of emergency treatments provide the specifics of where and how they will be applied, and what they are intended to do.

Land Treatments:

P1a./ P1b. Invasives EDRR and Invasives EDRR - Suppression:
Early Detection Rapid Response (EDRR) treatment of high priority non-native invasive plant species is proposed along roadsides that burned, resulting in moderate or high soil burn severity.

EDRR treatment is also proposed for 1) Forest Service roadsides disturbed by road reopening and used for fire suppression activities (direct access roads), where reopening those roads for suppression caused ground disturbance and created new openings facilitating the establishment and spread of invasive plant propagules; and 2) interior roads in areas that experienced moderate or high soil burn severity. Roads are major vectors for the introduction and spread of invasives, and early detection and treatment will help prevent new infestations from invading newly burned ground.

EDRR for roads reopened for use as containment lines, staging areas, drop points and other ground disturbance caused by fire suppression activities is proposed under suppression EDRR. The likelihood that firefighters' vehicles and equipment brought in propagules from outside the Willamette National Forest is high, especially since high priority invasive weeds were abundant and in seed at the fire camp on the Umpqua National Forest as well as at a spike camp and several areas with bulldozer activity. Furthermore, there was no weed wash available on the fire during the first week of suppression. Early detection and treatment will help prevent new invasive species from becoming established in these newly disturbed areas. **This BAER report only addresses suppression-disturbed areas on the Willamette National Forest; areas disturbed by Potter Fire suppression activities on the Umpqua National Forest (roads, camps, helibase) were addressed in the Windigo fire BAER report.**

BAER (non-suppression) botany treatments P1a.

Line items	units	Unit cost	# of units	Total $
Native plant community adjacent to high priority roads EDRR				
Weed Surveys along roads and adjacent burned areas with moderate and high burn severity	Acres	$25	25	$625
Weed Treatments (est. based on nearby infestations pre-fire, including SHAB sites)	Roadside acres	$200	5	$1,000
Total (non-suppression)	*average/ acre*	$54	**30**	**$1,625**

Invasives EDRR - Suppression P1b. (treatments for suppression-related impacts only)

Line items	units	Unit cost	# of units	Total $
Dozer lines, staging areas, drop points, roads as containment, danger tree removal areas				
Weed surveys (dozer line, fuel break, reopened road as line, repair sites – 44 miles; 30 staging areas, drop points and helispots are along survey roads)	acre	$25	105	$2,625
Weed surveys (1 helispot not along survey roads and adjacent to rock outcrop)	acre	$250	1	$250
Treatments along roads (est. based on proximity of existing infestations)	acre	$200	10	$2000
Fire line treatments off-road (est. based on proximity of existing infestations) (0.9 miles)	acre	$225	2	$450
Total (suppression)	*average/ acre*	$45	**118**	**$5,325**
Grand Total				**$6,950**

Channel Treatments: None

Roads and Trail Treatments: Road closures under Forest Order until lifted; no other treatments (natural recovery and standard/suppression repair road maintenance). No trails in the burned area.

Protection/Safety Treatments: Road and area closures under Forest Order until lifted; no other treatments (natural recovery).

I. Monitoring Narrative: N/A

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										
P1a. Invasives EDRR	Acres	54.17	30	$1,625	$0		$0		$0	$1,625
P1b. Invasives EDRR suppression	Acres	45.13	118	$5,325	$0		$0		$0	$5,325
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Land Treatments				$6,950	$0		$0		$0	$6,950
B. Channel Treatments										
N/A				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Channel Treatments				$0	$0		$0		$0	$0
C. Road and Trails										
N/A					$0		$0		$0	$0
					$0					
					$0					
					$0		$0		$0	$0
					$0		$0		$0	$0
Subtotal Road and Trails				$0	$0		$0		$0	$0
D. Protection/Safety										
N/A				$0	$0		$0		$0	$0
				$0	$0		$0		$0	$0
Insert new items above this line!				$0	$0		$0		$0	$0
Subtotal Protection/Safety				$0	$0		$0		$0	$0
E. BAER Evaluation										
Initial Assessment	Report			$0	$5,000		$0		$0	$5,000
				$0	$0		$0		$0	$0
Insert new items above this line!				---	$0		$0		$0	$0
Subtotal Evaluation				$0	$5,000		$0		$0	$5,000
F. Monitoring										
				$0	$0		$0		$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				$6,950	$5,000		**$0**		**$0**	**$11,950**

PART VII - APPROVALS

1. Dianne F Bishop 9/20/2022

Forest Supervisor Date