COMMUNITY WILDFIRE PROTECTION PLAN

Copper Center

VALDEZ - COPPER RIVER
DIVISION OF FORESTRY & FIRE PROTECTION

ALASKA DIVISION OF FORESTRY & FIRE PROTECTION

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 CWPP analyzes the risk of wildland fire to the Copper Center community planning area and mitigation efforts to reduce future wildland fire hazards.

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. Copper Center's risk hazardous fuels assessment confirms that the fuel accumulation and threat of danger from wildland fire to Copper Center is high. This rating is due to vegetative fuel types and configuration inside and outside the community.

Based on community input from the 2021/2022 survey results, the top hazards Copper Center residents identified include: unsafe burning practices, lack of clear road signage, unimproved roads with minimal clearance from flammable vegetation. Many homes also do not have adequate defensible space and hazardous fuels such as inoperable vehicles, uninhabitable trailers and buildings are common. There are large areas that need hazardous fuels reduction this may correspond with the need for new identified firewood cutting lots. The Glenn-Rich Volunteer Fire Department needs more equipment and training. Homes and businesses need to be Firewised, and a community evacuation plan needs to be created.

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, and abandoned inoperable vehicles near residences, adding challenges to emergency responders and 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 such as the Copper River and Klutina River provide some defense, however, notable vulnerabilities persist, particularly to the north and south of the community to include high concentrations of continuous fuels which pose a threat to the wildland-urban interface.

Background

The Copper Center 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 collaborative wildfire protection plan to guide future mitigation efforts. Completion of this CWPP involved the following steps:

- Identify 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.
- Finalization of the plan with a total of three public community meetings throughout the process.

This will be Copper Center's first Community Wildfire Protection Plan. 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. This type of program was developed for the Glennallen and McCarthy communities in 2009 and 2011, and was a highly successful program that resulted in many homeowners clearing trees and creating adequate defensible space around their residences. The natural conditions surrounding Copper Center remain equally concerning, with areas of beetle killed trees and fuel loading of dead and down trees, that pose a threat to the wildland urban interface.

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

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 areas of 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 members**
- **Native Village of Kluti-Kaah**
- **Valdez-Copper River Area Division of Forestry & Fire Protection (DOF)**
- **Wrangell - St. Elias National Park and Preserve (NPS)**

COMMUNITY PROCESS

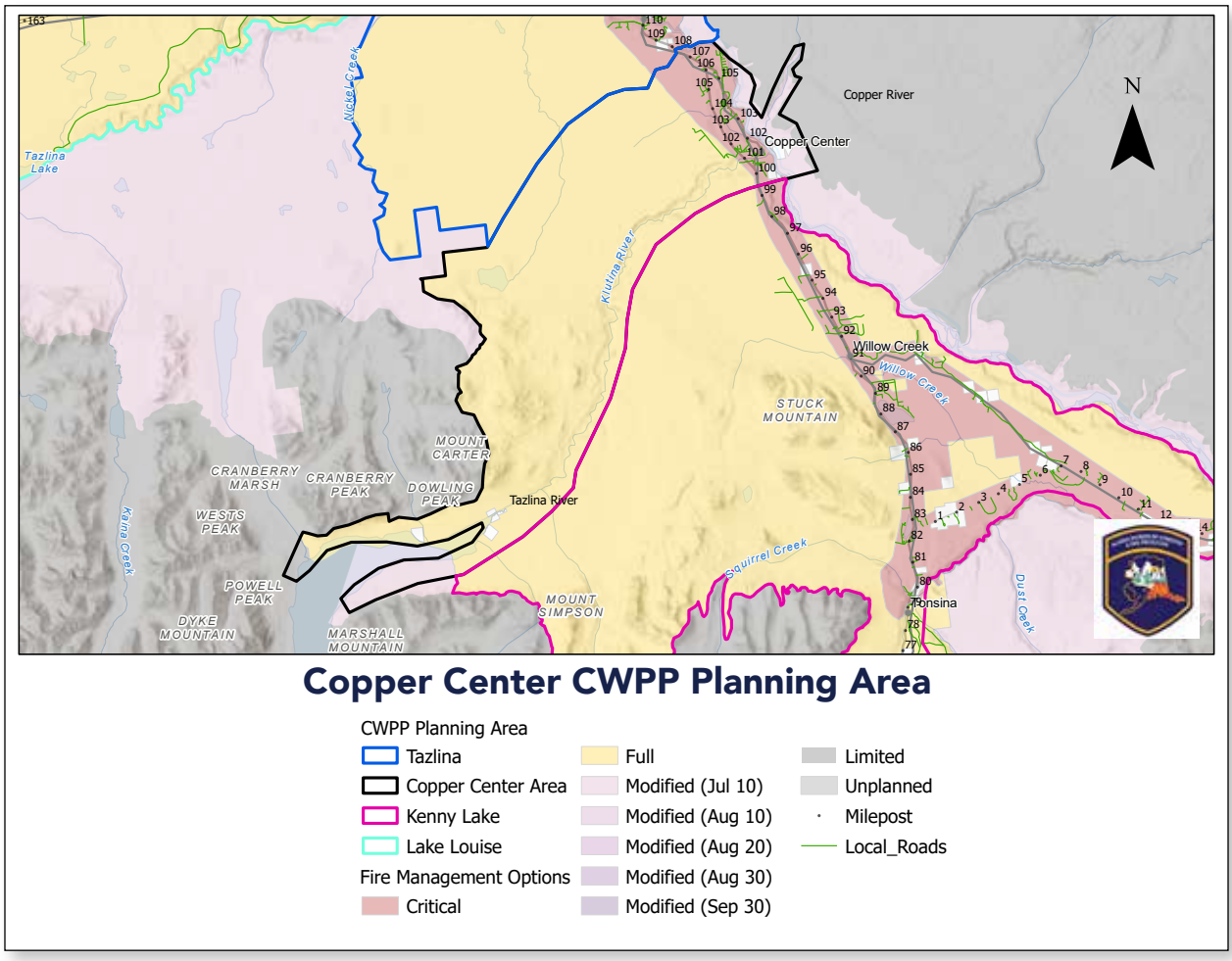
Community input was solicited by in person visits to Copper Center, including formal and informal meetings, attendance at public events, online and mail-delivered surveys, social media platforms, and a collaborative website showcasing the latest information. All ideas were gathered and analyzed to determine 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 Copper Center (WUI) Boundary is designated to incorporate the surrounding Critical and Full-Fire-Management option, which includes all residents and infrastructure of the area as well as the surrounding lands that would cause 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 goal is to mitigate the potential for disaster within this boundary by recognizing the hazards, prioritizing, and developing an action plan with clear goals and objectives.

Critical-Fire-Management option is defined by the State of Alaska and Alaska Fire Service as “The highest priority for suppression actions. 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.”

Full-Fire-Management option is defined by the State of Alaska and Alaska Fire Service as “High priority but below Critical. 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 Copper Center Community Wildfire Protection Planning Area covers from mile 99.5 to 107.5 of the Richardson Highway, paralleling the eastern bank of the Copper River to include the Klawasi River Drainage, Klutina Lake Road, and Hudson Lake. The communities of Copper Center, Native Village of Kluti-Kaah, and Silver Springs are all encompassed in this planning area. Land ownership in this area includes private, state, BLM, village and tribal corporation lands, native allotments, and lands managed by the University of Alaska. This area holds a rich history deeply embedded with cultural and historic significance to the Ahtna People.

Community Profile

Copper Center is located 16 miles south of Glennallen and 105 miles north of Valdez, on the west bank of the Copper River at the confluence of the Klutina River. It lies just west of Wrangell-St. Elias National Park and Preserve Service Headquarters, which is also included in the planning area. The community was founded in 1896. Andrew Holman was its first resident, establishing a temporary roadhouse near the site in July 1898 to provide shelter for prospectors on their way to the Klondike. He initially erected two tents: one served as Hotel Holman and the other as a makeshift post office. By winter 1899, Holman had replaced his tents with a substantial cabin. Leaving Dick Worthman to run the roadhouse, Holman pioneered the first mail route from Valdez to Eagle.

In 1901, a telegraph station and post office were established. And in 1909, the settlement was designated a government agricultural experiment station. The economy in Copper Center is based on local services and businesses, the Wrangell-St. Elias National Park and Preserve Headquarters, and seasonal tourism. Several RV parks and river boat charter businesses operate out of the Copper Center area.

The Native Village of Kluti-Kaah is an Alaska federally recognized Alaska Native tribal entity located in the Copper Center census area. The village is primarily made up of the Ahtna Athabaskan people, who have resided in the Copper River basin for generations.

The community of Silver Springs is its own census-designated place in the Copper River Census Area. Glenn-Rich VFD has a substation located in the Silver Springs community with an artesian water well.

During the summer, subsistence salmon fishing in the Klutina River brings large numbers of Alaskans and tourists to the Copper Center 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 Copper Center consist of subsistence fishing, hunting, forest foraging, to include berry picking and personal use firewood timber harvesting. Sensitive cultural sites in the Copper Center planning area are located at and around the Native Village of Kluti-Kaah, along the Klutina River and surrounding areas.

LOCATION

The Community of Copper Center is located in the Copper River Basin in South Central Alaska. The general geographic location is approximately 61.9592° north latitude -145.3177° west longitude township 2 north, range 1 east, section 18, Copper River Principal Meridian.

The Native Village of Kluti-Kaah is located 3 miles north of the original townsite of Copper Center at mile 104 on the Old Richardson Highway.

Silver Springs is located to the east of the Old Richarson Highway at mile 105.

POPULATION

According to the 2020 census data, the population of the Copper Center census data area including Kluti-Kaah and Silver Springs is 338 people.

CRITICAL FACILITIES (INFRASTRUCTURE)

According to 2020 Census Data, there is a total of 202 houses in the Copper Center area; 137 are occupied and 65 are vacant or uninhabitable homes. The Native Village of Kluti-Kaah is also located in this planning area which includes village office buildings, housing, a preschool Head Start building, recreation building, and a community hall.

Other community buildings in the Copper Center planning area include the old Copper Center School and the community baseball fields with structures. There are many commercial buildings located within the area including: Mountain View Grocery and Gas, Copper Rail Depot Bar, Copper Center Lodge, Copper Center local museum, churches, a local art studio, and a clothing boutique as well as the Copper River Princess Lodge. There are many campgrounds, fishing guide businesses, bed-and-breakfast establishments as well as the Wrangell - St. Elias National Park and Preserve Headquarters.

Infrastructure in the Copper Center area consists of roadways, telecommunication through Copper Valley Telephone, electrical grids through Copper Valley Electric as well as the Copper River Housing Authority which provides housing to residents and native corporations including Ahtna, Native Village of Kluti-Kaah and Copper River Native Association. Industry for the Copper Center planning area consists of various locally owned businesses such as hunting and fishing businesses, eateries, boutiques, health care facilities, native corporations, and the Wrangell-St. Elias National Park and Preserve.

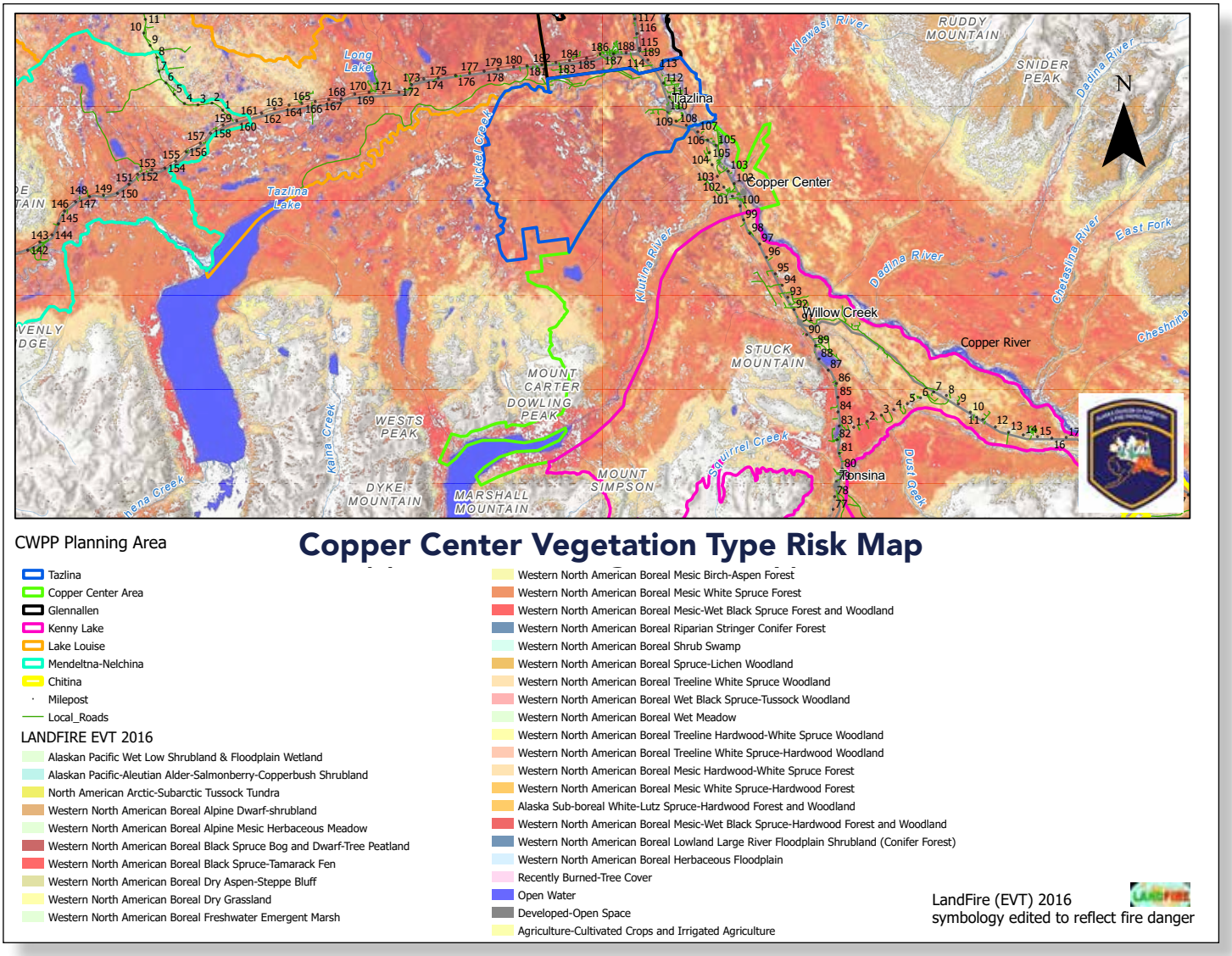
SEASONAL FACTORS

Spring 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 Copper Center soars with an influx of summer residents, as well as fishermen and tourists increasing the risk of human caused fires. Several campgrounds, two hotels, and numerous bed-and-breakfast establishments serve and house these visitors.

WILDLAND FIRE HISTORY

Large fire history in the surrounding area:

- **2019 human-caused Klutina River Fire burned 176 acres west of the Copper Center planning area.**
- **2015 Klutina Fire burned 289.2 acres west of the Copper Center planning area, north of the 2019 Klutina River Fire, on the southeastern side of Klutina Lake.**
- **1981 lightning caused Wilson Camp Fire burned 14,884.8 acres along the Klawasi River, east of the Copper Center planning area on the eastern side of the Copper River.**
- **1958 Copper Canyon Fire burned 5,398.3 acres.**
- **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.**



Copper Center Vegetation Type Risk Map

CWPP Planning Area

- Tazlina
- Copper Center Area
- Glennallen
- Kenny Lake
- Lake Louise
- Mendeltna-Nelchina
- Chitina
- Milepost
- Local_Roads

LANDFIRE EVT 2016

- Alaskan Pacific Wet Low Shrubland & Floodplain Wetland
- Alaskan Pacific-Aleutian Alder-Salmonberry-Copperbush Shrubland
- North American Arctic-Subarctic Tussock Tundra
- Western North American Boreal Alpine Dwarf-shrubland
- Western North American Boreal Alpine Mesic Herbaceous Meadow
- Western North American Boreal Black Spruce Bog and Dwarf-Tree Peatland
- Western North American Boreal Black Spruce-Tamarack Fen
- Western North American Boreal Dry Aspen-Steppe Bluff
- Western North American Boreal Dry Grassland
- Western North American Boreal Freshwater Emergent Marsh
- Western North American Boreal Mesic Birch-Aspen Forest
- Western North American Boreal Mesic White Spruce Forest
- Western North American Boreal Mesic-Wet Black Spruce Forest and Woodland
- Western North American Boreal Riparian Stringer Conifer Forest
- Western North American Boreal Shrub Swamp
- Western North American Boreal Spruce-Lichen Woodland
- Western North American Boreal Treeline White Spruce Woodland
- Western North American Boreal Wet Black Spruce-Tussock Woodland
- Western North American Boreal Wet Meadow
- Western North American Boreal Treeline Hardwood-White Spruce Woodland
- Western North American Boreal Treeline White Spruce-Hardwood Woodland
- Western North American Boreal Mesic Hardwood-White Spruce Forest
- Western North American Boreal Mesic White Spruce-Hardwood Forest
- Alaska Sub-boreal White-Lutz Spruce-Hardwood Forest and Woodland
- Western North American Boreal Mesic-Wet Black Spruce-Hardwood Forest and Woodland
- Western North American Boreal Lowland Large River Floodplain Shrubland (Conifer Forest)
- Western North American Boreal Herbaceous Floodplain
- Recently Burned-Tree Cover
- Open Water
- Developed-Open Space
- Agriculture-Cultivated Crops and Irrigated Agriculture

LandFire (EVT) 2016
symbology edited to reflect fire danger

RISK/HAZARD ANALYSIS, AVAILABLE FUELS

The Copper River Basin is classified as Fire Regime Group IV, which means a stand replacement severity fire is possible 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 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.

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**

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 had the necessary equipment and training. The times of highest concern are spring when pre-green up conditions exist, and tall, thick, and often matted dry 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 Copper Center in all directions 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 Copper Center 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, thunderstorms and associated lightning strikes are a frequent cause for wildland fire concern during the summer.

3. BARRIERS:

This includes water, natural and human-made features

Rating: High

Copper Center has significant wildland fire protection from the Copper River spanning the eastern side of its Wildland Urban Interface. The Klutina River also intersects the Wildland Urban Interface from west to east, providing additional protection to certain parts of the community. However, the area faces significant risk due to the abundance of tall, dry grasses before the green-up period, as well as a mix of spruce and hardwoods between the waterways and the community. Given that Copper Center spans both sides of the Klutina River, pre-green up grasses, and the abundance of mixed spruce and hardwoods the risk/hazard analysis category is high.

4. FIRE PROTECTION RESOURCE AVAILABILITY:

Includes local and agency resources

Rating: MODERATE–HIGH

A rating of moderate-high 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 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 location, and approximately 30 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 115 to Mile 138 of the Glenn Highway and Mile Marker 92 to Mile 124 of the Richarson Highway. The Glenn-Rich VFD is currently registered with the State Fire Marshal's Office and receives dispatch notifications from Matcom 911. Kenny Lake Volunteer Fire Department and Gakona Volunteer Fire Department offer mutual aid to the Copper Center area in the event of a fire; however, they have longer response times.

5. COMMUNITY FIREWISE RATING:

Includes landscaping, construction, water supply and access

Rating: High

LANDSCAPING: Less than 35% of homes and community buildings have a clearing of flammable vegetation at least 30 feet around the structure or have lawns that are mowed and watered regularly. Ladder fuels can be found throughout the community and in-between structures with pockets of trees lacking crown spacing. Tall and matted uncut grass can be found along road corridors and around structures, along with unoccupied and uninhabitable structures with debris, trash, and inoperable vehicles surrounding them.

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: 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 main access route, the Richardson Highway, is at least two lanes wide and clearly marked. The Old Richardson Highway runs through the planning area to include the intersections of the Copper Center old town site, Native Village of Kluti-Kaah, Silver Springs subdivision and various private driveways. The Old Richardson Highways offers a road that is two lanes wide and clearly marked; however, this old road is a short section of the planning area. 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 zones.

Escape Routes:

1. Old Richardson Highway north and south
2. New Richardson Highway north and south

Safety Zones:

1. Copper Center gravel pit — accessed by the Richardson Highway Mile 100.2 to Old Richardson Highway Mile 0.2 (before Copper Center airstrip)
2. Native Village of Kluti-Kaah multi-use facility — located in the Native Village of Kluti-Kaah, Mile 104 Old Richardson Highway
3. Glennallen K-12 School — accessed by Aurora Drive, Mile 186.5 Glenn Highway

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
4. **FIRE PROTECTION RESOURCE AVAILABILITY**	MODERATE–HIGH
5. **COMMUNITY FIREWISE RATING**	HIGH

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

Wildland fire risk to the Copper Center community using Wildfirerisk.org is very high. Copper Center is higher than 96% of 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.

Action Plan

The Copper Center Community Wildfire Protection Plan (CWPP) aims to address the wildland fire risks in the Copper Center 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 fires pose significant threats to the community, its infrastructure, and areas of cultural significance. Frequent human activities and lightning strikes are the major causes of wildland fires in the area.

This plan assesses various risk factors, including the types of vegetation that can fuel fires, such as black and white spruce, mixed hardwood forests, and grass and shrublands. These fuels are highly flammable and can lead to high-intensity fires. Within the community, there are additional hazards like tall dry grass, debris, and inoperable vehicles near homes, which increase the risk of fire spreading. Outside the community, similar vegetative fuels extend the risk zone up to 10 miles away.

Natural barriers including the Copper River on the eastern boundary and the Klutina River, which cuts through the Wildland Urban Interface area from west to east, offering some protection to parts of the community, but there are significant gaps. The local volunteer fire department (VFD) faces challenges due to limited resources, long response times, inadequate training and equipment.

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

PRIORITIZED ASSESSMENT FINDINGS

1. Homes and businesses not being Firewised
2. Dry grasses—especially around structures
3. Not having clear road signs
4. VFD training needs
5. Driveways inaccessible to emergency vehicles
6. Public wildland fire education
7. Update evacuation plan
8. Protection of Native heritage sites
9. Support local fuels crew
10. Standing dead timber mitigation
11. Biomass viability
12. Community woody mass disposal site
13. Identity other fuel reduction projects

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
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 mass byproduct. 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. 7. Adopt State of Alaska Stewardship Program model for Firewise home assessments.	Ahtna Inc. Bureau of Indian Affairs Copper River Basin Regional Housing Authority Glenn-Rich Volunteer Fire Department Homeowners Native Village of Kluti-Kaah State of Alaska Department of Environmental Conservation State of Alaska Division of Forestry & Fire Protection
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 programthrough grant funding.	Copper River Basin Regional Housing Authority Homeowners 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.	Homeowners Local Emergence Planning Committee State of Alaska Division of Forestry & Fire Protection
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
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.	Native Village of Kluti-Kaah State of Alaska Department of Transportation State of Alaska Division of Forestry & Fire Protection

ASSESSMENT FINDING	ASSOCIATED TASK	RESPONSIBLE ENTITIES
Public wildland fire education (Implementation)	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 Native Village of Kluti-Kaah State of Alaska Division of Forestry & Fire Protection
Update evacuation plan (Planning)	1. Review and modernize existing community emergency plan 2. Include updated and 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 Native Village of Kluti-Kaah State of Alaska Division of Homeland Security and Emergency Management 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 Know Sites Database.	Ahtna Inc. Bureau of Indian Affairs Bureau of Land Management Native Village of Kluti-Kaah State of Alaska Division of Forestry & Fire Protection
Support local fuel crews (Implementation)	1. Coordinate with fuels crews, VFDs and DOF for training. 2. Work with crews to prioritize community projects.	Ahtna Inc. Bureau of Indian Affairs Copper River Basin Regional Housing Authority Native Village of Kluti-Kaah State of Alaska Division of Forestry & Fire Protection
Standing dead timber mitigation (Implementation)	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.	Ahtna Inc. Alyeska Pipeline Bureau of Land Management State of Alaska Division of Forestry & Fire Protection

ASSESSMENT FINDING	ASSOCIATED TASK	RESPONSIBLE ENTITIES
Biomass Viability (Implementation)	1. Continually reevaluate the viability of biomass solutions.	Copper Rive Development Association Native Village of Kluti-Kaah 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 mass byproduct.	Native Village of Kluti-Kaah State of Alaska Division of Forestry & Fire Protection
Identity other fuel reduction projects and re-treat existing projects (Planning)	1. Determine areas where spring pre-green up grasses pose a threat. 2. Determine areas of beetle-kill and other dead-standing timber. 3. Identify other infrastructure to be protected, plan fuel reduction/fuels removal project to protect them. 4. Address work through mitigation plans.	Ahtna Inc. Bureau of Indian Affairs Native Village of Kluti-Kaah State of Alaska Division of Forestry & Fire Protection Wrangell - St. Elias National Park and Preserve

Summary, Review, and Updating Process

The community of Copper Center has a high risk of wildland fire potential and impact. Due to the type of fuels both inside and outside of the community, natural and man-made barriers, 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 moderate–high rating for fire protection resource availability, Copper Center's overall assessment findings show a high threat of danger from wildland fire.

Wildfirerisk.org outlines Copper Center 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 Copper Center 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

Signature Page

This plan has been reviewed and approved by the following:

Signed by:
Norm McDonald – State of Alaska Forestry & Fire Protection, Deputy Director (Fire)
E5B67CB95214470...

X_____ Date_____

State of Alaska Forestry & Fire Protection, Deputy Director (Fire)

X JOSHUA SCOTT Digitally signed by JOSHUA SCOTT Date: 2026.01.09 13:03:34 -09'00' Date_____

Wrangell - St. Elias National Park and Preserve

X William M. Dunk Jr. Digitally signed by WILLIAM DUNK Date: 2026.01.14 13:28:32 -09'00' Date_____

Bureau of Land Management

X JOLENE JOHN Digitally signed by JOLENE JOHN Date: 2026.01.16 11:50:57 -09'00' Date_____

Bureau of Indian Affairs

X_____ Date_____

Ahtna Inc.

Signed by:
Bill Hand – Native Village of Kluti-Kaah
20D2FE2A90644F0...

X_____ Date_____

Native Village of Kluti-Kaah Representative

Signed by:
Scott Feicht – Fire Chief – GRFR
DE3C2A7739384DB...

X_____ Date_____

VFD Community Representative

Appendix A

Alaska Fire Management Planning References

The Copper Center 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

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

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

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.*

Sources

2020 Forest Action Plan. (2020, December 31). Alaska Natural Resources Division of Forestry & Fire Protection. https://forestry.alaska.gov/Assets/pdfs/forestactionplan/FINAL2020AlaskaForestActionPlan.pdf

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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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

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

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.

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.

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.

Narrative description of constructed (human-made) 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.

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.

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**

Appendix C

Fjørdland Fire Solutions

C.1 — RISK ASSESSMENT AND ACTION PLAN

CONTENTS

COPPER CENTER 2 FJØRDLAND FIRE SOLUTIONS

COMMUNITY CONCERNS

- Need for identification of cultural sites
- Need for defensible space around structures to eliminate the need for agency triage during a wildfire
- New influx of people unfamiliar with wildfire and safe burning practices
- Need for individual household evacuation plans
- No community woody mass disposal site leads to improper/untimely burning by individual citizens/difficulty in disposing of removed vegetation
- Inadequate defensible space surrounding homes and businesses
- Inadequate ingress/egress to homes
- Private roads structurally inadequate or otherwise inaccessible to EMS vehicles
- Communication difficulties during wildfire operations
- Lack of community water source
- Inadequate road signage
- Risk of tourist/hunter/recreation fires
- Beetle killed spruce contributing to dead fuel loading
- Need for additional VFD Wildland training
- Need for additional/enhanced VFD Equipment
- Need for a geographically closer VFD station
- Need for more firebreaks/open wood lots to reduce standing dead timber
- Need for general community-aimed wildfire training
- Dry grasses in pre-greenup spring

MITIGATION PRIORITIES

1

Establish Community Wildfire Exposure Model Map

Associated Tasks

1. Create mapping system to determine which structures are most at risk of wildfire exposure
   a. Metrics should include fuels, topography and terrain-driven wind influences
   b. Use exposure model mapping system to establish community defensible space priorities
2. Coordinate public outreach to inform homes/neighborhoods of their risk determinations

Additional Notes

Exposure Model Mapping to be made public so-as to encourage a sense of individual homeowner responsibility for the Firewising of their own homes.

COPPER CENTER 4 FJØRDLAND FIRE SOLUTIONS

2

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.

3 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
2. Examine the viability of funding and creating a VFD station closer to Copper Center

Additional Notes

Emphasis on Wildfire Training for VFD including but not limited to FFT2. Emphasis should be placed on equipment that benefits both the VFD and DOF/Agency Firefighters i.e. Water Tenders.

4 Update Community Emergency Plan

Associated Tasks

1. Modernize existing Community Emergency Plan
    a. Include updated and centralized community contact list
    b. Include maps with road signage and house identifiers (in conjunction with community Firewise mapping)
2. Identify and mitigate all communication issues that could arise during an emergency situation

5 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

Special attention/evaluation should be devoted to the allotments located to the East of the Copper River as continuous spruce is more prevalent there making them more difficult to defend.

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

6 Local Fuels Crew

Associated Tasks

1. Form local Fuels Crew
    a. Attain funding to form Fuels Crew to assist in fuels reduction projects, Native Allotment protection, Heritage Site protection and community Firewise
    b. Prioritize Wildfire training for Fuels Crew
    c. 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 FFT2.

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

MITIGATION PRIORITIES

7 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.

8 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

9 Biomass Viability

Associated Tasks

1. Continually reevaluate the viability of biomass solutions in Copper Center and outlying communities
2. Explore the possibility of biomass utilization of byproducts of the mitigation of Copper Center standing dead timber

MITIGATION PRIORITIES

10 Standing Dead Timber 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

11 Public Wildfire Education

Associated Tasks

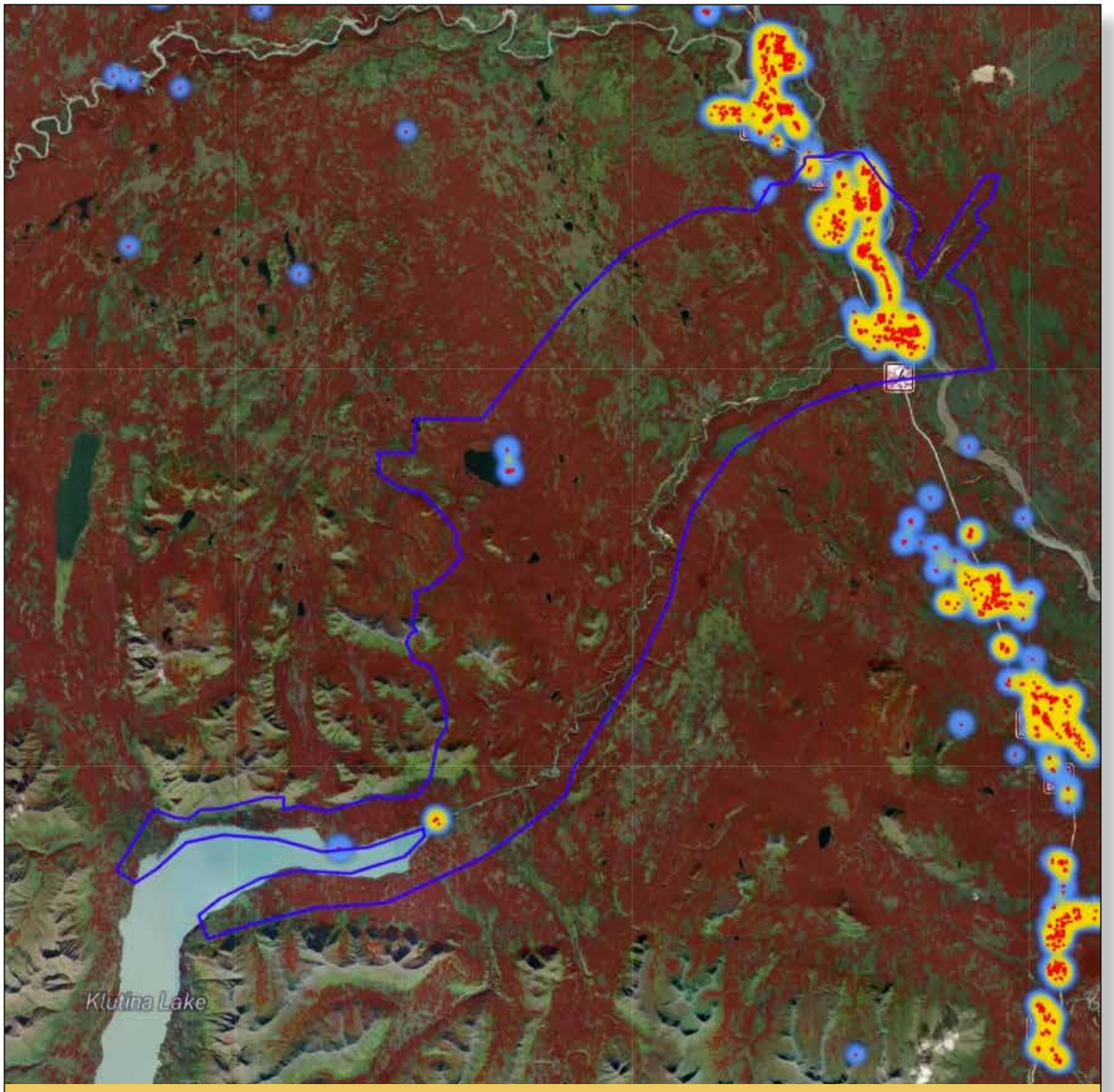
1. Explore the viability of teaching general wildfire knowledge to the community with emphasis on basic wildfire behavior
2. Reinstitute/continue wildfire education outreach in schools

C.2 — MAPS

MAPS APPENDIX

COPPER CENTER 10

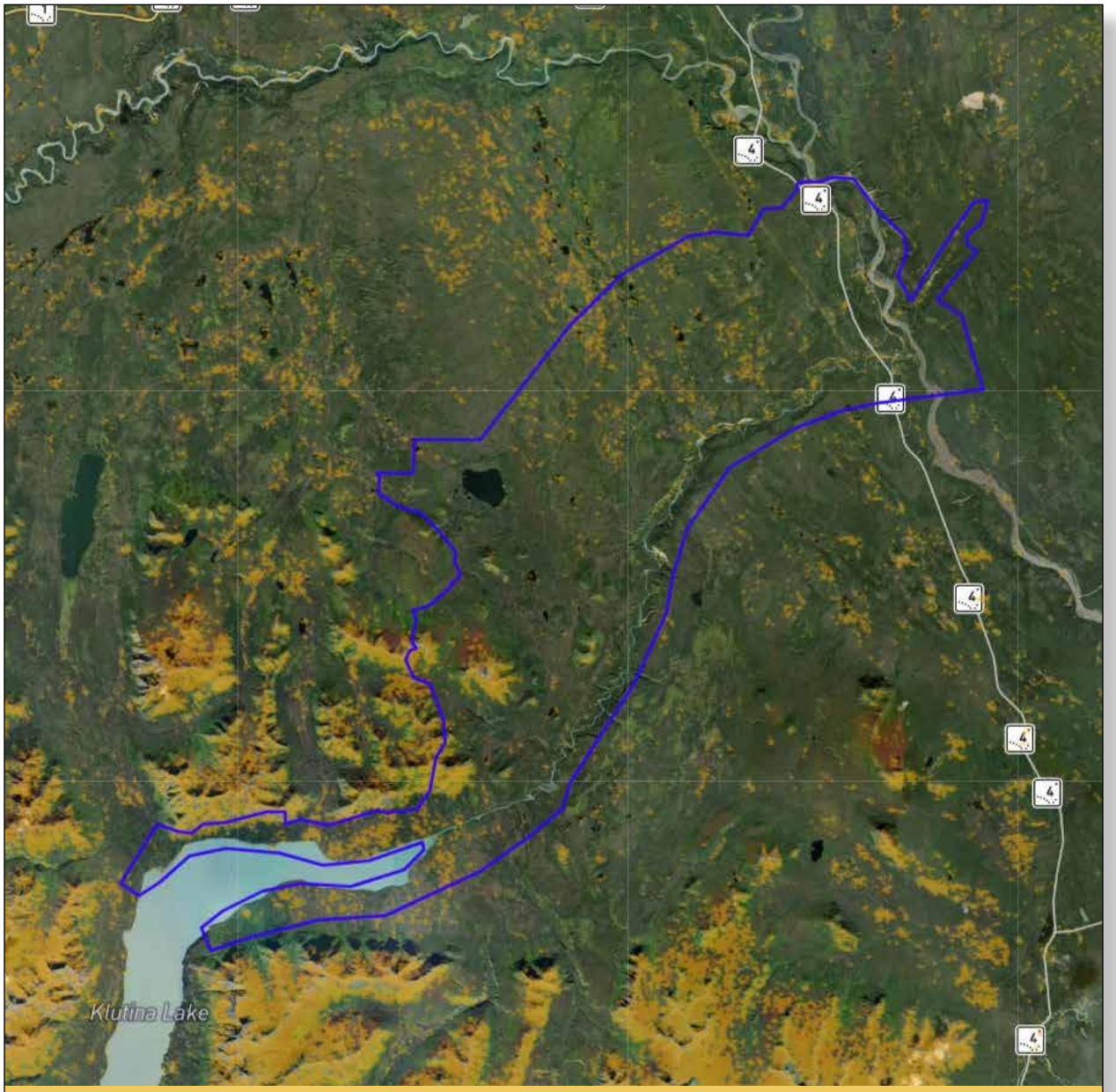
FJØRDLAND FIRE SOLUTIONS



STRUCTURE DENSITY MAP WITH SPRUCE IN RED

COPPER CENTER 11

FJØRDLAND FIRE SOLUTIONS



GRASSES IN GOLD

COPPER CENTER 12

FJØRDLAND FIRE SOLUTIONS

Appendix D

Bureau of Land Management Glennallen Field Office Risk Assessments

Wildland Fire Community Risk Assessment

Planning Area: Copper Center	

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 80th Percentile
Final Rating:	**High**

Background/History

Current Population: 338 (Population Year: 2020)

Copper Center developed where the Valdez Glacier trail reached the Copper River. Andrew Holman was its first resident, establishing a temporary roadhouse near the site in July 1898 to provide shelter for prospectors on their way to the Klondike. He initially erected two tents: one served as Hotel Holman and the other as a makeshift post office. By winter 1899, Holman had replaced his tents with a substantial cabin. Leaving Dick Worthman to run the roadhouse, Holman pioneered the first mail route from Valdez to Eagle.

During the height of the Klondike stampede prospectors set up tent camps along both the Copper and Klutina rivers, but the first cabins were built on a site one half mile west of the Copper. Another camp sprang up at what was called Copper Ferry, where a ferry crossed the river. The area got a boost as a goldfield service center in June 1898, when B. F. Millard brushed a trail from there to the mouth of the Slana River via the foothills of Mt. Drum.

The east bank site of Old Copper Center apparently was settled in 1901 1902 by prospectors intent on investigating mineral prospects on that side of the river. Its days as a mining center were short lived, but it did draw a Native population and existed for many years as a village.

Copper Center rapidly became the primary supply center for prospectors and travelers in the Copper River basin. A telegraph station and the trail's first official post office opened in 1901, with Ringwald Blix serving as the community's first postmaster. The next year, John McCrary staked a homestead about a mile north of the Klutina River crossing. Before long, McCrary opened a hotel as well, the first frame roadhouse between Valdez and Fairbanks. Much of McCrary's property remains in the family's hands.

By 1910 American settlers had established over fifty homesteads in the vicinity. The community now received tri-weekly mail delivery in the winter and weekly service in the summer. It also contained the only telegraph station between Valdez and Fairbanks where money could be sent or received by wire.

Since the creation of Wrangell-St. Elias National Park and Preserve in 1980, Copper Center has served as one of the gateways for visitors entering the massive national park. It is a full-service community with a small selection of accommodations, restaurants, campgrounds, supplies, gas, and tire repair.
The Wrangell-St Elias National Park Headquarters & Visitor Center is along the Richardson Highway just outside Copper Center. The National Park Service center has exhibits and videos on the park and is the best place for information and suggestions on exploring the area's backcountry, whether on foot or by raft. There is also a bookstore that sells maps and guidebooks to the park.

Overview / Values

Location/Ownership Map:

Community Areas of Concern:

Most of the infrastructure directly adjacent to the highway corridors and subdivisions 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. The area is highly variable in the mitigation work that has been completed. One house may have done a very good job in creating defensible space and several neighboring properties have done little or nothing. There are also several remote properties in the area that are isolated or have no road access at all. Many of these properties will continue to be of concern due to the inability of protection resources to reach them at all. 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.

Community Overview / Values Map:

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%**

Keep in mind this is a general overview of the fuels within and up to 1 mile outside the community. For some small areas near subdivisions, near riverbanks, and near other manmade or natural features this rating may not be representative. It is however just meant to be an overview of the area described.

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%**

Keep in mind this is a general overview of the fuels within 1 and up to 10 miles outside the community. For some small areas near subdivisions, near riverbanks, and near other manmade or natural features this rating may not be representative. It is however just meant to be an overview of the area described.

Fuels Map:

Barrier(s) Assessment

Natural: The Community is primarily located on the west side of the Copper River, and north of the Klutina River. The Copper River and Klutina River are the most prominent natural barriers. However, other various riparian features are consistent throughout the area including small lakes, creeks, and rivers. Hardwood stands and hardwood brush also present around most subdivisions can slow fire spread under certain conditions. With wind and dry fuel sources many of these natural barriers could become ineffective due to long range spotting common in the spruce fuel type.

Constructed: The Richardson and Old Richardson Hwy. run generally north to south through the center of the copper Center area. The Trans-Alaska Pipeline also runs north to south, west of the Richardson highway. There is a small airport on the southside of the Klutina River near the Richardson and Old Richardson Hwy junctions. There are also several smaller paved and gravel roads in subdivisions, business districts and other populated areas throughout the area. Some Gravel Roads and other human made openings are present throughout the area, some of these openings could be affective in slowing fire growth or be incorporated into fuel breaks.

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.

Fire History Map:

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
(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 to High 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. Glennallen, and many other 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 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. One of the biggest concerns is number of resources available. Although most of the communities in the area have some form of fire protection resources, most if not all do not have and adequate number of resources immediately available to assist with anything but small initial attack fires. Due to this situation all communities in the area will be rated as High Risk. Some communities are somewhat better off than others due to location along the road system. However, the region as a whole lacks adequate numbers of fire protection resources.

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	

Possible mitigation measures:

- **Fuel Breaks**: There are many opportunities for fuel breaks in the area such as widening road and river corridors, connecting segments of existing man made and natural breaks in the fuel, widen or improve the pipeline corridor, maintain and improve existing previously constructed fuel breaks, coordinate with surrounding communities for construct large multi community breaks, and construct small scale breaks around specific subdivisions and population clusters that are in need of improvement. It is very important fuel breaks be maintained to ensure they remain effective.

- **Fire Wise Communities**: Some areas have done a very good job of creating defensible space and doing what is necessary to make their area resistant to wildfire, others have done little or no work and pose a significant risk to fire in the wildland urban interface (WUI). It is important to educate and assist communities and doing what is necessary to mitigate fire risks in the WUI. Creating a cost share options to assist homeowners is one way to help them to complete projects that will create a safer community.

- **Increase Fire Protection Resources:** The Copper River Basin as a whole does not have adequate fire protection resources. Increasing the capacity of bot state and local resources would greatly help the communities reduce the potential damage caused by wildfire to area communities.

Copper Center

COMMUNITY WILDFIRE PROTECTION PLAN