

BURNED-AREA / EMERGENCY STABILIZATION PLAN # 1 – AERIAL MULCHING

PART F – SPECIFICATION

SPECIFICATION TITLE:	Alt 2 - Aerial Straw Mulch	JURISDICTIONS:	USFS-Fishlake N.F.
PART E: LINE ITEM:	Aerial Straw Mulch to Prevent Unacceptable Degradation of Critical Habitat	FISCAL YEAR:	2011
FSM 2520 REFERENCE#:	2523.2.1.b, 2523.2.1.c, 2523.2.2.C 2523.2.3.a	SPECIFICATION TYPE:	ES

WORK TO BE DONE

A. Provide a Brief General Description of Treatment
Apply agricultural straw mulch to the ground surface to achieve a continuous cover of uniform thickness, as specified below, to replace ground cover consumed by the fire. Ground cover is needed to maintain soil moisture, accelerate recovery of native vegetation, to protect any seed remaining onsite, and to improve success of stabilization seeding treatment. In addition, the organic mulch will protect soil from solar heating and drying, thereby improving the ability of seeds to germinate.
B. Describe Specific Treatment Location or General Description of Suitable Sites for Treatment
The treatment unit totals 4,158 acres. The location of this treatment is upslope of road and trail infrastructure, reaches of habitat important to Bonneville cutthroat trout, and fish barriers important to the protection of the species. The mulch will be applied in the watersheds of North Fork, Mill Hollow, Twitchell Canyon, Shingle Creek, Fish Creek, and Sevier Creek. Refer to BAER Treatment Map for exact locations.
C. Provide and Number Detailed Design/Construction Specifications
<ol style="list-style-type: none"> 1. Treat areas in designated units with "High" and "Moderate" soil burn severity that are less than 70% slope. Do not treat areas that have needles in trees, exposed rock outcrops, or slopes greater than 70%. 2. Straw application rate: Apply mulch to achieve a continuous cover of uniform thickness over 70% of treatment area at a depth of less than 2.0 inches. Application rate will be approximately 1.0 ton/acre (2,000 pounds). This is about 0.25 inches or 3 straw shafts deep. Aerial application may not achieve desired ground cover, therefore ground crews will likely be needed to spread straw clumps by hand in select locations in each treatment unit. 3. Straw must conform to State Department of Agriculture (SDA), Certified Noxious Weed Free Standards for Noxious Weed Free Forage and Straw (NWFFS). All straw provided must have been planted and harvested during the 2010 growing season. Straw shaft length will not exceed 12 inches. Suitable straw includes barley, rice, and wheat grasses. 4. The straw must be applied dry (less than 12 percent internal moisture content) to ensure proper dispersal during aerial applications. The Forest Service may randomly test bales using a moisture probe.
D. Describe Purpose of Treatment Specification – What Resource will be Protected
<p>This treatment is intended to achieve three sequential objectives:</p> <ol style="list-style-type: none"> 1. Improve conditions to protect soil productivity by replacing ground cover burned in the fire. Replacing ground cover will: a) decrease erosion by interrupting raindrop impact and surface soil detachment; and b) increase hillslope obstructions to decrease slope lengths which mitigate accelerated overland flow, thereby decreasing sediment delivery. Mulching also helps to protect the native seedbed and retain moisture on the burned slopes to facilitate vegetative recovery of the treatment areas. 2. Decrease overland flow and erosion from high soil burn severity areas upslope of trails or roads, which can intercept surface runoff and result in damage and/or loss of infrastructure. 3. Decrease sedimentation from burned areas and trails upslope of streams that provide important spawning and rearing habitat for Bonneville cutthroat trout, a federally sensitive aquatic species. <p>The mulching treatments are predicted to lower the estimated soil erosion and subsequent sediment delivery to the streams by up to about 1/2. Mulching will also reduce downstream peak flows by absorbing and slowly releasing overland runoff which is likely to be increased due to reduced soil cover and hydrophobic soil conditions. Mulching treatments in the headwaters of the streams can protect a much larger downstream area from cumulative runoff and sedimentation.</p> <p>The purpose of the mulching treatment is to reduce the delivery of sediment from severely burned hillslopes to avoid sediment bulking of flows entering sensitive fish habitat and road or trail infrastructure.</p> <p>The mulching treatments were determined to be the minimum necessary to protect critical values, as defined in FSM 2523.1. The probability of damage or loss to the following critical values is very likely. The critical values are soil productivity, hydrologic function, human safety, road and trail infrastructure, and native/naturalized communities where invasive species and noxious weeds are absent. These values are threatened by the post-fire response to short duration, high intensity precipitation events. The magnitude of consequences is moderate especially to road infrastructure, soil productivity, natural resources, and human safety. Overall, the assessed risk is high for natural resources and human safety.</p>
E. Describe Treatment Effectiveness Monitoring
Visually inspect randomly selected mulch treatment units for proper application rate and uniform thickness during/immediately after treatment. In each unit, measure percent ground cover using a 100ft pace transect method once after treatment, and again in the spring of 2011.

LABOR, EQUIPMENT, MATERIALS, AND OTHER COST:

PERSONNEL SERVICES (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item Do not include contract personnel costs here (see contractor services below).	COST/ITEM
1. Implementation Leader: GS-12/5 @ \$50/hour x 312 hours 2. Contracting Officer: GS-11/5 @ \$40/hour x 104 hours 3. Implementation Inspectors: GS7 @ \$30.00/hr x 416 hours x 8 inspectors 4. Monitoring: GS7 @ \$30.00/hr x 40 hours x 1 fy x 2 crew members	\$15,593 \$4,158 \$124,740 \$2,400
TOTAL PERSONNEL SERVICE COST	\$146,891

EQUIPMENT PURCHASE, LEASE, OR RENTAL (Item @ Cost/Hours or Cost/Day or # Days X # Fiscal Years = Cost/Item) Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.	COST/ITEM
TOTAL EQUIPMENT PURCHASE, LEASE, OR RENTAL COST	

MATERIAL AND SUPPLIES (Item @ Cost/Each X Quantity X # Fiscal Years = Cost/Item)	COST/ITEM
Agricultural Straw: \$300/ton x 1 ton/ac x 4,158 acres (cost includes transportation)	\$1,247,400
TOTAL MATERIAL AND SUPPLY COST	\$1,247,400

TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item)	COST/ITEM
1. Vehicle for Implementation Leader: \$200/week x 2 weeks 2. Vehicles for Implementation Inspectors: \$200/week x 2 weeks x 2 vehicles 3. Vehicle for Monitoring Crew: \$200/week x 1 week	\$800 \$800 \$200
TOTAL TRAVEL COST	\$1,800

CONTRACT COST (Labor or Equipment @ Cost/Hour X # Hours X # Fiscal Years = Cost/Item)	COST /ITEM
Type II (medium) helicopter @ \$3,515/hr x 594 hrs (4,158 acres of straw/7 acres/hr)	\$2,087,712
TOTAL CONTRACT COST	\$2,087,712

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	UNIT COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
2011	acre	\$838	4,158	\$3,483,803	ESR	P/C
TOTALS	acre	\$838	4,158	\$3,483,803	ESR	P/C
FUNDING SOURCES		SPECIFICATION TYPE		METHOD OF COMPLETION		
F= Fire Suppression ESR = Emergency Stabilization & Rehab. OP/O = Agency Operating Fund EWP = Emergency Watershed Program		ES = Emergency Stabilization R = Rehabilitation FS = Fire Suppression		P = Agency Personnel Services C = Contract EFC = Emergency Fire Contract FC = Crew Labor Assigned to Fire		

SOURCE OF COST ESTIMATES

Put Letter (P,M,T,C, or F) Next to Appropriate Cost Estimate Source (1-5) Below	
1. Estimate obtained from 2-3 independent contractual sources.	
2. Documented cost figures from similar project work obtained from local agency sources.	C

3. Estimate supported by cost guides from independent sources or other federal agencies.	
4. Estimates based upon government wage rates and material cost.	P/T
5. No cost estimate required – cost charged to Fire Suppression Account (not tracked in plan)	
P = Personnel Services M = Materials/Supplies T = Travel C = Contract F = Suppression	

RELEVANT DETAILS, MAPS, AND DOCUMENTATION INCLUDED IN THIS REPORT

List Relevant Documentation and Cross-References within ESR Plan	
1.	Map of treatment units

TOTAL COST BY JURISDICTION

JURISDICTION	UNITS TREATED	COST
USFS – Fishlake N.F.	4,158 acres	\$3,484,404
TOTALS	4,158 acres	\$3,484,404

BURNED-AREA / EMERGENCY STABILIZATION PLAN # 2 - USING TRITICALE

PART F - SPECIFICATION

SPECIFICATION TITLE:	Aerial seed application on 1,234 acres (see attached map) over the moderate to high severity burn areas of the Twitchell Canyon Fire – Sterile Triticale Hybrid only – Alternative A	JURISDICTIONS:	USFS
FISCAL YEAR:	2011		

WORK TO BE DONE

<p>Number and Describe Each Task:</p> <p>A. General Description: Aerial seed application of 1,234 acres of the moderate to high severity burn areas of the Twitchell Canyon Fire.</p> <p>B. Location (Suitable) Sites: Moderate to high severity burn areas of the Twitchell Canyon Fire using Sterile Triticale Hybrid only (see attached map).</p> <p>C. Design/Construction Specifications:</p> <ol style="list-style-type: none"> 1. Aerial application of seed mix by fixed-wing aircraft or helicopter. 2. Seed to be applied: Sterile Triticale Hybrid – 40 lbs. PLS/acre Total = 40 lbs. PLS/acre <p>D. Purpose of Treatment Specifications: The purpose of this treatment is to provide soil stabilization and effective ground cover from seeded grass vegetation. Soil loss tolerance has been predicted from 108% to 1400% in the burned area where seeding is proposed. Seeding will help to prevent soil loss and help to minimize down slope effects to lower watersheds that result from soil erosion by providing effective ground cover more rapidly than these ecological systems would provide without treatment. Soil production and hydrologic function is expected to be severely impacted by this soil erosion following this wildfire if no seeding in these proposed treatment areas are done.</p> <p>E. Treatment Effectiveness Monitoring: Study plots will be set up on different slopes, elevations, and vegetation types to monitor representative areas within this proposed seeding area during the growing season following the treatment. This will help to determine the initial success of this treatment.</p>
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LABOR, MATERIALS AND OTHER COST:

<p>PERSONNEL SERVICES (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item): Do not include contract personnel costs here (see contractor services below).</p>	COST/ITEM
<p>Contract Preparation and Site Details = (GS-12 @ \$40/hr X 40 hrs) = 1600 Contract Preparation and Site Details = (GS-11 @ \$32/hr X 80 hrs) = 2560 Implementation Monitoring (Seed Inspection) = (GS-11 @ \$32/hr X 40 hrs) = 1280 Implementation Monitoring (Seed Inspection) = (GS-5 @ \$15/hr X 40 hrs) = 600 Implementation Monitoring (Seed Inspection) = (GS-5 @ \$15/hr X 40 hrs) = 600 Implementation Monitoring (Seed Inspection) = (GS-5 @ \$15/hr X 40 hrs) = 600 Overtime for Seed Inspection (40 hrs for each inspector) = 2440 Effectiveness monitoring (GS-11 @ \$32/hr X 80 hrs x 1) = 2560</p>	\$ 12,240
TOTAL PERSONNEL SERVICE COST	\$ 12,240
<p>EQUIPMENT PURCHASE, LEASE OR RENTAL (Item @ Cost/Hour or Cost/Day X # Hours or # Days X # Fiscal Years = Cost/Item): (Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.)</p>	COST/ITEM
<p>4 Vehicles x 500 miles each = 2000 miles x 0.59/per mile = 1180</p>	\$1,180
TOTAL EQUIPMENT PURCHASE, LEASE, OR RENTAL COST	\$1,180

MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X # Fiscal Years = Cost/Item):	COST/ITEM
Sterile Triticale Hybrid – 40 lbs. PLS/acre = \$64/acre x 1234 acres = 90944	\$ 78,976
TOTAL MATERIALS AND SUPPLY COST	\$ 78,976
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item):	COST/ITEM
Seed Sampling and Testing (Per Diem/Travel Expense for Two FS Employees) = 1000 Vehicle Mileage for Sampling (2000 miles X0.59/mile) = 1180 Seed Testing Costs = 500	\$2,680
TOTAL TRAVEL COST	\$2,680
CONTRACT COST (Labor or Equipment @ Cost/Hour X # Hours X # Fiscal Years = Cost/Item):	COST/ITEM
Aerial application of seed by fixed wing aircraft or helicopter = \$35/acre x 1234 acres	\$ 43,190
TOTAL CONTRACT COST	\$ 43,190

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	UNIT COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
FY 1	acre	\$ 112.05	1234	\$ 138,270	EFR	C
TOTAL				\$ 138,270		

FUNDING SOURCES:

F = Fire Suppression Account
EFR=Emergency Fire Rehabilitation
OP/O =Agency Operating Fund
EWP = Emergency Watershed Program

SPECIFICATION TYPE

ES = Emergency Stabilization
R = Rehabilitation
FS = Fire Suppression

METHODS FOR COMPLETION

P=Agency Personnel Services
C=Contract
EFC= Emergency Fire Contract
FC=Crew Labor Assigned to Fire

SOURCE OF COST ESTIMATE

1. Estimate obtained from 2-3 independent contractual sources.	
2. Documented cost figures from similar project work obtained from local agency sources.	P, M, C
3. Estimate supported by cost guides from independent sources or other federal agencies.	
4. Estimates based upon government wage rates and material cost.	
5. No cost estimate required – cost charged to Fire Suppression Account.	

P = Personnel Services M = Materials/Supplies T = Travel C = Contract F = Suppression

III. RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:

List Relevant Documentation and Cross-References Within ESR Plan:

SEE ATTACHED MAP FOR TREATMENT AREA.

IV. TOTAL COST BY JURISDICTION

JURISDICTION	UNITS TREATED	COST
USFS	1234 acres	\$ 138,270
TOTAL COST		\$ 138,270

BURNED-AREA / EMERGENCY STABLIZATION PLAN # 3 – BROADCAST SEEDING

PART F - SPECIFICATION

SPECIFICATION TITLE:	Aerial seed application on 13,565 acres (see attached map) over the moderate to high severity burn areas of the Twitchell Canyon Fire – Alternative D	JURISDICTIONS:	USFS
FISCAL YEAR:	2011	FISHLAKE NF	BEAVER RD

WORK TO BE DONE

I.

Number and Describe Each Task:

F. General Description:

Aerial seed application of 13,565 acres of the moderate to high severity burn areas of the Twitchell Canyon Fire.

G. Location (Suitable) Sites:

Moderate to high severity burn areas of the Twitchell Canyon Fire. (blue, gold, and striped areas - see attached map).

H. Design/Construction Specifications:

3. Aerial application of seed mix by fixed-wing aircraft or helicopter.
4. Seed mix to be applied on areas not mulched (22+ inches precip.) – 7,043 acres:
 - Sterile Triticale Hybrid – 20 lbs. PLS/acre
 - Canby Bluegrass (*Poa canbyi*) – Canbar cultivar – 1 lbs. PLS/acre
 - Slender Wheatgrass (*Elymus trachycaulus*) – San Luis cultivar – 3 lbs. PLS/acre
 - Mountain Brome (*Bromus carinatus*) – Bromar or Garnet cultivars – 4 lbs. PLS/acre
 - Thickspike Wheatgrass (*Elymus lanceolatus*) – Bannock cultivar – 2 lbs. PLS/acre
 - Total = 30 lbs. PLS/acre**
3. Seed mix to be applied on areas not mulched (14-22 inches precip.) – 1,439 acres:
 - Sterile Triticale Hybrid – 20 lbs. PLS/acre
 - Big Bluegrass (*Poa ampla*) – Sherman cultivar – 0.25 lbs. PLS/acre
 - Bluebunch Wheatgrass (*Elymus spicatus*) – Anatone cultivar – 1.5 lbs. PLS/acre
 - Snake River Wheatgrass (*Elymus waiwaiensis*) – Secar cultivar – 1.5 lbs. PLS/acre
 - Canby Bluegrass (*Poa canbyi*) – Canbar cultivar – 0.5 lbs. PLS/acre
 - Sandberg Bluegrass (*Poa sandbergii*) – VNS -0.25 PLS/acre
 - Slender Wheatgrass (*Elymus trachycaulus*) – Pryor cultivar – 3 lbs. PLS/acre
 - Mountain Brome (*Bromus carinatus*) – Bromar or Garnet cultivars – 3 lbs. PLS/acre
 - Thickspike Wheatgrass (*Elymus lanceolatus*) – Bannock cultivar – 1 lbs. PLS/acre
 - Crested Wheatgrass (*Agropyron cristatum*) – Hycrest cultivar – 2 lbs. PLS/acre
 - Crested Wheatgrass (*Agropyron cristatum*) – Fairway cultivar – 2 lbs. PLS/acre
 - Total = 35 lbs. PLS/acre**
4. Seed mix to be applied on areas mulched (22+ inches precip.) – 4,239 acres:
 - Canby Bluegrass (*Poa canbyi*) – Canbar cultivar – 1 lbs. PLS/acre
 - Slender Wheatgrass (*Elymus trachycaulus*) – San Luis cultivar – 3 lbs. PLS/acre
 - Mountain Brome (*Bromus carinatus*) – Bromar or Garnet cultivars – 4 lbs. PLS/acre
 - Thickspike Wheatgrass (*Elymus lanceolatus*) – Bannock cultivar – 2 lbs. PLS/acre
 - Total = 10 lbs. PLS/acre**
5. Seed mix to be applied on areas mulched (14-22 inches precip.) – 844 acres:

Big Bluegrass (*Poa ampla*) – Sherman cultivar – 0.25 lbs. PLS/acre
 Bluebunch Wheatgrass (*Elymus spicatus*) – Anatone cultivar – 1.5 lbs. PLS/acre
 Snake River Wheatgrass (*Elymus waiwaiensis*) – Secar cultivar – 1.5 lbs. PLS/acre
 Canby Bluegrass (*Poa canbyi*) – Canbar cultivar – 0.5 lbs. PLS/acre
 Sandberg Bluegrass (*Poa sandbergii*) – VNS – 0.25 PLS/acre
 Slender Wheatgrass (*Elymus trachycaulus*) – Pryor cultivar – 3 lbs. PLS/acre
 Mountain Brome (*Bromus carinatus*) – Bromar or Garnet cultivars – 3 lbs. PLS/acre
 Thickspike Wheatgrass (*Elymus lanceolatus*) – Bannock cultivar – 1 lbs. PLS/acre
 Crested Wheatgrass (*Agropyron cristatum*) – Hycrest cultivar – 2 lbs. PLS/acre
 Crested Wheatgrass (*Agropyron cristatum*) – Fairway cultivar – 2 lbs. PLS/acre
Total = 15 lbs. PLS/acre

I. Purpose of Treatment Specifications:

The purpose of this treatment is to provide soil stabilization and effective ground cover from seeded grass vegetation. Soil loss tolerance has been predicted from 108% to 1400% in the burned area where seeding is proposed. Seeding will help to prevent soil loss and help to minimize down slope effects to lower watersheds that result from soil erosion by providing effective ground cover more rapidly than these ecological systems would provide without treatment. Soil production and hydrologic function is expected to be severely impacted by this soil erosion following this wildfire if no seeding in these proposed treatment areas are done. A broader range of grass species is used in this proposal to maximize germination and establishment on a broader range of microsites (e.g. slope, aspect, and surface types) within the proposed treatment area. On the 14-22 inches precip. (lower elevation) proposed treatment areas, a primary purpose of this treatment is to provide competition for invasive cheatgrass. Successfully seeded grasses will occupy resources to help reduce cheatgrass that was present in minor amounts on the proposed seeded areas prior to the fire. This cheatgrass is expected to substantially increase following the wildfire if this seed treatment is not done. A broader range of grass species is used in this proposal to maximize germination and establishment on a broader range of microsites (e.g. slope, aspect, and surface types) within the proposed treatment area.

Treatment Effectiveness Monitoring:

Study plots will be set up on different slopes, elevations, and vegetation types to monitor representative areas within this proposed seeding area during the growing season following the treatment. This will help to determine the initial success of this treatment.

ILABOR, MATERIALS AND OTHER COST:

PERSONNEL SERVICES (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item): Do not include contract personnel costs here (see contractor services below).	COST/ITEM
Contract Preparation and Site Details = (GS-12 @ \$40/hr X 120 hrs) = 4800 Contract Preparation and Site Details = (GS-11 @ \$32/hr X 200 hrs) = 6400 Implementation Monitoring (Seed Inspection) = (GS-11 @ \$32/hr X 120 hrs) = 3840 Implementation Monitoring (Seed Inspection) = (GS-5 @ \$15/hr X 120 hrs) = 1800 Implementation Monitoring (Seed Inspection) = (GS-5 @ \$15/hr X 120 hrs) = 1800 Implementation Monitoring (Seed Inspection) = (GS-5 @ \$15/hr X 120 hrs) = 1800 Overtime for Seed Inspection (80 hrs for each inspector) = 7320 Effectiveness monitoring (GS-11 @ \$32/hr X 160 hrs x 1) = 7680	\$ 35,440
TOTAL PERSONNEL SERVICE COST	\$ 35,440
EQUIPMENT PURCHASE, LEASE OR RENTAL (Item @ Cost/Hour or Cost/Day X # Hours or # Days X # Fiscal Years = Cost/Item): (Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.)	COST/ITEM
4 Vehicles x 1500 miles each = 6000 miles x 0.59/per mile = 3540	\$3540
TOTAL EQUIPMENT PURCHASE, LEASE, OR RENTAL COST	\$3540

MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X # Fiscal Years = Cost/Item):	COST/ITEM
<p>2. Sterile Triticale Hybrid – 20 lbs. PLS/acre = \$32/acre x 7043 acres = 225376 Canby Bluegrass (<i>Poa canbyi</i>) – Canbar cultivar – \$3/acre x 7043 acres = 21129 Slender Wheatgrass (<i>Elymus trachycaulus</i>) – San Luis cultivar – \$5.25/acre x 7043 acres = 36975 Mountain Brome (<i>Bromus carinatus</i>) – Bromar or Garnet cultivars – \$10/acre x 7043 acres = 70430 Thickspike Wheatgrass (<i>Elymus lanceolatus</i>) – Bannock cultivar – \$7/acre x 7043 acres = 49301 Total = \$403,211</p>	
<p>3. Sterile Triticale Hybrid – \$32/acre x 1439 acres = 46048 Big Bluegrass (<i>Poa ampla</i>) – Sherman cultivar – \$0.75/acre x 1439 acres = 1079 Bluebunch Wheatgrass (<i>Elymus spicatus</i>) – Anatone cultivar – \$6.75/acre x 1439 acres = 9713 Snake River Wheatgrass (<i>Elymus waiwaiensis</i>) – Secar cultivar – \$6/acre x 1439 acres = 8634 Canby Bluegrass (<i>Poa canbyi</i>) – Canbar cultivar – \$1.5/acre x 1439 acres = 2158 Sandberg Bluegrass (<i>Poa sandbergii</i>) – VNS - \$0.75/acre x 1439 acres= 1079 Slender Wheatgrass (<i>Elymus trachycaulus</i>) – Pryor cultivar – \$5.25/acre x 1439 acres = 7555 Mountain Brome (<i>Bromus carinatus</i>) – Bromar or Garnet – \$7.50/acre x 1439 acres = 10792 Thickspike Wheatgrass (<i>Elymus lanceolatus</i>) – Bannock cultivar – \$3.50/acre x 1439 acres = 5036 Crested Wheatgrass (<i>Agropyron cristatum</i>) – Hycrest cultivar – \$6/acre x 1439 acres = 8634 Crested Wheatgrass (<i>Agropyron cristatum</i>) – Fairway cultivar – \$6/acre x 1439 acres = 8634 Total = \$109,362</p>	\$ 656,743
<p>4. Canby Bluegrass (<i>Poa canbyi</i>) – Canbar cultivar – \$3/acre x 4239 acres = 12717 Slender Wheatgrass (<i>Elymus trachycaulus</i>) – San Luis cultivar – \$5.25/acre x 4239 acres = 22255 Mountain Brome (<i>Bromus carinatus</i>) – Bromar or Garnet cultivars – \$10/acre x 4239 acres = 42390 Thickspike Wheatgrass (<i>Elymus lanceolatus</i>) – Bannock cultivar – \$7/acre x 4239 acres = 29673 Total = \$107,034</p>	
<p>5. Big Bluegrass (<i>Poa ampla</i>) – Sherman cultivar – \$0.75/acre x 844 acres = 633 Bluebunch Wheatgrass (<i>Elymus spicatus</i>) – Anatone cultivar – \$6.75/acre x 844 acres = 5697 Snake River Wheatgrass (<i>Elymus waiwaiensis</i>) – Secar cultivar – \$6/acre x 844 acres = 5064 Canby Bluegrass (<i>Poa canbyi</i>) – Canbar cultivar – \$1.5/acre x 844 acres = 1266 Sandberg Bluegrass (<i>Poa sandbergii</i>) – VNS - \$0.75/acre x 844 acres= 633 Slender Wheatgrass (<i>Elymus trachycaulus</i>) – Pryor cultivar – \$5.25/acre x 844 acres = 4431 Mountain Brome (<i>Bromus carinatus</i>) – Bromar or Garnet cultivars – \$7.50/acre x 844 acres = 6330 Thickspike Wheatgrass (<i>Elymus lanceolatus</i>) – Bannock cultivar – \$3.50/acre x 844 acres = 2954 Crested Wheatgrass (<i>Agropyron cristatum</i>) – Hycrest cultivar – \$6/acre x 844 acres = 5064 Crested Wheatgrass (<i>Agropyron cristatum</i>) – Fairway cultivar – \$6/acre x 844 acres = 5064 Total = \$37136</p>	

TOTAL MATERIALS AND SUPPLY COST	\$ 656,743
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item):	COST/ITEM
Seed Sampling and Testing (Per Diem/Travel Expense for Two FS Employees) = 1000 Vehicle Mileage for Sampling (2000 miles X0.59/mile) = 1180 Seed Testing Costs = 2500	\$4680
TOTAL TRAVEL COST	\$4680
CONTRACT COST (Labor or Equipment @ Cost/Hour X # Hours X # Fiscal Years = Cost/Item):	COST/ITEM
Aerial application of seed by fixed wing aircraft or helicopter= \$35/acre x 13565 acres	\$ 474,775
TOTAL CONTRACT COST	\$ 474,775

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	UNIT COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
FY 1	acre	\$ 86.60	13565	\$ 1,174,729	EFR	C
TOTAL				\$ 1,174,729		

FUNDING SOURCES:

F = Fire Suppression Account
EFR=Emergency Fire Rehabilitation
OP/O =Agency Operating Fund
EWP = Emergency Watershed Program

SPECIFICATION TYPE

ES = Emergency Stabilization
R = Rehabilitation
FS = Fire Suppression

METHODS FOR COMPLETION

P=Agency Personnel Services
C=Contract
EFC= Emergency Fire Contract
FC=Crew Labor Assigned to Fire

SOURCE OF COST ESTIMATE

1. Estimate obtained from 2-3 independent contractual sources.	
2. Documented cost figures from similar project work obtained from local agency sources.	P, M, C
3. Estimate supported by cost guides from independent sources or other federal agencies.	
4. Estimates based upon government wage rates and material cost.	
5. No cost estimate required – cost charged to Fire Suppression Account.	

P = Personnel Services M = Materials/Supplies T = Travel C = Contract F = Suppression

II. RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:

III.

List Relevant Documentation and Cross-References Within ESR Plan:

SEE ATTACHED MAP FOR TREATMENT AREA.

IV. TOTAL COST BY JURISDICTION

JURISDICTION	UNITS TREATED	COST
USFS	13,565 acres	\$ 1,174,729
TOTAL COST		\$ 1,174,729

BURNED-AREA / EMERGENCY STABILIZATION PLAN # 4 – NOXIOUS WEED (ED / RR)

PART F - SPECIFICATION

SPECIFICATION TITLE:	Noxious Weed Monitoring and Spot Treatment Early Detection / Rapid Response to the expansion of noxious weed occurrences	JURISDICTIONS:	USFS
FISCAL YEAR:	2011	BEAVER RD	FISHLAKE

WORK TO BE DONE

<p>Number and Describe Each Task:</p> <p>K. General Description: Monitor and spot treat the expansion of noxious weeds from any known occurrences. Also detect and treat any new occurrences. This is an early detection / rapid response treatment.</p> <p>L. Location (Suitable) Sites: Actions to occur on the specified routes, priority segments of the fire perimeter, drop points, helispots, heliwells, spike camps, and dozer line (see attached map).</p> <p>M. Design/Construction Specifications: District weed crew will supply the personnel and vehicles needed, as well as most spray equipment, ATV's, and PPE. This treatment does provide for the District to acquire a horse pack sprayer. The crew will monitor and treat the areas for one week each in May, late June and early August.</p> <p>N. Purpose of Treatment Specifications: The purpose of this action is to monitor, detect, and spot treat any expansion of noxious weed species within the fire perimeter or in areas designated on treatment map of specific areas adjacent to the burned area that may be affected because of fire suppression activities.</p> <p>O. Treatment Effectiveness Monitoring: Expansion from existing occurrences and any new locations of noxious weeds detected will be documented by photo and GPS.</p>
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LABOR, MATERIALS AND OTHER COST:

PERSONNEL SERVICES (Grade @ Cost/Hours X # Hours X # Fiscal Years = Cost/Item): Do not include contract personnel costs here (see contractor services below).	COST/ITEM
Noxious Weed Monitoring and Spot Treatment = 1 (GS-11 @ \$36/hr X 120 hrs) = \$4320 Noxious Weed Monitoring and Spot Treatment = 3 (GS-5 @ \$16/hr X 120 hrs) = \$5760	\$ 10,080
TOTAL PERSONNEL SERVICE COST	\$ 10,080
EQUIPMENT PURCHASE, LEASE OR RENTAL (Item @ Cost/Hour or Cost/Day X # Hours or # Days X # Fiscal Years = Cost/Item): (Note: Purchase requires written justification that demonstrates cost/item benefits over lease or rental.)	COST/ITEM
One horse pack spray unit.	\$ 1,500
TOTAL EQUIPMENT PURCHASE, LEASE, OR RENTAL COST	\$ 1,500
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X # Fiscal Years = Cost/Item):	COST/ITEM
Supplies needed to complete the spot treatment. (PPE and supplemental chemical as needed.)	\$ 500
TOTAL MATERIALS AND SUPPLY COST	\$ 500

TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X # Fiscal Years = Cost/Item):	COST/ITEM
TOTAL TRAVEL COST	N/A
CONTRACT COST (Labor or Equipment @ Cost/Hour X # Hours X # Fiscal Years = Cost/Item):	COST/ITEM
TOTAL CONTRACT COST	\$ 12,080

SPECIFICATION COST SUMMARY

FISCAL YEAR	UNIT	UNIT COST	# OF UNITS	COST	FUNDING SOURCE	METHOD
FY 1	acre	\$ 12.08	1,000	\$ 12,080	EFR	P
TOTAL				\$ 12,080		

FUNDING SOURCES:

F = Fire Suppression Account
EFR=Emergency Fire Rehabilitation
OP/O =Agency Operating Fund
EWP = Emergency Watershed Program

SPECIFICATION TYPE

ES = Emergency Stabilization
R = Rehabilitation
FS = Fire Suppression

METHODS FOR COMPLETION

P=Agency Personnel Services
C=Contract
EFC= Emergency Fire Contract
FC=Crew Labor Assigned to Fire

SOURCE OF COST ESTIMATE

1. Estimate obtained from 2-3 independent contractual sources.	
2. Documented cost figures from similar project work obtained from local agency sources.	P, M
3. Estimate supported by cost guides from independent sources or other federal agencies.	
4. Estimates based upon government wage rates and material cost.	P
5. No cost estimate required – cost charged to Fire Suppression Account.	

P = Personnel Services M = Materials/Supplies T = Travel C = Contract F = Suppression

RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:

List Relevant Documentation and Cross-References Within ESR Plan:

SEE ATTACHED MAP FOR TREATMENT AREA.

JURISDICTION	UNITS TREATED	COST
USFS Fishlake NF, Beaver RD	1,000 acres	\$ 12,080
TOTAL COST		\$ 12,080

Part VI – Emergency Stabilization Treatments and Source of Funds

Initial Request

Line Items	Units	NFS Lands			Other \$	Other Lands			All Total \$	
		Unit Cost	# of Units	BAER \$		# of units	Fed \$	# of Units		Non Fed \$
A. Land Treatments										
Aerial Mulching	Acres	\$832	5084	\$4,229,888	\$0	\$0		\$0	\$4,229,888	
Straw Wattles-Mandersfield Res	Lin/Ft	\$3	2000	\$6,000	\$0	\$0		\$0	\$6,000	
Implementation Crew for straw w	Each	\$5,000	3	\$15,000	\$0	\$0		\$0	\$15,000	
Seeding-Sterile Hybrid only	Acres	\$112	1234	\$138,270	\$0	\$0		\$0	\$138,270	
Seeding-Mod to High burn sever	Acres	\$87	13565	\$1,174,729	\$0	\$0		\$0	\$1,174,729	
Weed Detection Rapid Response	Days	\$805	15	\$12,080					\$12,080	
Initial Approval Request Sterile Triticale / Other seeding				-\$375,000					-\$375,000	
<i>Subtotal Land Treatments</i>				\$5,200,967	\$0	\$0		\$0	\$5,200,967	
B. Channel Treatments										
Grade Structures - N Fk N Ck/Sh	Each	\$3,000	12	\$36,000	\$0	\$0	0	\$0	\$36,000	
Grade Structures - N.Fk N.Ck Fis	Each	\$0	0	\$0	\$0	\$0	18	\$54,000	\$54,000	
<i>Subtotal Channel Treat.</i>				\$36,000	\$0	\$0		\$54,000	\$90,000	
C. Road and Trails										
Trail Treatments	Miles	\$2,391	16.4	\$39,210	\$0	\$0		\$0	\$39,210	
Road Treatments - Hardened Cro	Each	\$7,432	33	\$245,250	\$0	\$0		\$0	\$245,250	
Road Treatments - clean cattle g	Each	\$409	16	\$6,545	\$0	\$0		\$0	\$6,545	
Trailhead Hazard Tree Removal	Each	\$978	8	\$7,826	\$0	\$0		\$0	\$7,826	
Road Treatments-Culvert cleanin	Each	\$1,643	21	\$34,500	\$0	\$0		\$0	\$34,500	
Road Reconditioning-Grader wor	Miles	\$2,750	14	\$38,500	\$0	\$0		\$0	\$38,500	
Road Reconditioning-Dozer	Days	\$990	39.5	\$39,105	\$0	\$0		\$0	\$39,105	
Road Treatments-Import Roadm	Cu.Yds	\$75	1250	\$93,750	\$0	\$0		\$0	\$93,750	
Road Treatments-Install Gravel	Tons	\$30	4300	\$129,000	\$0	\$0		\$0	\$129,000	
Road Treatment Sediment Basin	Each	\$2,000	10	\$20,000	\$0	\$0		\$0	\$20,000	
Road Treatment-Ditch Construct	Days	\$1,485	6.5	\$9,653	\$0	\$0		\$0	\$9,653	
Road Treatment-Hardened Cross	Each	\$30,000	5	\$150,000					\$150,000	
Initial Request Approval				-\$100,000					-\$100,000	
<i>Subtotal Road & Trails</i>				\$713,339	\$0	\$0		\$0	\$713,339	
D. Protection/Safety										
Road Hazard Signs	Each	\$625	26	\$16,250	\$0	\$0		\$0	\$16,250	
Trail Hazard Signs	Each	\$450	13	\$5,850	\$0	\$0		\$0	\$5,850	
Mine Adit Closure	Each	\$2,043	3	\$6,128	\$0	\$0		\$0	\$6,128	
Road Gate Large	Each	\$4,400	6	\$26,400	\$0	\$0		\$0	\$26,400	
Road Gate Small	Each	\$2,750	2	\$5,500	\$0	\$0		\$0	\$5,500	
Road Gate - Replace	Each	\$5,225	1	\$5,225	\$0	\$0		\$0	\$5,225	
Initial Request Approval 10k signs / 15k gates				-\$25,000					-\$25,000	
<i>Subtotal Structures</i>				\$40,353	\$0	\$0		\$0	\$40,353	
E. BAER Evaluation										
Assessment Team	Report		1	\$112,500	\$0	\$0		\$0	\$112,500	
BAER Team Supplies	Each	\$1,500	1	\$1,500	\$0	\$0		\$0	\$1,500	
Helicopter FT BAER Recon	Days	\$7,500	2	\$15,000	\$0	\$0		\$0	\$15,000	
BAER Report Printing	Each	\$2,500	1	\$2,500	\$0	\$0		\$0	\$2,500	
<i>Subtotal Evaluation</i>				\$131,500	\$0	\$0		\$0	\$131,500	
F. Monitoring										
Effectiveness Monitoring	Days	\$375	15	\$5,625	\$0	\$0		\$0	\$5,625	
Effectiveness Monitoring-Helo F	Hours	\$1,000	6	\$6,000	\$0	\$0		\$0	\$6,000	
Document Preparation	Days	\$375	10	\$3,750	\$0	\$0		\$0	\$3,750	
Storm Patrol	Days	\$200	7	\$1,400				\$0	\$1,400	
<i>Subtotal Monitoring</i>				\$16,775	\$0	\$0		\$0	\$16,775	
G. Totals										
Previously approved				\$6,138,934	\$0	\$0		\$54,000	\$6,192,934	
Total for this request				\$6,138,934						