

KANUTI NATIONAL WILDLIFE REFUGE

BURNED AREA EMERGENCY RESPONSE PLAN

STABILIZATION PLAN

Old Dummy Fire 2005

Kanuti National Wildlife Refuge
2005 Old Dummy Fire
BURNED AREA EMERGENCY RESPONSE PLAN

UNIT: Kanuti National Wildlife Refuge

LOCATION: *Fairbanks, Alaska*

DATE: *November 28, 2005*

PREPARED BY: *Lisa Saperstein, Wildlife Biologist, Kanuti National Wildlife Refuge*
Karen Murphy, Regional Fire Ecologist

Submitted By: _____ Date: _____

EXECUTIVE SUMMARY

Introduction

This Burned Area Emergency Response Plan has been prepared in accordance with Department of the Interior and U.S. Fish and Wildlife Service policy. This plan provides emergency stabilization recommendations for all lands burned within the 2005 Old Dummy Fire perimeter and downstream impact areas including: public lands administered by the U.S. Fish and Wildlife Service and other jurisdictions if necessary. The primary objectives of the Old Dummy 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 Old Dummy Fire burned approximately 231,822 acres based on a preliminary fire perimeter map developed by the Alaska Fire Service (AFS); 191,444 acres are within the Kanuti National Wildlife Refuge (NWR). Smokejumpers were deployed to the fire to protect the refuge's administrative cabin on Kanuti Lake and to protect Native allotments. The fire was officially declared to be out on September 30, 2005. Smoke, poor weather conditions, and October snowfall have prevented an assessment of the fire to date, and a full assessment will not be possible until spring 2006 (see specification #5). Therefore, this plan is based on existing knowledge of the affected area rather than post-fire assessments conducted by agency personnel. In preparation of this plan, the preparers reviewed existing information about biological and cultural resources within the fire perimeter and reviewed fire reports to assess potential impacts of suppression activities.

The individual emergency stabilization treatments specifications, including effectiveness monitoring identified in the assessments, can be found in Part F. A summary of the costs is in Part E. Appendix II contains the National Environmental Policy Act (NEPA) compliance documentation summary.

Fire Background

The Old Dummy Fire, fire number BUW3, was first detected on June 16, 2005 on Native corporation land within the Kanuti NWR boundary. Lightning was the cause, and the fire was officially declared out on Sept. 30, 2005, though smokes were still spotted in early November, 2005. The fire perimeter was last updated on August 27, and the digitized acreage was calculated to be 231,822.8 acres following revision of the map in November ; a portion of this acreage is outside the refuge. The fire initially burned in open muskeg habitat but eventually entered forested areas, including riparian habitat, and spread into the hills north of the Kanuti River and into the Ray Mountains foothills to the south. It burned around numerous wetlands adjacent to the Kanuti and Kanuti Kilolitna rivers and Nolitna Creek. The perimeter also included areas along the Kanuti Kilolitna River that support potentially sensitive plant communities atypical for the refuge. This area has been scheduled for a botanical survey in cooperation with botanists from the University of Alaska Fairbanks since 2004, but the work was never completed due to smoke from the 2004 and 2005 fires. Uplands on the refuge's southern boundary, including some of the refuge's scarce tundra habitat, were also burned. The fire threatened the refuge's administrative cabin on Kanuti Lake, requiring that smokejumpers set a backburn to protect it. Smokejumpers also cut saw lines and used tactics such as cold trailing and hotspotting to protect Native allotments north of the Kanuti River. Ground damage resulting from suppression activities is believed

to be minimal. A maximum of eight firefighters worked on the fire at any given time, and the crew was frequently split between two different locations.

2. Chronological summary of fire and fire management organization growth.

The Old Dummy fire was monitored on an almost daily basis, except when smoke and weather precluded monitoring efforts or when resources were needed at higher priority fires. Daily summaries of fire progress and management efforts are provided in Table 1. Information was provided by AFS.

Issues to be addressed in the Burned Area Emergency Response Plan

The following issues will be addressed in the Burned Area Emergency Response Plan:

1. Non-native, invasive plant species
2. Safety hazards on winter trail
3. Stabilization of cultural resources sites

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

Information is lacking about the fire's effect on human safety and natural and cultural resources as smoke and inclement weather prevented access to much of the burned area prior to snowfall. However, the fire perimeter includes a segment of a winter snowmobile trail regularly used by area residents and areas previously identified as seasonal cultural sites are within or adjacent to the perimeter (Clark 1996, Jones and Arundale 1997). The extent of habitat disturbance caused by efforts to protect the refuge's administrative cabin and Native allotments to the north is unknown, but is expected to be minimal. Of more concern is the possibility that seeds of invasive weeds were inadvertently introduced on tools and equipment used by firefighters during suppression activities. These issues are discussed in more detail in Appendix I, Resource Assessments.

Table 1. Daily summary of fire activity, suppression efforts, and acreage. Information from preliminary AFS report.

Date	Activity	Acres
June 16	Fire detected near the confluence of the Kanuti and Kanuti Kilolitna rivers, on Doyon lands	200
June 17	Fire not monitored due to other priorities	
June 18	Fire has progressed about 5 miles to the west and has crossed the Kanuti River;	4,500
June 19-21	The fire was not monitored due to other priorities	
June 22	Fire was 5% active on the east side, backing to the east	4,750
June 23	Fire not monitored due to other priorities	
June 24	Fire is 15% active with intermittent torching. Northeast corner was backing while southwest and northwest corner actively burning with 15 foot flame lengths at times.	7,159
June 25-26	Fire not monitored due to other priorities	
June 27	Smoky conditions; fire estimated to be 1 mile from Old Dummy Lake, with gains on the north and east ends.	8,743
June 28-30	The fire was not monitored due to other priorities	
July 1	Fire was actively moving to the east, remaining on south side of river.	
July 2	Northwest corner was actively backing into a west wind and has crossed Nolitna Creek. Smoke obscured much of the fire	30,677
July 3	Fire was backing toward the northeast and was 80% active with torching and creeping behavior.	37,983
July 4	Smokejumpers dispatched to Kanuti Lake to defend the administrative cabin . The site was prepared for a burnout operation, but afternoon rain showers prevented ignition. Too smoky to map perimeter.	
July 5	Continuing moist conditions prevent burnout. Helicopter used to assess several Native allotments for protection action	
July 6	Surveillance aircraft reported considerable activity on the northwest corner and east end. Smokejumpers conducted the burnout to protect the cabin and utilized direct attack to protect an allotment near the mouth of the Kanuti Kilolitna River. Rain fell on the fire for about 30 minutes. Staffing remained at 8 smokejumpers	53,576
July 7	Fire ran eastward in black spruce north of Kanuti River. Two smokejumpers completed mop up around the cabin, the remaining six mopped up allotment. Head of fire was burning along south shore of Kadakina Lake.	
July 8	Portion of fire north of Kanuti River was extremely active. Smokejumpers finished mopping up and prepared FWS repeater site on Hill 1606 for possible burnout.	75,146
July 9	Smokejumpers assessed allotments to the north	
July 10	Fire received intermittent rain throughout day; fuels were very wet, and only a few smokes were located on the northern edge and in the interior of the fire.	
July 11	Fire received more rain, smokejumpers shifted to direct attack strategy and put in a line near Kaldolyeit Lake.	
July 12	Fire received intermittent rain. Jumpers worked on line from south of Kaldolyeit Lake west toward Kanuti River. They completed about half of the desired distance.	
July 13	Fire was inactive with a few isolated, interior smokes. Jumpers completed additional line towards the river, mopping up 2 feet in along the trail	78,195
July 14	Jumpers continue securing the perimeter toward Kadakina Lake	
July 15	Jumpers detect several flare ups in peat banks and put them out. Surveillance plane reports a few isolated perimeter smokes and one interior smoke	
July 16	Smokejumpers return to Fairbanks and fire is placed in monitor status	
July 17	Surveillance aircraft reports that fire is inactive.	
July 18	Fire not monitored due to other priorities	
July 19	Scattered smokes on southern perimeter, one interior smoke to north	
July 20	Southeast portion of fire had a 100acre patch within perimeter with creeping fire activity. Southern perimeter had a few smokes, but rest of fire was inactive.	

Table 1, continued. Daily summary of fire activity, suppression efforts, and acreage. Information from preliminary AFS report.

July 21	Fire not monitored due to other priorities	
July 22	Unburned fingers burned southeast of Old Dummy Lake.	80,134
July 23	Fire not monitored due to other priorities	
July 24	A 60 acre area on northwest corner was active; southeast side was 30% active with backing	82,461
July 25	Southeast side had a 3 mile active front, with torching observed in other areas	84,921
July 26	Too smoky to see the fire	
July 27-28	Fire not monitored due to other priorities.	
July 29:	The fire was backing toward the Kanuti River to the north, but had not crossed the river. It made small runs to the south southwest, but south side too smoky to observe	98,475
July 30	The west side of the fire was 10% active, creeping in tundra. The fire gained 300 acres on its western sided. The eastern side was 90% active, backing to the south and east and working into the hills.	
July 31	It was 25% active on the eastern side, backing into tundra. The fire was mainly backing and filling in unburned areas within the existing perimeter. There was one small run on the western side	107,513
Aug. 1:	Unfavorable weather conditions prevented surveillance.	
Aug. 2	Fire was 5% active on the eastern side, smoldering in hardwoods along the drainages. It had backed into the drainages on the eastern side and was holding there. The furthest west portion of the fire was 50% active, backing into spruce and lichen. The west perimeter backed into a patchy old burn that appeared to slow it down. The southern and southeastern ends were the most active. Haze made it difficult to see the perimeter,	113,454.5
Aug. 3.	Fire not monitored due to other priorities.	
Aug. 4	The west side was 10% active, creeping in tundra. The east side was too smoky to monitor. The fire remains in monitor status, with no current threat to identified sites	
Aug. 5 - 8	The fire was not monitored	
Aug. 9	The northeast side moved up to the Kanuti River; drainages have presented spread to the east. The most active area was in the hills to the southeast. Smoke prevented mapping of the entire perimeter	113,560.4
Aug. 10	The fire was not monitored due to higher priorities	
Aug. 11	The fire was not monitored due to drift smoke from multiple fires	
Aug. 12	mokejumpers (6 total) conducted a successful burnout to protect an allotment on the west shore of Kaldolyeit Lake. Additional allotments to the west are threatened, and smokejumpers will be moved when a helicopter is available.	121,152.4
Aug. 13	South side of fire was completely smoked in	
Aug. 14	Jumpers mop up 50 feet in on allotment. South side of fire remained completely smoked in	
Aug. 15	Fire exhibited extreme behavior and substantial westward growth. Perimeter north of Old Dummy Lake became active again after dormant period. Jumpers completed protection of first allotment and move to unburned half of another allotment. A helicopter moved the RAWS station to Bettles as the fire was ½ mile away	
Aug. 16	Heavy smoke	161,160.8
Aug. 17	Jumpers could not reach Kanuti Lake cabin due to smoke; they were moved to Bettles	
Aug. 18	Jumpers moved to cabin and conduct a backburn. Results were spotty due to unfavorable conditions.	
Aug. 19	Heavy smoke prevents burnout and helicopter support	
Aug. 20	Helicopter was able to reach the fire in late evening. Conducted reconnaissance. Backburn could not be done due to unfavorable winds	

Table 1, continued. Daily summary of fire activity, suppression efforts, and acreage. Information from preliminary AFS report.

Aug. 21	Six jumpers assessed sites using a helicopter. Burn conditions were not favorable for a planned burnout around the administrative cabin. Two Forest Service jumpers scheduled for demobilization	
Aug. 22	Smoke and low clouds prevented aerial observation. FWS cabin and native allotments secured. Fire burned to natural barriers on southwest side and stopped. Fire burned within 2 1/2 miles of Holonada Creek cabin and stopped. Smokejumpers demobilized due to length of assignment	
Aug. 23	Mapped northwest perimeter and assessed potential for additional site protection. Fire activity limited to creeping and smoldering. Allotments without natural barriers still threatened	166,799.1
Aug. 24	Four smokejumpers were transported to Bettles to be deployed to cabin/allotment protection. the fire was receiving rain throughout the day and was smoldering and creeping.	
Aug. 25	Rain continued. Personnel (4 smokejumpers) mopped up on the northern perimeter and started securing an allotment. Helicopter used infra-cam between sites 1 – 18 and found little heat. Acreage same as previous day	
Aug. 26	Personnel secured perimeters of two allotments using a Mark III pump. Operations moved to north of Kaldolyeit Lake. Surveillance aircraft flew the fire and reported scattered smokes throughout	232,528.9
Aug. 27 - 28	Personnel worked on a peat bank on the north side of Kaldolyeit Lake. Crew moved ½ mile via helicopter to work on another site	
Aug. 29	Rained for most of the day. Personnel finished mopping up and were transported to Bettles. An IR flight with helicopter showed no heat in areas of concern	
Aug. 30	Objectives met and personnel and gear demobilized. Fire put in monitor status	
Aug. 31– Sept. 29	Weather not conducive to significant fire activity. Fire not monitored	
Sept. 30	Fire declared out	
Nov. 17	Perimeter map revised	231,821.8

Management Requirements

Kanuti NWR was created in December 1980 with the passage of the Alaska National Interest Lands Conservation Act (ANILCA) (Public Law 96-487). The refuge encompasses 1.65 million acres in northcentral Alaska, straddling the Arctic Circle and occupying a basin formed by the Koyukuk and Kanuti rivers. Habitats consist of boreal forest and muskeg, numerous wetlands, riparian habitat, and limited tundra. The Brooks Range is to the north and the foothills of the Ray Mountains form the southern boundary.

The establishing purposes of the refuge, defined in ANILCA, are: 1) to conserve fish and wildlife populations and habitats in their natural diversity including, but not limited to, white-fronted geese and other waterfowl and migratory birds, moose, caribou (including participation in coordinated ecological studies and management of the Western Arctic caribou herd), and furbearers; 2) to fulfill international treaty obligations with respect to fish and wildlife and their habitats; 3) to provide, in a manner consistent with the purposes set forth in subparagraph (1) and (2), the opportunity for continued subsistence uses by local residents; and 4) to ensure, to the maximum extent practicable and in a manner consistent with the purposes set forth in paragraph (1), water quality and necessary water quantity within the refuge.

Kanuti NWR does not contain designated Wilderness. No threatened or endangered species are known to occur on the refuge, although two Candidate 2 plants, *Aster yukonensis* and *Thlaspi arcticum*, have been found near the refuge (Murray and Lipkin 1987).

The Kanuti NWR revised Comprehensive Conservation Plan (CCP), Environmental Impact Statement, and Wilderness review was completed in 1987 (USFWS 1987) and is currently under revision. The original CCP does not include management goals and objectives that are specific enough to be used as justification for actions recommended in this stabilization plan. Several of the biological objectives in the draft CCP revision concern fire, but they focus on monitoring the ecological effects of naturally concerning fires and determining fire history patterns on the refuge and are therefore not relevant to this plan.

The Kanuti Fire Management Plan (FMP) is currently in draft status. Draft goals within the plan are (Section III.B):

1. Protect human life and settlements within and adjacent to Kanuti NWR from wildland fire;
2. Protect sensitive biological communities, cultural and historic sites, Native allotments, privately owned and legally registered cabins, and refuge administrative facilities on Kanuti NWR from wildland fires to the extent practicable;
3. Restore, perpetuate, and protect native wildlife and plant species on Kanuti NWR by maintaining a diversity of plant communities that would be expected under a natural regime of wildland fire;
4. Maintain natural fire-related ecosystem processes on Kanuti NWR to the maximum extent feasible and initiate studies if the role of fire in these processes is poorly understood;
5. Refuge staff will participate in interagency efforts to plan and implement fire-related monitoring and modeling activities such as those documented in the National Fire Plan or recommended by the Alaska Fire Effects Task Group;
6. Educate children and adults residing in or visiting northern Alaska to recognize the role of fire in the boreal forest and understand the long- and short-term ecological consequences of maintaining or restricting fire in the landscape.

Within these broad goals, several objectives are pertinent to BAER activities. Under Goal 2 in the FMP, there is an objective to work with the Regional Archaeologist or a cultural resources specialist to identify and map which cultural and historic sites are at risk of unacceptable damage from wildland fire by 2007 so that suppression efforts can be prioritized appropriately. This objective had not been initiated by the 2005 fire season, and effects of the Old Dummy fire on cultural resources are not known. Only known or suspected cultural resource sites within or adjacent to the Old Dummy fire perimeter are being considered under this stabilization plan. Seasonal camps have been identified within the fire perimeter, and these should be assessed to determine status, remove trees leaning over campsites that may be hazardous to campers, and in order to make recommendations about future management. The refuge staff recognizes that the ability to visit cultural resource sites within the burn may be limited depending on the wishes of area residents. The refuge will respect the concerns of residents in terms of visiting these sites. One known cultural area within the burn perimeter is on a Native corporation inholding within the refuge boundaries.

Activities within this BAER proposal are also supported by national policy. The FWS Biological Integrity, Diversity, and Environmental Health Policy (601 FW3, 2001) directs refuges to “prevent the introduction of invasive species, detect and control populations of invasive species, and provide for

restoration of native species and habitat conditions in invaded ecosystems.” Kanuti NWR currently has no known populations of invasive plants, and will take a proactive role in preventing introduction via seeds introduced on equipment or natural expansion into disturbed areas from existing populations along the Dalton Highway.

The FWS Cultural Resources Policy (614 FW1, 1992) directs refuges to “protect, maintain, and plan for the use of Service managed cultural resources for the benefit of present and future generations,” and that we “exercise caution that cultural resources are not inadvertently transferred, sold, demolished, or substantially altered as a result of Service sanctioned activities until appropriate identification, evaluation, and planning are accomplished.” Many of the refuge’s cultural resources have not been adequately identified or evaluated, and are thus subject to loss through fire and other activities.

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PART A - FIRE LOCATION AND BACKGROUND INFORMATION

Fire Name	Old Dummy
Fire Number	BUW3
Agency Unit	Kanuti NWR
Region	7
State	Alaska
County(s)	NA
Ignition Date/Cause	June 16, lightning
Zone	Tanana
Date Fully Contained	September 30, 2005
Jurisdiction	FWS, 191,433.7cres
<i>other jurisdictions</i>	Doyon, 17,093.6 acres
<i>other jurisdictions</i>	BIA, 757.1 acres
<i>other jurisdictions</i>	BLM, 22,527.4 acres
Total Acres	231,821.8
Date Contained	September 30, 2005

PART B - NATURE OF PLAN

Type of Action (check one box below)

<input checked="" type="checkbox"/>	Initial Submission
<input type="checkbox"/>	Amendment to the Initial Submission

PART C - EMERGENCY STABILIZATION ASSESSMENT

Emergency Stabilization Objectives

- Locate and stabilize severely burned conditions that pose a direct threat to human life, property, or critically important cultural and natural resources.
- Recommend post-fire emergency stabilization prescriptions that prevent irreversible loss of natural, historic, and cultural resources.
- Locate and remove non-native invasive plants that have been introduced to areas occupied by fire personnel during suppression efforts or in severely burned sites adjacent to areas that may serve as seed sources for invasive species (e.g., winter trails, allotments, or other areas of human use where equipment/vehicles may serve as a vector for seed dispersal).

PART D - TEAM ORGANIZATION, MEMBERS, AND RESOURCE ADVISORS

I. Burned Area Emergency Response Team Members:

Position	Team Member (Agency)
Team Leader	Lisa Saperstein (FWS)
Fire Ecologist	Karen Murphy (FWS)
Operations	Mike Spindler (FWS)
Hydrologist	John Trawicki (FWS)
Cultural Resources/Archeologist	Debra Corbett (FWS)
Vegetation Specialist	Contract
Wildlife Biologist	Lisa Saperstein (FWS)
GIS Specialist	Lisa Saperstein (FWS)

II. 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
Gene Long	USFWS
Randy McKinley	EROS Data Center, USGS
Randi Jandt	Alaska Fire Service, BLM
Ken Coe	Alaska Fire Service, BLM

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 – Old Dummy Fire

Spec #	Title	Unit	Unit Cost	# of Units	Work Agent	Cost
1	Assess Damage to Winter Trail	miles	\$316.00	11	FA &SC	\$ 3,476
2	Remove Hazards from Winter Trail	miles	\$3,590.00	3	FA & SC	\$10,772
3	Plan Development and Assessment	Acres	\$ 0.22	191,444	FA & SC	\$9,504
4	Cultural Resources Assessment and Treatment	Acres	\$ 0.09	191,444	FA & SC	\$17,947
5	Invasive Species Control	Acres	\$ 0.13	191,444	FA, SC	\$26,087
TOTAL COST						\$67,786
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/ACTIVITY NAME	Assess Damage to Winter Trail	PART E SPECIFICATION #	1
NFPORS TREATMENT CATEGORY*	Trails	FISCAL YEAR(S) (list each year):	2006
NFPORS TREATMENT TYPE *	Assessment	WUI? Y / N	No
IMPACTED COMMUNITIES AT RISK	Allakaket and Alatna	IMPACTED T&E SPECIES	None

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

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

A. General Description:
 Assess how much of the traditional winter trail is in the burn perimeter and how much damage actually occurred to the trail. Assessment will include a village meeting and an aerial assessment. The winter trail portrayed on the USGS topographical map likely does not represent the current route. The meeting will be to discuss the actual trail location and plans for treatment, if any is needed. The aerial assessment will be conducted in a FWS aircraft, along with one village resident familiar with the route and one other refuge staff member. Ground assessment will be done if landing sites are available. This assessment will be used to determine how much work will be required to remove fire-created hazards from the trail for public safety.

B. Location/(Suitable) Sites:
 According to the USGS topographical map, approximately 11 miles of a winter trail was burned by the Old Dummy Fire south of Kanuti Chalatna Creek near Kaldolyeit Lake and Kadakina Creek. The trail crosses wetland areas, riparian habitat, and forested uplands within the fire perimeter.

C. Design/Construction Specifications:
 1. Determine the most cost effective treatment method to mark winter trail location and remove hazard tree (e.g., force account, contract with native village, etc.) and mark trails.
 2. The assessment will consist of a meeting in Allakaket in late winter to discuss potential fire damage to the trail and the opportunity for hazard removal. Residents familiar with the trail will indicate the route on a map. One resident from the village will accompany refuge staff on an overflight of the trail to determine the extent of damage. Trail route will be recorded in a GPS, and notes on the extent of damage will be recorded.

D. Purpose of Treatment Specifications:
 Blocked trails and debris on trails can represent significant safety risks to travelers that rely on trails for winter travel to allotments and seasonal hunting areas. Burning can also remove familiar landmarks and destroy existing trail delineation that can result in travelers losing the trail in dark, cold conditions, a potentially life-threatening situation.

This preliminary assessment is necessary to determine the exact location of the trail, to assess the extent of damage caused by the fire and determine appropriate treatment specifications. Information gained from this assessment will be used to modify Treatment #4, Hazard Removal from Trail.

E. Treatment Effectiveness Monitoring Proposed: A report of assessment results will be produced by refuge staff. No additional monitoring is required for this task.

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-13/5 Pilot/Manager @ \$57/hour X 10 hours	\$570.00
GS-12/5 Deputy Manager @ \$48/hr X 12 hours	\$576.00
TOTAL LABOR, MATERIALS, AND OTHER COST	\$1,146.00
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
Cessna 185 @ \$148/hour X 10 hours	\$1,480.00
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	\$1,480.00
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):	COST / ITEM
Aviation fuel: 150 gallons @ \$5.00/gallon	\$750.00
TOTAL MATERIALS AND SUPPLY COST	\$750.00
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):	COST / ITEM
	\$0.00
TOTAL TRAVEL COST	\$0.00
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	COST / ITEM
Labor- reconnaissance \$100/day X 1 people X 1 day	\$100.00
TOTAL CONTRACT COST	\$100.00

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
FY-06	10/14/2005	08/30/2006	F & S	miles	\$316	11 miles	\$3,476.00
FY-07							0
FY-08							0
FY-09							0
TOTAL							\$3,476.00

Work Agent: C=Coop Agreement, F=Force Account, G=Grantee, P=Permittees, S=Service Contract, T=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.	P, E
5.	No cost estimate required - cost charged to Fire Suppression Account	C

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

RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:

A map of the winter trail depicted on the USGS Bettles 1:250,000 quadrangle, with an overlay of the fire perimeter, can be found in Figure 5.

TOTAL COST BY JURSDICTION

JURISDICTION	UNITS TREATED	COST
FWS	11 miles	\$3,476.00
	TOTAL COST	\$3,476.00

TREATMENT/ACTIVITY NAME	Remove Hazards from Winter Trails	PART E SPECIFICATION #	2
NFPORS TREATMENT CATEGORY*	Trails	FISCAL YEAR(S) (list each year):	2006
NFPORS TREATMENT TYPE *	Hazard Removal	WUI? Y / N	No
IMPACTED COMMUNITIES AT RISK	None	IMPACTED T&E SPECIES	None

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

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

<p>A. General Description: Clear hazardous debris from trail and install trail markers as needed. Details in this specification will likely be modified based on findings from Specification #1, Assess Damage to Winter Trail.</p> <p>B. Location/(Suitable) Sites: Approximately 11 miles of a winter trail was burned by the Old Dummy Fire south of Kanuti Chalatna Creek near Kaldolyeit Lake and Kadakina Creek. The trail crosses wetland areas, riparian habitat, and forested uplands within the fire perimeter</p> <p>C. Design/Construction Specifications: 1. Implement most cost effective treatment method as early late winter of 2006 as possible. 2. Clear original width of the trail from downed and leaning trees, approximately 6 – 10 feet wide, during late winter 2005-2006 as described in assessment recommendations. 3. Install reflective trail markers as needed through burned areas to prevent people from straying off the trail. 4. Recommend rehabilitation actions if hazards cannot be readily removed. 5. Document control actions taken and additional control actions needed.</p> <p>D. Purpose of Treatment Specifications: Reduce public safety risks along refuge winter trails. Blocked trails and debris on trails can represent significant public safety risks to travelers that rely on trails for winter travel to allotments and seasonal hunting areas. Burning can also remove familiar landmarks and destroy existing trail delineation that can result in travelers losing the trail in dark, cold conditions, a potentially life-threatening situation. Only trees considered to be hazardous will be removed.</p> <p>Four members of the village fire crew will be hired to clear the trail of debris and install trail markers if needed. Two crew members will be certified sawyers equipped with chain saws and one will be crew boss.</p> <p>E. Treatment Effectiveness Monitoring Proposed: Treatments will be monitored to determine if refuge winter trails are clearly marked and meet refuge safety standards. Monitoring results are reported annually and summarized in NFPORS. Refuge staff and the crew leader will survey the trail from the air to ensure that work was completed and that cleared area does not exceed prescriptions. Ground evaluations will be conducted during the aerial survey in areas adjacent to landing sites.</p>

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-13 Pilot/Manager @ \$57/hour X 12 hours	\$684.00
GS-12 Deputy Manager @ \$48/hr X 30 hours	\$1440.00
TOTAL PERSONNEL SERVICE COST	\$2,124.00
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
Cessna 185@ \$148/hour X 8 hours	\$1,184.00
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	\$1,184.00
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):	COST / ITEM
Aviation fuel: 120 gallons @ \$5.0/gallon (FY06)	\$600.00
Stihl chainsaw model MS290@ \$350.00 X 2	\$700.00
Fuel for snowmobiles and chainsaws: 175 gal. @ \$4.50/gallon	\$787.50
Chain saw and bar oil:	\$16.00
Reflective trail markers @ \$1.10 X 250 X 1FY	\$275.00
Miscellaneous spare parts for chain saws	\$100.00
TOTAL MATERIALS AND SUPPLY COST	\$2,478.50
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):	COST / ITEM
Roundtrip (72 miles) @ \$35 X 7 roundtrips X 4 snowmobiles	\$980.00
Roundtrip travel to Allakaket@ \$290 for Deputy Manager	\$290.00
Per diem@ \$135/day X 1	\$135.00
TOTAL TRAVEL COST	\$1,405.00
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	COST / ITEM
Crew Boss AD4@21.42hr X 60 hrs	\$1,285.20
Trail Crew AD1@15.30/hr X 50 hrs X 3 people	\$2,295.00
TOTAL CONTRACT COST	\$3,580.20

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
FY-06	10/14/2005	08/30/2006	F & S	miles	\$3,600	3 miles	\$10,772.00
						TOTAL	\$10,772.00

Work Agent: C=Coop Agreement, F=Force Account, G=Grantee, P=Permittees, S=Service Contract, T=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	M, E
4.	Estimates based upon government wage rates and material cost.	C, 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

RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:

A map of the winter trail depicted on the USGS Bettles 1:250,000 quadrangle, with an overlay of the fire perimeter, can be found in Figure 5.

TOTAL COST BY JURSDICTION

JURSDICTION	UNITS TREATED	COST
FWS	14 acres	\$10,772.00
	TOTAL COST	\$10,772.00

TREATMENT/ACTIVITY NAME	Plan Development and Assessment	PART E SPECIFICATION #	3
NFPORS TREATMENT CATEGORY*	Planning	FISCAL YEAR(S) (list each year):	2006
NFPORS TREATMENT TYPE *	Prescription and Design	WUI? Y / N	
IMPACTED COMMUNITIES AT RISK	None	IMPACTED T&E SPECIES	None

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: Gather necessary information concerning resources at risk (i.e., cultural resource sites, invasive species, and FWS minor facilities [trails, campgrounds, etc.]) to develop the necessary Burned Area Emergency Response and Burned Area Rehabilitation Plans for the 2005 fires.</p> <p>B. Location/(Suitable) Sites: 2005 burned areas with anticipated emergency stabilization or burned area rehabilitation issues.</p> <p>C. Design/Construction Specifications: <i>(Note: many of the aerial assessment aspects of these design specifications are imbedded in the individual specifications that follow.)</i></p> <p>1. Review refuge land/fire management plans (i.e., CCP, HMP, FMP, etc.), 2005 wildfire suppression and first order fire effects monitoring records relative to the above resources at risk in the burned areas. Based on the approved land management plans, identify what constitutes “fire damage”, to what resource management standards will the fire damage need to be addressed, and are there administrative constraints that need to be addressed. Conduct a late winter village meeting in Allakaket to inform residents of Allakaket and Alatna about the extent of the fire, suppression activities conducted during the fire, potential impacts of the fire to resources, and possible stabilization/rehabilitation actions. Specifically:</p> <ul style="list-style-type: none"> • What can realistically be done to each known cultural resource sites to minimize further degradation until additional long-term cultural resource management strategies can be developed and implemented? • What are the refuge winter trails and native use campground public use safety standards? • What is the approved refuge trail marking method. • What are the anticipated invasive species issues and where are the most likely locations for invasive species establishment? What invasive species control method are approved (i.e., approved pesticides). <p>3. Locate (map) resources at risk.</p> <ul style="list-style-type: none"> • Known cultural resource sites. • High priority invasive species invasion sites in the burned area (e.g., public access points, winter trails, ground suppression locations, etc.). • FWS minor facilities (e.g., trails, campgrounds, fish monitoring sites, etc.). <p>4. Aerially assess each specific refuge resource at risk to preliminary determine whether any treatment is needed and, if so, the type and degree of treatment needed. Specifically identify:</p> <ul style="list-style-type: none"> • Fire damage to known cultural resource sites containing combustible materials. Unstable culture resource sites or as site exposed by the wildfire and susceptible to erosion or looting. • Fire damage to refuge facilities that will need to be repaired or replaced. • Visible location of winter trails and the possible need for trail markers. • Tree mortality along winter trails creating unacceptable (based on refuge approved land management

<p>plan standards) public safety standards.</p> <ul style="list-style-type: none"> • Fire damage to winter trails or native use campgrounds requiring rehabilitation to refuge approved land management plan standards. • Significant ground disturbance (high burn severity or suppression actions) creating the potential for invasive plant establishment. <p>5. Record findings for plan preparation.</p> <p>6. Prepare Burned Area Emergency Response and/or Burned Area Rehabilitation Plans to address each individual resource treatment issue.</p> <p>D. Purpose of Specification: Develop specific treatment specifications</p> <p>E. Treatment Effectiveness Monitoring Proposed: None</p>

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 Wildlife Biologist/GIS Specialist @ \$40/hour X 130 hours	\$ 5,200.00
GS-12 Fire Ecologist @ \$48/hour X 20 hours	\$960.00
GS-13 Pilot/Manager @ \$57/hour X 18 hours	\$1,026.00
GS-12 Deputy Manager @ \$48/hr X 10 hours	\$480.00
TOTAL PERSONNEL SERVICE COST	\$7,666.00
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
Cessna 185 @ \$148/hour x 6 hours	\$888.00
TOTAL EQUIPMENT PURCHASE, LEASE OR RENTAL COST	\$888.00
MATERIALS AND SUPPLIES (Item @ Cost/Each X Quantity X #Fiscal Years = Cost/Item):	COST / ITEM
Miscellaneous office and GIS supplies	\$ 200.00
Aviation Fuel: 110 gallons @ \$5.00/gallon	\$550.00
TOTAL MATERIALS AND SUPPLY COST	\$ 950.00
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
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
FY-06	10/11/2005	8/30/2006	F	acres	\$0.04/acre	191,444	\$9,504.00
TOTAL							\$9,504.00

Work Agent: C=Coop Agreement, F=Force Account, G=Grantee, P=Permittees, S=Service Contract, T=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	M
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

RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:

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

TOTAL COST BY JURSDICTION

JURISDICTION	UNITS TREATED	COST
FWS	191,444 acres	\$9,504.00
	TOTAL COST	\$9,504.00

TREATMENT/ACTIVITY NAME	Cultural Resources Assessment and Treatment	PART E SPECIFICATION #	4
NFPORS TREATMENT CATEGORY*	Heritage Resources	FISCAL YEAR(S) (list each year):	2006
NFPORS TREATMENT TYPE *	Site Stabilization	WUI? Y / N	No
IMPACTED COMMUNITIES AT RISK	None	IMPACTED T&E SPECIES	none

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

Number and Describe Each Task:

A. General Description

Implement emergency stabilization measures on protect known cultural resources within the burned area to minimize cultural resource degradation until additional long-term cultural resource management strategies can be developed and implemented.

Based on the preliminary boundaries identified for the Old Dummy fire, there is one known site containing semi-subterranean winter houses and a cabin foundation on Doyon, Limited land and several seasonal camps on land managed by FWS. Refuge personnel have identified another potential cultural site on FWS lands within the perimeter. There are likely other cultural sites within the perimeter, but the area has not been adequately assessed for cultural resources and existing information primarily concerns areas further to the north. The known and suspected sites will be assessed for potential stabilization and rehabilitation issues associated with these sites from fire-caused erosion, the destabilization of standing structures, and from exposure of previously hidden artifacts that now may be subjected to looting. Field visits to these sites will be used to determine if any action is necessary to prevent further degradation of these sites. Treatments to camouflage sites that can be conducted by hand or with light mechanical tools will be completed immediately following assessment. More extensive treatments will be proposed as amendments to this stabilization plan or as Rehabilitation treatments.

B. Location/(Suitable) Sites: Known cultural resource sites in the 2005 burned areas. Sites are located along rivers and large lakes known to support subsistence activities or seasonal camps

C. Design/Construction Specifications:

Conduct emergency stabilization measures on known sites during spring/summer 2006.

1. In consultation with the Regional 7 Historic Preservation Officer (RHPO) review known cultural site documentation (e.g., refuge Cultural Resource Management Plan; refuge, RHPO and THPO and SHPO cultural resource records including systematic inventory findings and 36 CFR 800 compliance determination; and all Cultural Resource Management Reports) to determine site locations, identified cultural resource management standards, wildfire problems possibly affecting particular resource(s) and those specific emergency stabilization measures that can alleviate or minimize degradation until additional long-term cultural resource management strategies can be developed and implemented. In addition develop NHPA appropriate site inspection protocols. Also in consultation with the RHPO and using information from the aerial assessment develop NHPA appropriate emergency stabilization treatments for each site identified as needing stabilization.
2. Acquire resources needed to address the likely cultural resource issues and anticipated emergency site stabilization actions.
3. Visit each known site identified as needing an emergency stabilization treatment and implement the RHPO

approved treatment.

4. Document emergency stabilization measures taken and additional unanticipated emergency stabilization actions needed.

5. Follow-up on any unanticipated emergency stabilization actions no later than 1 year following wildfire containment (requires a plan amendment).

D. Purpose of Treatment Specifications:

Stabilize known cultural resource sites.

E. Treatment Effectiveness Monitoring Proposed:

All treated sites will be will be monitored annually through FY2008 or until additional long-term cultural resource management strategies can be developed and implemented (which ever is sooner) to ensure that treatments are still in place and effective. Monitoring results are reported annually and summarized in NFPORS.

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
Archaeologist, GS-12 @ \$48/hr X 80 hours	\$3,840.00
GS-12 Deputy Manager @ \$48/hour X 24 hours	\$1,152.00
GS-7 Archaeological technician @ \$21.42 x 40 hours	\$ 856.80
TOTAL PERSONNEL SERVICE COST	\$5,848.80
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
Avgas@\$5.00/hr X 180 gallons	\$ 900.00
Food for fieldwork	\$ 180.00
TOTAL MATERIALS AND SUPPLY COST	\$1,080.00
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):	COST / ITEM
Commercial transport between Anchorage and Fairbanks @ \$360.00 X 1 person for village meeting	\$360.00
Per diem in Fairbanks @ \$154 day (winter rate) X 2 days X 1 people	\$308.00
Commercial flight between Fairbanks and Allakaket@\$290.00 X 2 people	\$580.00
Per Diem at "Other Alaska" rate @ \$135/day X 2 people	\$270.00
Commercial transport between Anchorage and Fairbanks @ \$360.00 X 2 people for fieldwork	\$720.00
Per diem in Fairbanks @ \$247/day X 2 days X 2 people	\$988.00
Commercial flight between Fairbanks and Bettles@\$290.00 X 2 people	\$580.00
Camp rate @ \$3/day X 2 days X 2 people	\$ 12.00
TOTAL TRAVEL COST	\$3,818.00
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	COST / ITEM
R-44 Helicopter (Charter) @ \$600/hr X 12 hours	\$7,200.00
TOTAL CONTRACT COST	\$7,200.00

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
FY_-06	03/15/2005	08/30/2005	F	Acres	\$448/a cre	Est, 40 acres	\$17,947.00
TOTAL							\$17,947.00

Work Agent: C=Coop Agreement, F=Force Account, G=Grantee, P=Permittees, S=Service Contract, T=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	T, 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

RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:

List Relevant Documentation and Cross-Reference Location within the Accomplishment Report.
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TOTAL COST BY JURISDICTION

JURISDICTION	UNITS TREATED	COST
FWS	40 acres	\$17,947.00
TOTAL COST		\$17,947.00

TREATMENT/ACTIVITY NAME	Invasive Species Control	PART E SPECIFICATION #	5
NFPORS TREATMENT CATEGORY*	Invasive Species	FISCAL YEAR(S) (list each year):	2006
NFPORS TREATMENT TYPE *	Hand Treatment	WUI? Y / N	No
IMPACTED COMMUNITIES AT RISK	None	IMPACTED T&E SPECIES	None

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

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

A. General Description:

Implement emergency stabilization measures to control and eradicate invasive species where ground wildfire suppression actions were taken and in the vicinity of public use and access areas.

Field investigations will be conducted within the Old Dummy fire to determine if exotic, invasive plant species were introduced into burned areas due to proximity to seed sources associated with human-use areas (e.g., trails, allotments) or areas occupied by fire suppression personnel. Hand-pulling of exotics will occur whenever these species are found unless the species do not respond to hand-pulling or the population extent is too large.

B. Location/(Suitable) Sites:

Ground wildfire suppression area and public use and access areas in the 2005 burned areas.

Field sites for invasive species inventory will focus on burned areas near the following locations:

1. Kanuti Lake administrative cabin
2. Winter trail
3. Allotment perimeters
4. Sites where smokejumpers conducted suppression activities

C. Design/Construction Specifications:

Work will be contracted out to the Alaska Natural Heritage Program (ANHP) or another contract botanist, but a refuge biologist will accompany the botanist in the field.

1. Utilize 2005 wildfire suppression, first order fire effects monitoring records and information in the aerial assessment, to locate priority assessment and treatment areas (i.e., areas where human use has potentially introduced nonnative vegetation).
2. Identify likely invasive species issues and cost effective eradication treatments (chemical, cultural, biological).
3. Acquire resources needed to address the likely invasive species issues and anticipated control actions (e.g., pesticide use permits, FWS approved herbicides, mechanical control equipment, etc.).
4. Plan to visit each identified site at the most ecologically appropriate time (i.e., when the anticipated invasive species is easiest to detect and control).
5. Travel to, inspect and implement the appropriate invasive species control treatments at least once in FY2006.
6. Document control actions taken and additional control actions needed.
7. Follow-up on any additional actions no later than 1 year following wildfire containment.
8. Sites thought to have increased susceptibility to colonization by invasive plants will be identified using GIS products during winter 2005-2006. Areas of high burn severity associated with potential sources of invasive plant seeds (see section B above) will be given higher priority for the invasive plant inventory.
9. Inventory and monitoring protocols for invasive species work will employ accepted techniques for measuring and monitoring plant populations. Sites will be accessed via helicopter in mid-July 2006. All sites visited will be photographed and GPS locations will be recorded. Plots may be established in areas where invasive plants are detected.
10. For infestations involving a limited number of individuals, and where the plant ecology is conducive, non-

native species will be pulled up and destroyed.

11. A report will be prepared for all sites searched, including recommendations for future action, if any. Findings will be incorporated into the Alaska Exotic Plant Information Clearinghouse database.

D. Purpose of Treatment Specifications:

Control and eradicate invasive species within the burned area within the initial year after wildfire containment.

E. Treatment Effectiveness Monitoring Proposed:

All treated area will be monitored (at least on the ground visits at the most ecologically appropriate time) through FY2009 to ensure that treatments are still in place and effective or additional burned area rehabilitation invasive species control treatments are needed. Monitoring results are reported annually and summarized in NFPORS. The final report will include recommendations for future monitoring or other actions. All sites where exotic species were located will be revisited in FY07 under the rehabilitation plan.

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 Wildlife Biologist @\$40/hour X 44 hours	\$1,760.00
GS-9 Wildlife Biologist @ \$33/hour X 10 hours	\$ 330.00
GS-12 Deputy Manager@\$48/hr X 8 hours	\$ 384.00
TOTAL PERSONNEL SERVICE COST	\$2,474.00
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
Avgas@\$5.00/hr X 270 gallons (15 gal/hr for R44 X 18 hours)	\$1,350.00
Field camp food	\$375.00
Field per diem@\$3.00/day 5 days X 1 person	\$15.00
TOTAL MATERIALS AND SUPPLY COST	\$1,740.00
TRAVEL COST (Personnel or Equipment @ Rate X Round Trips X #Fiscal Years = Cost/Item):	COST / ITEM
Commercial transport to Bettles@\$290.00 X 2 personnel	\$580.00
Excess baggage/freight	\$100.00
Commercial transport between Anchorage and Fairbanks @\$360.00 X 1 person	\$360.00
Per diem in Fairbanks@\$247/day X 2 days X 1 person	\$494.00
TOTAL TRAVEL COST	\$1,534.00
CONTRACT COST (Labor or Equipment @ Cost/Hour X #Hours X #Fiscal Years = Cost/Item):	COST / ITEM
ANHP contract@\$40/hr X 176 hrs X 35.5%	\$9,539.20
R-44 Helicopter (Charter)@\$600/hr X 18 hours	\$10,800.00

TOTAL CONTRACT COST	20,339.20
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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
FY-06	06/01/2005	08/30/2006	F & S	acres	\$0.52	50,000 acres	\$26,087.00
TOTAL							\$26,087.00

Work Agent: C=Coop Agreement, F=Force Account, G=Grantee, P=Permittees, S=Service Contract, T=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, M, E
3.	Estimate supported by cost guides from independent sources or other federal agencies	M, T
4.	Estimates based upon government wage rates and material cost.	
5.	No cost estimate required - cost charged to Fire Suppression Account	C

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

RELEVANT DETAILS, MAPS AND DOCUMENTATION INCLUDED IN THIS REPORT:

List Relevant Documentation and Cross-Reference Location within the Accomplishment Report.
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TOTAL COST BY JURISDICTION

JURISDICTION	UNITS TREATED	COST
FWS	191,444	\$26,087.00
Allotments?		
TOTAL COST		\$26,087.00

LITERATURE CITED

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Burned Area Emergency Stabilization Plan

Appendix I Resource Assessments

- A Vegetation Assessment
- B Winter Trail Assessment
- C Cultural Resource Assessment

A. VEGETATION RESOURCE ASSESSMENT

I. OBJECTIVES

- Evaluate and assess fire impacts on vegetation resources and identify values at risk associated with vegetation losses.
- Evaluate potential for invasive plant species introduction or encroachment into native plant communities within, and adjacent to, fire areas and along travel ways.

II. ISSUES

- An area recommended for increased protection in the refuge's draft fire management plan due to high lichen cover and use as caribou winter range was partially burned by the Old Dummy fire.
- Burned areas along the Kanuti Kilolitna River and associated uplands had been identified as possibly supporting unusual, potentially sensitive plant communities. Burned uplands may be at risk for erosion.
- Non-native noxious and invasive plant species may be inadvertently introduced on firefighting equipment or have a greater chance of proliferation in burned areas adjacent to existing seed sources in areas of human use.

III. Background

A. General Vegetation Information

The ecosystems of interior Alaska are considered to be fire-adapted. Stand-replacing fires occur on a regular basis, and boreal forests are characterized by a mosaic of different aged landscapes that are maintained by fire (BAER Team 2004). Kanuti NWR has had an active fire history since 1950 (Fig. 1).

About 70% of the refuge's landscape lies within burns that occurred from 1950 – 2005, but the actual area burned within the perimeters, and severity of burns, are only known for the most recent fires. Fires in 2004 and 2005 occurred during the largest and third largest fire years, respectively, for the state. Both years were associated with unusually high temperatures and low precipitation that resulted in a longer than average fire season and record acreage burned for the 60 year period in which fire records have been maintained.

Drought conditions in 2004 resulted in extremely low fuel moistures causing most fuel types to burn, including those that have lower burning potential such as deciduous forests, shrub lands and recent burns (BAER Team 2004). Throughout the state, burn severity was high due to the late season and low fuel moistures although most fires still exhibited a mosaic of unburned, low and moderate burn severities (BAER Team 2004). Severity data for Kanuti NWR are currently being analyzed. Conditions in 2005 were similar to 2004 in interior Alaska, with dry conditions and a fire season that extended into September.

Figure 1. Fire history on Kanuti NWR, 1950 – 2005. Data from Alaska Fire Service.

Because fire is a natural component of the boreal forest ecosystem, most of Kanuti NWR is in a limited suppression zone, meaning that fires are typically allowed to burn unless they are threatening life or property. Suppression actions were initiated on the Old Dummy fire when it threatened the refuge's administrative cabin on Kanuti Lake and several allotments to the north of the Kanuti River. Smokejumpers were deployed to the area; a backburn was set to protect the cabin; they also used saw lines, cold trailing, and hotspotting to protect the allotments.

Preliminary analysis indicated that the Old Dummy fire burned a variety of vegetation types (Fig. 2). About 115,806 acres were forested, including areas outside of the refuge boundary, the majority being woodland forest with 10 – 24% canopy cover of black spruce (*Picea mariana*) (Table 2). Over 22,451 acres of lichen habitat burned; this habitat is used by caribou in winter. The fire burned over approximately 58,665 acres that last burned in 1991 (Fig. 2).

Although naturally occurring fires are typically allowed to burn, the refuge is interested in the ecological effects of fire on vegetation and wildlife. Two of the refuge's purposes, as mandated in its establishing legislation, are to conserve fish and wildlife populations and habitats in their natural diversity and to provide, when consistent with other purposes, opportunities for subsistence activities by local residents. This does not mean that the refuge will strive to maintain current habitat diversity should changes in climate result in regional shifts in the composition of plant communities. However, the refuge does have an obligation to monitor changes in habitat, predict future changes and their effects when possible, and, in some cases, use management actions to influence these changes. Several specifications in this plan, discussed below, address refuge concerns about fire effects on vegetation.

Post-fire vegetation is largely determined by burn severity, particularly the amount of organic mat consumed (Vioreck 1973; Vioreck and Schandelmeier 1980). Burn severity determines whether post-fire recovery is driven largely by re-sprouting or by new seedlings. Paper birch (*Betula papyrifera*), aspen (*Populus tremuloides*), and many shrubs will re-sprout following a light to moderate fire, but recolonization of a severe burn is largely dependent on seeds (BAER Team 2004). Plants deeply rooted in mineral soil that can escape burning, such as horsetails (*Equisetum* spp.) can also re-sprout following a high severity burn (BAER Team 2004). Exposed mineral soil provides a seed bed for air-born seeds, such as fireweed or willow, and spores of mosses and liverworts (BAER Team 2004). Long-term soil and hydrologic changes can also occur following a severe burn, particularly in permafrost areas, further affecting post-fire habitat.

The BARC maps and CBI fieldwork proposed in this plan provide refuge staff with a picture of differing burn severities within the fire perimeter, ranging from unburned to severely burned habitat. In addition to their usefulness in identifying potential "problem areas" – usually severely burned sites at higher risk for invasive plant establishment and erosion – the maps will enable some prediction of future habitat condition and potential use by wildlife. Post-fire successional stages remain poorly understood in Alaska, and the maps will provide a baseline against which to assess future vegetation patterns and wildlife use. Many post-fire studies involving different-aged burns, or even different habitats within a single burn, suffer from a lack of knowledge about the pre-fire vegetation and fire severity that formed

the foundation for the observed characteristics.

A preliminary burn severity map is displayed in Figure 3. Post-fire satellite imagery used to develop the map was obtained on Aug. 12, two weeks before the fire was declared out. Therefore, the map does not include all burned areas, and a complete map will not be available before summer 2006. The preliminary map will be used for planning purposes, and will be roughly checked for accuracy from the air during the spring assessment described in this plan. A ground-based accuracy assessment will be conducted later in summer. The preliminary map suggests that few areas sustained a severe burn, but this initial classification cannot be evaluated until spring.

Figure 2. Mosaic of pre-fire landcover classes, based on 1999 Landsat 7 imagery, within the Old Dummy fire. The fire re-burned a 1991 burn. Landcover data from BLM et al. 2002.

Table 2. Landcover classes and acreage within the Old Dummy fire perimeter. Landcover classes are based on 1999 Landsat 7 imagery. Some vegetation within a 1991 fire scar could be assigned to a landcover class (e.g., “fire scar-tall shrub”); portions that could not be classified were called “Fire Scar” (BLM et al. 2002).

Landcover Class	Acres
Closed Needleleaf	259.31
Open Needleleaf	49779.12
Open Needleleaf - Lichen	6518.18
Woodland Needleleaf	16826.85
Woodland Ndl. - Lichen	15127.75
Woodland Ndl. - Moss	356.28
Closed Deciduous	5977.53
Open Deciduous	987.66
Closed Mixed Ndl./Decid.	6971.86
Open Mixed Ndl./Decid.	7812.29
Tall Shrub	7944.84
Low Shrub	21624.80
Low Shrub - Lichen	30.47
Low Shrub - Tussock Tundra	12931.38
Dwarf Shrub	2704.99
Wet Graminoid	2128.10
Lichen	805.74
Moss	308.24
Mesic/Dry Graminoid	369.84
Tussock Tundra	678.53
Tussock Tundra Lichen	670.52
Aquatic Bed	2782.61
Emergent	25.58
Clear Water	8948.51
Snow/Ice	0.89
Sparse Vegetation	1268.76
Rock/Gravel	1115.98
Terrain Shadow	36.03
Fire Scar	15056.81
Smoke	2.89
fire scar - open needleleaf	4271.32
fire scar - woodland needleleaf	918.05
fire scar - tall shrub	9901.69
fire scar - low shrub	10805.06
fire scar - low shrub tussock tundra	16076.71
fire scar - tussock tundra	1634.83
Total	233659.97

Figure 3. Preliminary burn severity map of the Old Dummy fire. Perimeter boundaries shown on the map are from the Alaska Fire Service. Post-fire imagery for the severity map was acquired on August 12, 2005, when the fire was still burning.

B. Noxious and Invasive Plant Species

The incidence of noxious and invasive plant species has increased in Alaska in recent years, particularly along road corridors. White sweetclover (*Melilotus officianalis*) is of particular concern to refuge staff as it is expanding north along the Dalton Highway, and numerous streams cross the highway and flow into the refuge. BLM personnel have pulled out sweetclover growing at the Kanuti River crossing, and the plant has reportedly also spread further north to the Jim River crossing. Invasive plant inventories were a major component of the 2004 BAER activities (see pages 79 – 86 of the 2004 plan), with specification costs exceeding \$1.3 million.

An invasive plant survey was conducted in 2004 burns on Kanuti NWR. Botanists with the Alaska Natural Heritage Program inventoried the boundaries of nine allotments that were burned and approximately 50 miles of the South Fork Koyukuk River within the burn (Carlson and Cortes-Burns 2005). No exotic species were found, but the botanists warn that riverbank sites could potentially harbor exotics if the river corridors serve as dispersal vectors. However, exotic plants were detected in 2004 burns on other refuges, generally associated with areas of human use such as allotments and winter trails (Carlson and Cortes-Burns 2005). Surveys for exotic species in the Old Dummy fire will occur in areas of increased potential for infestation, namely areas of medium to high burn severity adjacent to the winter trail, allotments, rivers, Kanuti Lake, and areas where smokejumpers performed suppression activities.

WINTER TRAIL ASSESSMENT

I. Objectives

- Assess damage to winter trail
- Remove dead and leaning trees that pose a human safety hazard

II. Issues

- Actual route of trail is uncertain; route on map likely does not reflect current route
- The winter trail is used to access allotments and seasonal hunting/trapping areas
- Fallen trees blocking the trail, and trees likely to fall in the near future, can pose a safety risk to travelers
- Fire may have removed existing trail markers or trees and shrubs that delineate the route, increasing the likelihood that travelers could get lost during cold, dark conditions

III. Observations

Approximately 11 miles of a winter trail that runs between Allakaket and the Kanuti River is within the Old Dummy fire perimeter (Fig. 5). The trail, locally known as the Tsaalaaatne Winter Trail (Jones and Arundale 1997), provides access to several allotments, including ones that were protected by smokejumpers, and seasonal hunting and trapping areas. The trail is delineated on the USGS 1:250,000 scale Bettles map, originally developed in 1956 with limited revision in 1984, but the map may not reflect the current route. A refuge field crew was working near the trail in summer 2005, prior to burning, and noted that its location differed slightly from what is shown on the map. Therefore, the actual miles of trail that burned will not be known until the trail is surveyed in late winter 2006.

The field crew noted that the trail was well delineated and showed signs of recent use in the form of refuse and limbing/brushing along the trail. Some of the observed areas were in woodland black spruce with sparse trees; removal of trees by fire could make it difficult to safely follow the trail. The trail also ran up steep lake banks that could be dangerous to navigate if fallen trees block the way.

The trail also runs through wooded hills north of the Kanuti River. Depending of burn severity, this area may have experienced considerable deadfall, and dead trees adjacent to the trail may pose a threat to travelers.

Work proposed for FY06 will remove safety hazards by clearing woody debris from the trail and removing dead leaning trees that are immediately adjacent to the trail. The trail may need to be rerouted in some areas. Further rehabilitation work may be required in FY07 to remove additional

deadfall.

Figure 5. Approximate location of winter trail within the Old Dummy Fire perimeter.

C. CULTURAL RESOURCES ASSESSMENT

I. OBJECTIVES

- Assess damage to cultural resources

II. ISSUES

- Limited existing information on cultural sites within the refuge (will know more once I get the place names map); of the sites known to occur within the fire perimeter, one is on Native corporation land
- There is significant potential for impacts to cultural resources resulting from the direct and indirect effects of fires
- Any activities associated with Native cultural sites will be discussed with local residents

III. OBSERVATIONS

A. Background

The 2004 BAER plan noted that the prehistory of interior Alaska is much more poorly understood than for coastal Alaska. There remains considerable discussion and disagreement about chronologies and the nature and relationship of archaeological information from the region. The Kanuti NWR area is occupied by Koyukon Athapaskans and Kobuk Inupiat Eskimos, most of whom live in three villages just outside the refuge's borders: Allakaket and Alatna to the west of the refuge and the contiguous communities of Bettles and Evansville to the north. The area is an interface between the two cultures, with the village of Allakaket primarily comprised of Koyukukon Athapaskans and Alatna, just across the Koyukuk River, comprised mostly of Inupiat. Evansville is a mixture of the two cultures, and Bettles is predominantly non-Native.

There is a considerable body of literature about cultures in the overall Koyukuk region, but relatively little about the refuge and areas immediately surrounding it. It is difficult to find detailed information about gold mining camps and sites that occurred within the refuge boundaries at the turn of the 19th century, let alone earlier information. Perhaps the best published source of archaeological information specifically for the Kanuti area is a book about semi-subterranean houses called "Who Lived in this House? A Study of Koyukuk River Semisubterranean Houses" by A. McFadyen Clark (1996). The following information is derived from this book.

Prior to the late 1800s, people lived in small villages of semisubterranean houses during the coldest part of the year; otherwise, they traveled along a hunting circuit. Several of these village sites near the refuge were excavated in the late 1960's. One was near the confluence of the

Kanuti and Koyukuk rivers, another above the confluence of the Koyukuk and Alatna rivers, and another about five river miles upstream of this confluence. An additional semisubterranean house was identified within the Old Dummy fire perimeter, on land owned by Doyon, Limited. Findings from the excavated sites included timbers, fabric, ceramic, knives, musket balls and parts, .44 rimfire cartridges, ulu blades and scrapers, glass beads, wooden implements, and other items. The book also identifies seasonal hunting/fishing camps, some of which lie within the fire perimeter.

B. Methods

Because information is limited, part of the cultural resources specification involves researching potential cultural sites within the fire boundaries. In addition to the book cited above, sources of information may include other published or gray literature, a place names map of the refuge developed in conjunction with local residents, and additional information provided by local residents. A public meeting in Allakaket will be necessary to inform Allakaket and Alatna residents of potential fire effects on cultural resources and to discuss potential courses of action. Residents of Evansville typically do not use the area within the burn perimeter, but if it is deemed that there is a stronger historical connection than originally thought, a meeting will be held in Evansville or residents will be contacted individually. Doyon Limited will be contacted regarding the cultural sites on their land and the possibility of cooperating on any archaeological activities.

Further methods are unavailable until additional background information is compiled. This will include burn severity information, as it is uncertain if known sites have actually burned.

APPENDIX II - ENVIRONMENTAL COMPLIANCE

Federal, State, and Private Lands Environmental Compliance Responsibilities

All projects proposed in the Kanuti National Wildlife Refuge 2005 Fires 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) and the Department of the Interior. 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 Kanuti National Wildlife Refuge 2005 Fires.

Related Plans and Cumulative Impact Analysis

Kanuti National Wildlife Refuge 2005 Fires Burned Area Emergency Stabilization Plan *January 2006*. The Kanuti National Wildlife Refuge 2005 Fires Burned Area Emergency Response Plan was reviewed and it was determined that actions proposed in the Kanuti National Wildlife Refuge 2005 Fires Burned Area Emergency Response Plan within the boundary of the Old Dummy Fire are consistent with the management objectives established in the Comprehensive Conservation Plan. The Comprehensive Conservation Plan NEPA compliance process specifically addresses:

- Fire management and suppression activities within the refuge;
- Maintaining water quality;
- Conserving fish and wildlife populations and habitats in their natural diversities;
- Provide for continued subsistence uses by local residents.

The Kanuti National Wildlife Refuge 2005 Fires Burned Area Emergency Response Plan was reviewed and it was determined that actions proposed in the Kanuti National Wildlife Refuge 2005 Fires Burned Area Emergency Response Plan within the boundary of the Old Dummy Fire are consistent with the management objectives established in the Kanuti National Wildlife Refuge DRAFT Fire Management Plan. The fire management plan specifically addresses:

- Protection of sensitive biological communities, cultural and historic sites, Native allotments, privately owned and legally registered cabins, and refuge administrative facilities on Kanuti NWR from wildland fires to the extent practicable;
- Restoration, perpetuation and protection of native wildlife and plant species on Kanuti NWR by maintaining a diversity of plant communities that would be expected under a natural regime of wildland fire;
- Maintenance of natural fire-related ecosystem processes on Kanuti NWR to the maximum extent feasible and initiate studies if the role of fire in these processes is poorly understood;

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 Kanuti National Wildlife Refuge 2005 Fires, as proposed in the Kanuti National Wildlife Refuge 2005 Fires 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 the Kanuti National Wildlife Refuge 2005 Fires are Categorically Excluded from further environmental analysis as provided for in section 516 DM 2, Appendix 2 of the Departmental Manual. 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

- The operation, maintenance, and management of existing facilities and routine recurring management activities and improvements, including renovations and replacements which result in no or only minor changes in the use, and have no or negligible **environmental** effects on-site or in the vicinity of the site.
- Fire management activities, including prevention and restoration measures, when conducted in accordance with **departmental** and Service procedures.
- Consultation and technical assistance activities directly related to the conservation of fish and wildlife resources.

U.S. FISH AND WILDLIFE SERVICE, REGION 7: STATEMENT OF COMPLIANCE

This section documents consideration given to the requirements of specific environmental laws in the development of the Kanuti National Wildlife Refuge 2005 Fires 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 Kanuti National Wildlife Refuge 2005 Fires Burned Area Emergency Response Plan:

Project Name: Burned Area Emergency Stabilization Plan. Kanuti National Wildlife Refuge.

Location: Old Dummy fire, southcentral portion of Kanuti National Wildlife Refuge

Description: The U. S. Fish and Wildlife Service proposes to conduct stabilization activities within the perimeter of the Old Dummy fire on refuge lands. These activities include assessment of burn severity and fire effects on critical wildlife habitat, detection of introduced noxious and invasive non-native plants, and assessment of fire damage to cultural resources.

National Environmental Policy Act: The Service has determined that implementation of the specifications of the plan for the proposed project qualifies as a categorical exclusion under 516 DM 6, appendix 1, C (4), to the National Environmental Policy Act of 1969 (see attached Qualification for Categorical Exclusion).

Endangered Species Act: The proposed action will not affect listed, proposed, or candidate species or adversely modify critical habitat.

Coastal Zone Management Act, Section 307: The Alaska Coastal Management Program (ACMP) has concurred with National Weather Service's negative determination, and that a ACMP review is not required for this project.

Telecommunications Act of 1996, Section 704: Not applicable

Coastal Barrier Resources Act, Section 6: Not applicable.

Subsistence Evaluation and Finding, Section 810 - Alaska Lands Act: Subsistence uses of the area will not be impacted by the proposed action. Subsistence user access and the availability of subsistence resources will not be affected by the proposed action and the competition for resources will remain unchanged.

National Historic Preservation Act, Section 106: The Service's Regional Archaeologist has determined that this action will have no effect on historic properties following regulations at 36 CFR 800.5(b).

Executive Order 11988 - Floodplain Management: Not applicable

Executive Order 11990 - Protection of Wetlands: No wetlands areas will be affected by the proposed project.

Executive Order 12372 - Inter-governmental Review of Federal Programs: Inter-governmental review was accomplished during formal review by the State of Alaska through the Alaska Coastal Management Program.

Refuge Compatibility Determination: This use has been determined to be compatible with purposes for which the Kanuti National Wildlife Refuge was established (see attached compatibility determination).

Public Participation: Due to the lack of potential adverse effects, and lack of controversy surrounding the proposed project, public participation activity was limited to that associated with the refuge compatibility determination, including posting a public notice and draft compatibility determination on the Service's compatibility web site, and at the refuge headquarters.

Prepared by: _____ Date: _____
Wildlife Biologist

Reviewed by: _____ Date: _____
Regional Fire Ecologist

Approved by: _____ Date: _____
Refuge Manager

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 11988 (Floodplain Management) or Executive Order 11990 (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.
- (X) Are any toxic chemicals, including pesticides or treated wood, proposed for use? If so, local agency integrated pest management specialists must be consulted.

PART H - CONSULTATIONS

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John Trawicki, Regional Hydrologist

Gene Long, Regional Fire Management Coordinator

BLM, Alaska Fire Service

Ken Coe