AERIAL FIREFIGHTING AIRSPACE

Wildfire season in Alaska is approaching and we can expect to see fires and smoke impacts. As a pilot, an important factor to consider during wildfire season are the fires in proximity to high traffic VFR corridors. In general, fires near values at risk will have firefighting resources on scene. However, some remote fires will be left to burn for resource benefit and will be flown only for mapping and monitoring.

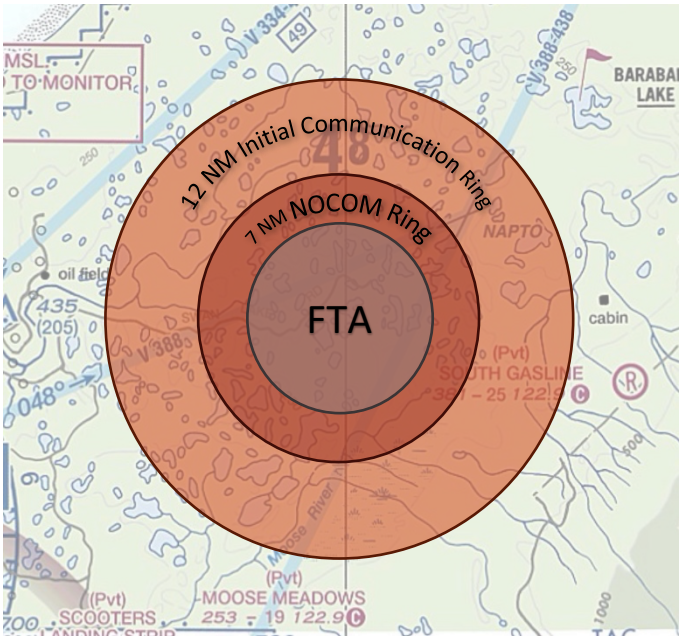
Aerial view of 2022 Kenai Peninsula fire
Photo/Alaska Division of Forestry & Fire Protection Air Attack

Many of Alaska's fires are natural ignitions from lightning strikes. Common methods for fire detection include satellite imagery and aerial detection flights. Many of Alaska's fires are also initially reported by commercial and recreational pilots.

When a fire is detected, the first resource to respond is often Air Attack (Air Tactical Group Supervisor). Air Attack platforms are generally a turbine Commander or King Air 200. Air Attack will order the appropriate number of aerial resources needed for the incident such as airtankers, water scoopers, helicopters, and smokejumpers.

The primary responsibility of an Air Attack is airspace management and tactical direction for firefighting aircraft. They also serve as the communication link to dispatch, land managers and ground resources on scene.

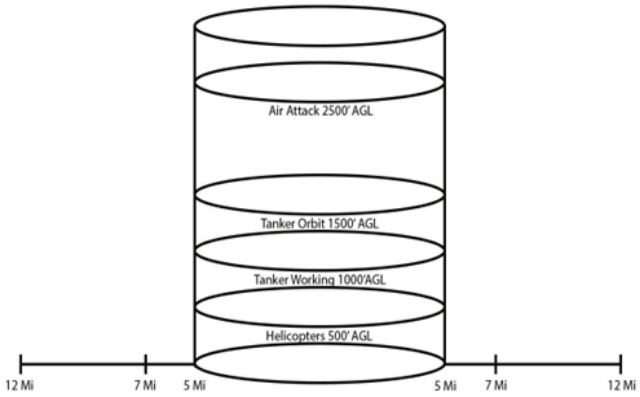
FIRE TRAFFIC AREA (FTA)



The Fire Traffic Area (FTA) is a term used for the airspace aerial firefighters use to manage air traffic over an incident. All fires have a designated FTA which differs from a Temporary Flight Restriction (TFR). The FTA is an airspace management tool containing established communication and separation protocol. The FTA is a section of airspace with a five nautical mile radius from the center of an incident during fire suppression operations that is surrounded by additional 12 nautical mile "Initial Communication" and 7 nautical mile "No Communication" rings. Responding resources will call the Air Attack at 12nm for clearance to enter the FTA. If a clearance has not been received, participating aircraft are not authorized to proceed past the 7nm ring.

VERTICAL SEPARATION IN THE FTA

The Aerial Supervisor will build a stack by determining the ground elevation of the fire. Helicopters will be cleared at or below 500’ AGL. Fixed wing aircraft like Airtankers will enter the FTA at 1500’ AGL in a left-hand orbit. Water Scoopers will initially be cleared at 1500’AGL but the scoop to drop circuit will be 500’-1000’ AGL for the remainder of an operation. The Air Attack will generally be at 2500’ AGL in a right-hand orbit directing operations.



Photo/Alaska Smokejumpers

Smokejumpers often will be the first or only resource on an incident. If an Air Attack is not on scene, Smokejumper aircraft have a spotter who will manage the air space. The spotter will scout the jump spot and throw streamers to judge wind drift from 1500’ AGL. Jump operations are at 3000’ AGL and then descend to 150’-250’ AGL for paracargo.

Paracargo re-supply missions are common in Alaska on long-duration and remote incidents.

HORIZONTAL SEPARATION IN THE FTA

Aerial Supervisors will use a combination of vertical and horizontal separation to allow multiple aviation resources to work simultaneously. Routes and circuits are often established based on aircraft type, terrain, water source and target area. For example, even though a large tanker is cleared in at 1500’ AGL, they maneuver at 1000’ AGL and then descend to 150’ AGL for the drop. This requires horizontal separation with helicopters and scoopers. When large aircraft are low and slow, there is no room for anyone to be in the way.

COMMUNICATION WITHIN THE FTA

All aircraft must have clearance to enter the FTA. Clearance will include an altimeter setting, assigned altitude, Air Attack altitude, other aircraft altitudes and any special hazards.

In Alaska the initial tactical frequency is 128.45 MHz It is recommended that nonparticipating aircraft monitor this frequency when flying in the vicinity of visible smoke. If you are unable to remain five miles clear, contact the Air Attack at the 12nm communication ring for additional information or directions.

Air Attack may be able to route you through the FTA, but they cannot do that unless you communicate. (Note: TFR's have different regulatory limitations). Air Attack will monitor the local Common Traffic Advisory Frequency CTAF if workload allows.

WHY IS THE FTA FIVE MILES?

The five-mile radius is established as a safety measure to ensure aerial resources have the space required to do their job safely and without interference. Large air tankers fly in a left-hand orbit and must stay clear of the smoke to see the target area. Water scoopers may have to travel a distance to find a suitable scooping site. Helicopters will land clear of the fire's direction of spread to drop off personnel and will find a water source suitable for bucket operations. Smokejumpers will typically jump upwind of the fire at the closest suitable jump spot unless there is a value at risk in front of it. Ground resources often use drones to scout containment lines. All aerial operations can be done simultaneously by using standardized procedures in the FTA.

TEMPORARY FLIGHT RESTRICTION (TFR)

All participating aircraft must obtain clearance into the incident TFR by the on scene aerial supervisor or official in charge of the incident. There may be multiple aircraft operation areas within the TFR. The operational frequency is generated with the TFR request and will be published along with a contact number for additional information. TFRs are initiated for the safety of firefighters and aerial resources providing support to the incident.

CONDITIONS THAT PROMPT TFR INITIATION

- EXTENSIVE AERIAL FIREFIGHTING OPERATIONS.
- AIRCRAFT NOT MONITORING THE CTAF
- POTENTIAL CONFLICT WITH NON-OPERATIONAL AIRCRAFT
- HEAVY SMOKE OR LOW VISIBILITY CONDITIONS
- LONG DURATION INCIDENTS WITH CONTINUOUS LOGISTICAL AIRCRAFT SUPPORT
- CONGESTED AIRSPACE INVOLVED: VICINITY OF HIGH-DENSITY CIVIL AIRCRAFT OPERATIONS.

CONDITIONS THAT ALLOW NON-PARTICIPATING AIRCRAFT TO ENTER THE TFR

- CARRYING A LAW ENFORCEMENT OFFICIAL
- OPERATING UNDER THE ATC APPROVED IFR FLIGHT PLAN
- ON A FLIGHT PLAN AND CARRYING ACCREDITED NEWS REPRESENTATIVES
- OPERATION IS CONDUCTED DIRECTLY TO OR FROM AN AIRPORT WITHIN THE AREA OR IS NECESSITATED BY THE IMPRACTICABILITY OF VFR FLIGHT ABOVE OR AROUND THE AREA DUE TO WEATHER OR TERRAIN.
- NOTIFICATION IS GIVEN TO THE FLIGHT SERVICE STATION (FSS) OR ATC FACILITY SPECIFIED IN THE NOTAM TO RECEIVE ADVISORIES CONCERNING DISASTER RELIEF AIRCRAFT OPERATIONS; AND THE OPERATION DOES NOT HAMPER OR ENDANGER RELIEF ACTIVITIES AND IS NOT CONDUCTED FOR OBSERVING THE DISASTER.

REPORTING A FIRE

Alaska has two agencies with jurisdiction over aerial fire suppression activities: State of Alaska Division of Forestry & Fire Protection (DOFFP) and Alaksa Fire Service (BLM).

Fires in the Kenai, Mat-Su, Copper River, McGrath, Tok, Delta and Fairbanks areas can be reported on 132.45 MHz to State Dispatch. For fires near Galena, Bettles, Circle, north of Fairbanks and Fort Yukon, contact Yukon Dispatch on 127.45 MHz

Fires can also be reported to a Flight Service Station or Air Traffic Control facility.

Aerial view of 2019 fire near Talkeetna
Photo/Alaska Air Attack

SAFETY

Safety is always our priority when fighting fires. If non-participating aircraft travel through the FTA, a TFR will be initiated. Monitor the appropriate frequencies, self-announce your position when around active fires, and remember to check NOTAMS for TFR information. Non-participating aircraft and Unmanned Aerial Systems (UAS) within the FTA that fail to communicate with the Aerial Supervisor will force a stop to all aerial firefighting efforts until a clear and safe airspace is established.

This information is provided by the State of Alaska, Division of Forestry & Fire Protection. The Division provides fire protection services and related fire and aviation management activities on 150 million acres of land throughout Alaska.