U.S. Department of the Interior
Bureau of Land Management

Handy Dandy

Firefighting Field Guide

Alaska 2025

Cover photo: *June 2024, BLM Alaska Fire Service Smokejumpers wait for guidance from a smokejumper spotter assessing a fire burning below.*

All photos courtesy of BLM Alaska Fire Service unless otherwise noted.

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NEW TO ALASKA?

Alaska is large. The distance between Fairbanks and the western coast of Alaska can be equal to the distance between Boise, Idaho and the Pacific Coast of Oregon, but without roads.

You should receive an Alaska-specific briefing shortly after arrival and before going into the field. If not – ask for one.

All resources should be field-ready upon arriving in state. Make sure you have a 21-day supply of anything you need while in the bush. Do not rely on field stations to stock up. This includes tobacco, special dietary needs, medications, and personal gear such as a sleeping bag, tent and rain gear. Costs in rural Alaska are inflated and availability of products are limited. Bring cash.

Do not discredit local knowledge in any form, from any source. Please remember and remain constantly aware of your status as a visitor in rural Alaskan settings, including Indigenous culture. Ask questions and spend a moment becoming familiar with your surroundings, local etiquette and this guide.

Your preparedness and conduct in the field directly affect the health, safety and reputation of you and everyone else involved in your fire operations and support. Be prepared, exercise good judgement, use common sense, show respect and have fun. Alaska is a unique place with great people. We hope you enjoy your stay.

Feedback and thoughts on this guide are encouraged.
Please send feedback to:

Alaska Fire Service – Branch of Fire Training
Blm_ak_afs_fire_training@blm.gov
(907) 356-5630
Or AFS Public Affairs
Blm_ak_afs_public_affairs@blm.gov
Fire information: (907) 356-5511

EMERGENCY PLANNING IN ALASKA

Due to Alaska's size and the remoteness of many incidents, the golden hour is unrealistic. This should be considered when pre-planning for a medical emergency. It is important to ensure you have qualified medical providers on the incident as early as possible.

Operational Medical Support

The BLM Alaska Fire Service (BLM AFS) and the Alaska Division of Forestry & Fire Protection (DOF) can provide incidents with emergency medical personnel and equipment. Alaska operational medical support personnel have specialized training and an expanded scope of practice specific to austere environments. These resources are ordered through normal dispatch channels.

Options for Ordering Medical Personnel:

MEDL: Medical Unit Leader

EMPF: Paramedic, Fireline

AEMF: Advanced Emergency Medical Technician, Fireline EMTF: Emergency Medical Technician, Fireline

*Suggested practice is to order two personnel: EMPF + AEMF/EMTF

Additional Considerations for Ordering

- If you are on a non-Complex Incident Management Team incident, you will be best suited with a provider from the Alaska medical programs. Request this.
- If Alaska has no medical resources left, request a federally credentialed USFS or BLM medical provider, as they are legally authorization to practice anywhere in the nation.
- Be sure to request that all medical providers come with medical equipment and medications to practice at their level.
- For additional ordering information, consult the Alaska Interagency Mobilization Guide and Alaska Interagency Cache Catalog.

Medical Plan Considerations

- Communication procedures: dispatch/communications, frequencies, contact numbers.
- On-scene medical providers/resources: type, capabilities, equipment, locations (day/night).
- Location of helispots, drop points, camps, personnel, etc.
- Location of incident aircraft, capabilities, availability, identify/notify medevac aircraft if appropriate.
- Local medical resources: clinics, ambulance, air ambulance, hospitals - locations, contact info, capabilities and transport times.
- Burn considerations: Transport patients to the nearest hospital where medical staff will triage and determine next level of care needed. (Reference: NWCG Burn Protocols 23-001)
- Communicate medical plan to appropriate entities: Zone/Area manager, dispatch, incident personnel.

Additional Considerations

- Utilize the Medical Incident Report (MIR).
- Decision points: Wait for air transport, turn the patient over to a higher-level medic, transport patient taking incident medic off the incident, meet air/ground transport at another location, etc.
- If you need air transportation, notify dispatch immediately and include location description and latitude/longitude.
- Dispatchers can advise emergency response, notify hospitals, and help make administrative notifications.
- Use aircraft on scene if appropriate.
- Will the individual be returned to the incident after treatment or released? If released, has someone been identified to support them?
- Gather/verify information (who, what, when, where, why) and secure accident area if an investigation seems likely.

Medical Transportation

Recognizing the difference between a medical transport and a medevac is essential to ordering and receiving the right resource for the mission.

Medevac is for a **medical emergency**, either a serious injury or illness which requires immediate medical attention. Incident, zone, and/or commercial aircraft may be used. Commercial air ambulance aircraft can be requested through dispatch, who will coordinate directly with the appropriate service.

Medical transport is a **non-emergency** situation in which an injured or ill person requires transportation to medical care. Transport can be requested through the normal chain of command.

Public medical transports include people not working for the federal government or directly for the incident. They are the responsibility of the Alaska State Troopers at (907) 451-5100. The BLM AFS may provide support only at the request of the Troopers.

Emergency Services Phone List

Anchorage:
Alaska Regional Hospital ER: (907) 264-1222
Providence Alaska Medical Center ER: (907) 212-3111 ext. 1
Alaska Native Medical Center ER: (907) 729-1729
Bethel: Yukon-Kuskokwim Health Corp. Hospital: (907) 543-6395
Dillingham: Kanakanak Hospital ER: (907) 842-9371 Fairbanks:
Fairbanks Memorial Hospital ER: (907) 458-5556 Homer: South
Peninsula Hospital: (907) 235-0282
Kodiak: Providence-Kodiak Inland Hospital ER: (907) 486-9578
Kotzebue: Maniilaq Health Center ER: (907) 442-7208
Nome: Norton Sound Regional Hospital ER: (907) 443-3203
Palmer: Mat-Su Regional Medical Center ER: (907) 746-5123
Soldotna: Central Peninsula Hospital ER: (907) 714-4444
Guardian Flight: (888) 997-3822 / (907) 264-2388
LifeMed: (800) 478-5433 / (907) 248-6633
National Poison Control: (800) 222-1222

SMOKEJUMPER EMERGENCY MEDICAL TECHNICIANS

Smokejumper EMTs are highly effective at getting into remote spots, cutting out helispots and administering initial medical care. EMTs are interspersed throughout the jump list and might be on any jumpship. All smokejumper aircraft have an extensive trauma kit on board for smokejumper EMT use only.

If requested and available, a load with a trauma/mass casualty kit with aircraft extraction tools can be dispatched from BLM AFS facilities at Fort Wainwright. The load will include up to 12 EMTs, or as many qualified EMTs as available along with ex-EMTs and non-EMTs.

A request for smokejumper EMTs must be coordinated through

the Alaska Interagency Coordination Center (AICC) Operations Coordinator at (907) 356-5690. Requests should include coordinates of the emergency, nature of the emergency, number of people involved in emergency, and other pertinent information.

All smokejumper EMTs are trained to at least the EMT-Basic level, with one-third trained to the Advanced EMT level.

- Smokejumper EMTs can be utilized for remote search and rescue, aircraft crash rescue, and helispot construction for extraction of injured patients.
- Smokejumper EMTs have extensive parachute training specifically focused on landing in remote forested areas. They can be inserted near most incident sites.

Note: Smokejumper EMTs should not be relied upon as your primary medical plan. An EMT load is not held in case of emergency. If you need Smokejumper EMTs, do not hesitate to ask but be aware there may not be any available.

ALASKA FIRE ORGANIZATIONS

Wildfire management in Alaska is complicated by a large land area with limited road access and intermingled jurisdictions. To provide efficient and effective fire management services with limited duplication of resources and effort, the Alaska Master Agreement and Statewide Operating Plan separate wildland fire management responsibilities in Alaska into two categories: Jurisdictional Agencies and Protecting Agencies.

Jurisdictional Agencies

Jurisdictional Agencies are responsible for land and resource management activities that take place on their lands – including fire management. Jurisdictional Agency Administrators provide strategic direction to protection agencies through land and resource management plans, fire management plans, and decision documents for individual wildfires affecting their lands.

The primary Jurisdictional Agencies in Alaska include the Bureau of Indian Affairs, Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service, U.S. Forest Service, Alaska Department of Natural Resources, Department of Defense Agencies and the regional and village corporations established under the Alaska Native Claims Settlement Act (ANCSA).

Protecting Agencies

Wildland Fire protection services for nearly all lands in Alaska are provided by three Protecting Agencies: the Alaska Department of Natural Resources Division of Forestry & Fire Protection (DOF), the Bureau of Land Management Alaska Fire Service (BLM AFS) and the U.S. Forest Service (USFS). Protection boundaries are geographically defined and are independent of jurisdictional boundaries. Protecting Agencies provide wildland fire suppression services for all Jurisdictional Agencies within their protection area.

Bureau of Land Management Alaska Fire Service

The BLM AFS is headquartered on Fort Wainwright and is divided into five protection areas called zones. Upper Yukon, Tanana, Galena, Military and South. Zone Fire Management Officers (FMOs) also act as liaisons for ANCSA jurisdictions within their Zone. With exception of the South Zone, each Zone provides wildland fire suppression services to all Jurisdictional Agencies within their Zone. The Galena Zone operates a station in Galena from late May through August. The Upper Yukon Zone operates a turn-key station in Fort Yukon as needed.

The Military Zone provides wildland fire and fuels management on U.S. Army Garrison Alaska (USAG AK) lands and public lands that have been withdrawn for military purposes under an agreement between the BLM and USAG AK. The Military Zone FMO also acts as a liaison for the DOI and ANCSA jurisdictions that are under DOF protection in the Tok, Delta and Fairbanks Areas.

The South Zone, based in Anchorage, has no direct protection responsibility but the Fire Management Specialist acts as a liaison for DOI and ANCSA Jurisdictions served by DOF or USFS protection areas south of the Alaska Range.

The primary initial attack response forces for AFS are smokejumpers and contracted Fire Boss water-scoopers (Air Tractor 802Fs). The AFS hosts two Type 1 Interagency Hotshot Crews (Chena and Midnight Sun IHCs), an entry-level Type 2 Crew (North Star Fire Crew) and several village-based contract Type 2 crews. The AFS Fire Specialist program provides a pool of personnel to support overhead, air operations, suppression and prescribed fire activities.

Alaska Division of Forestry & Fire Protection (DOF)

The DOF is a division of the Alaska Department of Natural Resources. Its protection responsibilities are divided into seven protection areas spread throughout the state: Fairbanks, Delta, Tok, Valdez/Copper River, Mat-Su, Southwest (McGrath), and Kenai/Kodiak. All protection areas are staffed with firefighting personnel and resources during the fire season.

DOF's primary initial attack response forces are engines and helitack. DOF also contracts two air tankers – one stationed in Palmer and the other in Fairbanks. Agency crews include the Pioneer Peak Interagency Hotshot Crew (IHC) based in Palmer, two Type 2 Initial Attack (Type 2IA) crews (Gannett Glacier in Palmer and White Mountain in Fairbanks), and two DOF-cooperative Type 2IA crews (Tanana Chiefs and Yukon [Chugachmiut]). DOF also sponsors and provides annual training, physical fitness tests, and Red Card certification for several Type 2 Emergency Firefighter (EFF) crews.

U.S. Forest Service

The U.S. Forest Service Alaska (Region 10) provides wildland fire protection in Southeast Alaska including the Chugach (CGF) and Tongass (TNF) National Forest boundaries, National Park Service lands and the DOF Haines Area (HNS). Fire Management staff for both forests are aligned under one fire management program with staff located on each unit to support fire, aviation, and fuels activities.

Chugach National Forest fire management staff and the Forest Dispatch Center are located in Anchorage. The CGF initial attack resources located in Moose Pass consist of a Zone FMO and AFMO, a Type 6 engine and a hand crew module. The CGF also hosts a Helicopter Manager and Unit Aviation Officer.

Tongass National Forest fire management staff is located in Juneau. Juneau Dispatch is the primary dispatch center for fire response; however, there are two additional dispatch facilities on the forest

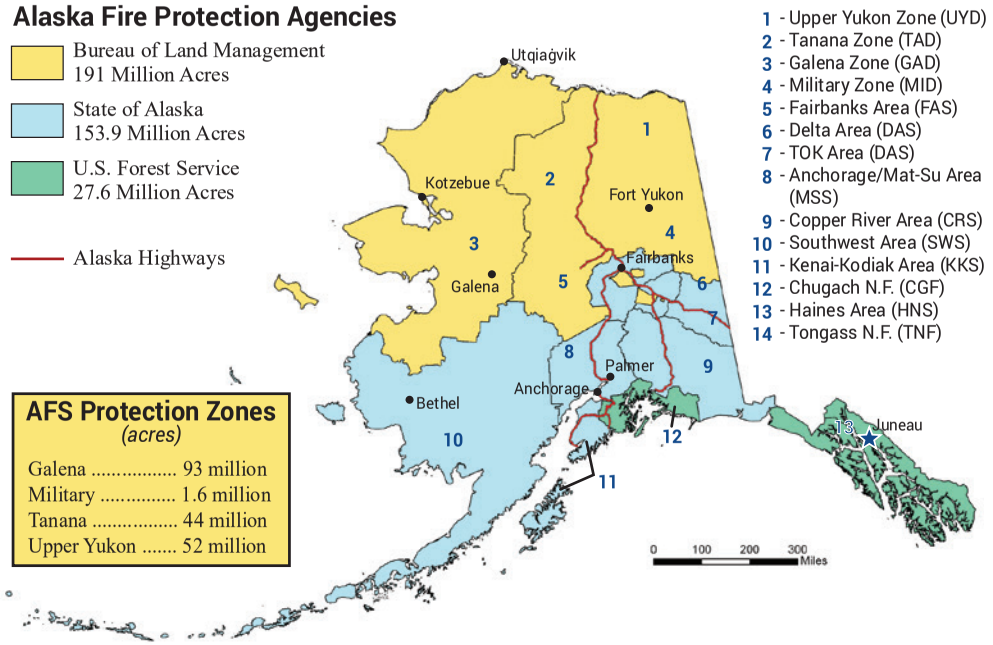
that provide dispatch services for resource activities (Ketchikan and Petersburg). The TNF administrative boundary contains several islands, which spread fire suppression resources across a wide area. The TNF resources include one Type 6 engine located in Thorne Bay, one Type 6 engine located at Juneau and small fire modules in Wrangell and Hoonah.

Tongass National Forest fire management staff are located in Juneau, AK. Juneau Dispatch is the primary dispatch center for fire response; however, there are two additional dispatch facilities on the forest that provide dispatch services for resource activities (Ketchikan and Petersburg). The TNF administrative boundary contains several islands, which spread fire suppression resources across a wide area. TNF resources include one Type 6 engine located in Thorne Bay, one Type 6 engine located at Juneau and small fire modules in Wrangell and Hoonah.

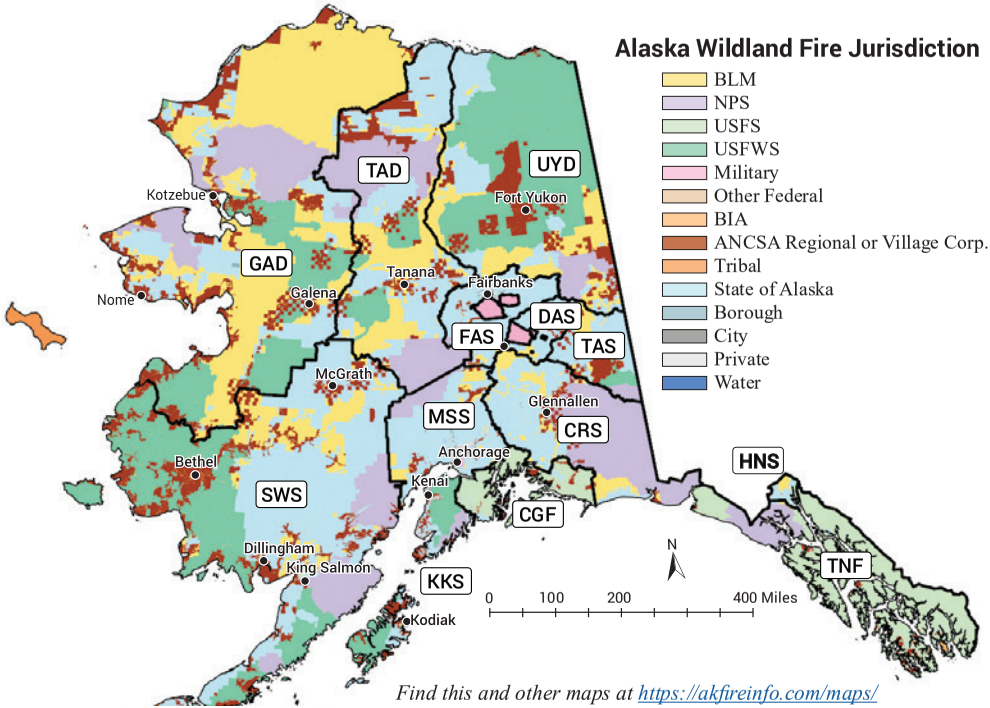
Alaska Interagency Coordination Center

The Alaska Interagency Coordination Center (AICC) is the Geographic Area Coordination Center and the focal point for resource coordination, logistics support, and predictive services for all wildland fire management agencies in Alaska. Unique to AICC is the Tactical Resources portion of the aircraft section which works with the local dispatch offices and is the point of contact for dispatching and tracking smokejumpers, aerial supervision, and air tankers statewide. The Tactical section also issues fire numbers, and cost codes when appropriate, for all wildfires within Alaska. The section lead hosts the daily interagency tactical meeting during fire season.

The AICC website (https://fire.ak.blm.gov/) contains a variety of information including the AICC Situation Report, fire weather maps and briefing materials.



Find this and other maps at https://akfireinfo.com/maps/



Find this and other maps at https://akfireinfo.com/maps/

ALASKA INTERAGENCY WILDLAND FIRE MANAGEMENT PLAN

In the 1970s and 1980s, Alaska fire managers recognized that not all fires should or could be suppressed and that there needed to be a way to prioritize suppression efforts across jurisdictional boundaries. In 1998, the 13 existing Interagency Fire Management Plans were consolidated into the Alaska Interagency Wildland Fire Management Plan (AIWFMP).

Fire Management Options

The Plan identifies four wildfire management options that prescribe a default initial response (Critical, Full, Modified, Limited). These options are designed to:

- Quickly prioritize areas for protection actions and the allocation of available initial attack firefighting resources.
- Optimize the ability to achieve land use and resource management objectives.
- 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.

Management option designations reflect identified values, resource management objectives, legal mandates, policies, regulations, and local conditions including population density and environmental factors. They are assigned at a landscape scale through a collaborative process and apply across jurisdictional boundaries.

Options may be changed to reflect long-term changes in land use patterns, values, resource objectives and/or fuels. They may also be overridden with a non-standard response when local conditions, risk factors or resource availability warrants.

Critical Fire Management Option

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 are 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

High priority, but below critical. This option provides for protection of moderately populated areas, cultural and paleontological sites, developed recreational facilities, physical developments, administrative sites and cabins, structures, high-value natural resources, Alaska Native allotments, and other high-value areas.

Modified Fire Management Option

This option allows for a response to wildfire that tailors the initial action to the time of year that the fire starts. It provides for an initial response designed to protect identified sites early in the season when the probability is high that they will eventually be affected. However, later in the year, this option allows fire-related land use and resource objectives to be accomplished in a cost-effective manner while still providing appropriate levels of site protection. Areas are assigned target conversion dates (July 10 for most areas). The conversion date can be adjusted based on seasonal severity and fire activity.

Before the conversion date, the initial response for fires occurring within the Modified Option is similar to the Full Option. After the conversion date, the initial response for Modified similar to the Limited Option.

Limited Fire Management Option

The lowest priority for resources. The Limited Option is designed for broad, landscape-scale areas where the low density and wide distribution of values to be protected allows for fire to function in its natural ecological role. The default initial response is to conduct surveillance, assessment and site protection as needed.

Unplanned

A small percentage of lands in Alaska have no management option assigned. No default initial action or priorities have been identified for these areas.

Wildland Fire Decision Support System

Once a fire moves into the extended attack phase, initial strategies should be re-evaluated, and actions adapted to reflect changes in risk, objectives and probability of success.

Strategies for extended attack fires are documented and approved in Wildland Fire Decision Support System (WFDSS) decisions. Non-standard responses involving a federal partner also require WFDSS decisions. Jurisdictional and Protecting Agencies jointly identify values, assess risk, develop objectives, constraints and plan courses of action. Once approved by all affected Jurisdictional Agency Administrators, the Protecting FMO and the Fiscal Agency Representative, WFDSS decisions are implemented by firefighting resources. When multiple protection areas are affected by a fire, one will assume operational control.

FIRE MANAGEMENT POLICY ON ALASKA NATIVE LANDS

Policy affecting fire management responsibilities relating to Alaska Native organizations and lands can be found in the following documents:

- 1891 Townsite Act
- 1906 Alaska Native Allotment Act (amended 1956)
- 1971 Alaska Native Claims Settlement Act (ANCSA)
- 1980 Alaska National Interest Lands Conservation Act (ANILCA)
- 1998 Alaska Native Veteran Land Allotment Equity Act
- Department of the Interior Manual 620 Chapter 5

There are three categories of Alaska Native lands figure prominently in fire management decisions. The three categories of land include:

ANCSA Native Corporation Land

Alaska Native regional and village corporations (ANCSA corporations) were established through the ANCSA. Individual ANCSA corporations are considered the Jurisdictional Agency for their lands. Per DOI Manual 620 Chapter 5.3, the BLM AFS is responsible for fire protection on ANCSA corporation lands. BLM AFS provides fire management liaisons to the ANCSA corporations to ensure they are informed about fires occurring on or threatening their lands, and that their interests are represented in fire management decisions.

ANCSA corporations also have jurisdiction over 14H-1 sites, which are sites of cultural significance including villages, seasonal camps and cemeteries. BLM AFS has protection responsibility for 14H-1 sites.

Tribal (Tribal Government) Land

There are 229 federally recognized Tribes in Alaska. Most have Tribal councils as their governing bodies. Tribal governments in Alaska are distinct from ANCSA corporations and have the same government status as other federally recognized Tribes throughout the U.S. They have a government-to-government relationship with the United States and are entitled to the same protections, immunities and privileges as other federally recognized Tribes. Some Tribes receive funding from the BIA to provide certain fire management services such as advising protection agencies of their needs during active wildfires and fuels management work.

Even though ANCSA places its land entitlement with the ANCSA corporations, most Tribes in Alaska own some land. Tribal land is generally either in trust (BIA jurisdiction) or fee simple status (private land – State jurisdiction). One notable exception is the land around the Village of Venetie in northeastern Alaska that is owned by the Tribe and mentioned specifically in ANCSA. This parcel has been treated like ANCSA corporation land and AFS acts as the jurisdictional contact.

Federally Administered Indian Trust Lands (Including Alaska Native Allotments)

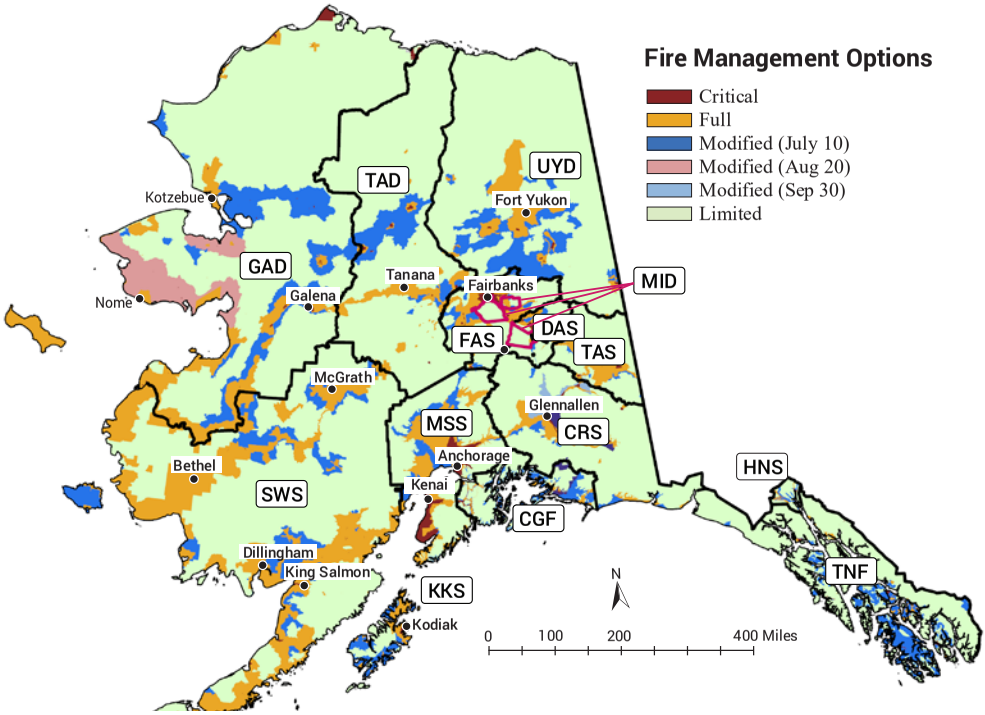
Federally administered Indian trust lands in Alaska include Alaska Native Allotments, the Annette Island Indian Reservation, some townsite lots created under the 1891 Townsite Act, and lands placed into trust under the fee-to-trust regulation. The BIA is tasked with the protection of Alaska Native trust lands and serves as the Jurisdictional Agency for fire management purposes.

An Alaska Native Allotment is a parcel or parcels of land, totaling up to 160 acres, conveyed to an Alaska Native under the terms and conditions of the Alaska Native Allotment Act of 1906 and the following 1956 amendment, and the Alaska Native Veterans Land

Allotment Equity Act of 1998 (P.L. 105-276). As of January 2025, there are more than 15,500 Alaska Native allotments throughout the state. Although allotments are not public land, the federal government, at the direction of Congress, protects allotments in perpetuity for future generations as a trust asset. This includes fire protection. Allotments are generally placed in **full protection** regardless of fire management strategy of surrounding lands.

Alaska Native allotment protection is a common assignment in Alaska (see Alaska Native Allotment Protection in the Operations section of this guide). Individuals choose their allotment locations for various reasons. As part of the application process, allotment owners were required to prove a traditional and customary use of the land. Uses may include residency, white spruce stands for cabins and lumber, berry gathering locations, fish harvesting, burial sites and hunting camps. In some cases, a parcel that had a traditional use was unavailable and the individual may have received a similar piece of land in another location. In addition to general directives to protect the land contained in the allotment, specific direction on protection priorities may be given based on how the land is used.

This aerial photo taken from an unmanned aircraft systems, otherwise known as a drone, shows the hose system set up to protect remote structures.


Fire Management Options
Critical
Full
Modified (July 10)
Modified (Aug 20)
Modified (Sep 30)
Limited
TAD
UYD
GAD
MID
DAS
FAS
TAS
MSS
CRS
SWS
CGF
HNS
TNF
KKS
Kotzebue
Fort Yukon
Nome
Galena
Tanana
Fairbanks
McGrath
Glennallen
Anchorage
Bethel
Kenai
Dillingham
King Salmon
Kodiak
N
0
100
200
400 Miles

GENERAL ALASKA FIELD SAFETY

- Only drink water from a secure source. Filter or boil all water taken from rivers, ponds, streams or lakes before drinking and do so only in emergencies.
- Avoid wild animals. Moose are Alaska's most dangerous animal, especially a cow with a calf or during rut (August to early October).
- Grizzly and black bears are common in Alaska. Keep a clean camp. Bear avoidance and mitigation information is in the Safety section of this guide.
- Carry insect repellent, a head net and anti-itch cream. Mosquitos, white socks, no-see-ums and moose flies are prevalent in Alaska. Bees and yellow jackets are also common. If you are allergic take precautions including notifying medical personnel when arriving.
- Personal hygiene is difficult on Alaska fires. Remote areas and primitive conditions are the norm. Wash your hands as often as you can. Use hand sanitizer and "bath in a bag" towels to avoid bacterial and viral infection. Keep a sanitary camp and latrine area. In primitive living conditions, you have a greater chance of contracting hepatitis, MRSA (Methicillin-resistant Staphylococcus aureus) and other unpleasant infections.
- Cut tree stobs below the surface of the forest floor to eliminate tripping hazards.
- Spruce trees have shallow root systems. They blow down in strong winds, especially after the roots have burned. Avoid working or putting personnel in spruce stands during these conditions.
- Tussocks, tundra and swampy wet areas create very unstable footing. Make sure log decks and bridges are secure.
- Wet feet lead to foot rot. Change socks often, dry boots when off shift, and dry feet after shift. Apply foot powder and moisturizer (i.e. bag balm or foot cream) to keep foot skin from rotting.

- Fuels in Alaska are volatile and flashy. Extreme fire behavior is common in seemingly moderate weather conditions. Expect the unexpected.
- Fire shelters are required personal protective equipment (PPE) in Alaska. Deployment sites are rare in Alaska fuel types. Find wet/swampy areas or stands of hardwoods if deployment is the last resort. Identify escape routes and safety zones early.

The North Star Fire Crew clears jack straw dead and down trees on a remote fire in Alaska.

BEARS AND ALASKA NON-LAW ENFORCEMENT FIREARMS PROGRAM

Bear encounters in Alaska are common. However, with proper prevention, mitigation and response procedures, the situation usually ends well for fire personnel and the bear.

A Few Things to Remember When Working Around Bears in Alaska

Rule #1 – Reduce Attractants. A fed bear is a dead bear. Bears are extremely food driven. If a bear physically obtains food from humans, it will be back. If this occurs, see response procedures and firearms ordering section below. Bears have even eaten sealed MREs. Consider moving camp if possible.

Sanitation – Keeping a clean camp is the best mitigation for minimizing attractants and keeping bears away. Backhaul trash early and often.

Rule #2 – Stay Alert and Aware of Surroundings. – If walking alone, make noise. Scan busy radio channels to create extra noise. Walk with the wind at your back if possible and avoid areas of thick vegetation such as willows or terrain traps.

Studies indicate that bears generally avoid groups of people. Place camps in areas that are visible and away from game trails. River corridors are naturally high animal traffic areas – unfortunately, these areas are also the most suitable locations to place camps. Avoid streams that have large numbers of salmon running.

Never run from a bear! Running may trigger a bear to chase you.

Response Procedures for Bear Issues

Communicate – Notify all camp personnel, incident personnel and dispatch/zone.

Hazing – Is used often but has short-lived results. Yelling, starting a chainsaw, lighting a fusee, and using a helicopter (if on the line) have been used. Know your limits. Firearm hazing (warning shots) is not permitted.

Firearms – You may order a shotgun kit if qualified. If not, order a qualified shooter as a bear guard.

Move camp – While this is a logistically taxing operation, it is effective and may be the best option.

Firearm Ordering

Any firearm issued from the warehouse must have an associated qualified shooter. The BLM AFS warehouse keeps a current list of individuals certified to carry. Note that the ordering party does not have to be certified but the name(s) of the certified person receiving the firearm must be given at the time of order. The IC or Safety Officer will track the firearm location and its assigned shooter and will certify that the shooter is within his or her agency requirements. Transport shotguns in hard cases with trigger locks to ensure the firearm is not exposed to dirt and grime. Empty the magazine and chamber for transport. The firearm comes with 10 slugs and additional ammunition should be ordered. Order a firearm with a certified shooter as a critical need if necessary. Firearms can be delivered by paracargo.

Bear Spray

The use of bear spray on fire assignments in Alaska is discouraged due to the hazards associated with potential for discharge during its transportation. The AFS Cache does not carry bear spray. If you have bear spray, know its limitations and how and when to use it. Bear spray is not a replacement for practicing bear awareness and safety techniques.

You must inform the pilot or vehicle operator that you have bear spray whenever you transport it in an aircraft or vehicle. This is true even when the bear spray is expected to be transported in an exterior compartment such as a helicopter basket, truck bed, or stake side. The pilot or vehicle operator will secure your bear spray for the trip. Improperly secured bear spray is a risk to all occupants in the aircraft/vehicle, anyone loading or unloading gear or cargo and anyone in the immediate vicinity of a discharge.

Bear spray is prohibited by the Federal Aviation Administration on all commercial flights and must be transported in an **approved** container on all government-operated flights per the terms contained in the NWCG Standards for Aviation Transport of Hazardous Materials (see the Aviation section of this guide). **There are no exceptions.** The pilot or vehicle operator may refuse to transport bear spray. Please note that approved containers are not readily available for purchase in most locations.

In camp, store bear spray in a location and manner that prevents accidental discharge. Bear spray cannisters contain pressurized gas; keep it away from flame and do not store it in an enclosed vehicle.

The effects of bear spray on humans can be severe. Bear spray contains capsaicin and related capsaicinoids designed to cause irritation and inflammatory response in the respiratory system, mucous membranes, eyes and skin. First aid for bear spray includes:

- Move away from the spray area into fresh air. Respiratory irritation can last for 45 minutes or more.
- Rinse eyes with cold water for 15-20 minutes. DO NOT RUB. If the patient is wearing contact lenses, rinse eyes for five minutes before removing the lenses and continuing to rinse. Seek medical attention.
- Remove any contaminated clothing. Rinse skin with cold water. Dishwashing soap can help remove the pepper oil.

Bear spray must be disposed of per the directions on the label. DO NOT put bear spray in the trash or package it with other backhaul.

Reporting Bear Encounters

To track occurrences and trends, the IC must follow up with dispatch and/or AFS Zone personnel. Per Alaska Department of Fish and Game (ADF&G) defense of life/property procedures, any action resulting in the death of a bear must have a written report submitted to ADF&G within 15 days. BLM will follow all Alaska State Laws. These forms are issued with all firearms from the BLM AFS warehouse and are in the firearms case. The hide, claws, and skull of the bear must also be sent to ADF&G in the case of a kill. The shooter is responsible for skinning the bear if a lethal take occurs. Notify the BLM AFS Safety Manager immediately.

Complete the bear encounter/sighting reporting form for ALL encounters and sightings, even when no further contact or issues occur. The form can be found on the BLM AFS SharePoint Site (under Safety), or available from your IC, your fire point of contact, or dispatch office. Turn the form in to the BLM AFS Safety Manager.

OFF-HIGHWAY VEHICLE OPERATIONS

NOTE As per FA-IM-2016-022, BLM personnel must have a waiver to use all-terrain vehicles (ATVs). This includes any wildland fire management activities, regardless of incident jurisdiction or project/activity location. Consult with Safety Managers for current waivers and status. Employees of cooperating agencies/ entities may utilize ATVs and utility terrain vehicles (UTVs) on BLM incidents if allowed by their individual agency/entity policy. UTVs must be equipped with a roll cage.

- Off-road vehicle operation reference; BLM Manual H-1112-1 Ch.17 Off-Highway Vehicle Safety. All requirements listed in this reference must be followed when utilizing OHVs on BLM-managed fires or by BLM personnel.

- UTVO/ATVO Red Card Qualification required.
- ATVs may only have a single rider. Passengers are prohibited even if ATV is designed for two riders.
- UTV passengers are limited to the number of seats installed by manufacturer. Seat belts are required for all occupants when the vehicle is in motion.
- PPE is required while loading/unloading ATV/UTV from trailer or vehicle.
- Secure cargo loads to maintain the vehicle's center of gravity and ensure they do not exceed the manufacturer's maximum carrying capacity recommendations.
- Secure a 5-pound class B:C fire extinguisher to the vehicle when transporting external fuel containers with a UTV/ATV.
- Use only if essential to accomplish mission.
- Carry the following equipment when operating an OHV in the field:
  - First aid kit – In addition to a standard first aid kit, a bloodborne pathogen protection kit is recommended. Operators should enclose the first aid kit in a sealable plastic bag or other dust and water-resistant container.
  - Personal communications device and spare batteries – This equipment may include a two-way radio, cellular phone, satellite phone or other BLM-approved equipment.
  - Manufacturer's tool kit, including a manual and low pressure tire gauge.
- Riding alone in the backcountry is prohibited unless otherwise authorized.

- Securely attach all tools or equipment to the vehicle to prevent loose cargo from falling under the wheels, to prevent cargo from striking the rider or vehicle, or to prevent a sudden shift in the center of gravity.
- Alaska's landscape is very fragile. Tread lightly! Avoid sensitive areas such as wetlands, sloughs, bogs and meadows.

For additional guidance, reference Interagency Standards for Fire and Fire Aviation Operations, Chapter 14.

Firefighters use utility terrain vehicles to support prescribed burning on military training lands in Interior Alaska.

ALASKA BOAT SAFETY

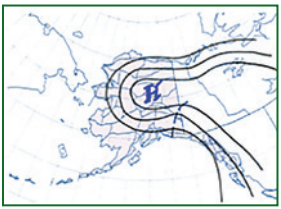
Alaska has one of the highest boating fatality rates in the nation. Do not underestimate Alaska's cold swift rivers!

- All motorized boats must be registered.
- All vessels must receive a documented inspection, which includes.
  - > Hulls – Bottoms inspected. Drain plug(s) installed before launch. General inspection / walk around.
  - > Outboard Engines – Belts, hoses and fittings checked. The water pump is operational. A water stream is a telltale that it is. Props and lower units inspected. Engines(s) secure on transom, clamps or bolt nuts tight. Start and warm up the engine for five minutes, monitor gauges, check fuel and cooling systems for leaks. Test forward and reverse gears, steering and emergency cut-off switches.
  - > Boats will have a port line, bowline or stern line to secure boat to shoreline or dock.
- **All personnel must wear Coast Guard approved personal flotation devices (PFD)**. Remain seated while in watercraft. Take fire packs off and make sure tools are sheathed.
- Never overload a watercraft. Post the maximum safe load limit on each craft under 26 feet in length.
- Secure cargo to ensure it will not shift when the craft is in motion.
- Spare oar, paddle, pole or other alternate propulsion must be on board.
- A first aid kit and fire extinguisher are required.
- Have a compass and/or GPS.
- Use handheld radio for communication. Dedicate frequency if needed.

- Have a float plan. Discuss mission, time of pick up, crew name, overhead names, drop point, boat operator's name and communicate to Incident Command Post or Operations.
- Just like flying, weather can determine mission.
- No smoking.
- Manifest passengers. Can use helicopter manifest style.
- Life ring for boats over 16 feet.
- Sound producing device, such as a whistle or air horn, is required.
- When using more than one boat; space out on waterway for less wake.
- Give a thorough boat safety briefing to all passengers.

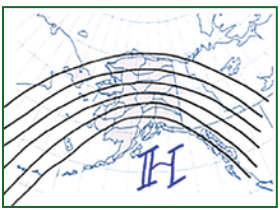
Firefighters load gear onto a boat while a qualified boat operator holds the Zodiac steady.

CRITICAL WEATHER PATTERNS IN ALASKA



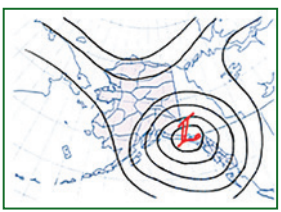
Upper-Level Ridge & Breakdown

- Brings the most lightning to Alaska.
- Starts with an upper-level ridge over
- Canada, pushing into Alaska.
- Can last several days to weeks, causing significant drying of fuels.
- When ridge weakens, this allows unstable air to move in along edges, bringing dry thunderstorms.
- Ridge breakdown is a critical fire
- weather pattern in many areas.



Southwest Flow/Flat Ridge

- Wettest pattern for most of Alaska, usually signals the end of fire season.
- Upper-level flow parallel to the Alaska Range brings moisture across the state from west to east.
- Allows clouds and rain to reach into the usually protected areas near the Alaska-Canada border.
- Copper River Basin may be protected by Talkeetna Mountains.



Backdoor Rain Pattern

- Season-slowing event.
- There is a surface and upper-level closed low near Yakutat.
- Easterly flow will bring clouds and rain from Canada into the Upper Tanana and Yukon valleys.
- Amount and extent of precipitation
- will be difficult to predict.

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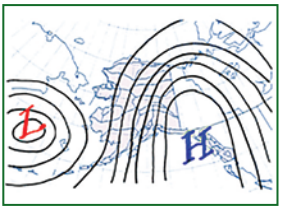
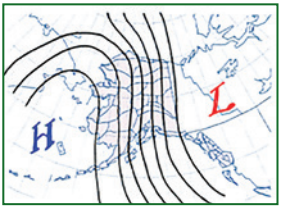


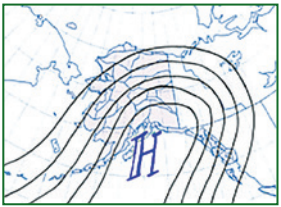
South Winds Aloft (Chinook Winds)

- Creates warm, dry winds that fan existing fires and dry fuels.
- These downslope winds form downwind of mtns, mainly north of:
  - > Chugach Mtns (Copper River Basin)
  - > Alaska Range (southern Interior)
  - > White Mountains (northern Interior)
  - > Brooks Range (North Slope)
- Winds can funnel and be very strong through the mountain passes near Healy and Delta Junction.



North Winds Aloft

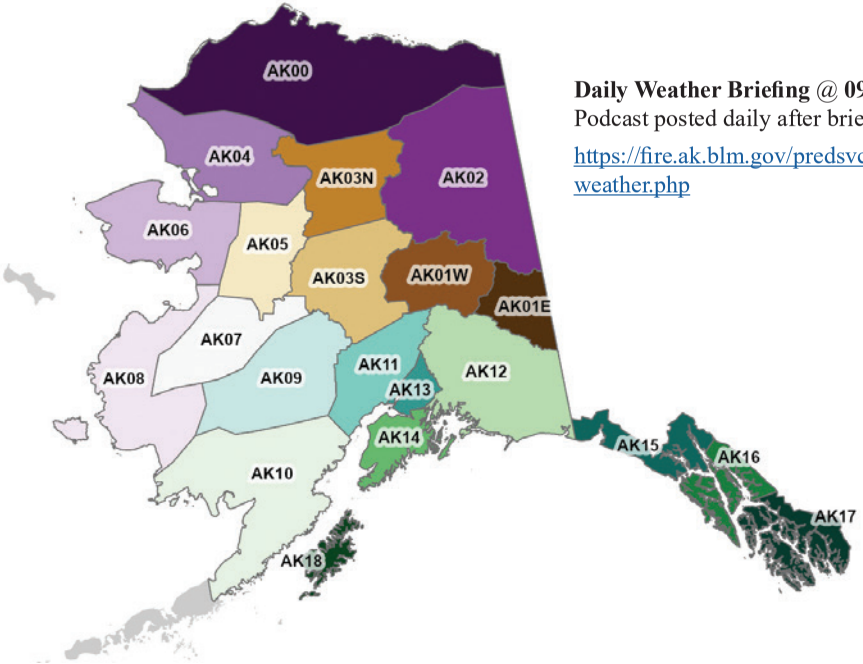
- Strong north winds at surface bring very dry air and extreme fire danger, mainly to Southcentral.
- High pressure to north or west causes strong winds through mountains which funnel and accelerate in passes.
- Air is cool but has little moisture due to downslope warming/drying over mountains; acts as a dry cold front
- Existing fires may exhibit sudden and extreme fire behavior.



Taku Winds

- One of few patterns that brings high fire danger to Southeast Alaska.
- High pressure northwest of the
- Panhandle tilts to the northeast.
- Upper flow comes over Canada and
- into the Alaska Panhandle.
- Downsloping over the coastal mountains creates strong, dry offshore winds, raising fire danger.

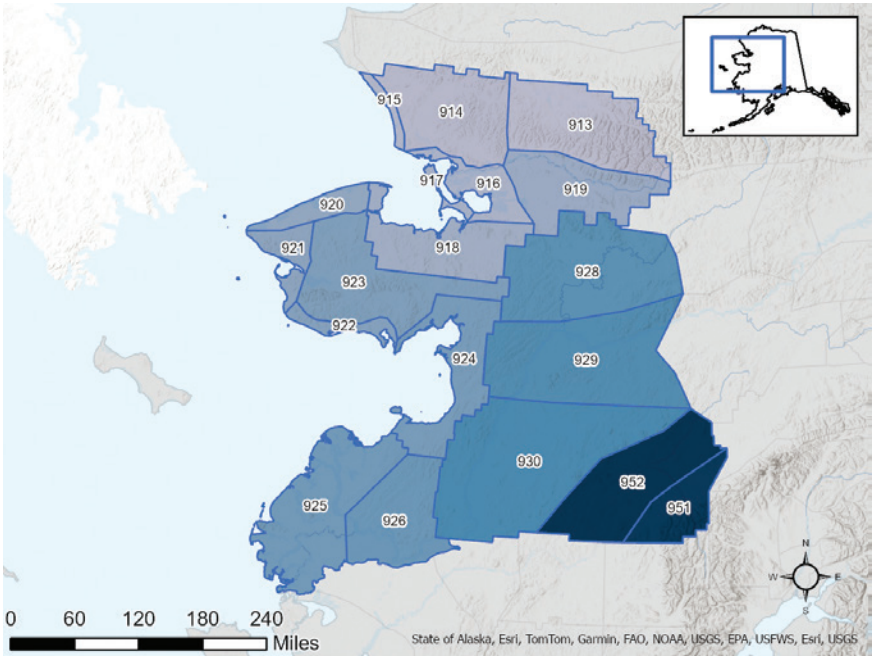
Alaska Predictive Service Areas (PSAs)



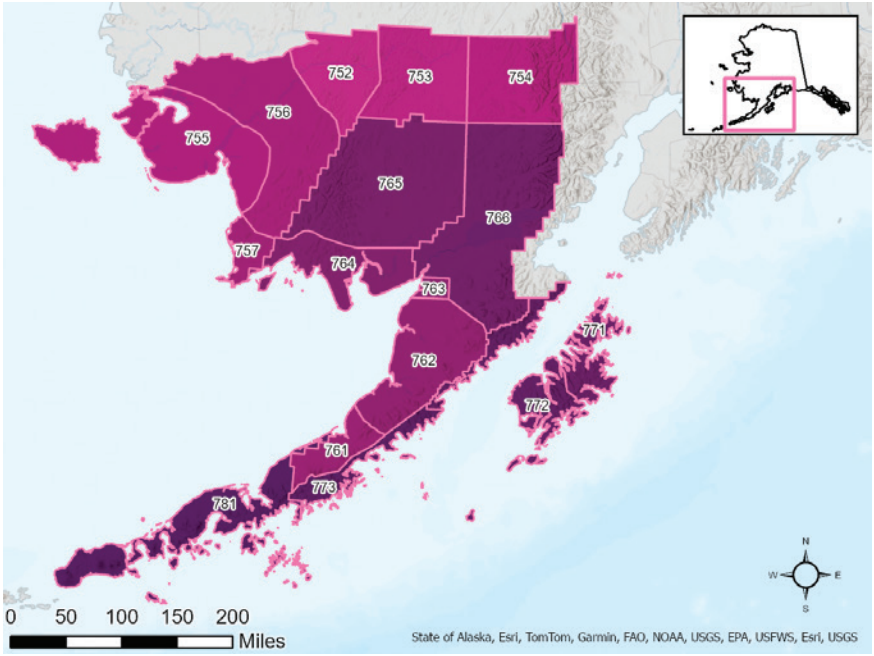
Daily Weather Briefing @ 0945
Podcast posted daily after briefing

https://fire.ak.blm.gov/predsvcs/weather.php

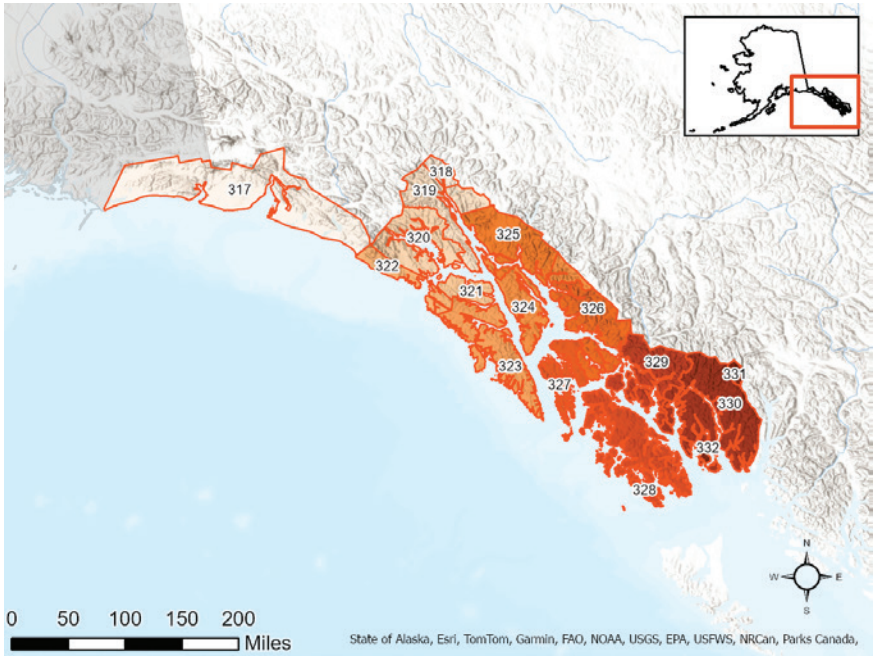
Alaska PSA for Western Alaska



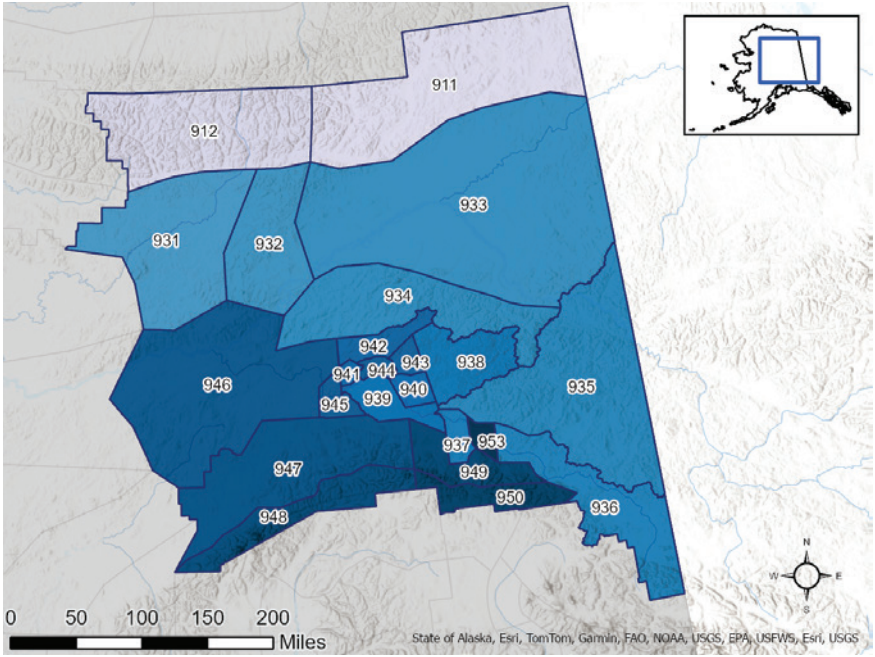
Alaska PSA for Southwest Alaska



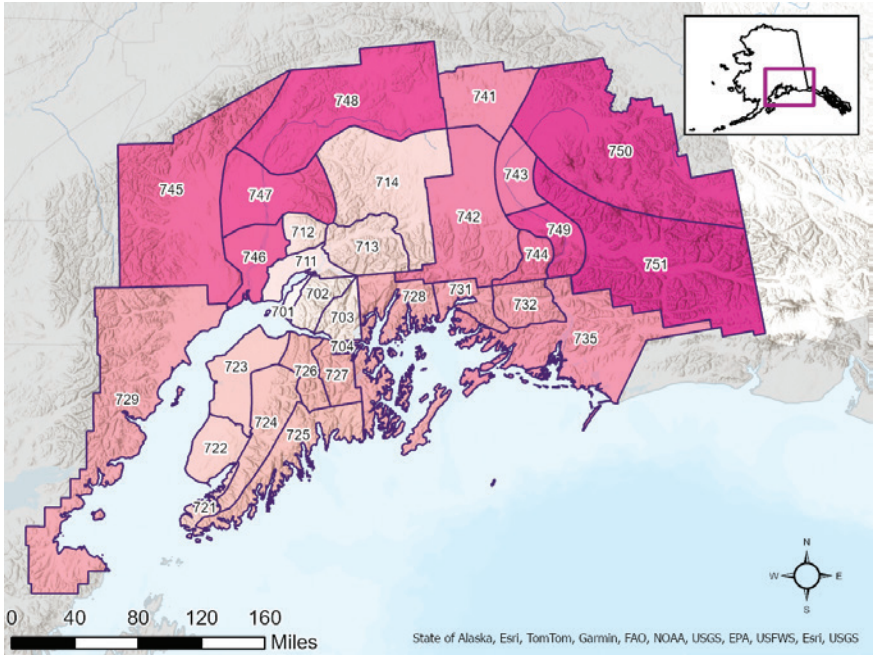
Alaska PSAs for Southeast Alaska



Alaska PSAs for Eastern Interior Alaska



Alaska PSAs for Southcentral Alaska



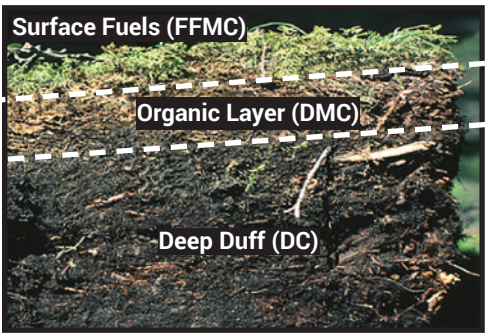
CANADIAN FOREST FIRE DANGER RATING SYSTEM (CFFDRS) AND FIRE WEATHER INDEX (FWI)

Because it accurately portrays the fluctuations in fire season conditions, this rating system has been utilized in Alaska since 1992. The FWI system is comprised of codes and indices which fluctuate based on environmental parameters. They are not directly measured in the field but are instead based on 1400 Alaska Daylight Time (AKDT) weather observations and the previous code or index value. The CFFDRS focuses on below surface fuels to determine fuel moisture codes and indices.

Fine Fuel Moisture Code (FFMC) – is a numeric rating of the moisture content of litter and other cured fine fuels. This is an indicator of the relative ease of ignition and the flammability of the fine fuels.

Duff Moisture Code (DMC) – is a numeric rating of the average moisture content of loosely compacted organic layers of moderate depth. This gives an indication of fuel consumption in moderate duff layers and medium-sized woody material.

Drought Code (DC) – is a numeric rating of the average moisture content of deep compact organic layers. This is a useful indicator of seasonal drought effects on forest fuels and the amount of smoldering in deep duff layers and large logs.

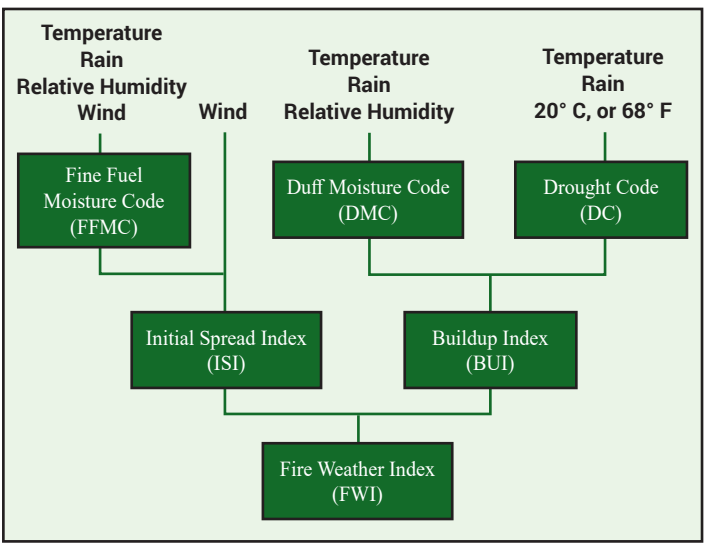


Initial Spread Index (ISI) – is a numeric rating of the expected rate of fire spread. It combines the effects of wind and the FFMC on rate of spread without the influence of variable quantities of fuel.

Buildup Index (BUI) – is a numeric rating of the total amount of fuel available for combustion. It combines the DMC and the DC.

Fire Weather Index (FWI) – is a numeric rating of the fire intensity. It combines the ISI and the BUI. It is suitable as a general index of fire danger throughout the forest areas of Alaska and Canada. FWI values are found at https://akff.mesowest.org/

FWI Structure and Thresholds



FFMC – Fine Fuel Moisture Code; 5- to 16-hour time lag

Range	Class	Forest floor Thresholds and Interpretations
0 to <80	LOW	Ease of Ignition and flammability in fine dead surface fuels shaded by forest canopy. • Use the Grass Fuel Moisture Code (GFMC) for cured grasses. • Below 74, Little chance of ignition or surface fire spread with an open flame. • At 80, Active spread in light fuels. • At 86, open flames in forest fuels. • At 90, ignition potential is high. • At 92, very intense surface flames. • 96 is the typical maximum value.
80 to <86	MOD	
86 to <89	HIGH	
89 to <92	V HIGH	
92+	EXT	

DMC – Duff Moisture Code; 15 day or 360-hour time lag

Range	Class	Thresholds and Interpretations
0 to <40	LOW	Mid-level drying - a measure of resistance to control. • Represents loosely compacted organic layer 0-4" below surface. • Duff layer not involved below 20. • At 40, noticeable increase of duff influence on surface fire behavior. • Extreme fire behavior becomes possible above 60. • A key factor in fire behavior during June and July. • One of the inputs to BUI. • Maximum values can be over 300.
40 to <60	MOD	
60 to <80	HIGH	
80 to <100	V HIGH	
100+	EXT	

DC – Drought Code; 53 day or 1288-hour time lag

Range	Class	Thresholds and Interpretations
0 to <150	LOW	A measure of seasonal drought effects on forest fuels - a measure of resistance to extinguishment. • Below 300, mop-up relatively easy. • Between 300 and 500, mop-up becomes more difficult. • Above 500, dry mop-up not possible and wet mop-up difficult. • A key factor in fire behavior in late July and August. • The other input to BUI. • Maximum values over 600 during very dry seasons.
150 to <350	MOD	
350 to <400	HIGH	
400 to <450	V HIGH	
450+	EXT	

ISI – Initial Spread Index

Range	Class	Thresholds and Interpretations
0 to <2	LOW	Best indicator of pre-green potential for fire ignition and spread. • Changes through day due to windspeed. Monitor expected change. • Beware of forecast winds of 15mph. • Below 2, little ignition or spread. • At 5-8, primarily surface fire. • Above 10, anticipate extreme fire behavior. • Wind is the most important factor.
2 to <5	MOD	
5 to <8	HIGH	
8 to <11	V HIGH	
11+	EXT	

BUI – Buildup Index

Range	Class	Thresholds and Interpretations
0 to <40	LOW	Overall fuel availability and season severity. • Indicates depth of burn, fuel consumption and mop-up problems. • At BUI of 40, heavy fuels just begin to burn. • At BUI of 80, large fire growth more likely. • 12-14 rain-free days corresponds to 60-point increase in BUI, beware of crown fire. • Standard measure of seasonal severity that combines DMC and DC.
40 to <60	MOD	
60 to <90	HIGH	
90 to <110	V HIGH	
110+	EXT	

FWI – Fire Weather Index

Range	Class	Thresholds and Interpretations
0 to <9	LOW	A general index of head fire flame length that varies through the day due to changes in wind. • Good indicator of extreme fire behavior. • At 20, Intense surface fire & torching begin. • At 28, frequent torching causes problems. • By 35, expect active crown fire behavior. • A combination of BUI and ISI. • Represents weather's effect in fireline intensity.
9 to <18	MOD	
18 to <28	HIGH	
28 to <35	V HIGH	
35+	EXT	

GFMC - Grass Fuel Moisture Code for Matted Grass; 1-hour time lag

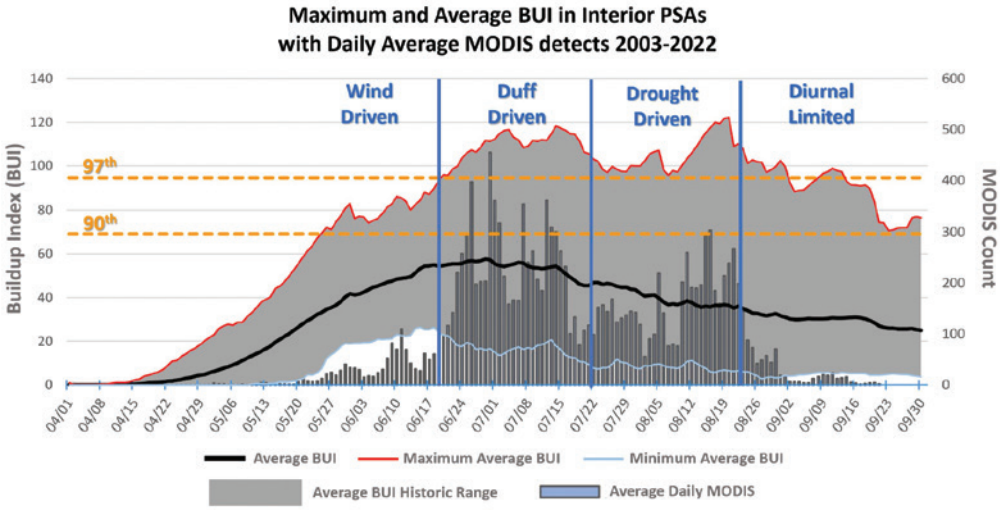
Range	Class	Cured Grass Thresholds and Interpretations
0 to <86	LOW	To estimate percent grass fuel moisture, subtract the GFMC value from 101. • GFMC < 89 equals moisture of extinction for cured grass fuel models is 12-15%. • Changes rapidly with weather changes and shading. • Fire spread easily dictated by wind direction.
86 to <91	MOD	
91 to <94	HIGH	
94 to <97	V HIGH	
97+	EXT	

Table to determine
Grass Fuel Moisture Code (GFMC) / 1-hr fuel moisture

GFMC		Relative Humidity (%)							
Cloud Cover	Temp	10%	20%	30%	40%	50%	60%	80%	100%
Overcast	41°F	91	88	85	84	83	81	78	68
	50°F	92	89	87	85	84	83	79	69
	59°F	93	90	88	86	85	84	79	69
	68°F	94	91	89	88	86	84	81	71
	77°F	95	93	91	89	87	86	82	72
	86°F	96	94	92	90	89	87	83	72
Broken, Clouds > 50% of sky	41°F	94	91	89	87	86	85	83	81
	50°F	95	92	90	88	87	86	84	82
	59°F	95	93	91	90	88	87	85	83
	68°F	96	94	92	91	89	88	86	84
	77°F	97	95	93	92	91	90	87	84
	86°F	98	96	95	93	92	91	88	85
Scattered Clouds < 50% of sky	41°F	96	93	91	90	89	88	86	84
	50°F	96	94	92	91	90	89	87	86
	59°F	97	95	94	92	91	90	88	87
	68°F	97	96	95	93	92	91	90	88
	77°F	98	97	96	95	94	93	91	89
	86°F	99	98	97	96	95	94	92	90
Clear Skies	41°F	97	95	94	93	92	91	89	88
	50°F	98	96	95	94	93	92	90	89
	59°F	98	97	96	95	94	93	92	90
	68°F	98	97	97	96	95	94	93	91
	77°F	99	98	97	97	96	95	94	92
	86°F	99	99	98	98	97	96	95	94

Seasonal Trend Analysis *– Alaska's equivalent to Pocket Cards*

Current BUI graphs for all PSAs can be found at https://fire.ak.blm.gov/predsvcs/fuelfire.php



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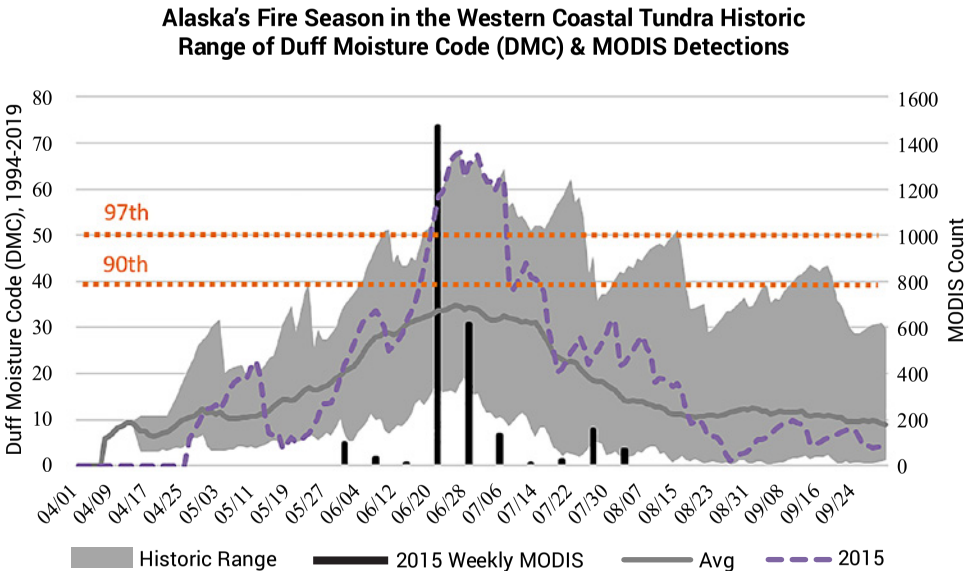
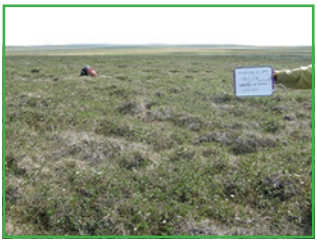


FUELS

Common Fuels Found in Alaska

Black Spruce (C-2 or SH5)

- Extreme rates of spread possible under favorable weather conditions.
- Feathermoss on surface is generally more flammable than birch and leatherleaf.
- Tree canopies extend down to ground.
- Transitions rapidly from surface to torching/spotting or crown fire.
- Alaska's problem fuel.



Tundra (O-1a and O-1b or GS3)

- Heavy load of matted dead tussock mixed with live fuels.
- Drought can be a factor.
- Wind driven fire can spread rapidly.
- Fires will back readily into the wind.

Mixedwood (M-1 and M-2 or TU5)

- Will burn much more readily before green up, especially with taller spruce.
- Significant torching and spotting under dry conditions.
- Percentage of conifer dictates potential for crown fire.
- White spruce has a shallow root system and is very unstable after surface fire.

(Continued on next page)

Hardwoods (D-1 and D-2 or TU1)

- Generally only surface fire.
- Slow to moderate spread rates and low flame lengths.
- After green-up, usually act as a barrier until severe drought cures surface vegetation.
- Hardwoods may not effectively slow fire spread in a dry season or in extended drought.

Beetle Kill

- Normally found in white spruce stands.
- Well established on the Kenai Peninsula and Southcentral Alaska.
- More open stands can have dense grass surface fuels which can be extremely flammable before green-up.
- Shallow rooted trees and very unstable after mortality.

Burn Scars

- Do not always assume they will be an effective barrier, especially during prolonged drought.
- Ask someone with local expertise.

FIRE OBSERVATION/DESCRIPTION

- No open flame in surface fuels.
- **White smoke.**
- Smoldering ground fire.

- Visible open flame, **1-4 ft.** in surface fuels.
- Surface fire only.
- Unorganized flame front.
- Little or no spread.

- Organized surface flame front, **4-8 ft.** in surface fuels.
- Moderate rate of spread.
- Vigorous surface fire.
- May see some torching along the perimeter and/or within the fire.

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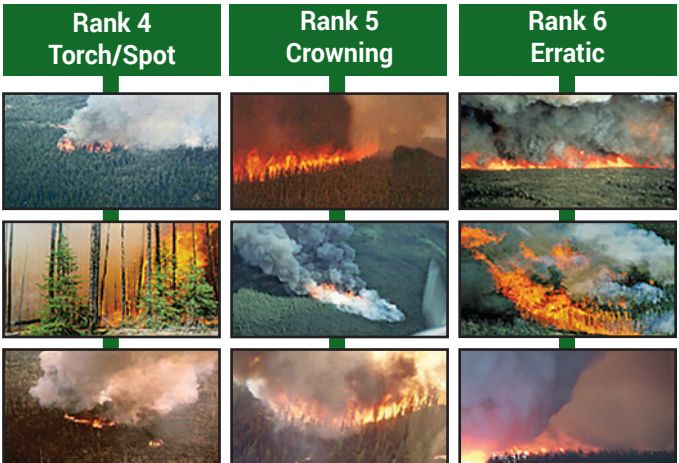
FIRE OBSERVATION/DESCRIPTION

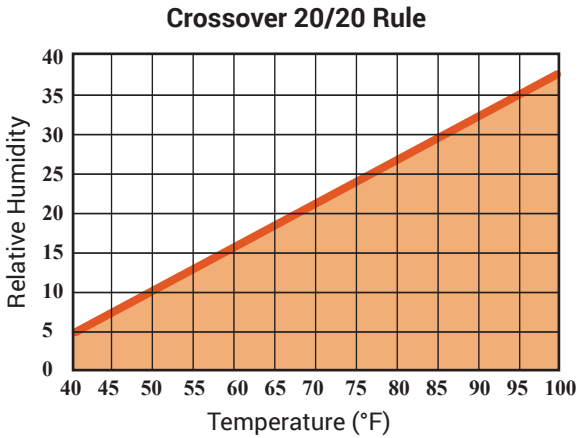


- Organized surface flame front, **8-12 ft.** in surface fuels.
- Moderate to fast ROS on the ground.
- **Grey to black smoke.**
- Torching/short range spotting.
- Disorganized crown involvement.

- Organized crown fire front.
- Moderate to long range spotting.
- Independent spot fire growth.
- **Black to copper smoke.**
- **12-18 ft.** flames in open and slash fuels.

- Organized crown fire front.
- Moderate to long range spotting.
- Independent spot fire growth.
- Presence of fire balls and whirls.
- Violent fire behavior.

POTENTIALLY SEVERE FIRE WEATHER



The combination of temperature and relative humidity, falling below the orange line in this graph, signals potentially severe fire behavior. Beware that severe conditions may exist even if crossover doesn't occur. The 20/20 Rule is a specific example of this when temp is 20°C, or 68°F.

Alaska Specific Guidelines

- Black spruce is more likely to burn when temperatures are above 70°F and relative humidity (RH) levels are near or below 30%.
- Fire behavior increases significantly after seven continuous days above 70°F.
- Check viability of barriers after 12-14 days of little or no precipitation.
- Expect an increase in the amount of jackstraw in burned areas with a DMC of 65 or greater.

- FFMC above 92 can support extreme fire behavior.
- BUI above 80 is a sign that fuels below the surface are dry enough to support increased fire behavior.
- Do not be fooled by 1 inch of rain. A lot more is needed to put fires out, especially when BUIs are over 80.
- Fires are much harder to mop up in August than they are in June.
- Do not underestimate fire behavior in black spruce.
- Long daylight hours and high sun angle lead to long burn periods in June and July.

The East Fork Fire in Southwest Alaska backs into the wind on June 14, 2022, burning through a mixture of tundra and mixed trees.

FIREFIGHTING RESOURCES IN ALASKA

BLM AFS Fire Specialist Section

The Fire Specialist Section is a unique program specific to Alaska. Personnel in this section are skilled in a variety of functional areas including operations, logistics, plans and air operations. Diverse backgrounds and experience make fire specialists a valuable resource to consider for many positions on your incident.

Common roles filled by fire specialists include Staging Area Manager; Type 3 operations/logistics/plans; remote base camp manager; air operations; and communications.

BLM AFS Smokejumpers

The Alaska Smokejumpers consist of approximately 70-80 highly trained, highly experienced and skilled wildland firefighters.

The Alaska Smokejumpers' primary mission is to provide highly qualified, safe and aggressive firefighters who can quickly and effectively respond to initial attack, extended attack and point protection missions in Alaska and the Lower 48.

Secondary missions include providing support for Incident Management Teams (IMT) and performing in specialized roles unique to Alaska. These roles include bear guards, boat operators, helispot construction and water handling. Smokejumpers specialize in managing fires and logistics in the remote, roadless areas of the Alaska.

Smokejumpers can be ordered for initial attack, extended attack or point protection by ordering "a load of smokejumpers" through Zone or State dispatch centers. A load of smokejumpers consists of 8-12 jumpers with saws, pumps, hose, food and water sufficient for 48-72 hours. See the Aviation section in this guide for more information.

Alaska Handcrews

Alaska Interagency Hotshot Crews (IHC)

The BLM AFS hosts the Chena and Midnight Sun IHC crews out of AFS facilities on Fort Wainwright and the Alaska Division of Forestry & Fire Protection (DOF) hosts the Pioneer Peak IHC in Palmer.

Other DOF And AFS Agency Crews

DOF Gannett Glacier Type 2 Initial Attack Crew – based in Palmer.

DOF White Mountain Type 2 Initial Attack Crew – based at the DOF compound in Fairbanks.

BLM AFS North Star (volunteer) Fire Crew – Type 2 training crew that develops entry level hand crew personnel. Although classified as a Type 2 crew, the North Stars are trained and equipped to IHC standards. The North Star Fire Crew is designed to provide an experienced pool of potential recruits for the AFS Type 1 Interagency Hotshot Crews, provide entry level positions, provide AFS with an additional quick response hand crew, and provide Alaska natural resource agencies a low-cost, labor-intensive crew for project work.

Cooperative Alaska Fire Crews

Type 2IA Yukon Fire Crew – Operates under a cooperative agreement between Chugachmuit, Inc. and the State of Alaska. Chugachmiut is a tribal consortium created to promote self-determination to the seven Native communities of the Chugach Region in Southcentral Alaska. The crew is based in Soldotna, Alaska.

Tanana Chiefs Conference (TCC) T2IA Fire Crew – Consists mostly of Alaskan Native Tribal members. It is primarily supported by cooperative agreements between Tanana Chiefs Conference and the State of Alaska. The crew supports wildland fire incidents and works on fuel reduction projects in Alaska. TCC is a regional, non-profit consortium of villages and Tribes in Interior Alaska. The crew is based in Tok.

Other Alaska Type 2 Crews

Village Emergency Firefighter (EFF) Type 2 Crews

- The Alaska DOF sponsors Type 2 handcrews and modules based in Alaska communities.
- Hired and assembled on an as-needed basis. Qualifications and experience vary greatly depending on the personnel available.
- Do not come equipped. All support equipment, including Nomex, tools, line gear, chainsaws, radios, etc. must be ordered.
- EFF crews come with a qualified overhead (CRWB and FFT1s) and fallers.
- Order a Strike Team Leader – Crew (STCR) for each EFF crew.
- EFF crews can be ordered as a full crew (16-20 personnel) or as a Squad or module. For L48 assignments, crews will have 20 crewmembers.
- EFF crews are available for fire assignments in Alaska and the L48.

BLM Type 2 Wildland Fire Contract Handcrews (AK2CC)

AFS contracts village-based Type 2 crews. For 2025, contractors and assembly points include:

- **CATG (Council for Athabascan Tribal Governments)**
  > Assembly Points: Fort Yukon, Venetie, Arctic Village
- **Mooseheart Crew (Rural Metro Fire in California)**
  > Assembly Points: Minto, Tanana
- **K-River #1 and K-River #2 (SES Fire)**
  > Assembly Points: Huslia, Hughes, Allakaket
- **Nulato #1 and #2 crews (Nulato Hills, LLC)**
  > Assembly Points: Ruby, Galena, Koyukuk, Nulato, Kaltag
- **Paradise Crew (TCC)**
  > Assembly Points: Grayling, Anvik, Shageluk, Holy Cross

- **Big River Crew and Clear Water Crew (Rural Metro Fire)**
  > Assembly Points: Marshall, Pilot Station, St. Mary's, Mountain Village

Important notes for AK2CCs:

- These are standard Type 2 crews trained and qualified to national standards.
- Mandatory Availability Period – June 1 to August 31.
- Crews are fully outfitted at assembly points and ready to work.
- Crews will have a minimum of two sawyers. Up to four sawyers can be requested at time of order.
- AK2CC are dispatched through the Zone dispatch centers.
- These crews are NOT on the EFF Crew Rotation list.
- Crews can be ordered for use on all incidents in Alaska and L48.
- The AK2CC crews may or may not come with a Contracting Officer's Representative. The COR will make that determination.

FIREFIGHTING IN ALASKA

Alaska Tactics

Alaska tactics differ from those in the Western U.S. due to the abundance of water and the thick organic layers covering the ground. Handline construction is rarely used. Line construction in most Alaska fuel types consists primarily of saw line and hose lay, or saw line reinforced by using beaters (limbed up spruce boughs or pre-constructed synthetic models) to swat down flames and sweep in burning materials off the edge. Fires in Alaska usually have a water source nearby to support pump and hose operations. Handline construction is very time consuming, labor-intensive and damaging to the land. If handline is required, use cold trailing along the edge and dig line where needed by anchoring and tying into the cold black.

One effective method of direct handline construction:

- Use leapfrog method – have each person take approximately 10-15 feet of proposed line.
- Chop and pull out a small section at your starting point so that the person behind you has a target.
- Cut parallel lines 12-18 inches in width with axe side of Pulaski.
- Chop end point and begin to pull up the duff with the hoe end.
- Work back to starting point, trying to roll sections into manageable pieces.
- Place rolls on green side of the line with the root side down to preserve them for rehabilitation.
- Clean out organic material down to permafrost or water.

Hardwood stands typically make good fuel breaks due to the moderate fire behavior associated with the hardwood fuel types. Remember, spotting is the rule, not the exception, for black spruce. Expect extreme

fire behavior when relative humidity levels are less than 30% (see the Fuels, Weather, and Fire behavior section of this guide).

Mop-Up

Because the deep duff in black spruce and hardwood forests can smolder throughout the entire winter, extensive mop-up, thorough gridding, and cold trailing are necessary. Often hot areas will not be visibly smoking. Most buried or capped heat in the duff and rotted roots is found by touching the area. Where permafrost is present underneath the organic layer, use it to cool the burning materials. Always cold trail after mop-up. A single, missed ember in the duff will grow if not found and extinguished.

Point Protection

Point protection in Alaska generally consists of protecting small cabins, homesteads and larger sized allotments. The resources commonly used for these missions are smokejumpers, Zone personnel, Fire Specialists and hotshot crews. During an active fire season, resources can quickly be stretched thin, resulting in many simultaneous small-scale point protection operations in the Zones. In AFS protection areas, personnel will be working for a Zone (see the Fire Management section of this guide).

Fire reports, supply orders and resource orders will go through Zone dispatches, while questions regarding tactics and site-specific issues will be directed to the FMO, AFMO or their appointed representative. Make sure objectives, tactics and values at risk are understood prior to departing. Be aware that all of those can change depending on where you are on a large incident. Point protection in Alaska is almost always remote and relies heavily upon helicopter support. It is not uncommon to access sites using boats.

Cabin Protection

Remote cabin sites are scattered throughout the Alaska Bush. They range in size from a 10-by-10 trapping cabin with a sod roof to a full-sized home with all the amenities. Some are located on private landholdings or on trap lines and mining claims. The following are some things to consider:

- **Water Sources** – If you have a water source, evaluate whether it is close enough for a lightweight pump kit or if a Mark 3 is needed. Ensure the pump site is protectable and practical.
- **Time Frames** – Evaluate if the fire is going to reach you and how long it will take to reach the area of protection. Are you going to be forced to burnout to save the cabin or do you have time to do prep work? A little prep work goes a long way and there is almost always prep work that needs to be done.
- **Resources** – There may not be other resources available to assist you due to higher priority incidents. However, don't hesitate to order additional resources if they are needed to meet objectives. In Alaska, you can do a lot of firefighting with a Pulaski, light pump kit and a backpack pump.
- **Occupied Cabins** – It is not uncommon for a small remote cabin to be occupied. Individuals choose to live a secluded remote lifestyle for a reason and "The Code of the Bush" should be respected. Be sure to announce your arrival to a cabin site or camp by projecting "Hello" or something equivalent at a shouting distance. It is advisable to let the occupants know that you are a firefighter since not all remote-dwelling citizens look favorably upon government agencies. If you use any firewood or food at a cabin site, be sure to replace it prior to departing. This could be a lifesaver for someone seeking shelter in the winter. If you are not using the latrine, be sure to bury waste in an area where mop-up will not occur and in an area that will minimize impact on the cabin site.

Cabin Protection Set-up Tips

Cabin protection in Alaska consists of two primary tasks: structure protection and surrounding land preparation.

Structure protection:

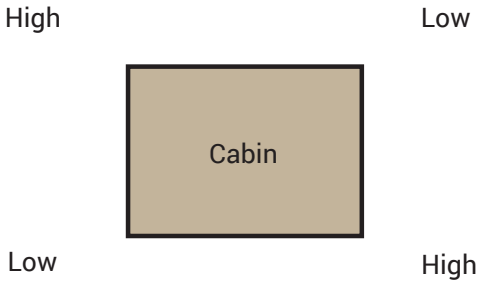
- Identify fire hazards that need to be mitigated to protect cabin.
  - > Are the roof and eaves clear?
  - > Are there building materials or firewood stacked against the cabin?
  - > Are there trees, snags, or other vegetation that poses a direct hazard to the cabin?
- Take the extra step to prevent water from entering the structure when using sprinklers/hose.
- Use extra sprinklers on wood piles or surrounding fuels.
- See Sprinkler System Set Up Tips and Pump Tips later in this section for hints on setting up sprinklers for site protection.

Surrounding Land Preparation Tips

- **DON'T** get focused on just the cabin. White spruce stands around structures have been known to fall over, destroying cabins days after firefighting resources have left the scene. Due to shallow root systems, green spruce generally starts to fall over 1-2 days after the area has burned, creating a work hazard and a line holding issue.
- Consider setting up sprinklers in green tree stands that have a potential to fall over and impact the structure.
- Cut problem trees, snags and vegetation.
- Stack rounds away from structure and scatter limbs.
- Remove hazard dead and down trees.
- Clear away enough to accomplish the job, but remember why people have cabins in the woods.

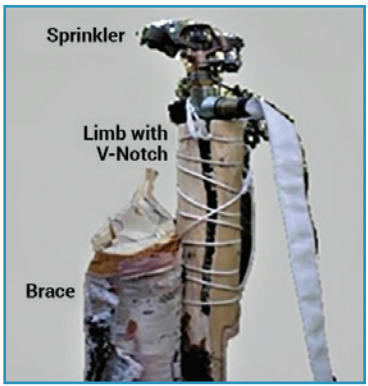
Sprinkler System Set Up Tips:

- Both AFS and DOF have sprinkler kits available from the warehouse. There are four types of sprinkler kits. Check the Alaska Interagency Catalog of Fire Supplies and Equipment or ask about the kits available to your agency and region.
- Sprinkler coverage should wet all surfaces of the structure. One kit does not equal one cabin. Use as many as you need to cover all surfaces.
- Sprinklers at the cabin corners provide the best coverage with two at or above the roofline and another two below the roofline:



- Adjust sprinklers for long-range spray or short-range mist.
- Sprinkler head attachment methods:
  - > Set sprinkler heads on poles, tripods or stands to get them above the ground/cabin roof level.
  - > Use p-cord or fiber tape to secure to pole, stand or tripod.
  - > Bring your own fiber tape; it is not provided in sprinkler kits.

> Cut and notch method: Cut a V-notch in a limb to prevent the sprinkler from rotating when charged. If necessary, use another pole/limb with notch to support the hose feeding the sprinkler.*(right)*.

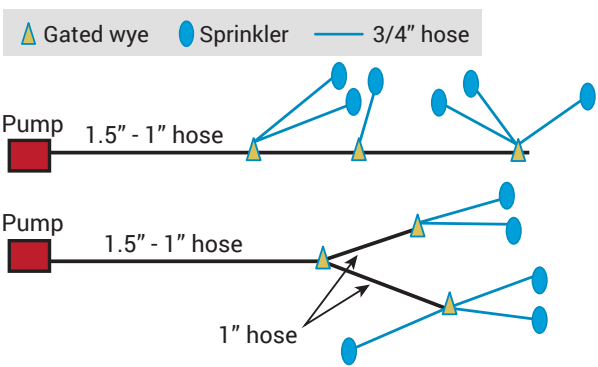


> Secure the sprinkler/ hose with p-cord or tape. Reinforce with shims or cardboard if necessary.

> Cut a brace for your limb/ pole to prevent excess movement when the hose is charged.

> TEST YOUR SYSTEM. Make sure your sprinklers are secure under pressure.

- Run each sprinkler on one section of 3/4" hose attached directly to a gated wye off one-inch or larger hose *(see diagram below)*.



Pump Set-Up Tips

- Shindaiwa type pumps work well close to water sources.
- Use five gallon can and fuel line attachment in sprinkler kit for Shindaiwa.
- Mark 3 pumps work well when the structure is far from or high above the water source.
- Tie down pumps and fuel cans because rivers often rise unexpectedly.
- If pumps are left near river/tidal waters, move the pump and fuel above the high-water mark.

Miscellaneous Site Prep Tips:

- Make sure your hose lay is protected from flames.
- Think about additional supply needs: extra pump fuel, extra hose, extra pump, extra burning supplies, drinking water, food, etc.
- Make a map with locations, pump numbers and quantity of supplies.
- Compile a list of site prep completed and pass it on to the replacement crew, IC, FMO or land manager.
- Take pictures for land managers.

Firefighters test a sprinkler system on a remote cabin while working on the Sinnott Fire north of Eagle in July 2024.

Alaska Native Allotment Protection

Under federal law, Alaska Native allotments are granted full-protection status unless there are no available resources or it endangers firefighter safety. Allotments can be up to 160 acres in size. Sites were selected by individuals for various reasons, and those reasons should be considered while protecting them. Examples are white spruce stands for cabin logs and lumber, traditional berry gathering locations, and traditional fish harvesting and moose hunting camps. Zone FMOs will have more specific information on sensitive areas within allotments being protected. Some things to consider:

- **Resources** – The resources you have directly affects the timeframe for protecting an allotment. If an entire allotment is being protected, then at least one handcrew is recommended for the line construction, pump and hose setup, and potential burnout operation. Hotshot crews work well for this and are low maintenance. If you need resources immediately, smokejumpers are a good option. Resource needs are site-specific.
- **Time frames** – There can be multiple logistical needs for protecting a large allotment. You may not have the time or resources to cut and prep a control line around the entire allotment. Consider using natural barriers and vegetation changes instead. Tussock fields burn well, are easy to control with minimal water usage, have quick mop-up timeframes, and recover quickly after being burned. However, tussocks are hard to navigate through and act as a flashy fuel. Areas where hardwood and black spruce stands meet are well suited for control lines because fire behavior usually moderates in hardwood stands. If the entire allotment cannot be protected, prioritize larger white spruce stands, cultural sites and other high-value resources. It may be easier to back off the allotment and protect a larger area using natural features. Do not be afraid to ask for advice or direction from the FMO.

ALASKA KNOWN SITES DATABASE

The Alaska Known Sites Database (AKSD) is a statewide collaborative effort to collect infrastructure, and cultural and natural resource site data outside of urban areas for wildland fire response. The primary audience for this data is protecting agencies, jurisdictional authorities, and Incident Management Teams. AKSD is not a stand-alone dataset. It is a dynamic product that allows a wide variety of users to view and make edits in real-time. Users must have a NIFC AGOL account to access AKSD.

IMTs working in Alaska are expected to use AKSD in lieu of the National Interagency Fire Center Structure Triage template or other structure/values at risk templates.

Often, conditions at a site are different than those described in the initial briefing. Updated site information and information for any new sites discovered during the incident should be provided to the FMO as soon as possible. Photos, descriptions of actions taken at the site, and updated coordinates are extremely helpful and will help improve situational awareness for the Zone and future responders. In Alaska, site assessment data is collected on a statewide scale. Contact the Plans Chief and Situation Unit Leader for specific guidance.

All site updates will be added to the AKSD. Inputs are reviewed by agency GIS staff and jurisdictional agencies.

Field Maps for ArcGIS is the preferred tool for site updates. See the AKSD Collection Checklist for tips on using Field Maps. If you do not have a Field Maps device, you can order one. If you need to record information manually (for example, if you do not have a device with you and will not be back to the site), please record:

- Type of site (cabin, allotment, camp, mining, threatened and endangered species, historical/archaeological, etc.).
- Coordinates.

- Site description and condition.
- Fuels on or surrounding the site.
- Terrain (slope, aspect).
- Access (boat, helicopter, UTV, etc.).
- If this is a structure, is it inhabited?

Alaska Known Sites Database Collection Checklist

✓ Please review the AKSD Collection Key for questions regarding what information goes in the attribute field.

- Fill out the attributes as completely as possible.
- Note: The voice dictation feature works in Field Maps.
- Attribute data can be edited/added offsite. Not all data needs to be entered in the field BUT it should be attributed ASAP.
- Do not include Personally Identifiable Information (PII) in any of the fields.

✓ Limit to one photo per point. Multiple photos reduce performance and increase the likelihood of database corruption.

- The ideal photo shows the general site conditions, vegetation and location of nearby water sources. An overview photo is better than a close-up.
  - > Take photo in the normal photo app or Theodolite and then load into Field Maps. This enables the selection of the best photo.
  - > Photos may not be authorized on some jurisdictions.
  - > Photos are the icing on the cake, not the cake itself.

✓ Do not use special characters when filling out attributes. Examples: @#$%&

✓ Delete is not enabled to data collectors.

- If you mistakenly add a point, please change the Flag for Deletion field to Yes and add a note to Delete Notes field.
- If you want to change the attributes, you can go back and edit them.
- If you want to move the point to the correct place, you can move the point.

✓ Follow the sync and download schedule set by the Plans/SITL/GISS to ensure all your hard work is properly captured.

Contact BLM AFS GIS specialists at BLM_AK_AFS_GIS@blm.gov for instructions and access to Alaska Known Sites Database.

Firefighters conducted a burn out around a U.S. Fish and Wildlife camp for a fish weir camp to protect it from a wildfire.

PORTABLE PUMP OPERATION

Cautions on Pump Use

- Do not run engine at full speed until it is thoroughly warmed up, which takes about one minute, or head of engine is hot to the touch.
- Do not run engine with pump disconnected.
- Do not run the pump dry.
- Do not run pump without a foot valve strainer.
- Remove and drain pump after final use and at night if temperature dips below freezing.

Setting Up and Starting a Mark 3 Pump

1. Connect fuel line to fuel can and pump.
2. Connect suction hose to the pump. Connect male end of the suction hose to the foot valve. Tighten female end of suction hose, with gasket, to the pump, using spanner wrench. Do not allow foot strainer to rest on the bottom or come too close to the surface.
3. Attach wye valve to discharge side of pump hand tighten only. Connect priming pump to one side of the wye and the hose to the other side of the wye. Close valve to the hose. Stroke primer until water squirts from the small holes or until the resistance is too great to keep going. If neither occurs, check for suction leaks. If no leak is found, prime the pump by filling the suction hose and the pump head with water. After priming, close valve to primer and open valve to hose.
4. Move choke lever to START (if engine is cold).
5. Move throttle to START AND WARM UP position.
6. Pull starter rope several full pulls until engine pops. It is extremely important to turn off choke immediately after the engine makes any noise otherwise flooding will occur on the next pull.

7. Move choke lever to RUN and pull starter cable until engine starts. It usually takes one to three pulls to start.
8. Allow engine to warm up until head is hot to the touch before using full throttle.

Stopping a Mark 3

1. Move throttle lever to START/WARM UP position.
2. Let pump cool down for one minute.
3. Press and hold STOP switch until engine is fully stopped, or flip toggle switch to OFF.

Components of a Portable Pump

Fuel

- Use premixed fuel, 40:1 mix whenever possible. If you must mix your own, this is 5 gallons of straight gasoline to 1/2 quart of two-cycle oil.
- Thorough mixing is important and is best achieved by pouring 1 gallon of gasoline into the fuel tank, adding the oil, and then adding the remaining gasoline. Vigorous stirring will complete the mixing.
- Fuel consumption: Mark 3: 5 gallons in 3 hours. Shindaiwa: 5 gallons in 10 hours.

Fuel Can and Fuel Line

All AFS fuel cans now use quick connect fittings. The fuel can, more commonly referred to as a Jerry can, is listed in the warehouse catalog as “Tank, Gasoline, 5 GL, Pump Adapted.”

1. Put male end of the fuel line in the receptacle at the front bottom edge of the can. Make sure both “O” rings are seated.
2. Loosen the vent valve on top of fuel can for venting. Make sure the gas can is securely tied off and situated several feet from the pump, either uphill or level with the pump.

3. Fuel can and pump exhaust should be on opposite sides of the pump to avoid exhaust/spark/heat from impacting the fuel can.

Starter Operations

The starter has an automatic rewind. Proper technique extends the life of the starter cable and starter internal mechanism.

1. The Mark 3 engine has high compression. Grasp handle firmly while holding the pump in place (with a foot or help from another person). Pull with a full, vigorous stroke, but do not pull starter rope to its full extension. Retain grip on handle and allow startercable to rewind slowly. Do not release handle and allow starter cable to snap back. Excessive wear is caused by pulling handle sideways.
2. Continue to pull with full, vigorous strokes.
3. When engine starts, retain grip on handle and allow cable to rewind slowly. If the rewind starter spring breaks, the complete starter assembly can be easily removed. This gives access to a manual starter rope pulley mounted on the flywheel. Reuse the starter cable by tying a knot at the end and wrapping the cable around the starter pulley.

Automatic Cutoff Switch

The Mark 3 is equipped with an automatic manual cutoff switch, which stops the engine instantly to eliminate over-speeding. If the switch activates under normal operating conditions, look for the reason before resetting. If air is getting into the intake of the pump assembly, possibilities include improper prime, loose suction coupling, loose priming cap, clogged foot valve strainer or a foot valve strainer too close to the surface. The Wick Pump and many of the Mark 3 have an electronic cutoff switch. This works like the mechanical except that it automatically resets itself. Look for the reason prime was lost. If you fix it, the electronic switch will automatically reset itself.

Air Cleaners

Air cleaners on the Mark 3 do not need replacement when dirty. Simply remove it from its housing and clean.

Troubleshooting a Mark 3 Pump

Engine Won't Start

1. Check ON/OFF switch.
2. Make sure fuel reaches carburetor; no leaks or kinked hose, plugged filter.
3. Make sure air filter is clear.
4. Check for spark. Remove and ground spark plug away from gas fumes. Pull starter cable and check for spark. If no spark, try with new spark plug. If there is a spark, replace spark plug and if engine is not flooded, retry cold-starting procedure.
5. If spark plug is covered with fuel, the engine is flooded.
6. If spark plug is dry, there may be a lack of fuel.
7. To clear flooded engine – Disconnect fuel line, pull starter cord 5-10 times with spark plug removed, choke and throttle open. Before reinstalling spark plug, clean and dry electrode and insulator tip. Then check for spark.

Engine Runs Improperly or Misses

1. Check for suction leaks. Tilt pump back and work water from the hose back into the pump.
2. Check fuel supply, all fuel connections, and fuel can vent.
3. Check spark plug for evidence of fouling; deposits on electrode, white ash, cracked insulation. If present, change spark plug.
4. Clean air filter.
5. Make sure spark plug cap has a good connection.

Setting Up and Starting a Lightweight Shindaiwa or Honda

Both pumps use 40:1 premix fuel even though the Honda is a four-stroke engine.

1. Set the fuel switch on the pump to pick the fuel source.
2. Shut off handle parallel or pointing at internal fuel tank (internal), or 90 degrees handle pointing away from pump (external). A strainer is needed but no foot valve is required because a flapper in the pump keeps water in the pump.
3. When starting the Honda, pump the primer bulb approximately 20 times to get fuel to the carburetor.
4. Leave the throttle at idle and choke off to start.

CHAINSAW TROUBLESHOOTING

Fuel consumption: 4 gallons/shift
Bar oil consumption: 1 gallon/shift

Engine will not start:

- Check toggle switch
- Check choke operation. Butterfly valve must be closed to start cold.
- Check fuel supply and fuel filter.
- Check spark plug wire and spark plug. When checking spark plug for spark, do no pull starter cord without grounding the removed spark plug.

Engine does not run well:

- Clean air and fuel filters.
- Check spark plug.
- Check for water or dirt in fuel.

TYPE 3 FIRES AND ORGANIZATION

Type 3 Fires

Type 3 fires in Alaska are common and range from small, complex fires, to hundreds of thousands of acres. Due to the remote nature of most of our fires, logistical concerns are a major factor and play into the decision to manage a fire at the Type 3 level.

Tips for Type 3 Incident Commanders

- Keep it simple. Ordering a few key positions will enable you to do this (see following sections).
- Your basic daily duties are the same as in the Lower 48, but there are usually fewer political concerns. Most AFS fires are straightforward and utilize appropriate management techniques. It is normal to not fully suppress fires in remote parts of Alaska and instead solely enlist point protection tactics.
- Communicate. Before heading into the field, get a thorough briefing about objectives from the land manager. Get your 209s in on time (over the radio or satellite phone).
- Communication with a fire manager will be anywhere from once daily to several times a day. Set up a schedule that works for you and stick to it.
- Plan ahead and think about demobilization from the beginning. Backhaul at every opportunity. A good staging area manager will be integral to your success.
- Have enough supplies on site to last at least three days. Stay ahead of the curve on supplies.

Type 3 Organization

Typically, Type 3 fires in Alaska are managed by organizations, not teams. Grow your organization as needed but try to keep it simple. Consider the following positions:

- **Operations** – Utilizing a local firefighter as OPS. This will be a great benefit in dealing with tactics and local customs. Think outside the box. If you need a boat, utility terrain vehicles (UTV), or truck – request them. Zodiac boats with operators are available through dispatch.
- **Air Operations** – It's different up here. Helicopters come with a manager only. Order HECMs if needed. Most Alaska crews are used to traveling by fixed- or rotor-wing and are very capable of loading and unloading personnel and cargo. A HECM on each end (who may be a member of the crew being transported) is usually all that is needed for personnel transport. The HMGB will most likely be on the helicopter for each leg and will direct loading and unloading. Ordering a HECM or two for the staging area, which also serves as a helispot, is a good idea; they will also be able to assist the Staging Area Manager (STAM). Consider ordering a Deck Coordinator (DECK), Aircraft Base Operator (ABRO), and Helibase Manager (HEBM) as complexity demands.
- **Plans** – This person will help you stay organized, develop a communications plan, medivac plan, produce IAPs, maps, 209s, establish check-in and track resources, gather and crunch information, request spot weather, etc. A Type 3 Plans Section Chief (PSC3), Situation Unit Leader (SITL), or Field Observer (FOBS) is well-suited for this position. Is there computer access? Order a plans kit if necessary.
- **Logistics** – An Alaska STAM is your best bet and will be integral to your success. Order one immediately if one is not already in place. In Alaska, the STAM is responsible for ordering equipment, supplies, demobilizing, and whatever else may be needed (see Alaska Staging Areas under the Logistics section of this guide).

Staging areas are not restricted to equipment. They often double as helispots, ramp, fueling areas, ICP, etc. Supplies can be delivered in a variety of ways: fixed wing to ramp; paracargo directly to fire; rotor-wing via longline; and internal or cargo-kick if unable to land. Ask your helicopter managers about options

- **Finance** – Having this function in place early will alleviate headaches later. This person will be able to track times, rental agreements, costs, etc. If they do not set up near your fire, ensure a way to get CTRs, rental agreements and paperwork to Fairbanks in a timely fashion (usually with backhaul). A Personnel Time Recorder (PTRC) from the Lower 48 may not be able to meet your needs. Consider ordering an Alaska resource.
- **Equipment Manager** – If your fire is utilizing boats, UTVs, and/or vehicles from a local village, assigning a person to track this equipment will come in handy.
- **Safety** – Good to have around, especially if they are local.
- **PIO** – Coordinate PIO resources with FMO and the BLM AFS Public Affairs Specialist at (907) 356-5510/5511.
- **Medical Support** – See the Emergency Planning section in this guide for more information on medical resources and considerations.

Type 3 Functional Responsibility	Minimum Qualification Standards for local incidents *(per 2023 Red Book)*
Incident Commander	ICT3
Safety	Line Safety Officer (SOFR)
Division	Single Resource Boss – Operational qualification must be commensurate with resources assigned (i.e., more than one resource assigned requires a higher level of qualification.
Information	Local entities can establish level of skill

Activating the Operations, Plans, Logistics, and Finance positions using local/AK Smokejumper, Fire Specialist, Zone Personnel or State Tech is highly recommended. If in doubt about qualifications for Type 3 incidents, contact the local FMO.

As of October 1, 2019, PMS 310-1 qualifications as Operations Section Chief Type 3 (OPS3), Planning Section Chief Type 3 (PSC3), Logistics Section Chief Type 3 (LSC3), and Finance Section Chief Type 3 (FSC3) are required for national mobilization.

See the Logistics section in this guide for more ordering hints.

Firefighting personnel, a pilot and a visiting fire manager talk at a village landing strip used as a staging area for a Type 3 incident.

ZONE CALL-IN CHECKLIST

When assigned to remote fires, be prepared to give and receive the following information (order may vary):

Fire #_____ Zone:_____ IC:_____ Date:_____

Weather:

- General weather pattern and any changes overnight/during shift (rain, wind, smoke, inversion)?
- Did weather factors change any plans?
- Spot weather forecast: relay weather observations for next spot forecast; receive current spot forecast from dispatch.

Fire Status Update:

- Current fire behavior.
- Accomplishments / activities.
- Acreage growth.
- Containment % by end of shift.
- PM call: off the line time.
- Local factors and interactions (village events, cabin owners checking status, etc.).
- Key personnel changes.

Fire Plan:

- Operational plan.
- Glidepath.
- Resources released / demobed.
- Operational resources expected /arrived.

(Continued on next page)

Logistical Plans and Needs:

- Status of outstanding resource orders.
- Aircraft needs.
- Demob and/or resource replacement plan.
- Fresh food (received/expected).

Outside Intel for Fire (Information relayed to you)

- Changes to the overall fire situation in Alaska.
- Changes to the status of nearby fires / new fires in the area.
- Upcoming personnel changes that could affect your fire.
- Aircraft availability changes that could affect your fire.
- Upcoming local events (4th of July celebrations, boat races, etc.).
- Info needed for next call.

Other Discussion Items as Needed

Logistical Orders

- Transfer to Logistics Desk to place supply orders.

The IC on a remote wildfire listens to his IC trainee use a satellite phone to call in to BLM AFS in Fairbanks for the morning briefing with AFS staff supporting the fire.

ALASKA SMOKEJUMPER PARACARGO GUIDELINES

Ordering Procedure

To receive supply orders by paracargo (PC), simply specify PC delivery when you place your standard order with dispatch. Dispatch will need the lat/long of the drop zone, ground contact, and air to ground frequency when you place the order.

Basic fire supplies such as pumps and hose, MREs, cubies and chainsaws are pre-rigged in the paracargo warehouse. Supplies are usually received faster by paracargo. Any helispot will be an acceptable drop zone (DZ) for a paracargo mission. If multiple drops are required, be sure to specify what you want at each DZ to allow the PC specialists to load the plane accordingly. This can be very helpful when establishing a large pump operation on your fire. A large DZ is not needed for dropping a small amount of supplies such as a pump and some hose on the edge of a lake. The PC aircraft can assist in selecting a DZ if one isn't apparent from the ground.

After the order is placed with dispatch, call Paracargo directly at (907) 356-5534 to discuss the order. Information useful to PC includes priorities, timeframes, drop zones (A-22s or garbage), visibility, and other aircraft working the area. Green netting and canvas, called A-22s, are used to wrap the cargo for large bundles. Small bundles, aka "garbage" can be dropped into a smaller DZ.

Delivery

The PC aircraft will broadcast on the AFS air-to-ground frequency (166.6375 rx/tx) at least 10 minutes prior to arrival on the fire unless another frequency is specified on the resource order. The PC aircraft will ask if the air space is clear for the drop. Ground personnel must provide a radio contact at the DZ. Anyone with a radio can be the contact. Input during the drop is encouraged if the cargo is landing other than in the desired area.

All cargo parachutes have a canvas bag or stuff sack attached to them for ease of handling and transport. Cargo parachutes weigh from 13-18 pounds each.

Larger orders may be palletized. These pallets can be moved to different areas on the fire by helicopter if needed. A pallet of water contains 24 cubies and a pallet of MREs contains 48 cases of MREs.

Joint Precision Aviation Device (JPAD)

Paracargo can deliver supplies via a programed Joint Precision Aviation Device (JPAD) during times of limited visibility. Interior Alaska can experience long periods of very limited or zero visibility due to large-scale fire on the landscape. If your fire has been socked in and visibility is very limited, the JPAD is an option for mission critical resupply and/or ordering emergency supplies. PC will need exact coordinates for center of the drop zone, an open 3-acre DZ area (1.5 acres will suffice if DZ is not surrounded by tall white spruce, steep terrain, or an adjacent large water feature), and the DZ elevation.

Drop Zone Considerations

- A football field-size DZ is recommended for A-22s used to wrap the cargo for large bundles. Small bundles, aka “garbage,” can be dropped into a smaller DZ.
- If receiving PC from a Dash-8, cargo will come packed in a large white bundle made from a grainsack-type material. These Dash-8 bundles can be slung with helicopter to desired location. A football field-size DZ is also desired for this bundle.
- Please backhaul all PC components (chutes, A-22, grainsacks, JPAD, and any associated hardware) to SMJ Paracargo or AFS Warehouse as soon as possible.
- Convenience or distance to the point of use.
- Ease of cargo and parachute retrieval.

- Safe approach and departure paths for drop aircraft.
- Safety of personnel and equipment on the ground during operations.
- Good communications with aircraft and the ground.
- If using your helispot, clean up the parachutes before helicopter use.
- Clear the DZ of all personnel during the drop.
- No camps within 400 yards of DZ.
- Advise all aircraft on the fire of paracargo mission.
- Mark DZ in some way if it is not obvious.

Non-Standard Equipment Available from Paracargo

- Sprinkler kits for cabin protection.
- Foldable water tanks for pump shows.
- Off-road vehicles.
- Zodiacs and motor for multiple cabins on lakes etc.
- 55-gallon fuel drums, jet fuel, or gasoline.
- Containment dikes for remote fueling sites.
- Lumber and plywood.

Paracargo has the capability to deliver almost anything. If you have any questions about paracargo ordering call dispatch, the Zone or PC direct at (907) 356-5534.

Approximate Paracargo Aircraft Payload Capabilities

Aircraft	Payload
Casa 212	4,000 pounds
Dash-8	7,500 pounds

****For more information on paracargo aircraft capabilities, see the Paracargo Reference Sheet in the Aviation section of this guide.**

USING BOATS ON ALASKA FIRES

What Kind of Boats Are Available?

Where Do They Come From?

Most often the boats are hired locally by the Zone using the Emergency Equipment Rental Agreement (EERA). These are usually flat-bottom river skiffs. The boats can be hired with a local operator or a DOI/BLM certified boat operator. Contract conditions vary. Work with the Zone admin and see the Admin section of this guide for boat hiring details.

AFS has Zodiac inflatable boats for use with or without a motor. A DOI/BLM certified boat operator will need to operate a motorized boat. A DOI/BLM non-motorized watercraft certificate is needed to operate a non-motorized Zodiac. Zodiacs can be delivered by any type of aircraft. They are packaged and typically delivered via paracargo by the Alaska Smokejumpers. Please feel free to call paracargo at (907) 356-5534 before you place your order so the best boat and motor can be sent for your specific water conditions. Do not forget about fuel. Twenty gallons are included with the kit, but it is a good idea to order more.

A 16-feet and two 21-feet jet boats are also available. These units can be transported via trailer to road accessible launch points and driven to the fire by a connecting waterway. You can also call paracargo at (907) 356-5534 to match the best boat for your water conditions. DOI/ BLM certified operators are required for AFS boats. Normally, two operators are ordered per jet boat. Operators are available through AFS.

Boats used in one body of water must be cleaned before transporting them to another body of water. This reduces the risk of spreading pathogens and invasive species such as Elodea.

How Are the Boats Used?

Boats are typically used to transport equipment and personnel between fires and a transfer point – usually a village. They are especially useful when dealing with multiple site protection efforts – usually cabins scattered around a lake or river.

Are the Boats Safe?

Boats acquired by EERAs are inspected prior to use. They are hired with a local operator familiar with the local waterways or an experienced certified DOI/BLM operator. Personal floatation devices (PFDs) must be worn by all individuals in the boat and either come with the boat or can be ordered through the AFS Cache.

All AFS boats will be delivered with enough PFDs for the boat's maximum personnel capacity, paddles, a fire extinguisher, signaling devices, throw bags, tool kits and briefing checklists. See the Safety section of this guide for information on boat safety and use it as an outline for briefings before utilizing any boat.

How Do I Get a Boat?

Requests for the hiring and/or delivery of a boat will be approved by the Zone. Requests are placed through dispatch. The Zone will provide hiring preference instructions.

Firefighters are shuttled back to their camp by a qualified boat operator.

INFRARED OPTIONS AND USE

The use of infrared (IR) is common in Alaska due to the deep duff layer. Alaska fuels and surface conditions, in combination with a rain event, tend to mask heat – sometimes for days – allowing the fire to re-establish and run when the weather turns hot and dry.

IR is used for finding hot spots or areas of concern to complete mop-up and is usually done before fire demobilization. IR options in Alaska include handheld IR devices used on the ground or from a helicopter and IR-capable drones. Fixed wing IR flights are sometimes available during busy seasons. Satellite heat mapping is commonly used in addition to IR. If you are unsure, talk to dispatch and/or your fire manager to determine the best options.

Consider the following before initiating IR operations:

- **Timing** – Early mornings or late evenings are generally the best, due to daytime surface heating. IR immediately following a light precipitation event works well.
- **Aircraft availability** – Drone, helicopter and fixed wing options might be available.
- **Operator availability** – Handheld and drone IR must be used with qualified operators to ensure quality results, prevent damage to the equipment, and for the overall safety of the mission.
- **Operator skills and experience** – Although IR can be a great benefit, the product is only as good as the operator. Having a spotter on helicopter flights, in addition to the operator, is useful. Spotters can assist the operator, drop markers, manage workload, and handle communications during the flight.

Handheld Palm IRs are available at the AFS warehouse along with a list of qualified local operators. UAS can be ordered through dispatch. ****See the Aviation Section of this guide for more information on UAS ordering.**

ECOLOGICAL CONSIDERATIONS DURING FIRE SUPPRESSION

Mechanized Equipment and Protecting Watersheds

Fine, silty soils on firelines are susceptible to erosion by water and wind when bladed to mineral soil. Soils underlain by ice-rich permafrost will thaw and subside when the duff layer is removed. Permafrost is most likely to occur on north slopes, toe slopes, or in bottomlands. Water from thawing soil will quickly saturate and erode bladed firelines, even without rain. Use bladed fireline only as a last resort and with explicit permission of the land manager.

When bulldozers, skidders, Nodwells or other heavy equipment are used:

- Maximize the use of walkdown versus bladed line (only one blade-width to mineral) and use the contours of the slopes.
- Build drainage into the constructed fireline to minimize erosion potential and environmental damage.
- Never blade firelines across a waterway or stream. Connect to streams using handline, brushing or dozer walkdown.
- Limit clearing to 200 feet horizontal distance from the ordinary high-water mark when feasible. Clearing closer than 100 feet should be avoided.
- Vehicle or equipment crossing of cataloged anadromous fish water bodies require prior approval from the Alaska Department of Fish & Game (ADF&G).
- Obtain documented approval from land manager via Wildland Fire Decision Support System for use of off-road vehicles over 1,500 pounds (bulldozers, skidders, Nodwells, etc.) on State of Alaska managed lands.

- When immediate action is necessary, the FMO or IC may approve tactical use of heavy equipment on an individual case basis. Land manager approval must be attained immediately thereafter for continued use, and document it on the fire notification form.
- Suppression techniques used should limit disturbance to ground surface and vegetation.
- Suppression repair is required when heavy equipment is used. Coordinate with land managers to prepare and implement a fireline suppression repair plan.

Fireline Rehabilitation Considerations

Take suppression actions with the understanding that all firelines will be rehabilitated. This includes firelines, camp areas, staging areas, access trails, helispots and any other area where suppression actions have removed the duff. Request a resource advisor if ecological effects are uncertain.

- **Preplanning** – Consider rehabilitation needs during the suppression phase. Use Minimum Impact Suppression Tactics (MIST) where possible. Locate camps at least 200 feet from lakes, streams, trails, or other sensitive areas.
- **Duff** – Initiate actions to reclaim firelines ASAP. Replace duff on denuded areas (areas that have been removed, destroyed or covered, and which may result in or contribute to erosion and sedimentation) prior to heavy equipment leaving the fire area. Some vegetation material may have to be replaced by hand. This action replaces topsoil, provides seed and propagule source, increases the water holding capacity, decreases drying, and provides shade and shelter. Lines located on north slopes, south toe slopes, or drainages, may require this treatment.
- **Water bars** – Water diversion structures should be initiated during line construction. Add and improve where needed. Water bars should be placed at 50- to 150-feet intervals depending on

slope and soil texture. Coarse soils containing sand and gravel generally do not require water bars spaced as frequently as those located on fine-textured materials (silt and clay). Gravelly slopes may be adequately protected with water bars at 300-feet intervals. Fine-textured, ice-rich materials are subject to severe erosion even with slopes of less than 2%. The goal is to divert water from the lines or denuded areas at a velocity which will not cause erosion. Generally, this means that the diversion channels themselves should be less than 2% slope. Angle them to divert the water into undisturbed vegetation where possible. Make sure that the diversion cuts or structures are “daylighted” to drain the water rather than just accumulating it until it flows over or around. The berm should be at least 12 inches high with an 18-inch-deep trench on dozer or excavator-created water bars. Log diversions are less effective than trench water bars.

WATER WITHDRAWAL GUIDELINES

These guidelines are for water withdrawing from bodies of water during wildland fire suppression activities in Alaska, aiming to protect sensitive fish habitat while minimizing impacts on operations and maintaining safety. Water withdrawal and stream crossing details must be provided to the responsible Zone/Area FMO or land manager.

Notification Information

- Fire number, name.
- Location: NAD83 or WGS84 in decimal degrees; highway milepost if applicable.
- Withdrawal type(s): Small pump, engine, helicopter bucket, scooper plane.
- Waterbody name.
- Basic information on situation if needed.

Water Withdrawal and Stream Crossing Regulations

Water withdrawals and stream crossings for all fish bearing[1] water bodies are permitted under the following conditions:

1. Equipment, light vehicles, and ATVs must cross streams from bank to bank as close to perpendicular to the flow as praticable, avoiding barriers to fish passage (i.e., ridging and /or rutting of streambed). Any disturbance of the bank shall be immediately stabilized.

[1] All streams should be considered fish bearing unless specifically excluded by the assigned resource advisor. Current inventories of fish bearing waters in Alaska are incomplete but data can be accessed through this mapper: Alaska Fish Resource Monitor

2. No significant modifications to the banks are authorized, except for the following mitigation measures when needed to stabilize the bank and ensure safe and efficient crossings:

   a. Logs, cribbing, and/or culverts may be temporarily placed along the bank or in the bed of the stream parallel to the current.

   b. Large woody debris may be moved downstream, deposited upland or used for the crossing.

   c. Cut riparian vegetation must be deposited back from the stream, but no roots/stumps may be grubbed within 50 feet of the stream.

   After use, all materials from the crossing structure must be immediately removed and placed upland from the bank, and the streambed and bank must be restored and stabilized.

3. Each water intake structure must be designed to prevent fish entrainment, impingement or entrapment and must be installed and maintained at each intake location. Screen openings may not exceed 0.25 inches (1/4 inch), and water velocity at the screen/water interface may not exceed 0.5 feet per second when the pump is operating.

4. Water bodies must not be altered in a way that could block or trap fish. However, hand tools may be used to deepen a sump for pump operation, and the depression must be filled in after use to prevent fish entrapment.

5. In urgent situations requiring immediate water withdrawal from a fish-bearing water body, a pump may be used if the intake is buoyed near the surface and the site is deep enough to prevent streambed disturbance.

6. Notify ADF&G Habitat within 72 hours (three days) if a crossing required modification to the streambank or crosses a knkown salmon bearing water body based on the review of the Alaska Fish Resource Monitor.

7. All water withdrawals from fish-bearing water bodies (including the use of scooper planes and/or aerial buckets) must be summarized and provided annually to ADF&G Habitat no later than Oct. 31. Include the location and date of the water withdrawal in the report, and if modifications to the streambank were made to facilitate the withrawal.
8. When practicable, mitigate the spread of the invasive aquatic plant Elodea. Avoid infested water bodies. See the AWFCG Fire Invasive Species Committee website or the Alaska Exotic Plants Information Clearinghouse (AKEPIC) map portal. Ask for a hard copy of the AWFCG Invasive Species Pocket Guide for Alaska Firefighters and adhere to best management practices described in this guide with emphasis on the following:

    a. Before withdrawing from new water bodies, thoroughly inspect and clean equipment, pumps, hoses and screens.

    b. Discard organic material at upland sites that will not freely drain into a natural water body.

    c. Untreated water obtained in one location should never be directly discharged into a waterbody at a different location.

ADFG Contacts and Offices

Anchorage: (907) 267-2342, dfg.hab.infoanc@alaska.gov
Craig: (907) 826-2560, dfg.hab.infocga@alaska.gov
Douglas: (907) 465-4105, dfg.hab.infodou@alaska.gov
Fairbanks: (907) 459-7289, dfg.hab.infofai@alaska.gov
Palmer: (907) 861-3200, dfg.hab.infopaq@alaska.gov
Soldotna: (907) 714-2475, dfg.hab.infosxq@alaska.gov

INVASIVE SPECIES BEST MANAGEMENT PRACTICES

Invasive species include certain plants, animals, and diseases or pathogens that can cause ecological problems when introduced outside their native range. Invasive species are especially adept at colonizing places that have been disturbed, including disturbance by fire management activities. Preventing new introductions of invasive species is the most cost-effective way to avoid infestations. Firefighters should implement operational habits and techniques to inhibit spread. The AWFCG Fire and Invasive Species Committee provides guidance to help firefighters identify the most concerning invasive species and recommends best management practices.

Best Management Practices

1. Leave the seeds! – Shake out your tent and gear before leaving an incident. Inspect and remove all insects, seeds, plant fragments, debris, and soil from clothing, boots, tents, gear, vehicles and equipment (including borrowed or rented) before leaving an incident. This is especially important before travel between the Lower 48 and Alaska.
2. Avoid infestations! – Locate fire line, camps, and spike camps away from patches of exotic plant species whenever possible. Keep the vegetation mowed. Remove and bag the flower and seed heads of invasive plants. Replace the duff over exposed mineral soil as soon as possible. Intact forests, even burned forests, are more resilient to infestation than disturbed areas.
3. Clean equipment! – If the incident has a hotsie or wash station, wash your off-road vehicle frequently. Clean helicopter buckets and engine tanks between water sources. Request a map of water bodies known to be infested with Elodea.
4. Get a map! – Request a terrestrial and aquatic invasive species map for your incident. Flag the known infestations as avoidance

areas. You can never be certain that invasives are NOT present, but at least you will know ahead of time where they ARE known to be present.

5. Request a Resource Advisor! – READs can inspect the incident command posts, camps, staging areas and aircraft landing pads for invasive plants.

Species of top concern for Alaska fire management: White sweetclover (Melilotus albus), Narrowleaf hawksbeard (Crepis tectorum), Smooth brome (Bromus inermis), Bird vetch (Vicia cracca), Waterweed (Elodea sp.).

Most infestations occur in disturbed areas (camps, firelines, helispots, trails) rather than the burn area itself.

Reporting

Note the location, and lat-long, and access points. Flag the site. Take photos of the suspected invasive species and the larger area. Collect a sample in a sealable plastic bag. Make a report online or contact the incident READ or IC. For plants, insects, and diseases submit a report at https://www.uaf.edu/ces/invasives/.

For plants, use the Alaska Weeds ID app. For mussels or other animals call: 1 (877) 468-2748 / 1-877-INVASIV or report online at https://www.adfg.alaska.gov/index.cfm?adfg=invasive.report

For plants, use the Alaska Weeds ID app. For mussels or other animals call: 1 (877) 468-2748 / 1-877-INVASIV or report online at https://www.adfg.alaska.gov/index.cfm?adfg=invasivespeciesreporter.main.

More Information:

For more information, see the AWFCG Fire Invasive Species Committee website: https://www.frames.gov/afsc/partners/fisc.

PUBLIC INFORMATION IN ALASKA

Alaska Interagency Fire Information Office – (907) 356-5511 This office is for statewide fire information needs. During the fire season, it is normally staffed by an Alaska Division of Forestry & Fire Public Information Officer and a BLM AFS Public Affairs Specialist. This number will reach a Joint Information Center after the Alaska reaches Preparedness Level 4 (PL4).

Interagency Information on Alaska Wildland Fire Information (akfireinfo.com) This is an interagency website developed by federal and state agencies in Alaska to provide timely and accurate wildland fire information for the entire state.

DOF and AFS also utilize social media for dissemination of information.

- AFS Facebook (@BLMAFS) and X (@BLM_AFS)
- DOF Facebook @AK.Forestry, X (@AK.Forestry) and Instagram (@akstatefire)

Media Interviews

You play a major role in communicating important safety and prevention information to the public.

If asked to do a media interview, ensure the appropriate Public Information Officer (PIO) is aware of the request. You may politely decline to take an interview for several reasons. If you are not the right person for the interview, direct the reporter to an appropriate contact and alert that contact. Never answer questions that require you to speak on subjects outside of your knowledge and/or authority.

Helpful interviews tips may be found in the Incident Response Pocket Guide (IRPG).

AWFCG Education/Prevention Committee Key Messages for Alaska:

- Public and firefighter safety is our priority.
- Wildland fire happens in Alaska, be ready.
- Wildland fire is an essential, natural process.
- Firefighting personnel and land managers work together to manage wildland fire in Alaska.
- Managing wildland fire in Alaska balances risks and benefits in an ever-changing environment.

USE OF SOCIAL MEDIA

Social media can be very positive for the fire and aviation community, providing an instant medium for messages and education. On the flip side, there have been instances of video or photographs taken in unsafe, unprofessional or embarrassing circumstances. When that happens, it reflects poorly on the entire fire and aviation community. Please adhere to your agency guidelines.

If you are unsure of agency guidelines, consider the following:

- The priority must be performing your job/ duty in a safe manner. Ensure proper PPE is utilized in images.
- Posting work-related content on your personal social media reflects on the professionalism of your crew, your agency and the wildland firefighting community.
- If you share work-related content, make sure it's already available to the public (nothing is truly private regardless of your settings).
- Always maintain situational awareness on the fireline. Firefighters looking at a camera are not looking up, down, and around — take photos when it's safe.
- No compensation for content posted that related to your job.

- Uphold our reputation. Always do what's right on the fireline and online.
- Remember, everything posted online is PERMANENT.
- If you have questions, ask your supervisor or contact your Public Affairs Officer (PAO) or Public Information Officer (PIO). You can reach agency PIO/PAO at (907) 356-5511.

Photos and Video

Please contact your agency PAO or Incident PIO and ask how you can share photos and video to help them tell the incident's story. The public and media in Alaska are interested in wildland fire and appreciate photo and video to accompany stories. People in photos and video must be in proper PPE and behaving in a safe manner. Your photos and video can be a useful tool to educate the public about an incident's current situation or wildland fires in general.

Your PIO/PAO is always looking for photos and video to share with the public on the various social media platforms.

DETERMINATION AND INVESTIGATION OF HUMAN-CAUSED FIRES

- Determine if there is any possibly that the fire may be caused by human activity and not natural causes.
- Take pictures of the initial attack, aerial resources, fire behavior/wind, smoke column and of general area of possible origin.
- Suppress fire as necessary but also locate and preserve the general area of the origin if safe to do so. Avoid disturbance such as mop up or walking through the area of origin. Flag off the area and ensure dispatch knows that it may be human caused. Determine if a Fire Investigator is needed to be dispatched to the incident. Dispatch or the Protection FMO should contact the Jurisdictional FMO for further guidance.

- Note that there may be more than one ignition area.
- Take note of witnesses. Get contact information (if possible) and or/other info such as picture or license plate number.
- Do not disturb or attempt to collect physical evidence.
- Document and write down all information collected.
- Ensure prompt ordering and delivery of the Fire Investigator since some materials degrade in time and weather exposure.

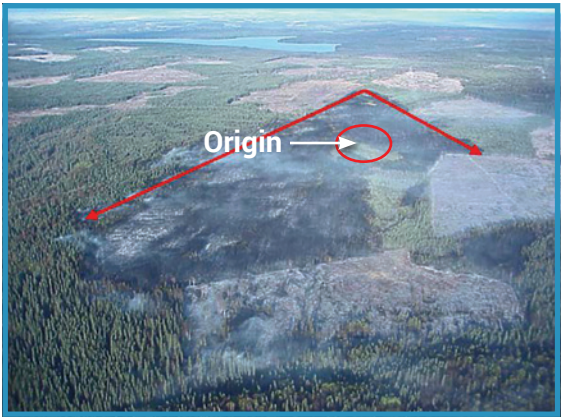
Aids to Locating Fire Origin

- The fire origin is key to fire investigation. Evidence at the origin can provide important information regarding the cause of the fire. Identifying and protecting this area should be of high priority for the initial attack responders. **PROTECT THE FIRE ORIGIN**.
- When the fire scene is reached, set up a systematic search of the area surrounding the origin. Look for the obvious to the not-so-obvious.
- Learn basic fire directional indicators: V at the tail, shielding and char indicators.

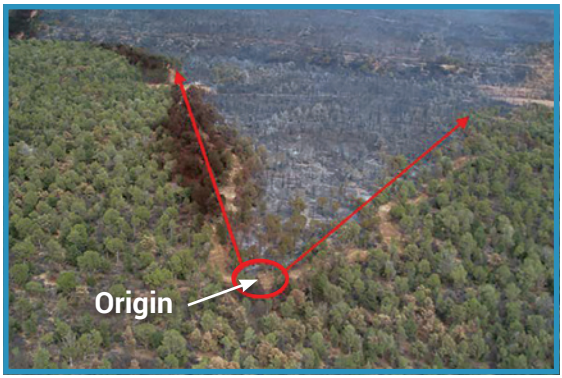
More indicators and origin determination information can be found at NWCG guide to Wildland Fire Origin and Cause Determination.

Fire origin examples on next page.

Flag and protect the circle around the origin.



Example of a V shaped burn pattern.



Example or irregular V or U shaped fire pattern.

INCIDENT COMMANDER DEBRIEFING OUTLINE

Fire Size-up:

- Gave an accurate size-up of the fire to dispatch upon arrival?
- Managed fire suppression resources in accordance with the management objectives for the area and availability of resources?
- Did the unit support organization provide timely response and feedback to your needs?
- Were there any radio communication issues?

Provide for the Safety and Welfare of Assigned Personnel:

- Gave an operational briefing to firefighters being assigned to incident operations?
- How were incoming resources debriefed (via radio, personal contact)?
- Were agency work/rest guidelines followed? Was adequate food and water provided to firefighters?

Fire Suppression Operations:

- Explain how the strategies and tactics used met management objectives, without compromising adherence to the Fire Orders, Watch Out Situations and LCES.
- How were weather conditions monitored (daily weather briefings, spot weather forecasts or other)?
- Were adjustments needed to strategy and tactics?
- What were the potentially hazardous situations and corresponding mitigations?
- How were projected changes in the weather, tactics, hazards and fire behavior communicated to fire personnel?
- Were communications effective with dispatch and supervisor?

- Were all interested parties kept informed of progress, problems and needs? Was aviation support used? If so, was it effective?
- Were there any injuries, close calls, or safety issues that should be discussed? Were these documented?

Administrative Responsibilities:

- Submitted complete documentation to supervisor for time, accidents, incident status, unit logs, evaluations and other required or pertinent reports?
- Provided timely and effective notification of the fire status and unusual events or occurrences to dispatch and management?
- As requested, provided effective input into the Wildland Fire Decision Support System?
- Provided transition briefing to incoming team, IC, and/or local unit personnel?
- Forms completed in accordance with local policy?

This photo shows a typical incident commander briefing at a staging area on a gravel bar while on a remote Type 3 incident.

ALASKA FIRE CAMPS

Fire camps in rural Alaska are similar to remote fire camps in the Lower 48, but have their own special concerns. Reducing animal issues and camp illnesses are high priorities. Camps should be monitored for cleanliness. All personnel should be supplied for three days, including food and water.

Camp location should be based on:

- Distance to fire – Difficult to travel overland in remote parts of Alaska.
- Helicopter access – Most likely mode of resupply.
- On or near rivers – Water rises, and sand bars disappear. Bears travel along water ways.
- Latrines – Typically, latrines are dug and used at camp locations.
- Land ownership – Make sure it's not an allotment or privately held.

Camp Etiquette:

- Each crew sets up its own camp. Overhead personnel usually get together and set up an overhead camp.
- Be considerate when entering another crew's camp. Wait for an invitation before approaching the campfire/kitchen area.

Unique Camp Features:

- Latrines are dug by the crews for the crews. Dig your own for overhead.
- Visqueen for tents, crew tarps, and parachutes for eating area can make life bearable when it rains.
- Arctic refrigerators are constructed by cutting a square out of the forest floor down to permafrost, placing a fresh food box into the hole or lining it with Visqueen, and then placing the duff mat on top of the box. Your food items will remain cold for several days.

A firefighter makes an "arctic fridge" by digging a hole in the ground down to the permafrost while keeping the organic mat intact and used on top of the frame lid.

- Fire pits are normally placed under the crew tarp. This will keep you warm and dry instead of warm/wet or cold/dry when it rains.
- Wash basins and kitchen areas are constructed from fresh food boxes and empty water cubie containers. Additionally, furniture and tripods are constructed from spruce or birch trees. Some camps get quite elaborate.
- When in doubt about camp life, ask a local firefighter.
- Items you will want to bring, or order, include insect repellent, head net, toilet paper, coffee cup, food and water for three days, and rain gear.
- Trash should be backhauled as often as possible using proper bag and tag techniques – plastic garbage bag inside of burlap bag, marked as TRASH/GARBAGE. Burn anything that can safely be burned (paper, cardboard, etc.) and clean up microtrash, such as staples, afterward. More on backhaul under that heading.
- Cargo chutes are a priority backhaul item, as is trash.

ALASKA STAGING AREA MANAGER CHECKLIST

Before You Leave Civilization

- Get a briefing on objectives, lines of authority, priorities, limitations, previous contracts in the area, expected fire activity, expected duration and resources committed and ordered.
- Determine availability of services such as fuel, personnel and equipment. Get proper paperwork to procure these services. Initiate orders to establish communication or to obtain aircraft, fuel and other resources that will take time to obtain.

On the Incident

Establish a base of operations. Lay out and designate facilities and areas. Command Post and dispatch should be set up away from the noise and dust with good access and line-of-sight to aircraft landing area(s).

- Establish and maintain separation of rotor and fixed-wing operations. Consider fueling needs for each as well as off-loading needs for heavy cargo transports.
- Consider support vehicle needs and traffic routes.
- Separate sleeping and cooking areas from work areas. Make sure latrine and wash areas are sanitary and appropriately located.
- Evaluate power or telephone needs. Determine availability and costs.
- Maintain separation from local activities if incident is near a village.
- Hire local AD casual hires, otherwise known locally as emergency firefighters or EFF, for jobs they can fill.
- Plan shifts based on expected workload. Use people in multiple functions if appropriate.
- Keep track of time, locations and assignments for all assigned personnel. Hire a timekeeper early in the incident.
- Provide pilot facilities including a quiet sleeping area and a standby area with maps of the incident.

- Develop and post a medivac plan.
- Consider ordering Operational Medical Support Personnel (see the Emergency Planning section of this guide).
- Establish order times and procedures with the supporting dispatch offices. Use AK Logistics Job Aid for an ordering guide (also in Logistics section of this guide).
- Establish property management and resource order systems for surrounding incidents and the staging area. Document all orders, issues, returns and demobilizations.
- Develop a communications plan. Identify frequencies for tactical, command, air-to-ground, logistical and emergency functions. Flight follow incident assigned/support aircraft locally. Assign RADO/ABRO for the staging area.

Before Demobilization of the Staging Area

- Backhaul everything. Burn cardboard and paper if conditions permit. Pick up any micro-trash, such as staples, afterwards.
- Check with locals for permission to use the village dump. Leave the incident area cleaner than it was before the camp was set up.
- Rehabilitate high impact areas. Fill in latrines and fire pits.

Equipment staged at the 2024 Grapefruit Complex waits to be returned to the BLM AFS Cache in Fairbanks.

ORDERING HINTS FOR ALASKA

Basics

- The Alaska Interagency Catalog of Fire Supplies and Equipment is available from the Cache (NFES 008921).
- Organize your orders by type (supplies, overhead, aviation, equipment, crews, equipment, fire medic and commissary). Next, number your orders.
- Have dispatcher read your order back to you.
- If possible, include the catalog number assigned to equipment. It decrease the amount of time to process the order.
- Specify delivery time (do not say "ASAP") and method (Paracargo, fixed wing, vehicle, etc.).
- Identify any priority items.
- Communicate with dispatch for ordering time deadlines.
- Order for two or three days at a time (maximize delivery methods, especially aircraft).

Basic Pump and Hose

- 1 Mark 3 Pump Kit.
- 40 Gallons Premix (5 gallons burns for 3 hours) – you get 24+ hours of pump operation time.
- 5,000 feet 1 ½ inch hose in hose bags.
- 2,800 feet 1-inch hose in hose bags.
- 25 1 ½ inch gated wyes.
- 25 1 ½ inch to 1-inch reducers.
- 25 1-inch nozzles.
- ½ mile hoselay kit: 1300 feet 1-inch hose, 2600 feet 1-½ inch hose, nozzles, wyes and reducers.

Basic Chainsaw Order

- 1 Chainsaw Kit
- 5 gallons premix (approx. 20 hours trigger time)
- 10 quarts bar oil (approx. 20 hours trigger time)

Basic Cabin Protection Order (see Alaska Tactics in the Operations section of this guide)

- 1 lightweight pump kit (Shindaiwa or Honda)
- 1 sprinkler kit
- 700 feet of 1-inch hose
- 10 gallons premix
- More supplies and kits are listed later in the Logistics section of this guide.

A stack of supplies sits on a river bed waiting for retrieval from a remote fish camp that was protected from a wildfire.

Basic 3-day Crew Order

# of Crews	Items			OH Suggestions
1 Crew *Equipped with radios and crew kits	25 cubies 20 MREs 5 cans coffee 1 roll Visqueen	1 case bug dope 1 box garbage bags 1 belt weather kit 1 Boden kit	25 burlap bags 2 case AA batteries** 1 case toilet paper	1 STCR
2 Crew *Equipped with radios and crew kits	50 cubies 40 MREs 10 cans of coffee 10 boxes of sugar 2 rolls of Visqueen	2 case bug dope 2 box garbage bags 2 belt weather kits 10 rolls fiber tape 2 Boden kits	50 burlap bags 6 cases AA batteries** 3 cases toilet paper	2 STCR
3 Crew *Equipped with radios and crew kits	75 cubies 60 MREs 15 cans coffee 15 boxes of sugar 4 rolls of Visqueen	3 case bug dope 3 box garbage bags 3 belt weather kits 15 rolls fiber tape 3 Boden kits	75 burlap bags 6 cases AA batteries** 3 cases toilet paper	3 STCR Timekeeper
4 Crew *Equipped with radios and crew kits	100 cubies 80 MREs 120 cans coffee 20 boxes of sugar 4 rolls of Visqueen	2 case bug dope 2 box garbage bags 2 belt weather kits 10 rolls fiber tape 2 Boden kits	100 burlap bags 8 cases AA batteries** 4 cases toilet paper	4 STCR Timekeeper Staging Area Manager

(Continued on next page)

# of Crews	Items			OH Suggestions
5 Crew *Equipped with radios and crew kits	125 cubies 100 MREs 25 cans coffee 25 boxes of sugar 5 rolls of Visqueen	5 case bug dope 5 box garbage bags 5 belt weather kits 25 rolls fiber tape 5 Boden kits	125 burlap bags 10 cases AA batteries** 5 cases toilet paper	5 STCR Timekeeper Staging Area Manager
6 Crew *Equipped with radios and crew kits	150 cubies 120 MREs 30 cans coffee 30 boxes of sugar 6 rolls of Visqueen	6 case bug dope 6 box garbage bags 6 belt weather kits 30 rolls fiber tape 6 Boden kits	150 burlap bags 12 cases AA batteries** 6 cases toilet paper	6 STCR Timekeeper Staging Area Manager
7 Crew *Equipped with radios and crew kits	170 cubies 140 MREs 35 cans coffee 35 boxes of sugar 6 rolls of Visqueen	7 case bug dope 7 box garbage bags 7 belt weather kits 35 rolls fiber tape 5 Boden kits	175 burlap bags 14 cases AA batteries** 7 cases toilet paper	7 STCR Timekeeper Staging Area Manager

Type 2 Emergency Firefighter (EFF) Crews are expected to be 16-20 people.

*EFF Crews might come with nothing. Be sure to check with dispatch & order crew kits, radios (3-4 per crew), and saws.

**Rechargeable batteries are recommended. Solar chargers are available from the warehouse.

*** Fresh Food A Boxes are for two people for three days. B Boxes are for four people over three days.

Other considerations after the first three days: Fresh food, gloves, flagging, fusees, files, ear plugs, head nets, lime, foot powder, p-cord, juice, Gatorade, box tea, extra coffee pots, drinking cups, coffee creamer, extra crew tarps, port-a-potties..

ALASKA STAGING AREA JOB AID

Item	Description
Handy Dandy	
Cubies	Order "filled," 36 per pallet
MREs	48 per pallet
Batteries	AAs, 24 per package, 8 pkgs per case
Bug Dope	Cutter pump, 12 per box
First aid kit	SAFETY ITEM, red crew style
Coffee	Approximately 2 pounds
Sugar	1-pound box
Creamer	50 packets per container, 20 containers per box
Coffee pot	
Toilet paper	
Trash bags	100 per box
Burlap bags	50 per bundle
Fiber tape	36 per case
Plastic sheeting	Black, 20x100 foot roll
P-cord	110-feet bundles
Satellite phone kit!	SAFETY ITEM, extra batteries?
Premix*	5 gallon can, HAZMAT, got spigot?
Bar oil*	12 per case, HAZMAT
Standard "Canned"	
Sleeping bags	Things get wet.
Long sleeping bags	Cold WX and for tall firefighters
Earplugs	

(Continued on next page)

Item	Description
Standard "Canned"	
Head nets	
Flagging	Orange, 12 per box
Larson antenna	
Lime	32-ounce bottles
Foot powder	
Bath in a bag	255 per box
Mole skin	
Rite in the rain pad	4-5/8 inches x 7 inches
Tent fly	16'x24'
Tent fly upright poles	2
Tent fly ridge poles	2
Tent fly stakes	12 should do
Crash rescue kit*	SAFETY ITEM
Fire extinguisher	SAFETY ITEM/HAZMAT
Pulaski*	10 per box
Shovel*	10 per box, good for camp too
Backpack pumps*	
Chainsaw kit	HAZMAT
Extended	
Canteens	
Paper cups	
Leather firefighting gloves	Size XL. large, medium, small
Boot grease	Small can

(Continued on next page)

Item	Description
Extended	
Fire pants	Small/Medium/Large
Sleeping pads	
Writing paper	Pad, 8-1/2”x11”
Pens	12 per box
Mosquito coil	2 coils per box
Fire shirts	Large/XL
Shipping tags	
Ice chests	
Bung wrench	
Life vests	SAFETY ITEM
Cook pot	
Frying pan	
Utensil kit!	
Belt weather kit!	
Calculator	
Dry erase board	Specify size
Dry erase markers	
Cardboard filing box	For your records
Clipboard	
Alarm clock	
Scale	Lay-on-the-ground type
T-card sorter	
Folding tables	
Propane stove	
Folding chairs	

(Continued on next page)

Item	Description
Extended	
Propane heater	
Wall tent	
Hotstick telescoping pole	
ICOM radio	If heavy air traffic
Mark 3 pump kit*	Should include A and B boxes. Specify.
Lightweight pump kit*	
Cargo net kit*	6,000 lb., includes lead line and swivel.
Unleaded gas	5 gal. can, HAZMAT, got spigot?
Propane	20 lb. tank, HAZMAT
Driptorch flue*	5 gal. can, HAZMAT, got spigot?
Fusees*	72 per box, HAZMAT
Crew kits	
Crew kit!	Huge, see AK warehouse catalog for details.
EFF line gear	
Fresh Food	
Box A	Order 72 hours ahead. Zone approval?
Box B	

Green = Re-evaluate these items often.
Red = HAZMAT

**Tactical/Air Ops Item - Need and amounts vary by assignment!*

!Kit item - may include items listed individually. This is to be used as a guide only. Use common sense and good judgement when ordering. Consult Alaska Interagency Catalog of Supplies and Equipment for details.

Other items to consider (see appropriate Handy Dandy section): Firearms (shotgun and shells), medical kits, portable fueling sites.

ALASKA LOCAL SUPPLIES

Including catalog numbers in order submitted to dispatch will cut down in amount of time needed to put order together and get it to a fire. Reference the Alaska Interagency Catalog for catalog numbers and detailed contents for kits.

Description	Unit of Measure	Weight (lbs)
Catalog, Alaska Interagency	BK	1
Food, Fresh Food Box A	BX	55
Food, Fresh Food Box B	BX	30
Fuel, White gas, 1 gal (6 cans/case)	CN	7
Fuel, Jet-A, 55 gal (local purchase item/fuelers)	DR	425
Fuel, Premix, 5 gal	CN	40
Fuel, Gas, Unleaded 5 gal	CN	40
Fuel, Driptorch 5gal	CN	40
Fuel, Premix 30 gal	DR	195
Fuel, Unleaded 30 gal	DR	195
Fuel, Driptorch 30 gal	DR	200
Lime, Hydrated, 32-64 oz	BT	1
Net, Head, Mosquito	EA	<1
Repellent, Insect, PIC (package = 12 coils)	PG	<1
Kit, Firefighter, EFF Pack	KT	20
Kit, Air Ops	KT	96
Kit, Berm, Containment, Large (9-drum)	KT	58
Kit, Copier Box A	KT	93
Kit, Copier Box B	KT	64
Kit, Crew, 20-person	KT	1008

(Continued on next page)

Description	Unit of Measure	Weight (lbs)
Kit, Fuel Transfer * Does not include fuel bladder. Contact fuel shop for sizes and options.	KT	545
Kit, Hose Lay, ½ Mile	KT	520
Kit, Mop-up (3/4" hose)	KT	28
Kit, Net, Cargo (3000 lb)	KT	48
Kit, Net, Cargo (6000 lb)	KT	82
Kit, Pump, Barrel, Aircraft, Hand	KT	71
Kit, Pump, Barrel, Hand	KT	18
Kit, Satellite Phone	KT	5
Kit, Spill Containment, Small	KT	12
Kit, Sprinkler (need lightweight pump)	KT	39
Kit, Sprinkler (need MK-3 pump)	KT	65
Kit, Shotgun	KT	24
Kit, Utensil	KT	5
Saw, Fano, folding (lg teeth – 17" blade)	EA	1
Blade, Replacement (F180 for Fano Saw)	EA	<1
Kit, 20' Octagon (3 boxes + door)	KT	500
Type III Incident Support (DOF)	KT	

DR= drum; CN=can; PG=package; KT=kit; EA=each; BX=box; BK=book; BD=bundle; BG=bag

FRESH FOOD BOXES

Fresh food may be used as an alternative to Meals-Ready-to-Eat (MREs) for incidents lasting more than four or five days. MREs are the substitute when fresh food is not available.

The fresh food Box A is designed to feed two people for three days. Box B is an alternative – not a supplement – to the Box A. Box B is designed to feed four people for three days and provide some slight dietary changes and prevent an excess accumulation of food (see comparison charts on page 115-118).

Remember that Box A has been redesigned as a two-person box.

In preparation for fresh food delivery, ensure adequate pots, pans, cooking utensils, etc. are on hand or ordered. Crew kits contain these items, but additional cooking equipment is likely needed. Open fires are a generally accepted method of cooking food. When this is not appropriate, or firewood is scarce, white gas stoves are available. If there is limited permafrost to create camp refrigeration, consider ordering ice chests and ice delivery.

On a typical incident, all personnel have some responsibility including preparation, cooking, cleaning, gathering of firewood, etc. if they want to eat. Some crews may choose to have a crewmember remain in camp during the day to attend to these duties, particularly on fresh food delivery days.

Each crew will typically establish a kitchen at their camp. While generally not a problem, these camps should occasionally be inspected for sanitation and bear safety. One large cooking and eating area instead of smaller camps is recommended for fire overhead.

When fresh food boxes are delivered, it is advised to label each box with the intended recipient's name and box quantity. (For example: "CATG - 1 of 4" and "CATG - 2 of 4", etc.) Label the crews' boxes first and overhead's last.

Every effort should be made to educate those unfamiliar with fresh food boxes on some of the basics, such as posting the food cycle with a list of how many of each item an individual is entitled to over that cycle. For example, for each three days from the start of fresh food delivery, an individual gets one steak, three tortillas, three candy bars, two potatoes, etc.

Fresh Food Ordering

If the incident will last more than three days, order fresh food on the second day for delivery on the fourth. If the incident will last for an additional three or more days, order the Box As. If less, consider ordering the Box Bs.

There will always be situations when splitting a box to provide food to small groups makes sense. This practice should be the exception and not the rule.

Order enough quantities to limit division of boxes between cohesive units. For example, if you have three Type 2 crews, one with 20 personnel and two with 19 personnel, order 10 boxes per crew instead of trying to split a box between the two short crews.

For overhead, order box quantities for those assigned to each specific eating area. A typical example would be to order 19 boxes for 38 personnel at the Incident Command Post (don't forget bus drivers, boat operators, etc.); seven boxes for 13 personnel at the helibase (don't forget pilots, fuelers, etc.) and two boxes for the spike camp with six overhead. When in doubt – round up.

When assessing whether to order Box As or Box Bs, consider that the goal is to have adequate food for all personnel without accumulating too much. This requires continual monitoring for long duration incidents. Keep in mind that each Box B feeds four people.

Anticipate incoming resources and keep the entire incident on the same three-day, fresh food cycle when it makes logistical sense to do so. This is a generally accepted practice and is highly recommended unless adequate quantities were not anticipated. In this case, new arrivals may have to wait until the following cycle. Other considerations include the incident's ability to distribute large deliveries of fresh food because of staffing levels or transportation resources. During times of heightened activity, large incidents may be placed on an ordering schedule to prevent multiple fires from all ordering on the same day.

Toward the end of an incident, many village crews will divide any leftover fresh food amongst the crewmembers to take home. This is a generally accepted practice if it doesn't compromise demobilization, especially those requiring demob via aviation resources.

If the timing of crew or overhead demob is imminent, it is an acceptable to limit the quantity of fresh food ordered.

Any remaining food items may be donated to a local food bank if one exists or distributed equitably to a community.

Firefighters organize fresh food boxes and supplies while setting up a remote fire camp.

Fresh Food Contents and Quantity

Box A *(feeds 2 people for 4 days)*

Box A Item	Quantity	Unit
1. Steak, fresh frozen, New York Cut, 12 oz. each, individually wrapped	2	Each
2. Ham, precooked, frozen, boneless, 16 oz. package	1	Pkg.
3. Tuna solid white meat pouches 4 to 6 oz.	4	Pkg.
4. Chicken, white boneless meat, 12 oz.	1	Can
5. Wieners/Sausage, all beef, frozen, prepackaged, 1 lb.	1	Pkg.
6. Beef Jerky, 2.5 - 4 oz.	2	Pkg.
7. Bacon, precooked.	1	Lbs.
8. Bread, 24 oz. 1 oz. or greater per slice, sliced, wrapped, 1 multi-grain, 1 white	2	Loaves
9. Potatoes, #1 bakers, Russet, Large	2	Each
10. Cabbage	1	Each
11. Onion, medium, yellow	1	Each
12. Carrots, fresh, l lb.	1	Bag
13. Oranges, L and small, mandarin or Tangelo	10	Each
14. Apples (Two different kinds)	4	Each
15. Cheese, cheddar, mild or medium, sliced, 1 lb.	1	Lbs.
16. Cheese, Monterey Jack or Provolone, sliced 1½ lbs.	1/2	Lbs.
17. Peanut Butter, 8 oz Jar	2	Each
18. Jelly, squeeze bottle, (Grape or Strawberry) 20 oz	1	Each
19. Vegetables, 2 corn, 2 green beans, 2 pork & beans, 7.75 to 8.75 oz. (may substitute can size as long as quantity of food remains the same)	6	Cans
20. Rice, minute/instant, type, boil in a bag	1	Bag

(Continued on next page)

Box A Item	Quantity	Unit
21. Tortillas, Flour, large size, minimum 10 count	1	Pkg.
22. Refried beans, 16 oz.	1	Can
23. Salsa, individual packets (Minimum of 2 oz)	6	Each
24. Pilot Bread, 12 crackers total	1	Bag
25. Fruit, canned, variety of 4 cans such as pears, peaches, fruit cocktail, Mandarin oranges, etc. 8 to 8 ¾ oz.cans	4	Cans
26. Fruit, dried, assorted: apricots, dates, apples, pears, prunes, cranberries, etc. 6 oz. packages	2	Pkg.
27. Macaroni and Cheese, 7.25 oz. box	1	Box
28. Bouillon Cubes, 3 cubes chicken and 3 cubes beef where 1 cube makes 2 cups OR 1 Bag 6 cubes chicken and 6 cubes beef where 1 cube makes 1 cup; vendor bags contents		
29. Breakfast Cereal, instant, oatmeal, 1.2 oz., assorted flavors	12	Pkg.
30. Egg Substitute (i.e. Egg Beaters), 1 box each equals 4 eggs	1	Box
31. Candy bars, no less than three (3) different varieties of candy bars per Box that contains chocolate, "King Size" or no less than 2.2 oz each.	6	Each
32. Energy Bars, assorted flavors, a minimum of 2.25 oz. individually wrapped	6	Each
33. Breakfast Bars, fruit filled, individually wrapped, assorted fruit flavors	6	Each
34. Candy, assorted with a minimum of 2 varieties of hard, individually wrapped, 6 oz. or greater	1	Bag
35. Powdered Milk, 1 quart package	1	Pkg.
36. Drink mix. (Emergen-C brand or like product)	12	Each

(Continued on next page)

Box A Item	Quantity	Unit
37. Hot Chocolate, instant, 1 oz. pkg., (3/4 cup serving)	10	Each
38. Salt, iodized, table, 4 oz. shaker	1	Each
39. Pepper, black, table, ground, shaker, 1/2 oz.	1	Each
40. Garlic, powder, shaker, 2 oz. or more	1	Each
41. Honey, 12oz. squeeze bottle	1	Each
42. Margarine, 12 oz.	1	Each
43. Mayonnaise squeeze bottle. 10 -12 oz	1	Each
44. Ketchup, squeeze bottle, 12 -14 oz.	1	Each
45. Mustard, squeeze bottle, 8 -11 oz.	1	
46. Hot Sauce, Tabasco, Tapatio or similar pepper sauce, 2-5 oz	2	Each
47. Plates, disposable, paper, 10", heavy duty	18	Each
48. Utensils, eating, plastic, heavy duty, forks, spoons, knives, 3 to a package	12	Sets
49. Paper Towels, heavy duty, 75/95 two-ply towels per roll	1	Roll
50. Aluminum Foil, 12" x 25' roll/box	1	Box
51. Resealable (i.e. Ziploc or similar type), pint or quart freezer bags	25	Each
52. Bags. Garbage type, plastic, heavy duty, 13gallon	3	Each
53. Can opener, lid removing type, P-38 or similar size	1	Each
54. Moistened towelettes, individually wrapped	12	Each
55. Gloves for food handling	12	Pair
56. Hand Sanitizer, 2 oz.	2	BT

Note: May substitute can size if the total quantity of fruit remains the same

Box B *(feeds 4 people for 3 days)*

Box B Item	Quantity	Unit
1. Steak, fresh frozen, New York Cut, 12 oz. each, individually wrapped	4	Each
2. Sausage/hotlinks, all beef or pork, frozen, prepackaged 1 lb.	2	Pkg.
3. Summer Sausage/Salami or like, all port or beef, frozen	1	Pkg.
4. Chicken, white boneless meat, 12 oz.	2	Can
5. Beef Jerky, 4 oz.	4	Pkg.
6. Bread, 24 oz. (1 oz. or greater per slice) sliced, wrapped	3	Loaves
7. Cheese, Swiss, sliced (or combination of sizes = 1 lb. or greater)	1	Pkg.
8. Breakfast cereal, instant oatmeal, 1.2 oz, asst. flavors	12	Pkg.
9. Candy bars, no less than 3 different varieties of candy bars per box that contains chocolate, “King Size” or no less than 2.2 oz each	12	Each
10. Granola bars, moist & chewy, individually wrapped assorted flavors, 0.82 oz to 1.65 oz or greater	12	Each
11. Hot chocolate, instant, 1 oz. pkg. (¾ cup servings)	12	Each
12. Plates, disposable, paper, 10”, 3-layer construction, heavy duty	36	Each
13. Utensils, eating, plastic, heavy duty, forks spoons, knives (3 to a package)	16	Sets
14. Paper towels, heavy duty, 75/95 two-ply towels/roll	1	Roll
15. Aluminum foil, heavy duty, 12”x50’ roll/box	1	Box
16. Margarine, 12 oz.	1	Each
17. Gloves for food handling	12	Pair
18. Moistened towelette, individually wrapped	16	Each
19. Hand Sanitizer, 2 oz.	4	BT

AFS CACHE ISSUE AND RETURN PROCEDURES

Issue to incident from initial attack paracargo aircraft or Alaska Cache System

- Spotter or head paracargo kicker tracks what supplies were dropped on which incident. Document delivery to fire on smokejumper run sheet/Paracargo Drop Report for following actions:
  - > Cache issue – for all paracargo drops/orders.
  - > Alaska smokejumper action – for all initial attack orders.
- All Alaska Cache orders are issued to the incident number or designated person. The IC or delegate will sign one copy of warehouse issue, noting discrepancies. The IC or delegate will ensure issue/interagency incident waybill is generated for supplies being returned to a Cache and will ensure copies of issues/waybills are kept for the incident package.

Incident to Incident

Incident initiates an issue or Interagency Incident Waybill to the other incident. Issuing incident will keep one copy and send two copies to receiving incident.

- Receiving incident will sign and note any discrepancies on the waybill and return to appropriate Cache. Upon notification of transfers, the Cache will transfer from one incident to the other.
- Receiving incident will keep supporting documentation for incident package.
- Verbal notification and agreement from both incidents to Cache will suffice if paperwork is not available (IA to IA). Cache and/or dispatch will document names, dates and transaction to be performed.

Returns from Incident

- Incident initiates an issue or Interagency Incident Waybill to Cache.
- Keep copy of documentation for incident package.
- Tag all supplies and equipment with incident number.
- Any biohazard requires special packaging and/or handling. Contact Cache prior to returning.
- Tag garbage as garbage!

Theft Reporting

The IC is responsible for immediately reporting all incidents of theft. A written statement of circumstance must be forwarded to the AFS Cache Supply in Fairbanks within 24 hours.

Theft or damage involving government property where there is an indication of breaking and entering or other burglary activity requires immediate and direct reporting to local or federal law enforcement officials at or near the scene. All available information will be provided, including complete description of property damaged or missing, nature of break-in or vandalism, time of day, location and any other pertinent data.

Theft of government property will be immediately reported through proper chain of command.

BACKHAUL

Incident personnel must take every opportunity to backhaul unused and unnecessary equipment, supplies and trash. Remember, Alaska is huge and good logistical planning is paramount.

A helispot manager is a good resource for dealing with backhaul. A Cache Demobilization Specialist (CDSP) can be requested through the Cache system and is another great source to handle backhaul necessities.

ATTENTION: Please label all backhaul with the fire number. This is critical for warehouse tracking and proper incident credit.

Backhaul Tips

Deadheading (returning with an empty aircraft) is not advisable. There is always something to backhaul. Keep efficiency in mind.

Burning paper/cardboard products on site avoids costly and unnecessary aircraft weight. However, consider the fire danger when picking a burning site. River gravel bars work well. Also, be sure to clean up any box remains such as staples.

Assemble backhaul at helispots every morning so it can be ready for pickup in the event an aircraft shows up, even if it is not anticipated.

Trash – Must be double wrapped. A plastic bag inside of a burlap bag is standard. This is critical because the trash may pass through many hands and be exchanged between several aircraft. Removing trash early and often reduces bear encounters. Do not use local dumps for disposal unless authorized. Don't forget to label anything in a burlap bag. Label burlap trash as trash, and label other items packaged in burlap with the contents (fittings, etc.).

Fuel and fuel containers – It is often cheaper and safer to offer reasonable amounts of unused fuel to rural communities. This is done

through a representative of the village council. Note that whenever fuel is transferred, a "BLM Record of Transfer of Ownership of Surplus Fuel" is required (available from the Zone FMO or Property Manager). All BLM labels must be removed or overwritten from any containers left behind. Do not leave anything without proper authorization and documentation.

Priority – When backhaul space is limited, priority should be given to pumps, chainsaws and unused hose.

Proper backhaul assembly – Whether in a net or internal, backhaul should be processed efficiently. Take time to build the backhaul into clean and compact loads. Save hazmat shipping boxes for use when backhauling. Purge all equipment and remove spigots from fuel containers. Remember, pilots and flight crews have the responsibility for not only what goes on the aircraft, but how it goes on the aircraft. For the sake of all passengers and crew, and considering the long flight back to Fairbanks, be sure that ALL garbage is properly packaged and sealed to limit odors.

Safety

Backhaul inherently contains hazmat. A few examples are pumps, saws, empty fuel containers, batteries and fire extinguishers. Pay close attention to the packaging of these items and label appropriately. Always notify the pilot and/or crew of any aviation related hazmat transport. Order a CDSP (backhaul specialist) a few days ahead of planned demobilization if necessary.

***See the Aviation Section of this guide for specific information on aviation transportation of hazmat.**

ALASKA PORTABLE AVIATION FUELING SITES

Portable fueling sites are critical to support remote Alaska fires. Fueling sites can consist of barrels (55-gallon drums) with a pump, or a larger fuel bladder operation.

What you need to know about portable fueling:

- **Barrels** – 55-gallon drum fueling is ideal for minimal fueling needs with anticipated short incident duration. Drums can be challenging to deal with physically. A full drum weighs about 450 pounds. The drums are typically delivered to locations via fixed wing aircraft. Barrels must be kept in containment berms, which are available through the AFS warehouse (Part #008707). Each of these berms can contain up to nine drums. For aviation fuels, filtration is mandatory. A hand pump with filter is also available from the AFS Cache (Part #008732).
- **Bladders** – Portable fuel bladders are typically used for fire support involving multiple aircraft with anticipated extended incident duration. The sites require a large, flat area usually found at remote airfield aprons. AFS has full-time fueling staff which will set up and maintain the site.

If you are assigned in a logistical position for fire support (such as Staging Area Manager), you should have the AFS Aviation Fuel Shop's assistance (907)356-5564. Also keep these things in mind:

- **Location** – The site must be accessible by aircraft, but not in the way of other operations or local aviation traffic.
- **Support** – When using portable fuel sites, Aviation Fuelers (AFUL) should be on site for the duration of the incident. If not, the actual fueling process needs to be handled by the pilots. Other personnel may assist only with the direct supervision of the pilot.

Portable aviation fueling sites are only for use with aviation fuels (Jet-A and/or AvGas). Jet-A sites can be either barrels or bladders. AvGas is only available in barrels.

Monitor fuel level in anticipation of demobilization. Always leave enough fuel on hand for emergencies such as medical evacuations. Order additional fuel in advance.

Only the AFS Fuel Shop is authorized to package a bladder for demobilization. Coordinate demobilization of fuel bladder sites with the AFS Aviation Fuel Shop in advance.

In general, the key positions to coordinate with are the Zone fire managers (FMOs and AFMOs), Unit Aviation Managers (UAMs), incident helicopter managers and pilots, and the on-site Aviation Fueler (AFUL).

****Fueling sites are a critical need! Order early and keep the Unit Aviation Manger informed. Fuel delivery can take up to 96 hours.**

See the Aviation section of this guide for important information about aviation transport of hazmat.

COMMUNICATIONS

The DOF and BLM AFS still depend heavily on conventional frequencies and repeaters. The DOF also uses digital frequencies and the Alaska Land Mobile Radio (ALMR) statewide trunking system. The KNG-P150 and BKR5000 Radios issued by both DOF and AFS are programmed to work on both conventional and ALMR systems and share most of the same channels and zones. **Note: Out-of-State Fire Radios do not have access to the ALMR system**. This includes NIFC Kit Radios. If out-of-state resources require access to the ALMR system, they will need to check out an AFS or DOF Radio.

Digital channels are programmed the same way as conventional channels, except that they require a Network Access Code (NAC). See the DOF Radio Programming Guide for NAC codes. The NAC code is an option in the programming sequence (steps 18 and 19 below).

Scanning with the KNG/BKR – ALMR and Conventional

Two types of scan options are available in AFS and DOF portables – Dual Mode Scan (DMS) and Channel Scan. DMS Scan is used to scan trunking (ALMR) and conventional channels at the same time. This is useful when an ALMR talk group is used as part of daily operations. The drawback to this type of scan is that you have no priority option. It also limits the scanning speed and the number of conventional channels. Even though the DMS list will take 16 channels, generally you should limit the number of conventional channels to six. It is also important to note that the DMS scan list is global, meaning that any channel in the entire radio (even from different groups) can go into the list.

On DOF portables, DMS is activated by using the collar switch underneath the channel selector. On AFS portables, DMS is activated in the Menu. An indicator will appear in the upper right corner of the screen. Channel scan is for conventional channels only and is set up within each zone. The priority channel will be the selected channel unless changed in the menu under “Priority Channel Select.” On the

KNG, channel scan is activated with the left-hand toggle switch, and priority scan is activated by the right-hand toggle. On AFS BKR-5000 Portables, Channel Scan is activated by the Side Top button, and Priority Scan by the Side Middle button. Channel Scan option will not physically work on a trunking channel. For trunking channels, DMS must be used.

Cloning Guide

Attach a cloning cable to the two radios you want to clone to/from. The cord can go either way between radios. **Cloning between BKR and KNG or DPH radios requires BKR to Legacy Cloning Adapter.**

KNG to KNG or BKR to BKR or KNG to BKR or BKR to KNG

- On destination radio, place the radio in the zone you want to be Menu/Cloning/ENT/Enter Dest Clone.
- On source radio, place radio in the zone to be cloned from.
- Menu/Cloning/ENT/Clone Active Zone/ENT.
- Be patient. This takes longer than DPH to DPH.

KNG or BKR to DPH

- On DPH radio, select group to be cloned. Turn squelch button fully counterclockwise.
- On KNG/BKR radio, place radio in the zone to be cloned from.
- Menu/Cloning/ENT/Clone Active Zone/ENT.

DPH to KNG or BKR

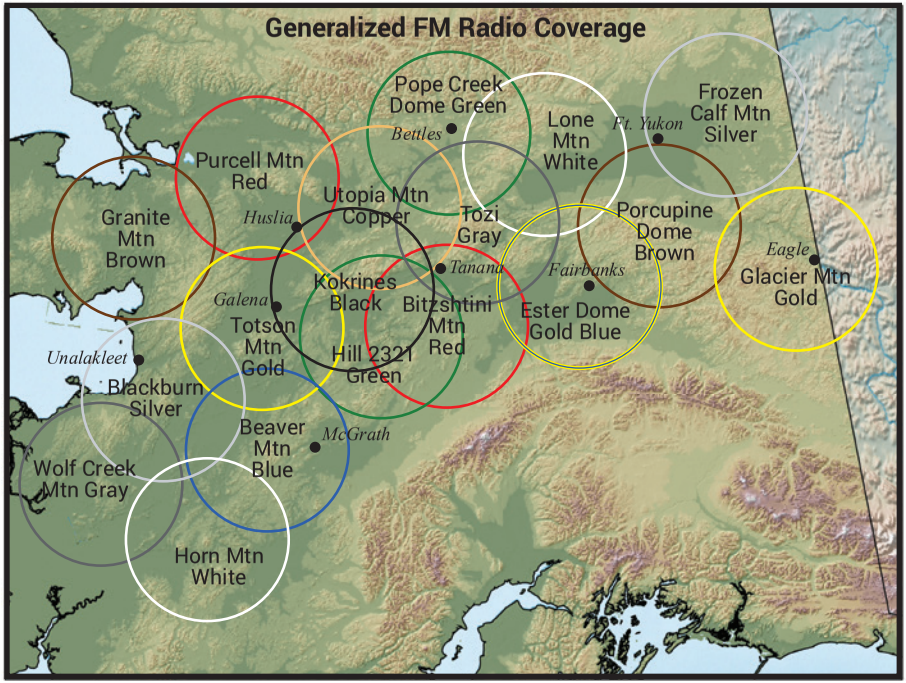
- One KNG/BKR radio, place the radio in the zone to be cloned.
- Menu/Cloning/ENT/Enter Dest Clone/ENT.
- On DPH radio, place radio in the group to be cloned from.
- Press button on cloning cable and hold ENT button/000000/ ENT/*/FNC.
- You must check squelch on your new zone. They automatically default to midline squelch.

LARSEN/THROW ANTENNAS

Larsen antennas are available for checkout through the AFS Cache. The antennas work well on Interior Alaska's extensive flats and boost the receiving and transmission capabilities of portable radios.

The antenna is simple and straightforward. It is essentially a 20 feet antenna extension cable that plugs in to the antenna port on the top of your KNG or BKR radio (or on the side of your DPH radio). The antenna can be thrown in a tree, raised on a branch or attached to a hotstick pole. The flexible metal Larsen antenna should not be in contact with **any** metal object, or it will not work as intended.

The Larsen antenna kit and hotstick are both available to order through the warehouse. The kit includers the antenna adapters needed for DPH, KNG, and BKR Radios. Feel free to contact the AFS or DOF Radio Shops for training or assistance with the Larsen kit.


Generalized FM Radio Coverage
Pope Creek
Dome Green
Bettles
Lone
Mtn
White
Ft. Yukon
Frozen
Calf Mtn
Silver
Purcell Mtn
Red
Utopia Mtn
Copper
Huslia
Tozi
Gray
Granite
Mtn
Brown
Porcupine
Dome
Brown
Eagle
Glacier Mtn
Gold
Tanana
Fairbanks
Kokrines
Black
Galena
Bitzshtini
Mtn
Red
Ester Dome
Gold Blue
Totson
Mtn
Gold
Unalakleet
Hill 2321
Green
Blackburn
Silver
Beaver
Mtn
Blue
McGrath
Wolf Creek
Mtn Gray
Horn Mtn
White

IRIDIUM SATELLITE PHONE OPERATIONS GUIDE

- Make sure a SIM card is inserted and the battery is charged.
- Check antenna seating and reseat if not firmly against body of phone. Swing antenna up to click stop. Hold base of antenna, pull body of antenna to extend it to its full length.
- Press the power button on the keypad. It is the red circle at the lower left.
- Check the display as the phone cycles through its power on testing and resisters with the satellite system. Once the phone displays "Registered" and has three to four bars showing in the signal strength across the top, you should be able to make or receive calls. Signal strength is displayed across the top along with the time and battery charge indicator.
- When holding the phone to your ear, swing the antenna into a position that keeps it as vertical as possible. There are click stops for left- and right-handed use.
- You will hear a tone indicating the system is connecting the call. A voice will inform you of the remaining minutes on your account. You should hear the normal ringing sound when it is connected. If you hear a double beep, or the tone or ringing stops, look at the display to see the status. If the call is aborted, you'll be able to press "OK" to redial after a few seconds following the termination of the call.
- If you are unable to connect, make sure you have a clear view of the sky. If you are in heavy vegetation or down in a hole, it may not be possible to use the sat phone, and the best solution may be to move to a higher or less obstructed spot. You also may simply need to attempt the call multiple times.

- Anytime the display shows “Iridium,” press “OK” to bring up the last number dialed. Press “OK” again to dial the number.
- Pressing the “^” key on the lower right brings up an iconic menu on the display. The arrow buttons below the display scroll the icons.
- If all else fails, read the manual!

Call Procedures

To call a landline or cell phone from an Iridium phone:
1 then 10-digit phone number

To call an Iridium phone from another Iridium phone:
12-digit Iridium phone number

To call an AFS Iridium phone *from a cell phone or landline*:
12-digit Iridium phone number

To use the SOS button: Remove the top cover and depress the red button

To cancel the SOS: Select “Menu,” arrow to highlight “Setup,” press “Select,” “Location Options” will be highlighted, press “Select,” arrow to highlight “Emergency Options,” press “Select,” “Cancel Emergency” highlighted, press “Select.”

To send an SMS text message: Select “Menu,” arrow to highlight “Messages,” press “Select,” “Create Message” will be highlighted, press “Select,” type your message, press “Options,” “Send” will be highlighted, press “Select,” “New Recipient” will be highlighted, press “Add,” enter email address, press “Send.”

ALASKA FLIGHT FOLLOWING

Flight Following

Flight following is required from departure to arrival. The approved standard methods of flight-following are:

- Automated Flight Following (AFF) – AFF with an approved Dispatch Center. This is the preferred method of flight following.
- Instrument Flight Rules (IFR) – An IFR flight plan filed with FAA

Relay the chosen method of flight following to the dispatch center responsible for flight following.

Upon departure, the pilot or flight manager must inform dispatch of:

- Entire aircraft tail number.
- Departure and destination and/or heading.
- Souls on board.
- Fuel on board.
- Estimated time enroute (ETE).
- Estimated time on the ground (if applicable).

The pilot or flight manager must contact dispatch prior to each departure, as soon as practical after each landing, and before any deviations.

If AFF capability is lost, resume 30-minute radio or satellite phone check-ins with dispatch. Pilots and flight managers are responsible for monitoring radio repeaters and satellite phones to receive messages from dispatch.

Note: If unable to contact your dispatch center via the predetermined flight following method, you may contact an FAA Flight Service Station (FSS) and ask them to relay a message to the appropriate dispatch center. The FSS does not provide flight following services.

Sterile Cockpit

Sterile cockpit is defined as limiting communications and actions within the cockpit to only those required for safe maneuvering and traffic separation. This means that communications with dispatch, ground personnel and other aircraft concerning mission information is prohibited. Pilots are always given the opportunity to maneuver the aircraft safely, without undue physical or mental interference. This is especially important during approach/departure and take-off/landings.

A sterile cockpit is maintained within a 5-mile radius of controlled and uncontrolled airports, and during approach and departure at remote helispots and airstrips for a time period specified by the pilot.

Exception: When conducting firefighting missions within 5 miles of an uncontrolled airport, maintain sterile cockpit until departing the traffic pattern and reaching final altitude. Monitor common traffic advisory frequency (CTAF) if feasible while engaged in firefighting activities. Monitor CTAF as soon as practical upon leaving the fire and returning to the uncontrolled airport. When conducting firefighting missions within Class B, C, or D airspace, notify dispatch that air traffic control (ATC) will have priority over dispatch communications.

The pilot and front seat passenger keep a look out for other aircraft while flying in remote Alaska.

LATITUDE-LONGITUDE FORMATS FOR AVIATION USE

Most people are familiar with reading coordinates from paper maps and GPS units. However, different agencies utilize different formats. Using the correct datum and format when working with aviation resources will cut down on confusion and errors.

GPS Datums

- Datums define the origin and orientation of latitude (lat)/longitude (long) lines.
- Describing a place by lat/long is not good enough. The datum must also be stated.
- Changing the datum changes the lat/long of a point on the surface of the Earth.
- There are hundreds of different datums; agencies use different datums.
- Referencing lat/long coordinates to the wrong datum can result in positional errors of hundreds of feet/meters.
- Common North American Datums (NAD): WGS84, NAD83, NAD27.

Know Your Agency's Standard Format and Datum

- BLM GIS (Various).
- BLM Fire (Degrees and Decimal Minutes, WGS84).
- BLM Aviation (Degrees and Decimal Minutes, WGS84, DD° mm.xxxx'/DDD° mm.xxxx').
- FAA Temporary Flight Restrictions (Degrees, Minutes and Seconds, WGS84). US NOTAM OFFICE FORMAT DD° mm' ss" N/DDD° mm' ss" W.
- National Weather Service (Decimal Degrees, NAD83).
- Common Map format (Degree, Minute, Seconds, Various Datums).

Remember to:

- Use only ONE period/decimal point when writing a latitude or longitude in **Decimal** Degrees (DD.xxxx°/DDD.xxxx°), Degrees and **Decimal** Minutes (DD° mm.xxxx'/DDD° mm.xxxx') or Degrees, Minutes and **Decimal** Seconds (DD0 mm' ss.xxxx"/ DDD° mm' ss.xxxx").
- Do NOT use periods/decimal points for degrees, minutes or seconds when writing a latitude or longitude in Degrees, Minutes and Seconds (DD° mm' ss"/DDD° mm' ss").
- There can NEVER be more than 60 minutes or seconds in Minutes and Seconds formats.
- Do NOT mix formats.
- Know, use, and state the proper datum.

When in doubt, utilize WGS84 Datum in Degrees Decimal Minutes when working with aviation resources

A smokejumper spotter surveys a wildfire burning on an island in the Round Island Walrus Sanctuary before a fire jump on May 17, 2022.

AIRPORT LOCATIONS AND RUNWAY INFORMATION

Galena Zone				
Location	**Designator**	**Runway Info**	**Lat**	**Long**
Alakanuk	AUK	4000’ gravel	62° 41	164° 43
Ambler	PAFM	4000’ gravel	67° 06	157° 51
Anvik	PANV	4000’ gravel	62° 39	160° 11
Buckland	BVK/PABL	3200’ gravel	65° 59	161° 09
Candle	AK75	3880’ gravel	65° 54	161° 56
Dahl Creek	DCK	4780’ gravel	66° 57	156° 53
Deering	DEE/PADE	3320’ gravel	66° 04	162° 46
Elim	ELI/PFEL	3400’ gravel	64° 37	162° 16
Galena	GAL/PAGA	6000’ asphalt	64° 44	156° 56
Holy Cross	HCA/PAHC	4000’ gravel	62° 11	159° 47
Huslia	HSL/PAHL	4000’ gravel	65° 42	156° 21
Kaltag	KAL/PAKV	3986’ gravel	64° 19	158° 44
Kiana	IAN/PAIK	3400’ gravel	66° 59	160° 26
Kobuk	OBU/PAOB	4020’ gravel	66° 55	156° 54
Kotzebue	OTZ/PAOT	6300’ asphalt	66° 53	162° 36
Koyuk	KKA/PAKK	3000’ gravel	64° 56	161° 09
Koyukuk	KYU/PFKU	4000’ gravel	64° 53	157° 44
Marshall	MDM/PADM	3200’ gravel	61° 52	162° 02
Mt. Village	MOU/PAMO	3500’ gravel	62° 06	163° 41
Noatak	WTK/PAWN	3992’ gravel	67° 34	162° 59
Nome	PAOM	6000’ gravel	64° 31	165° 27
Noorvik	D76/PFNO	4000’ gravel	66° 49	161° 01

(Continued on next page)

Galena Zone				
Location	**Designator**	**Runway Info**	**Lat**	**Long**
Nulato	NUL/PANU	4000’ gravel	64° 44	158° 04
Pilot Station	0AK	4000’ gravel	61° 58	162° 57
Russian Mission	RSH/PARS	3620’ gravel	61° 46	161° 19
St. Marys	KSM/PASM	6000’ gravel	62° 04	163° 18
St. Michael	SMK/PAMK	4000’ gravel	63° 29	162° 07
Selawik	WLK/PASK	3000’ gravel	66° 36	159° 59
Shageluk	SHX/PAHX	3400’ gravel	62° 42	159° 34
Shaktoolik	2C7/PFSH	4000’ gravel	64° 22	161° 13
Shishmaref	SHH/PASH	4997’ gravel	66° 15	166° 05
Shungnak	SHG/PAGH	4000’ gravel	66° 53	157° 10
Stebbins	WBB	2999’ gravel	63° 31	162° 17
Teller	TER/PATE	2983’ gravel	65° 14	166° 20
Unalakleet	UNK/PAUN	5900’ gravel	63° 53	160° 48

(Continued on next page)

Tanana Zone				
Location	**Designator**	**Runway Info**	**Lat**	**Long**
Allakaket	6A8/PFAL	4000’ gravel	66° 33	152° 37
Anaktuvuk Pass	AKP/PAKP	4800’ gravel	68° 08	151° 45
Bettles	BTT/PABT	5190’ gravel	66° 55	151° 32
Coldfoot	CXF/PACX	4000’ gravel	67° 15	150° 12
Galbraith Lake	PAGB	5182’ gravel	68° 29	149° 29
Hughes	HUS/PAHU	3381’ gravel	66° 02	151° 00
Kantishna	5Z5	1887’ gravel	64° 59	150° 39
Manley	MLY/PAML	3400’ gravel	64° 59	150° 39
Minchumina	MHM/PAMH	4184’ gravel	63° 53	152° 18
Minto	51Z	3400’ gravel	65° 09	149° 22
Prospect Creek	PPC/PAPR	4968’ gravel	66° 49	150° 39
Rampart	RMP	3520’ gravel	65° 30	150° 08
Ruby	RBY	4000’ gravel	64° 44	155° 28
Tanana	TAL/PATA	4400’ gravel	65° 10	152° 07

(Continued on next page)

Upper Yukon Zone				
Location	**Designator**	**Runway Info**	**Lat**	**Long**
Arctic Village	ARC/PARC	4500’ gravel	68° 07	145° 35
Beaver	WBQ/PAWB	3934’ gravel	66° 22	147° 24
Birch Creek	Z91	4000’ gravel	66° 16	145° 49
Central	CEM/PACE	2782’ gravel	65° 34	144° 47
Chalkyitsik	CIK/PACI	4000’ gravel	66° 39	143° 44
Chicken	CKX	2500’ gravel	64° 04	141° 57
Circle City	CRC/PACR	2979’ gravel	65° 49	144° 05
Circle Hot Springs	CHP	3669’ gravel	65° 29	144° 37
Coal Creek	L20	3900’ gravel	65° 19	143° 08
Eagle	EAA/PAEG	3600’ gravel	64° 47	141° 09
Fort Yukon	FYU/PFYU	5000’ gravel	66° 34	145° 15
Stevens Village	SVS	4000’ gravel	66° 01	149° 03
Venetie	VEE/PAVE	4000’ gravel	67° 01	146° 22

ALASKA DISTANCE (Air Miles)

	FBK	CEM	FYU	TAL	MHM	BTT	GAL	DCK	MCG	ANC	EAG
FBK Fairbanks	-	85	120	115	135	155	240	260	240	229	155
CEM Central	85	-	60	190	220	190	315	310	325	299	110
FYU Fort Yukon	120	60	-	190	235	150	310	280	340	347	135
TAL Tanana	115	190	190	-	75	105	125	160	160	247	305
MHM Lk Minchumina	135	220	235	75	-	190	130	215	105	175	330
BTT Bettles	155	190	150	105	190	-	185	125	260	347	310
GAL Galena	240	315	310	125	130	185	-	130	115	286	445
DCK Dahl Creek	260	310	280	160	215	125	130	-	240	390	440
MCG McGrath	240	325	340	160	105	260	115	240	-	191	440
ANC Anchorage	229	299	347	247	175	347	286	390	191	-	360
EAG Eagle	155	110	135	305	330	310	445	440	440	360	-

ALASKA AGENCY AIRCRAFT

BLM airplanes Quest Kodiak 100 (left) and the PC-12 (right) are parked in front of Super Scoopers parked on Ladd Air Field at Fort Wainwright.

PC-12 N190PE "Interior 77"

The BLM-owned PC-12 is manufactured by Pilatus Aircraft. It is a single-engine turboprop with a pressurized cabin and performs passenger, cargo transport, aerial detection and air tactical missions. Commonly referred to as 0PE (pronounced Ope) is an AICC resource and scheduled through AICC.

Specifications

Max Takeoff Weight: 9,965 lbs.
Max Fuel Capacity: 2,702 lbs.
Endurance: 6 hours
Cruise Speed: 255 knots
Max Seating: 9 passengers
Max Payload: 3,200 lbs.
Max Cargo Load: 2,200 lbs.

Fuel Type: Jet A, Jet A-1, Jet B, JP-4
Fuel Consumption: 400-500 lbs/hr
Service Ceiling: 28,000 ft
Wingspan: 53 ft.
Length: 47 ft.
Height: 14 ft.
Cargo Door: 4'4" high x 4'5" wide

Payload Scenarios

Hours of fuel	# of Passengers (180 pounds each)	Passenger baggage (pounds)	Cargo load only (pounds)
2	3/4/5	1,735/1,555/1,375	2,300
2	7/8/9	1,015/835/540	2,300
3	2/3	1,215/1,035	1,575
3	4/5/6/7	855/675/495/315	1,575
4	2/3	865/685	1,225
4	4/5/6	390/210/30	1,225
5	3/4	335/155	875
6	2	165	600

Quest Kodiak 100 N700FW

This K-100 is a BLM-owned aircraft assigned to and scheduled through the BLM AFS Military Zone. The Kodiak is an American utility aircraft designed and built by Quest Aircraft. The high-wing, unpressurized, single-engine turboprop has fixed tricycle landing gear and is suitable for short takeoff and landing (STOL) operations from unimproved airfields. It performs passenger, cargo transport, aerial detection and air tactical missions.

Specifications

Max Takeoff Weight: 7,255 lbs.
Max Fuel Capacity: 2,110 lbs.
Endurance: 5.7 hours
Cruise Speed: 145 knots
Max Seating: 6 passengers
Max Payload: lbs.
Max Cargo Load: lbs.

Fuel Type: Jet A, Jet A-1, Jet B, JP-4
Fuel Consumption: 300 lbs/hr
Service Ceiling: *12,500 ft. w/passengers
25,000 ft w/oxygen
Wingspan: 45ft. 0 in.
Length: 34 ft. 2 in.
Height: 15 ft. 3 in.
Cargo Door: 4'0" high x 4'0" wide

Payload Scenarios

Hours of fuel	# of Passengers (180 pounds each)	Passenger baggage (pounds)	Cargo load only (pounds)
2	2/3/4	1,640/1,460/1,280	2,000
2	5/6	1,100/920	2,000
3	2/3/4	1,140/1,260/1,080	1,800
3	5/6	900/720	1,800
4	2/3/4	1,140/960/80	1,500
4	5/6	600/420	1,500
5	2/3/4	840/660/480	1,200
5	5/6	300/120	1,200
6	2/3/4	540/360/180	900

COMMON ALASKA AIRTANKERS

Air Tractor AT-802F "Fire Boss"

The Air Tractor-802F is a single-turbine, purpose-built aircraft used for water bombing. The AT-802F is powered by one Pratt & Whitney PT-6 with 1,350 or 1,600 horsepower. BLM AFS annually contracts four of these single engine water scoopers at the beginning of the fire season.

Specifications

Max Takeoff weight: 16,000 lbs.
Max Fuel Capacity: 2,546 lbs.
Endurance: 4 hours
Cruise Speed: 150 knots
Drop Speed: 105-110 knots
Skim Distance: 2,200 ft.
Takeoff Distance: 5,600 ft.
Fuel Type: Jet A
Fuel Consumption (Bomb): 95 lbs/hr
Fuel Consumption (Ferry): 85 lbs/hr
Wingspan: 59.2 ft.
Length: 35.7 ft.
Height: 16.2 ft.
Tank Capacity: 800 gallons

Water source

Minimum Lake size: Roughly 1-mile shore to shore
Water Depth: 4 feet
Skim time: 12-15 seconds
*Rivers that are clear enough to see the bottom and any hazards can be used if the minimum scoopable distance can be met.

Loading

Two probes deploy from the float, loading 40 gallons per second at 60 miles per hour.

Doors

- Fire retardant, foam, gel or water flows from beneath the aircraft though a computer-controlled dispersal system. This gate permits either salvo drops or multiple drops with a constant flow of material at specific coverage levels.

Limitations

- Head Wind – 35 mph limit. Withstand rough water very well due to durable hull design.
- Cross Wind – Excellent crosswind capability due to spaced floats providing stability.
- Restricted to VFR daytime flights only.

A Fire Boss drops water.

CL-415 and CL-215T

A CL-215T, on the left, and a CL-415 parked on the ramp at Ladd Air Field.

The CL-415 and CL-215T are both twin turbine, high-wing, purpose-built aircraft used for water bombing. These aircraft are powered by two Pratt & Whitney PW123 AF 2,380 horsepower engines.

Specifications for the two aircraft are very similar, with the main difference being that the CL-415 has four gates while the CL-215T has two. These aircraft are ordered when needed during the fire season.

Specifications

Max Takeoff weight:16,000 lbs.
Max Fuel Capacity:10,250 lbs.
Endurance: 4 hrs.
Cruise Speed: 170 knots
Drop Speed: 105-110 knots
Skim Distance: 1,250 ft.
Takeoff Distance: 4,200 ft.
Fuel Type: Jet A
Fuel Consumption (Bomb): 1,554 lbs/hr
Fuel Consumption (Ferry): 1,200 lbs/hr
Wingspan: 93.1 ft.
Length: 66.9 ft.
Height: 29.5 ft.
Tank Capacity: 1,620 gallons

Water Source

Minimum lake size: Roughly 1-mile shore to shore
Water depth: 5 feet
Skim time: 10-12 seconds
*Rivers that are clear enough to see the bottom and any hazards can be used if the minimum scoopable distance can be met.

Two water probes aft of each tank fill the tanks while skimming. The pilot controls the load level via a cockpit gauge and pulling up the probes when the desired level is reached. However, in order to load four tanks with two probes, a bifurcation is incorporated.

Doors

One 63-inch by 11-inch door for each compartment. Doors are electronic unlatch, free fall open and hydraulic close. The four compartments can be released singly, in pairs or all four doors together simultaneously.

Wind Limitations

- Head wind – 35 mph limit. Can withstand rough water very well due to durable hull design.
- Cross Winds – Excellent crosswind capability due to wing-tip floats.

CONAIR Q-400AT

The Conair Q-400AT is a Dash 8-400 converted to a Type 2 air tanker. The Q-400 AT is a high capacity, fast, fuel-efficient and flexible firefighting aircraft designed to replace the CV-580. The Q-400AT offers the lowest fuel burn per gallon hauled while carrying 88% of the load of a typical Type 1 airtanker. DOF contracts two Q-400ATs based in Palmer and Fairbanks.

Specifications

Max Takeoff Weight: 68,200 lbs.
Normal Fuel Capacity: 13,792 lbs.
Loaded Endurance: 3 hrs.
Cruise Speed Loaded: 360 knots
Drop Speed: 120-125 knots
Takeoff Distance: 4,600 ft.
Fuel Type: Jet A
Fuel Consumption: 1,000 lbs/hr
Wingspan: 93 ft., 3 in.
Length: 107 ft., 9 in.
Height: 27 ft., 4 in.
Tank Capacity: 2,650 gallons

The Conair Q-400AT aircraft are approved by the Interagency Airtanker Board (IAB) and can deliver 2,642 gallons of long-term retardant or water at any coverage level. Key missions include: indirect, parallel or direct retardant line application; perimeter and anchor application on moderate to high intensity fires; pretreatment or offset of indirect line and burnout operations; and/or urban interface pretreatment for structures or other improvements.

ALASKA SMOKEJUMPER AIRCRAFT

Aircraft Types and Load Configurations

The Alaska Smokejumpers use the CASA 212-200 and the Dash-8. The Dash-8 significantly increases the number of personnel, amount of cargo, response time and range available for initial attack. The CASA carries eight jumpers, referred to as a "load of smokejumpers," while the Dash-8 can carry 12 smokejumpers. Each jumper exits the aircraft with a personal gear bag, personal items, and a tent/shelter. They are then supplied with paracargo from the same aircraft with remaining gear needs (sleeping bags, tools, food/water, cookpots, bug netting, etc.). Each aircraft also carries two chainsaw kits per load and an assortment of pumps and hose.

- The CASA carries one lightweight pump kit, one Mark 3 pump kit, 1,000 feet of 1 ½-inch hose, and 1,400 feet of 1-inch hose.
- The Dash-8 carries two Mark 3 pump kits, two lightweight pump kits, three chainsaw kits, 20 gallons of premix, six 1 ½-inch hose bags, one drip torch kit and two sprinkler kits.
- Both types of aircraft have a trauma kit on board set up for paracargo delivery.

Deployment Time Frames

Once a load is officially requested from the AICC, the goal is wheels-up in six minutes.

A CASA 212 can cruise about 170 knots and is loaded with three hours and 15 minutes of fuel. The Dash-8 can cruise at about 260 knots and is loaded with four hours and 30 minutes of fuel. Its speed provides statewide IA coverage from Fairbanks to all typical fire activity areas in less than two hours.

Due to the long response distances in Alaska, smokejumper aircraft are often prepositioned at outstations such as McGrath, Galena and Fort Yukon when fire activity is predicted. Sometimes the CASA requires a fuel stop prior to arrival on a fire.

Once over the fire area, smokejumper operations generally take 20-35 minutes depending on wind conditions, jump-spot selection and other aircraft. Smokejumpers are usually delivered directly to the fireline or work assignment location.

A smokejumper spotter looks out of a Dash-8 while sizing up a wildfire as a load of smokejumpers behind him get ready for a fire jump.

ALASKA PARACARGO REFERENCE SHEET

Paracargo contact (907) 356-5534

CASA 212:

Approximate PC Capabilities: up to four pallets and a 4,000-pound aircraft payload

Possible standard loads for one pallet (each is a full pallet):

- 24 cubies.
- 48 MREs.
- 1-mile hose kit (5,400-feet standard hose lay with fittings).
- Three 55-gallon fuel drums.
- Eight fresh food boxes.
- Eight Mark 3 pump boxes.
- 24 5-gallon fuel cans.
- One Zodiac boat kit (boat, motor, fuel, PFD's, etc.).
- 12 hose bags (5,000 feet of 1 ½ inch per bag or 700 feet of 1-inch per bag).

Dash-8:

Approximate PC Capabilities: Eleven 500lb "grain sack" bundles and a max aircraft payload of 7,500 pounds. Four hours and 30 minutes of fuel.

- The Dash-8 is not normally used for paracargo orders. However, it can be utilized under certain circumstances. Talk with dispatch and paracargo if you think this may be the best platform for delivery of your supplies.
- Justification for requesting the Dash-8 as a PC platform: 2+ hours of flight time from Fairbanks and/or multiple fires in your area requesting PC. 7,500 pounds of supplies are needed.

Ordering Info Needed:

- Lat/Long of drop zone(s).
- Ground contact person to receive load at drop zone.
- Air to Ground frequency being used on the fire.

Ordering Tips:

- When you place an order with dispatch, request delivery via paracargo.
- After order is placed with dispatch, call paracargo directly at (907) 356-5534 to discuss order. Information useful to PC includes: priorities, timeframe, drop zones (A-22s or garbage), visibility and other aircraft in the area.
- In low visibility situations, inquire about the use of a JPAD (a GPS-guided parachute capable of delivering up to 500 pounds.)

Paracargo is the ideal delivery method for small fires and isolated sections of large fires. PC is labor-intensive, and during busy seasons, demand may outstrip the ability of the paracargo section to accomplish all requests. Consider other delivery options if PC is unavailable, such as delivering the cargo to the nearest airstrip and bumping it by helicopter or boat.

****Ultimately, AICC makes the decision to use paracargo for delivery of your supply order. Be sure to follow up with dispatch to confirm how your order will be delivered.**

ALASKA AIRTANKER BASES

Name	Agency	Location	Coordinates	Notes
Fairbanks (FAI)	Alaska Division of Forestry & Fire Protection (DOF)	Fairbanks International Airport (FAI)	64 48 x 147 51	
Delta Junction	DOF	Delta Junction AirField	64 00 x 145 43	DOF only. Blaze Tamer Gel Plant
Fort Wainwright	BLM AFS	Ladd Army Airfield	64 50 x 147 40	SEAT base only
Kenai	DOF	Kenai Municipal Airport	60 34 x 151 14	
McGrath	DOF	McGrath Airfield	62 57 x 155 36	
Palmer	DOF	Palmer Municipal Airport	61 35 x 149 05	

UNMANNED AIRCRAFT SYSTEMS (UAS) IN ALASKA

Remote pilots operate under Federal Aviation Administration (FAA) and individual agency policies. Part 107 of the Federal Aviation Regulations (FAR) is the overarching regulation for small UAS. All remote pilots are required to follow agency policies when operating UAS on incidents and should refer to NWCG Standards for Fire Unmanned Aircraft System Operations (PMS-515) and the Department of the Interior OPM-11 for policy. Generally, small UAS operate line-of-sight in Class G airspace up to 400 feet above ground level (AGL). UAS can operate above 400 feet AGL and beyond visual line of sight (BVLOS) through various FAA waivers.

Advantages of UAS on Wildland Fires

- Limits exposure and reduces risk to pilots and wildland firefighters.
- Cost is a fraction of manned aviation resources.
- Able to fly in remote locations and easily packable.
- Diverse mission set including video, infrared, mapping, PSD.
- UAS can be flown beyond visual line of sight (BVLOS) and at night in certain circumstances. This includes flights that occur during periods of inversion or inclement environmental conditions.

Operational Considerations for Requesting UAS

Operation of UAS requires a qualified UAS pilot and a visual observer. Because the remote pilot or observer must always maintain line-of-sight with the UAS, it can only be flown during the day. The DOI has a limited number of qualified pilots with the ability to fly beyond visual line of sight (BVLOS) within a temporary flight restriction (TFR) and at night with special considerations and notifications. Available UAS platforms and pilots may be limited.

Mission Objectives and Final Data Products

Missions and products include fireline situational awareness, perimeter and acreage calculation or mapping, aerial photos and videos, infrared and plastic sphere dispenser aerial ignitions.

Other Considerations

- Smoke impacts on manned aircraft.
- Airspace ownership: restricted and controlled airspace, Memorandum of Agreements, who is in control?
- Current and expected weather: UAS cannot operate in rain.
- Limited availability of manned aircraft.

UAS Positions

- Unmanned Aircraft System, Pilot (UASP) – Pilots provide data to tactical and strategic decision makers and are responsible for flying, managing and coordinating UAS missions on wildland fire incidents. UASPs work in the Air Operations branch.
- Unmanned Aircraft System, Module Leader (UASL) – Module Leaders serve as single point of contact for incidents with more than two UAS modules on scene.
- Unmanned Aircraft System, Data Specialist (UASD) –Data specialists collect, store and disseminate data and intelligence collected by UAS for wildland fire incidents.
- Unmanned Aircraft System, Manager (UASM) – Managers are the conduit between a UAS vendor (under federal contract/agreement) and the IMT or ordering unit. The UASM coordinates UAS vendor missions with operations, air operations, and planning personnel, and is the designated government representative for the UAS contract/agreement.

Ordering UAS in Alaska

Agency-owned UAS are ordered as an overhead position (UASP, UASL, etc.) with the UAS platform identified in the Special Needs block in Interagency Resource Ordering Capability (IROC).

The DOF Areas will place requests to the Northern Forestry Dispatch Center (NFDC), who will work with DOF Aviation to determine which resource will fill the request. If NFDC is unable to assign a resource, an order may be placed with the AICC.

AFS Zones will place requests through their local dispatch to AICC, who will work with the UAS Program Coordinator to determine which resource will fill the request. Once the order is filled, the filling dispatch will document which drone is being taken by the property number.

The BLM AFS smokejumpers have qualified operators who may order UAS once they are on an incident. They will place the order through the local dispatch center to which they are assigned. That dispatch center will contact paracargo to identify the drone to be used. Documentation for approved use will be provided on the UAS pilot's resource order, with the drone's property number.

An Alta X drone with controller (right), two batteries (middle) and the Ignis plastic sphere dispenser that releases plastic balls filled with chemicals used to ignite vegetation on the ground.

UAS Typing and Specifications

Type	Configuration	Endurance	Data Collection altitude (AGL)	Max Range (Miles)	Sensors (payloads)
1	Fixed-Wing Rotorcraft	6-14 hrs. NA	3,500-8,000 NA	50 NA	EO/Mid Wave IR High Quality IR
2	Fixed-Wing Rotorcraft	1-6 hrs. NA	3,500-6,000 NA	25 NA	EO/Long Wave IR Moderate Quality IR
3	Fixed-Wing Rotorcraft	20-60 min. 20-60 min.	2,500 and below 2,000 and below	5 5	EO/IR Video and Stills Mod Quality IR and PSD
4	Fixed-Wing Rotorcraft	Up to 30 min.	1,200 and below 1,200 and below	>2 >2	EO/IR Video and Stills Moderate Quality IR

*Taken from PMS 515 NWCG Standards for Fire Unmanned Aircraft System Operations

FIXED WING ALLOWABLES

Type (at 2.5 hours fuel)	Useful Payload	Pax	Cruise Speed (KTS)	Range Miles	Range Hours	Min. Runway Length (ft.)	Fuel type	Useable fuel	Fuel (GPH)
SINGLE-ENGINE FIXED WING *at 2.5 hours of fuel*									
Cessna 185	900	3	120	800	5	1400	AVGAS	62	16
Cessna 185 w/floats	650	3	110	610	5	1700	AVGAS	62	16
Cessna 206	1100	5	(120) 130	800	5	1500	AVGAS	63	16
Cessna 207/208	1100	7	(120) 130	800	5	1900	AVGAS	58	16
Cessna Caravan 208	2400	9	(150) 175	900	5	1700	JET	333	53
Helio Courier	750	3	(115) 100	570	4.6	800	AVGAS	60	20
Piper PA32 Saratoga	1100	5	(150) 145	800	5.5	2000	AVGAS	102	16
MEDIUM MULTI-ENGINE PAX/CARGO *at 2.5 hours of fuel*									
Aero Commander AC-500	1150	5	(160) 155	800	4.8	2500	AVGAS	156	30
Aero Commander AC-680FL (1500 allowable w/ 5 hrs of fuel)	1500	7	(165) 160	1000	5	2500	AVGAS	223	40
Turbo Commander AC-690	2000	9	250	1375	5.5	3000	JET	256	85

(Continued on next page)

Type (at 2.5 hours fuel)	Useful Payload	Pax	Cruise Speed (KTS)	Range Miles	Range Hours	Min. Runway Length (ft.)	Fuel type	Useable fuel	Fuel (GPH)
MEDIUM MULTI-ENGINE PAX/CARGO *at 2.5 hours of fuel*									
Piper PA-31-310 Navajo	1,800	9	(175) 165	1,080	6	2,200	AVGAS	210	35
PA-31-350 Chieftan	1,800	9	175	1,000	5	2,500	AVGAS	182	34
Twin Otter 200 DHC-6	2,500	15	140	600	4.5	1,500	JET	381	85
Twin Otter 300 DHC-6	3,000	17	(140) 150	675	4.5	1,500	JET	381	90
C23A Sherpa	4,400	20	(180) 165	840	4	3,000	JET	600	128
Casa 212 Tail# 107=9pax, 112&117=19 pax)	4,048 w/ 3.5 hrs fuel	9	(170) 165	510	4.5	3,000	JET	520	110
BE-99 (Beech)	3,250	15	230	1,048	3.5	3,200	JET	368	85
BE-1900 (Beech)	4,000	19	(220) 240			4,000	JET		
LARGE MULTI-ENGINE PAX/CARGO *at 2.5 hours of fuel*									
Curtiss Wrights C-46	12,000	N/A	183	2,300	7.5	3,500	AVGAS	2,200	290
Douglas DC-6	28,000	N/A	311	3,983	9.5	3,500	AVGAS	5,525	580
De Havilland Dash-8	7,800	36	(268) 308	1,174	5	3,000	JET	865	290
C-130 Hercules (L-100)	30,000	N/A	300	3,000	5	4,000	JET	2,750	550

HELICOPTER ALLOWABLES

ROTORWING	HIGE	HOGE	JET	Cruise	Max Fuel	Range
Type 3						
AS-350 BA	514	414	544	100	143 gal	340
AS-350 B2	751	911	1,462	122	143 gal	340
AS-350 B3	899	1,074	2,063	130	143 gal	340
Augusta 119 (Koala)	1,000	1,000	1,900	140	184 gal	390
Bell 206 B-3 Jet Ranger	558	496	690	110	94gal	350
Bell 206 L-3 Long Ranger	722	604	784	110	250 gal	250
Bell 407	1,137	1,137	1,587	130	130 gal	310
Hughes 500 C/D	680	580	1,000	125	63 gal	325
Lama SA-315B	1,218	1,000	1,818	100	151 gal	250
Type 2						
BK117	1,730	1,730	1,928	125	185 gal	280
UH-1B	2,100	2,100	2,100	95	165 gal	198
Bell 205++	1,469	1,409	1,669	100	215 gal	200
Bell 212	2,405	1,855	2,495	100	220 gal	250
Bell 212 HP	1,900	1,700	2,090	100	284 gal	250
Bell 214B1	1,255	3,175	3,555	140	379 gal	320
Type 1						
Blackhawk UH-60A	9,483	8,074	8,604	150	600 gal	320
Boeing/Kaw Vertol	4,440	4,400	8,440	120	550 gal	360
Chinook CH-47	11,100	11,100	16,100	130	2,000 gal	1,000

All allowables are approximate (based on 2000 ft and 25 degrees with 2.5 hours of fuel)

HELICOPTER CARGO FREEFALL

When and Why

Cargo freefall from a helicopter is a method of delivering cargo to an area where conventional delivery methods will not work and/or landing is impossible. Rations, hand tools, cubitainers of water (cubies), and other items can be dropped by freefall when properly packaged. Larger loads can be delivered by releasing the cargo net from the cargo hook at a minimum safe altitude and air speed. Drops must be made a safe distance from personnel on the ground.

PMS 510 (NWCG Standards for Helicopter Operations) is guiding policy on cargo free fall.

Required Personnel

All helicopters: Minimum aircrew consists of pilot and spotter (spotter will conduct dropping operations). The spotter should be a qualified Helicopter Manager (HMGB). Some missions may require additional personnel with designated droppers, etc.

Equipment Required

An approved restraint harness fastened to a hard point on the helicopter must be worn by any individual who will not be restrained by seatbelt and shoulder harness. The restraint harness shall be fastened to an approved hard point and the tether adjusted so that the individual cannot break the plane of the door.

Cargo Freefall Use Criteria and Situations

Cargo freefall should only be done after the following criteria are met and in the following situations:

- The helicopter cannot land safely, and the mission is tactically essential.
- Other methods of cargo delivery were considered, and cargo freefall is the most efficient and economical method.

- A helicopter load calculation is completed using the helicopter hovering out of ground effect (HOGE) chart. Consideration must be given to weight of cargo and center of gravity limits.
- There is adequate clearance from obstructions in the flight path and at the drop zone.
- All personnel involved are thoroughly briefed. This will include the pilot, spotter, dropper and all ground personnel.
- Positive air-to-ground communications are established.

Planning for the Drop

The operation is conducted in two phases: 1) planning phase, and 2) drop phase. The planning phase includes:

1. **Compliance with Aircraft Flight Manual** – All procedures will comply with the aircraft manual (for example, door removal).
2. **Line of Authority** – The pilot and spotter must establish a contact at the drop zone. The person at the drop zone must be aware of the mission and have established a drop zone.
3. **Selection and Packing of Cargo** – Packing will depend largely on what materials are available. Cargo must be selected and packed to prevent undue damage.
4. **Little or No Packing Required** – Items that require little or no packing include:
   - Fire hose and sleeping bags – These must be banded with rubber bands, straps, or filament tape. Ends of the hose should be coupled to prevent damage.
   - Hand tools – These should be taped together with heads protected and appropriately packaged (for example, padded with several layers of cardboard).
   - Rations.

5. **Packing of Fragile Items** – Without access to large quantities of packing material, the only fragile items that are practical to drop are water, batteries and other inexpensive items. Fragile items will have to be appropriately packaged to prevent damage.
6. **Selecting the Drop Site** – When selecting the drop site, consider the items you are delivering and at what height you will have to release them. Site selection is not as critical for items such as tools or sleeping bags which can withstand more impact.
   - Fragile and breakable items such as radios and power saws require special consideration.
   - Look for areas where a lower drop can be accomplished. If available, a patch of brush serves as a good cushion.
   - Most items from the AFS warehouse are packed for use in paracargo operations.

Drop Procedure

The following procedures must be followed:

1. Air-to-ground communications shall be established before drop zone is selected.
2. The drop zone shall be identified on the ground (marker, ribbon, flagging).
3. Aircraft will make two reconnaissance runs -- one high-level and one low-level.
4. **A high-level reconnaissance flight** of the DZ will determine:
   - If the drop is feasible at the selected site.
   - Wind condition and direction.
   - Location and nature of ground and aerial hazards.
   - That ground personnel have been moved a safe distance away from the drop zone.

5. **During the low-level reconnaissance flight** over the DZ, the pilot and dropper shall:
   - Reconfirm hazards in the drop zone.
   - Determine approach and departure routes.
   - Check for personnel too close to the drop zone and/or approach-departure path.
   - Confirm with the ground contact that the area is clear.
   - Make final check of cargo to be delivered.
   - Pilot and dropper must both agree to proceed.
6. During the drop:
   - On the drop pass, the cargo is dropped if all conditions remain as planned.
   - Remember to anticipate forward speed of the helicopter.
   - Drop cargo laterally – that is, out and away – from the helicopter and not toward the tail rotor or skid.

HELICOPTER LOADING TIPS

Passengers (PAX)

- Review passenger briefing before every flight. Pay special attention to emergency procedures.
- Never load tools or sharp objects under the seats. Put soft cargo under seats, i.e. hose, trash bags, burlap bags etc.
- Log decks can shift during loading. Don't get your foot crushed between logs or skids.

Internal Loads

- Cargo wells – build a large stable base so that cargo leans in and away from the window.
- No heavy items on top of the cargo pile.
- When opening the sliding door of 205/212, make sure that windows are not pushed out by cargo. If you encounter resistance, STOP and find the problem.
- Tundra pads are fragile and easy to trip on – watch your footing!
- Fresh food – Carry right side up. If you have food and fuel on the same load, carry in different compartments.
- Garbage is double bagged and tagged with fire name or number! When possible, burn empty cardboard boxes rather than backhauling because they take up a lot of room.
- Place chainsaw boxes between rear facing seat and door.
- Pump kit – Fold ½ of rear seat to ride with pax.
- Tail compartment (only with pilot's permission) is a good place for hazardous materials. Do not exceed 200 pounds.
- Always ask for backhaul when at a landing site. Never let a helicopter fly away empty.

HELICOPTER LOG DECKS

Log-Deck Landing Pad for Use in Tundra and Boggy Areas

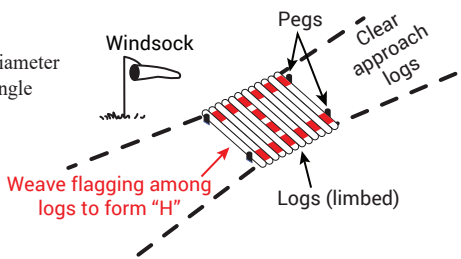
NWCG Standards for Helicopter Operations (NSHO) reference: Chapter 8, page 76

- Try to use logs that are 6-8 inches in diameter. Limb the logs and get rid of knobs, etc. that could catch the helicopter's skids or tundra pads.
- Cut logs equal length.
- Take the time to build the log deck.
- Log decks should be:
  - > Type 3 helicopters: 2-3 feet wider and longer than 15x15 landing pad
  - > Type 2 helicopters: 2-3 feet wider and longer than 20x20 landing pad

Go LONGER and WIDER than you think you need

- Decks should be built to so that a Bell 212 can land on them.
- Keep in mind, that due to center of gravity, the back end of the log deck will tend to settle more.
- Flag the log deck. Make sure flagging is secure.

1. Cut and limb poles 6-8" diameter
2. Place under skids at 90° angle
3. Pad area at least 15'x15'
4. Departure path of 300'. Approach path of 150'.



HELICOPTER LONGLINE OPERATIONS

- Never stand under any external cargo loads.
- Ensure approach and departure paths are clear of obstacles.
- Obtain allowable payload from current load calculation.
- Weigh your load and configure not to exceed current allowable. It is acceptable to use fuel burn, so plan heavier loads for later in the fuel cycle. Remember that wet items being backhauled weigh more than when they arrived.
- Don't forget the weight of the hook and net kit on your manifest.
- Inspect nets, swivels and lead lines prior to use. Flag any damaged equipment and label with an explanation.
- Paracargo (A-22) – just unhook parachutes and attach a swivel to the top where the clevis is. You now have a sling load.
- Place heavier items in the center of the net and secure small items that could work their way through the net.
- Visqueen and cargo chutes should be transported internally or securely packed into boxes to minimize risk of in-flight deployment.
- Do not mix personal items or food and water with hazardous materials. If in a daisy configuration, the lowest net should contain the hazmat.
- Tag each load with actual weight and destination. Communicate this information to the pilot and **notify of any hazardous materials being transported.**
- On longline jobs, **EVERY** load gets a swivel to avoid line twisting. Multiple loads on the same longline require multiple swivels. Refer to daisy chain diagram.

- When flying awkward loads such as UTV, ATV, plywood, structures or choked items, consult a helicopter manager or pilot for best packaging options.
- Remember, we are in Alaska where items get wet, making them heavier. Take that into account when putting loads together on the lines. Don't just go by weights in the IRPG. Those figures may have to be doubled.

Daisy Chain Configuration

PILOT DUTY LIMITATIONS

Single Pilot Crew	Two-Pilot Crew**
1. Maximum 8 hours flight time during any assigned duty period.	1. Maximum 10 hours flight time during any assigned duty period.
2. Maximum 14 consecutive duty hours during any duty period.	2. Maximum 14 consecutive duty hours during any duty period.
3. Maximum 42 hours flight time in any 6 consecutive duty days.	3. Maximum 50 hours flight time in any 6 consecutive duty days.
4. When 36 to 42 hours are flown in 6 days, the next 24 hours* must be taken off. A new 6-day cycle begins after the day off.	4. When 40 to 50 hours are flown in 6 days, the next 24 hours* must be taken off. A new 6-day cycle begins after the day off.

Note: Retardant/Smokejumper pilots follow limits for single crew.
*For Lower 48 = calendar day
**Single pilot rules apply during mission flights. Ten hours may be permitted when flights are point to point only.

Contracted pilot Louis Kuhn looks at his instrument panel while flying firefighting personnel to Lake Minchumina. Denali, north America's tallest peak, is in the background.

AVIATION TRANSPORT OF HAZARDOUS MATERIALS

This section provides general information regarding the transportation of hazardous materials (hazmat) aboard aircraft. The NWCG Standards for Aviation Transport of Hazardous Materials (PMS 513) and DOT Special Permit Authorization DOT-SP-9198 must be onboard any aircraft transporting hazmat and used by the pilot and trained employees (those who have attended Interagency Aviation Training module A-110) when loading and packaging hazmat for air transport. Only trained employees or the pilot may load hazmat on an aircraft.

General Aviation Transport of Hazmat Guidelines

- Qualified non-crewmembers whose presence is required to perform or is associated with performance of a governmental function are permitted aboard an aircraft performing public aircraft operations while transporting hazmat.
- The pilot and all persons onboard must be made aware of the location and type of hazmat being transported (use the manifest and radio when appropriate).
- The pilot in command is the final authority on acceptance of the hazmat.
- Each person who loads/unloads aircraft and handles hazmat must receive training per agency requirements.

The following is a list of common hazardous materials used in Alaska wildland firefighting, with control measures excerpted from the PMS 513 Handbook. See full handbook for items not listed in this section.

Flammable/Combustible

General Information – Includes all flammable and combustible liquids except those under compression (propane, butane, etc.). These materials may include, but are not limited to gasoline, diesel, kerosene, alcohol, white gas (stove fuel), paint and thinners/solvents.

Control Measures
Non-Bulk – To transport flammable and combustible liquids in non-bulk containers of 119-gallon capacity or less, the following conditions must be met:

- Containers must be specifically designed to carry flammable and combustible liquids and be of sufficient strength to prevent leakage during transportation/handling.
- All closures on the containers should be tight. The outside of the container should be free of any residue.
- Containers shall be filled to a level that allows for expansion due to temperature or altitude and never filled beyond rated capacity.
- Containers must be secured in the upright position by tie-down straps or shipped in an outside container that will keep the inner container upright.
- Containers that may release vapors must not be transported in unvented aircraft compartments.

Baggage compartments in unpressurized aircraft are considered vented compartments (an unpressurized cabin may also be used when it is ventilated to prevent accumulation of harmful vapors). Flammable and combustible liquids shall not be transported in plastic or glass containers unless they are specifically designed for that purpose.

Additional requirements apply to the following containers:
Safety Cans – Must be transported in vented compartments, secured in the upright position, and filled to a level that prevents spillage (no more than 90% capacity).

Military Jeep Cans (3A1 Jerrycans) – Must be secured in the upright position and have 2 inches of air space below the container opening.

Drip Torches – Must be transported with the igniter nozzle assembly in the tank, air breather valve closed, tank lock-ring sealed, and fuel spout plug closed and must be secured in the upright position. Leave a minimum of 2 inches of air space below the container opening when filling.

Chainsaw Fuel/Oil Plastic Container (Dolmars) – Must be transported with the pourer spouts enclosed within the container and caps sealed. Ensure seal gaskets or O-rings are intact. The fuel air breather cap must be closed during transportation. Secure in an upright position. Leave at least 2 inches of air space below the fuel compartment opening when filling.

Sigg Bottles – Must not be transported with a pouring spout in lieu of an unvented cap and must have 2 inches of air space below the container opening.

Control Measures

Flammable Fuel in Powered Equipment Tanks – To transport flammable fuel in powered equipment tanks, the following conditions must be met:

- Not more than 20 gallons of flammable fuel in powered equipment tanks may be carried on any load.
- Powered equipment is secured in an upright position.
- Each fuel tank is filled in a manner that will not spill fuel during loading and unloading and during transportation.
- The compartment in which the equipment is loaded must be ventilated to prevent the accumulation of fuel vapors and must not contain an exposed battery.
- And powered equipment (chainsaws, pumps, etc.) and fuel containers shall not be transported in plastic bags.

Bulk Fuel Containers – Any fuel container in excess of 119-gallon capacity will be considered a bulk fuel container. Fuel may be carried in bulk fuel tanks if the tanks are installed in accordance with applicable Federal Aviation Regulations approved by DOI or USFS. Seal drums (Rolligons) or bladder tanks of capacity up to 500 gallons are acceptable for carrying fuel in aircraft.

Small Arms Ammunition

General Information – Includes ammunition for pistols, rifles, shotguns and similar firing devices.

Control Measures
To transport small arms ammunition in aircraft, one of the following conditions must be met:

- A person who is required to carry a firearm while performing official government business may carry ammunition for small arms in a readily accessible manner.
- Loaded weapons will be transported in aircraft only when the mission dictates their use in flight or soon after landing.
- Small arms ammunition may be carried on aircraft if contained in original package, box, pack or manufactured container designed for transporting ammunition.
- Hazard communication marking is not required for small arms ammunition. Small arms ammunitions must not be stored with compressed gases, flammable liquids, or corrosives.

Ignition Devices

General Information – Includes fusees, flares and other flammable solids designed for signaling, fire ignition, or fumigating. This also includes other materials used for aerial ignition activities such as helitorches, helitorch fuel, plastic sphere dispensers, and plastic spheres containing oxidizers such as potassium permanganate.

Control Measures

- All fusees must be packaged in a container, box or pack.
- Broken fusees and those with protective igniter caps removed shall not be transported in aircraft.
- Fusees prepared for an aerial fusee gun are not required to have protective igniter cover.
- Fusees and flares should be carried in original shipping containers whenever possible pistol flare ammunition may be carried on aircraft if contained in original package, box, pack or manufactured container designed for transporting ammunition.
- Plastic spheres containing oxidizers must be segregated from antifreeze (glycol) containers during transportation; plastic spheres containing oxidizers may be loaded into bags that will be utilized to facilitate the efficient filling of the dispenser in flight during dispensing operations.
- Personnel engaged in fire management activities may transport small quantities of fusees (five or less) inside field gear packs without the hazard communications marking.
- Strike anywhere matches, other than those carried in personal survival kits, must be transported in a container that inhibits movement of matches, thus preventing ignition.

Compatibility Restrictions – Ignition devices shall not be transported in a position that allows them to interact with batteries or battery fluids. Ignition devices shall not be transported with explosives.

Personal Survival Equipment

General Information – Personal survival equipment is defined as materials essential to survival such as inflatable flotation devices, spare carbon dioxide (CO2) cartridges for flotation devices, stove fuel, fire starters, strike anywhere matches and supplemental breathing air. Many of these survival devices are carried in a pocket, survival vest, or pack.

Control Measures
Personal survival equipment and life saving devices may be carried in survival vests/jackets/packs/kits without any further requirements provided they are packed in such a manner to prevent any accidental discharge, activation or ignition.

Bear Repellent/Irritants

General Information – Includes red pepper extract aerosol products (oleoresin capsicum) such as bear repellent spray and personal defense sprays. Irritants such as bear repellent, tear gas, and mace should be transported in an external compartment whenever practical.

Control Measures
Except for law enforcement operations conducted under 10.2.B, all bear repellent/irritant spray must be transported in a container that prevents personnel exposure in the event of an inadvertent discharge. Defensive aerosols carried by law enforcement officers may be transported on their person, in a manner designed to prevent accidental discharge; and avoid exposure to ignition sources and temperatures above 120°F.

AFS addition: Bear spray is prohibited on all commercial flights and must be transported in an **approved** container on government-operated flights (fixed wing and helicopter). You must inform the pilot and/or crew that you are transporting bear spray. **There are no exceptions.**

**** See the Bears and Alaska Non-LE Firearms Program in the Safety section of this guide for more information on transporting bear spray.**

** Find Alaska Interagency Incident Business Management information through the AICC website at:* https://fire.ak.blm.gov/administration/IncidentBusinessManagement.php

CASUAL HIRING – SINGLE RESOURCE

For casual hire procedures, please contact the local admin with incident responsibility.

EMERGENCY COMMISSARY

Personnel and crews are responsible for being prepared with footwear, clothing, personal hygiene items, prescription medications and other personal items sufficient for a 14-day assignment, exclusive of travel.

For Administratively Determined (AD) and Emergency Firefighting (EFF) personnel, emergency commissary will be payroll deducted on the individual's OF- 288 by incident finance/administrative personnel.

Emergency Commissary are items are necessary for the safety and well-being of incident personnel. Emergency commissary must include a justification of necessity, signed by the Incident Commander, and approval from the Zone FMO. Orders for emergency commissary are given priority processing. Each item must list the recipient's full name and crew name.

- Boots, specify size, width and preferred sole (logger or Vibram).
- Personal clothing items damaged or destroyed during the incident, e.g., burned gear.

Finance or the official in charge coordinates with the Zone or DOF Area Office to determine:

- Accountability procedures.
- Distribution process.

Commissary is delivered to the incident with paperwork and directions for completion.

ZONE ADMINISTRATION

It is critical for our firefighters in the field to obtain approval when hiring any equipment, personnel or services, through the appropriate Zone administrative staff when an IMT is not assigned. Most hiring of equipment or services can be initiated through the appropriate Zone admin. We understand communication via landline or satellite phone is not always an option, so please place a radio call to the appropriate Zone dispatch to get in contact with Zone admin.

- **Zones Fire Business Lead/Supervisor** – (907) 356-5579
- **Yukon Fire Dispatch Center** – (907) 356-5553
- **Zone Admin Assistants** – (907) 356-5622/5576

When calling into the Zone admin to discuss hiring of equipment, services or personnel, please ensure you have this information readily available:

- Name of vendor or casual hire.
- Good contact telephone number.

PROCEDURES FOR HIRING EQUIPMENT

Ways of hiring equipment:

1. **Service** – Arrangement between the owner and agency to perform a service not to exceed $2,500. **Zone administration will pay by charge card upon receipt of an invoice. Submit General Message (ICS Form 213) to obtain S# for service. **If service is to exceed $2,500 initiate Incident-Only EERA.

Examples of when to use a Service:

- *Example 1* – Hiring a six-wheeler with driver to transport supplies from the runway to camp twice a day for no more than three days.
- *Example 2* – Smokejumpers needing river transport to/from jump spot (one to two days).

2. **Incident-Only Emergency Equipment Rental Agreement (EERA)** – Agreement for hiring equipment and executed by a warranted contracting officer.

All equipment hired through a Service or EERA must adhere to the following:

- Have prior coordination and approval through AFS Zone.
- Submit General Message through Zone dispatch to obtain a resource order.
- Refer to Geographical Area Supplement for rate guidelines.
- Contact Procurement at (907) 356-5773/5774 if vendor does not agree with rates

Service

- Keep it simple.
- Owner's contact information: Name, address, phone number.
- Explain service being rendered, duration and cost.

Emergency Equipment Rental Agreement (EERA)

If there is an Incident Management Team assigned to the fire, you must follow the dispatch ordering process for creation of an EERA. If there is not an IMT assigned, please provide information below to appropriate Zone Admin.

- Name, address, and phone number of legal owner.
- Type of equipment, VIN/serial number, and/or license plate number.
- Date, time and location of hire.
- Verify ownership through registration, title, bill of sales, etc.
- Complete a thorough pre-inspection of equipment. Include condition of equipment.
- If you have a camera, take photos and include them with your documented inspection.
- Verify all required safety items are available and in operating conditions (i.e., seat belts, fire extinguisher, properly rated life preservers for all passengers, etc.). DO NOT HIRE UNSAFE OR UNUSABLE EQUIPMENT!

Equipment and operators will adhere to national, state, and local operating requirements.

*Boats and heavy equipment will be hired with endorsements and valid licensing

Equipment Hired

Each piece of equipment must have a separate operator to receive full daily rate. The agreement will be negotiated by AFS Procurement for lower rates if only one operator will be operating multiple pieces of equipment.

General guidelines:

- Qualification training and PPE are required prior to operating specialized equipment per Red Book and agency policy.
- All tracked vehicles (ex: Nodwell,) must be hired with operator.
- Canoes, kayaks, Scanoes and catamarans will not be hired.
- Boats with motors are authorized for hiring. Do not hire a boat without a motor. It is the vendor's responsibility to provide the motor.
- Contact Procurement at (907) 356-5772/5773/5774 for a negotiated rate if the boat motor is less than 35 horsepower.

Tracking & Payment

- First and last day of hire determination of half/full daily rate will depend on time equipment was hired or released.
- Equipment is either on- or off-shift during the operational period. During the period of hire, document use on an Emergency Equipment Shift Ticket (OF-297).
- Record on-shift time for the equipment, not the operator. Record off-shift time for meal breaks, maintenance, repairs any down time.
- When equipment is broken down, or unavailable for a scheduled shift, the time of break down/unavailability must be notated in the remarks section of the shift ticket. Once it becomes available, that information must be notated in the remarks section of the shift ticket.
- Government representative ensures the shift ticket is completed.
- Vendor/operator and Government representative sign shift ticket and forward to finance section or Zone admin.
- Equipment hired without operator will have the shift ticket signed prior to release. Daily rate is based on a 24-hour period (calendar day) of availability.

Checklist

- Pre- and post-inspections will be required each time vendor takes equipment home. Note the shift ticket "Equipment removed from the incident for personal use."
- You are responsible for equipment being inspected, documenting use, and ensuring vendor understands their pay status of the equipment.
- Shift tickets for all days under hire are complete prior to demob.
- Prior to releasing equipment, perform a thorough post-inspection of the equipment and document the release. If a camera is available, take photos and include them with the equipment package.

Document the following information prior to releasing the equipment:

- Release/withdrawal date and time must match the post-inspection, or a statement included on the inspection form that return travel home is projected (if applicable).
- Post-inspection: list condition and any equipment damage. DESCRIBE THE DAMAGE OR CONDITION.
- Document any potential claims (who, what, where, when, and how and any witnesses). Ensure Zone FMO/admin is notified of any potential claims.

Do Not Solicit Claims

If vendor asks you about claims, have them contact Finance (if there is an IMT) or Procurement (if no IMT is established) at:
(907) 356-5772/5773/5774

MEDICAL TREATMENT FOR FEDERAL GOVERNMENT EMPLOYEES

Medical treatment and compensation benefits for regular government employees, casual hires/AD, or official volunteers for job-related injury or illness are provided by the Office of Workers' Compensation Programs (OWCP).

Types of Injury or Illness

- **Traumatic Injury** (CA-1) – An injury is defined as a wound or other condition of the body caused by external force, including stress or strain, in one specific event or incident, or by a series of events, that occurs during a calendar day or one work shift. You must be able to identify what, when, where, how and why the injury happened.
- **Occupational Disease** (CA-2) – This is defined as an illness, disease or condition that **develops over a period longer than one workday or shift.** Causes of illness may include repeated stress or strain, systemic infection, and exposure to toxins, poisons, fumes, and bloodborne pathogens. If you don't know what caused a condition, it is classified as an illness.

Reporting an Injury or Illness

- On-site supervisor must be notified as soon as possible of the injury or illness.
- Before obtaining medical treatment, ask your supervisor to authorize medical treatment by use of form CA-16, Authorization for Medical Treatment. Emergency medical treatment may be obtained without prior authorization.
- The appropriate OWCP form CA-1 or CA-2 should be completed based on the type of injury, listed above. This information will be evaluated by your claims examiner so be through. Don't forget on-site supervisor and witness statements.

- Employee or supervisor should upload their CA-1 or CA-2 into the Safety Management Information System (SMIS) Employee Module within three working days to document the occurrence.
- Employees who wish to file workers' compensation claims must report the accident first in SMIS, then file the workers' compensation claim in Employees' Compensation Operations and Management Portal (ECOMP).
  - > If computer access is not available, completed forms should be sent to the employee's supervisor within three days so the injury or illness can be entered into SMIS/ECOMP.
  - > For Alaska, BLM casual hires/ADs and volunteers, the process is the same and forms will be sent to the employee's supervisor of record (hiring official).
  - > The SMIS/ECOMP instructions are available in the AFS Employee Handbook.
- For non-Alaska BLM or other agency resources, follow the agency-specific reporting instructions, forms, and timeframes for the employee's agency/unit.
- The OWCP Coordinator (907) 271-3226 is the contact during regular business hours.
- Injury/illness claims are submitted to the employee's home unit.
  - > Equipment owner/operators and contract personnel do not have federal or state-provided injury compensation coverage and are required to provide private coverage.

Find OWCP forms, including fillable forms, online at:
https://www.dol.gov/owcp/dfec/regs/compliance/forms.htm

GUIDE TO FEDERAL INJURY AND ILLNESS

FORMS AND RESPONSIBILITIES

Medical Treatment for Government Employees (Federal)

Type of Injury or Illness	Form CA-1	Form CA-16	Form CA-2	APMC Form FS-1600-16
Traumatic Injury No Medical Treatment	Yes	No	No	No
Traumatic Injury Medical Treatment required	Yes	Yes	No	Only if APMC is authorized
Occupational Illness	Yes	No	Yes	Only if APMC is authorized
Exposure Incident (BBPO or other)	Yes	No	Yes	Only if APMC is authorized

CA-1 Notice of Traumatic Injury

Use if occurred within one work day or shift. Employee, witness complete side 1, submit to supervisor within 24 hours. Supervisor completes side 2. Original is submitted to the individual's home unit.

CA-16 Authorization for Examination/Treatment

Authorizes payment for initial medical care for traumatic injury only, if issued by compensation specialist. **DO NOT USE FOR ILLNESS.** Original is submitted to the individual's home unit.

CA-2 Notice of Occupational Disease

Use if occurred over longer than one work shift, or if cause is unknown. Employee and supervisor complete. Original is submitted to the individual's home unit.

FS-1600-16 APMC Authorization and Medical Report

Authorizes initial medical expense and documents initial diagnosis. Use only if authorized by the Zone. Requires incident order number, "M#" and charge code. Submit copy CA-1, CA-2 as soon as possible. The original is submitted to the incident agency for payment.

CLAIMS

Government Property

All incident personnel, regardless of agency, must manage property and supplies to prevent loss. Clearance procedures will be coordinated by incident personnel to ensure property issued on an incident is returned prior to demobilization.

- **Accountable Property** – If accountable property (e.g., chainsaws, pumps, cameras) is missing, damaged or unserviceable, a report must be made and included in the incident records.
  - > For federal property, form OF-289, Property Loss or Damage Report, must be completed and submitted to the IMT/Finance Section or responsible home unit property officer (i.e., AFS Fire Cache Warehouse) prior to demobing incident.
  - > For state property, form 02-627, Lost-Stolen-Damaged Property Review, must be completed and submitted to the supervisor, Incident Commander, or Area Forester. Find more DOF guidance here.
- **Expendable Property** – The incident agency should limit replacement of expendable property (e.g., hose fittings, filters) to those that are used up or acquired by the incident. Expendable property can be replaced at the incident or the incident can approve an Incident Replacement Requisition OF-315 for replacement at the home unit.

Incident personnel cannot authorize replacement of non-expendable or non-standard cache items. The incident submits the documentation to the IMT Finance Section, or if IMT is not assigned, to the Zone for review and determination.

Federal Tort Claims

A third party may file a claim for personal property damage or loss, personal injury, or wrongful death, caused by the negligent or wrongful acts or omissions of federal government employees while acting within the scope of their employment.

- Incident personnel shall not advise, encourage or discourage the filing of a claim.
- Incident personnel must document and report to the IMT Finance Section. If IMT is not assigned, report to Zone FMO, Zone Fire Business Lead, and BLM Alaska Incident Business Specialist. Provide the circumstances of any accident or incident which has, or potentially result, in a claim against or for the government.

Federal Employee Claims

A regular government employee (RGE), casual, or volunteer who loses or suffers damage to personal property may file a claim for reimbursement by submitting the DI-570 Employee Claim for Loss or Damage to Personal Property.

Claims should be submitted to the claimant's home unit within 60 days of loss or damage. The claimant's home unit will adjudicate the claim based on the following:

- Was the property necessary for the performance of duty?
- Did the loss or damage occur incidental to the individual's service?
- Was the claim submitted according to agency guidelines?

If loss or damage occurs while on incident assignment, report it to the IMT Finance Section. If IMT is not assigned, report to Zone for inclusion in the incident records, and return original claim forms, with witness and/or supervisor signatures, to the claimant's home unit.

Finance and administrative staff sort through time and equipment rental paperwork for people working on nearby wildfires.


ALASKA FIRE SERVICE