Aerial Firefighting

Fairbanks General Aviation Association

April 2024 Session

Wildfire Season Preparedness

- Alaska's wildfire season poses risks to pilots with fires and smoke, especially near high traffic VFR corridors.

Natural Ignitions & Detection

- Most Alaskan fires are ignited naturally by lightening.
- Detection methods include satellite imagery, aerial flights, and reports from commercial or recreational

Initial Response

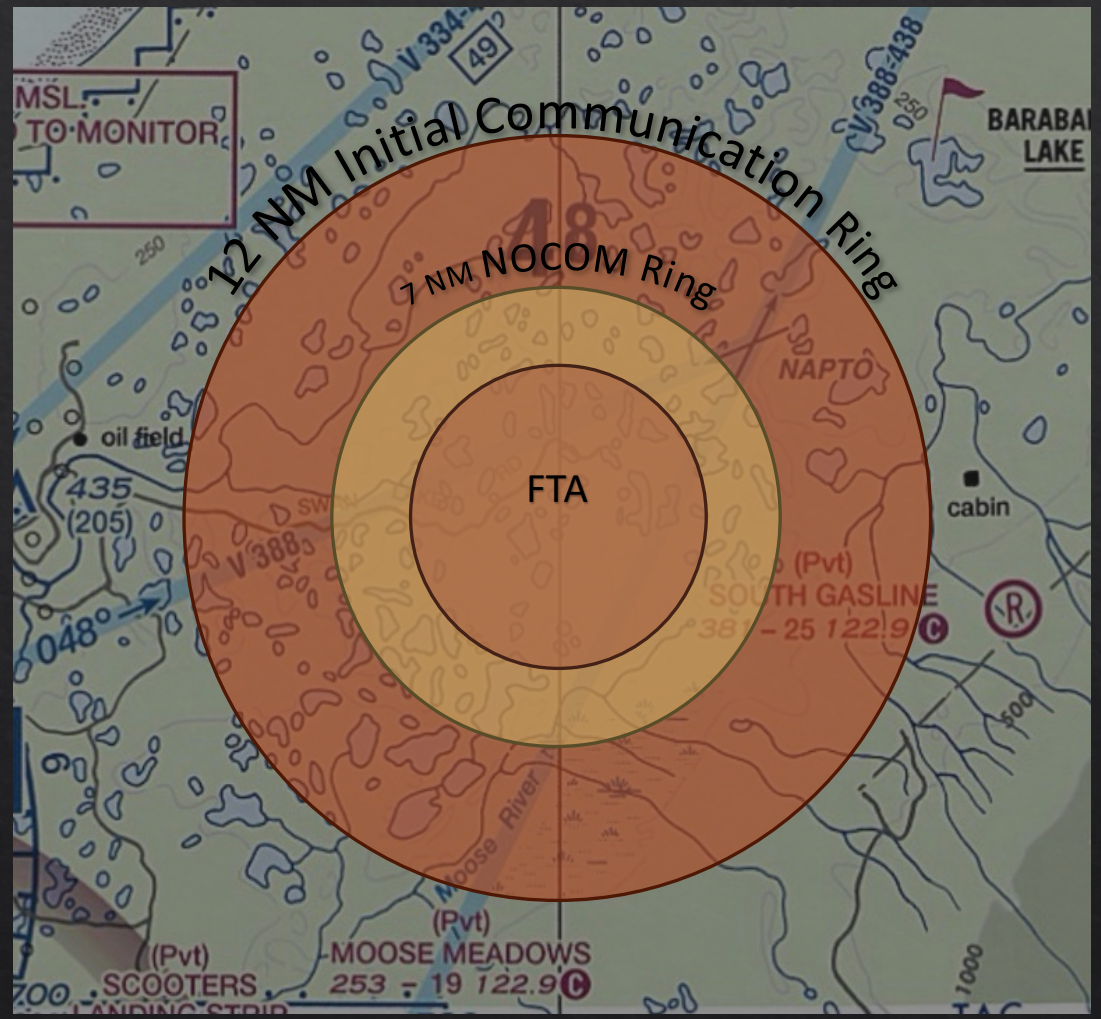
- Air Attack (Air Tactical Group Supervisor), utilizing turbine Commander or King Air 200, is often the first responder to manage airspace and direct aerial firefighting resources.

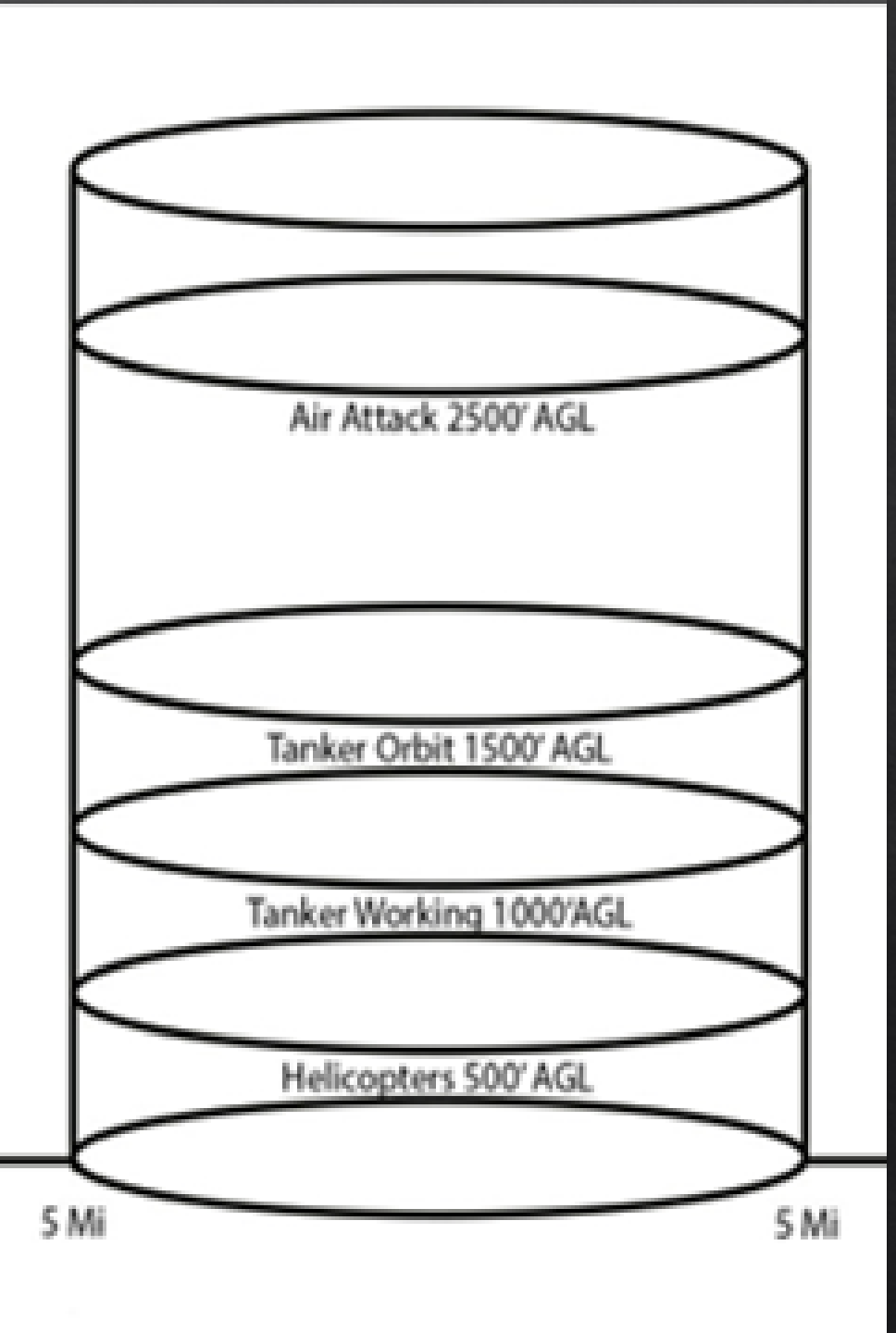
Aerial Resources

- Depending on the incident, resources may include airtankers, water scoopers, helicopters, smokejumpers.

FIRE TRAFFIC AREA (FTA)

- The FTA is airspace used by aerial firefighters to manage air traffic over a wildfire incident.
- Serves as an airspace management tool distinct from a Temporary Flight Restriction (TFR), facilitating communication and aircraft separation.
- Protocol
  - Responding resources must contact Air Attack at 12 nautical miles for clearance to enter the FTA.
  - Without clearance, aircraft are not authorized to proceed past the 7 nautical mile mark.





VERTICAL SEPARATION PROTOCOLS IN THE FTA

Ensures safe and organized aerial firefighting operations within the Fire Traffic Area (FTA).

Helicopters:

- Operate at or below 500 feet Above Ground Level (AGL) for close ground support.

Fixed-Wing Aircraft (Airtankers):

- Enter the FTA at 1500 feet AGL, performing left-hand orbits for aerial firefighting.

Water Scoopers:

- Initial clearance at 1500 feet AGL.
- Scoop to drop circuit between 500-1000 feet AGL.

Air Attack:

- Coordinates operations from 2500 feet AGL in a right-hand orbit, overseeing all aerial activity.

HORIZONTAL SEPARATION IN THE FTA

Aerial Supervisors employ both vertical and horizontal separation for safe, simultaneous operations of multiple aviation resources.

Routes and circuits are tailored based on aircraft type, terrain, water sources, and the target area.

Large Tankers Maneuver:

- Cleared at 1500 feet AGL.
- Maneuver at 1000 feet AGL.
- Descend to 150 feet AGL for drop operations.

Safety Priority: Horizontal separation critical to prevent interference, especially during low and slow maneuvers of large aircraft.

SMOKEJUMPERS & AIRSPACE MANAGEMENT

Initial Response:

- Smokejumpers can be the first or only responders to wildfire incidents.

Airspace Management:

- In absence of Air Attack, a Smokejumper spotter manages airspace.

Scouting & Streamers:

- Spotter scouts jump spot and assesses wind drift.
- Streamers thrown from 1500 feet AGL to evaluate conditions.

Jump Operations:

- Conducted at 3000 feet AGL, descending to 150-250 feet AGL for paracargo drops.

Paracargo Missions:

- Essential for long-duration and remote incidents in Alaska, providing vital resupply.

COMMUNICATION PROTOCOLS WITHIN THE FTA

All aircraft must receive clearance before entering the FTA, which includes crucial flight information.

Clearance Details Provided:

- Altimeter setting.
- Assigned altitude and Air Attack's altitude.
- Altitudes of other aircraft in the area.
- Information on special hazards.

Initial Tactical Frequency:

- In Alaska, 128.45 MHz is used for initial tactical communication.

Recommendation for Nonparticipants:

- Monitor 128.45 MHz near visible smoke.
- If unable to remain outside a 5-mile radius, contact Air Attack at the 12nm ring.

Routing Through FTA:

- Air Attack may assist in routing through the FTA with prior communication.
- TFRs (Temporary Flight Restrictions) may impose additional limitations.

Air Attack will monitor the local Common Traffic Advisory Frequency (CTAF) as workload permits.

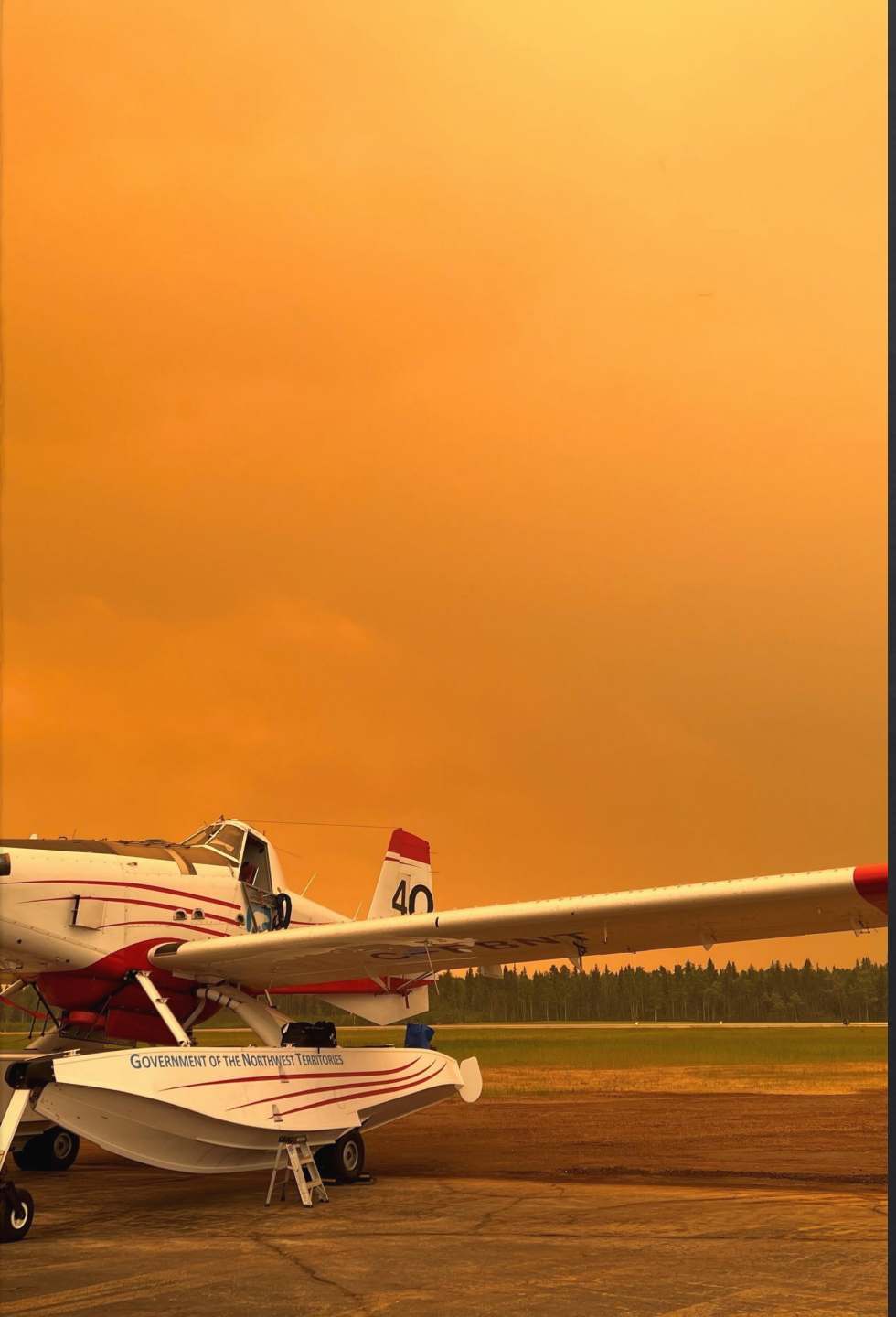
PURPOSE OF THE FIVE-MILE RADIUS IN THE FTA

Safety Measure: The five-mile radius ensures sufficient space for all aerial resources to operate safely and effectively.

Operational Tactics:

- Large air tankers navigate in a left-hand orbit, maintaining visibility of the target area by staying clear of smoke.
- Water scoopers seek distant, suitable water bodies for scooping.
- Helicopters drop off personnel and conduct water bucket operations, landing clear of the fire's spread direction.
- Smokejumpers prefer upwind jumps unless prioritizing values at risk.
- Ground crews may deploy drones for scouting containment lines.

Simultaneous Operations: Standardized procedures within the FTA allow for concurrent execution of diverse aerial and ground tasks.



TEMPORARY FLIGHT RESTRICTIONS

- **Clearance Requirement:** All aircraft must obtain clearance from the on-scene aerial supervisor or incident official before entering the Temporary Flight Restriction (TFR) area.
- **Multiple Operation Areas:** The incident TFR may encompass several distinct aircraft operation zones.
- **Operational Frequency and Contact Info:**
  - A specific operational frequency is set with each TFR request.
  - This frequency, along with a contact number for further details, is publicly disseminated.
- **Purpose of TFRs:**
  - To ensure the safety of both ground firefighters and aerial resources.
  - To facilitate efficient and safe support operations during wildfire incidents.

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 INCIDENT 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 the 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 endangered relief activities and is not conducted for observing the disaster.

REPORTING WILDFIRES IN ALASKA

Jurisdictional Agencies:

- State of Alaska Division of Forestry & Fire Protection (DOFFP).
- Alaska Fire Service (BLM).

Communication Frequencies for Reporting Fires:

State Dispatch Centers:

- Frequency: 132.45 MHz.
- Areas Covered: Kenai, Mat-Su, Copper River, McGrath, Tok, Delta, Fairbanks.

Yukon Fire Dispatch:

- Frequency: 127.45 MHz.
- Areas Covered: Galena, Bettles, Circle, areas north of Fairbanks, Fort Yukon.

Alternative Reporting Methods:

- Fires can also be reported to the nearest Flight Service Station or Air Traffic Control facility.

SAFETY PROTOCOLS FOR AERIAL FIREFIGHTING

Safety is paramount in all aerial firefighting operations.

TFR Initiations: Temporary Flight Restrictions (TFRs) are set up if non-participating aircraft enter the Fire Traffic Area (FTA).

Communication Recommendations:

- Monitor appropriate frequencies.
- Self-announce positions when near active fires.
- Check NOTAMs for updated TFR details.

Risks of Non-Compliance:

- Non-participating aircraft and Unmanned Aerial Systems (UAS) failing to communicate with the Aerial Supervisor can lead to a halt in all aerial operations.
- Operations will stop until airspace safety and clarity are re-established.

ACKNOWLEDGEMENTS & OVERVIEW

Local Complaints

Dispatch does not provide adequate TFR information from the call-in number.

TFR's are up for too long and or are too large.

TFR's cover up practice approach patterns.

TFR's in place for UAS Operations.

Aerial Firefighting Complaints

Continuous traffic in the working area, not on any common frequency, not on ADSB

Lack of common flight practices