

BURNED AREA EMERGENCY RESPONSE PLAN REVIEW AND APPROVAL

I. Project Leader approval that the Burned Area Emergency Response Plan meets approved land management plan management objectives.

Refuge Manager, Deer Flat National Wildlife refuge

Date

II. Regional Fire Management Coordinator concurs that the plan fits the technical definition for use of Burned Area Emergency Response funding.

Regional Fire Management Coordinator, Region 1

Date

III. Emergency Stabilization Funding Approval (check one box below):

Approved

Approved with Revision (see attached)

Disapproved

Regional Director, Region 1

Date

IV. Emergency Stabilization Funding Approval (check one box below):

Approved

Approved with Revision (see attached)

Disapproved

National Office

Date

CC Lightning Fire

BURNED AREA EMERGENCY RESPONSE PLAN



UNIT: U.S. Fish and Wildlife Service, Deer Flat National Wildlife Refuge

LOCATION: Nampa, Canyon County, Idaho

DATE: June 28, 2006 and August 15, 2006

PREPARED BY: Wayne Patton, ESR Team Leader and Lance Roberts, Fire Management Officer, SE Idaho NWRC.

Submitted By: _____
Refuge Manger, Deer Flat National Wildlife refuge

Date: _____

EXECUTIVE SUMMARY

Introduction

This Burned Area Emergency Response Plan has been prepared in accordance with Department of the Interior and US Fish and Wildlife Service policy. This plan provides emergency stabilization recommendations for all lands burned within the CC Lightning Fire perimeter (which includes the earlier Greenhurst Fire) and downstream impact areas including: public lands administered by the US Fish and Wildlife Service and other jurisdictions if necessary. The Refuge will treat both fires as one, the CC Lightning Fire. The primary objectives of the CC Lightning Fire Burned Area Emergency Response Plan are:

- To prescribe cost effective post-fire stabilization measures necessary to protect human life, property, and critical cultural and natural resources.
- To promptly stabilize and prevent further degradation to affected resources on lands within the fire perimeter or downstream impact areas and mitigate damages caused by fire suppression operations in accordance with approved land management plans and policies, and all relevant federal, state, and local laws and regulations.

This plan addresses emergency stabilization treatments. The burned area emergency response team conducted an analysis of fire damages within the area burned by the CC Lightning fire. The vegetation specialist evaluated and assessed fire damages and suppression impacts to vegetative resources, including threatened and endangered (T&E) species, and identified values at risk associated with vegetative losses. The watershed assessment group assessed the potential for sediment movement into Lake Lowell. The wildlife biologist conducted an assessment of T&E species and initiated and closed Section 7 consultations with U.S. Fish and Wildlife Service.

Individual resource Burned Area Assessment Reports produced by these specialists are in Appendix I. The individual emergency stabilization treatments specifications including effectiveness monitoring identified in the assessments can be found in Part F. A summary of the costs by jurisdictions is in Part E. Appendix II contains the National Environmental Policy Act (NEPA) compliance documentation summary. Appendix III contains the Burned Area Emergency Response Plan maps. Appendix IV contains photo documentation. Appendix V contains supporting documentation.

Fire Background

The Greenhurst fire started at approximately 1:30 am on June 28, 2006. The fire started adjacent to Greenhurst Road in a high public use area. The fire was human caused with the suspected ignition being fireworks. Two similar fires burned in this same general area last summer.

The City of Nampa Fire Department (NFD) responded to the fire with two fire engines and five personnel. When the first engines arrived the fire was approximately ½ acre; burning in grass/sagebrush and trees bordering Greenhurst Road. The two NFD engine contained the fire at approximately 1 acre and stayed on scene mopping-up until 4:50 am.

At 8:48 am the fire apparently re-kindled burning several more acres. The NFD had not informed Deer Flat NWR of the initial fire or of this flare up. NFD again responded with two fire engines. The initial fire size was five acres burning in grass and sagebrush. Five residences were within a couple hundred yards of the fire. The NFD incident commander requested mutual aid from Upper Deer Flat and the City of Caldwell Fire Departments. Two additional NFD engines and one water tender were requested and dispatched to the fire. Structural protection was initiated by the fire crews. The fire burned down slope in heavy grass/sagebrush until stopping at a green riparian area (irrigation run-off drain flowing water). The drain helped prevent the fire from burning upslope to residences, giving fire crews time to contain the fire. When informed of the fire Assistant Refuge Manager Todd Fenzl responded with the refuge Type 6 engine.

The fire was contained at 9:29 am. Assistant Manager Fenzl reported the fire to Boise Interagency Logistics Center and requested assistance in mopping-up. A Type 4 BLM engine crew from Middleton ID was dispatched and assisted with mop-up operations until the fire was controlled and declared out at 6:00 pm on June, 30 2006.

The CC Lightning Fire started at approximately 6:57pm on August 15, 2006, and Nampa Fire Department engines responded by 7:30pm. The fire was caused by a lightning strike and quickly spread to the north and east, threatening houses. Two NFD engines arrived and reported a large fire that was threatening structures on Nez Perce Lane. They established defensive hose lines on the Refuge's 12 foot firebreak. About this time, the Battalion Commander, David May, arrived with another engine and the head of the fire had extended around the south end of Nez Perce, and was threatening structures on Coyote Cove. Residents were evacuated. Three heavy BLM engines and one type 6 engine from the Deer Flat National Wildlife Refuge arrived and worked the fire on the federal land. Two NFD engines stopped the eastward travel of the fire below Coyote Cove ending the risk to houses. This was a very near thing, due to the flashy nature of the cheat grass fuels. Trees and shrubs were lost in the yards of three houses but no structures were lost. The fire burned all the way around the earlier Greenhurst Fire. The CC Lightning Fire was declared contained on August 16, 2005 at 18:00 hours.

A contract crew was hired on August 16 to do mop up. The crew worked until the evening of Friday, August 18. Over the course of the weekend, several flare-ups occurred on the west and east flanks in heavy riparian fuels adjacent to the Lake. BLM was called out again on the evening of August 20 and worked several hours. Staff from NIFC continued mop-up activities on August 21. Another contract crew arrived on August 22 and worked until August 26. The fire was finally declared out on August 26 at 18:00 hours.

Since records started in 1941, there have been over 140 fires on the refuge. Only three fires have been previously attributed to lightning. The flashy cheat grass fuels add to the incendiary nature of the area. As long as cheat grass dominates the plant community, fires will start more frequently and will burn larger areas of native shrubs and grasses. Native grasses and shrubs which stay green later in the summer should be seeded to reduce fire danger.

Fire Damages and Threats to Human Safety and Natural and Cultural Resources

Some soil and vegetation damage in the burned area occurred from fire suppression activities. Heavy equipment was used to establish a fire line in cottonwoods (5 acres) within the riparian area next to Lake Lowell. These areas will be revegetated along with the rest of the burned area and straw bale silt fences will be constructed to augment compromised riparian areas.

One mile of exterior boundary fence for the Deer Flat National Wildlife Refuge was burned or compromised by the fire. All but one of the wood corner posts and braces and all stretcher panels were either burned or weakened and need to be replaced. Steel posts can be reused but the galvanizing on the barbed wire has been compromised by high temperature and the wire will rust at an accelerated rate. At least two holes were cut into the fence to allow engines access to the fire. Taken as a whole, this damage means that a temporary fence will need to be constructed. This will be necessary to protect the seeding and silt fences from livestock as well as vehicles. The burned area will need to be closed to the public following herbicide treatment for safety and health reasons. This area will need to remain closed while other stabilization work is being completed.

Pre-fire vegetation was scattered sage brush and rabbit brush, occasional native grasses, cheat grass (an invasive, non-native species), and bulbous blue grass. Without treatment, post fire vegetation will be a solid stand of cheat grass with very sparse clumps of native grasses along with assorted weeds. Cheat grass will dominate the site thereby side-tracking natural succession to native grassland. With treatment, native grasses and shrubs can be established which will speed natural plant succession. Recommended treatments include cheat grass control with an herbicide, seeding with a drill on the contour and follow-up in some eroded areas with mulch spreading to conserve moisture on the site. Drilling will break up hydrophobic (water repellent) layers in the soil causing potential runoff to soak into the ground rather than running into Lake Lowell. Seeding will help return the burned area to a pre-fire vegetation composition. A close look at weeds in and around the burned area shows that noxious and invasive weeds are likely to invade the burned area. Noxious weeds, included spotted knapweed, Canadian thistle, bindweed, skeleton weed and others, will be monitored and if they occur, additional action will need to be taken to control them.

Soil and watershed analysis shows that soils on 8 to 14% slopes in burned condition can produce enough runoff to carry soil and ash into Lake Lowell, either direct to the lake or via an irrigation drain which is inside the fire boundary. This could happen as the result of a 2 year, 30 minute rainfall event of .60 inches. This rainfall event has a 50% chance of occurring each year for a 4 year period, at the end of which, the burned area should be revegetated enough to allow water to soak in faster. Proposed treatment is to construct straw bale silt fences immediately upslope from the service road to slow water and cause any ash and sediment to fall out. This should prevent runoff containing sediment, ash, phosphorus, and nitrogen from reaching Lake Lowell. The passing of the drill during seeding will penetrate the hydrophobic soil layer, slow surface flow and give the water a better chance to soak into the soil where it will do the most good.

CC Lightning Fire Burned Area Management Requirements

The refuge staff submitted a request for Cultural Resource Compliance to the Malheur NWR staff archeologist. The burned area was surveyed for potential cultural resources before any ground disturbing treatments are implemented. No significant cultural resources were found.

There are no issues that could negatively affect carrying out the emergency actions recommended in this plan. There are no T and E species present. The Refuge has submitted a Pesticide Use Proposal for the use of the herbicide *Plateau*. This herbicide is in widespread use to reduce competition from cheat grass following wildfire, so use of *Plateau* should be approved. All seed, straw or mulch will be certified weed-free and seed will be tested again by the Idaho State Seed Laboratory. Additional seed will be ordered to allow for these tests to be done. Recommended actions are consistent with goals and objectives for management of the Refuge covered in the Refuge Management Plan for the Deer Flat National Wildlife Refuge in 1995.

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PART A - FIRE LOCATION AND BACKGROUND INFORMATION

Fire Names	Greenhurst and CC Lightning Fires
Fire Numbers	14560-9141-CSR8 and 14560-9141-C4AK
Agency Unit	U.S. Fish and Wildlife Service-Deer Flat National Wildlife Refuge
Region	Region 1
State	Idaho
County(s)	Canyon County
Ignition Date/Cause	Greenhurst Fire, 6/28/06, human caused CC Lightning Fire, 8/15/06, lightning caused
Zone	Columbia Basin Eco Region
Date Fully Contained	June 28, 2006 @ 1800 hrs. and August 16 @ 1800 hrs.
Jurisdiction	U.S. Fish & Wildlife Service and Nampa
<i>other jurisdictions</i>	None
Total Acres	105 acres total--9 for Greenhurst Fire and 94 for CC Lightning Fire— 77 acres managed by the Refuge and 28 acres of private land
Date Controlled	June 30, 2006 @ 1800 hrs. and August 26 @ 1800 hrs.

PART B - NATURE OF PLAN

Type of Action (check one box below)

X	Initial Submission
	Amendment to the Initial Submission

PART C - EMERGENCY STABILIZATION ASSESSMENT

Emergency Stabilization Objectives:

- Locate and stabilize severely burned slopes which pose a direct threat to human life, property or critically important cultural and/or natural resources.
- As practical and necessary, restore natural conditions to areas disturbed by fire suppression actions.
- Decide if revegetation is necessary and determine what mix of seeds to use.
- Design, if possible, green stripping to reduce risk to adjacent residences, yards and outbuildings.
- Prevent the establishment of non-native invasive plants.
- Prevent takeover of burned sites by cheat grass (*Bromus tectorum*) and other invasive weeds before seeded grasses can become established.
- Restore vegetation in the burned sites to a pre-fire condition.
- Construct a temporary fence to keep livestock and motor vehicles out of the seedings and straw bale silt fences. Also, to exclude people following herbicide treatment for health and safety reasons and to restrict access during seeding, mulching and other stabilization work.

PART D - TEAM ORGANIZATION, MEMBERS, AND RESOURCE ADVISORS

I. Burned Area Emergency Response Team Members:

Position	Team Member (Agency)
Team Leader	Wayne Patton (Contractor)
Public Information	Elaine Johnson, Susan Kain (FWS)
Operations	Todd Fenzl (FWS)
NEPA Compliance & Planning	Elaine Johnson (FWS)
Hydrologist	Wayne Patton (Contractor-Retired Forest Service)
Soil Scientist	Wayne Patton (Contractor-Retired Forest Service)
Geologist	
Cultural Resources/Archeologist	Carla Burnside (FWS)
Vegetation Specialist	Wayne Patton (Contractor-Retired Forest Service)
Wildlife Biologist	Elaine Johnson, Todd Fenzl (FWS)
GIS Specialist	
Documentation/Computer Specialist	
Photographer	Wayne Patton (contractor) and Lance Roberts (FWS)
<i>Other Technical Specialists</i>	

III. Resource Advisors: (Note: Resource Advisors are individuals who assisted the burned area emergency response team with the preparation of the plan. See Part H for a full list of agencies and individuals who were consulted or otherwise contributed to the development of the plan.

Name	Affiliation
Elaine Johnson	Refuge Manager, Deer Flat National Wildlife Refuge
Todd Fenzl	Deputy Refuge Manager, Deer Flat National Wildlife Refuge

PART E - SUMMARY OF ACTIVITIES AND COSTS

The summary of activities and cost table below identifies emergency stabilization costs charged or proposed for funding from subactivity 9142 funding sources.

EMERGENCY STABILIZATION ACTIVITIES COST SUMMARY TABLE – CC Lightning Fire

Spec #	Title	Unit	Unit Cost	# of Units	Work Agent	Cost
1	Cultural Resource Survey	Each	81.00	1	FA,SC	\$881
2	Water Quality Monitoring	Each	1,961.64	3	SC	\$5,885
3	Storm Patrol	Each	375.00	2	FA	\$750
3	Erosion Control-silt fences and check dams	Feet	3.00	7,220	SC	\$21,750
4	Invasive Plant Control	Acre	25.00	77	SC	\$1,925
5	Revegetation	Acre	261.36	77	SC	\$20,125
5	Compost or Straw	Acre	265.00	25	SC	\$6,675
6	Temporary Fence	Mile	5,039.05	1	SC	\$5,039
7	Treatment Effectiveness Monitoring	Each	1,350.00	2	SC	\$4,050
8	Contract Administration	Each	2,588.70	2	SC	\$5,177
9	Planning	Each	1,950.00	1	SC	\$1,950
						\$74,207
TOTAL COST						
Work Agent: CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=Timber Sales Purchaser, V=Volunteer						

PART F - INDIVIDUAL SPECIFICATIONS

TREATMENT NAME	Cultural Resource Survey	PART E SPECIFICATION #	1
NFPORS TREATMENT CATEGORY*	Planning	FISCAL YEAR(S) (list each year):	2007
NFPORS TREATMENT TYPE *	Consultation	WUI? Y / N	Y
IMPACTED COMMUNITIES AT RISK	Nampa, ID	IMPACTED T&E SPECIES	NA

* See NFPORS Restoration & Rehabilitation module - Edit Treatment screen for applicable entries.

I. WORK TO BE DONE (describe or attach exact specifications of work to be done):

<p>Number and Describe Each Task:</p> <p>A. General Description: Conduct a cultural resource survey on the burned area to determine the extent of any cultural resources that might be impacted by re-vegetation treatment.</p> <p>B. Location/(Suitable) Sites: CC Lightning Fire, Deer Flat NWR</p> <p>C. Design/Construction Specifications: An archaeologist will survey the burn area on foot to determine the presence of any culturally significant sites.</p> <p>D. Purpose of Treatment Specifications: A cultural resource survey is required before any project that disturbs the ground on FWS property. The proposed re-vegetation of the burn area will be accomplished using a seed drill to plant grass seeds one inch below the surface.</p> <p>E. Treatment Effectiveness Monitoring Proposed: No additional monitoring of the burn area is proposed unless cultural resources are uncovered</p>
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II. 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
GS 11 @ \$41.25 (est. cost to government) x 16 hours = \$660.00 x 1	\$660.00
TOTAL PERSONNEL SERVICE COST	\$660.00
EQUIPMENT PURCHASE, LEASE AND/OR RENT (Item @ Cost/Hour X # of Hours X #Fiscal Years = Cost/Item): Note: Purchases require written justification that demonstrates cost benefits over leasing or renting.	COST / ITEM
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL MATERIALS AND SUPPLY COST	
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):	COST / ITEM
Room and Per Diem for two days = 121.00 x 1	\$121
Vehicle fuel = 100.00 x 1	\$100
TOTAL TRAVEL COST	\$221.00
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL CONTRACT COST	

SPECIFICATION COST SUMMARY

FISCAL YEAR	PLANNED INITIATION DATE (M/D/YYYY)	PLANNED COMPLETION DATE (M/D/YYYY)	WORK AGENT	UNITS	UNIT COST	PLANNED ACCOMPLISHMENTS	PLANNED COST
FY07	8/26/06	11/10/06	FA				\$881.00
TOTAL							\$881.00

Work Agent: CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=Timber Sales Purchaser,

V=Volunteer

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.	
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	

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

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

List Relevant Documentation and Cross-Reference Location within the Plan Accomplishment Report:

TREATMENT NAME	Water Quality Monitoring	PART E SPECIFICATION #	2
NFPORS TREATMENT CATEGORY*	Monitoring	FISCAL YEAR(S) (list each year):	2007, 2008, 2009
NFPORS TREATMENT TYPE *	Treatment effectiveness Monitoring	WUI? Y / N	Y
IMPACTED COMMUNITIES AT RISK	Nampa, ID	IMPACTED T&E SPECIES	NA

* See NFPORS Restoration & Rehabilitation module - Edit Treatment screen for applicable entries.

I. WORK TO BE DONE (describe or attach exact specifications of work to be done):

Number and Describe Each Task:
A. General Description: Water Quality Monitoring in Lake Lowell.
B. Location/(Suitable) Sites: Four water samples will be taken from Lake Lowell out from the CC Lightning burn. One control sample will be taken well away from the burned area. Samples will only be taken if storm patrol verifies runoff reaching Lake Lowell.
C. Design/Construction Specifications: Samples will be sent to a certified water quality lab and will be tested according to State of Idaho Department of Water resources protocols. The samples will be tested for Nitrogen, Phosphorous, pH and suspended solids.
D. Purpose of Treatment Specifications: To test erosion control effectiveness and to trigger building of new erosion control treatments if current ones are not working.
E. Treatment Effectiveness Monitoring Proposed: Yearly monitoring should be conducted for three years; 2007, 2008 and 2009.

II. 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
TOTAL PERSONNEL SERVICE COST	
EQUIPMENT PURCHASE, LEASE AND/OR RENT (Item @ Cost/Hour X # of Hours X #Fiscal Years = Cost/Item): Note: Purchases require written justification that demonstrates cost benefits over leasing or renting.	COST / ITEM
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL MATERIALS AND SUPPLY COST	
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	COST / ITEM
Water Quality Monitoring \$1,961.64/year x 3 = \$5,884.92	\$5,885
TOTAL CONTRACT COST	\$5,885

SPECIFICATION COST SUMMARY

FISCAL YEAR	PLANNED INITIATION DATE (M/D/YYYY)	PLANNED COMPLETION DATE (M/D/YYYY)	WORK AGENT	UNITS	UNIT COST	PLANNED ACCOMPLISHMENTS	PLANNED COST
FY07, 08, 09	11/01/06	04/20/07	SC	monitoring	\$1,962	3	\$5,885
TOTAL							\$5,884.92

Work Agent: CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=Timber Sales Purchaser, V=Volunteer

SOURCE OF COST ESTIMATE

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

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

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

List Relevant Documentation and Cross-Reference Location within the Plan Accomplishment Report:

TREATMENT NAME	Erosion control	PART E SPECIFICATION #	3
NFPORS TREATMENT CATEGORY*	Erosion/ Sedimentation	FISCAL YEAR(S) (list each year):	2007
NFPORS TREATMENT TYPE *	Erosion control	WUI? Y / N	Y
IMPACTED COMMUNITIES AT RISK	Nampa, ID	IMPACTED T&E SPECIES	NA

* See NFPORS Restoration & Rehabilitation module - Edit Treatment screen for applicable entries.

I. WORK TO BE DONE (describe or attach exact specifications of work to be done):

Number and Describe Each Task:	
A. General Description:	
1. Install silt fences and check dams of weed-free straw bales (7,220 linear feet) to filter out sediments which could run into Lake Lowell via irrigation run-off drain. Check dams will be placed in marked locations in upper sub watersheds.	
2. Replace one 18 in culvert with a 24 in culvert. Install a new 18 in culvert to protect the service road. See watershed treatment map for locations.	
B. Location/(Suitable) Sites:	Locations are shown on the Watershed Treatments Map, (Appendix III). Straw bale silt fences will be located where they will catch sediment that could wash into Lake Lowell or irrigation run-off drain which empties into Lake Lowell.
C. Design/Construction Specifications:	
1. Bales: Use straw bales certified as weed-free by the State of Idaho.	
2. Installation: Place straw bales end-to-end in a tight row. Stake the bales in place with 18 inch grade stakes driven through the bales. The fences should follow the contour and be turned up slightly at the ends. Second row of overlapping bales will be placed across channels.	
D. Purpose of Treatment Specifications:	To filter sediments out of water flowing toward roads and Lake Lowell. Also, properly placed and sized culverts will pass additional water that may run down the burned slopes.
E. Treatment Effectiveness Monitoring Proposed:	Monitor the silt fences (storm patrol) after the first several storm events. Check that no concentrated water flows are escaping between bales or around the ends. Repair and reinforce as necessary.

II. 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
GS 11 @ \$37.50 (est. cost to gov't) x 10 hours = \$375 per year x 2 years = \$750 TOTAL PERSONNEL SERVICE COST	\$750
EQUIPMENT PURCHASE, LEASE AND/OR RENT (Item @ Cost/Hour X # of Hours X #Fiscal Years = Cost/Item): Note: Purchases require written justification that demonstrates cost benefits over leasing or renting.	COST / ITEM
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):	COST / ITEM
Straw Bales @ \$5.00 each x 2,200 = \$11,000 x 1 = \$11,000	\$11,000
Wood stakes @ 2.50 each x 2000 = \$5,000.00 x 1 = \$5,000	\$5,000
18 inch culvert @ \$450 each x 1 = \$450 installed	\$450
24 inch culvert @ \$ 800 each x 1 = \$800 installed	\$800
TOTAL MATERIALS AND SUPPLY COST	\$17,250.00
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	COST / ITEM
Installation: \$75 per hour x 60 hours = \$4,500 x 1	\$4,500.00
TOTAL CONTRACT COST	\$4,500.00

SPECIFICATION COST SUMMARY

FISCAL YEAR	PLANNED INITIATION DATE (M/D/YYYY)	PLANNED COMPLETION DATE (M/D/YYYY)	WORK AGENT	UNITS	UNIT COST	PLANNED ACCOMPLISHMENTS	PLANNED COST
FY07	8/26/06	01/15/07	SC	9	121.67	9 acres	\$22,500.00
TOTAL							\$22,500.00

Work Agent: CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=Timber Sales Purchaser, V=Volunteer

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,C
3. Estimate supported by cost guides from independent sources or other federal agencies	P,C
4. Estimates based upon government wage rates and material cost.	
5. No cost estimate required - cost charged to Fire Suppression Account	

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

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

List Relevant Documentation and Cross-Reference Location within the Plan Accomplishment Report:
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TREATMENT NAME	Invasive Plant Control	PART E SPECIFICATION #	4
NFPORS TREATMENT CATEGORY*	Invasive Species	FISCAL YEAR(S) (list each year):	2007
NFPORS TREATMENT TYPE *	Chemical Treatment	WUI? Y / N	Y
IMPACTED COMMUNITIES AT RISK	Nampa, ID	IMPACTED T&E SPECIES	NA

* See NFPORS Restoration & Rehabilitation module - Edit Treatment screen for applicable entries.

I. WORK TO BE DONE (describe or attach exact specifications of work to be done):

<p>Number and Describe Each Task:</p> <p>A. General Description: Chemical treatment to prevent or reduce the spread of undesirable non-native invasive plants and to assist in restoring the burned area vegetation to a pre-fire condition.</p> <p>B. Location/(Suitable) Sites: The 77 acres of the CC Lightning fire.</p> <p>C. Design/Construction Specifications:</p> <ol style="list-style-type: none"> Control cheat grass in the fall prior to seeding. Acreage is 77 acres on FWS. Herbicide recommended is <i>Plateau</i>. Application should be according to paper "Control of Cheat grass after fire" by BASF. The area to be sprayed should be posted for at least two weeks following treatment. Winds in the area during spraying should be less than 3 miles per hour. Applicator or person supervising the application should be state of Idaho certified. <p>D. Purpose of Treatment Specifications: To prevent or reduce the spread of non-native plants, reduce the competition for recovering native vegetation, and to promote the establishment of seeded vegetation.</p> <p>E. Treatment Effectiveness Monitoring Proposed: See Monitor Seeding Effectiveness Specification.</p>
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II. 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
TOTAL PERSONNEL SERVICE COST	
EQUIPMENT PURCHASE, LEASE AND/OR RENT (Item @ Cost/Hour X # of Hours X #Fiscal Years = Cost/Item): Note: Purchases require written justification that demonstrates cost benefits over leasing or renting.	COST / ITEM
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL MATERIALS AND SUPPLY COST	
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	COST / ITEM
Herbicide and spraying of 77 acres @ \$25.00/acre x 1	\$1,925.00
TOTAL CONTRACT COST	\$1,925.00

SPECIFICATION COST SUMMARY

FISCAL YEAR	PLANNED INITIATION DATE (M/D/YYYY)	PLANNED COMPLETION DATE (M/D/YYYY)	WORK AGENT	UNITS	UNIT COST	PLANNED ACCOMPLISHMENTS	PLANNED COST
FY07	10/15/06	10/20/06	SC	acres	\$25	77 acres	\$1,925.00
TOTAL							\$1,925.00

Work Agent: CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=Timber Sales Purchaser,

V=Volunteer

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.	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, E = Equipment M = Materials/Supplies, T = Travel, C = Contract, F = Suppression

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

List Relevant Documentation and Cross-Reference Location within the Plan Accomplishment Report:

TREATMENT NAME	Revegetation	PART E SPECIFICATION #	5
NFPORS TREATMENT CATEGORY*	Invasive Species	FISCAL YEAR(S) (list each year):	2007
NFPORS TREATMENT TYPE *	Prevention Seeding	WUI? Y / N	Y
IMPACTED COMMUNITIES AT RISK	Nampa, ID	IMPACTED T&E SPECIES	NA

* See NFPORS Restoration & Rehabilitation module - Edit Treatment screen for applicable entries.

I. WORK TO BE DONE (describe or attach exact specifications of work to be done):

Number and Describe Each Task:																										
A. General Description: Revegetate the burned area to restore to a pre-fire condition.																										
B. Location/(Suitable) Sites: 68 acres of the CC Lightning fire plus 9 acres of fire suppression plow lines.																										
C. Design/Construction Specifications:																										
<p>1. Seed Mixture Selection and Certification: The seed mixture for the CC Lightning Fire was selected by refuge staff in concurrence with ESR team specialists and is based on pure live seed (PLS) rates. The mix reflects success rates for the Sage Fire. The seed mix should be tested for purity and germination rates by the Idaho State Seed Lab. Before accepting delivery, the contractor must provide written evidence (seed label and letter) to the refuge manager that the seed conforms to the purity and germination requirements in the specification. Test method specified in Rules for Testing Seeds, Proceedings of the Association of Official Seed Analyst will be acceptable for determining the germination rate. Seed mix is as follows:</p> <table border="0"> <tr> <td>Great Basin wildrye (<i>Elymus cineris</i> var. Trailhead)</td> <td>2 lbs./acre PLS</td> <td>10.0%</td> </tr> <tr> <td>Thickspike Wheatgrass (<i>Elymus lanceolatus</i> var. Critana)</td> <td>2 lbs./acre PLS</td> <td>10.0%</td> </tr> <tr> <td>Indian ricegrass (<i>Achmenoides hymenoides</i> var. Nezpar)</td> <td>3 lbs./acre PLS</td> <td>15.0%</td> </tr> <tr> <td>Bluebunch wheatgrass (<i>Pseudoroegneria spicata</i> var. Anatone)</td> <td>4 lbs./acre PLS</td> <td>21.5%</td> </tr> <tr> <td>Snake River wheatgrass (<i>Elymus lanceolatus</i> var. Secar)</td> <td>4 lbs./acre PLS</td> <td>21.5%</td> </tr> <tr> <td>Basin big sagebrush (<i>Artemisia tridentata</i> spp. Tridentata)</td> <td>0.1 lbs/acre PLS</td> <td>1.0%</td> </tr> <tr> <td>Fourwing saltbrush (<i>Atriplex canescense</i>)</td> <td>4 lbs./acre PLS</td> <td>21.0%</td> </tr> <tr> <td style="text-align: right;">Totals</td> <td>19.1 lbs./acre PLS</td> <td>100. 0%</td> </tr> </table>			Great Basin wildrye (<i>Elymus cineris</i> var. Trailhead)	2 lbs./acre PLS	10.0%	Thickspike Wheatgrass (<i>Elymus lanceolatus</i> var. Critana)	2 lbs./acre PLS	10.0%	Indian ricegrass (<i>Achmenoides hymenoides</i> var. Nezpar)	3 lbs./acre PLS	15.0%	Bluebunch wheatgrass (<i>Pseudoroegneria spicata</i> var. Anatone)	4 lbs./acre PLS	21.5%	Snake River wheatgrass (<i>Elymus lanceolatus</i> var. Secar)	4 lbs./acre PLS	21.5%	Basin big sagebrush (<i>Artemisia tridentata</i> spp. Tridentata)	0.1 lbs/acre PLS	1.0%	Fourwing saltbrush (<i>Atriplex canescense</i>)	4 lbs./acre PLS	21.0%	Totals	19.1 lbs./acre PLS	100. 0%
Great Basin wildrye (<i>Elymus cineris</i> var. Trailhead)	2 lbs./acre PLS	10.0%																								
Thickspike Wheatgrass (<i>Elymus lanceolatus</i> var. Critana)	2 lbs./acre PLS	10.0%																								
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Basin big sagebrush (<i>Artemisia tridentata</i> spp. Tridentata)	0.1 lbs/acre PLS	1.0%																								
Fourwing saltbrush (<i>Atriplex canescense</i>)	4 lbs./acre PLS	21.0%																								
Totals	19.1 lbs./acre PLS	100. 0%																								
2. Delivery: Deliver certified weed-free seed sold on pure live seed basis to Deer Flat National Wildlife Refuge, Nampa, Idaho, by October 15, 2006. The grass seed will be pre-mixed and the four wing seed will be de-winged and wrapped separately as will the sage seed.																										
3. Storage: Seed should be applied as soon as possible after delivery. If immediate application is not possible, the seed should be stored under dry, cool conditions and protected from rodents. Seed also needs to be protected from rain.																										
4. Timing of Seeding Application: Seeding should occur in early to mid November at least 2 to 3 weeks after herbicide application.																										
5. Application Method: Seed must be drilled to a depth of one inch to achieve success. A rangeland seed drill will be borrowed from the BLM Vale Project to apply seed. The refuge will provide a tractor to pull seed drill.																										
6. Application Rate: Seed will be applied at the above rates, on a PLS basis.																										
7. Mulch or straw: Certified weed-free wheat straw or mulch should be applied immediately after seeding. Straw will need to be crimped in to prevent it from blowing away in the wind. Mulch will not need to be crimped. One quarter inch of straw or mulch should be applied to the entire area.																										
8. Harvest cottonwood and willow cuttings from adjacent unburned area, cut bottom at a slant, treat with root-tone or similar product, cut top and paint with white house paint. Cuttings should be at least ¾ inch in diameter and 4 feet long. Plant in spring in riparian areas two to each square foot. Bottom of willow cutting should reach the water table (lake level) at bank-full stage. This work can be done by volunteers at no charge.																										
D. Purpose of Treatment Specifications: To protect water quality, maintain site productivity, reduce the risk of noxious weed invasion into the burned area, protect adjacent houses from future fire and to facilitate the vegetative recovery to a pre-fire condition.																										
E. Treatment Effectiveness Monitoring Proposed: Monitoring should be conducted to determine the relative establishment and effectiveness of seeding. See Treatment Effectiveness Monitoring																										

II. 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
TOTAL PERSONNEL SERVICE COST	
EQUIPMENT PURCHASE, LEASE AND/OR RENT (Item @ Cost/Hour X # of Hours X #Fiscal Years = Cost/Item): Note: Purchases require written justification that demonstrates cost benefits over leasing or renting.	COST / ITEM

Seed drill rental x 1	No charge for drill—it will be a borrowed BLM drill from Vale District	
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST		
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):		COST / ITEM
Tractor fuel @ \$2,000 X 1		\$2,000.00
Seed mix @ 19.1 lbs./acre (\$181.10) x 78 acres x 1		\$14,125.80
TOTAL MATERIALS AND SUPPLY COST		\$16,125.80
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):		COST / ITEM
TOTAL TRAVEL COST		
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):		COST / ITEM
Mulch application @ \$265/acre x25 acres x 1= \$6,675		\$6,675
Tractor operator and tractor @ \$51.90/acre x 77 acres = \$4,000		\$4,000
TOTAL CONTRACT COST		\$10,625.00

SPECIFICATION COST SUMMARY

FISCAL YEAR	PLANNED INITIATION DATE (M/D/YYYY)	PLANNED COMPLETION DATE (M/D/YYYY)	WORK AGENT	UNITS	UNIT COST	PLANNED ACCOMPLISHMENTS	PLANNED COST
FY07	11/20/06	12/20/06	SC	77 acres	261.40	77 acres	\$20,125.00
FY07	4/01/07	4/10/07	SC	25 acres	265.00	25 acres	\$6,675.00
TOTAL							26,800.00

Work Agent: CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=Timber Sales Purchaser, V=Volunteer

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.	C, E, M
3. Estimate supported by cost guides from independent sources or other federal agencies	C,E,M
4. Estimates based upon government wage rates and material cost.	
5. No cost estimate required - cost charged to Fire Suppression Account	

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

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

List Relevant Documentation and Cross-Reference Location within the Plan Accomplishment Report:
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TREATMENT NAME	Temporary fence to prevent ATVs, livestock and people from entering treatment areas	PART E SPECIFICATION #	6
NFPORS TREATMENT CATEGORY*	Facilities and infrastructure	FISCAL YEAR(S) (list each year):	2007
NFPORS TREATMENT TYPE *	Fence repair	WUI? Y / N	Y
IMPACTED COMMUNITIES AT RISK	Nampa, ID	IMPACTED T&E SPECIES	NA

* See NFPORS Restoration & Rehabilitation module - Edit Treatment screen for applicable entries.

I. WORK TO BE DONE (describe or attach exact specifications of work to be done):

<p>Number and Describe Each Task:</p> <p>A. General Description: Temporary Fence.</p> <p>B. Location/(Suitable) Sites: One mile along the north and east perimeters of the burned area.</p> <p>C. Design/Construction Specifications: Standard BLM design specifications as attached.</p> <p>D. Purpose of Treatment Specifications: To exclude private livestock, ATV and four wheel drive traffic and people from the riparian and upland seeding. Excluding people following application of herbicide must be done by State law.</p> <p>E. Treatment Effectiveness Monitoring Proposed: Yearly monitoring should be conducted to make sure the fence is working properly.</p>
--

II. 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
TOTAL PERSONNEL SERVICE COST	
EQUIPMENT PURCHASE, LEASE AND/OR RENT (Item @ Cost/Hour X # of Hours X #Fiscal Years = Cost/Item): Note: Purchases require written justification that demonstrates cost benefits over leasing or renting.	COST / ITEM
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):	COST / ITEM
12.5 gage galvanized barbed wire @ \$51.95/roll x 19 rolls= \$987.05	\$987.05
5.5 foot Steel T posts @ \$2.10/post x 50 posts= \$105	\$105
7 foot angle iron or black metal corners @ \$73 x 10 corners= \$730	\$730
7 foot angle iron or black metal panels @ \$43.80 x 5 panels= \$219	\$219
Sacks of pre-mix concrete @ \$2.89/ sack x 135 sacks= \$390	\$390
100 count bundles of wire fence stays (4 foot lengths) @ \$36/bundle x 3 bundles=\$108	\$108
TOTAL MATERIALS AND SUPPLY COST	\$2,539.05
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	COST / ITEM
Contract labor for fence construction \$2,500/mile x 1.0 miles	\$2,500
TOTAL CONTRACT COST	\$2,500

SPECIFICATION COST SUMMARY

FISCAL YEAR	PLANNED INITIATION DATE (M/D/YYYY)	PLANNED COMPLETION DATE (M/D/YYYY)	WORK AGENT	UNITS	UNIT COST	PLANNED ACCOMPLISHMENTS	PLANNED COST
FY07	11/01/06	11/20/06	SC				\$5,039.05
TOTAL							\$5,039.05

Work Agent: CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=Timber Sales Purchaser, V=Volunteer

SOURCE OF COST ESTIMATE

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

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

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

List Relevant Documentation and Cross-Reference Location within the Plan Accomplishment Report:
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TREATMENT NAME	Treatment Effectiveness Monitoring	PART E SPECIFICATION #	7
NFPORS TREATMENT CATEGORY*	Monitoring	FISCAL YEAR(S) (list each year):	2007, 2008
NFPORS TREATMENT TYPE *	Treatment Effectiveness Monitoring	WUI? Y / N	Y
IMPACTED COMMUNITIES AT RISK	Nampa, ID	IMPACTED T&E SPECIES	NA

* See NFPORS Restoration & Rehabilitation module - Edit Treatment screen for applicable entries.

I. WORK TO BE DONE (describe or attach exact specifications of work to be done):

<p>Number and Describe Each Task:</p> <p>A. General Description: Conduct monitoring of chemical and revegetation treatments.</p> <p>B. Location/(Suitable) Sites: Establish monitoring transects within seeding types and in an untreated control area. Transect locations should be determined at random.</p> <p>C. Design/Construction Specifications:</p> <ol style="list-style-type: none"> This specification can be accomplished through a contract with a local burned area rehabilitation specialist. A minimum seedling establishment of at least .6 to 1.3 plants per square foot should be present in seeded areas. If seedling establishment is below this, a second application of seed should be applied. Sampling should determine species composition, root depth and area, plant height and vigor. Count seedlings per square foot – seeded species/native species/total # and compare to seeding rate per square foot for treatment success. Estimate root mass/square ft – pull plants on representative area, measure diameter of root wad. Estimate effective root cover area due to grasses. Sampling methods shall represent all plant communities, all aspects, and all slope variations within the seeded areas. Digital photos shall accompany data as supporting documentation. Observations should be documented to record other factors such as surface erosion, noxious weeds, etc. For riparian areas, test and document the survival rates of willow, cottonwood or other plantings by percent. An annual and final report shall be written documenting sampling methods, techniques, areas sampled and summary of findings. The annual report will be submitted to the refuge by September 15 each year. The final accomplishment report will be submitted by September 30, 2008. <p>D. Purpose of Treatment Specifications: To ensure establishment of seeded species for water quality protection, prevention of noxious weed establishment, maintaining site productivity and conversion from cheat grass to native grassland to reduce future fires.</p> <p>E. Treatment Effectiveness Monitoring Proposed: See above</p>
--

II. 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
TOTAL PERSONNEL SERVICE COST	
EQUIPMENT PURCHASE, LEASE AND/OR RENT (Item @ Cost/Hour X # of Hours X #Fiscal Years = Cost/Item): Note: Purchases require written justification that demonstrates cost benefits over leasing or renting.	COST / ITEM
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL MATERIALS AND SUPPLY COST	
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	COST / ITEM
\$4050 for 2 years.	\$4050
TOTAL CONTRACT COST	\$4,050.00

SPECIFICATION COST SUMMARY

FISCAL YEAR	PLANNED INITIATION DATE (M/D/YYYY)	PLANNED COMPLETION DATE (M/D/YYYY)	WORK AGENT	UNITS	UNIT COST	PLANNED ACCOMPLISHMENTS	PLANNED COST
FY07	6/01/07	9/15/07	SC				\$2,700.00
FY08	5/01/08	6/15/08	SC				\$1,350.00
TOTAL							\$4,050.00

Work Agent: CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=Timber Sales Purchaser, V=Volunteer

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.	
3. Estimate supported by cost guides from independent sources or other federal agencies	C
4. Estimates based upon government wage rates and material cost.	
5. No cost estimate required - cost charged to Fire Suppression Account	

P = Personnel Services, **E** = Equipment **M** = Materials/Supplies, **T** = Travel, **C** = Contract, **F** = Suppression

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

List Relevant Documentation and Cross-Reference Location within the Plan Accomplishment Report:
--

TREATMENT NAME	Contract Administration	PART E SPECIFICATION #	8
NFPORS TREATMENT CATEGORY*	Administration	FISCAL YEAR(S) (list each year):	2007, 2008
NFPORS TREATMENT TYPE *	Contract administration	WUI? Y / N	Y
IMPACTED COMMUNITIES AT RISK	Nampa, ID	IMPACTED T&E SPECIES	NA

* See NFPORS Restoration & Rehabilitation module - Edit Treatment screen for applicable entries.

I. WORK TO BE DONE (describe or attach exact specifications of work to be done):

<p>Number and Describe Each Task:</p> <p>A. General Description: Provide oversight and administration of straw bale fence installation, herbicide treatment, fence work, seeding contracts, and treatment effectiveness monitoring.</p> <p>B. Location/(Suitable) Sites: CC Lightning Fire, Deer Flat NWR</p> <p>C. Design/Construction Specifications: The Deer Flat NWR refuge manager will provide oversight and administration of treatment monitoring, straw bale fence installation, chemical treatment, fence work and seeding contracts. One contract inspector will work for the refuge manager who will work on a daily basis with the contractors as they complete the work.</p> <p>D. Purpose of Treatment Specifications: Provide oversight and administration of treatment effectiveness monitoring and straw bale fence installation contracts.</p> <p>E. Treatment Effectiveness Monitoring Proposed: NA</p>
--

II. 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
GS 12 @ \$46.29 (est. cost to government) x 30 hours = \$1388.70 per year x 2 years = \$2,777.40	\$2,777
TOTAL PERSONNEL SERVICE COST	\$2,777
EQUIPMENT PURCHASE, LEASE AND/OR RENT (Item @ Cost/Hour X # of Hours X #Fiscal Years = Cost/Item): Note: Purchases require written justification that demonstrates cost benefits over leasing or renting.	COST / ITEM
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL MATERIALS AND SUPPLY COST	
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	COST / ITEM
\$1200/year x 2 years = \$2400	\$2400
TOTAL CONTRACT COST	\$2,400

SPECIFICATION COST SUMMARY

FISCAL YEAR	PLANNED INITIATION DATE (M/D/YYYY)	PLANNED COMPLETION DATE (M/D/YYYY)	WORK AGENT	UNITS	UNIT COST	PLANNED ACCOMPLISHMENTS	PLANNED COST
FY07	10/01/06	9/20/07	FA				\$2,587
FY08	10/01/07	6/15/08	FA				\$2,588
TOTAL							\$5,177

Work Agent: CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=Timber Sales Purchaser, V=Volunteer

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,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
5. No cost estimate required - cost charged to Fire Suppression Account	

P = Personnel Services, **E** = Equipment **M** = Materials/Supplies, **T** = Travel, **C** = Contract, **F** = Suppression

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

List Relevant Documentation and Cross-Reference Location within the Plan Accomplishment Report:
--

TREATMENT NAME	Planning	PART E SPECIFICATION #	9
NFPORS TREATMENT CATEGORY*	Planning	FISCAL YEAR(S) (list each year):	2007
NFPORS TREATMENT TYPE *	Planning Treatments	WUI? Y / N	Y
IMPACTED COMMUNITIES AT RISK	Nampa, ID	IMPACTED T&E SPECIES	NA

* See NFPORS Restoration & Rehabilitation module - Edit Treatment screen for applicable entries.

I. WORK TO BE DONE (describe or attach exact specifications of work to be done):

<p>Number and Describe Each Task:</p> <p>A. General Description: Write ESR Plan B. Location/(Suitable) Sites: ESR Plan will include both the Greenhurst and CC Lightning Burned Areas. C. Design/Construction Specifications: Standard Format using U. S. Fish and Wildlife Service examples. D. Purpose of Treatment Specifications: To develop a coordinated plan with each treatment specification adding to the others. E. Treatment Effectiveness Monitoring Proposed: Monitoring will be part of the plan.</p>
--

II. 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
TOTAL PERSONNEL SERVICE COST	
EQUIPMENT PURCHASE, LEASE AND/OR RENT (Item @ Cost/Hour X # of Hours X #Fiscal Years = Cost/Item): Note: Purchases require written justification that demonstrates cost benefits over leasing or renting.	COST / ITEM
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL MATERIALS AND SUPPLY COST	
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):	COST / ITEM
TOTAL TRAVEL COST	
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	COST / ITEM
Contract for writing the plan \$1,950.00	\$1,950
TOTAL CONTRACT COST	\$1,950

SPECIFICATION COST SUMMARY

FISCAL YEAR	PLANNED INITIATION DATE (M/D/YYYY)	PLANNED COMPLETION DATE (M/D/YYYY)	WORK AGENT	UNITS	UNIT COST	PLANNED ACCOMPLISHMENTS	PLANNED COST
FY07	10/13/2006	10/13/2006	SC				\$1,950
TOTAL							\$1,950

Work Agent: CA=Coop Agreement, FA=Force Account, G=Grantee, P=Permitee, SC=Service Contract, TSP=Timber Sales Purchaser, V=Volunteer

SOURCE OF COST ESTIMATE

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

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

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

List Relevant Documentation and Cross-Reference Location within the Plan Accomplishment Report:

PART G - POST-EMERGENCY STABILIZATION REQUIREMENT

The following are post-emergency stabilization, implementation, operation, maintenance, monitoring, and evaluation actions after three years from the control of the fire to ensure the effectiveness of initial investments. Estimated annual cost and funding source is indicated.

Emergency Stabilization

1. Continue invasive species monitoring and control (\$15,000 – 1261).
2. Continue to monitor water quality in Lake Lowell whenever runoff from the burned area reaches the lake (\$5,000 – 1261).

PART H - CONSULTATIONS

U.S. Fish and Wildlife Service

Alison Beck-Haas, Fish and Wildlife Biologist, Snake River Basin Field Office, Boise, Idaho

Carla D. Burnside, Archaeologist, Malheur National Wildlife Refuge, Burns, Oregon

Todd Fenzl, Deputy Refuge Manager, Deer Flat National Wildlife Refuge, Nampa, Idaho

Elaine Johnson, Refuge Manager, Deer Flat National Wildlife Refuge, Nampa, Idaho

Bill Leenhouts, National BAER Coordinator, National Interagency Fire Center, Boise, Idaho

Lance Roberts, Fire Management Officer, Southeast Idaho National Wildlife Refuge Complex, Pocatello, Idaho

Private Contractor

W. Wayne Patton (Contractor-Retired Forest Service)

Bureau of Land Management

Mike Pellant, Ecologist, State Office, Boise, Idaho

State Historic Preservation Office

Susan Neitzel, Deputy State Historic Preservation Officer, Idaho State Historic Preservation Office, Boise, Idaho

APPENDIX I - BURNED AREA ASSESSMENT REPORTS

- Soil & Watershed Damage Assessment Report
- Vegetation Damage Assessment Report
- Cultural Damage Assessment Report
- Threatened and Endangered Species Assessment Report

SOIL AND WATERSHED DAMAGE ASSESSMENT REPORT – CC LIGHTNING FIRE

I. OBJECTIVES

- Assess overall watershed changes caused by the fire, particularly those that pose substantial threats to human life, property and critical natural and cultural resources. This includes evaluating changes to soil conditions, hydrologic function, and watershed response to precipitation events.
- Identify the most critical soil and watershed areas and issues related to the CC Lightning Fire based on increased flood potential, loss of soil resources, water quality impacts, and prescribe treatments to mitigate impacts and risks.
- Develop maps of burn severity and treatments, if necessary.
- Identify future monitoring needs.

II. ISSUES

- Risk to water quality of nearby Lake Lowell.
- Increased surface erosion from the upland slopes with associated loss of site productivity and sediment transport.
- Related rilling and possible gully formation that could, once started on Federal land, move upslope onto private land where buildings, yards and other property could be negatively affected.
- Lack of adequate ground cover to protect the soil from wind and water erosion.
- Truncation of soil profile-loss of top and sub soil, exposing the salty C horizon.

III. OBERVATIONS

A. Background

Geology—Canyon County, Idaho is in the Payette section of the Columbia Plateau Province. It consists of an upland plain of unconsolidated lacustrine (wind-laid) and

fluviatile (water-worked) materials that have been dissected by the Snake and Boise Rivers. Basalt outcrops are present in the area on knolls and ridge-tops.

Soils—Within the CC Lightning burned area are two soil mapping units: Vickery-Marsing silt loams, 3 to 7% slopes and Vickery-Marsing silt loams, 7 to 12 % slopes as described in the Soil Survey of Canyon Area, Idaho. The slope breaks separate the moderate and severe erosion hazards related to agricultural fields. Vickery soils are moderately deep to a calcareous duripan (hardpan) whereas the Marsing soils are moderately deep over sand and gravel. Gravel pits next to the burned area are in the Marsing soil units while adjacent housing developments are being constructed on the Vickery soils. Both soils have calcareous layers at 17 to 20 inches. Both soils have friable silt loam surfaces and are very high in fertility. Text in the soil survey notes locations where surface soil has been removed through land smoothing or erosion within the mapping units. There are several calcareous (salty) spots associated with old farm fields where it will be difficult to establish native grasses. The sides of the burned sub-watersheds are steeper and runoff in non-vegetated areas is rapid and soil erosion severe.

Climate—Refuge climate is primarily continental, with some moderating effect due to maritime air flows. Elevation at the visitor center is about 2,550 feet and annual precipitation is between 8 and 11 inches with more than two thirds coming as winter snow. During the summer, the climate is generally arid, with little rainfall between May and October. Temperatures range from minus 25 degrees to 110 degrees Fahrenheit. The growing season averages 6 months.

Hydrology—Lands within the burned area have maximum slopes of 7 to 12%. The fire burned portions of riparian vegetation and runoff from the burned slopes can flow directly into Lake Lowell. Also, a tail-water drainage in the middle of the burned area can concentrate runoff which will then spill into Lake Lowell. Inside ditches on the service road will concentrate runoff until it spills over the road and directly into Lake Lowell. This could create washouts in the road and start gullies which will move upslope.

B. Reconnaissance Methods

The purpose of a burned area assessment is to determine if the fire caused emergency watershed conditions and if there are values at risk from these conditions. If an emergency is not identified the assessment stops. If emergency conditions are found and values at risk are identified, then the magnitude and scope of the emergency is mapped and described, values at risk and resources to be protected are analyzed, and treatment prescriptions are developed. Emergency watershed conditions include both hydrologic and soil factors; typically potential for surface soil erosion, rill and gully formation, channel erosion and deterioration of soil condition leading to a decline in soil productivity. Field visits and direct observations were conducted to identify the spatial distribution and extent of burn severity conditions. Burned area evaluation for the CC Lightning Fire included; assessing fire-caused changes in soil properties and hydrologic

function, determining aerial extent and strength of hydrophobic soil conditions, mapping burn severity, assessing conditions of sediment source areas and threats to human life and property from flood flows or gully formation.

Burn Severity—This measure relates to effects of the fire on soil conditions and hydrologic function. Although burn severity is not primarily a reflection of fire effects on vegetation, vegetative conditions and pre-fire vegetation density are indicators used to assess burn severity.

Site indicators used to evaluate and map burn severity include soil hydrophobicity (water repellency), ash depth and color, size of residual fuels, soil texture and structure, and post fire effective ground cover. These criteria provide clues about fire residence time, depth of litter layer consumed, radiant heat throughout the litter layer and upper topsoil. Using these indicators, burned areas are mapped into three principle burn severity categories; high, medium and low. A category of “unburned” may be mapped separately if there are large unburned islands inside the burn perimeter.

In some cases there may be complete consumption of vegetation by fire with little effect on soil and watershed function. In general, the denser the pre-fire vegetation and the longer the fire residence time, the more severe the effects the fire has on soil hydrologic function. For example, deep ash after a fire usually indicates a deep litter layer prior to the fire, which generally supports longer residence times. Longer fire residence time promotes the formation of water repellent layers at or near the soil surface and loss of soil structural stability. The results are increased runoff and soil particle detachment by water and transport off-site (surface erosion). The presence of white ash can indicate a hotter fire and more complete consumption of organic matter. Powdery ash without identifiable remnants of twigs and leaf litter also indicates more complete consumption. Generally there is a close correlation between soil properties and the amount of heat experienced by the soil as well as the residence time of the heat in contact with the soil.

The burn severity map becomes a basis to predict the hydrologic response of soil as a result of the fire and the rate of natural revegetation of the site following the fire.

Soil Condition—Soil condition and hydrologic function are important components of healthy ecosystems. These can be affected by catastrophic wildfire. Catastrophic fires have the potential to impact the soil beyond the limits of natural variability, including reduced soil aggregate stability, reduced permeability, increased runoff and erosion and reduced organic matter and nutrient status. These combined effects can cause the runoff following a rain event to increase significantly; increasing the overland flow available to initiate soil erosion, either as sheet or rill erosion. The potential for erosion is highest on steeper slopes that burned with a high burn severity.

The soil processes most important to hydrologic function include infiltration and percolation. The fire effects on infiltration and percolation were evaluated by observing the changes in litter and duff, soil structure, destruction of fine and very fine roots in the

surface horizon and development of hydrophobic soil surfaces. Changes in vegetative ground cover as affected by the fire were noted and compared to pre fire conditions. Stability and strength of surface soil structural aggregates were examined. Surface soils were examined for the presence of fine and very fine roots. Water repellency was evaluated by observing the depth and thickness of a water repellent horizon in surface soils where it exists, and the length of time a water drop remained beaded on the surface. Soils were assessed in the field to determine if there is an increase risk of erosion.

It appears that about 30 acres of this area were cultivated prior to Federal acquisition. Topsoil and portions of the subsoil were blown and washed away during crop production. These sites are more droughty and do not have the nutrient capacity of other soils in the area. In addition, they are more erosive than adjacent soils that were not farmed. This condition is the main reason mulch application is recommended following seeding.

Formation of Hydrophobic Soil—Heat of a fire can cause the development of a hydrophobic layer on or in the surface soil horizon. This occurs due to volatilization of organic matter that has high amounts of lignin and other waxy compounds. After the fire passes, the gasses cool to a waxy coating on soil particles. The effect is similar to putting wax on a car to cause water to bead up and run off. If the hydrophobic layer is thick or the degree of water repellency is strong, it can seriously inhibit infiltration of rainfall, increasing runoff and detachment of soil particles. Results can be increased flooding, erosion and sedimentation. Some soils can be significantly hydrophobic even without fire. Vegetation type, amount of organic matter and soil texture are the primary factors that determine whether or not soils will become hydrophobic. Sagebrush burns hot enough to create water repellent surface conditions but this feature is limited to the area immediately around the bush. Hydrophobicity is discontinuous in the CC Lightning Fire burned area.

Soil Erosion Estimates—Soil erosion estimates were made using the Universal Soil Loss Equation (USLE) as used by the Natural Resource Conservation Service (NRCS). The effects of fire and its burn severity were reflected in the values assigned to terms in the equation:

$$A=R \times K \times L \times S \times C \times P$$

The terms are as follows:

- A Estimated soil loss (tons/acre/yr)
- R Rainfall erosivity
- K Soil erodibility
- LS Slope factor
- C Cover factor—which changes due to fire
- P Conservation practice factor—which can change due to treatments

The R factor was based on the 2 year 6 hour rainfall for the area which is 0.6 inches. This is a mild storm and yields a low R of 0.10. The K factors were taken from the

tables of soil properties provided by the NRCS. The LS factor was taken from the table of factors based on the median slope and estimated slope length for each soil map unit. The P factor was 1.00 to reflect conditions before any treatments.

The C factor is the term that is altered by the fire because the fire destroys part or all of the overstory, understory and surface cover of the soil. In this case we used a C factor of 0.36. This is a conservative estimate; based on a C factor of 0.45 for a burned sage brush site with poor soil condition, no live vegetation and no litter cover, as modified by an allowance for the fine root mat of 20 percent under 100 percent bare soil.

Watershed Response—Field observations within and down stream of the burn area were conducted to determine the potential for high runoff response. Channel features related to transport and deposition processes were noted, along with channel crossings and stream outlets. Observations included condition of vegetation and the volume of sediment stored in channels and on slopes that could be mobilized. Field reconnaissance included upland slope processes and potential for runoff contributions to Lake Lowell. Burn severity and changes in soil infiltration were considered. Selected Runoff Curve Number Tables from the SCS National Engineering Handbook were used to estimate changes in runoff conditions for the site. Runoff Curve Number 71 was selected for use based on herbaceous/grassland/shrub communities and hydrologic soil group B. These group B soils are moderately deep with good infiltration rates. Post fire conditions of moderate burn severity but with high fire severity on vegetation suggest a Runoff Curve Number of 80. This number validated the ability of the CC Lightning burned area to produce runoff during thunderstorms into Lake Lowell.

C. Findings

Burn Severity—Field investigations of the size of fuels consumed, litter and duff consumption, ash color and depth, fine roots and soil structure were done. This field reconnaissance showed that in most places with accumulated litter, the fire left charred and blackened litter. This is an indicator of low fire residence time and a low degree of soil heating. Ash colors were predominantly black with only scattered patches of white ash where sagebrush and rabbit brush plants were completely consumed. Ash depths were generally shallow, about 1 inch. Short, charred grass stubble from cheat grass remained over a portion of the area. Fine roots in the surface soil were unburned and continued to bind the soil.

Based on these indicators, the fire was mapped in the low burn severity class with inclusions of moderate severity where sage brush and rabbit brush was reduced to white ash. There were no areas of high burn severity.

Soil Condition—Soil characteristics were investigated at numerous points across the burned area with emphasis on the steeper slopes. Hydrophobicity (water repellency) was moderate (25%) across the burned area. The hydrophobicity, including water beads that lasted for up to 10 seconds, occurred at the interface of the litter and the mineral soil in

burned areas. No hydrophobicity was found at any depth below the mineral soil surface. The Marsing/Vicary soils (map unit VmD) have a high erosion rating when the surface is bare following wildfire. Some inclusions of Marsing soils that had been farmed have a truncated profile with silty-clay B horizon or sand and well sorted gravel on the surface. This will make local erosion ratings and related gully formation even higher.

The presence of fine root mats was observed at many points. These root mats are closely tied to vegetation and particularly to cheat grass. Cheat grass and other grass roots survived the fire in condition to bind the soil in about 5% of the burned area. The density of the cheat grass varied depending on soil depth and pre fire grass cover. About 40% of the surface area has such a root mat. Cheat grass seeds which are ready for germination were noted within the root mats and atop the bare soil.

Soil Erosion Estimates—Overall soil erosion rates from the burn area are expected to be low to moderate and within allowable ranges for the preservation of soil productivity except on the Mapping Unit VmD of the soil survey and the calcareous inclusions. Mapping Unit VmD with 7 to 12% slopes has a soil erosion of 0.94 tons/acre/year and the average for the burned area is 0.84 tons/acre/year based on the USLE method.

Watershed Response—The annual hydrologic cycle indicates probability of rainfall increases in November through March. Rainfall in this area is normally of low intensity with most precipitation events amounting to less than 0.25 inches. Soil erosion ratings are based on the 2-year, 6 hour rainfall event which amounts to 0.6 inch. This rain event has a 50% likelihood of occurring each year. Pre-fire conditions produced little surface runoff from 0.6 inch of rain. Post fire conditions of bare soil and no evapotranspiration, according to Runoff Curve Number 80, will begin to produce runoff under this rainfall amount. Larger precipitation events, such as warm rain on melting snow, could produce runoff with entrains soil particles, ash and debris. With increased runoff and sediment, the soils may not have the capacity to store this output. Flows which normally would infiltrate and dissipate, may concentrate and cause a channel scour, increasing sediment loads. Small depressions in the landscape now serve as storage but they are not large enough to handle any significant increase in runoff. With the increase in runoff and sediments, an increase in nitrogen and phosphorus from ash and soil most likely will occur. These elements and sediment pose a significant risk to water quality of Lake Lowell.

Values at Risk—Water quality in Lake Lowell could be effected by sediment, nitrogen and phosphorus delivered by runoff from the burned area. Water quality in Lake Lowell is already an issue and additional nutrients reaching the lake could cause local problems.

Soil loss from potential wind and water erosion could reduce the ability of the soil to support native plant life even further. This could result in cheat grass being the only thing that can survive on the soils. Cheat grass takeover of the ecosystem will result in increased fire risk to adjacent houses and grape vineyards as well as greater risk of sediment and nutrients reaching Lake Lowell.

The gravel service road could be compromised by rills and gullies or could have mud and ash deposited on them by increased runoff. Existing culverts could become plugged and possibly washed out, with sediment going directly into Lake Lowell.

IV. RECOMMENDATIONS

A. Management (emergency stabilization)

Specification # 3. Erosion Control – Construct straw bale sediment fences and check dams in the burned area upslope from the drain and above the service road. This will slow water causing sediment loads to drop out. Roads will be protected and sediment will probably not reach Lake Lowell. When work is completed within the burned area, one culvert will be upgraded from an 18 inch culvert to a 24 inch culvert and a new 18 inch culvert will be added to prevent road washouts. Refer to the Erosion Control map for locations of these treatments. Sediment fences, check dams and culverts will be monitored following each storm (storm patrol) for the first three years following installation. Minor corrections can be made and culvert intakes can be cleaned as needed. If ash and sediment laden water is making its way into Lake Lowell, this will trigger water quality monitoring in the lake.

Specification #2. Water Quality Monitoring—If sediment or ash laden runoff is seen to be entering Lake Lowell, water quality monitoring of the lake will be triggered. Samples will be taken according to State of Idaho Department of Water Resources protocols. Four samples will be taken after each precipitation event that results in water reaching Lake Lowell. These samples will be analyzed by a certified water quality lab for suspended solids, phosphorous, nitrogen and pH. A control water sample should be taken from a point well away from the burned area. The purpose of this monitoring is to determine treatment effectiveness and to determine if additional measures are needed to reduce sediment reaching the lake.

B. Management (non-specification related)

None

C. Rehabilitation Recommendations

See reseeding specifications.

V. CONSULTATIONS

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Mike Pellant, Ecologist, Bureau of Land Management, State Office, Boise, Idaho.

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VEGETATION DAMAGE ASSESSMENT REPORT – CC LIGHTNING FIRE

I. OBJECTIVES

- Evaluate and assess fire and suppression impacts to vegetative resources and identify values at risk associated with vegetative losses.
- Determine emergency stabilization and rehabilitation needs supported by specifications to aid in vegetative recovery and soil stabilization efforts.
- Provide management recommendations to assist in vegetative recovery, physical improvement repairs and species habitat protection and rehabilitation.

II. ISSUES

- Short and long-term fire impacts to plant communities and vegetation within the CC Lightning Fire.
- Protection and enhancement of other resource values including site productivity, wildlife habitat and watershed stability.
- Management strategies for the conversion of cheat grass to a native grass and shrub ecosystem.

- Management strategies which provide for the revegetation of impacted areas.
- Identification and early detection of noxious weeds in the fire areas.

III. OBSERVATIONS

This report identifies and addresses known and potential impacts to vegetation within the CC Lightning Fire on lands managed by FWS at Deer Flat NWR. The burned area is located immediately next to Lake Lowell. The fire burned both hillsides vegetated with sage brush and grasses as well as riparian vegetation next to Lake Lowell.

Reconnaissance of impacted areas was conducted using ground survey methods. This assessment captures the concerns expressed by FWS staff for the future management of these lands; will detail the known damage to the vegetation; will discuss revegetation needs and monitoring criteria; and outline management considerations for recovery.

A. Background

The CC Lightning Fire spread rapidly because of erratic winds and extremely dry vegetation. Cheat grass was the primary carrier of the fire which impacted 105 acres; 9 acres from the Greenhurst Fire, 96 acres from the CC Lightning fire with 77 acres managed by Deer Flat NWR and 19 acres in private ownership. Resource concerns include: vegetative loss and the short and long term impacts to site productivity; loss of wildlife habitat; accelerated soil loss; possible water quality issues in Lake Lowell; and reduced success rates for stabilization actions if livestock, vehicles, and people are not kept out of the area with fences. Concern was also raised about future fire risk to adjacent houses if cheat grass was allowed to take over. In addition, concern was expressed about invasive species control and restoring areas affected by suppression activities. Additional direction was obtained from the Deer Flat National Wildlife Refuge Management Plan, 1995.

The effected plant community within the fire area is the shrub/steppe association. Dominant vegetation includes: basin big sagebrush, spiny hopsage, rabbit brush, Indian rice grass, blue bunch wheat grass, great basin wild rye grass, Sandberg blue grass and Idaho fescue. Non-native plants now make up a major component in the plant community because of past fires, grazing, cultivation, and erosion. Some of these are: cheat grass, bulbous blue grass, crested wheat grass and Russian thistle (tumbleweed). The burned riparian area contained cottonwood, Russian olive and willow trees along with wild rose, false indigo bush, willow shrubs and rabbit brush. Grasses include orchard grass, intermediate wheatgrass and some great basin wildrye. Some of the trees will die as a result of scorching at which time they will become a safety hazard that will need to be addressed.

Elevation of the burned area is from 2,500 feet to 2,600 feet. About 8 to 11 inches of precipitation occur annually, primarily in winter and mostly in the form of snow.

B. Reconnaissance Methods and Results

Ground surveys were made to observe fire effect on vegetation, threatened and endangered species, noxious weeds and suppression impacts. During the surveys, vegetation losses were assessed, fire effects to vegetation and future risk to adjacent houses was determined, and vegetative rehabilitation actions were analyzed. Ground reconnaissance included traversing affected areas and recording observations on plant community types, species composition, burn severity and impacts on vegetation and duff, topographic feature, noxious weed species, and fire suppression damage. Each vegetative issue will be discussed followed by treatment actions.

1. Vegetation

Due to extremely dry fuels and erratic winds, a significant amount of vegetation was burned within the shrub/steppe community. Cheat grass is a non-native and is highly flammable as a result of complete summer drying, its fine structure and its tendency to accumulate litter. Due to its ability to produce massive amounts of seed, this grass will recover and will provide fuel for many fires in the future if not treated. It will also prevent native grasses from establishing. Other grasses burned such as Indian rice grass and great basin wild rye, will recover some by the next growing season. Basin big sagebrush is readily killed when above ground plant parts are charred by fire and it does not re-sprout after fire.

2. Non-native Invasive Species

Noxious weeds within the fire area include Canada thistle, spotted knap weed and skeleton weed. Cheat grass is a non-native as is Russian olive trees. Other weed species include Russian thistle and tumble mustard. Although many of these species were top-killed, they will recover by the next growing season. Tumble mustard is an annual and, much like cheat grass, will produce considerable amounts of seeds.

3. Suppression Impacts

Suppression activities near the lake edge were noted. As fire lines were dug through the vegetation to the Lake's edge, there is a greatly increased risk of erosion and sediment loads reaching the Lake which could create water quality issues.

C. Findings

1. Vegetation

Emergency re-vegetation of the burned shrub/steppe type is needed to protect ecological integrity of the site. To keep natural succession on track, cheat grass must be controlled so seeded native grasses and shrubs can germinate and survive.

Emergency re-vegetation is needed to protect the ecological integrity of some riparian sites, also.

2. Non-native Invasive Species

Noxious weeds within and adjacent to the burn are adapted to invade disturbed sites and will spread into the burned area. Cheat grass control with the herbicide, *Plateau*, needs to be done prior to seeding. Control for cheat grass will be followed by monitoring to determine seeding effectiveness. If monitoring indicates the need for additional measures, an amendment will be submitted to obtain funding. Burned areas should be monitored for the next two years to identify any new weed occurrences. If weeds are found, treatment should be conducted.

3. Suppression Impacts

Straw bale silt fences, culvert replacement and re-vegetation will need to be done to reduce impacts from suppression activities near the water's edge. These treatments will need to be coordinated so that one accents the other.

IV. RECOMMENDATION

A. Management - Emergency Stabilization

Specification # 5, Revegetation – The seeding on the upland slopes will maintain site productivity, reduce the risk of weed invasion, facilitate the vegetative recovery to a pre-fire condition, and protect water quality. The proposed seed mix, which was developed after monitoring of the Sage Fire burned area, consists of:

Great Basin wildrye (<i>Elymus cineris</i> Var. Trailhead)	2 lbs/acre PLS	10.0%	
Thickspike Wheatgrass (<i>Elymus lanceolatus</i> var. Critana)	2 lbs/acre PLS	10.0%	
Indian ricegrass (<i>Achmenoides hymenoides</i> var. Nezpar)	3 lbs/acre PLS	15.0%	
Bluebunch wheatgrass (<i>Pseudoroegneria spicata</i> var. Anatone)	4 lbs/acre PLS		21.5%
Snake river wheatgrass (<i>Elymus lanceolatus</i> var. Secar)	4 lbs/acre PLS		21.5%
Basin big sagebrush (<i>Artemisia tridentata</i> spp. Tridentata)	0.1 lbs/acre PLS	1.0%	
Fourwing saltbrush (<i>Atriplex canescense</i>) de-winged	4 lbs/acre PLS	21.0%	
Totals	19.1 lbs/acre PLS	100.0%	

The seed will be pre-mixed and the fourwing seed will be de winged prior to delivery. The seed will be certified noxious and invasive weed free and be tested prior to seeding by the Idaho Seed Lab for germination and noxious weed seed. The total amount of seed to be ordered for the 78 acres is 1,589 lbs or about thirty 50 lb. bags. The seed lab needs about 2 gallons of seed to run its tests which will be ordered extra. It is strongly suggested that the contract states that the vendor will be paid based on the results of the Idaho State Seed Lab testing and not on the tag analysis.

Seeding should be done at least three weeks following herbicide treatment with *Plateau* and as close to winter rain and snow as possible. Most years this seeding window is between November 1 and November 23. The seed must be drilled to a depth of 1 inch for the seeding to be successful. The wheat grasses, needle and thread and Indian rice grass should be planted about 1 inch deep with the sage brush being a surface scatter. This seed can be dropped ahead of the discs and follow up chain. Following seeding, a one quarter inch mulch of weed-free straw or compost should be applied. If straw is used, it should be wheat straw rather than barley straw, and it should be crimped into the soil to prevent it from blowing away.

A strip of native grass (without sage and fourwing) 40 feet wide will be established immediately down-slope from the houses. This strip can be mowed at the end of June each year as a fuel reduction measure to help protect private property from fire.

The burned riparian areas (about 5 acres) will be treated to speed recovery and growth of native tree and shrubs killed by the fire. This will be accomplished during March or April of 2007 as early spring is the best time to plant cuttings from willow and cottonwood trees. Cuttings will be taken from a nearby unburned site shall be 1 to 2 inches in diameter. The bottoms will be dipped in root tone or similar compound and the tops will be painted with white house paint to conserve moisture. The cuttings will be at least 3 feet tall, will be planted at least one foot deep and will be touching the water table. This work can be done with volunteers or with contract crews. In addition to the cuttings, grass seed will be hand scattered in the burned riparian areas. This seed mix is the same as that used on the upland sites.

B. Monitoring

Specification # 7, Treatment Effectiveness Monitoring – This specification will determine the success of seeding efforts and identify areas of additional treatment. Funding for additional seeding treatments will need to be requested if the need is demonstrated. If less than 0.7 plants per square foot or less than 50% ground cover is found on the slopes by the end of the second year, additional revegetation should be done, possibly following light *Plateau* application to reduce cheat grass competition. Monitoring noxious weeds can be done simultaneously. The riparian areas must show at least a 60% survival rate for planted shrubs, trees, and grasses.

C. Management Recommendations (non-specification related)

All actions need to be coordinated to ensure proper application and success. For example, the herbicide application must be done several weeks before seeding. Proper timing and staging is vital for success.

Immediately hire or assign a project inspector to ensure timely and proper application of treatments.

Specification #4, Invasive Plant Control – The purpose of this treatment is to prevent or reduce the spread of cheat grass and to assist in the reestablishment of native grasses. The recommended control method is spraying the herbicide *Plateau* in the early fall prior to seeding. Applications should follow the recommendations of BASF in the paper entitled “Control of Cheat grass after fire using Plateau”. Application should be done using a ground spray rig mounted either on a pickup or a small four wheeler and only when wind-speeds are three miles per hour or less. Rates and timing are included in this paper. Herbicide applications will need to comply with agency approval authorities.

Specification #6, Construct a Temporary Fence – This fence is necessary to keep livestock and vehicles off the seedings, and straw bale silt fences and checkdams. People will need to be excluded from the treatment area following herbicide application by State law. This is a major safety concern and is a primary reason for fence construction complete with boundary and closure signs. In addition, people need to be kept out to allow plants to germinate and revegetation to take hold.

V. CONSULTATIONS

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I. OBJECTIVES

- Assess potential damage to cultural resources for the purposes of recommending treatments to stabilize and rehabilitate archaeological sites from adverse effects following wildland fires, suppression activities, and rehabilitation projects.
- Conduct cultural resource inventory of land disturbance activities associated with the CC Lightning Fire and recommend treatments of those sites adversely affected by suppression activities and rehabilitation projects in a manner that meets legal requirements.

II. ISSUES

- Possible impacts to prehistoric and historic resources resulting from fire suppression activities, proposed rehabilitation activities and fire effects.
- Possible impacts to previously unknown prehistoric and historic resources resulting from fire suppression activities, proposed rehabilitation activities and fire effects.

III. OBSERVATIONS

A. Background

Before settlement of the area by Euro-Americans, the area now under Lake Lowell was a low-lying region with many springs. Herds of deer and elk wintered in the area. Between 1906 and 1909 four earthen embankments were constructed to create the reservoir. Water diverted out of the Boise River via the New York Canal is used to fill the reservoir.

Outflows from the reservoir are used for irrigation. In the 1930's a Civilian Conservation Corps camp was established on the Refuge. Their main task was to face each of the four earthen embankments with stone. A Works Projects Administration crew also completed tasks at the refuge until the beginning of World War II.

B. Reconnaissance Methods and Results

A pedestrian survey of hilltops and slopes less than 5% grade was completed. Also, a visual examination of all areas containing trash or can dumps was made.

Conditions were excellent to see any possible cultural resources as much of the vegetation had burned and most of the ash had blown or washed away.

C. Findings

No prehistoric or historic resources were found. Garbage and thirteen can dumps (ranging from 30 to over 200 cans per dump) were strewn across the area, but do not contain items that are historic. Items included bed springs; barbed wire; smooth wire; tires; paint, tuna, milk, vegetable, fruit, sardine, coffee, and white gas cans; Heinz ketchup bottles; window screens; vaccine bottles with rubber caps; jars with screw tops; Mason jars; beer bottles; liquor bottles; Ponds cold cream jars and Noxima jars.

IV. RECOMMENDATIONS

Cleanup of the trash can proceed. Likewise, watershed treatments can be constructed and grass seeding can proceed. Seeding will stay within the burn perimeter and all access will be along established roads. No monitoring is needed. No specifications are recommended.

V. CONSULTATIONS

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THREATENED AND ENDANGERED SPECIES RESOURCE ASSESSMENT—CC LIGHTNING FIRE

I. OBJECTIVES

- Identify and locate Threatened and Endangered (T and E) species impacted by the fire and/or suppression actions.
- Determine impacts of fire, suppression activities, or proposed emergency stabilization or rehabilitation actions to T and E species and/or their habitat.

II. ISSUES

- Possible impacts to T and E species within the burned area.

III. OBSERVATIONS

This assessment addresses potential T and E species that may be in the area of the Deer Flat NWR. It also identifies and addresses potential impacts of the fire, its suppression, and proposed rehabilitation actions within the burned area. Initial discussions with Elaine Johnson, Refuge Manager, and with Alison Beck-Haas, FWS, Snake River Field Office, indicated that no T and E species are present.

A. Background

The CC Lightning Fire burned 105 acres within two vegetation types, the shrub-steppe community on the hillsides and the riparian community next to Lake Lowell. Plants present include basin big sagebrush, spiny hopsage, rabbitbrush, four-wing salt bush, Indian ricegrass, Sandberg bluegrass, sand dropseed, crested wheatgrass, bluebunch wheatgrass, Idaho fescue, needle and thread grass, three awn, cheat grass brome, purple aster, penstemon, tumble mustard, and tumble weed.

Elevation within the burned area ranges from 2,500 to 2,600 feet. About 8 to 11 inches of precipitation occur annually, primarily in winter and mostly as snow. Farms and private property surround the burned area to the north and Lake Lowell is to the south. Refuge lands have been an important wintering area for waterfowl such as Canada geese, mallards, gadwall, and red head. Other species include ring-necked pheasants, California quail, mourning doves, yellow-bellied marmots, mule deer, white tail deer, muskrat, beaver, weasels, coyotes and raccoons.

B. Findings

The emergency stabilization activities proposed in this plan will hold soils on the slopes, protect water quality, revegetate burned sub watersheds, treat non-native invasive plants, and seed the burned areas with native grasses.

IV. RECOMMENDATIONS

No treatments are recommended.

V. CONSULTATIONS

Elaine Johnson, Refuge Manager, Deer Flat NWR, U S Fish and Wildlife Service, Nampa, Idaho.

Todd Fenzl, Assistant Refuge Manager, Deer Flat NWR, U S Fish and Wildlife Service, Nampa, Idaho.

Alison Beck-Haas, Fish and Wildlife Biologist, Snake River Basin Field Office, U.S. Fish and Wildlife Service, Boise, Idaho

VI. REFERENCES

W. Wayne Patton , consultant	208-377-4583
Elaine Johnson, Refuge Manager, Deer Flat NWR	208-467-9278

APPENDIX II - ENVIRONMENTAL COMPLIANCE

Federal, State, and Private Lands Environmental Compliance Responsibilities

All projects proposed in the CC Lightning Burned Area Emergency Response Plan that are prescribed, funded, or implemented by Federal agencies on Federal, State, or private lands are subject to compliance with the National Environmental Policy Act (NEPA) in accordance with the guidelines provided by the Council on Environmental Quality (CEQ) Regulations (40 CFR 1500-1508); Department of the Interior and U. S. Fish and Wildlife Service. This Appendix documents the burned area emergency response team considerations of NEPA compliance requirements for prescribed emergency stabilization and monitoring actions described in this plan for all jurisdictions affected by the CC Lightning Fire.

Related Plans and Cumulative Impact Analysis

The Management Plan for Deer Flat National Wildlife Refuge was reviewed and it was determined that actions proposed in the CC Lightning Fire ES Plan are consistent with the management objectives established in the plan. The Management Plan's NEPA compliance process specifically addresses:

- Vegetation
- Wildlife habitat
- Goals and Objectives for the Refuge

Cumulative effects are the environmental impacts resulting from the incremental impacts of a proposed action when added to other past, present, and reasonably foreseeable future actions, both Federal and non-Federal. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time. The emergency protection treatments for areas affected by the CC Lightning Fire, as proposed in the CC Lightning Fire Burned Area Emergency Response Plan, do not result in an intensity of impact (i.e. major ground disturbance, etc.) that would cumulatively constitute a significant impact on the quality of the environment. The treatments are consistent with the above jurisdictional management plans and associated environmental compliance documents and categorical exclusions listed below.

Cumulative Impact Analysis

Cumulative effects are the environmental impacts resulting from the incremental impacts of a proposed action when added to other past, present, and reasonably foreseeable future actions, both Federal and non-Federal. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time. The emergency stabilization treatments for areas affected by the CC Lightning Fire, as proposed in the CC Lightning Fire Burned Area Emergency Response Plan, do not result in an intensity of impact (i.e. major ground disturbance, etc.) that would cumulatively constitute a significant impact on the quality of the environment. The treatments are consistent with the above jurisdictional management plans and associated environmental compliance documents and categorical exclusions listed

below.

Applicable and Relevant Categorical Exclusions

The individual actions proposed in this plan for cultural resource survey, treatment effectiveness monitoring, erosion control, invasive plant control, and revegetation are Categorical Exclusions from further environmental analysis as provided for in the Department of the Interior Manual Part 516 and 516 DM 2, Appendix 1 and Appendix 2, and 516 DM 6, Appendix 1. All applicable and relevant Department and Agency Categorical Exclusions are listed below. Categorical Exclusion decisions were made with consideration given to the results of required emergency consultations completed by the Burned Area Emergency Response team and documented below.

Applicable Department Categorical Exclusions

- | | |
|--------------------------|---|
| 516 DM 2 app. 1, 1.6 | Non-destructive data collection, inventory (including field, aerial, and satellite surveying and mapping), study, research and monitoring activities. |
| 516 DM 6, app. 1.4 B (3) | The construction of new, or the addition of, small structures or improvement, including structure and improvements for the restoration of native habitats, which result in no or only minor changes in the use of the affected local area. The following are examples of activities that may be included: The construction of small water control structures, the planting of seeds or seedlings and other minor revegetation actions, and the construction of small berms or dikes |
| 516 DM 6 app. 1.4 B (5) | Fire management activities, including prevention and restoration measures, when conducted in accordance with departmental and Service procedures. |

Statement of Compliance for the CC Lightning Fire Burned Area Emergency Response Plan.

This section documents consideration given to the requirements of specific environmental laws in the development of the CC Lightning Fire Burned Area Emergency Response Plan. Specific consultations initiated or completed during development and implementation of this plan are also documented. The following executive orders and legislative acts have been reviewed as they apply to the CC Lightning Fire Burned Area Emergency Response Plan:

- National Historic Preservation Act (NHPA).
- Executive Order 11988. Floodplain Management.
- Executive Order 11990. Protection of Wetlands.
- Executive Order 12372. Intergovernmental Review.

- Executive Order 12892. Federal Actions to Address Environmental Justice in Minority and Low-income Populations.
- Endangered Species Act.
- Secretarial Order 3127. Federal Contaminated
- Clean Water Act.
- Clean Air Act.

NEPA Checklist: If any of the following exception applies, the Burned Area Emergency Response Plan cannot be Categorically Excluded and an Environmental Assessment (EA) is required.

(Yes) (No)

- (X) Adversely affect Public Health and Safety
- (X) Adversely affect historic or cultural resources, wilderness, wild and scenic rivers aquifers, prime farmlands, wetlands, floodplains, ecologically critical areas, or Natural Landmarks.
- (X) Have highly controversial environmental effects.
- (X) Have highly uncertain environmental effects or involve unique or unknown environmental risks.
- (X) Establish a precedent resulting in significant environmental effects.
- (X) Relates to other actions with individually insignificant but cumulatively significant environmental effects.
- (X) Adversely effects properties listed or eligible for listing in the National Register of Historic Places
- (X) Adversely affect a species listed or proposed to be listed as Threatened or Endangered.
- (X) Threaten to violate any laws or requirements imposed for the "protection of the environment" such as Executive Order 1 1 988 (Floodplain Management) or Executive Order 1 1 990 (Protection of Wetlands).

National Historic Preservation Act

Ground Disturbance:

- None
- Ground disturbance did occur and an archeologist survey, required under section 110 of the NHPA will be prepared. A report will be prepared under contract as specified by the Burned Area Emergency Response Plan.

A NHPA Clearance Form:

- Is required because the project may have affected a site that is eligible or on the national register. The clearance form is attached. SHPO has been consulted under Section 106 (see Cultural Resource Assessment, Appendix I).
- Is not required because the Burned Area Emergency Response Plan has no potential to affect cultural resources (initial of cultural resource specialist).

Other Requirements

(Yes) (No)

- (X) Does the Burned Area Emergency Response Plan have potential to affect any Native American uses? If so, consultation with affiliated tribes is needed.

APPENDIX III - MAPS

- Fire Perimeter
- Erosion Control
- Revegetation
- Temporary Fence

APPENDIX IV - PHOTO DOCUMENTATION

APPENDIX V - SUPPORT DOCUMENTS

USDI Fish and Wildlife Service, Wildland Fire Management Plan, Deer Flat National Wildlife Refuge, 2001.

Fire Report, Greenhurst and CC Lightning Fires, Captains Tim Atwood and David May, Nampa Fire Department.

USDI Fish and Wildlife Service, Deer Flat National Wildlife Refuge Management Plan, 1995.

USDI Soil Conservation Service, Soil Survey Canyon Area, Idaho, July 1972.

USDI Fish and Wildlife Service, Oster Lake Fire Burned Area Emergency Stabilization & Rehabilitation Plan, Hagerman National Fish Hatchery and Wildlife Management Area, Gooding, Idaho 8/21/2001.

Sage Fire Rehabilitation and Cleanup Project, Section 196 Cultural Resources Survey Report, USDI Fish and Wildlife Service, Carla Burnside, 7/28/2003.

USDI Manual Part 516 and 516 DM 2, Appendix 1 and 516 DM 6, Appendix 1.4., Categorical Exclusions.