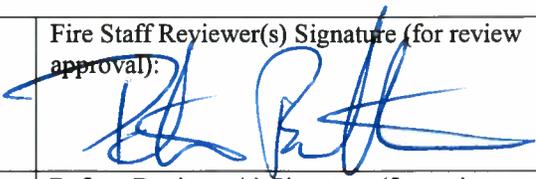
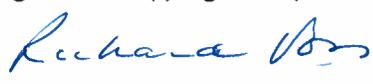
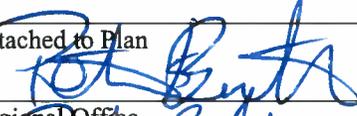
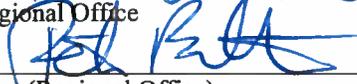


FWS REVIEW CHECKLIST (LONG FORM)
FOR
FISH AND WILDLIFE FIRE MANAGEMENT PLANS
Based on the template of April 9, 2009

Name of Plan Reviewed for Annual Update Process:		Review Date:	
Arctic National Wildlife Refuge Fire Management Plan		March 1, 2012	
Refuge or Unit Name (Include Complex if applicable): Arctic National Wildlife Refuge			
Fire Staff Reviewer(s) Name and Phone Number: Peter Butteri Eastern Interior Refuges FMO 907-456-0361		Fire Staff Reviewer(s) Signature (for review approval): 	
Refuge Reviewer(s) Name and Phone Number: Richard Voss 907 456 0253		Refuge Reviewer(s) Signature (for review approval): 	
Amendment Completed and attached to Plan 		Date: 5/1/2012	
Review information sent to Regional Office 		Date: 5/3/2012	
Review date entered in Database (Regional Office)		Date:	

Please review the Fire Management Plan (FMP) and complete the columns as follows: A check-mark in the "No Update" column means that this portion of your FMP has been reviewed and determined not to need an update; if a row requires an update (answering yes to the question (s)), check the "Update Needed" column and provide an explanation of the changes in the "Notes/Comments" section. This information will be included in the amendment (including chapter, section and comments) to be attached to the plan annually following the review. Be sure to adequately describe the changes so they are easily understandable to the outside reader. Put an N/A in the "No Update" column for lines that do not pertain to your refuge/unit to make it easier for future reviewers to complete the annual review process.

If the reviewers determine that the changes are substantial and the original intent of the document is compromised, then a revision of the document should be completed. The review discussion between the line officer and the fire staff may support that conclusion but the responsibility for making this decision rests with the unit line officer.

If the reviewers determine that the changes are substantial and the original intent of the document is compromised, then a revision of the document should be completed. This responsibility for making this decision rests at the Unit Line Officer level.

No Update or N/A	Update Needed	Section	Title – Content	Notes/Comments	Date
Chapter 1. Introduction					
X		I.A.	Purpose of the FMP	No Change	
X		I.E.	General description of the FMP area (location/vicinity map, size, land ownership, etc.)	No Change	
X		I.E-3	• Has your vicinity map changed due to new acres added or from complexing for FMP?	No Change	
X		I.E-8	• Total acreage changed? If it is the same management?	No Change	
	X	I.E-8	• Are there significant changes in land ownership in lands surrounding unit and/or in-holdings? New subdivisions?	Allotment conveyances tracked by R7 Realty and incorporated into current GIS land-status records.	
X		I.E-3	• FWS units included in the FMP – have you recently complexed multiple units or added new units to a complex?	No Change	
X		I.E, I.F-8, I.F-9	Are there any new Significant values to Protect? If so, add them in the spaces provided below. mission, special resource/ management designations (e.g., wilderness, cultural sites, T & E species, etc.	Historic Site survey still incomplete. No change to FMP.	
Chapter 2. Policy, Land Management Planning, and Partnerships					
II.A. Fire Policy					
	X	II.	Federal Interagency Policy change?	See Chapter 2 updates.	
	X	II.	• Terminology changes?	“	
	X	II.A.	DOI policy change? (e.g., Departmental manuals).	“	
	X	II.	Service policy change?	“	
	X	II.	Regional/unit-specific policy change?	“	
II.B.-E. Land/Resource Management Planning					
N/A		I.C-3	• Does Habitat Management Plan (HMP) align with FMP at unit? Is it being revised? Does management wan HMP and FMP revisions to take place simultaneously?	No Habitat Management Plan currently in place.	
X			• Is the Comprehensive Conservation Plan (CCP) currently being developed? Revised?	CCP date: 11/10/88 Revised CCP currently in draft. FMP revision process has begun as well. No significant changes to management direction. Estimate FMP revision completion by 12/31/2012.	
X		I.C.	<u>Environmental Compliance</u> – are your compliance documents up to date in the following areas?	Programmatic FMP EA including Arctic has been initiated. Estimate 2013 completion.	
X		I.C.	• National Environmental Policy Act (NEPA)	Current EIS with CCP	
X		I.C-1	• Endangered Species Act (ESA)	Date of consultation: 11/10/88	
X		I.C-1	• National Historic Preservation Act (NHPA)	No Change to Policy	
N/A			• Archaeological Resources Protection Act (ARPA)	No Change to Policy	
X		I.C-1	• <u>ANILCA</u>	No Change to Policy	
V.A. Partnerships					
X		V.A.	Internal Partnerships changes? (Use spaces below to add new partnerships)	No Changes	
	X	V.A.	External Partnerships changes?	No changed partners, however partnership agreements and procedures have changed. Reference Master Agreement and AK-AOP	

No Update or N/A	Update Needed	Section	Title – Content	Notes/Comments	Date
Chapter 3. Fire Management Unit Characteristics					
		III.A-C	FMP-wide Management Considerations		
X		III.B.	Have the CCP <u>Goals, strategies, and actions</u> for FMP-wide fire management changed? If so, describe the changes in the comment box.	Not significantly.	
X		III.A-E.	Have the <u>Standards and guidelines/desired conditions</u> from the CCP or other planning documents/handbooks changed? If so, describe the changes in the comment box.	Not Significantly.	
X		III.A-C	<u>Common Characteristics</u> of the FMUs	No Change	
		3.2	Fire Management Unit - Specific Descriptions		
X		III.D.	Have the FMUs changed in your FMP? Do they need to be revised or more added/deleted? If so, fill out the information below.	No Change	
X			<u>Description of the FMU</u> (add new information about FMU below)	No Change	
X			• FMU name	No Change	
X			• vicinity map	No Change	
	X		• adjacent ownership and jurisdiction	Allotment conveyances tracked by R7 Realty and incorporated into current GIS land-status records.	
X			• fire management objectives	No Change	
X			• vegetation types	No Change	
X			• fuel models	No Change	
X			• burnable acres	No Change	
X			• Unique physical characteristics affecting fire management (topography, soils, access, fire effects, etc.)	No Change	
	X		• values to protect / uses that affect (or are affected by) fire management decisions	See 2011 R7 Revised Cabin Protection Policy	
	X	III	<u>Values to Protect</u> (use space below to add new)	Update known sites database	
		3.2.3	<u>Fire Management Guidance</u>		
	X		Have any of the following changed? If so, add comments/changes in comment box or use space below to add new.	Reference master agreement AOP	
	X	IV.B.	• Wildfire response objectives	Update WFU to use of fire	
X			• Potential size and scope of fuels treatments	No Change	
X			• Approved fuels treatments and methods,	No Change	
X			• Restrictions, limitations, constraints,	No Change	
X		IV.E.	• Suppression Damage Repair, ES, and BAR considerations	No Change	
	X		FMU Safety Considerations (use space below to add new)	No Change	
Chapter 4. Wildland Fire Operational Guidance					
		IV	Management of Unplanned Ignitions		
		IV	Preparedness		
	X		Training and Qualifications	See current 2012 Eastern Interior Preparedness/Dispatch Plan	
	X		Refuge/Unit Delegation of Authority to Fire Staff	See current 2012 Eastern Interior Fire Management Officer Delegation of Authority.	
	X	IV.A.6.	Readiness	See current 2012 Eastern Interior Preparedness/Dispatch Plan	

No Update or N/A	Update Needed	Section	Title – Content	Notes/Comments	Date
X			Aviation Management	No Change	
X		IV.A-8	Fire Detection	No Change	
	X	IV.A-9	Initial Report of Fire and Initial Attack dispatch	WFDSS replaces WFIP and WFS.A. See Master Agreement and Alaska Annual Operating Plan.	
	X		Mutual Aid and Cross Boundary Operations	See Alaska Annual Operating Plan	
	X	V, V.B-C	Org. and funding	Tetlin NWR added to Unit Fire Program responsibilities in 2010. See revised Organization Chart.	
		4.1.2	Incident Management		
	X	IV.A-9	Dispatching beyond IA	WFDSS replaces WFIP and WFS.A. See Master Agreement and Alaska Annual Operating Plan.	
X	X	IV.A-3	Delegation of Authority to Incident Commander	No Change	
	X	IV.E.	Resource Allocation and Prioritization	See 2012 Annual Dispatch/Preparedness Plan	
X		IV.E.	Regulatory Compliance for Managing Unplanned Ignitions	No Significant Changes to Policy See Master Agreement and Alaska Annual Operating Plan.	
	X		Use of Decision Support Tools – (WFDSS etc.)	WFDSS replaces WFIP and WFS.A. See Master Agreement and Alaska Annual Operating Plan.	
X			Wildfire Reporting Requirements	No Changes to policy	
X			Suppression Damage Repair	No Changes to Policy	
If no potential for ES and BAR exist on your unit, please skip sections 4.1.3 and 4.2					
		IV.B-5	Emergency Stabilization (ES)		
X			ES Planning and Post-fire Assessments	No Changes	
X			ES Post-wildfire Issues and Values to Protect	No Changes	
X			ES Treatment Maintenance and Monitoring	No Changes	
X			ES Reporting Requirements	No Changes	
		IV.B-5	Burned Area Rehabilitation (BAR)		
X			BAR Planning	No Changes	
	X		BAR Issues and Values to Protect	No Changes	
X		VI.E.	BAR Regulatory Compliance	No Changes	
X		VI.B-5	BAR Monitoring Protocols	No Changes	
	X		BAR Contact Information	See 2012 Annual Dispatch/Preparedness Plan	
X			BAR Public Information and Public Concerns	No Changes.	
X			BAR Reporting Requirements	No Changes.	
		4.3	Management of Planned Fuels Treatments		
X			Processes to Identify and Prioritize Fuels Treatments	No Rx Fire planned in 2012. Additional detail to be provided in FMP revision.	
		4.3.2	Prescribed Fire Project Implementation		
X			Prescribed Fire Planning	No Rx Fire planned in 2012. Additional detail to be provided in FMP revision.	
X			Prescribed Fire Operations	“	
X			Prescribed Fire Public Notification	“	
X			Multiple Prescribed Fires	“	
X			Prescribed Fire on Private Lands	“	
X			Prescribed Fire Conversions and Reviews	“	
X			Planning, Preparing, Implementing Non-fire Fuels Treatments	“	
X			Fuels Treatment Regulatory Compliance	“	
X			Fuels Treatment Monitoring	“	

No Update or N/A	Update Needed	Section	Title – Content	Notes/Comments	Date
X			Fuels Treatment Reporting Requirements	“	
X			Fuels Committees/Local Coordinating groups	“	
X			Funding Processes	“	
X			Debris Burning (if applicable)	“	
		4.4	Prevention, Mitigation, and Education		
	X	4.4.1	Wildfire Investigation and Trespass Policies	See Master Agreement and Annual Operating Plan	
	X	4.4.2	Prevention/Mitigation Activities	See Prevention Program Update	
X		4.4.3	Education/Outreach Activities	Additional detail to be provided in FMP revision.	
		Chapter 5. Monitoring and Evaluation			
		5.1	FMP Monitoring		
	X	5.1.1	Annual FMP Review	See FMP Review Update.	
	X	5.1.2	FMP Terminology (update as needed)	See Terminology Update.	
		5.2	Treatment Effects Monitoring		
	X	VI.B2-3	Fire Effects Monitoring	See Effects Monitoring Update.	
	X	VI.B-4	Non-fire Treatment Effects Monitoring	“	
	X		Collaborative Monitoring with other Disciplines	“	
	X		Fuels Treatment Performance Information/Targets	“	

Additional reviewer comments:

The Arctic Refuge Revised CCP is currently in draft form. A programmatic Fire Management EA and a major FMP revision have been initiated and are expected to be completed in FY 2013.

Revisions to fire management portions of the CCP primarily reference terminology and changes reflected in the Master Agreement and Annual Operating Plan established in 2010. No significant changes have been made to fire management direction provided in the original 1988 CCP, and this review should adequately serve the Refuge until the EA and FMP revision are complete.

2012 Fire Management Plan Review

Arctic National Wildlife Refuge

May 2012

Review and Approvals



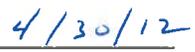
Reviewed by Arctic NWR Fire Management Officer



Date



Reviewed/Approved by Arctic NWR Refuge Manager



Date

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1. Introduction

No Changes

2. Policy, Land Management Planning and Partnerships

2.1. Fire Policy

See **Appendix H** for complete citations of policy documents.

2.1.1. Federal Interagency Wildland Fire Policy

Fire, as a critical natural process, will be integrated into land and resource management plans and activities on a landscape scale, and across agency boundaries. Response to wildland fires is based on ecological, social and legal consequences of the fire. The circumstances under which a fire occurs, and the likely consequences on firefighter and public safety and welfare, natural and cultural resources, and values to be protected, dictate the appropriate response to the fire.

This FMP implements the guiding principles of federal wildland fire policy excerpted from the *Review and Update of the 1995 Federal Wildland Fire Management Policy (January 2001)*:

- 1) Firefighter and public safety is the first priority in every fire management activity.
- 2) The role of wildland fire as an essential ecological process and natural change agent has been incorporated into the planning process. Federal agency land and resource management plans set the objectives for the use and desired future condition of the various public lands.
- 3) Fire management plans, programs, and activities support land and resource management plans and their implementation.
- 4) Sound risk management is a foundation for all fire management activities. Risks and uncertainties relating to fire management activities must be understood, analyzed, communicated, and managed as they relate to the cost of an activity.
- 5) Fire management programs and activities are economically viable, based upon values to be protected, costs, and land and resource management objectives,
- 6) Fire management plans and activities are based upon the best available science.
- 7) Fire management plans and activities incorporate public health and environmental quality considerations.
- 8) Federal, State, tribal, local, interagency, and international coordination and cooperation are essential.
- 9) Standardization of policies and procedures among federal agencies is an ongoing objective.

In addition, the following guidelines from *Guidance for Implementation of Federal Wildland Fire Management Policy (February 2009)* are considered in order to provide consistent implementation of federal wildland fire policy:

- 1) Wildland fire management agencies will use common standards for all aspects of their fire management programs to facilitate effective collaboration among cooperating agencies.
- 2) Agencies and bureaus will review, update, and develop agreements that clarify the jurisdictional inter-relationships and define the roles and responsibilities among local, State, tribal and federal fire protection entities.
- 3) Responses to wildland fire will be coordinated across levels of government regardless of the jurisdiction at the ignition source.
- 4) Fire management planning will be intergovernmental in scope and developed on a landscape scale.
- 5) Wildland fire is a general term describing any non-structure fire that occurs in the wildland. Wildland fires are categorized into two distinct types:
 - a) Wildfires – Unplanned ignitions or prescribed fires that are declared wildfires
 - b) Prescribed Fires - Planned ignitions.
- 6) A wildfire may be concurrently managed for one or more objectives and objectives can change as the fire spreads across the landscape. Objectives are affected by changes in fuels, weather, topography; varying social understanding and tolerance; and involvement of other governmental jurisdictions having different missions and objectives.
- 7) Management response to a wildfire on federal land is based on objectives established in the applicable Land/Resource Management Plan and/or the Fire Management Plan.
- 8) Initial action on human-caused wildfire's will be to suppress the fire at the lowest cost with the fewest negative consequences with respect to firefighter and public safety.
- 9) Managers will use a decision support process to guide and document wildfire management decisions. The process will provide situational assessment, analyze hazards and risk, define implementation actions, and document decisions and rationale for those decisions.

Federal Wildland Fire Cost Effectiveness Policy

Maximizing the cost effectiveness of any fire operation is the responsibility of all involved, including those who authorize, direct, or implement operations. Cost effectiveness is the most economical use of resources necessary to accomplish mission objectives. Accomplishing fire operations objectives safely and efficiently will not be sacrificed for the sole purpose of “cost-saving.” Care will be taken to ensure that expenditures are commensurate with values to be protected, while understanding that other factors may influence spending decisions, , including those from the social, political, economic, and biophysical environments. (2012 *Interagency Standards for Fire and Fire Aviation Operations, Chapter 1*).

2.1.2. National Fire Plan

This FMP emphasizes the following overarching goals and performance measures described in A *National Cohesive Wildland Fire Management Strategy (2011)*

Restore and Maintain Landscapes:

GOAL: *Landscapes across all jurisdictions are resilient to fire-related disturbances in accordance with management objectives.*

Outcome-based Performance Measure:

- Risk to landscapes is diminished.

Fire Adapted Communities:

GOAL: *Human populations and infrastructure can withstand a wildfire without loss of life and property.*

Outcome-based Performance Measure:

- Risk of wildfire impacts to communities is diminished.
- Individuals and communities accept and act upon their responsibility to prepare their properties for wildfire.
- Jurisdictions assess level of risk and establish roles and responsibilities for mitigating both the threat and the consequences of wildfire.
- Effectiveness of mitigation activities is monitored, collected and shared.

Wildfire Response:

GOAL: *All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions.*

Outcome-based Performance Measure:

- Injuries and loss of life to the public and firefighters are diminished.
- Response to shared-jurisdiction wildfire is efficient and effective.
- Pre-fire multi-jurisdictional planning occurs.

2.1.3. Department of the Interior (DOI) Fire Policy

This FMP meets DOI policy in the *Departmental Manual (620 DM 1 and 620 DM 2)* by making full use of wildland fire as a natural process and as a tool in the planning process, and by providing for the following:

- Wildland fires, whether on or adjacent to lands administered by the Department, which threaten life, improvements, or are determined to be a threat to natural and cultural resources or improvements under the Department's jurisdiction, will be considered emergencies and their suppression given priority over other Departmental programs. (620 DM 1.6 B)
- Bureaus shall cooperate in the development of interagency preparedness plans to ensure timely recognition of approaching critical wildland fire situations; to establish processes for analyzing situations and establishing priorities, and for implementing appropriate management responses to these situations. (620 DM 1.6 E)
- Bureaus will enforce rules and regulations concerning the unauthorized ignition of wild land fires, and aggressively pursue violations. (620 DM 1.7) Wild land fire will be used to

protect, maintain, and enhance natural and cultural resources and, as nearly as possible, be allowed to function in its natural ecological role (620 DM 1.4.D).

Additionally, this FMP implements the policy outlined in 620 DM 2.4 that sets out the lead fire protection role of the *Bureau of Land Management* (BLM) for the DOI agencies in Alaska.

“BLM will maintain and operate the Department of the Interior wildland fire suppression organization in Alaska with the primary intention of providing cost-effective suppression services and minimizing unnecessary duplication of suppression systems for Department of the Interior agencies. BLM will also provide consistency in State and Native wildland fire relationships and provide State-wide mobility of wildland fire resources.

BLM is authorized to provide safe, cost-effective emergency wildland fire suppression services in support of land, natural and cultural resource management plans on Department of the Interior administered land and on those lands that require protection under the Alaska Native Claims Settlement Act, as amended (43 U.S.C. 1620(e)), herein after referred to as Native land. BLM will execute these services within the framework of approved fire management plans or within the mutually agreed upon standards established by the respective land managers/owners.”

- a. Nothing herein relieves agency administrators in the Interior bureaus of the management responsibility and accountability for activities occurring on their respective lands.
- b. Wildland fire suppression and other fire management activities provided on Native lands under the authority of the Alaska Native Claims Settlement Act, as amended (43 U.S.C. 1620(e)), will consider Native land managers on an equal basis with Federal land managers.
- c. Each bureau will continue to use its delegated authority for application of wildland fire management activities such as planning, education and prevention, use of prescribed fire, establishing emergency suppression strategies, and setting emergency suppression priorities for the wildland fire suppression organization on respective bureau lands.”

2.1.4. U.S. Fish and Wildlife Service Fire Policy

The goal of fire management as stated in the Service Manual (621 FW 1.2) is "to protect or enhance habitat and ecosystems for the benefit of fish and wildlife." Service policy (621 FW 1.3) states that the Service will use prescribed fire whenever it is an appropriate tool for managing Service resources, and will protect against wildland fire whenever it threatens human health, private property, or Service resources.

Any response to wildland fire occurring on Arctic NWR will be based on direction provided in this FMP. The FMP addresses the management of all fire related activities, and considers a full spectrum of strategic options (from monitoring to intensive management actions) designed to meet Fire Management Unit (FMU) objectives. It fully applies procedures and guidelines in the *FWS Fire Management Handbook (FWS FMH 2011)* and the *Interagency Standards for Fire and Fire Aviation Operations (2011 Red Book)* and affirms these key elements of FWS fire policy:

- Firefighter and public safety is the first priority of the wildland fire management program and all associated activities.
- Only trained and qualified leaders and agency administrators will be responsible for, and conduct, wildland fire management duties and operations.

- Trained and certified employees will participate in the wildland fire management program as the situation requires; non-certified employees will provide needed support as necessary.
- Fire management planning, preparedness, wildfire and prescribed fire operations, other hazardous fuel operations, monitoring, and research will be conducted on an interagency basis with involvement by all partners to the extent practicable.
- The responsible agency administrator has coordinated, reviewed, and approved this FMP to ensure consistency with approved land management plans, values to be protected, and natural and cultural resource management plans, and that it addresses public health issues related to smoke and air quality.
- Fire, as an ecological process, has been integrated into resource management plans and activities on a landscape scale, across agency boundaries, based upon the best available science.
- Wildland fire is used to meet identified resource management objectives and benefits when appropriate.
- Prescribed fire and other treatment types may be employed when they selected as the appropriate tool to reduce hazardous fuels and the associated risk of wildfire to human life, property, and cultural and natural resources; and to manage our lands for habitats as mandated by statute, treaty, and other authorities.
- Response to Wildfires will consider firefighter and public safety, cost effectiveness, values to protect, and natural and cultural resource objectives.
- Staff members will work with local cooperators and the public to prevent human ignition of wildfires on service lands.

2.1.4.1. Region 7 FWS Policy

All activities authorized under this FMP will comply with Region 7 FWS policies, including but not limited to:

- *Region 7 Policy for Management of Permitted Cabins on National Wildlife Refuges in Alaska (August 2010) (RW-1)*
- *U.S. Fish and Wildlife Service Region 7 Bear Awareness and Firearms Safety Training Policy (February 22, 2008)*
- *U.S. Fish and Wildlife Service Region 7 Watercraft Safety and Training Annex (January 12, 2011)*

2.1.5. Alaska Region Interagency Fire Management

Background on Fire Management Policy in Alaska Region(1939-2010):

The history of fire control within Interior Alaska dates back to 1939 when the Alaskan Fire Control Service was established under the General Land Office. Headquartered in Anchorage, it was given responsibility for fire suppression on an estimated 225 million fire-prone acres of public domain lands in Alaska. When the Bureau of Land Management (BLM) was formed in

1946, it received the management authority for most of Alaska's federal lands and also absorbed the Alaska Fire Control Service. The BLM fire organization was based in Fairbanks and Anchorage and the two offices worked cooperatively but separately. The BLM also kept a Division of Fire Management at the State Office.

In 1959, the first of three big divestures of land managed by BLM-Alaska began and, with the changes in land management authority, issues regarding wildland fire suppression responsibilities arose.

- Under the Statehood Act 1959, the State was granted 104 million acres of land.
- Alaska Native Claims Settlement Act of 1971 (ANCSA) established Native corporations and an entitlement of 44 million acres for those corporations.
- The Alaska National Interest Lands Conservation Act of 1980 (ANILCA) transferred approximately 100 million acres from BLM administration to the National Park Service and Fish and Wildlife Service.

Under ANCSA, the federal government was directed to continue to provide wildland fire suppression on lands conveyed to Native regional and village corporations. In response to ANILCA, Secretarial Order #3077, dated March 17, 1982, creating "a fire line organization with headquarters in Fairbanks" was issued. BLM, Alaska Fire Service (AFS) was formed and, in Department of Interior Manual 620, AFS was assigned the fire suppression responsibility for all Department of Interior-administered lands in Alaska and Native Corporation land conveyed under ANCSA. Department of Interior-administered lands include land managed by the BLM, the National Park Service, Fish and Wildlife Service, and the Bureau of Indian Affairs. Each agency remained accountable for following its agency's mandates and policies for resource and wildland fire management. The role of AFS is to implement each agency's direction.

BLM Anchorage and Fairbanks districts fire suppression authority was delegated to AFS. The Division of Fire Management in the State Office was phased out. Today, in conjunction with his interagency role, the AFS Manager works directly for the BLM State Director and serves as the BLM State Fire Management Officer. The BLM Field Offices¹ retain the fire management responsibilities; AFS implements the fire direction given by the Field Offices and provides technical fire management expertise. This same principal applies to FWS and NPS lands. The State of Alaska established a wildland fire suppression organization in the Department of Natural Resources, Division of Forestry, and, in the mid-1970s, began to gradually assume suppression responsibilities in the Anchorage area and on the Kenai Peninsula.

A reciprocal fire protection agreement was signed by the BLM, AFS and the State to cooperatively provide fire suppression operations in fire-prone areas. (AFS also has an agreement with the U.S. Army-Alaska for wildland fire suppression on BLM-managed lands withdrawn for military use.) Under the State agreement, AFS has the suppression responsibility for wildland fires in the northern half of the Alaska, regardless of ownership, including Arctic NWR. The State has the suppression responsibility for wildland fires in Southcentral, most of Southwestern Alaska and portions of the Central Interior. Most State protection areas are lands previously protected by the BLM Anchorage District; most of AFS protection is in areas once

¹ BLM Districts are now called Field Offices.

protected by the BLM Fairbanks District. As of 1985 when the State took over protection responsibilities for 66 million acres in southwest Alaska, the State and AFS each protect roughly half of the fire-prone lands in Alaska. The Forest Service protects State, Federal, and Native lands within the boundaries of Chugach and Tongass National Forests.

An Interagency fire response plan, the **Alaska Interagency Wildland Fire Management Plan 2010 (AIWFMP)**, was developed in Alaska during the 1980s and 1990s in order to help prioritize initial attack responses, and allow for some fires to be managed for resource benefit.

In 2010 the reciprocal fire protection agreements between the protection agencies (DNR, BLM AFS and USFS) and the individual memorandum of agreement between land management agencies (FWS, NPS, BIA) were consolidated into the **Alaska Master Cooperative Wildland Fire Management and Stafford Act Response Agreement 2010 (Master Agreement)**. The Master Agreement and its exhibits (including the AIWFMP) define the roles and responsibilities of the jurisdictional and protection agencies as well as operating procedures for fire management in Alaska.

2.2. Land/Resource Management Planning

2.2.1. Arctic NWR Comprehensive Conservation Plan (CCP)

The Arctic Refuge Revised CCP is currently in draft form. Revisions to fire management portions of the CCP primarily reference terminology and changes reflected in the Master Agreement and Annual Operating Plan established in 2010. No significant changes have been made to fire management direction provided in the original 1988 CCP, and this review should adequately serve the Refuge until the EA and FMP revision are complete.

This FMP steps down from the Arctic NWR Comprehensive Conservation Plan. The land and resource management goals and objectives that form the basis of this FMP have been identified in the CCP (**See Section 3.1.1**).

A programmatic Fire Management EA and a major FMP revision have been initiated and are expected to be completed in FY 2013.

2.2.2. Compliance with Regulatory Acts

The management direction and actions specified in this FMP were evaluated in the approved Refuge CCP (2008), in accordance with National Environmental Policy Act of 1969 (NEPA), and Sections 304 and 810 of ANILCA. Public participation in the CCP process was used in the development of alternatives and in the selection of a preferred management alternative.

Prescribed fires and fuel reduction activities authorized under this FMP require completion of an initial NEPA Compliance Checklist in order to determine whether additional NEPA documentation is necessary. Fire suppression activities are normally categorically excluded from further Environmental Assessment analysis (516 DM 2 and 16 DM 6); however, before implementing any fire management project not categorically excluded, an EA or EIS will be prepared. Fire management activities authorized within the scope of this plan will also comply with all of the following Regulatory Acts:

- *Endangered Species Act of 1973 (ESA)*

- *National Historic Preservation Act of 1966 (NHPA)*
- *Archeological Resources Protection Act of 1979 (ARPA)*
- *Alaska National Interest Lands Conservation Act of 1980 (ANILCA)*
- *Alaska Native Claims Settlement Act of 1971 (ANCSA) [43 USC 1620(e)]*
- *Director's Order 172: Migratory Birds*
- *Subsistence Evaluation and Finding, Section 810 - Alaska Lands Act*

2.3. Fire Management Partnerships

2.3.1. Internal Partnerships

No Changes

2.3.2. External Partnerships

2.3.2.1. Alaska Interagency Coordinating Groups

2.3.2.1.1 Alaska Interagency Coordination Center (AICC)

National fire resource coordination is accomplished through the National Interagency Coordination Center (NICC) located in Boise, ID and through eleven Geographic Area Coordination Centers (GACCs) located throughout the country. AICC is Alaska's GACC, located on Fort Wainwright in Fairbanks. The principal mission of AICC is to provide safe, cost effective, and timely response of national and area resources for all aspects of wildland and prescribed fire management activities, and other emergency management activities within Alaska.

2.3.2.1.2 Alaska Wildland Fire Coordinating Group (AWFCG)

The Alaska Wildland Fire Coordinating Group (AWFCG) group provides coordination and recommendations for all interagency fire management activities in Alaska. Membership, procedures, and guidelines are documented in the AWFCG Memorandum of Understanding and Standard Operating Procedures available at <http://fire.ak.blm.gov/administration/awfcg.php>. The Region 7 Fire Management Coordinator represents the Service on this group.

2.3.2.1.3 Alaska Multi Agency Coordinating Group (AMAC)

The Alaska Multi-Agency Coordination Group (AMAC) provides a forum to discuss actions to be taken to ensure that an adequate number of resources are available to meet anticipated needs and to allocate those resources most efficiently. When activated and as warranted, the AMAC is tasked with the following: incident prioritization; resource allocation; coordination of state and federal disaster responses; political interfaces; media and agency information; anticipation of future resource needs; and the identification and resolution of issues. The *AMAC Operations Handbook* is available at <http://fire.ak.blm.gov/administration/mac.php>. The Region 7 Fire Management Coordinator represents the Service on this group.

2.3.2.2. Interagency Agreements and Planning Documents

2.3.2.2.1 Alaska Master Cooperative Wildland Fire Management and Stafford Act Response Agreement 2010 (Master Agreement)

The Master Agreement and its exhibits define the roles and responsibilities of the jurisdictional and protection agencies as well as operating procedures for fire management in Alaska. It documents the commitment of its signatories to improve the efficiency of fire management activities in Alaska by facilitating the coordination and exchange of personnel, equipment, supplies, services, and funds. The Master Agreement also facilitates improved coordination regarding other incidents covered under the National Response Framework (NRF).

Signatories include:

- The State of Alaska, Department of Natural Resources (DNR)
- The United States Department of Agriculture Forest Service, Region 10 (USFS)
- The United States Department of the Interior, National Park Service, Alaska Region (NPS)
- The United States Department of the Interior, Fish and Wildlife Service, Alaska Region (Region 7) (FWS)
- The United States Department of the Interior, Bureau of Indian Affairs, Alaska Regional Office (BIA)
- The United States Department of the Interior, Bureau of Land Management, Alaska (BLM)
- The United States Department of the Interior, Bureau of Land Management, Alaska Fire Service (AFS)

2.3.2.2.2 Alaska Statewide Annual Operating Plan (Alaska AOP)

The *Alaska AOP*, exhibit C of the Master Cooperative Agreement addresses cooperation, interagency working relationships and protocols, financial arrangements, and joint activities. The *Alaska Interagency Mobilization Guide* and the *Alaska Interagency Wildland Fire Management Plan* are incorporated by reference into the *Alaska AOP*. Signatories to the *Alaska AOP* include: State Forester, AFS Manager, USFS Regional Forester, FWS, NPS, BLM and BIA Regional Director.

2.3.2.2.3 Alaska Interagency Wildland Fire Management Plan 2010 (AIWFMP)

The purpose of the *Alaska Interagency Wildland Fire Management Plan 2010 (AIWFMP)* is to promote a cooperative, consistent, cost-effective, interagency approach to wildland fire management in Alaska and it is the interagency reference for wildland fire operational information. It has been incorporated by reference into the *Alaska AOP*

The AIWFMP specifies direction for the response to a wildland fire that is based on a management option designation, and provides guidelines to jurisdictional and protection agencies for decision support requirements as the complexity of a wildland fire increases. The

AIWFMP is designed to be used in conjunction with this FMP which contains definitive objectives and constraints for the Arctic National Wildlife Refuge.

The following *AIWFMP* fire management objectives were developed to meet and support agencies' goals and to provide implementation guidance for fire operations:

- Protect human life.
- Prioritize areas for protection actions and allocation of available firefighting resources without compromising firefighter safety.
- Use a full range of fire management activities (fire suppression, monitoring, prescribed fire, thinning and other vegetation treatment projects, prevention and education programs, scientific studies, etc.) to achieve ecosystem sustainability including its interrelated ecological, economic, and social components.
- Use wildland fire to protect, maintain, and enhance natural and cultural resources and, as nearly as possible, enable fire to function in its ecological role and maintain the natural fire regime.
- Manage vegetation through various fuels treatment techniques to reduce and mitigate risks of damage from wildland fire.
- Balance the cost of suppression actions against the value of the resource warranting protection and consider firefighter and public safety, benefits, and resource objectives.
- Consider short and long-term cost effectiveness and efficiencies while maintaining responsiveness to Jurisdictional agency objectives and within the scope of existing legal mandates, policies and regulations.
- Minimize adverse environmental impact of fire suppression activities.
- Maintain each Jurisdictional agency's responsibility and authority for the selection and annual review of fire management options for the lands that they administer.
- Adhere to state and federal laws and regulations.

The *AIWFMP* provides for a range of suppression responses to wildfire that protects human life and property and other identified resources and developments, balances suppression costs with values at risk and is in agreement with Refuge resource management objectives. The result is that developed areas and other high resource value areas are protected and the natural occurrence of fire in the ecosystem is maintained in remote areas with minimal and cost-effective intervention. Currently many special concern areas (such as archaeological/cultural/historic sites and administrative sites/cabins) have been identified and taken care of through the process of changing the fire management option to one that provides the level of suppression needed to protect the resource(s) at risk. As new areas become known, they will be assigned a protection level and their locations provided to AFS.

Four wildland fire management options are established in the *AIWFMP*.

- ***Critical*** is the highest priority area/sites for suppression actions and assignment of available firefighting resources.

- **Full** is the second highest priority area/sites for suppression actions and assignment of available firefighting resources.
- **Modified** is a high priority for surveillance, suppression, and site protection during the peak of the fire season and less priority (often surveillance only) after a designated conversion date in the latter stages of the fire season, normally after July 10.
- **Limited** requires only a surveillance response as long as fires within this designation do not threaten to escape into higher priority areas; if a threat is ascertained, a suppression response may be initiated.

The **Critical management option** was specifically created to give the highest priority to suppression action on wildland fires that threaten human life, inhabited property, designated physical developments and to structural resources designated as National Historic Landmarks. Fires that threaten a critical site have priority over all other wildland fires. These areas are the priority for detection coverage. The initial response to wildland fire is to provide protection to the area/sites. Use of wildland fire would only be appropriate in extraordinary circumstances.

The **Full management option** was established for the protection of cultural and paleontological sites, developed recreational facilities, physical developments, administrative sites and cabins, uninhabited structures, high-value natural resources, and other high-value areas that do not involve the protection of human life and inhabited property. Structures on or eligible for inclusion on the National Register of Historic Places and non-structural sites on the National Register are placed in this category. Fires occurring within or immediately threatening this designation will be high priority for initial action depending on the availability of firefighting resources but are less priority than wildland fires within or threatening a Critical Management Option area. The intent is to control wildland fires at the smallest acreage reasonably possible.

The **Modified management option** is intended to be the most adaptable option available to land managers. This option provides a higher level of protection when fire danger and probability of significant fire growth are high. A lower level of protection is considered when the fire danger and potential for fire growth decrease. Unlike the Full management option, the intent is not to minimize burned acres but to balance acres burned with suppression costs and to accomplish land and resource management objectives. After the conversion date (usually around July 10), the default action for all fires occurring within this option will be surveillance and assessment to ensure that identified values are protected and that adjacent higher priority management areas are not compromised.

In the **Limited management option** fire may be allowed to function in its ecological role while providing for the protection of human life and site-specific values. Most natural ignitions will be managed for maintaining fire's natural role in the ecosystem. Low impact or indirect suppression methods will be used whenever possible, if suppression action is needed. The intent is to reduce overall suppression costs through minimum resource commitment without compromising firefighter safety.

The AIWFMP allows the land manager to authorize the Protecting Agency to provide an increased or decreased level of suppression action depending on the situation at hand (non-standard response). Additionally, the selected fire management option area should be re-evaluated during the next annual review period. The AWFCG may approve departures from the selected management options during periods of "unusual fire conditions" for a specific

geographic area(s). These decisions will be based not only on fires and acres burning, but also on anticipated fire behavior and acreage likely to be burned, existing and anticipated smoke problems, probability of success, the experience and judgment of Service and Protecting Agency personnel, and decisions of the Multi-agency Coordinating Group (MAC Group).

Signatories include:

- The State of Alaska, Department of Natural Resources (AKDNR)
- The State of Alaska, Department of Environmental Conservation (ADEC)
- The State of Alaska, Department of Fish and Game (ADF&G)
- The United States Department of the Interior, National Park Service, Alaska Region (NPS)
- The United States Department of the Interior, Fish and Wildlife Service, Alaska Region (Region 7) (FWS)
- The United States Department of the Interior, Bureau of Indian Affairs, Alaska Regional Office (BIA)
- The United States Department of the Interior, Bureau of Land Management, Alaska (BLM)
- The United States Department of Agriculture Forest Service, Region 10 (USFS)
- The Association of Village Council Presidents
- Tanana Chiefs Conference, Inc. (TCC)
- Chugachmiut, Inc.
- Anchorage Fire Department

2.3.2.2.4 Alaska Interagency Mobilization Guide (AIMG)

The *Alaska Interagency Mobilization Guide (AIMG)* identifies policy and agreements that establish the standard procedures that guide the operations of multi-agency/jurisdictional logistical support activities. The guide is an extension of Agency Manuals, Handbooks, Directives, and Instructional Memorandums relating to logistical support. The guide is intended to promote uniformity of logistical support communications, facilitate interagency dispatch coordination, and ensure that the most timely and cost effective support services are provided. It is designed to accommodate amendments and will be recognized as currently applicable until amended.

2.3.2.2.5 2009 Alaska Enhanced Smoke Management Plan (ESMP)

The *Alaska Enhanced Smoke Management Plan (ESMP)* developed by the Alaska Department of Environmental Conservation (ADEC) in coordination AWFCG helps fulfill Alaska's responsibilities for protection of air quality and human health under federal and state law and reflects the *Clean Air Act* requirement to improve regional haze in Alaska's Class I areas. Under state regulation all agencies, corporations and individuals that burn areas larger than forty acres of land a year, whether slash or *in situ*, require a controlled burn approval application and written

approval from ADEC. The *ESMP* outlines the process and identifies issues that need to be addressed by ADEC and land management agencies or private landowners / corporations to help ensure that prescribed fire (e.g. controlled burn) activities minimize smoke and air quality problems. Adoption of this document enables the State to certify to the U.S. Environmental Protection Agency (EPA) that we are implementing a smoke management plan which addresses elements of the EPA's *Interim Air Quality Policy on Wildland and Prescribed Fire, April 23, 1998 (EPA's Interim Policy)*. The *ESMP* and accompanying volume of appendices have been adopted by ADEC and participating Wildland owners and managers through a Memorandum of Understanding (MOU).

2.3.2.3. Local Government Partners

No Changes.

2.3.2.4. Non-governmental Organization Partners

No Changes.

3. Arctic Refuge Fire Management Unit Characteristics

3.1. Fire Management Goals, Strategies, and Guidance

3.1.1. Fire Management Goals, Strategies, and Guidance from the Refuge CCP

There is no significant change to fire management direction provided in the draft revision of the Arctic Refuge CCP. Following are the revised CCP Fire Management Objective and Strategy:

Managers will maintain a fire management program on Arctic Refuge that allows wildland fires to continue their ecological role and that protects human life and, where appropriate, property and cultural resources.

Rationale: The primary goal of the Refuge's fire management program is to maintain the natural wildland fire regime to the greatest degree possible. This goal recognizes the important and ongoing role of fire as a natural process in the creation and maintenance of the ecological diversity and natural dynamics central to the purposes of the Refuge. However, all fire management decisions must first consider the protection of human life and, where appropriate, the protection of property and cultural resources. Fire suppression and preventative fuels reduction may sometimes be necessary to achieve this balance.

Drier conditions and longer summers tied to global climate change are expected to result in increased wildland fire activity on the Refuge in coming years. Despite these potential changes to the fire regime, Refuge managers anticipate that it will continue to be important to allow natural fires to shape Refuge ecosystems.

Strategy:

The Arctic Refuge FMP provides a framework for making fire management decisions, and outlines a unified strategy for managing wildland fire on all Refuge lands. The FMP is a dynamic document and will be reviewed each year using the Service's nationally established process (FWS Fire Management Handbook 2012). Refuge managers will conduct a full

revision of the FMP whenever significant changes in management are proposed, or in concert with revisions to the Arctic Refuge Comprehensive Conservation Plan. This review and revision process ensures that the objectives and strategies for fire management in the FMP remain consistent with general management direction in the CCP.

3.2. Characteristics of the Arctic NWR FMU

3.2.1. Climate

3.2.2. Fire Weather

The Alaska Interagency Coordination Center (AICC) Predictive Services website <http://fire.ak.blm.gov/predsvcs/weather.php> maintains links to statewide fire weather forecasts and weather data. Fire weather briefing products including Red Flag Warnings and Fire Weather Watches are posted daily on the site throughout the fire season, and a link is included to the National Weather Service Spot Forecast Request page.

Alaska Red Flag Warning & Fire Weather Watch Criteria (if combined with burnable fuels)		
1.	Strong Wind:	Wind* \geq 25 mph & RH \leq 30%
2.	Low Humidity:	RH \leq 15%
3.	Strong Wind Low Humidity:	Wind* \geq 25 mph & RH \leq 15%
4.	Dry Thunderstorms:	Dry thunderstorms w/ scattered coverage (25% Areal) and $<$ 0.10" rainfall
* Wind is defined as frequent gusts or sustained for one hour or more		

Table 1: Alaska Red Flag Warning & Fire Weather Watch Criteria

Arctic NWR maintains one permanent, Weather Information Management System (WIMS) compliant Remote Automated Weather Stations (RAWS) on the Refuge. The Helmut Mountain RAWS (AWR) is located 6 miles west of the Sheenjek River and 12 miles south of Big Fish Lake.

The Eastern Interior FMO is responsible for maintaining station catalog information for these stations to meet NFDRS standards (green up date, cured, freeze date, etc. Daily observation into WIMS dispatch responsibility.

3.2.3. Fire Danger

Since the 1990s, fire danger indices in Alaska have been calculated using the Canadian Forest Fire Danger Rating System - Fire Weather Index (CFFDRS - FWI) instead of the National Fire Danger Rating System (NFDRS) used throughout most of the rest of the U.S. For most purposes the CFFDRS focus on duff moisture better represents Alaskan fuels than the NFDRS woody fuels classes. However, the reliance of FSPRO and other fire behavior modeling tools has prompted Alaskans to ensure that fire weather stations are cataloged and maintained in WIMS as NFDRS stations.

3.2.3.1. CFFDRS - FWI

The Canadian Forest Fire Weather Index (FWI) tracks the effects of weather on forest fuels. In doing so, it gives an estimation of potential fire danger and fire behavior in the area adjacent to a weather station at which the weather is recorded. It is based on the moisture content of three classes of surface forest fuels, plus the effect of wind, on fire behavior. The FWI system is probably best explained as a bookkeeping system in which, for a particular weather station, fuel moisture is added in the form of precipitation and subtracted in the form of drying. Precipitation is the only input component that will add to fuel moisture while the other inputs of temperature, relative humidity, wind speed, and time of year, control the rate of drying.

The system consists of six components; three primary indexes, or codes, representing fuel moisture for each of the three fuel layers, two intermediate indexes representing rate of spread and fuel consumption, and a final index representing fire intensity as energy output per unit length of fire front. Each year, for each representative weather station the system is initiated three days following the station's snow-free date; and shut down following the station's freeze-up date.

1. The Fine Fuel Moisture Code (FFMC) represents the moisture content of litter and cured fine fuels, 1-2 cm deep. It expresses the ease of ignition and fuel flammability. FFMC is sensitive to daily changes in temperature, rainfall, relative humidity, and wind speed. Time lag is 2/3 day, which means that it takes two thirds of a day for the fine fuels to react to a change in the weather.

2. The Duff Moisture Code (DMC) represents the moisture content of loosely compacted, decomposing organic matter, 5-10 cm. deep, which determines resistance to control. DMC is sensitive to temperature, rainfall, and relative humidity. Time Lag is 12 days.

3. The Drought Code (DC) represents the deep layer of compacted organic matter, 10-20 cm. deep, which determines resistance to extinguishment. It indicates seasonal drought and smoldering fires in deep duff or large logs. DC is sensitive to temperature and rainfall. Time lag is 52 days.

4. The Initial Spread Index (ISI) represents a numerical rating of fire spread immediately after ignition without the influence of variable fuel quantity (the fuel type isn't considered). It fluctuates with wind speed and time of day. ISI is a combination of FFMC and wind.

5. The Build Up Index (BUI) represents total fuel available for combustion. In the absence of rain, BUI fluctuates little throughout the day. BUI is a combination of DMC and DC.

6. The Fire Weather Index (FWI) represents the intensity of a spreading fire. FWI is a combination of ISI and BUI.

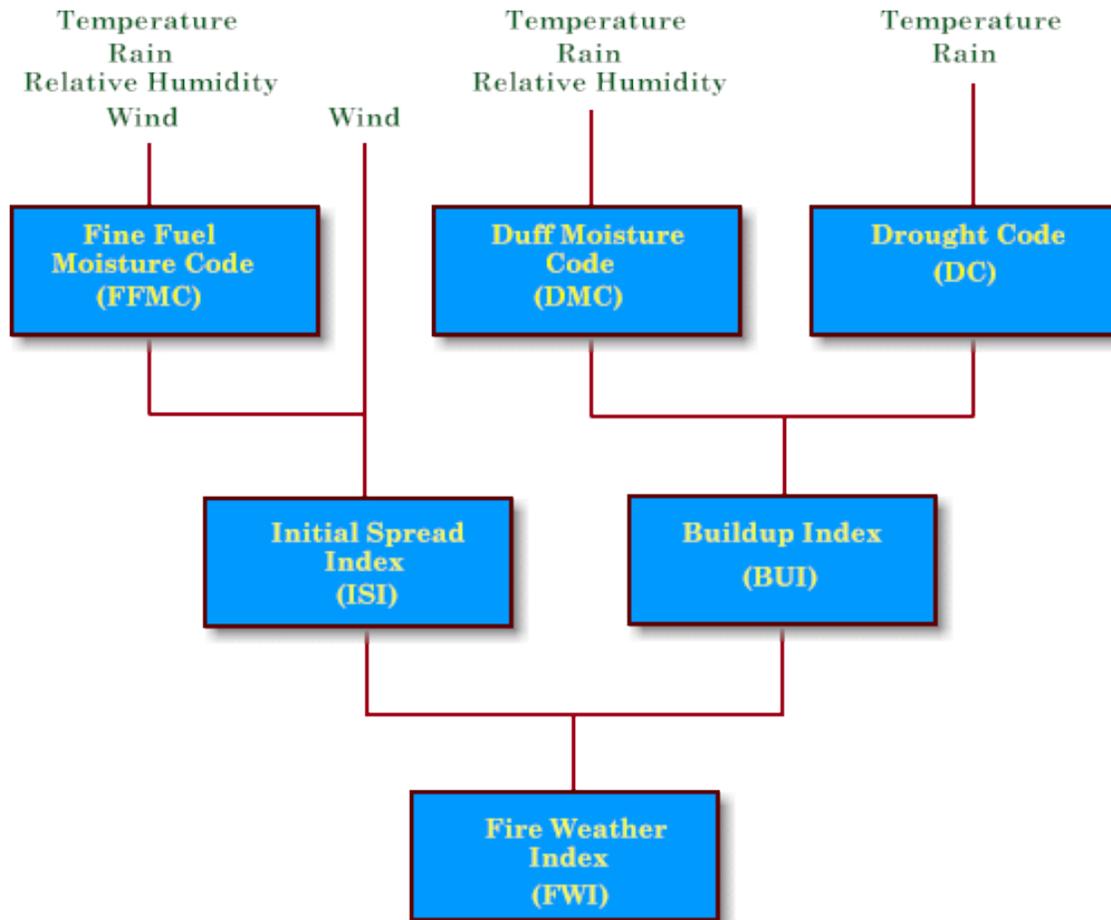


Figure 1: CFFDRS Fire Weather Index (FWI) system

Fuel Moisture Code	Soil horizon	Water capacity mm	Rain fall thresholds mm	Timelag* days	Nominal fuel depth cm	Bulk density Mg/m ³
FFMC	L	0.62	0.6	2/3	1.2	0.021
DMC	F	15	1.5	15	7	0.071
DC	H	100	2.9	53	18	0.139

* A fuels time-lag is expressed as that amount of time required for the fuel to lose $1 - 1/e$ (about 2/3) of the free moisture above equilibrium on a standard day (noon temperature of 21.1^oC, relative humidity of 45%, 13 km/h wind, during the month of July) (Merrill and Alexander 1987).

Figure 2: Properties of the FWI System’s fuel moisture codes. (Wilmore 2001)

Weather readings taken at 13:00 solar noon local standard time (14:00 daylight savings time in Alaska) at weather stations for temperature, rainfall, relative humidity, and wind speed are used as inputs into a computer program that calculates the six indices for each station.

3.2.3.1. NFDRS

Fire weather station WIMS catalogs require annual Green-up and Freeze-up dates to be entered in order to maintain WIMS compliance and properly generate NFDRS indices.

3.2.4. Fire Return Interval

No Changes.

3.2.5. Fire History

No Changes.

3.2.6. Ignitions/Cause

No Changes.

3.2.7. Fire Season

No Changes.

3.2.8. Landcover & Fuels

No Changes.

3.2.8.1. Fire Behavior

No Changes.

3.2.8.2. Fire Effects

No Changes.

3.2.9. Wildlife

No Changes.

3.2.10. Hydrology

No Changes.

3.2.11. Geology/ Hypsography

No Changes.

3.2.12. Humans & Human Activity

No Changes.

3.3. Specific Values to Protect

No Changes.

3.4. Communications

No Changes.

3.5. Safety Considerations

No Changes.

4. Wildland Fire Operational Guidance

The national policy and procedure guidance in the current edition of the *Interagency Standards for Fire and Fire Aviation Operations*, (Red Book) is incorporated into this plan, and must be followed. Alaska operational guidance for the management of fires is located in the Alaska Interagency Annual Operating Plan (AOP).

4.1. Management of Wildfires

Initial response to Refuge fires will be carried out according to the procedures and guidelines in the *Alaska Interagency Wildland Fire Management Plan (AIWFMP)*. All wildfire management decisions will include consideration of risks to public and firefighter safety, threats to the values to protect, costs of various mitigation strategies and tactics, and potential wildfire benefits.

4.1.1. Staffing

The Eastern Interior Refuges District includes Tetlin Refuge, along with Arctic, Kanuti, and Yukon Flats Refuges. The District shares fire management staff duty stationed in Tok and Fairbanks. All positions are currently funded through the Kanuti cost center.

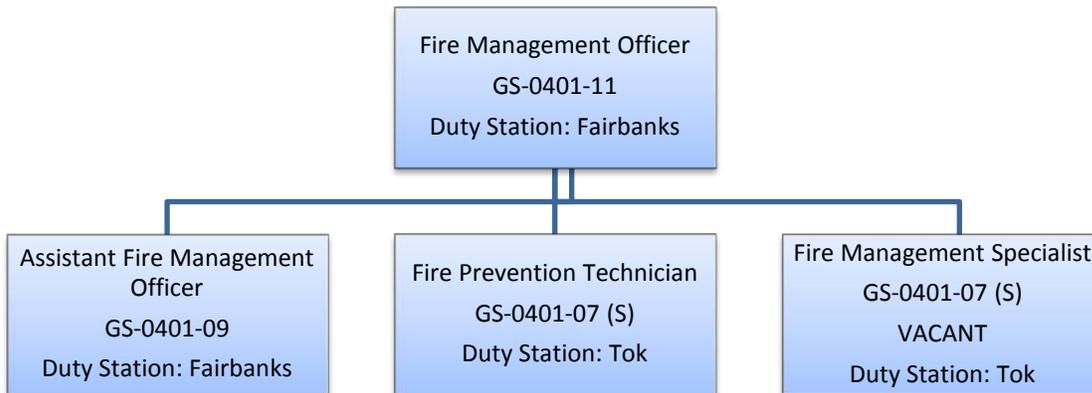


Figure 3: Eastern Interior Refuges fire management staffing

The Fire Management Officer (FMO), duty stationed in Fairbanks, is supervised by the Kanuti Refuge Deputy Manager. Refuge Managers from each of the Eastern Interior Refuges delegate specific fire management duties and responsibilities to the FMO (**Appendix E**). In addition, the incumbent takes an active role in fire management activities on the refuges, cooperating and coordinating with the appropriate protection agency - Alaska Division of Forestry (DOF) for Tetlin, and Alaska Fire Service (BLM-AFS) for Arctic, Kanuti, and Yukon Flats; as well as with incident management teams (IMTs). The FMO is responsible for providing refuge managers with up to date fire information and for advising them on fire management decisions.

The Assistant Fire Management Officer (AFMO) is also duty stationed in Fairbanks, assists with overall program management, and serves as acting FMO when the FMO is assigned to fires or otherwise absent. The AFMO and FMO rotate duty officer responsibility during the fire season.

The Fire Management Specialist, duty stationed in Tok, is currently vacant. The incumbent is primarily responsible for coordinating fuels reduction projects, managing agreements in order to accomplish treatments, and field supervision of the Fire Prevention Technician (FMO retains official supervisory duties).

The Fire Prevention Technician duty stationed in Tok works closely with the Tok Area DOF counterpart to implement refuge specific prevention and outreach efforts and assist with local Community Wildland Fire Protection Plan (CWPP) efforts. The incumbent has primary responsibility for maintenance of the Refuge cache and Type 5 engine.

Due to limited fire program staffing, most prescribed fire and mechanical fuels treatments require outside assistance. Qualified Service personnel from other Refuges and programs, interagency partners, and assistance agreement cooperators play key roles in treatment accomplishment. Fire program and other qualified personnel may be available for Local, Regional and National fire assignments with supervisory approval.

The Regional Office in Anchorage has a fire management staff to assist the Refuge with fire ecology and fire research needs, fire planning, outreach and public information, and fuels management. Regular communication between Refuge staff, the Regional Fire Coordinator, and other Regional fire program staff provide for two-way information flow between the Refuge, the Region, and other Regional fire programs.

4.1.2. Training and Qualifications

Refuge personnel will meet *National Interagency Incident Management System Wildland Fire Qualification System Guide, PMS 310-1* training, experience, and fitness levels for prescribed fire and suppression positions. All personnel funded with fire funds who are hired under a position description containing firefighting duties will meet PMS 310-1 requirements for the appropriate fire position. Individuals will not be assigned to duties for which they lack training and qualification. All personnel hired as primary firefighters must meet the arduous fitness standard to maintain full fire funding and if the position is career status, arduous is required to meet special retirement considerations for fire. Additional training policy and guidance is available in the *Interagency Standards for Fire and Fire Aviation Operations* and in the *U.S. Fish and Wildlife Service Fire Management Handbook*.

4.1.2.1. Incident Qualifications and Certification System

The Eastern Interior Fire Management Officer is responsible for input and maintenance of all pertinent Refuge employee data into the Incident Qualifications and Certification System (IQCS), and for ensuring that employees are trained, qualified, and certified at levels which meet preplanned needs for appropriate management response, initial attack and prescribed fire, and for ensuring the accuracy of annual Incident Qualification Cards.

The Eastern Interior FMO has been delegated the duties of the Certifying Official from the Refuge Manager (**Appendix E**), and confirms through the issuance of an incident qualification card that an individual is qualified to perform in a specified position. The Incident Qualification Card has a currency of 12 months. Current fire qualifications for fire program and collateral duty employees will be documented annually in the Refuge Preparedness/ Dispatch Plan (**Appendix B**).

Only PMS 310-1 and USFWS specific positions are approved for use by agency employees. IQCS Account Managers will proactively maintain organization codes for which they are responsible. Employees that are no longer employed by the FWS should be placed in INAC upon termination of duty.

4.1.2.2. National Incident Management System (NIMS) Training Requirements

Service personnel, who may become involved in emergency response activities, including wildland fire, are required to meet minimum training requirements established by the Department of Homeland Security in order to be NIMS compliant. Information regarding specific position requirements is outlined in the Service NIMS required training memorandum from the Director dated December 5, 2008 and the DOI Bulletin dated May 31, 2007.

4.1.2.3. Interagency Fire Program Management (IFPM) Requirements

Service personnel in IFPM covered positions must meet the NWCG qualification and additional required training requirements identified for their positions. Minimum qualification standards for Eastern Interior Fire Management positions is as follows:

Position	IFPM Position Standard	IFPM Complexity
Fire Management Officer	Unit Fire Program Manager	Moderate
Assistant Fire Management Officer	Wildland Fire Operations Specialist	Low
Fire Management Specialist	Prescribed Fire Fuels Specialist	Low
Fire Prevention Technician	N/A	N/A

Information regarding specific position requirements is available at <http://www.ifpm.nifc.gov/>.

4.1.2.4. Physical Fitness and Conditioning

Employees serving in wildland fire positions that require a fitness rating of arduous as a condition of employment are authorized one hour of duty time each work day for physical fitness conditioning. Employees not having a fitness rating of arduous as a condition of employment, but who are required by a Critical Performance element or other written agreement to maintain an arduous level, will be authorized three hours per week of duty time for physical fitness condition. All other wildland firefighting personnel holding qualifications requiring ratings of moderate or arduous may be authorized, by their supervisor, up to three hours per week of duty time for fitness conditioning. Prior to any duty time being allowed for physical fitness conditioning, employees and supervisors must agree, in writing, what physical conditioning activities the employee will engage in, and when and where they will occur (**Appendix G**). Activities outside of the agreement will not be authorized or allowed. A combination of activities designed to increase both physical strength and aerobic fitness, while minimizing the possibility of physical injury, should be utilized.

4.1.3. Preparedness

Annual preparedness activities are documented in the *Eastern Interior Refuges Preparedness/Dispatch Plan (Appendix B)*.

4.1.3.1. Delegation of Authority to Fire Management Officer

The Refuge Manager will annually provide the Fire Management Officer a written delegation of authority to perform fire management duties for the Refuge. See (**Appendix E**).

4.1.3.2. Preparedness Planning

Eastern Interior Refuges Fire Preparedness Level will mirror the statewide preparedness level identified in the AICC Daily Situation Report. National preparedness levels will be identified in the NICC Situation Report. The *Eastern Interior Refuges Preparedness/Dispatch Plan (Appendix B)* will identify step up actions to be taken when these preparedness levels change.

4.1.3.3. Equipment and Supply Levels

N/A

4.1.3.4. Communications

All Wildfire radio communication for Refuge and other Upper Yukon Zone fires will take place on the BLM Alaska Fire Service radio network. Prescribed fire and other fuels project communications will normally be conducted on the Refuge radio network; however, interagency projects and communications with the Upper Yukon/Tanana Dispatch Center will occur on the BLM AFS network. Telephone contacts and radio channel plans appear in the *Eastern Interior Refuges Annual Dispatch/Preparedness Plan (Appendix B)*

4.1.3.5. Aviation Management

The Refuge aviation program primarily supports resource missions and is not under fire management control. Refuge aircraft may sometimes be used to perform fire related missions including detection, fire reconnaissance, and logistical support at the request of the protection agency. Air crew and passengers will be appropriately briefed prior to performing fire related missions. All fire-related aviation operations will follow applicable guidelines of the DOI National Business Center - Aviation Management Directorate. All fire-related Refuge aviation activity will coordinate with the Upper Yukon/Tanana Dispatch Center.

Refuge personnel performing fire-related aviation missions in cooperator aircraft will meet DOI standards and will additionally comply with cooperator policy and procedures when they are more stringent than DOI policy.

4.1.3.6. Fire Detection

Detection services for the Upper Yukon Zone including the Refuge are the responsibility of the protection agency – BLM AFS, Upper Yukon Zone. Detection flights are scheduled based on area lightning detections and fire danger rating, and are often combined with reconnaissance of ongoing fires. At the request of Upper Yukon Zone, refuge aircraft and/or personnel may be used to perform detection missions. An aircraft resource order/ request number (A-number) will

be issued by the local dispatch center if the refuge is charging flight time to the detection flight or a specific fire.

4.1.3.7. Initial Report of Fire and Initial Response Dispatching

The Upper Yukon/Tanana Interagency Dispatch Center (AK-UYTC) will be responsible for initial attack dispatching on all refuge fires. The Center will operate from 08:00 to 18:00 hours, 7 days per week. Center season and hours will be extended as needed and an after-hours contact protocol will be included in the *Eastern Interior Refuges Annual Preparedness/ Dispatch Plan (Appendix B)*. The Alaska Interagency Coordination Center (AICC) will be responsible for dispatching outside of AK-TASC's operating season.

Upon discovery of a fire, AK-UYTC is responsible to determine, verify and document the incident location, management option, and cause, and implement the initial response based on the management option designation as described in the AIWFMP and mapped on the Map atlas maintained by AICC. Notification procedures are addressed in the AIWFMP and Clause 24 of the Alaska AOP and can be summarized as follows:

Fire notifications are required to the jurisdictional agency for any fires occurring on federal lands and Alaska Native village and regional corporations lands. A Wildland Fire Decision Support System (WFDSS) entry by the Protecting Agency, as described in **Section 4.1.4.6**, is required as part of the notification process. The following notification protocols will be followed:

- When a fire occurs on refuge lands, the Refuge FMO or Duty Officer will be notified promptly by phone or other pre-arranged contact method.
- When a fire occurs on non-Service lands but threatens to burn onto refuge lands, the Refuge FMO or Duty Officer will be notified.
- As a courtesy, the Refuge FMO or Duty Officer should be notified when a fire occurs within five miles of the Refuge ANILCA boundary.
- The Refuge FMO or Duty Officer will be notified of all false alarms and natural outs reported on Refuge lands.

All notification attempts should be documented. The notification process should not delay any initial response necessary within AIWFMP guidelines; however a non-standard response should not be initiated until the Refuge Manager or designee has been consulted, unless life or property are immediately threatened. AK-UYTC will initiate WFDSS documentation for all Refuge fires and will transfer ownership to the Refuge FMO or Duty Officer. At a minimum, fire notification will include the following information:

- DOI Fire Number
- State Fire Number (only applicable if State resources are assigned to the fire)
- Fire Name
- Management Option
- Date and Time Fire Reported
- Geographic Coordinates (Latitude/ Longitude)
- Legal Description (¼ ¼ Section, Township, Range, Meridian)

- Current Size
- Fuels
- Values Threatened

Initial response to Refuge fires will be in accordance with the AIWFMP procedures. Non-Standard responses will be approved by the Refuge Manager unless threats to life or property preclude this. Non-standard responses will be documented through a decision in the WFDSS process.

AK-UYTC employs the Alaska Dispatch automated dispatch system which tracks events and resources assigned to a fire in near real time through an online interface. Refuge fire management staff may have read-only access to this system in order to facilitate management decisions.

Reports of fires occurring in the Upper Yukon Zone should be made directly to AK-UYTC or to the after-hours duty-officer at **1-800-237-3652**. The following information should be recorded before the person reporting the fire hangs up or leaves:

1. Name, phone number, and calling location of person reporting the fire:
2. Date and time report is received: ____ / ____ / _____ AM/PM
3. Date and time fire was observed: ____ / ____ / _____ AM/PM
4. Immediate threats/hazards:
5. Estimated fire size: _____ (acres or length x width in feet).
6. Fire location (be as specific as possible, e.g. lat./long, street name, milepost, homeowner's name, etc.):
7. Topographical features (hillside, valley bottom, ridge top, etc.):
8. Fire behavior (i.e. smoldering, surface fire, torching trees, etc.):
9. Smoke color, direction of spread, and column description:
10. Anyone observed in the fire area or leaving the scene? (vehicle description, license #, etc.)
11. Fuel type (spruce, brush, tundra, dump, etc.):
12. Name of person receiving or recording this report:

When a fire is reported directly to refuge personnel the reporting party should be kept available while the Upper Yukon/Tanana Zone Dispatch Center is called (on another line if necessary). If this is not possible, the information should be recorded and relayed to the AK-UYTC fire dispatcher immediately.

4.1.3.8. Incident Commander Responsibilities

Operational control of a Refuge wildfire is the responsibility of BLM AFS Upper Yukon Zone. The Upper Yukon Zone FMO will assign a qualified Incident Commander (IC) and provide supervision and support including oversight, direction and logistical support. When a fire is not staffed, the Upper Yukon Zone FMO will retain operational control and will be the de facto Incident Commander. Upper Yukon Zone will be responsible for fulfilling daily interagency

incident reporting requirements directed in the AIMG and will complete the final fire report which will be provided to the Service.

The IC is a single individual responsible to the Upper Yukon Zone FMO for all incident activities, including the development of incident management strategies and tactics, and the ordering, deployment, and release of resources. For fires on Refuge lands the Upper Yukon Zone FMO is then responsible to the Refuge Manager. The IC is responsible to:

- Provide a size-up to dispatch as soon as possible upon arrival on scene. A size-up checklist is in the *Incident Response Pocket Guide (IRPG)*.
- Assess potential management by suppression and/ or by wildfire for resource benefits as incident objective(s) and contact the Upper Yukon Zone FMO with recommendations which will be relayed to the Refuge Manager.
- Use guidance in this FMP and/or a Delegation of Authority, implement selected response and manage an organization to implement effective strategies and tactics. Minimize suppression impacts where possible without reducing the effectiveness of the actions being undertaken.
- Determine resource needs and order as needed through local dispatch.
- Ensure that all resources assigned to the incident and those incoming receive a briefing and document these briefings. Refer to the Briefing Checklist in the IRPG.
- Continually re-assess incident complexity using the checklist in the IRPG. When a more qualified IC is needed, inform dispatch and delegated unit administrator and place the order for a higher level IC.
- Depending on incident complexity, additional responsibilities may apply. The NWCG Fireline Handbook provides a more detailed description of IC responsibilities.
- All resources, including mutual aid resources, will report to the IC (in person or by radio) and receive an assignment prior to tactical deployment.
- All Refuge fires must be investigated to determine fire cause, and if negligence or criminal intent were factors. If the IC suspects a fire cause is suspicious the point of origin will be protected and the Refuge Manager will be consulted regarding further investigative actions.

4.1.3.9. Mutual Aid and/or Cross-Boundary Operations

4.1.3.9.1 *BLM AFS / Yukon 10 Mile Border Corridor Initial Attack Agreement*

This agreement allows protection agencies in Alaska and Canada to commence initial attack activity on any wildland fire within ten miles of either side of the border between the Alaska and the Yukon Territory.

4.1.3.9.2 *Northwest Wildland Fire Protection Agreement (Northwest Compact)*

Canadian resources may be ordered by DNR under the terms of the *Northwest Wildland Fire Protection Agreement* (Northwest Compact). While in Alaska, those resources must remain under the operational control of DNR unless inspected and certified by the appropriate federal agency.

4.1.4. Incident Management

4.1.4.1. Dispatching Beyond IA

The IC will notify AK-UYTC whenever it appears a fire will escape initial attack efforts, cross Service boundaries, or when fire complexity will exceed the capabilities of command or operational forces. When additional resources are needed, they will be ordered through the AK-UYTC, which will mobilize any additional resources, including higher level ICs and Incident Management Teams.

AK-UYTC or the Upper Yukon Zone FMO will notify the Refuge Duty Officer who will notify and provide technical assistance to the Refuge Manager through the decision making process:

- Assisting the Refuge Manager to complete a WFDSS analysis.
- Assisting the Refuge Manager to complete a Delegation of Authority for Type 3 and higher complexity incidents.

4.1.4.2. Delegation of Authority to Incident Commander (IC)

The Master Agreement will serve as the Delegation of Authority from the Refuge Manager to Upper Yukon Zone to implement initial response activities in accordance with the AIWFMP. A written delegation will be developed jointly by the Upper Yukon Zone FMO and the Refuge Manager with the assistance of the Eastern Interior FMO for All Type 1, 2, and 3 complexity fires. The delegation will be jointly signed by the Upper Yukon Zone FMO and the Refuge Manager.

Upper Yukon Zone and Arctic NWR will participate in IMT in-briefings to provide information on local issues, personnel, facilities and identify key representatives. Upper Yukon Zone will authorize and provide oversight for incident resources regardless of the complexity level and will assign a liaison to out-of-state IMT Type 1 & 2. Tetlin NWR may assign Resource Advisors and/or an Agency Administrator Representative.

Upper Yukon Zone and Arctic NWR will be given timely notification and will participate in IMT closeouts. Each agency may contribute to the written evaluation of IMTs' performance in the implementation of the direction contained in the Delegation of Authority. Lessons learned will be included as an Interagency Fall Fire Review agenda item. IMTs will be provided written After Action Reviews.

See the current Red Book for supporting guidelines including an Agency Administrators Briefing to an IMT. **Appendix F** displays a Sample Delegation of Authority from Agency Administrator to Incident Management Team.

4.1.4.3. Minimum Impact Suppression

No Changes.

4.1.4.4. Resource Allocation and Prioritization

Initial Attack priorities will be based on the following:

- AIWFMP Management Option
- Values at risk
- Resource Availability

Fire resources will be allocated and prioritized based on procedures outlined in the Alaska Statewide Annual Operating Plan. Under Alaska Preparedness Levels 1-3, the Protecting Agencies' fire operation leads set resource allocation priorities; under Preparedness Levels 4 and 5, the AMAC determines those priorities. Reference AMAC Handbook:

<http://fire.ak.blm.gov/administration/mac.php>

and Alaska Preparedness Levels in the AIMG:

<http://fire.ak.blm.gov/logdisp/aimg.php>

4.1.4.5. Regulatory Compliance for Managing Unplanned Ignitions

NEPA analysis is not required for wildfires because they are unplanned events. Suppression activities are Categorically Excluded from NEPA (516 DM 8.5(5)).

No endangered species or critical habitat on the Refuge are likely to be impacted by wildland fire or by fire management actions; however, restrictions may be placed on suppression aircraft flyover altitudes of certain waterfowl and raptor nesting areas depending upon time of year and amount of flyovers required.

Smoke assessments are the responsibility of both Upper Yukon Zone and Arctic NWR. The need for air resource advisors is increasing and additional technical expertise for addressing air quality and health related issues may be available through the DEC. The AWFCG-approved "Smoke Effects Mitigation and Public Health Protection Protocols" are available at:

<http://fire.ak.blm.gov/administration/awfcg.php>.

For current smoke information, forecasts, regulations, advisories, and educational materials, refer to the DEC website:

<http://www.dec.state.ak.us/air/anpms/index.htm>.

The *Alaska Enhanced Smoke Management Plan for Planned Fire* (ESMP) was developed by DEC in coordination with the AWFCG Air Quality Committee. The ESMP and its appendices are located at:

http://fire.ak.blm.gov/administration/awfcg_committees.php.

The ESMP outlines the process and identifies issues that need to be addressed by DEC and federal and state agencies or private landowners/corporations to help ensure that prescribed fire activities minimize smoke and air quality problems. The ESMP Appendices provide additional assistance for interagency sharing of information, the applicability and availability of current smoke management techniques, monitoring protocol, public education strategies, and emission reduction techniques.

4.1.4.6. Use of Decision Support Tools

Decisions for extended response, non-standard responses and escaped prescribed fires will be documented using the Wildland Fire Decision Support System (WFDSS), and will support the objectives listed in the AIWFMP and the Refuge Fire Management Plan. Upper Yukon Zone will initiate the WFDSS process by entering the required information into the Incident Information tab within the WFDSS program. Upper Yukon Zone will transfer the “ownership” as defined within WFDSS to the refuge WFDSS contact; both Upper Yukon Zone and the Refuge will work collaboratively to complete documentation as required. For all incidents:

- Public and firefighter safety issues will continue to be the primary consideration.
- Upper Yukon Zone and the Refuge will jointly complete a complexity analysis or operational needs assessment to determine the management level of the incident.
- Upper Yukon Zone will authorize and provide oversight for all incident resources regardless of the complexity level.
- Operational guidelines for special management considerations are contained in the AIWFMP and in this FMP.
 - No retardant will be used on federal lands without prior approval of the agency administrator unless there is an immediate threat to life.
 - Each agency’s structure and site protection policies will be reviewed and applied as directed by the Refuge Manager and based on priorities, the overall statewide fire situation and resource availability.
- IMT in-briefings and close-outs will be conducted jointly with Upper Yukon Zone as the lead.

Approval authority for WFDSS decisions rests with the Refuge Manager. Upper Yukon Zone may develop and implement incident tactics based on verbal approval from the Refuge FMO or Refuge Manager while WFDSS approvals are being finalized. WFDSS decisions exceeding two million dollars will additionally require BLM approval of costs with a CC to the FWS Region 7 Fire Management Coordinator. Upper Yukon Zone will notify the Refuge when costs are approaching approval thresholds.

4.1.4.7. Wildfire Reporting Requirements

Accurate and timely completion of the Incident Status Summary is a critical factor in the allocation of available resources during multiple fire situations. The information included on the form often determines the priority of a given fire, and thus its share of the resources available.

Reports are generally required for incidents where life and/or real property are threatened or destroyed, on incidents with high resource damage potential, and complex incidents that could have political ramifications. Reports are filed on a daily basis until the incident is declared controlled. In addition to the national standard, Alaska requires an Incident Status Summary (ICS 209) for all fires (whether in Critical, Full, Modified or Limited) that have a commitment of 17 or more personnel for more than one burning period (overnight). ICS 209s are the primary source of Alaska fire activity information for national fire managers. AK-UYTC is responsible

for completing ICS 209s in the event that the Incident Commander fails to submit one. Alaska ICS-209's should be submitted by 10:00 p.m. (2200 hrs.) Alaska DST.

The Alaska Interagency Coordination Center may also request ICS 209s for other fires not covered by the above criteria as determined by the Predictive Services section. Managers determine the allocation of firefighting resources on a national basis. ICS 209s are therefore an essential element in our ability to obtain national resources such as smokejumpers, airtankers, helicopters, and type 1 crews.

Fires with Resource benefit acres will be documented in the National Fire Plan Operations and Reporting System (NFPORS) by the FMO. For all wildland fires, a Fire Management Information System (FMIS) report will be submitted by the Refuge FMO within five days of receiving the final fire report from AICC or the burn boss.

4.1.4.8. Suppression Damage Repair

Repairing the impacts of suppression activities is the responsibility of the Incident Commander and is funded by the wildfire account. Such work should be completed by incident resources prior to final demobilization whenever practical. However, it may be more cost-effective and practical to delay repairs to improve the probability of success. It is the responsibility of the Refuge Manager/line officer to ensure that suppression activity damage repair is completed.

Repair of suppression damage can include:

- Removing all trash from incident facilities, work areas and firelines,
- Replace soil dug from any trenched firelines to refill them to level; add water bars as needed,
- Fell and buck up hazardous trees and snags,
- Flush cut all stumps as close to ground level as practicable,
- Roll back and compact sod and peat overturned by plowing (with a grader or by hand) to preserve native grass rootstock and reduce thawing of permafrost by retaining the insulative properties of the vegetation mat.

4.1.5. Emergency Stabilization (ES)

Natural recovery is the preferred choice for recovery following unplanned ignitions. However, when natural recovery is not likely, ES treatments may be needed to prevent further degradation of cultural and natural resources in the burned area and downstream influence areas from erosion and invasion of undesirable species. ES uses emergency appropriations and activities must be completed within one year of fire containment. An IC may initiate ES actions before the fire is demobilized, as delegated by the agency administrator. Emergency stabilization activities were not used in Alaska until after the 2004 fire season. The Regional Fire Ecologist will be the primary contact person for ES activities in Region 7 and should be consulted if a plan is anticipated.

4.1.5.1. ES Planning and Post-Fire Assessments

Because of the emergency nature of the fire event, the Emergency Stabilization Plan (ES) must be developed expeditiously and is frequently developed by a local unit or designated burned area

Emergency Stabilization Rehabilitation (ESR) team. The Refuge Manager/Line Officer is responsible to order or assign teams to develop ES plans. The first step in developing a plan is to review available data about the fire and affected resources. Field inspections will likely be necessary to assess values at risk as a result of the fire. The Refuges/unit may not have sufficient expertise to conduct burned area assessments; resource specialists from cooperating units or from the Region may be needed to assist in developing a plan.

The ES Plan specifies treatments approved to implement post-wildfire emergency stabilization on a single incident. The plan specifies only emergency activities and treatments to implement within one year of wildfire containment, although emergency stabilization funding can be used for up to three years following containment of the fire in order to monitor treatment effectiveness or to replace/repair emergency stabilization treatments if failure to do so would imperil watershed functionality or result in serious loss of downstream values. Funding beyond the first year requires an approved amendment to the plan. Funding beyond the first year cannot be used to continue seeding, plantings, or invasive plant treatments. The plan must be completed within seven calendar days of wildfire containment and approved within six business days of receipt by the approving office. An interdisciplinary team prepares this plan during or immediately after wildfire containment. Information and a plan template are at:

<http://fire.r9.fws.gov/ifcc/esr/home.htm>.

A DOI Memo (September 5, 2007) states that “all Emergency Stabilization planning must adhere to Department of the Interior policy (620 DM 3.6.B) requiring that standard treatments are to be used that have been validated by monitoring data from previous projects, or when there is documented research establishing the effectiveness of such actions. All plans must justify proposed treatment(s) with existing research or monitoring documentation that demonstrates that the proposed treatment(s) are significantly more effective in achieving the emergency stabilization objective than natural recovery...” Reports of previous stabilization efforts in Alaska can be consulted for information about techniques.

4.1.5.2. ES Post-Wildfire Issues and Values to Protect

Wildfire damage to improvements is a concern. Developments are typically protected from fire damage, but dispersed improvements such as fences, public use facilities, and gates are likely to be damaged by severe or large fires.

ES actions likely to be needed deal with erosion, invasive plant infestation, or loss of sensitive and protected species habitat or native vegetation post-fire, as identified in 620 DM 3, include

- 3.7 M (2) placing structures to slow soil and water movement,
- 3.7 M (7) seeding or planting to prevent permanent impairment of designated Critical Habitat for Federal and State listed, proposed or candidate threatened and endangered species,
- 3.7 M (10) direct treatment of invasive plants,
- 3.7 M (12) monitoring of treatments and activities for up to three years.

Few invasive plants have been documented on the Refuge, but they are spreading throughout the state. Disturbed areas, such as burns, provide a favorable substrate for establishment of invasive plants. Invasive plants are associated with areas of human activity (e.g., trails, roads, cabins,

airstrips), so these areas are likely seed sources. Fire crews, particularly those from outside the state, may import seeds of non-native, invasive plants on clothing and equipment. Helicopter buckets and tanks, and Canadair CL2-15 tanks are required to be cleaned prior to scooping water in Alaska to prevent the spread of aquatic invasive species. ES funds can be used to control invasive plants only if an approved management plan and existing program are in place addressing non-native invasive species control. It is allowable to conduct assessments to determine the need for treatment if there are known infestations, possibility of new infestation due to management actions, or there are suspected contaminated equipment use areas. Systematic inventories are not allowed under ES funding. See the 2006 Interagency Burned Area Emergency Response Guidebook for additional information (http://www.fws.gov/fire/ifcc/esr/Policy/es_handbook_2-7-06.pdf). The Alaska Exotic Plants Information Clearinghouse (AKEPIC; <http://aknhp.uaa.alaska.edu/botany/akepic>) provides information about invasive plants, including species information, known location of infestations, and field data sheets.

Cultural resource sites, including prehistoric ones, can be exposed after fire removes vegetation and thick organic layers. Exposure of these sites can lead to loss of important artifacts and further degradation. The regional archaeologist should be contacted if you think cultural sites may have been exposed by fire. Efforts should be concentrated on known or suspected cultural sites; systematic inventories or surveys are prohibited.

Trail systems on the Refuge serve as more than a platform for recreational activities; winter trails are often primary inter-village transportation routes. Hazard trees can obstruct trails, making travel difficult or impossible. It is not allowed to use ES funds to improve a trail to a standard above its pre-fire condition.

4.1.5.3. ES Treatment Maintenance and Monitoring

Treatment monitoring protocols and maintenance requirements will be specified within individual ES plans. The Regional Fire Ecologist can help with developing these plans. See **Section 5.2** for an overview of effects monitoring.

4.1.5.4. ES Reporting Requirements

Annual accomplishment reports are required for ES activities, and accomplishment reports including treatment and activity information are also required in the National Fire Plan Operations and Reporting System (NFPORS). A Final Accomplishment Report documenting all accomplishments, implementation costs, and monitoring results will be archived in the Refuge project files with electronic copies sent to the RFMC and Branch of Fire Management in Boise, Idaho, no later than 3 years and 60 days following wildfire containment. The Eastern Interior FMO will be responsible for initiating ES reports and entering accomplishments in NFPORS prior to October 1 of the fiscal year in which they occur.

4.1.6. Burned Area Rehabilitation (BAR)

Burned Area Rehabilitation activities are “undertaken within three years of containment of a wildland fire to repair or improve fire-damaged lands unlikely to recover naturally to management approved conditions or to repair or replace minor facilities damaged by fire” (620 DM 3.3M). Information on the BAR process can be found in the 2006 Interagency Burned Area Rehabilitation Handbook (http://www.fws.gov/fire/ifcc/Esr/Policy/BAR_Guidebook11-06.pdf).

Rehabilitation treatments include only the following allowable actions:

1. Repair or improve lands unlikely to recover naturally from wildland fire damage by emulating historical or pre-fire ecosystem structure, function, diversity, and dynamics consistent with existing land management plans.
2. Chemical, manual, and mechanical removal of invasive species, and planting of native and non-native species, consistent with DM 3.8F, restore or establish a healthy, stable ecosystem even if this ecosystem cannot fully emulate historical or pre-fire conditions.
3. Tree planting to reestablish burned habitat, reestablish native tree species lost in fire, prevent establishment of invasive plants, and regenerating Indian trust commercial timberland as prescribed by a certified silviculturalist to not regenerate for ten years following the fire.
4. Repair or replace fire damage to minor operating facilities (e.g., campgrounds, interpretive signs and exhibits, shade shelters, fences, wildlife guzzlers, etc.). Rehabilitation may not include the planning or replacement of major infrastructure, such as visitor centers, residential structures, administration offices, work centers and similar facilities. Rehabilitation does not include the construction of new facilities that did not exist before the fire, except for temporary and minor facilities necessary to implement burned area rehabilitation efforts.

4.1.6.1. BAR Planning

A BAR plan is a document that specifies treatments required to implement post-fire rehabilitation policies; it is separate from the ES plan. A BAR plan may be developed at any time within three years from the containment date as long as work can be completed by the third anniversary of containment, but it will likely be developed in conjunction with the ES plan. BAR funds are competitive among DOI Bureaus. Refuge rehabilitation plans will be prepared by an interdisciplinary team of specialists; prior to developing a BAR plan, the refuge should consult with the regional fire ecologist. Information and a BAR plan template are at the DOI ESR website at <http://fire.r9.fws.gov/ifcc/esr/home.htm>.

4.1.6.2. BAR Issues and Values to Protect

Likely post-wildfire BAR issues on the Refuge include:

- The establishment of invasive species within the burned area
- Damage to existing trails
- Damage to interpretive signs and exhibits
- Damage to campgrounds

Allowable actions concerning invasive species are similar to those allowed under ES funding. BAR funds cannot be used for restoration of any cultural resource or heritage site. Other issues correctable by any of the four allowable actions listed in **Section 4.1.6** may also merit BAR action.

4.1.6.3. BAR Regulatory Compliance

Two Categorical Exclusions (CX) may apply to BAR. The first is a DOI CX (516 DM 2, Appendix 1(1.13)) and the second is a FWS CX (516 DM 8.5(5)). When utilizing the FWS Categorical Exclusions, the Refuge/unit staff will complete and submit the most recent version of the NEPA Compliance Checklist (FWS Form 3-2185) with the BAR plan. Before using the DOI Cat X, consult with the Regional Office regarding its use.

BAR projects must comply with NHPA. Plans will be submitted to Regional archeologist for review and cultural / archeological clearance. To the greatest extent possible, project implementation will follow recommendations of the Regional archeologist and/or SHPO. BAR projects that may affect Threatened & Endangered species/their habitats must comply with Section 7 of the ESA. Any such projects will be submitted for Section 7 consultation.

Routine BAR operations on the Refuge will be conducted using non-motorized means to the extent practical. Motorized equipment may be used with Refuge Manager approval.

4.1.6.4. BAR Monitoring Protocols

Treatment monitoring protocols and maintenance requirements will be specified within individual BAR plans. The Regional Fire Ecologist can help with developing these plans. See **Section 5.2** for an overview of effects monitoring.

4.1.6.5. BAR Contact Information

In addition to the Eastern Interior FMO, Refuge biologists would be involved in creating and implementing a BAR plan. Assistance would also be sought from the Regional Fire Management Coordinator and the Regional Fire Ecologist. See the Communications section of the *Eastern Interior Refuges Annual Preparedness/Dispatch Plan (Appendix B)* for specific names and contact numbers.

4.1.6.6. BAR Public Information and Public Concerns

Meetings in local communities to obtain input and identify issues needing further discussion or resolution should be held early in the BAR plan development process.

4.1.6.7. BAR Reporting Requirements

Reporting requirements for BAR are similar to those for ES treatments. An Annual Accomplishment Report is required for funding in years two and three. Detailed Annual Accomplishment Reports will be completed by fiscal year end to document actual accomplishments, costs and monitoring results. Reports will be kept in field unit project files, with a copy of the Annual Accomplishment Report sent to the Regional office and to the national office in Boise. Annual accomplishments are also summarized and reported in the NFPORS treatment/activity form. The final accomplishment report must be completed no later than 3 years and 60 days following containment of the fire. NFPORS Accomplishment updates are the responsibility of the Eastern Interior FMO; they are to be completed by the 23rd of every month and at the end of the fiscal year until the project is shown as completed.

4.2. Management of Planned Fuels Treatments

No Changes.

4.3. Prevention, Mitigation and Education

4.3.1. Wildfire Investigation and Trespass Policies

The inadvertent or intentional ignition of wildland fuels by humans is illegal. Agency policy requires any wildfire to be investigated to determine cause, origin, and responsibility. All fires suspected of being human-caused will be investigated to the degree possible by the initial response Incident Commander. The Refuge Manager will be notified immediately of suspected human-caused fire. The Refuge Manager will determine if the fire scene is to be formally investigated, and if so, will direct that an investigator be ordered. The Service will pursue any legal actions deemed necessary. When incidents impact multiple agencies lands, collections will be pursued jointly and cooperatively by each affected agency to the extent practical. The Incident Commander will:

- Locate and protect the point of origin of fire.
- Search for and protect evidence.
- Identify and document witnesses and other persons at fire scene (Name and contact information, if possible).
- Document observations, actions, and findings.

Wildland fire trespass refers to the occurrence of unplanned ignitions on Service lands where the source of ignition is tied to some type of human activity. Fire trespass is a legal/law enforcement activity and the appropriate local law enforcement authorities should be contacted and standard criminal and/or civil investigative procedures and reports used. The Red Book as well as the FWS Fire Management Handbook provides detailed information regarding investigation and trespass procedures.

4.3.2. Prevention/Mitigation Program

No Changes.

4.3.3. Education/Outreach Activities

No Changes

5. Monitoring and Evaluation

Monitoring and evaluation are the functions used to determine if the FMP is being implemented as planned to meet its goals and objectives as well as to determine whether the goals, objectives, strategies, and procedures outlined in the FMP and other plans remain relevant. Wildland fire is one of the primary sources of disturbance on the Tetlin Refuge. As such, it is integral to the management of the refuge's wildlife and plant communities. Through monitoring and evaluation methods, we seek to better understand the relationships between fire and other refuge resources. Monitoring also helps us improve our WUI and Hazardous fuels treatment techniques, and provides documentation to show how we address our performance measures.

This chapter is divided into two primary sections:

- Fire Management Plan Monitoring - covers the five management components in this fire management plan, and provides guidance to insure that our actions within these areas meet the goals of the Refuge and are in compliance with other national and service policies.
- Effects Monitoring - focused on the ecological effects that result from fire management activities on the Refuge.

5.1. Fire Management Plan Monitoring

5.1.1. Annual FMP Review

The Fire Management Plan is monitored for compliance with the National Fire Plan and resulting performance standards, National Wildlife Refuge System, Wildland Fire Management Program Strategic Plan, Alaska Interagency Wildland Fire Management Plan, compatibility with refuge plans, support of the applicable National Wildlife Refuge promises, and national and region policies of the Fish and Wildlife Service.

FMPs are intended to be dynamic and reflect current situations and policies; therefore, to maintain currency, FMPs must be reviewed each year using the nationally established annual review process (**Appendix D**). Plans must be revised when significant changes occur or substantial changes in management are proposed. Minor plan revisions may be accomplished through an amendment added to the plan and signed by the Refuge Manager and Eastern Interior Fire Management Officer. Major scheduled revisions to fire management plans will follow the 15 year Comprehensive Conservation Plan revision cycle to provide consistency in objectives and management strategy formulation. Major revisions are reviewed by the Regional Fire Management Coordinator and approved by the Region 7 Chief of Refuges. Without a current FMP, prescribed fires cannot be conducted and response to unplanned ignitions can only consider suppression strategies. Preparedness and prevention activities can continue in the interim period as outlined in the expired plan. All new FMPs and those needing revisions due to significant change in land use or other circumstances will use the most recent Interagency Fire Management Plan Template and apply the most recent Service-specific guidance.

The following partners should be given the opportunity to review major revisions to the FMP:

- Bureau of Land Management, Alaska Fire Service
- Arctic Village Council
- Venetie Reservation
- Doyon Native Corporation
- Tanana Chiefs Conference

5.1.2. Preparedness/Step-up Plan Review and Update

The Eastern Interior Preparedness/Step-up Plan will be reviewed annually, and updated as necessary.

5.1.3. Fire Management Options Review and Update

A review of refuge Fire Management Options will be completed annually by March 1. Changes will be submitted in accordance with procedures outlined by the AIWFMP. Mid-season Management Option boundary changes will rarely be necessary but may be accommodated as outlined in the AIWFMP.

5.1.1. Known Sites Review and Update

A review of known sites on the Refuge and their default protection level will be completed annually by April 1. Changes will be submitted in accordance with procedures outlined by AWFCG.

5.2. Effects Monitoring

Effects monitoring can apply to all aspects of the fire program that involve changes on the ground. The goals of effects monitoring may include the following:

- Develop data that helps quantify the relationship of fire with Refuge resources.
- Develop data that helps quantify fire effects associated with a specific vegetation/fuel type in order to improve predictive capabilities for modeling fire distribution, spread, and behavior.
- Evaluate the effectiveness of a treatment (prescribed fire, mechanical treatment, or suppression action) in order to determine whether objectives have been met.
- Document unexpected treatment results.

This FMP outlines four management components that may require some level of effects monitoring and evaluation:

- Wildfire
- Prescribed fire
- Non-fire fuels treatment
- Emergency stabilization and rehabilitation

Similar monitoring methods and protocols can be applied to each of these activity types. The following sources are available for guidance if a post-fire monitoring program is implemented:

- AWFCG Fire Effects Monitoring Protocol. Contains Alaska-specific guidance. http://fire.ak.blm.gov/administration/awfcg_committees.php or <http://frames.nacse.org/5000/5585.html>
- FWS Fuel and Fire Effects Monitoring Guide. <http://www.fws.gov/fire/downloads/monitor.pdf>
- National Park Service Fire Monitoring Handbook. http://www.nps.gov/fire/download/fir_eco_FEMHandbook2003.pdf

For wildfires and prescribed fires, an evaluation of burn severity can provide a useful measure to understand fire effects and to predict vegetation response. For long-term monitoring sites detailed information on burn severity should be collected (for example the Composite Burn Index protocols by NPS <http://fire.org/firemon/lc.htm> or [burn severity transects described in the FETG Fire Effects Monitoring Protocol](#)).

Remote sensing techniques are available for development of burn severity maps for fires greater than 300 acres. The normalized burn ratio technique (dNBR) developed by the NPS is described on the FIREMON website at <http://fire.org/firemon/lc.htm>.

Unfortunately recent research, some of it conducted on the Refuge, suggests that this method does not adequately differentiate along the range of moderate to high burn severity in Alaskan boreal forests. Caution should be used in interpreting dNBR and ground-based validation should be invested in if the objective is to develop a burn severity map that captures the full range of variability in site conditions and provides a basis for predicting vegetation change in boreal forests (Murphy *et al.* 2008).

Monitoring protocols will be treatment/ incident specific and will be detailed in the appropriate planning document (prescribed fire plan, treatment plan, ES plan, BAR plan).

Appendices

Appendix A.	List of Acronyms	A-0
Appendix B.	Eastern Interior Annual Dispatch/Preparedness Step-up Plan....	B-4
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Appendix A. List of Acronyms

Terminology in this Plan is defined in the National Wildfire Coordinating Group Glossary of Wildland Fire, located at <http://www.nwccg.gov/pms/pubs/glossary/index.htm>. Additional terms that appear in this document but are not listed in the glossary are defined below:

AD= Administratively Determined Pay Plan

ADEC = Alaska Department of Environmental Conservation

ADF&G = Alaska Department of Fish and Game

AFS = Alaska Fire Service

AICC = Alaska Interagency Coordination Center

AIWFMP = Alaska Interagency Wildland Fire Management Plan

AK-DOF = Alaska Department of Natural Resources, Division of Forestry

AMAC=Alaska Multi-agency Coordination (Group)

AMD = (DOI) Aviation Management Directorate

AMR = Appropriate Management Response

ANCSA = Alaska Native Claims Settlement Act

ANILCA = Alaska National Interest Land Conservation Act

AOP= Annual operating plan

ATV= All-terrain Vehicle

AWFCG = Alaska Wildland Fire Coordinating Group

BAR= Burned Area Rehabilitation

BIA = Bureau of Indian Affairs

BLM = Bureau of Land Management

BUI = buildup index

CCP = comprehensive conservation plan

CDI = Canadian drought index

CFFDRS = Canadian Forest Fire Danger Rating System

CFR= Code of Federal Regulations

DC = drought code

Department = U.S. Department of the Interior

DM = departmental manual

DMC = duff moisture code

DNR=(State of Alaska) Department of Natural Resources

DOF= (State of Alaska) Division of Forestry
DOI = U.S. Department of the Interior
EA = environmental assessment
EFF = Emergency Firefighter
EIS = Environmental Impact Statement
ES= Emergency Stabilization
ESMP= (Alaska) Enhanced Smoke Management Plan
ESR= Emergency Stabilization Rehabilitation
FFMC = fine fuel moisture code
FMIS = (FWS) Fire Management Information System
FMO = fire management officer
FMP = fire management plan
FMU = fire management unit
FRCC = fire regime and condition class
FWS= U.S. Fish and Wildlife Service
IC= Incident Commander
IMT = Incident Management Team
IQCS= Incident Qualifications and Certification System
IRPG= Incident Response Pocket Guide
MAC = multi-agency coordination
MIST = minimum impact suppression tactics
MMA = maximum manageable area
mph = miles per hour
NEPA = National Environmental Protection Act
NFDRS = National Fire Danger Rating System
NFORS= National Fire Plan Operations and Reporting System
NPS- National Park Service
NWR – National Wildlife Refuge
POW= Program of Work
Refuge = Tetlin National Wildlife Refuge
Refuge Manager = Refuge Manager, or, if unavailable, the Deputy Refuge Manager, or Refuge
FMO, or their designee
RFMC = Regional Fire Management Coordinator

RH – relative humidity

Service = U. S. Fish and Wildlife Service

TES= threatened, endangered and sensitive(species)

UTV= All-terrain Utility Vehicle

VFD= Volunteer Fire Department

WFDSS= Wildland Fire Decision Support System

WFIP = Wildland Fire Implementation Plan (obsolete)

WFSA = Wildland Fire Situation Analysis (obsolete)

WFU = Wildland Fire Use (obsolete)

WUI= Wildland/ Urban Interface

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*Appendix B. Eastern Interior Annual
Dispatch/Preparedness Step-up Plan*

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Appendix C. Eastern Interior Multi-year Treatment Plan

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Annual Fish and Wildlife Fire Management Plan Review Checklist Process

The annual review of the Fire Management Plan (FMP) is a requirement of the Service which is documented in the *Fire Management Handbook*, Chapter 9 – section 4. The language in the Handbook states:

“To maintain currency, fire management plans must be reviewed each year using the nationally established annual review process. Plans must be revised when significant changes occur or substantial changes in management are proposed. Minor plan revisions may be accomplished through an amendment added to the plan and signed by the line officer and servicing fire management officer. Major scheduled revisions to fire management plans will follow the 15 year Comprehensive Conservation Plan revision cycle to provide consistency in objectives and management strategy formulation. Without a current FMP, prescribed fires cannot be conducted and response to unplanned ignitions can only consider suppression strategies. Pre-suppression and prevention activities can continue in the interim period as outlined in the expired plan.”

The review is essential to ensure that the FMP continues to contain relevant information for the management of the unit and that it conforms to current laws, objectives, procedures, and strategies. The review is intended to keep the FMP as current as possible and in line with changes that may occur in components of the FMP. Updating federal fire policy, terminology, agreements, wildland urban interface acres in close proximity to the refuges/units are examples of appropriate revisions to an FMP using this review and update format.

This review process requires the refuge/unit line officer and fire management officer responsible for fire management to review the FMP currently in place using the annual review checklist. During the review, they will discuss and update the sections as needed and complete an amendment containing the updates. Once this update/amendment is complete and signed off by the reviewing officials, the Fire Management Plan is deemed to once again be current and meets Service requirements.

The process will be more efficient if the fire management officer (FMO) does some pre-work on the checklist prior to meeting with the line officer. The regional and national fire planners will be filing changes to policy, terminology, etc. in a Sharepoint file they receive them and these changes, recommendations can be added.

Release Date: April 30, 2010

The Review Process Steps are as Follows:

1. Select the appropriate review form for the process – Short or Long.
Note: For the first review of the FMP, it is suggested that the Long Form of the template be used so that a solid baseline of update information is completed and documented for future reviews.
2. The Fire Management Officer should look through the file in Sharepoint for suggested updates placed there by the regional and national planner.
3. FMO should incorporate all the update changes found in the Sharepoint into the document before meeting with the refuge/line officer.
4. Set up a discussion between the refuge/unit FMO and line officer to determine other changes that may be needed to the remaining portions of the document.
5. Determine if the changes warrant a rewrite or just local approval.
6. If determined to not need a rewrite, the line office and the FMO must sign signature block to show approval of the review.
7. The FMO will list the changes addressed in the FMP on an amendment.
8. Staple the completed amendment and signature page to the fire management plan that was reviewed.
9. Have the Fire Management Officer fax the signed signature page to the regional fire planner (if desired).
10. The regional fire planner will insert the review completion date into the Sharepoint spreadsheet.

If there are any questions about this process, please call Becky Brooks at (208) 387-5345.

Release Date: April 30, 2010

FWS REVIEW CHECKLIST (SHORT FORM)
FOR
FISH AND WILDLIFE FIRE MANAGEMENT PLANS
Based on the template of April 9, 2009

Name of Plan Reviewed for Annual Review Process:		Review Date:
Refuge or Unit Name (Include Complex if applicable):		
Fire Staff Reviewer(s) Name and Phone Number:		Fire Staff Reviewer(s) Signature (for review approval):
Refuge Reviewer(s) Name and Phone Number:		Refuge Reviewer(s) Signature (for review approval):
Amendment Completed and Attached to Plan		Date:
Review information sent to Regional Office		Date
Review date entered in Database (Regional Office)		Date

The "Short Form" of the Review Checklist was developed to be used the year(s) following the completion of the Long Form. The Long Form, with the required amendment, will provide baseline data to the reviewers. The significant headers from the 2009 Interagency Fire Management Plan Template make up the rows of the document and are intended to spark talking points between the FMP reviewers. The Long Form and Amendment should be utilized as reference documents during this discussion.

Please complete this Review Checklist as follows: A check-mark in the "No Update" column means that this portion of your FMP has been reviewed and determined not to need an update; if, through discussion, it is determined that a row may require an update, refer to the previously filled out Long Form to see which sub-chapter elements should be included in the update comments. At that point, put a check-mark in the "Update Needed" column and provide an explanation (and the sub-section number from the long form) of the changes in the "Notes/Comments" section. This information will be included in an amendment that needs to be attached to the plan outlining the changes described for this review. Be sure to adequately describe the changes so they are easily understandable to the outside reader. Put an N/A in the "No Update" column for lines that do not pertain to your refuge/unit to make it easier for future reviewers to complete the annual review process.

If the reviewers determine that the changes are substantial and the original intent of the document is compromised, then a revision of the document should be completed. The review discussion between the line officer and the fire staff may support that conclusion but the responsibility for making this decision rests with the unit line officer.

No Update or N/A	Update Needed	Section	Title – Content	Notes/Comments	Date
		Chapter 1. Introduction			
		1.1	Purpose of the FMP		
		1.2	General Description (of FMP area)		
		1.3	Significant values to Protect		
		Chapter 2. Policy, Land Management Planning, and Partnerships			
		2.1	Fire Policy		
		2.2	Land/Resource Management Planning		
		2.2.2	Environmental Compliance		
			• National Environmental Policy Act (NEPA)	What type?	
			• Endangered Species Act (ESA)	Date of consultation:	
		2.3	Partnerships (internal/external)		
		Chapter 3. Fire Management Unit Characteristics			
		3.1	Area -wide Management Considerations		
		3.1.1	CCP Goals, strategies, and actions		
		3.1.2	CCP Standards and Guidelines/Desired Conditions		
		3.1.3	FMU Common Characteristics		
		3.2	Fire Management Unit - Specific Descriptions		
		3.2.1	FMU Description(s)		
		3.2.2	FMU Values to Protect		
		3.2.3	FMU Fire Management Guidance		
		3.2.4	FMU Safety Considerations		
		3.2.5	FMU Wildfire Response Objectives		
		3.2.6	FMU Fuels Treatments and Methods		
		Chapter 4. Wildland Fire Operational Guidance			
		4.1	Management of Unplanned Ignitions		
		4.1.1	Preparedness		
		4.1.2	Incident Management		
		4.1.3	Emergency Stabilization (ES)		
		4.2	Burned Area Rehabilitation (BAR)		
		4.3	Management of Planned Fuels Treatments		
		4.3.1	Processes to Identify and Prioritize Fuels Treatments		
		4.3.2	Prescribed Fire Project Implementation		
		4.4	Prevention, Mitigation, and Education		
		Chapter 5. Monitoring and Evaluation			
		5.1	FMP Monitoring		
		5.2	Treatment Effects Monitoring		
		References			
		Appendices			

Additional reviewer comments:

FWS REVIEW CHECKLIST (LONG FORM)
FOR
FISH AND WILDLIFE FIRE MANAGEMENT PLANS
Based on the template of April 9, 2009

Name of Plan Reviewed for Annual Update Process:		Review Date:
Refuge or Unit Name (Include Complex if applicable):		
Fire Staff Reviewer(s) Name and Phone Number:		Fire Staff Reviewer(s) Signature (for review approval):
Refuge Reviewer(s) Name and Phone Number:		Refuge Reviewer(s) Signature (for review approval):
Amendment Completed and attached to Plan		Date:
Review information sent to Regional Office		Date:
Review date entered in Database (Regional Office)		Date:

Please review the Fire Management Plan (FMP) and complete the columns as follows: A check-mark in the “No Update” column means that this portion of your FMP has been reviewed and determined not to need an update; if a row requires an update (answering yes to the question (s)), check the “Update Needed” column and provide an explanation of the changes in the “Notes/Comments” section. This information will be included in the amendment (including chapter, section and comments) to be attached to the plan annually following the review. Be sure to adequately describe the changes so they are easily understandable to the outside reader. Put an N/A in the “No Update” column for lines that do not pertain to your refuge/unit to make it easier for future reviewers to complete the annual review process.

If the reviewers determine that the changes are substantial and the original intent of the document is compromised, then a revision of the document should be completed. The review discussion between the line officer and the fire staff may support that conclusion but the responsibility for making this decision rests with the unit line officer.

If the reviewers determine that the changes are substantial and the original intent of the document is compromised, then a revision of the document should be completed. This responsibility for making this decision rests at the Unit Line Officer level.

No Update or N/A	Update Needed	Section	Title – Content	Notes/Comments	Date
Chapter 1. Introduction					
		1.1	Purpose of the FMP		
		1.2	General description of the FMP area (location/vicinity map, size, land ownership, etc.)		
			<ul style="list-style-type: none"> Has your vicinity map changed due to new acres added or from complexing for FMP? 		
			<ul style="list-style-type: none"> Total acreage changed? If it is the same management? 		
			<ul style="list-style-type: none"> Are there significant changes in land ownership in lands surrounding unit and/or in-holdings? New subdivisions? 		
			<ul style="list-style-type: none"> FWS units included in the FMP – have you recently complexed multiple units or added new units to a complex? 		
		1.3	<p>Are there any new Significant values to Protect? If so, add them in the spaces provided below.</p> <p>mission, special resource/ management designations (e.g., wilderness, cultural sites, T & E species, etc.</p> <ul style="list-style-type: none"> 		
Chapter 2. Policy, Land Management Planning, and Partnerships					
		2.1	Fire Policy		
		2.1.1	Federal Interagency Policy change?		
			<ul style="list-style-type: none"> Terminology changes? 		
		2.1.3	DOI policy change? (e.g., Departmental manuals).		
		2.1.4	Service policy change?		
		2.1.5	Regional/unit-specific policy change?		
		2.2	Land/Resource Management Planning		
		2.2.1	Planning Documents:		
			<ul style="list-style-type: none"> Does Habitat Management Plan (HMP) align with FMP at unit? Is it being revised? Does management wan HMP and FMP revisions to take place simultaneously? 		
			<ul style="list-style-type: none"> Is the Comprehensive Conservation Plan (CCP) currently being developed? Revised? 	CCP date:	
			<ul style="list-style-type: none"> Others: (list) 		
		2.2.2	Environmental Compliance – are your compliance documents up to date in the following areas?		
			<ul style="list-style-type: none"> National Environmental Policy Act (NEPA) 	What type?	
			<ul style="list-style-type: none"> Endangered Species Act (ESA) 	Date of consultation:	
			<ul style="list-style-type: none"> National Historic Preservation Act (NHPA) 		
			<ul style="list-style-type: none"> Archaeological Resources Protection Act (ARPA) 		
			<ul style="list-style-type: none"> Others: (list) 		
		2.3	Partnerships		
		2.3.1	Internal Partnerships changes? (Use spaces below to add new partnerships)		
			<ul style="list-style-type: none"> 		

No Update or N/A	Update Needed	Section	Title – Content	Notes/Comments	Date
		2.3.2	External Partnerships changes?		
			•		
			•		
Chapter 3. Fire Management Unit Characteristics					
		3.1	FMP-wide Management Considerations		
		3.1.1	Have the CCP Goals, strategies, and actions for FMP-wide fire management changed? If so, describe the changes in the comment box.		
		3.1.2	Have the Standards and guidelines/desired conditions from the CCP or other planning documents/handbooks changed? If so, describe the changes in the comment box.		
		3.1.3	Common Characteristics of the FMUs		
			•		
		3.2	Fire Management Unit - Specific Descriptions		
		3.2.1	Have the FMUs changed in your FMP? Do they need to be revised or more added/deleted? If so, fill out the information below.		
			Description of the FMU (add new information about FMU below)		
			• FMU name		
			• vicinity map		
			• adjacent ownership and jurisdiction		
			• fire management objectives		
			• vegetation types		
			• fuel models		
			• burnable acres		
			• Unique physical characteristics affecting fire management (topography, soils, access, fire effects, etc.)		
			• values to protect / uses that affect (or are affected by) fire management decisions		
		3.2.2	Values to Protect (use space below to add new)		
			•		
			•		
			•		
		3.2.3	Fire Management Guidance		
			Have any of the following changed? If so, add comments/changes in comment box or use space below to add new.		
			• Wildfire response objectives		
			• Potential size and scope of fuels treatments		
			• Approved fuels treatments and methods,		
			• Restrictions, limitations, constraints,		
			• Suppression Damage Repair, ES, and BAR considerations		
			•		
		3.2.4	FMU Safety Considerations (use space below to add new)		
			•		
			•		
			•		
			•		

No Update or N/A	Update Needed	Section	Title – Content	Notes/Comments	Date
		Chapter 4. Wildland Fire Operational Guidance			
		4.1	Management of Unplanned Ignitions		
		4.1.1	Preparedness		
			Have any of the following changed? If so, describe changes in the comment box.		
		4.1.1.1	Training and Qualifications		
		4.1.1.2	Refuge/Unit Delegation of Authority to Fire Staff		
		4.1.1.3	Readiness		
		4.1.1.4	Aviation Management		
		4.1.1.5	Fire Detection		
		4.1.1.6	Initial Report of Fire and Initial Attack dispatch		
		4.1.1.8	Mutual Aid and Cross Boundary Operations		
		4.1.2	Incident Management		
			Have any of the following changed? If so, describe changes in the comment box.		
		4.1.2.1	Dispatching beyond IA		
		4.1.2.2	Delegation of Authority to Incident Commander		
		4.1.2.3	Resource Allocation and Prioritization		
		4.1.2.4	Regulatory Compliance for Managing Unplanned Ignitions		
		4.1.2.5	Use of Decision Support Tools – (WFDSS etc.)		
		4.1.2.6	Wildfire Reporting Requirements		
		4.1.2.7	Suppression Damage Repair		
		If no potential for ES and BAR exist on your unit, please skip sections 4.1.3 and 4.2			
		4.1.3	Emergency Stabilization (ES)		
		4.1.3.1	ES Planning and Post-fire Assessments		
		4.1.3.2	ES Post-wildfire Issues and Values to Protect		
		4.1.3.3	ES Treatment Maintenance and Monitoring		
		4.1.3.4	ES Reporting Requirements		
		4.2	Burned Area Rehabilitation (BAR)		
		4.2.1	BAR Planning		
		4.2.2	BAR Issues and Values to Protect		
		4.2.3	BAR Regulatory Compliance		
		4.2.4	BAR Monitoring Protocols		
		4.2.5	BAR Contact Information		
		4.2.6	BAR Public Information and Public Concerns		
		4.2.7	BAR Reporting Requirements		
		4.3	Management of Planned Fuels Treatments		
		4.3.1	Processes to Identify and Prioritize Fuels Treatments		
		4.3.2	Prescribed Fire Project Implementation		
			Have any of the following changed? If so, describe changes in the comment box.		
		4.3.2.1	Prescribed Fire Planning		
		4.3.2.2	Prescribed Fire Operations		
		4.3.2.3	Prescribed Fire Public Notification		
		4.3.2.4	Multiple Prescribed Fires		
		4.3.2.5	Prescribed Fire on Private Lands		
		4.3.2.6	Prescribed Fire Conversions and Reviews		
		4.3.3	Planning, Preparing, Implementing Non-fire Fuels Treatments		
		4.3.4	Fuels Treatment Regulatory Compliance		
		4.3.5	Fuels Treatment Monitoring		
		4.3.6	Fuels Treatment Reporting Requirements		
		4.3.7	Fuels Committees/Local Coordinating groups		

No Update or N/A	Update Needed	Section	Title – Content	Notes/Comments	Date
		4.3.8	Funding Processes		
		4.3.9	Debris Burning (if applicable)		
		4.4	Prevention, Mitigation, and Education		
			Have any of the following changed? If so, describe changes in the comment box.		
		4.4.1	Wildfire Investigation and Trespass Policies		
		4.4.2	Prevention/Mitigation Activities		
		4.4.3	Education/Outreach Activities		
		Chapter 5. Monitoring and Evaluation			
		5.1	FMP Monitoring		
		5.1.2	FMP Terminology (update as needed)		
		5.2	Treatment Effects Monitoring		
			Have any of the following changed? If so, describe changes in the comment box.		
		5.2.1	Fire Effects Monitoring		
		5.2.2	Non-fire Treatment Effects Monitoring		
		5.2.3	Collaborative Monitoring with other Disciplines		
		5.2.4	Fuels Treatment Performance Information/Targets		
		Chapter 6. References			
			(Review Optional)		
		Appendices			
			(Dynamic process - updated annually - Review Optional)		

Additional reviewer comments:

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Template Delegation of Authority for the Arctic, Kanuti, Tetlin, and Yukon Flats Fire Management Officer

Peter Butteri, Fire Management Officer for the Arctic, Kanuti, Tetlin, and Yukon Flats Refuges is delegated authority to act on our behalf for the following duties, actions and expectations:

1. Represent the US Fish and Wildlife Service in the local area Multiagency Coordinating Group in setting priorities and working to assist the Protecting Agencies in fire emergencies.
2. Provide direction, supervision and leadership to the Refuge Fire Management Program outlined in the respective Refuge Fire Management Plans and provide a liaison to the Protecting Agencies for all wildfire activities on the Arctic, Kanuti, Tetlin, and Yukon Flats Refuges.
3. Coordinate with and provide timely and accurate reports to the Refuge Managers, Deputy Refuge Managers or Acting Refuge Managers, and Regional Fire Management Coordinator for all wildland fire management activities on the Arctic, Kanuti, Tetlin, and Yukon Flats Refuges.
4. Responsible for coordination and oversight of the fire management budget for the Arctic, Kanuti, Tetlin, and Yukon Flats Refuges to assure adherence to agency fiscal guidelines.
5. Coordinate prescribed fire and hazardous fuels management activities for the Arctic, Kanuti, Tetlin, and Yukon Flats Refuges including requests and oversight of funding for Hazardous Fuels projects (F31, F32 accounts).
6. Request and oversee distribution of Severity and Emergency Preparedness Funding for Arctic, Kanuti, Tetlin, and Yukon Flats Refuge fire activities in collaboration with Protecting Agency FMO's.
7. Ensure all Arctic, Kanuti, Tetlin, and Yukon Flats Refuge wildfire incidents are managed in a safe and cost-effective manner in collaboration with Protecting Agency FMO's.
8. Provide for the management of inventories and property records for supplies and equipment purchased with fire program funds.
9. Oversee the recruitment and hiring of fire management personnel on the Arctic, Kanuti, Tetlin, and Yukon Flats Refuges as required.
10. Ensure all personnel participating in prescribed fire and wildfire operations on the Arctic, Kanuti, Tetlin, and Yukon Flats Refuges are fully qualified for assigned positions.
11. Responsible for representing the Arctic, Kanuti, Tetlin, and Yukon Flats Refuges and/or the Region in assigned interagency wildland fire management program activities and

collaborative efforts such as AWFCG sub-committees and working teams.

12. Coordinate wildfire prevention and mitigation activities and provide appropriate program direction and guidance for the Arctic, Kanuti, Tetlin, and Yukon Flats Refuges.
13. Hire emergency firefighters for prescribed fires conducted by the Arctic, Kanuti, Tetlin, and Yukon Flats Refuges in accordance with Department of Interior "Pay Plan for Emergency Workers." Coordinate FWS hosted emergency hires with Protection Agency FMO's.
14. Manage the Incident Qualification Certification System (IQCS) and certify Incident Qualification Cards for the Arctic, Kanuti, Tetlin, and Yukon Flats Refuges. Coordinate incident management resources status (ROSS) with dispatch centers.
15. Initiate and Certify NWCG Position Task Books for Arctic, Kanuti, Tetlin, and Yukon Flats Refuge personnel per NWCG and agency guidelines.
16. After initial implementation of the Wildland Fire Decision Support System (WFDSS) by the Protection Agency, continue the WFDSS documentation through completion for fires occurring on the Arctic, Kanuti, Tetlin, and Yukon Flats Refuges.
17. In the rare event a Refuge Manager and Deputy Refuge Manager **are absent**; the FMO may approve the WFDSS, and Periodic Fire Assessment.
18. In the absence of the FMO the above listed authorities may be delegated to AFMO, Brian Haugen.
19. This delegation will be reviewed and signed annually prior to fire season.

(Arctic NWR Refuge Manager)

Date

(Kanuti NWR Refuge Manager)

Date

(Tetlin NWR Refuge Manager)

Date

(Yukon Flats NWR Refuge Manager)

Date

Appendix F. Incident Commander Delegation of Authority Template

**Delegation of Authority
Alaska Division of Forestry
Tok Area**

As of **1800, May 20, 2010**, **IC Name** is delegated authority to manage the **Black Hills Fire #123**. Within the authority, regulations and policies of the Alaska Division of Forestry you are responsible for adhering to the guidelines and considerations established by this delegation and the WFDSS:

1. Provide for firefighter and public safety.
2. Manage the fire with as little environmental damage as possible.
3. Key cultural features requiring priority protection are:
4. Key resources considerations are:
5. Restrictions for suppression actions include:
6. Minimum tools for use are:
7. My agency Resource Advisor will be:
8. Keep fire south of
9. Manage the fire cost-effectively for the values at risk.
10. Provide training opportunities for the resources area personnel to strengthen our organizational capabilities.
11. Minimum disruption of residential access to private property, and visitor use consistent with public safety.

(Signature and Title of Agency Administrator)

(Date)

Amendment to Delegation of Authority

The Delegation of Authority dated **May 20, 2010**, issued to Incident Commander **IC Name** for the management of the **Black Hills Fire #123** is hereby amended as follows. This will be effective at **1800, May 20, 2010**.

12. Key cultural features requiring priority protection are:
13. Use of tracked vehicles authorized to protect Escalante Cabin.

(Signature and Title of Agency Administrator)

(Date)

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*Appendix G. Employee Fitness & Conditioning
Agreement Template*

Eastern Interior Fire Management Physical Fitness Agreement

National policy authorizes physical fitness conditioning during duty time for firefighting personnel (Interagency Standards for Fire and Fire Aviation Operations 2012, 13-6).

FWS policy further defines the conditions under which this training will occur:

Employees serving in wildland fire positions that require a fitness rating of arduous as a condition of employment are authorized one hour of duty time each workday for physical fitness conditioning. Employees not having a fitness rating of arduous as a condition of employment, but who are required by a Critical Performance element or other written agreement to maintain an arduous level, will be authorized three hours per week of duty time for physical fitness condition. All other wildland firefighting personnel holding qualifications requiring ratings of moderate or arduous may be authorized, by their supervisor, up to three hours per week of duty time for fitness conditioning. Prior to any duty time being allowed for physical fitness conditioning, employees and supervisors must agree, in writing, what physical conditioning activities the employee will engage in, and when and where they will occur. Activities outside of the agreement will not be authorized or allowed. A combination of activities designed to increase both physical strength and aerobic fitness, while minimizing the possibility of physical injury, should be utilized (FWS Fire Management Handbook 2012, 13-3).

This agreement is in accordance with the above cited policies, and authorizes _____ to engage in physical fitness conditioning activities while on duty for up to _____ hour(s) per _____.

All duty time physical fitness conditioning activities will be performed during the employee's regular tour of duty. Overtime or compensatory time will not be authorized.

Workout facilities and equipment are absent at FWS duty stations in Tok and Fairbanks. Therefore, employees are authorized to seek out other means for exercise including:

- Cooperator Facilities (AK-DOF, AFS)
- Commercial gym facilities
- On and Off-site outdoor locations
- Home workout equipment

Authorized Activities include:

- Stretching/Calisthenics
- Weight training
- Cycling
- Running/Walking/Hiking
- Nordic Skiing
- Fitness equipment exercises
- Swimming
- _____
- _____
- _____

Team sports are not authorized.

Employee Signature

Date

Supervisor Signature

Date

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Appendix H. References

1. Authorities

The following statutes authorize and provide the means for managing wildland fires on FWS lands or threatening FWS lands and on adjacent lands:

- A. Protection Act of September 20, 1922** (42 Stat. 857; 16 U.S.C. 594) Authorizes the Secretary of the Interior to protect, from fire, lands under his/her jurisdiction and to cooperate with other Federal agencies, States, or owners of timber.
- B. Economy Act of June 30, 1932** (47 Stat. 417; 31 U.S.C. 1535). Authorizes Federal agencies to enter into contracts and agreements for services with each other.
- C. Reciprocal Fire Protection Act of May 27, 1955 as amended by the Wildfire Suppression Assistance Act of 1989** (69 Stat. 66, 67; 42 U.S.C. 1856a)(102 Stat. 1615). Authorizes reciprocal fire protection agreements with any fire organization for mutual aid with or without reimbursement and allows for emergency assistance in the vicinity of agency facilities in extinguishing fires when no agreement exists.
- D. National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997 and the Refuge Recreation Act of 1962.**(80 Stat. 927)(16 U.S.C. 668dd-668ee)(16 U.S.C. 460k-460k4). Governs the administration and use of the National Wildlife Refuge System.
- E. Alaska Native Claims Settlement Act of December 18, 1971.** (88 Stat. 668; 43 U.S.C. 1601). Alaska Natives' lands are to continue to receive forest fire protection from the United States at no cost until they become economically self-sufficient.
- F. Disaster Relief Act of May 22, 1974.** (88 Stat. 143; 42 U.S.C. 5121). Authorizes Federal agencies to assist State and local governments during emergency or major disaster by direction of the President.
- G. Federal Fire Prevention and Control Act of October 29, 1974 et seq.** (88 Stat. 1535; 15 U.S.C. 2201) as amended. Authorizes reimbursement to State and local fire services for costs incurred in firefighting on Federal property.
- H. Federal Grants and Cooperative Act of 1977.** (Pub. L. 95-244, as amended by Pub. L. 97-258, September 13, 1982. 96 Stat. 1003; 31 U.S.C. 6301-6308). Eliminates unnecessary administrative requirements on recipients of Government awards by characterizing the relationship between executive agencies and contractors, States and local governments and other recipients in acquiring property and services in providing U.S. Government assistance.
- I. Alaska National Interest Lands Conservation Act of December 2, 1980.** (94 Stat. 2371, 43 U.S.C. 1602-1784). Designates certain public lands in Alaska as units of the National Park, National Wildlife Refuge, Wild and Scenic Rivers, National Wilderness Preservation, and National Forest systems resulting in general expansion of all systems. Any contracts or agreements with the jurisdictions for fire management services listed above that were previously executed will remain valid.

- J. Supplemental Appropriation Act of September 10, 1982.** (96 Stat. 837). Authorizes Secretary of the Interior and Secretary of Agriculture to enter into contracts with State and local government entities, including local fire districts, for procurement of services in pre-suppression, detection, and suppression of fires on any unit within their jurisdiction.
- K. Wildfire Suppression Assistance Act of 1989.** (Pub. L. 100-428, as amended by Pub. L. 101-11, April 7, 1989). Authorizes reciprocal fire protection agreements with any fire organization for mutual aid with or without reimbursement and allows for emergency assistance in the vicinity of agency facilities in extinguishing fires when no agreement exists.

2. Other Policy References

- A.** A Collaborative Approach for Reducing Wildfire Risks to Communities and the Environment: 10-Year Strategy Implementation Plan (December 2006)
- B.** Alaska State Statues 41.15.010 – AS 41.15.170
- C.** Bureau of Indian Affairs Act, as amended (67 STAT. 495:16 U.S.C.1b)
- D.** Cooperative Forestry Assistance Act of July 1, 1978, as amended (16 U.S.C. 2101) (FS)
- E.** Cooperative Funds Act of June 30, 1914, (16 U.S.C. 498) (FS)
- F.** Cooperative Funds and Deposits Act of Dec 12, 1975, (P.L. 94 148, 16 U.S.C. 565) (FS)
- G.** Department of the Interior and Related Agencies Appropriations Act, 1999, as included in P.L. 105-277, section 101(e);
- H.** Departmental Manual, 620 DM 1-3, Wildland Fire Management, General Policy and Procedures; Wildland Fire Management, General Policy and Procedures – Alaska; and Burned Area Emergency Stabilization and Rehabilitation.
- I.** Federal Land Policy and Management Act of Oct. 21, 1976, (P.L.94 579; 43 U.S.C.)(BLM)
- J.** Granger-Thye Act of April 24, 1950, (16 U.S.C., Sec 572) (FS)
- K.** Homeland Security Act of 2002 (H.R. 5005-8)
- L.** Homeland Security Presidential Directive-5 (HSPD-5)
- M.** Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide, September 2006
- N.** Interagency Standards for Fire and Fire Aviation Operations, also known as the “Red Book.”
- O.** National Fire Plan (September 2001) and Healthy Forest Initiative (August 2002)
- P.** National Indian Forest Resources Management Act (P.L. 101-630, Title III) (Interior Agencies)
- Q.** National Wildlife Refuge System Wildland Fire Management Strategic Plan (May 2006)
- R.** Region 7 Policy for Management of Permitted Cabins on National Wildlife Refuges in Alaska (RW-1)
- S.** Robert T. Stafford Disaster Relief and Emergency Assistance Act (P.L. 93-288) (Federal Agencies)

- T. Taylor Grazing Act of June 28, 1934, (48 Stat. 1269; 43 U.S.C. 315) (BLM, FS)
- U. United States Fish and Wildlife Service Fire Management Handbook
- V. United States Fish and Wildlife Service Manual sections 095 FW 3 Emergency Preparedness and Response -- Wildland Fire Management, 241 FW 7 Wildland Fire Safety, 232 FW 6 Training Standards for Wildland and Prescribed Fire Operations, 621 FW 1 Wildland Fire Policies and Responsibilities, 621 FW 2 Fire Management Planning, and 621 FW 3 Prescribed Fire.
- W. Watershed Restoration and Enhancement Act of 1998, P.L. 105-77;
- X. Wildland Fire Leadership Conference Call Notes, March 24, 2008 “Modifying Guidance for Implementation of Federal Wildland Fire Policy (AMR), published on the Internet at <http://www.forestsandrangelands.gov/leadership/meetings/index.shtml>

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