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COMMUNITY WILDFIRE PROTECTION PLAN

Glennallen

VALDEZ - COPPER RIVER
DIVISION OF FORESTRY & FIRE PROTECTION

ALASKA DIVISION OF FORESTRY & FIRE PROTECTION

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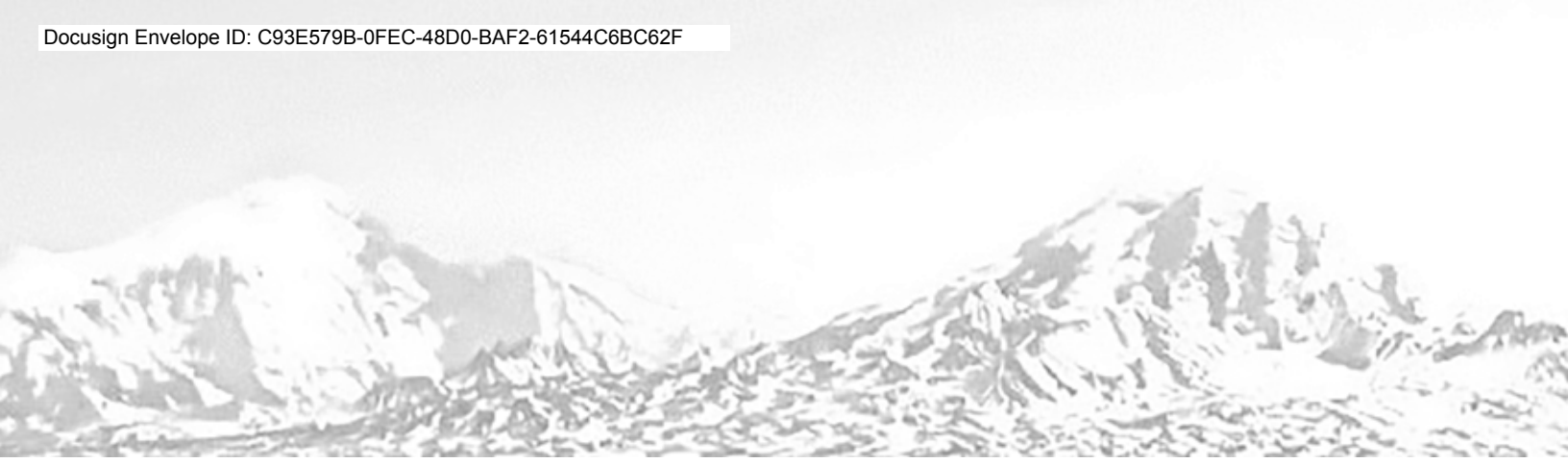

A Cooperative Agreement Grant provided funding through BLM, Glennallen Field Office to SOA, Valdez-Copper River Area Forestry & Fire Protection. We appreciate the opportunity this grant gave our office to create, develop and execute writing ten (10) Community Wildfire Protection Plans for the Copper River Basin. Partnerships like this help agencies plan, collaborate, and take action to make our communities safer and better prepared in the event of large-scale wildland fire.

The Valdez-Copper River Area Community Wildfire Protection Plans have been created and written by Emily Hjortstorp, CWPP Project Coordinator, and Jenny Moser, Wildland Fire Prevention Lead, along with help and input from the local community and 3rd party resources. Guidelines suggested in “Preparing a Community Wildfire Protection Plan — A Handbook for Wildland-Urban Interface Communities” that is posted on the State of Alaska Website were followed during the development of this plan. An interactive website and a local Valdez-Copper River Area Forestry & Fire Protection logo were also created through this grant funded project.

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Executive Summary

Wildland fire is a natural event in the boreal forest, which extends throughout much of Alaska, including the Copper River Basin. Being a fire-prone ecosystem, the effects of fire are needed to regenerate old forests, introduce nutrients to the soil, and create a mosaic pattern on the landscape of new-growth vegetation, which provides diversity and valuable animal habitat. Fires in the wildlands of Alaska can be beneficial, but they are extremely destructive to our communities, infrastructure, areas of cultural significance and resource values. These areas must be protected from the threat of wildland fire. Thunderstorms and associated lightning strikes are a frequent cause for wildland fire concern during the summer. An even greater threat of wildland fire is posed by human-caused fires, often started in or around our communities, which cause more damage with less acres burned than a lightning caused wildland fire in a remote area.

Proper planning and preparation can reduce the destructive effects of wildland fire. This Community Wildfire Protection Plan (CWPP) analyzes the risk of wildland fire to the Glennallen community planning area and mitigation efforts to reduce future wildland fire hazards.

The community risk/hazardous fuels assessment confirmed that fuel accumulation and threat of danger from wildland fire to Glennallen is high–moderate. This rating is due to vegetative fuel types and configuration in and outside the community. Additionally, in the 1990s, the Kenai Peninsula and Copper River Basin experienced a spruce beetle *(Dendroctonus rufipennis)* outbreak that affected nearly 2.3 million acres by its peak in 1996, killing most large diameter spruce trees in many parts of these regions *(Werner et al. 2006)*. The Copper River Basin saw large scale infestation from Alaska spruce beetle for many years during this outbreak, resulting in heavy fuel loading of standing and fallen beetle-killed spruce. The result of over a decade of this epidemic is heavy fuel loading of standing and fallen beetle killed spruce. Spruce beetle is a natural forest disturbance much like wildland fire, which can cause an increase in fuel loading and resistance to suppression efforts. These conditions set the stage for a catastrophic wildland fire event if efforts are not taken to reduce the risk. Hazards in the Glennallen planning area include roads lacking adequate signage and clearance from surrounding vegetation to provide safe access and egress in the event of a wildland fire and updated mapping. Many homes do not have adequate defensible space and are surrounded by hazardous debris, including inoperable vehicles, dilapidated trailers, and buildings. The Glennallen planning area also has a deficiency in subsurface water sources, with the closest well fill sites for the VFD located near Tazlina and Gakona. The Copper River Basin experiences a large influx of tourists during the summer months participating in recreational activities which leads to an increased risk of accidental wildfire starts.

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Survey input from Glennallen community members in 2021/2022 identified significant hazards of unsafe burning practices, a lack of clear road signage, unimproved roads with minimal gravel to support large fire apparatus, and the lack of subsurface water sources. Surface water sources, susceptible to seasonal conditions, are the only sources available for refilling fire-fighting equipment. The community member surveys also identified equipment and training needs for the Glenn-Rich Volunteer Fire Department.

The community risk and wildland fire hazard ratings are used to create an action plan to reduce the risk of catastrophic wildland fire. The plan evaluates various risk elements and encompassing vegetation types prone to fueling fires, such as black and white spruce, mixed hardwood forests, and grass and shrub lands. These fuels pose high flammability and can contribute to fires of intense magnitude. Additionally, within the community, there are additional hazards such as tall dry grass during pre-green up, debris, abandoned inoperable vehicles near residences, and challenges to emergency responders increasing the risk and hazards of wildland fire potential and emergency response. Beyond the community periphery, adjacent vegetative fuels extend wildland fire risk.

Natural barriers include the constructed and maintained Glennallen fuel break to the north and west of the community, the Copper River to the east, and the Tazlina River to the south. Various lakes offer some defense which break up expanses of vegetative fuel continuity. However, notable vulnerabilities persist in the community to include high concentrations and continuous fuels which pose a threat to the wildland-urban interface.

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Background

The Glennallen Community Wildfire Protection Plan (CWPP) is a collaborative effort that has been created in response to the 2003 Healthy Forest Restoration Act (HFRA) which directs communities at risk for wildland fire to develop a risk assessment and mitigation plan. The Community Wildfire Protection Plan (CWPP) process assists communities in developing an appropriate and desired Wildfire Protection Plan to guide future mitigation efforts. Completion of this CWPP involved the following steps:

- Identifying stakeholders, land management agencies, and interested parties.
- Establish a community planning area.
- Develop a community risk assessment.
- Ongoing opportunities for community input through surveys, public meetings, and the creation of a dedicated website.
- Address priorities through stakeholder meetings and opportunity for public input.
- Development of an action plan and task matrix.
- Finalize and publish the plan with a total of three public community meetings throughout the process.

Glennallen's first Community Wildfire Protection Plan was completed in December 2009. A cost share program was created and implemented the following year to assist homeowners with the cost that they encountered to create defensible space around their homes (Firewise). This was a highly successful program that resulted in many homeowners clearing trees and creating adequate defensible space around their residences. The homes that were treated need to be maintained. Additionally, some identified problems remain ongoing, such as removal of debris, trash, and inoperable vehicles surrounding homesites to allow fuel reduction efforts to further take place, road mapping, signage, and maintenance. Creating a cost share program that can be implemented in the following years to assist homeowners with costs that they encounter to create defensible space around their homes is a goal outlined in the Action Plan. The natural conditions surrounding Glennallen remain equally concerning including large expanses of black spruce forest around the community, beetle killed trees, and fuel loading of dead and down trees which all pose a threat to the wildland-urban interface.

Refer to Appendix A for guidance on Alaska statewide interagency wildland fire management response and planning.

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Collaboration

The Alaska Division of Forestry & Fire Protection (DOF)/Valdez-Copper River Area office partnered with members to help with the identification, assessment, and prioritization of areas with greatest risk and vulnerability in the event of a wildland fire.

- **Ahtna, Inc.**
- **Bureau of Land Management (BLM)**
- **Bureau of Indian Affairs (BIA)**
- **Fjørdland Fire Solutions LLC.**
- **Glenn-Rich Volunteer Fire Department**
- **Local landowners, business owners, and community**
- **Valdez-Copper River Area Division of Forestry & Fire Protection (DOF)**
- **Wrangell - St. Elias National Park and Preserve (NPS)**

COMMUNITY PROCESS

Community input was solicited through various channels in Glennallen, including formal and informal meetings, attendance at public events, online and mail-delivered surveys, social media platforms, and a collaborative website showcasing the latest information. All ideas were gathered and analyzed to determine the priority needs and actions incorporated in this plan.

CWPP PLANNING AREA

A Wildland-Urban Interface (WUI) Boundary is the line where human development meets and intermingles with undeveloped wildland and vegetative fuels. The Glennallen (WUI) Boundary is designated to incorporate the surrounding Critical and Full-Fire-Management options, which include all residents and infrastructure of the area as well as the surrounding lands that would cause a threat in the event of a wildland fire. A fire management option is a classification assigned by the jurisdictional agency that provides fire protection and determines the initial response to a wildland fire. The objective is to mitigate the potential for catastrophic wildland fires within this boundary by identifying hazards, prioritizing actions, and formulating a clear action plan with defined goals and objectives.

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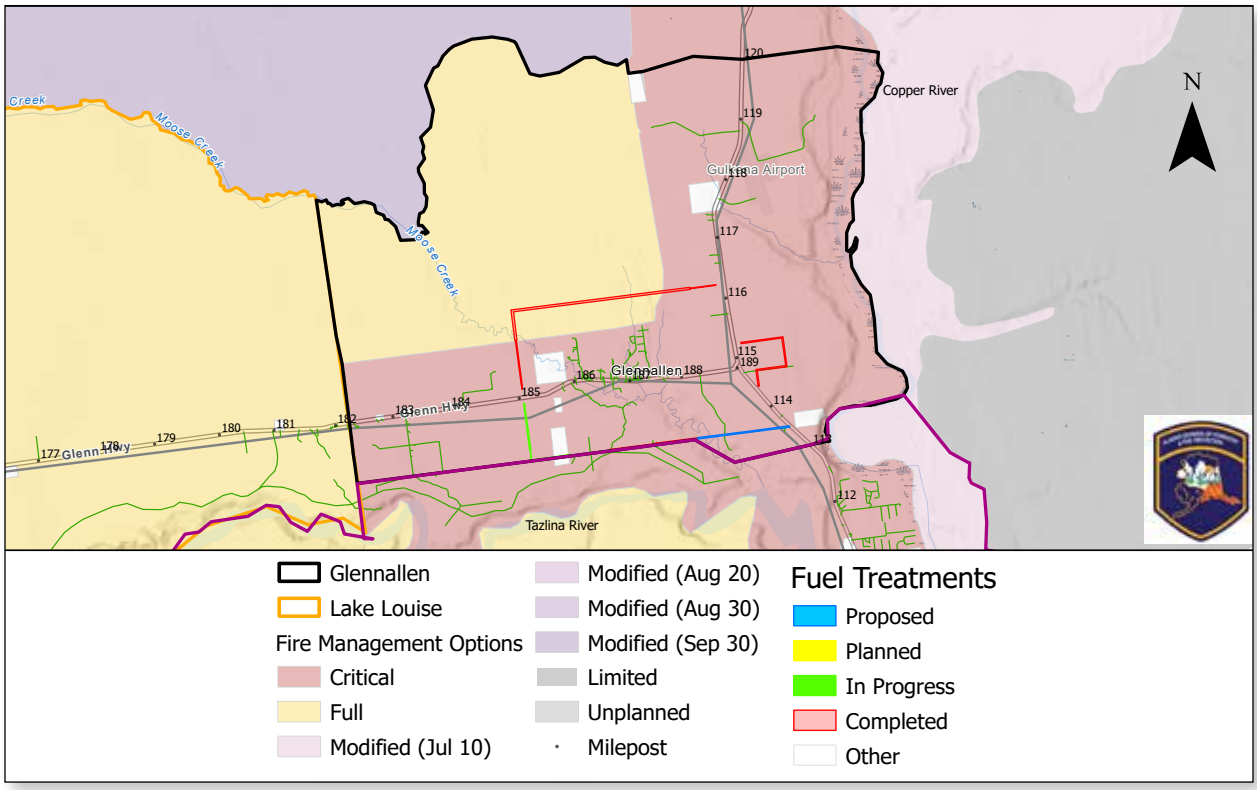
The Critical-Fire-Management option is defined by the State of Alaska and Alaska Fire Service as "The highest priority for suppression actions. It applies to lands in wildland urban interface and other densely populated areas where there is an immediate threat to human life, primary residences, inhabited property, community-dependent infrastructure, and structural resources designated as National Historic Landmarks should be considered for the Critical Management Option. This classification is applicable to an entire village or town as well as a single inhabited structure."

Glennallen CWPP Planning Area



The Full-Fire-Management option is defined by the State of Alaska and Alaska Fire Service as "High priority but below Critical. This option provides for protection of moderately populated areas, cultural and archeological sites, developed recreational facilities, physical developments, administrative sites and cabins, structures, high-value natural resources, and other high-value areas."

The Glennallen Community Wildfire Protection Planning Area includes all critical and full fire management options and extends from mile 113 of the Richardson Hwy to mile 120 of the Richardson Hwy then west along the Glenn Hwy to include the intersection at mile 189 west to mile 183.5 of the Glenn Hwy. including the east side of the Copper River, Gulkana Airport, two health care centers, multiple campgrounds, and the infrastructure that supports the entire Copper River Basin.

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Community Profile

Glennallen is located on the west bank of the Copper River and lies outside the western boundaries of the Wrangell-St. Elias National Park and Preserve. The community of Glennallen was established in 1899. In 1899 the United States Army built a pack trail for summer use between the port of Valdez and Eagle, which passed through the Copper River Basin. During World War II, this trail was turned into a road to transport supplies, now known as the Richardson Highway. The construction of the Glenn Highway began at a camp along the Richardson Highway. The camp is now the townsite of Glennallen. The name Glennallen was given to the town in honor of two U.S. Army explorers of the late 19thcentury, Captain Edwin Glenn and Lieutenant Henry T. Allen. By 1945, the two roads, Glenn and Richardson, were connected and completed. This small town became the epicenter for motor traffic along both the Glenn and Richardson Highways. Glennallen is one of very few communities in this region that was not built on the site of a Native Village. In 1961, Glenallen was officially renamed Glennallen by the US Postal Service. From 1975 to 1977 the Trans-Alaska Pipeline System helped to flourish the economy in Glennallen. In 1971 the completion of the George Parks Highway negatively impacted this town and region. As a result, motor traffic was redirected to Fairbanks through the Denali National Park along the Alaska Railroad. Today, according to the 2020 Census, there are 439 people residing in Glennallen.

During the summer, subsistence fishing for salmon in the world-famous Copper River brings large numbers of Alaskans and tourists to the Glennallen area. Gardening, berry picking, herb gathering, and hunting are popular pursuits among locals. Winter activities include: trapping, snow machining, and ice fishing. The natural resource values in Glennallen consist of subsistence fishing, hunting, forest foraging, to include berry picking and personal use firewood timber harvesting.

LOCATION

The Community of Glennallen is in the Copper River Basin in South Central Alaska. The general geographic location is approximately 62.10° North Latitude, -145.54° West Longitude, Township 4 North, Range 3 West, Section 11, Copper River Principal Meridian. Glennallen is the infrastructure hub of the Copper River Basin. The community lies just west, outside the boundary, of the Wrangell-St. Elias National Park and Preserve.

POPULATION

According to the 2020 census data, the population of Glennallen is 439 people.

CRITICAL FACILITIES (INFRASTRUCTURE)

According to 2020 Census Data, there are a total of 293 homes in the Glennallen area; 188 are occupied and 105 are vacant or uninhabitable homes. The Copper Basin Housing Authority has

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a large campus, formally known as the Alaska Bible College, that is in the process of renovation to provide additional housing. This campus also has a gym and community center. There are over 70 businesses, as well as public offices located inside the Glennallen planning area including 3 bulk fuel companies, Gulkana Airport (the regions primary airport), and the Trans-Alaska Pipeline (pump 11).

Other community buildings and businesses include Copper Valley Electric (CVEA) and Copper Valley Telephone (CVTC), who provide services for not only Glennallen, but for most of the Copper River Basin. School bus transportation for the entire basin is also based out of Glennallen. Agencies such as the Bureau of Land Management (BLM), the Alaska Department of Fish and Game (ADF&G), and AHTNA, Inc. are based here as well. KCAM radio in Glennallen was founded during the 1964 Alaska earthquake, and it has been in-place to serve the emergency and non-emergency communication needs of the Copper River Basin ever since. Both Glenn-Rich VFD & Copper River EMS along with Cross Road Medical Center, a courthouse and Alaska State Trooper station are all located within the Glennallen CWPP planning area. There is one local dump that serves the entire Copper River Basin in this planning area as well.

SEASONAL FACTORS

Spring cured fine fuels including pre-green up grass, poses wildland fire threat, commonly found around structures and previously cleared areas. Summer thunderstorms bring frequent lightning from mid-June to mid-August and the potential of lightning caused fires.

During the summer, the population of Glennallen soars with an influx of summer residents, as well as fishermen and tourists. Several campgrounds, one hotel, and numerous bed-and-breakfast establishments serve and house these visitors.

WILDLAND FIRE HISTORY

Large fire history in the surrounding area:

- **2019 lightning-caused Tokiana Creek Fire burned over 820 acres west of the Glennallen planning area in the Tazlina planning area.**
- **2019 lightning-caused Tokiana 2 Fire burned over 13,900 acres west of the Glennallen planning area in the Tazlina planning area.**
- **2019 lightning-caused Tokiana 3 Fire burned over 4 acres west of the Glennallen planning area in the Tazlina planning area.**
- **2019 lightning-caused Tokiana 4 Fire burned over 74 acres west of the Glennallen planning area in the Tazlina planning area.**
- **1991 Tazlina Lake Fire burned over 6,700 acres west of the Glennallen planning area.**
- **1981 Wilson Camp Fire burned 14,885 acres east of the Glennallen planning area on the eastern side of the Copper River up the Klawasi River Drainage.**
- **From 1940 to current, numerous human-caused fires can be found in the Alaska fire history location database within Glennallen's CWPP planning area. These wildland urban interface (WUI) fires were smaller in size; however, if they were not contained while small, they could have led to a catastrophic outcome.**

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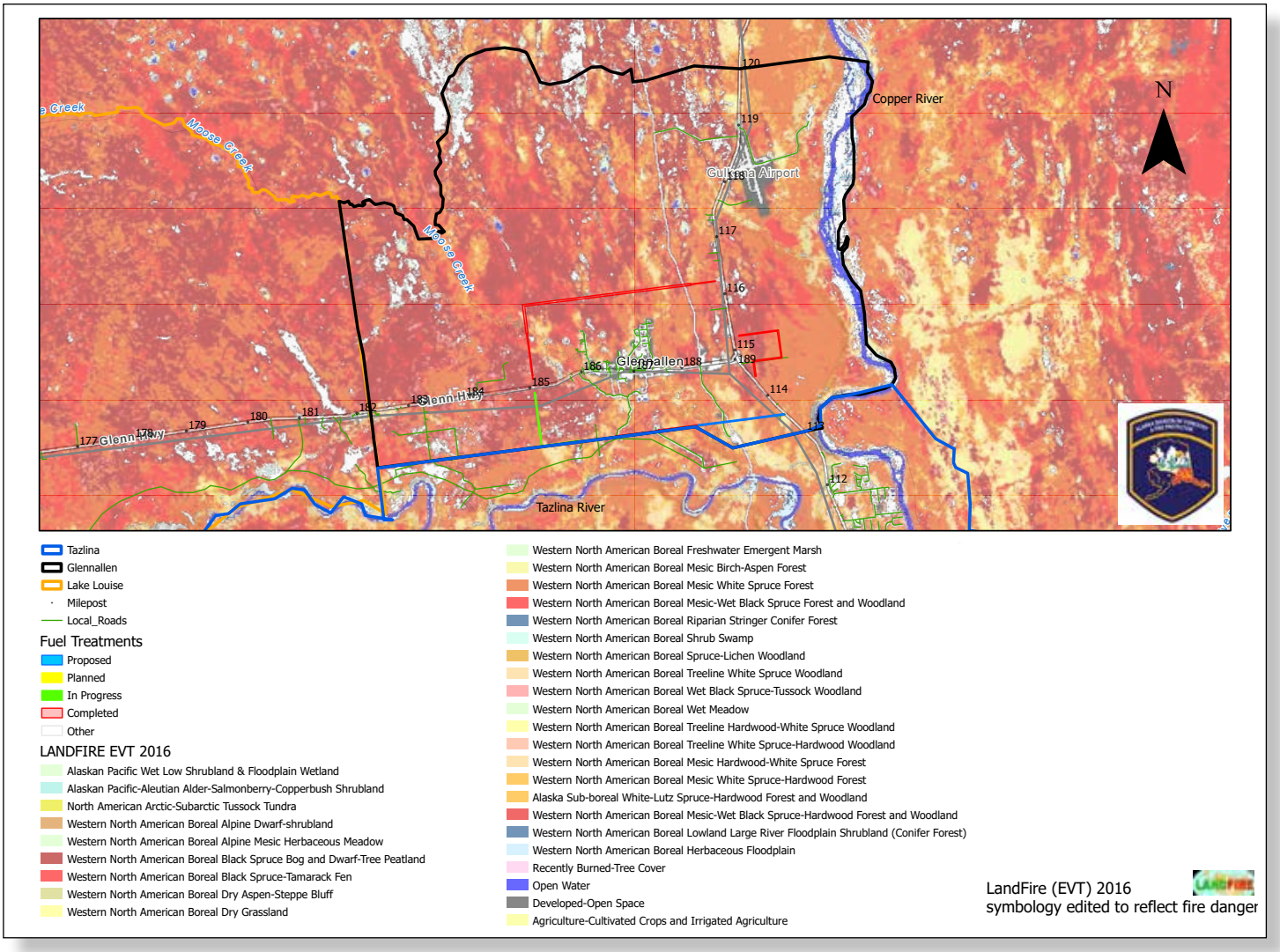
Glennallen Vegetation Type Risk Map



RISK/HAZARD ANALYSIS, AVAILABLE FUELS

The Copper River Basin is classified as Fire Regime Group IV, which means a Stand-Replacement-Severity fire is expected every 35-100+ years.

The image above shows vegetative fuels with the color corresponding to their flammability or fire danger in prime fire weather conditions. Fuels shown in shades of red constitute coniferous needle-bearing trees, primarily black or white spruce, which are highly flammable in high fire danger conditions. Orange tone vegetative fuels consist of a more mosaic mix of spruce and hardwoods or more open canopy structure. While still highly flammable, these vegetative fuel types constitute less of a threat than a continuous closed canopy forest. Yellow tone vegetative

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fuels display hardwood, willow, and alder type shrubs and grassland areas, while the green and blue tones show the subalpine brush component found near and above the tree line at higher elevations. In the right conditions, these areas can still burn and show resistance to control; however, they are less of a threat than the black and white spruce component of the boreal forest in Glennallen planning area.

COMMUNITY RISK ASSESSMENT

Rating Elements

1. **RISK/HAZARD ANALYSIS** of available fuels inside community (inside community to 1 mile)
2. **RISK/HAZARD ANALYSIS** of available fuels outside community (1–10 miles)
3. **BARRIERS,** natural and man-made
4. **FIRE PROTECTION RESOURCE AVAILABILITY**
5. **COMMUNITY FIREWISE RATING**
6. **OVERALL COMMUNITY RATING**

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1. INSIDE COMMUNITY:

The rating area includes lands within one mile of the community in all directions. The rating is based on history/likelihood of fire in the community and the availability of hazard fuels.

Rating: High

Based on potential ignition sources and surrounding fuel types, the risk of fire spreading from within the community is high. Fires that start within the community are primarily human-caused and could be extinguished by community members if they have the necessary equipment and training. The times of highest concern are spring when pre-green up conditions exist, and tall, thick, and often matted grass is prevalent around many structures. Additionally, debris, trash, and inoperable vehicles are prevalent within the community boundary, creating a hazard. Many residents and businesses use burn barrels to dispose of organic waste. This area sees a large influx of recreational users in the spring, summer, and fall (tourists traveling to the Wrangell-St. Elias National Park and Preserve, salmon fishermen, rafters, and hunters). Camping in non-designated spots is very common, and these users pose a very high risk of leaving campfires unattended or not fully extinguishing their fire. Wildland fuels within one mile of Glennallen to the north, west, and east consist primarily of spruce and spruce-mixed hardwood forest with pockets of beetle killed trees.

2. OUTSIDE COMMUNITY:

The rating area is from 1–10 miles outside the community and is based on the history/likelihood of fire in the area and the availability of hazard fuels.

Rating: High

The potential for large fires to impact Glennallen is high. The prevalence and high concentrations of spruce (black spruce, white spruce, spruce/hardwood mix), insect (beetle-kill), and disease in mixed boreal forest and grass (seasonal cured tall standing or matted), are very receptive to wildland fire in high fire danger conditions. In addition to the influx of recreational users in the spring, summer, and fall, frequent thunderstorms and associated lightning strikes are a constant cause for wildland fire concern during the summer.

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3. BARRIERS:

This includes water, natural and human-made features.

Rating: **High–Moderate**

The community has natural and constructed barriers that provide protection from fuels less than one mile away in at least two cardinal directions. The Copper River provides protection from a large-scale fire to the east, and the Tazlina River provides protection from the south. Other natural water features, such as lakes and creeks, are consistent throughout the area and can slow fire spread under certain conditions. However, with wind and dry fuel sources, many of these natural barriers are ineffective. The Glenn Highway runs west to east through the center of the area, and the Richardson Highway runs north to south. The Gulkana airport is located four miles northeast of Glennallen. Some gravel roads and other human-made openings are present throughout the area including a fuel break to the north of the community. These barriers could help slow fire growth or provide a place of engagement for firefighting resources. Although, Glennallen has significant waterways spanning the eastern and southern sides of its CWPP boundary, due to the prevalence of spruce between the waterways and the community of Glennallen, one or both waterways could be jumped by wildland fire in high to extreme fire conditions. Glennallen is determined to be in the risk/hazard analysis category is high–moderate.

4. FIRE PROTECTION RESOURCE AVAILABILITY:

Includes local and agency resources.

Rating: **Moderate**

A rating of moderate for resource availability criteria states that adequate initial attack resources are more than 30–75 minutes away and adequate extended attack resources are more than 8–12 hours away. The Division of Forestry & Fire Protection (DOF) has statutory authority to protect forested lands from wildland fire on state, private, and borough lands. DOF also has a contractual agreement with the BLM Alaska Fire Service to provide protection of federal jurisdiction and native lands. Valdez-Copper River Area (DOF) initial response times are 20+ minutes by road, depending on fire engine locations, and approximately 10 minutes by helicopter. Other air resources are 1+ hour out, and extended attack resources could be as long as 12 hours away. During the peak fire season, a helitak crew and helicopter capable of bucket drops is available locally from May 10th to August 31st. Smokejumpers are also available from Fairbanks with a response time of about 90 minutes. Crews could also be available from Palmer and Fairbanks with a minimum response time of 6–12 hours and up to 48 hours, depending on availability and other fire activity across the state. The Glenn-Rich Volunteer Fire Department (VFD) response area is from Mile 138 to Mile 189 of the Glenn Highway and Mile Marker 92 to Mile 124 of the Richardson Highway. The Glenn-Rich VFD is currently registered with the State Fire Marshall's Office and receives dispatch from Matcom 911. Kenny Lake Volunteer Fire Department and Gakona Volunteer Fire Department offer mutual aid to the Glennallen area in the event of a fire; however, they have longer response times.

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5. COMMUNITY FIREWISE RATING:

Includes landscaping, construction, water supply and access.

Rating: High

LANDSCAPING: Less than 35% of homesites and community buildings have a clearing of flammable vegetation at least 30 feet around the home for firefighting equipment. Remove coniferous brush and dead/overhanging branches. 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 feet apart at crowns; garden equipment (hoses and hand tools) are kept on the property.

CONSTRUCTION: Less than 35% of homes are made of fire-resistant or non-combustible construction materials. Roofing materials range from metal to wood shake roofs. Many structures do not have skirting around the bottom or other general Firewise and Home Hardening recommendations, such as covering vents and openings with wire mesh, cleaning organic debris off roofs and other surfaces that trap leaves and needles to prevent ember entrapment and ignition.

WATER SUPPLY: Between 35%–65% of homesites and community buildings have a reliable water source. Many homeowners, renters, and businesses rely on hauling water from Tazlina, on average, about 10 miles to and from the paid water well back to their home, community building or business.

ACCESS: The only main access route, the Glenn Highway, is at least two lanes wide and clearly marked. Ample turnaround space for vehicles/fire equipment exists in less than 35% of homes and community buildings. Due to persistent landslides within the Copper Basin, all roads that exist along bluffs and rivers are susceptible to erosion. If there is not ongoing construction or road closures, there exists more than one escape route and safety zone.

Escape Routes:

1. Glenn Highway to the west
2. Richardson Highway to the north and south

Safety Zones:

1. Glennallen K–12 School — accessed by Glenn Highway
2. Gulkana Airport — accessed by Richardson Highway

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6. OVERALL COMMUNITY RATING:

OVERALL RATING CHART SUMMARY

1. **RISK/HAZARD ANALYSIS** of available fuels inside community to 1 mi	HIGH
2. **RISK/HAZARD ANALYSIS** of available fuels outside community 1–10 mi	HIGH
3. **BARRIERS**	HIGH–MODERATE
4. **FIRE PROTECTION RESOURCE AVAILABILITY**	MODERATE
5. **COMMUNITY FIREWISE RATING**	HIGH

The overall assessment, based off the findings, shows the threat of danger from wildland fire for the community of Glennallen is high–moderate.

Wildfire risk to the Glennallen community using Wildfirerisk.org is very high. Glennallen is rated higher than 96% of other communities in the United States. Risk is determined by the Risk to Homes national percentile rank of the selected community, county, tribal area, or state. Low is less than 40th percentile; medium is 40th–70th percentile; high is 70th–90th percentile; Very High is equal to or greater than 90th percentile. More information regarding this rating can be found www.wildfirerisk.org.

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Action Plan

The Glennallen Community Wildfire Protection Plan (CWPP) aims to address the wildland fire risks in the Glennallen area, located in the Copper River Basin in Southcentral Alaska. This region is prone to wildland fires due to its boreal forest ecosystem, which requires fire to regenerate and maintain ecological balance. However, wildland fire poses significant threats to the community, its infrastructure, and areas of cultural significance. Frequent lightning strikes and human activities are major causes of wildland fires in the area.

This plan assesses various risk factors, including the types of vegetation that can fuel fire, such as black and white spruce, mixed boreal forests, and grasslands. These fuels are highly flammable and can lead to high-intensity fires. Within the community, there are additional hazards like beetle killed spruce trees, dry grass, debris, inadequate road sings, and hazardous materials such as old inoperable vehicles near homes, which increase the risk of fire spreading and increase risk to responding resources. Outside the community, similar vegetative fuels extend the risk zone up to 10 miles away.

Natural barriers like the Copper River and lakes provide some protection, but there are significant gaps. A man-made barrier, Glennallen fuel break, could offer some relief of wildland fire spread from the north and west, and allow a place of engagement for firefighting resources. Glenn-Rich Volunteer fire department (VFD) faces challenges due to limited resources, wildland fire training and equipment needs.

By addressing these concerns and implementing these measures, the plan aims to reduce the wildland fire risk to Glennallen, making it safer for residents and preserving its natural and cultural resources.

PRIORITIZED ASSESSMENT FINDINGS

1. Dry grasses especially around structures during pre-green up
2. Homes and businesses not being Firewised
3. Community roads do not have clear road signs
4. Unsafe burning practices
5. Driveways inaccessible to emergency vehicles
6. VFD training and equipment needs
7. Create an evacuation plan
8. Public wildland fire education
9. Lack of free subsurface water source
10. Protection of Native heritage sites
11. Identify other fuel reduction projects
12. Support local fuel crews
13. Community woody mass disposal site
14. Biomass viability

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TASKS AND MATRIX OF MITIGATION MEASURES

The following table is a task matrix and identifies solutions for each prioritized assessment finding listed in the previous section. Ensuring proper risk mitigation and potential entities that may address these tasks.

ASSESSMENT FINDING	ASSOCIATED TASK	RESPONSIBLE ENTITIES
Dry grasses especially around structures during pre-green up (Implementation)	1. Educate home and business owners on dangers of pre-green up dry grass and removal actions. 2. Implement mitigation program through grant funding.	Copper River Basin Regional Housing Authority Homeowners State of Alaska Division of Forestry & Fire Protection
Homes and businesses need to be Firewised (Implementation)	1. Educate homeowners on Firewise and home hardening principles. 2. VFD participation on home/ structure assessments and creation of defensible space. 3. Apply for a Firewise grant program that will establish a cost share program for homeowners. 4. Identify/designate an area or equipment for the community members to dispose of woody debris. 5. Apply for grant program and funding for a community cleanup project for removal of hazardous materials such as but not limited to inoperable vehicles, tires, and other hazards. 6. Complete a hazardous materials cleanup project on homes/structures within the planning area.	Ahtna Inc. Bureau of Land Management (BLM) Bureau of Indian Affairs (BIA) Copper River Basin Regional Housing Authority Glenn-Rich Volunteer Fire Department Homeowners State of Alaska Department of Environment Conservation State of Alaska Division of Forestry & Fire Protection
Community roads do not have clear road signs (Implementation)	1. Update maps. 2. Clear brush around existing road signs. 3. Work with DOT to install new road signs.	Local Emergency Planning State of Alaska Department of Transportation State of Alaska Division of Forestry & Fire Protection
Unsafe burning practices (Implementation)	1. Implement wildland fire and debris burning safety programs into the community. 2. Hold community fire safety events and education opportunities. 3. Post signage and information around community, campgrounds and fishwheel sites.	State of Alaska Division of Forestry & Fire Protection
Driveways inaccessible to emergency vehicles/address ingress and egress concerns (Implementation)	1. Initiate contact with AK DOT and Native entities to have an assessment done and recommendations to widen main roads. 2. Apply for grants to assist homeowners in widening existing roads and driveways to support large firefighting apparatus to include brush clearing and/or widening roads.	Ahtna Inc. Bureau of Indian Affairs (BIA) State of Alaska Department of Transportation State of Alaska Division of Forestry & Fire Protection

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ASSESSMENT FINDING	ASSOCIATED TASK	RESPONSIBLE ENTITIES
VFD training and equipment needs (Implementation)	1. Continue wildland fire response program with training, equipment, and coordination with the State of Alaska Copper River DOF office. 2. Strengthen local prevention programs in coordination with State of Alaska Copper River DOF office.	Glenn-Rich Volunteer Fire Department State of Alaska Division of Forestry & Fire Protection
Create an evacuation plan (Planning)	1. Have agencies work with each other to create a community emergency plan. 2. Include a centralized community contact list. 3. Include maps with road signage and house identifiers (in conjunction with community Firewise mapping). 4. Adopt Alaska Ready, Set, Go standards. 5. Work with State of Alaska Emergency Coordination Center and Copper Valley Telephone to set up an emergency alert system.	Copper Valley Telephone Local Emergency Planning Committee State of Alaska Division of Homeland Security and Emergency Management State of Alaska Division of Forestry & Fire Protection
Public wildland fire education (Implementation) (Planning)	1. Promote teaching general wildland fire knowledge to the community with emphasis on safe burning practices and creating defensible space through Firewise and Home Hardening programs. 2. Continue wildland fire education outreach in schools.	Bureau of Indian Affairs Glenn-Rich Volunteer Fire Department State of Alaska Division of Forestry & Fire Protection
Lack of free subsurface water source (Implementation)	1. Identify area for community well to be drilled. 2. Apply for a grant to fund the project.	Copper River Development Association State of Alaska Division of Forestry & Fire Protection
Protection of Native heritage sites (Implementation)	1. Native entities internally identify heritage sites to be protected. 2. Implement appropriate measures and desired fire suppression tactics for protecting these areas. 3. Insure they are denoted as “other land” contact land manager on Known Sites Database.	Ahtna Inc. Bureau of Indian Affairs Bureau of Land Management State of Alaska Division of Forestry & Fire Protection Native Village of Kluti-Kaah
Identity other fuel reduction projects and re-treatment of existing projects (Planning)	1. Determine areas where spring cured fine fuels including pre-green up grass, pose a threat. 2. Determine areas of beetle-killed and other dead-standing timber. 3. Identify other infrastructure to be protected, plan fuel reduction and fuels removal projects. 4. Address work through mitigation plans.	Ahtna Inc. Bureau of Indian Affairs Bureau of Land Management State of Alaska Division of Forestry & Fire Protection

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ASSESSMENT FINDING	ASSOCIATED TASK	RESPONSIBLE ENTITIES
Support local fuel crews (Implementation)	1. Re-form local fuels crews through BIA. 2. Coordinate with fuels crew, VFDs and DOF for training. 3. Work with newly formed fuels crews to prioritize community projects.	Ahtna Inc. Bureau of Indian Affairs State of Alaska Division of Forestry & Fire Protection
Community woody mass disposal site (Implementation)	1. Identify/designate an area for the community members to dispose of woody debris.	State of Alaska Division of Forestry & Fire Protection
Biomass viability (Implementation)	1. Continually reevaluate the viability of biomass solutions in Glennallen and outlying communities.	Ahtna Inc. Bureau of Indian Affairs Copper Basin Sanitation

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Summary, Review, and Updating Process

The community of Glennallen has a high–moderate risk of wildland fire potential and impact. Due to the type of fuels both inside and outside of the community and the overall community Firewise rating to include safety zones and escape routes, are all given the score of high wildland fire potential. Combined with the high-moderate rating for natural and man-made barriers and fire protection resource availability rating of moderate, Glennallen's overall assessment findings show a high–moderate threat of danger from wildland fire.

Wildfirerisk.org clearly outlines Glennallen's wildland fire risk of 96% higher than other communities throughout the United States (July 2024).

Through collaboration on this CWPP, community members and organizations, Native entities, and the Glenn-Rich VFD will take first steps to mitigate the potential negative impacts from wildland fire. The community along with its entities are encouraged to continue fuels mitigation, education, and implementation that are consistent with the Alaska Firewise program.

This is a living document, where changes can be discussed and made at any time. Review and updates to this CWPP is recommended to take place every three (3) years, not to extend past five (5) years. The Community Risk Assessment and Action Plan should be reviewed and updated by subject matter experts, through solicited information via public meetings with community members and landowners.

The following table represents the timeline that the Glennallen CWPP needs to be reviewed, updated and when it expires.

REVIEW: 3 YEARS	UPDATE: 5 YEARS	EXPIRE: 10 YEARS
December 1, 2028	December 1, 2030	December 1, 2035

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Signature Page

This plan has been reviewed and approved by the following:

Signed by:
X Norm McDonald – State of Alaska Forestry & Fire Protection, Deputy Director (Fire) Date
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State of Alaska Forestry & Fire Protection, Deputy Director (Fire)

X JOSHUA SCOTT Digitally signed by JOSHUA SCOTT Date: 2026.01.09 13:09:53 -09'00' Date

Wrangell - St. Elias National Park and Preserve

X William M. Dunk Jr. Digitally signed by WILLIAM DUNK Date: 2026.01.14 13:39:33 -09'00' Date

Bureau of Land Management

X JOLENE JOHN Digitally signed by JOLENE JOHN Date: 2026.01.16 12:01:37 -09'00' Date

Bureau of Indian Affairs

X Date

Ahtna Inc.

Signed by:
X Scott Feicht – Fire Chief – GRFR Date
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VFD Community Representative

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Appendix A

The Glennallen Community Wildfire Protection Plan (CWPP) is a collaborative effort created in response to the 2003 Healthy Forest Restoration Act (HFRA) which directs communities at risk for wildland fire to develop a risk assessment and mitigation plan. [1] The HFRA includes the following guidance:

> The minimum requirements for a CWPP as described in the HFRA are: (1) Collaboration: A CWPP must be collaboratively developed by local and state government representatives, in consultation with federal agencies and other interested parties. (2) Prioritized Fuel Reduction: A CWPP must identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more at-risk communities and essential infrastructure. (3) Treatment of Structural Ignitability: A CWPP must recommend measures that homeowners and communities can take to reduce the ignitability of structures throughout the area addressed by the plan. [2]

Additionally, the Alaska Interagency Fire Management Plan, of which the State of Alaska Division of Forestry & Fire Protection is a signatory, recognizes that each of the land-managing Federal and State agencies and ANCSA corporations in Alaska have their own missions, goals, and objectives related to their lands and that to effectively prioritize and manage Alaska wildland fires there is a need to consider the full spectrum of initial responses to wildland fire; from suppression actions designed to contain and control wildland fire growth, to periodic surveillance of wildland fires that are allowed to spread naturally across the landscape. To accomplish this, jurisdictional organizations and protecting agencies have collaboratively assigned one of four wildland fire management options (Critical, Full, Modified, and Limited) to nearly all lands in Alaska. Pre-identified Wildland Fire Management Options allow fire managers to:

- *Quickly prioritize areas for protection actions and the allocation of available initial attack firefighting resources to achieve protection objectives.*
- *Optimize the ability to achieve land use and resource management objectives and integrate fire management, mission objectives, land use, and natural resource goals.*
- *Reinforce the premise that the cost of suppression efforts should be commensurate with the economic, social, and resource values identified for protection.*[3]

Wildland fire management in Alaska is a joint effort among federal, state, local, and tribal governments, native organizations, local fire departments, communities, and landowners. The land management agencies, also known as jurisdictional agencies, have the overall land and resource management responsibilities as provided by federal, state, or local law. The Alaska Master Cooperative Wildland Fire Management and Stafford Act Response Agreement improves Alaskan fire management agencies' efficiency in responding to wildland fire by facilitating the coordination and exchange of

[1] WADNR. (2023, April 25). *Community Wildfire Protection Plan Guidance CWPP* ...Wildfire Preparedness. https://www.dnr.wa.gov/sites/default/files/publications/rp_cwpp_guidance_04102023.pdf.pdf
[2] *H.R.1904 - Healthy Forests Restoration Act of 2003*. (2003, December 3). CONGRESS.GOV. Retrieved October 30, 2024, from https://www.congress.gov/bill/108th-congress/house-bill/1904
[3] *ALASKA INTERAGENCY WILDLAND FIRE MANAGEMENT PLAN*. (2024). Alaska Interagency Coordination Center. Retrieved October 30, 2024, from https://fire.ak.blm.gov/content/aicc/Alaska%20Statewide%20Master%20Agreement/3.%20Alaska%20Interagency%20Wildland%20Fire%20Managment%20Plan%20(AIWFMP)/Alaska%20Interagency%20Wildland%20Fire%20Management%20Plan.pdf

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personnel, equipment, supplies, services, and funds while sustaining activities such as prevention, preparedness, communication and education, fuels treatment and hazard mitigation, fire planning, response strategies, tactics and alternatives, suppression, and post-fire rehabilitation and restoration.[4]

Acknowledging increased complexity in fire management practices, the State of Alaska State Hazard Mitigation Plan (SHMP) notes that future conditions for wildland fire hazards, including climate change, highlight an intensified pattern of wildland fire that is emerging in Alaska as rapidly increasing temperatures and longer growing seasons alter the state's environment. Both tundra and boreal forest regions are seeing larger and more frequent wildland fires. The impacts of these fires are felt across the state. In response to changing wildland fire patterns, Alaska's fire management agencies are adapting quickly. The use of remote sensing tools, such as data from satellites, and science-based decision making have been a critical component in responding to intensified wildland fire seasons. [5]

Additionally, the Statewide Operating Plan (SOP) is applicable to all signatory parties to the Alaska Master Agreement (AMA). Its purpose is to address statewide issues affecting cooperation, interagency working relationships and protocols, financial arrangements, sharing of resources, and joint activities/projects.[6]

Jurisdictional agencies (as identified in the Alaska Master Agreement) are responsible for all planning documents (e.g., land use plans, resource management plans, fire management plans, and decision support documents) for a unit’s wildland fire and fuels management program.[7]

Protecting agencies (as identified in the Alaska Master Agreement) are responsible for implementing the actions documented and directed by the appropriate planning and decision support documents for initial and extended attack on wildland fire incidents. They provide supervision and support including operational oversight, direction, and logistical support to incident management teams (IMTs). [8]

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[4] *ALASKA MASTER COOPERATIVE WILDLAND FIRE MANAGEMENT AND STAFFORD ACT RESPONSE AGREEMENT: 2024 ALASKA STATEWIDE OPERATING PLAN.* (2020, August 6). Alaska Interagency Coordination Center. Retrieved October 30, 2024, from https://fire.ak.blm.gov/content/aicc/Alaska%20Statewide%20Master%20Agreement/2.%20Alaska%20Statewide%20Operating%20Plan/Alaska%20Statewide%20Operating%20Plan.pdf

[5] SOA. (2023). State of Alaska State Hazard Mitigation Plan. Alaska Division of Homeland Security and Emergency Management Hazard Mitigation Section. https://ready.alaska.gov/Documents/Mitigation/SHMP/2023 State of Alaska Hazard Mitigation Plan.pdf

[6] *ALASKA MASTER COOPERATIVE WILDLAND FIRE MANAGEMENT AND STAFFORD ACT RESPONSE AGREEMENT: 2024 ALASKA STATEWIDE OPERATING PLAN.* (2020, August 6). Alaska Interagency Coordination Center. Retrieved October 30, 2024, from https://fire.ak.blm.gov/content/aicc/Alaska%20Statewide%20Master%20Agreement/2.%20Alaska%20Statewide%20Operating%20Plan/Alaska%20Statewide%20Operating%20Plan.pdf

[7] *ALASKA MASTER COOPERATIVE WILDLAND FIRE MANAGEMENT AND STAFFORD ACT RESPONSE AGREEMENT: 2024 ALASKA STATEWIDE OPERATING PLAN.* (2020, August 6). Alaska Interagency Coordination Center. Retrieved October 30, 2024, from https://fire.ak.blm.gov/content/aicc/Alaska%20Statewide%20Master%20Agreement/2.%20Alaska%20Statewide%20Operating%20Plan/Alaska%20Statewide%20Operating%20Plan.pdf

[8] *ALASKA MASTER COOPERATIVE WILDLAND FIRE MANAGEMENT AND STAFFORD ACT RESPONSE AGREEMENT: 2024 ALASKA STATEWIDE OPERATING PLAN.* (2020, August 6). Alaska Interagency Coordination Center. Retrieved October 30, 2024, from https://fire.ak.blm.gov/content/aicc/Alaska%20Statewide%20Master%20Agreement/2.%20Alaska%20Statewide%20Operating%20Plan/Alaska%20Statewide%20Operating%20Plan.pdf

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The State of Alaska Forest Action Plan (FAP) seeks to prioritize areas where forests matter most to Alaska's people—forest lands and wildland urban interface areas that have been identified through the robust Alaska Interagency Wildland Fire Management Plan as having resources requiring fire protection; private forest lands including Alaska Native corporation lands; and state forests and state land classified for forestry. This plan also highlights the following key goals relevant to fire management on State of Alaska lands:

1. *Cultivate fire adapted communities*
2. *Manage fuels to reduce risk to communities & to benefit forest ecosystems.* [9]

Similarly, the National Cohesive Wildland Fire Management Strategy Addendum Update (Addendum Update) identifies new drivers impacting the wildland fire management system. As Federal agencies, states, tribes, and the private sector all ramp up work together to meet the challenge of the wildland fire crisis, stakeholders are challenged to reach beyond individual, organizational, and historical silos to collectively define and understand their risk; set landscape-level and community-wide priorities; share and co-manage risk across boundaries and jurisdictions; accept some short-term risk for long-term benefit; and collectively invest in outcome-based approaches and activities, rather than outputs. The Addendum Update elevates critical issues like climate change and environmental justice and defines key challenges that are not limited to one agency or organization, provides new guidance for stakeholders addressing today's wildland fire challenges and aims to "safely and effectively extinguish fire, when needed; use fire where allowable; manage natural resources; and collectively, learn to live with wildland fire." The updated National Cohesive Strategy goals include:

1. *Resilient Landscapes – Landscapes, regardless of jurisdictional boundaries are resilient to fire, insect, disease, invasive species and climate change disturbances, in accordance with management objectives.*
2. *Fire Adapted Communities – Human populations and infrastructure are as prepared as possible to receive, respond to, and recover from wildland fire.*
3. *Safe, Effective, Risk-based Wildland fire Response – All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildland fire management decisions.* [10]

Ultimately, the Community Wildfire Protection Plan (CWPP) process aligns with the goals outlined by the National Cohesive Strategy and the State of Alaska Forest Action Plan, and offers prescriptive recommendations based on feedback gathered at the community level, while also referencing Fire Management Response Guidance from the AIWFMP, the Stafford Act and the SHMP. This collaborative planning process assists

[9] *2020 Forest Action Plan*. (2020, December 31). Alaska Natural Resources Division of Forestry & Fire Protection. https://forestry.alaska.gov/Assets/pdfs/forestactionplan/FINAL2020AlaskaForestActionPlan.pdf
[10] Wildland Fire Leadership Council. (2023). *National Cohesive Wildland Fire Management Strategy Addendum Update*. https://www.forestsandrangelands.gov/documents/strategy/natl-cohesive-wildland-fire-mgmt-strategy-addendum-update-2023.pdf

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communities in developing an appropriate and desired wildland fire protection plan to guide future mitigation efforts. Completion of this CWPP involved the following steps:

1) *Identify stakeholders, land management agencies, and interested parties.*
2) *Establish a community planning area.*
3) *Develop a community risk assessment.*
4) *Ongoing opportunities for community input through surveys, public meetings, and the creation of a dedicated website.*
5) *Address priorities through stakeholder meetings and public input.*
6) *Development of an action plan and task-matrix.*
7) *Finalization of the plan with a total of three public community meetings throughout the process.*

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Appendix B

Assessment of Hazard, Barriers, and Defensible Space Rating Criteria (Community Risk Assessment)

Rating Elements

1) Risk/Hazard Analysis of available fuels inside community (inside community to 1 mile)
2) Risk/Hazard Analysis of available fuels outside community (1-10miles)
3) Barriers
4) Fire Protection Resource Availability
5) Community Firewise Rating
6) Overall Community Rating
7) Wildfire Risk to Communities (wildfirerisk.org) Rating Summary

Risk/Hazard Analysis, Available Fuels

The Copper River Basin is classified as Fire Regine Group IV, which means a stand replacement severity fire is possible every 35-100+ years.

1. **Inside Community**: The rating area includes lands within one mile of the community in all directions. The rating is based on history/likelihood of fire in the community and the availability of hazard fuels.

RISK/HAZARD ANALYSIS AVAILABLE FUELS CHART 1

FUELS (predicted fire behavior based on historic summertime weather with hot, dry conditions)	Alaska Fire Return Interval: High 0-99 years	Where Found:
Black Spruce Boreal Forest (CFFDRS=C2) *rate of spread: high intensity: high spotting potential: high*	HIGH	
Black Spruce Lichen Woodland (CFFDRS=C1) *rate of spread: moderate intensity: moderate spotting potential: high*	HIGH	
Grass (cured tall standing or matted; CFFDRS = O1a/O1b) *rate of spread: high intensity: moderate: spotting potential: low*	HIGH	
Mixed Boreal Forest (may include white or black spruce, aspen and/or birch; CFFDRS=M1) *rate of spread:* moderate intensity: moderate spotting potential: moderate	MODERATE	
Hardwood Forest (includes aspen & birch; CFFDRS use D1 or M1, M2) *rate of spread: low intensity: low spotting potential: low*	MODERATE	
Deciduous Brush (includes willow & alder) *rate of spread: low intensity: low spotting potential: low*	LOW	
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*	MODERATE	

Narrative description fuels within one mile of community.

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2. **Outside Community**: The rating area is from 1-10 miles outside the community and is based on the history/likelihood of fire in the area and the availability of hazard fuels.

RISK/HAZARD ANALYSIS AVAILABLE FUELS CHART 2

FUELS (predicted fire behavior based on historic summertime weather with hot, dry conditions)	Alaska Fire Return Interval: High 0-99 years	Where Found:
Black Spruce Boreal Forest (CFFDRS=C2) *rate of spread: high intensity: high spotting potential: high*	HIGH	
Black Spruce Lichen Woodland (CFFDRS=C1) *rate of spread: moderate intensity: moderate spotting potential: high*	HIGH	
Grass (cured tall standing or matted; CFFDRS = O1a/O1b) *rate of spread: high intensity: moderate: spotting potential: low*	HIGH	
Mixed Boreal Forest (may include white or black spruce, aspen and/or birch; CFFDRS=M1) *rate of spread:* moderate intensity: moderate spotting potential: moderate	MODERATE	
Hardwood Forest (includes aspen & birch; CFFDRS use D1 or M1, M2) *rate of spread: low intensity: low spotting potential: low*	MODERATE	
Deciduous Brush (includes willow & alder) *rate of spread: low intensity: low spotting potential: low*	LOW	
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*	MODERATE	

Narrative description fuels 1-10 miles from community.

3. **Barriers**

Standards for rating natural and constructed (human-made) barriers:

Low Fire Danger: The community has a natural or constructed barriers that provide 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, or a community on an island

Moderate Fire Danger: The community has natural or constructed barriers that provide 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 less flammable vegetation types, or communities situated on major rivers.

High Fire Danger: Any barriers that exist which 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 highly flammable fuel types.

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BARRIER RATING CHART

Barrier Type	Rating for Community (Low, Moderate or High Fire Danger)	Where Found:
Water Features		
Other Natural Features		
Constructed (Human-made) Features		
Overall Community Barrier Rating		

Narrative description of natural barriers.

4. Fire Protection Resource Availability

FIRE PROTECTION RESOURCES RESPONSE CHART

Response Time	Risk	Kind of Response (List 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.	High	
Adequate initial attack resources are 30- 75 minutes away and adequate extended attack can be in place in 8-12 hours.	Moderate	
Adequate initial attack resources are less than 30 minutes away and adequate extended attack can be in place in less than 8 hours.	Low	
Overall Fire Response Rating		

Narrative description of fire protection resources.

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5. Community Firewise Rating

Alaska Firewise Standards for Creating Defensible Space

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.

COMMUNITY FIREWISE FOR DEFENSIBLE SPACE RATING CHART
(Overall community assessment, not individual structures)

Alaska Firewise Standards	Low Excellent Over 65% of homesites and community buildings meet standard	Moderate Between 35- 65% of homesites and community buildings meet standard	High Less than 35% of homesites and community buildings meet standard
Landscaping			
Construction			
Water Supply			
Clear of Flammables/ Refuse/Debris (flammables stored properly & area cleared)			
Overall Rating			

Narrative description of fire protection resources.

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6. Overall Community Rating

OVERALL RATING CHART

Category	Rating
Risk/Hazard Analysis of available fuels inside community (inside community to 1 mile)	
Risk/Hazard Analysis of available fuels outside community (1-10miles)	
Barriers	
Fire Protection Resource Availability	
Community Firewise Rating	

Narrative on other contributing factors to risk and mitigation of wildland fire in this community.

7. Wildfire Risk to Communities (wildfirerisk.org) Rating Summary

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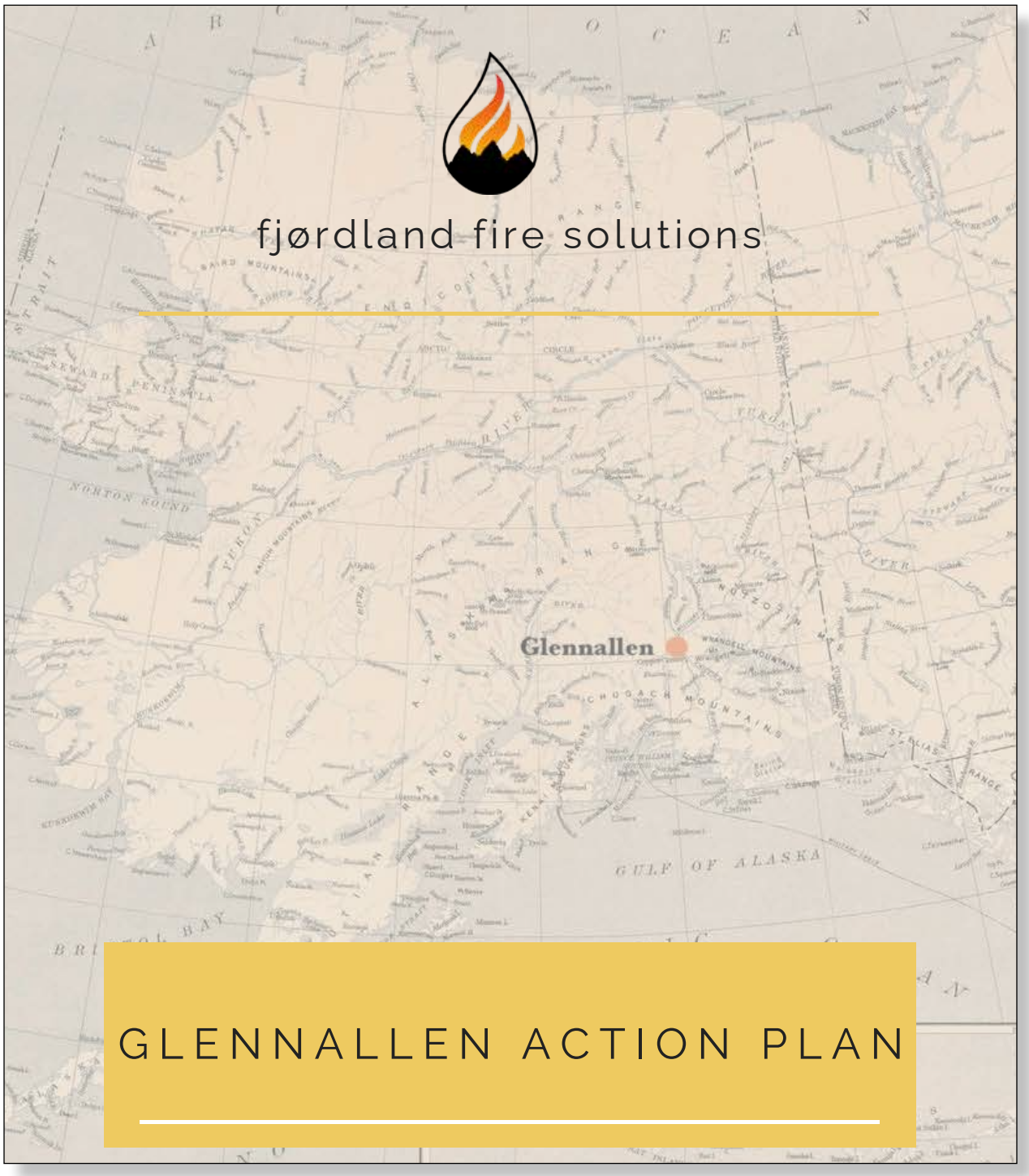
Appendix C

Fjørdland Fire Solutions

C.1 — RISK ASSESSMENT AND ACTION PLAN



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GLENNALLEN 2 FJØRDLAND FIRE SOLUTIONS

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COMMUNITY CONCERNS

- Inadequate defensible space surrounding homes and businesses
- No community woody mass disposal site leads to improper/untimely burning by individual citizens
- Inadequate ingress/egress to homes
- Private roads structurally inadequate to EMS vehicles
- Lack of community water source
- Inadequate road signage
- Risk of tourist/hunter fires
- Beetle kill
- Need for additional VFD Wildland training
- Need for funding to improve VFD equipment and capabilities
- Possibility of fire starts inside of the shaded fuel break
- DOF/Agency Fire resources exhausted in the event of multiple localized fire starts
- Current sources of Federal/State/other funding may not be available in the future
- Dry grasses in pre-greenup spring
- Junk cars/Hazmat

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1

Community Firewise/Defensible Space

Associated Tasks

1. Reinstitute WUI Grant Cost Share Incentive Program for private/homeowner fuels reduction around structures
2. Adopt and apply Alaska Firewise Standards to all at-risk structures
   a. Firewise should include ample escape routes and safety zones for every household, as well as alternate escape routes and safety zones. If escape routes/safety zones are not viable, construct them
   b. Firewise should include evacuation plan for all pets and livestock
   c. Widen overgrown escape routes and establish ample ingress, egress, structural road capacities, and turnarounds for Emergency Vehicles
3. Post clear signage throughout community
4. Create system of structure mapping (including Firewise ratings) for land manager/emergency responder use
5. Institute program to remove junk vehicles and other hazmat
6. Provide community Firewise outreach and education

Additional Notes

It should be emphasized to the community that fuels reduction focus should be primarily on Spruce species and tall grasses.
Firewise efforts should be combined with Forest Stewardship Program directives.

It should be emphasized to community members that spruce is best cut at a certain time of year in order to mitigate the spread of spruce beetles.

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MITIGATION PRIORITIES

2 VFD Training & Funding

Associated Tasks

1. Apply for Federal Grants to bolster VFD with improved infrastructure, equipment and training
   a. Frequent training between VFD, DOF, proposed BIA Fuels Crew as well as standardization of Standard Operating Procedures
   b. Increased Wildfire training and equipment

Additional Notes

Emphasis on Wildfire Training for VFD including but not limited to FFT1 (Squad Boss) qualification and FFT2.

Emphasis should be placed on equipment that benefits both the VFD and DOF/Agency Firefighters i.e. Water Tenders.

3 Local Fuels Crew

Associated Tasks

1. Attain funding to form Fuels Crew to assist in fuels reduction projects, Native Allotment protection, Heritage Site protection and community Firewise
2. Prioritize Wildfire training for Fuels Crew
3. Prioritize close working relationship/overlap with VFD, as well as DOF and other Wildfire agencies

Additional Notes

Emphasis on Wildfire Training for local Fuels Crew including but not limited to FFT1 (Squad Boss) qualification and CRWB (Crew Boss) qualification.

A current viable pathway to Fuels Crew funding is through BIA financial incentive programs.

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4 Protection of Native Heritage Sites and Allotments

Associated Tasks

1. Identify heritage sites/allotments to be protected and implement appropriate measures
    a. Create improved mapping of heritage sites and allotments so that agency firefighters can locate and protect.

Additional Notes

Provide public outreach to inform Native Allotment holders of the funding sources available to pre-treat allotment boundaries in anticipation of wildfire.

5 Community Woody Mass Disposal Site

Associated Tasks

1. Identify/designate an area for the community/private landowner to dispose of woody mass byproduct of community Firewise and fuel reduction projects
    a. Ideal area would be easily accessible
    b. Allow community access to repurpose woody mass accumulation for firewood, biomass, etc.

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MITIGATION PRIORITIES

6 Community Water Fill Site

Associated Tasks

1. Identify site and funding to implement a fast-fill water site for Emergency Services/Agency Firefighters/Community members and develop the preferred infrastructure

Additional Notes

The capacity/infrastructure of this fill site would ideally go beyond the drafting method that is currently available.

7 Biomass Viability

Associated Tasks

1. Continually reevaluate the viability of biomass solutions in Glenallen and outlying communities
2. Explore the possibility of biomass utilization of byproducts of the re-treatment of Glennallen fuel breaks

8 Beetle-Kill Mitigation

Associated Tasks

1. Determine areas in which beetle-kill and other dead-standing timber can be accessed
2. Explore the viability of opening or gaining access to these areas for the purpose of community/private firewood or other viable biomass opportunities
3. Public outreach to make these areas known

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C.2 — MAPS

MAPS APPENDIX

GLENNALLEN 8

FJØRDLAND FIRE SOLUTIONS

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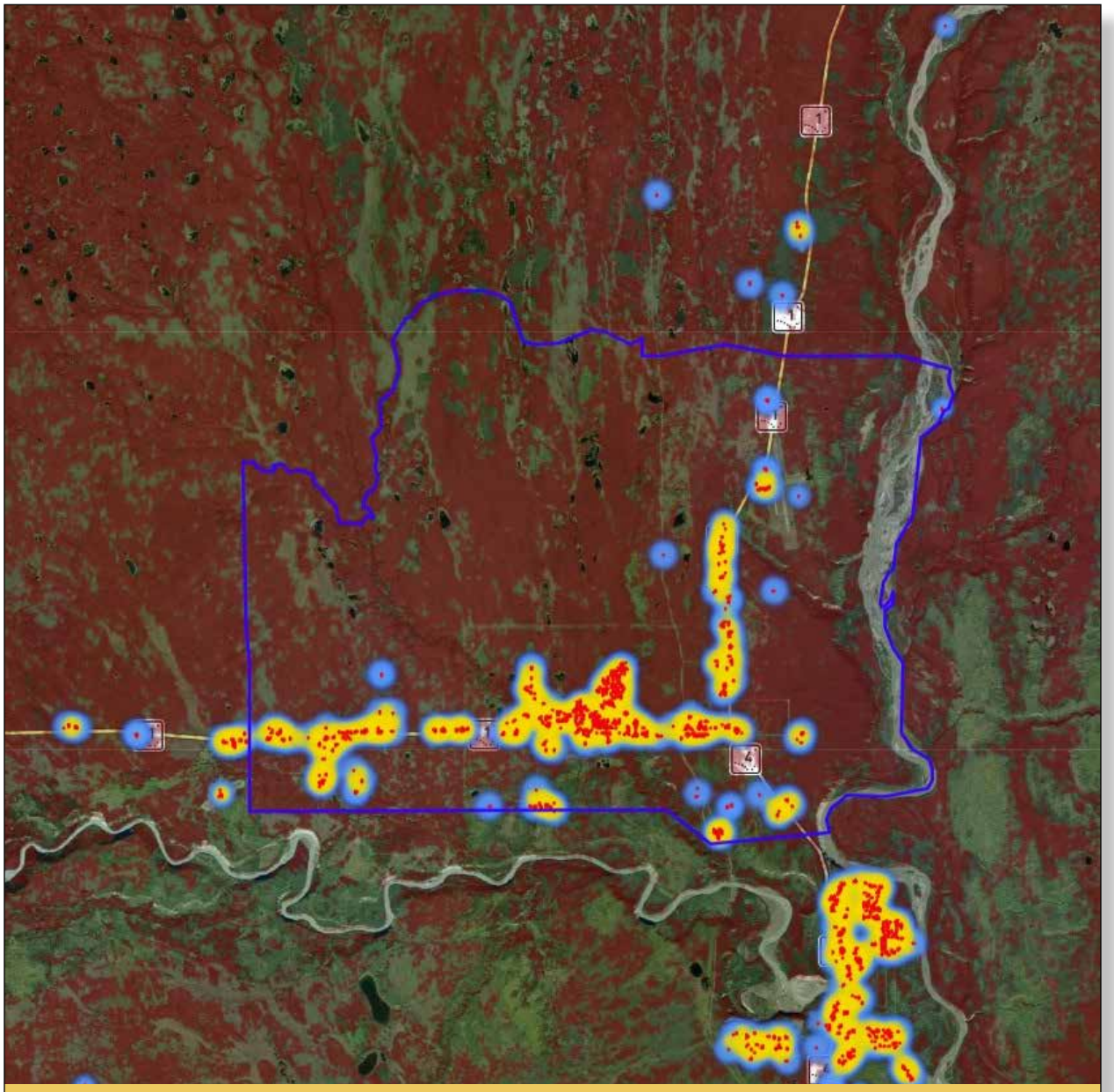

STRUCTURE DENSITY MAP WITH SPRUCE IN RED

GLENNALLENN 9

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GRASSES IN GOLD

GLENNALLENN 10

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Appendix D

Wildland Fire Community Risk Assessment

Planning Area: Glennallen	

Overall Rating

Category	Rating
Fuels Risk/Hazard inside community	High
Fuels Risk/Hazard outside community	High
Barriers	Moderate
Fire Protection	High
Community Firewise Rating	High
NFRC Database-Wildfire Likelihood	High 86th Percentile
Final Rating:	High

Background/History

Current Population: 437 (Population Year: 2021)

The name was derived from Maj. Edwin Glenn and Lt. Henry Allen, both leaders in the early American explorations of the Copper River region. It is one of the few communities in the region that was not built on the site of a Native village.

The community of Glennallen lies along the Glenn Highway at its junction with the Richardson Highway, 189 road miles east of Anchorage. It is located just outside the western boundary of Wrangell-St. Elias National Park. Glennallen is a full-service community with a clinic, post office, grocery store, restaurants, gas stations, lodging, etc. The area sees an influx of visitors in the summer months from tourism, people traveling through the area from Fairbanks and Anchorage, and seasonal residents. Glennallen along with the entire copper river basin is well known for its fishing, hunting and many other outdoor recreation activities. Land ownership in the area is mixed between Ahtna native corporation, BLM, NPS, State of Alaska, and relatively small private parcels.

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Overview / Values

Community Areas of Concern:

Most of the infrastructure directly adjacent to the highway corridor within the Community have some defensible space. Most of the remaining infrastructure has little to no defensible space and have flammable materials directly adjacent to them. Structure and vegetation fires within the community have the potential to spread into the wildland, and fires in the wildland have a high potential to enter parts of the community.

Fuels Assessment

Risk/Hazard Analysis (Inside and with-in 1 mile of the community)

FUEL Types (predicted fire behavior based on historic summertime weather with hot, dry conditions)	Wildland Fire Hazard	Percent of Area
Black Spruce Boreal Forest (CFFDRS=C2) *rate of spread: high / intensity: high / spotting potential: high*	High	**25%**
Black Spruce Lichen Woodland (CFFDRS=C1) *rate of spread: moderate /intensity: moderate / spotting potential: high*	High	**25%**
Grass (cured tall standing or matted; CFFDRS = O1a/O1b) *rate of spread: high / intensity: moderate / spotting potential: low*	Moderate	**25%**
Mixed Boreal Forest (may include white or black spruce, aspen and/or birch; CFFDRS=M1) rate of spread: moderate / intensity: moderate / spotting potential: moderate	Moderate	**10%**
Insect and Disease in Mixed Boreal Forest (may include white or black spruce, aspen and/or birch. CFFDRS=M4 30%) rate of spread: moderate / intensity: high / spotting potential: moderate	Moderate	**0%**
Hardwood Forest (includes aspen & birch; CFFDRS use D1 or M1, M2) *rate of spread: low / intensity: low / spotting potential: low*	Low	**5%**
Deciduous Brush (includes willow & alder) *rate of spread: low / intensity: low / spotting potential: low*	Low	**10%**

Risk / Hazard Analysis (1 -10 miles outside community that can impact community)

FUEL Types (predicted fire behavior based on historic summertime weather with hot, dry conditions)	Wildland Fire Hazard	Percent of Area
Black Spruce Boreal Forest (CFFDRS=C2) *rate of spread: high / intensity: high / spotting potential: high*	High	**25%**
Black Spruce Lichen Woodland (CFFDRS=C1) *rate of spread: moderate /intensity: moderate / spotting potential: high*	High	**25%**
Grass (cured tall standing or matted; CFFDRS = O1a/O1b) *rate of spread: high / intensity: moderate / spotting potential: low*	Moderate	**15%**
Mixed Boreal Forest (may include white or black spruce, aspen and/or birch; CFFDRS=M1) rate of spread: moderate / intensity: moderate / spotting potential: moderate	Moderate	**10%**
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: moderate CFFDRS=M4 30%)	Moderate	**10%**
Hardwood Forest (includes aspen & birch; CFFDRS use D1 or M1, M2) *rate of spread: low / intensity: low / spotting potential: low*	Low	**5%**
Deciduous Brush (includes willow & alder) *rate of spread: low / intensity: low / spotting potential: low*	Low	**10%**

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Barrier(s) Assessment

Natural: The Community is located on the west side of the Copper River and north of the Tazlina River. Other various riparian features are consistent throughout the area including small lakes, creeks, and rivers. Hardwood stands and hardwood brush can slow fire spread under certain conditions. With wind and dry fuel sources many of these natural barriers are ineffective.

Constructed: The Glenn Hwy. runs west to east through the center of the area and the Richardson Hwy runs north to south. The Gulkana airport is located 4 miles northeast of Glennallen. There was previously a fuel break constructed around the community of Glennallen. This fuel break needs to be maintained as it is becoming overgrown and would no longer be a good option for slowing fire spread. Some Gravel Roads and other human made openings are present throughout the area, some of these openings could be affective in slowing fire growth.

Barrier Rating Chart

Barrier Type (list specific type under excellent, fair or poor)	*Rating
Water (may include lakes, rivers, streams and sloughs)	Moderate
Natural features (may include barren landscape, rock, topographic features)	Moderate
Human-made features (may include airstrips or other clearings)	Moderate
Overall Rating	**Moderate**

Barrier Rating Chart Key:

Low Fire Danger: The community has a barrier(s) that provides thorough protection from fuels less than one mile away in at least three cardinal directions. An example of this would be a small community sandwiched between a major river and a runway or a community on an island.

Moderate Fire Danger: The community has a barrier(s) that provides thorough protection from fuels less than one 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.

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

Depending on the severity/consumption of the burn, fuels remaining, time of year, and current conditions, fires may or may not carry through old burn scars. In general, burn scars older than 15 years will not significantly hinder the ability for a fire to carry through the burn scar (unless the severity of the burn was high, the tundra mat was consumed, and birch saplings or willow/alder regrew). Resistance to control will be lessened, and the probability of a running/spotting head fire will be dramatically reduced.

Firewise Assessment

Community Firewise Rating for Defensible Space Assessment

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(Overall Community Assessment Not Individual Structures)

Alaska Firewise Standards	**Low** Over 65% of homesites and community buildings meet standard	**Moderate** 35-65% of homesites and community buildings meet standard	**High** 35% or less of homesites and community buildings meet standard
Landscaping			High
Construction			High
Water Supply			High
Access		Moderate	
Clear of Flammables/ Refuse/Debris (flammables stored properly & area cleared)			High
Overall Rating			**High**

Alaska Firewise Rating Chart Key:

Landscaping: 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 feet 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 two 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.

Fire Protection Resources

The community rates Moderate based on limited wildland fire capabilities, including trained personnel and equipment available. Wildland fire response is the responsibility of the state of Alaska Department of Forestry and Fire and local volunteer departments, based out of Tazlina and Glennallen, neighboring communities also have some volunteer resources available. Local resources are primarily Type 6 fire engines and water tenders. With a response time of about 30 minutes. Fire retardant is available from Palmer with a response time of about 60 minutes, and from Fairbanks with a response time of about 90 minutes. During the primary fire season

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May-July there could also be a helicopter capable of bucket drops available locally depending on fire danger and availability. Smokejumpers are also available from Fairbanks with a response time of about 90 minutes. There could also be Crews available from Palmer and Fairbanks with a minimum response time of 6-12 hours and up to 48 hours depending on availability and other fire activity across the state.

Fire Protection Resources Response Chart

Response Time	Kind of Resource (initial and extended attack)	Risk	Overall Risk
Initial attack resources are more than 75 minutes away and adequate extended attack resources are more than 12 hours away.	Hand Crews, Engines, Incident Command Teams, and Air resources.	High	High
Adequate initial attack resources are 30-75 minutes away and adequate extended attack can be in place in 8-12 hours.	Smoke Jumpers, Air Tankers, Air Attack.	Moderate	
Adequate initial attack resources are less than 30 minutes away and adequate extended attack can be in place in less than 8 hours.	Local Volunteer Fire Department Engine, personnel, Water Tender and Dozers.	Low	

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Glennallen

COMMUNITY WILDFIRE PROTECTION PLAN