

# **Alaska Interagency Community Wildfire Protection Plan Guide**

## **STEVENS VILLAGE CWPP (February draft)**

### **I. BACKGROUND**

The Community Wildfire Protection Plan (CWPP) process assists communities in developing an appropriate and desired wildfire protection plan that addresses elements of community protection. Through discussion among interested parties about wildfire protection, communities develop, clarify and refine their priorities for protection of life, property, and critical infrastructure in the wildland urban interface. Minimum requirements for a CWPP include: (1) collaboration, (2) prioritizing areas for treatment, and (3) recommended measures to reduce structure ignitibility. The following process is an aid to help a community to complete a CWPP. It should not be overly complex. Three elements are addressed in this process: (1) the risk/hazard assessment, (2) mitigation plan, and (3) monitoring.

### **II. EXECUTIVE SUMMARY**

The Stevens Village Fuels Reduction Project has been a collaborative effort from the onset. The Stevens Village IRA Council, the BIA, the Tanana Chiefs Conference, the Alaska Fire Service (AFS), and the U.S. Fish & Wildlife Service (USFWS) have worked together to identify the fire protection needs of Stevens Village. Recommended areas to be treated include: (1) community property surrounding the house lots at Stevens Village, (2) areas around the tank farm, and (3) most importantly expanding a fuel break east from the end of the new runway to the nearby Yukon River and westerly to the site of the new landfill, in order to protect the village from encroaching wildland fire from the north. Once these phases have been completed, the final phase of the project will include: (1) recommending FIREWISE measures to reduce individual structure ignitibility, while furthering FIREWISE principles for the entire community, (2) encouraging fuels reduction work around private homes, and (3) strengthening the capabilities of the local volunteer fire department.

### **III. COLLABORATION**

Collaboration has been accomplished through three processes. Decision makers have involved the local community, state, and federal agencies, and other interested parties at the regional level (such as Doyon Ltd., Dinyee Native Village Corporation, TCC and CATG). Decision makers have been those responsible for the development of this CWPP. The make up of this group has been based upon community involvement and participation in the planning process. The planning effort included the active involvement of 1<sup>st</sup>. Chief Randy Mayo, Natural Resources Director Dewey Schwalenberg, the Council members, and local Tribal members, allotment owners, and Native shareholders. The involvement of the local, state, and government agencies and other interested parties has been included based upon the needs of the community. Alaska Fire Service has been represented in this project by Fuels Specialist James Higgins. The USFWS Fire program has been represented by FMO/Fire Management Specialist Sam Patten. The BIA

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involvement has been represented by Larry Adams, BIA Hazardous Fuels Specialist. In this way the approval or adoption of the plan has progressed through the appropriate process identified by the community.

This risk assessment system provides information about four primary elements contributing to or mitigating wildfire danger within or near a given Alaska community.

These elements include:

- 1) Risk/Hazard
- 2) Barriers
- 3) Fire Protection Response
- 4) Community Firewise Rating

The collaboration process for this project began when the Stevens Village IRA Council Chairman Randy Mayo approached the Fish and Wildlife Service (USFWS) and the Alaska Fire Service (AFS) several times during 2005-2006, in person, and requested assistance from the wildland fire agencies in protecting his village from wildfire. The USFWS responded in June 2006 by sending field personnel (detailer FMO Doug Downs) to Stevens Village to perform a hazardous fuels assessment. Various fuels treatment options were subsequently presented to the IRA Council. The initial project was discussed with local residents of the village, the BIA, the IRA Council, and the Tanana Chiefs Conference. The BIA offered to fund a project in September of 2007 and the USFWS agreed to fund and administer their portion of the fuels reduction project for the village in December of 2007. Project scoping was officially pursued by the USFWS beginning in February 2008. NEPA was completed by the Service in 2008. Project design has been a collaborative process involving the IRA Council Chairman (R. Mayo), the Natural Resources coordinator (D. Schwalenberg), the BIA, other residents of Stevens Village, AFS, and USFWS personnel.

## IV. ASSESSMENT TO PRIORITIZE AREAS FOR FUEL REDUCTION

**A. Introduction:** treatment areas were selected based on input from the IRA Council Chairman, residents of Stevens Village, BIA, Dinyee, Tanana Chiefs Conference, AFS, and USFWS.

### **B. Identification and Description of Community and Area:**

1. Describe the WUI boundary and how it was delineated:

The WUI boundary lies to the north of the village and East and West of the new Stevens Village airport runway. It was delineated based on the hazardous fuels assessments and extensive input from the village government. A bend of the Yukon River provides fire protection 1) directly to the south of the village, and 2) to a lesser degree, several miles to the east of the village. The new gravel airport runway provides fire protection 3) immediately north of the village, and 4) a new landfill and 2.37 mile land fill road will provide protection from the west and

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northwest. The Hazardous Fuels Protection treatment will be applied to link up the landfill and landfill road to the west end of the new airport to provide protection from a northwesterly approaching fire. Another hazardous Fuel Protection treatment will be applied to the area east of the airport runway to the Yukon River which currently remains open to wildfire intrusion from the northeast. This is clearly the area recommended for the initial treatment intervention. This treatment would involve creation of a firebreak extending from the east end of the airport runway directly east to the Yukon River. This fireline would be created by means of mechanical treatment, using a locally hired chainsaw crew. Subsequent treatment actions would include burning off the resulting slash piles, and conducting prescribed fires to reduce accumulated fuels to the north, northeast and northwest of the village, once the firebreak is completed east of the runway protecting the village.

### 2. Community Name:

Stevens Village. This is a residential community dependent upon a subsistence-based economy. There is a single local government entity: the Stevens Village IRA Council. The history of Stevens Village dates from the beginning of the Gold Rush and mining support activities at the turn of the last century, about 1898. During the Gold Rush, local residents began to cut wood for mining operations and to provide fuel for steamboats going up and down the Yukon River to and from Dawson City in the Yukon Territory. Stevens Village was named for Old Steven, a local Athabaskan chief who founded the village with his two brothers in 1902. The village has grown slowly through the following century. Local residents now gain seasonal employment from commercial fishing, ecotourism, and firefighting.

### 3. Location:

Stevens Village is located on the inside of a bend on the north side of the Yukon River, about 94 air miles northwest of Fairbanks. The village is also located 27 miles upstream of the Dalton Highway Bridge. Stevens Village is located in the Rampart Recording District.

### 4. General Geographic Location:

- a. Lat. N66.0064° Long. W-149.0908°.
- b. Township 14N, Range 07W, Fairbanks Meridian.

### 5. Population:

Population for the local area is 68 (2005 DCCED Cert.).

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## 6. Structures:

a. Homes: 43 homes in total (7 vacant)

### b. Community buildings:

Stevens Village IRA Council Office  
Electrical Power station and Fuel Site (incl. diesel tank)  
Health clinic (one Health Aide)  
Washeteria  
Community Hall  
(2) Airport maintenance sheds  
School building (currently 15 students)

### c. Commercial:

One small store.

### d. Seasonally inhabited structures:

Some cabins during fish season

### e. Outbuildings:

There are approximately 40 outbuildings ranging in size from outhouses to storage sheds.

## 7. Infrastructure:

Utilities include telephone (ACS and AT&T) and electrical (Stevens Village Energy Systems) service. The Stevens Village runway is 5000 x 100 feet and is capable of supporting medium-large sized multi-engine aircraft.

## 8. Industry:

Airline services include Brooks Range Aviation, Arctic Circle Air Service, Everts Air Alaska, Warbelow's Air Ventures, and Wright Air.

## 9. Natural Resource Values:

Timber resources are limited to merchantable white spruce, primarily used for local house logs, found along the riparian corridor of the Yukon River. The area was heavily logged for wood-fired steamboat boilers beginning about 100 years

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ago. Forest cover around the village is now largely a regenerating second-growth stand of deciduous forest with emergent white spruce and grass and sedge meadows with black spruce stands in the wetter locations. Stevens Village has prepared a forest stewardship plan discussing potential white spruce harvest. Common berries used for subsistence include blueberry, cloudberry, and low- and high-bush cranberry. Wildlife habitats include those of moose, black bears, grizzly bear, other furbearers such as beaver, and waterfowl. The Yukon River contains considerable fishery resources for subsistence and some commercial activity. Several commercial fishing permit owners reside in the village. The Yukon is the most important river drainage in Alaska and extends west to the Bering Sea and into the Yukon Territory of Canada, well to the east of Stevens Village.

### 10. Cultural Sites:

The cemetery is the only identified cultural site.

### 11. Dumps:

There is one open pit dump located south of the new Stevens Village airport. The material in the pit is periodically burned. Several burn barrels are currently being used throughout the Stevens Village. The Council is in the process of constructing a new landfill northwest of the village and the AKDOT&PF is constructing a 2.37 mile road to connect the village to the landfill. This road and landfill will provide protection from fire approaching from the northwest. This road corridor will have to be connected to the new airport by a Fuels Reduction Treatment to protect the village from fires approaching between the new landfill and the new airport. The construction of these facilities will begin late 2008 or early 2009.

### 12. Hazards:

The Stevens Village Tank Farm (above-ground fuel storage tanks) has a capacity for fuel oil, aviation fuel and unleaded gasoline. The new electric generator plant also has a double-walled 9000 gallon diesel fuel tank adjacent to the plant. The other known hazardous materials sites at Stevens Village include smaller fuel tanks at government and commercial structures. Many homes also have above-ground fuel oil storage tanks. The vegetation type presently surrounding the village and airfield is dominated by younger age classes of lowland riparian deciduous species and second-growth white spruce. Within the village, the prevalent fuel type is a regenerating white spruce understory emerging through a mixed balsam poplar, aspen, and white birch stand. The 2004 Fort Hamlin Hills Fire burned large areas of black spruce to the west and northwest of the village, towards the Dalton Highway, but unburned black spruce stands remain in proximity of the village to the north and northeast. Part of the hazard lies within the village of Stevens Village itself, where a 50-year accumulation of natural fuels

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around the homes needs to be reduced, particularly the emergent spruce regeneration.

### 13. Fire Equipment:

The village has a Code Red unit. There is a cache of hand tools and a portable fire suppression foam machine. There are various pieces of equipment within the village, a tractor with front-end loader and back-hoe, a dump truck, and a road grader which are used for maintenance at the Stevens Village Airport.

### 14. Local Fire Prevention Efforts:

A limited amount of fire prevention education has taken place in the village.

### 15. Other community values:

Value sets in the community are mixed and range from maintaining the subsistence economy to fostering a commercial ecotourism trade to the village from tourist departure sites at the Yukon River Bridge.

## **C. Areas or Values to be Protected**

Protecting the Stevens Village residential area has been the priority identified by the village. This is followed by the protection of the fuel storage tanks at the Tank Farm, and then expanding the firebreak to the Yukon River from the east end of Stevens Village airport runway and westerly to the new landfill road. Allotments within the townsite and up-river of the village will be protected as well with this containment plan. No monetary value has been established for these areas. All four of these areas are vulnerable to a wildland fire originating from lightning strikes to the north, or human-caused fires originating from within the village or on nearby allotments (cf. 2004 Waldron Creek Fire).

## **D. Assessment of Risk/Hazard, Barriers, Fire Protection Resources, and Firewise**

### 1. Fire Regime and Condition Class

Fire Regime IV; Condition Class 1.

### 2. Rating Elements

#### a) Risk/Hazard Analysis

##### (1) Inside Community:

The Fort Hamlin Hills Fire started as a lightning strike on a hill above the Yukon River southeast of Stevens Village in July 2004.

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This fire shortly thereafter burned west to the Yukon River bridge as well as to the northeast, towards the village. As the fire approached the north side of the village, a number of persons from Stevens Village were mobilized as Emergency Fire Fighters (EFF) and the village became very concerned about this fire. Planning efforts were instituted to protect the village, but fortunately the fire moved primarily to the northwest and eventually did not enter the village. The likelihood of a fire occurring in the village remains, however, moderately high given three situations: (1) the increase in the number of lightning-caused fires in interior Alaska related to warming and drying climatic conditions, (2) open barrel burning in the village and on nearby allotments has a demonstrated potential for human-caused fires; and (3) the highly lightning-prone hilly local geography of the upper Yukon basin along the Yukon River, which strongly influences ignition potential in the vicinity.

There is some information regarding the fire history of the local area. The fire regime probably follows that described for the interior black spruce biophysical setting developed for the Alaska Fire Regime and Condition Class (2004). The fire return interval for this setting ranges from 40-120 years and averages about 70 years. Since the cessation of large-scale logging for steamboats approximately 70 years ago, natural fuels have accumulated in and around Stevens Village to the point that they will challenge fire suppression efforts if a fire were to start in or near the village. (A small human-caused fire (less than 1 acre) occurred on a dog lot within the village in 2004.) The village has a **MODERATE** Risk/Hazard rating based on the following charts.

### (2) Outside Community:

During the past fifty years, most fire activity occurred near the village during the 1940's before the advent of organized suppression efforts. There is a **MODERATE** likelihood of fire occurring outside of the village because hazardous fuels have accumulated since that time and adjacent black spruce stands have aged. The 2004 Fort Hamlin Hills Fire, which was lightning caused and became part of the Yukon Crossing Complex, burned to the west and northwest of Stevens Village towards the Dalton Highway. Wildland fire could still enter the village from unburned black spruce stands to the north and east of the village. The entire local area is highly prone to lightning strikes. In addition, the 2004 Waldron Creek fire, which was human-caused, started on an allotment across the river from Stevens Village, and eventually threatened Pump Station 4 on the Dalton Highway.

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### b) Barriers

The Yukon River provides a good natural barrier to fire to the south and east of the village but does not provide complete protection, given dry conditions and/or a major wind-driven fire event. The only manmade barriers are the gravel roads that lie within the village and the gravel pad extending along the Stevens Village airstrip just north of the village. In a few places these one-lane gravel roads could serve as fuel breaks, but a wind-driven fire would rapidly jump these roads. It is recommended that the fuel breaks along the road system be expanded. The barrier rating for Stevens Village is currently **MODERATE** because of the presence of the Yukon River south of the village and the airport runway to the north.

### c) Fire Protection Resources

The village is provided suppression coverage by AFS Upper Yukon Zone. The AFS Galena Zone can send supplemental resources within several hours if necessary and forces are not otherwise committed. Fire Protection Response rating is **MODERATE**. Smokejumpers are the usual resources available for initial attack. Although there are trained wildland firefighters residing in the village, local numbers are insufficient to form a complete crew. In the recent past, local village firefighters have joined those from the neighboring village of Beaver to form a complete crew. If more resources are needed for extended attack, other village EFF and Hotshot crews would be ordered, along with air support currently located at AFS in Fairbanks.

### d) Firewise Ratings

The Firewise Home Rating is **POOR** based on observations made during the hazardous fuels assessment (June 2006). Many homes are surrounded or overtopped by spruce and/or highly flammable ericaceous shrubs and have varying accumulations of flammable materials, such as construction materials, firewood, and gasoline cans, around the houses.



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## RISK/HAZARD ANALYSIS CHART 1

Outside Community Area (1-10 miles)

	Alaska Fire Return Interval		
	High (0-99 years)	Moderate (100-300 years)	Low (>300 years)
FUELS (predicted fire behavior based on historic summertime weather with hot, dry conditions)			
Black Spruce Boreal Forest (CFFDRS=C2) <i>rate of spread: high</i> <i>intensity: high</i> <i>spotting potential: high</i>	H	M	M
Black Spruce Lichen Woodland (CFFDRS=C1) <i>rate or spread: moderate</i> <i>intensity: moderate</i> <i>spotting potential: high</i>	H	M	M
Grass (cured tall standing or matted; CFFDRS = O1a/O1b) <i>rate of spread: high</i> <i>intensity: moderate:</i> <i>spotting potential: low</i>	H	M	L
<i>Mixed Boreal Forest (may include white or black spruce, aspen and/or birch; CFFDRS=M1)</i> <i>rate of spread: moderate</i> <i>intensity: moderate</i> <i>spotting potential: moderate</i>	M	M	L
Hardwood Forest (includes aspen & birch; CFFDRS use D1 or M1, M2) <i>rate of spread: low</i> <i>intensity: low</i> <i>spotting potential: low</i>	M	L	L
Deciduous Brush (includes willow & alder) <i>rate of spread: low</i> <i>intensity: low</i> <i>spotting potential: low</i>	L	L	L
<i>Insect and Disease in Mixed Boreal Forest (may include white or black spruce, aspen and/or birch; rate of spread: moderate intensity: High spotting potential: High)</i>	M	H	M

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## RISK/HAZARD ANALYSIS CHART 2

Inside Community Area (within 1 mile)

FUELS (predicted fire behavior based on historic summertime weather with hot, dry conditions)	Alaska Fire Return Interval		
	High (0-99 years)	Moderate (100-300 years)	Low (>300 years)
Black Spruce Boreal Forest (CFFDRS=C2) <i>rate of spread: high</i> <i>intensity: high</i> <i>spotting potential: high</i>	H	M	M
Black Spruce Lichen Woodland (CFFDRS=C1) <i>rate or spread: moderate</i> <i>intensity: moderate</i> <i>spotting potential: high</i>	H	M	M
Grass (cured tall standing or matted; CFFDRS = O1a/O1b) <i>rate of spread: high</i> <i>intensity: moderate:</i> <i>spotting potential: low</i>	H	M	L
<i>Mixed Boreal Forest (may include white or black spruce, aspen and/or birch;</i> CFFDRS=M1) <i>rate of spread: moderate</i> <i>intensity: moderate</i> <i>spotting potential: moderate</i>	M	M	L
Hardwood Forest (includes aspen & birch; CFFDRS use D1 or M1,M2) <i>rate of spread: low</i> <i>intensity: low</i> <i>spotting potential: low</i>	M	L	L
Deciduous Brush (includes willow & alder) <i>rate of spread: low</i> <i>intensity: low</i> <i>spotting potential: low</i>	L	L	L
<i>Insect and Disease in Mixed Boreal Forest (may include white or black spruce, aspen and/or birch;</i> <i>rate of spread: moderate</i> <i>intensity: High</i> <i>spotting potential: High</i>	M	H	M

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## BARRIER RATING CHART

Barrier Type (list specific type under excellent, fair or poor)	Excellent	Fair	Poor
Water (may include lakes, rivers, streams and sloughs)		Yukon River and a few scattered wetland areas.	
Natural features (may include barren landscape, rock, topographic features)			None. The local area is flat.
Human-made features (may include airstrips or other clearings)			The airstrip lies parallel to the Yukon River. There are a few gravel roads in the village.
Overall Rating			<b>POOR</b>

### Barrier Rating Chart Key:

Excellent: Community has a barrier(s) that provides thorough protection from fuels less than 1 mile away in at least 3 cardinal directions. An example of this would be a small community sandwiched between a major river and a runway (e.g. Sleetmute), or a community on an island (Stony River).

Fair: The community has a barrier(s) that provides thorough protection from fuels less than 1 mile away in at least two cardinal directions. Communities may have multiple barriers affecting a rating. Examples are airstrips separating a community from significant outside fuels, communities set amidst certain vegetation types or some communities situated on major rivers (e.g. Steven Village fits within this category).

Poor: Any barriers that exist provide protection from fuels less than 1 mile away in fewer than two cardinal directions. Examples of insignificant barriers are small streams or sloughs with narrow riparian zones situated in the midst of highly flammable fuel types.

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## FIRE PROTECTION RESOURCES RESPONSE CHART

Response Time	Risk	Kind of Resource (List kinds of resources available for initial attack)
Adequate initial attack resources are more than 75 minutes away and adequate extended attack resources are more than 12 hours away.	<b>High</b>	Smokejumpers
Adequate initial attack resources are 30-75 minutes away and adequate extended attack can be in place in 8-12 hours.	<b>Moderate</b>	AFS Upper Yukon Zone provides suppression coverage for the village providing air support (helicopters and air tankers) along with ground support (smokejumpers, Hotshot crews, and EFF); Tanana Zone can also send additional resources within 2 hours (if they are available).
Adequate initial attack resources are less than 30 minutes away and adequate extended attack can be in place in less than 8 hours.	<b>Low</b>	

\*Adequate initial and extended attack forces are defined as the minimum force necessary to stop the spread of a wildfire under 90<sup>th</sup> percentile weather and fuels conditions. Calculating percentile weather can be done by downloading RAWS data into FireFamilyPlus from WIMS/KCFAST. Response times are based on resource location and historical response times.

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Alaska Firewise Standards	Excellent Over 65% of home sites and community buildings meet standard Value =5	Fair Between 35- 65% of home sites and community buildings meet standard Value =3	Poor Less than 35% of home sites and community buildings meet standard Value=1
Landscaping			1
Construction			1
Water Supply			1
Access			1
Clear of Flammables/ Refuse/Debris (flammables stored properly & area cleared)			1
<b>Rating Summary</b>			<b>5</b>

### COMMUNITY FIREWISE RATING FOR DEFENSIBLE SPACE OVERALL COMMUNITY ASSESSMENT NOT INDIVIDUAL STRUCTURES

Total of Rating Sum / 25 x 100 = Community Firewise Rating 20% <b>POOR</b> Excellent greater than 65%, Fair 35-65%, Poor less than 35%
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## STANDARDS FOR FIREWISE RATING

Landscaping: There is a clearing of flammable vegetation at least 30 feet around the home for firefighting equipment: coniferous brush and dead/overhanging branches are removed; trees are pruned 6-10 feet above the ground; lawn is mowed and watered regularly and ladder fuels are removed from the yard; remaining trees are spaced at least 30' apart at crowns; garden equipment ( hoses and hand tools) are kept on the property.

Construction Guidelines: Home is made of fire-resistant or non-combustible construction materials (especially important for roofing); vents are covered with wire mesh no larger than 1/8 inch; at least two ground-level doors exist; at least two means of escape exist in each room.

Water Supply Guidelines: Home has a reliable water source, 3 to 4 sprinklers and enough hose to circle the home.

Access Guidelines: Access roads are at least 2 lanes wide and clearly marked; ample turnaround space exists for vehicles/fire equipment.

Clear of Flammables/Refuse/Debris Guidelines: Combustible materials are not located in the yard or under decks or porches; firewood is stored away (at least 30 feet) from the house; all debris or refuse is picked up regularly.

3. Overall Assessment Rating of Risk/Hazard, Barriers, Fire Protection Resources, and Firewise

### OVERALL RATING CHART

Category	Rating
Risk/Hazard	
a) inside community	<b>MODERATE</b>
a) outside community	<b>MODERATE</b>
Barriers:	<b>POOR</b>
Fire Protection:	<b>MODERATE</b>
Community Firewise Rating:	<b>POOR</b>

4. Other Contributing Factors to risk and mitigation of wildland fire *[List other factors not previously addressed or of a unique nature that may contribute to the risk of wildland fire or mitigate the risk from wildland fire.]*

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## V. WILDLAND FIRE HISTORY

There have been several large recent wildfires within a 20 mile radius of Stevens Village. Fire activity was highest during 2004. The Fort Hamlin Hills Fire originated as a lightning strike on hills just north of the Yukon River near the Yukon Bridge on June 15, 2004. The Waldron Creek Fire started as a human-caused fire in an allotment on the south side of the Yukon River opposite Stevens Village on July 9, 2004. These fires were subsequently combined into the 2004 Yukon Crossing Complex, which became one of the major incidents of the 2004 Alaska fire season. These fires threatened the Alaska Pipeline, Pump Station 4, and the Dalton Highway, as well as Steven Village. The Fort Hamlin Hills Fire, which started as a lightning strike within sight of Stevens Village, could have entered the community except for a wind shift which drove the fire to the northwest.

## VI. SUMMARY

The overall rating for Stevens Village is moderate to poor due to the volatility and extent of the surrounding fuels (primarily black spruce) and the physical location of the village (exposed to the north and west to large stands of continuous black spruce on hilly country, but protected to the southwest and east by the Yukon River. The defensibility of the village at present is marginal depending upon several variables (time of year, location of the wildfire, winds, available suppression forces, time since last rainfall, and period of drought). The entire local area has demonstrated an extremely active recent fire history (i.e., the 2004 Yukon Crossing Complex).

## VII. MAPS:

Photos of the village and surrounding area along with a proposed treatment area map are found in Appendix A.

## VIII. APPENDICES:

Appendix A. Photos and Map.

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**THE NEXT STEP** *[The first element, risk/hazard assessment, should provide the community with a greater understanding of the risk and hazard associated with wildland fire. It should identify those resources that are most at risk from wildland fire, what types of firefighting resources that may or may not be available, and if structures and the community are Firewise. To complete the CWPP elements two and three the mitigation plan and monitoring plan should be completed. The Mitigation plan will take the information from the assessment and with input from the community members develop goals and objectives and treatments to assist the community to become less at risk from loss due to wildland fire. Attached is a template that will help you develop a mitigation plan. The third element (monitoring) reminds the community to follow-up on treatments to determine if goals and objectives were met and address periodic checks of the area to determine maintenance needs of the treated area(s).]*



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## MITIGATION PLAN

### Executive Summary

The Stevens Village is located 90 air miles northwest of Fairbanks on the Yukon River. It is surrounded by a landscape composed of primarily hilly black spruce to the north and deciduous riparian regeneration to the south. The population of the village in 2005 was 68. There are 43 homes in the village along with several other major buildings (power station, health clinic, community hall, IRA Council office and washeteria, fuel plant, and an airport maintenance shed). The economy is divided between subsistence based activities and some commercial tourism and commercial fishing.

The initial field assessments (June 2006) along with the final assessment both found the village in need of wildland fire protection. The wildland fire Risk Assessment process determined the village to be in a **MODERATE** to **POOR** condition.

### Background

Wildland fire is a common feature of the area surrounding Stevens Village. The village is surrounded by a black spruce and a deciduous/regenerating white spruce fuel complex. Fire behavior in these mixed fuel types varies from smoldering to active torching to running crown fires with long-range spotting, depending upon the fuel type, fine fuel moisture, wind, and topography. Conditions during 2004 were exceedingly warm and dry in the vicinity, and climate change models predict increasing warming and drying conditions in interior Alaska.

Values to be protected include life, property, and cultural resources.

### Goals and Objectives

The **goal** of this project is to reduce the threat of wildland fire to Stevens Village.

The **objectives** of the proposed project include: (1) reduce the amount of brush and trees in the community areas around the Stevens Village residences (2) conduct similar thinning around the Stevens Village Tank Farm (3) create a defensible fireline from the Stevens Village runway east to the first bend of the Yukon River and west to the new landfill site and landfill road..

### Strategic Plan/Desired Condition

The priority values to be protected include life, property, and cultural resources.

The proposed strategy includes: (1) constructing a fuel break around the village residences, tank farm, and create a fire break to the east and west of the airport runway, (2) improving the defensibility of village homes and buildings by implementing Firewise

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techniques, (3) working collaboratively with the Stevens Village IRA Government, and AFS, (4) provide an education/outreach program focusing on Firewise principles and understanding the role of fire in the environment, and (5) monitoring.

Fuel reduction priorities will be: (1) removing flammable fuels from the proposed fuel breaks, (2) reducing the concentrations of natural fuels around the residences, and (3) pile burning accumulated slash.

Structural ignitability will be reduced through implementation of Firewise principles in Stevens Village.

Strengthening the capability of the volunteer fire department in the future through training and acquisition of new equipment will be encouraged during the design and implementation of this project.

A collaborative approach will be adhered to throughout the design, implementation, and monitoring phases of this project.

The *desired condition* focuses on (1) providing Stevens Village with a first line of defense against an oncoming wildland fire and (2) providing a level of understanding of Firewise principles and wildland fire that sustains an organized response to wildland fire when it threatens Stevens Village.

### **Actions and Methodology (Tactical Plan)**

The proposed Stevens Village Hazardous Fuels Reduction Project includes: (1) building a fuel break (removing fuels such as regenerating spruce and deciduous brush from around the village residences), (2) constructing a similar fuel break around the Stevens Village Tank Farm, (3) thinning and pruning black spruce while expanding the fuels break east and west of Stevens Village. This line should extend east from the airport to the Yukon River and west from the airport to the new landfill. Resulting slash will be piled and burned in a prescribed fire.

Rural fire assistance will be pursued during FY 2008. Prevention and public education will be an ongoing activity within the community and the school during the life of the project.

### **Roles and Responsibilities**

Planning has been a collaborative effort between the Stevens Village Tribal Chief/council, the BIA, AFS, and USFWS. The Project will be funded by USFWS and the BIA. Monitoring will be carried out by the Village and the USFWS during implementation and 5 years after completion. The actual fuels reduction work is scheduled to be completed within two years (FY2008 and 2009).

### **Funding Guidelines**

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The USFWS will fund the project through a cooperative agreement with the Stevens Village IRA Council. The USFWS agreement with the Stevens Village IRA Council will be for one year.

The estimated cost for USFWS-funded work is \$70,000.00.

### **Signatures**

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Randy Mayo, 1<sup>st</sup>. Chief , Stevens Village IRA Council

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Sam Patten, Fire Management Specialist-Yukon Flats NWR

# **Alaska Interagency Community Wildfire Protection Plan Guide**

## **Monitoring Plan**

Monitoring will take place during implementation of the project and post implementation out to five years. Implementation monitoring will be done by the USFWS project inspectors. Pre-treatment, treatment, and post-treatment photos will be taken at established photo points by the project administrator/inspector(s). Weekly progress inspections will be done by the USFWS administrator/inspector and documented on the "Inspectors Daily Log". All monitoring information will be placed in the Stevens Village Hazardous Fuels Reduction Project folder and/or filed electronically in the WUI folder Stevens Village subfolder of the Fire Management files. A post treatment summary will assess whether treatment objectives were met and filed in the project folder.

Post implementation monitoring will be the responsibility of the Stevens Village Tribal Office. It will consist of a site inspection for each site and representative photos (taken at USFWS photo points) during years 2008, 2010, and 2012.

During the summer of 2012, the Stevens Village Tribal Office along with fire management representatives of USFWS, and/or AFS, will assess the treated sites for effectiveness of treatment and need for maintenance.

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## Appendix A. Photos and Maps

Stevens Village Satellite Photo (1) Wide angle  
Stevens Village Satellite Photo (2) Stevens –Jackson Slough  
Stevens Village Satellite Photo (3) Close-up Stevens Airport East to Yukon River  
Stevens Village Map AK Fire Service Hazardous Fuels Reduction Units  
USF&WS Map-History of Wildfire in the Yukon Flats Refuge  
USF&WS Map-Land Cover Types in the Yukon Flats Refuge  
Stevens Village IRR Map-Roads Inventory (1)  
Stevens Village IRR Map-Roads Inventory (2)  
Stevens Village IRR Map-Roads Inventory (3)

Location of the four proposed treatment areas at Stevens Village.  
Overhead perspective.

Number 1, Home sites in Stevens Village  
Number 2, Fuel Tank Farm in Stevens Village  
Number 3, Airport East to Yukon River  
Number 4, Airport West to New Dump Road (Construction Winter 2008-09)

Aerial view of Stevens Village looking northwest. Fuels complex consists of mixed hardwoods with emergent white spruce on the Yukon River lowlands and black spruce on the hills to the north.

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Village of Stevens Village and surrounding area. Looking northeast.

East and west of Stevens Village runway where the proposed fuel break(s) would be constructed.

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Stevens Village. Yukon River is to the left and thinning/pruning would occur on the right.

Proposed location of fuel breaks.