MN DNR FORESTRY

AIRSPACE COORDINATION
DE-CONFLICTION

ACTION PLAN
AND
PROCEDURES GUIDE

Recommend Annual Update Prior to March 1st

Revised by _____ **Date** _____
MIFC Aviation Dispatcher

Approved by _____ **Date** _____
Aviation Safety Advisor

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PURPOSE AND OBJECTIVE

The purpose of this plan/guide is to promote aviation safety by documenting and utilizing air space coordination procedures and air space de-confliction procedures. The guide will serve as a reference to the procedures and tactics available to the Division. It is essential that all personnel involved in flight planning and operations read, understand and implement the procedures and tactics contained in this guide.

REVIEW

This guide will be revised and maintained annually (prior to March 1) by the MIFC Aviation Dispatcher and reviewed annually by the Division's Aviation Safety Advisor.

INTRODUCTION

The Division of Forestry will employ a variety of tactics to help de-conflict incident airspace.

Tactics to include:

A. Education of Incident Personnel Including:

1) Agency Personnel
2) Cooperating Agencies
3) MNICS Aviation Partners
4) Others

B. Education of General Aviators via:

1) Airport mailings
2) Posters
3) Airport directory
4) Notification to towers & airports adjacent to incidents
5) Other

C. Training of Division Personnel in the Areas of:

1) Temporary Flight Restrictions (TFRs)
2) Special Use Areas (SUAs)
3) Military Training Routes (MTRs)
4) Incident Aviation Management
5) Fire Traffic Areas (FTAs)
6) Radio Communication
7) Border Crossing Issues
8) Other

D. Establishing Division Procedures for:

1) Temporary Flight Restrictions (TFRs)
2) Military Training Routes (MTRs)
3) Military Operating Areas (MOAs)
4) Operating in Incident Airspace
5) Radio Communications
6) Border Crossings
7) Other

E. Improve Aerial Detection - Deconfliction via:

1) Increased use of VHF-AM radios
2) Improved coordination between Forestry Area Offices
3) Establishing detection route procedures
4) Aircraft/Altitude separation near borders
5) Pilot/observer training
6) Cockpit resource management

F. Collaboration With:

1) MNICS partners, such as
    a. National Guard
    b. State Patrol
    c. Emergency Medical Services
    d. Media
    e. Civil Air Patrol
    f. Coast Guard
    g. Border Patrol
    h. DNR Enforcement
    i. Others

2) Federal Aviation Administration (FAA)
    a. Flight Standard District Office (FSDO)
    b. Flight Service Station (FSS)
    c. Air Route Traffic Control Center (ARTCC)

3) Border Patrol, Grand Forks, Sector Headquarters

4) Other Military

5) Others

G. Enforcement of:

1) Temporary Flight Restrictions (TFRs)
2) Safety Procedures
3) Other

H. Analysis, Advisories and Modifications via:

1) Reporting (SAFECOMs)
2) Briefings
3) Alerts
4) Review of Policy/Procedures Guide
5) Guide Revisions
6) Other

BACKGROUND

Congress has charged the Federal Aviation Administration (FAA) with administering and managing the airspace, in the public interest, to insure the safety of aircraft and the efficient utilization of airspace. Airspace is a limited natural resource with numerous potential conflicting demands. The primary focus in airspace coordination is mid-air collision avoidance. In the past several years, we have seen a marked increase in incident airspace conflicts; near mid-air collisions, intrusions into temporary flight restriction areas, etc. (See appendix B for documentation).

Airspace coordination is a shared responsibility of pilots, dispatchers, Air Tactical Group Supervisors, aviation personnel and management. It is the pilot's responsibility to be familiar with the airspace of the intended flight and to comply with all rules and regulations for flight through each type of airspace. Thorough understanding of the procedures in this guide will aid in the reduction of airspace conflict and will improve aviation safety within the National Airspace System (NAS).

CHAPTER I: SEE AND AVOID –

INCIDENT PERSONNEL SHALL FOLLOW "SEE AND AVOID TECHNIQUES."

Pilots, aviation managers, aircraft chiefs of party and flight crewmembers must understand that even with the implementation of procedures (TFRs, NOTAMs, etc.) in this guide, the ultimate assurance of collision avoidance rests with the pilot in command (PIC) maintaining the vigilance necessary to spot other aircraft and take necessary action. Flight crewmembers should remember they are not merely passengers, but observers as well, and should keep a constant watch for other aircraft whenever in flight. They should never assume the pilot sees another aircraft.

CHAPTER II: COMMUNICATION PROCEDURES

INCIDENT PERSONNEL SHALL KNOW, UNDERSTAND AND FOLLOW INCIDENT AIRSPACE COMMUNICATION PROCEDURES.

- INITIAL RESPONSE TO AN INCIDENT-

  While en route, flight follow with your local dispatch center until contact is made with the incident or other local dispatch center. All aircraft, when within 12 miles of each fire incident should announce "in the blind": aircraft identification, current altitude, location, and direction of travel on VHF-AM (Victor) 122.925. All aircraft will monitor 122.925 while in the vicinity of the fire – (unless in controlled airspace **or** another frequency has been assigned) whether in bound to that particular fire or not. 122.925 is the primary AM frequency being utilized in the State of Minnesota for wildfire. Detection planes or "Air Attack" may or may not be over a fire before suppression aircraft arrive. Do not assume you are the first or only aircraft in the vicinity of the fire. Aircraft responding to a non-fire, "all-risk" type emergency should announce "in the blind" on 123.025 and monitor 123.025.

  Detection planes should respond on the AM frequency; however, another option would be to attempt contact on the appropriate agency FM frequency.

  If an Air Tactical Group Supervisor (ATGS) is over the fire or other incident, they have the responsibility and authority to manage the airspace for participating aircraft, assign appropriate radio frequencies and activate an alternate communication plan when necessary. Airspace management is facilitated by all aircraft maintaining radio discipline.

  If an Air Tactical Group Supervisor (ATGS) is on the incident: Prior to entering incident airspace (12 miles out), contact ATGS and identify your type of aircraft, call sign, general location from the incident and E.T.A. Request status of other aircraft on the incident and adhere to the Flight Traffic Area Rules (FTA), see Appendix E.

  NOTE: *DO NOT ENTER* incident airspace without prior approval from the ATGS. If contact cannot be established on 122.925 or an agency FM frequency, try the "Air Guard Frequency" 168.625, Tone Tx 110.9. Air Tactical Group Supervisor (ATGS) are commonly referred to as "Air Attack". Their call sign on an incident is often "Air Attack" followed by a number, i.e., Air Attack 1 or Air Attack 2, etc.

When departing the incident, all aircraft should announce to Air Attack or other aircraft their intended flight path.

- **TRANSITION PHASE OR EXTENDED RESPONSE –**

In this phase an Air Tactical Group Supervisor is usually in place providing airspace coordination between aircraft over an incident. In addition, an Air Operations Branch within the Incident Command System (ICS) may be utilized as part of an incident management team, facilitating aviation operations, assigning radio frequencies and determining the need for a TFR.

- **PROCEDURE FOR VHF-AM FREQUENCY CHANGE ON WILDFIRES –**

When the Air Tactical Group Supervisor (Air Attack) recognizes the need for an AM (Victor) frequency change, the procedure will be as follows:

1. Air Attack recognizes the need for an alternate VHF-AM frequency and selects an available alternate frequency usually 124.650 (Alpha), 119.950 (Bravo) or 119.850 (Charlie) or others as assigned.

2. Air Attack notifies all aircraft on scene of the frequency change and confirms change by commo check with all aircraft. Air Attack monitors both the new frequency and the former AM frequency (122.925 most likely) if possible.

3. Air Attack contacts/informs appropriate dispatch; i.e., MIFC, SUF, etc., of new frequency assignment.

4. MIFC Dispatch contacts all tanker bases and the applicable helibases and informs them of the fire name, location, and AM frequency assignment. If SUF jurisdiction, SUF Dispatch will ensure all SUF aircraft are informed of frequency assignments by fire location.

5. MIFC Dispatch contacts/informs local area/agency of frequency change; local area/agency notifies their detection or observer aircraft.

6. When it is determined by Air Attack that the frequency plan is no longer required, MIFC Dispatch will be directed to close out the plan. MIFC Dispatch will contact tanker bases, helibases and local area/agency of frequency closure/change.

- **"ALL RISK COMMUNICATION EFFORTS"**

The "All Risk" Aviation Operation Plan is designed to provide guidance for coordinating aviation assets from various agencies (law enforcement, DNR, EMS, Forest Service, Army National Guard, CAP, contractors, media, etc.) responding to any emergent situation. These guidelines are recommended for use when two or more aircraft are functioning at an incident and are extremely important to initiate immediately upon response to any emergent incident. The "Plan" addresses three phases of an incident: initial response, transition, and extended response.

INITIAL RESPONSE PHASE

The "Plan" encourages the use of the Air Tactical Group Supervisor position (Air Attack) generally filled by the first aircraft on the scene until formally handing off the responsibility.

The initial VHF AM frequency for "All Risk" incidents is 123.025 (122.925 wild land fire). Any aircraft arriving on the scene will adhere to the following standards:

Monitor VHF AM
Announce "in the blind" 5 minutes from incident:

Tail number
Altitude
Direction of entry

First aircraft assumes air traffic control providing for coordination, separation and safety. If other aircraft are on the scene, do not enter incident airspace until contact has been made with the Air Tactical Group Supervisor or the controlling aircraft. Any aircraft departing the incident should announce their intended flight path from the incident.

TRANSITION PHASE

The transition phase has the incident going beyond "normal" or "usual" response. Some of the indicators that you are in the transition phase may include:

Activity is escalating at the incident
Multiple agencies are responding
Media involvement
Airborne air traffic control is more difficult

It is critical that the Air Tactical Group Supervisor is identified and functioning smoothly. Also, at this time, the aviation assets should begin to be organized and managed under the ICS system.

EXTENDED RESPONSE PHASE

Some of the indicators of the extended response phase:

The incident has grown in complexity
The incident is beyond the first operational period
Air Tactical Group Supervisor is assigned
Incident management team assigned or on order

All risk MNICS aviation activities include both "civil" and "public" operations. All aircraft operations shall comply with applicable sections of 14CFR (control of air traffic, use of air space, and aircraft registration) as well as owner agency's policy.

A ground based Air Operations Branch Director (AOBD) will often coordinate the aviation aspects of an extended aviation operation. Aircraft entering or departing the incident will contact the Air Tactical Group Supervisor for an incident briefing or check-in / check-out. The Air Tactical Group Supervisor will inform the incoming aircraft of: other aircraft, whether or not a TFR is in effect, the current altimeter setting and the frequencies to monitor at all times while operating within 5 minutes of the incident.

- **UNSAFE CONDITIONS:**

All personnel have the responsibility to initiate action to stop any unsafe aviation operation. Anyone may refuse or curtail a flight or operation when an unsafe condition exists. Federal employees and Division of Forestry employees will utilize a "SAFECOM" to document any deviations of normal operation or safety concerns. "SAFECOMs" will be forwarded through each agency's channels.

Aircraft and Pilots: Agency personnel may only use aircraft and pilots that are approved for use by their agency. For Federal fire agency employees, only those aircraft with current aircraft data cards or letters of authorization may be used. Pilots are required to have a current pilot qualification card or letter of authorization before taking Federal fire agency employees as passengers. For non-Federal employees, each agency will determine approval of aircraft and pilots.

For additional information on "All Risk" coordination, refer to the Minnesota Incident Command System "All Risk" Aviation Operation Plan.

- # FIRE MUTUAL AID

FM RADIO:

Fire Mutual Aid (154.295) wide band is the primary frequency used for coordination between fire departments and other agency responding ground forces.

Some counties in Minnesota are utilizing the Armer (800 MHz) radio system. Initial contact with the county dispatcher and the incident commander will be made on the assigned 800 MHz talk group.

DNR ground personnel will coordinate priorities and assignments with the incident commander, either face to face, on Fire Mutual Aid or by using 800 MHz radio communications.

Air-ground communication for tactical operations with DNR aircraft will normally be communicated on a DNR VHF-FM air-ground frequency. Tactical aircraft managers are encouraged to use the MN DNR Forestry designated air-ground frequency 151.340 Tone 110.9 (Tx / Rx narrow band) when coordinating air operations if the primary frequency is congested.

If initial contact cannot be made with aircraft, try utilizing the Air Guard frequency, 168.625, Tone 110.9 Tx narrow band). Return to an air-to-ground or a tactical frequency as soon as possible to "free-up" the Air Guard frequency.

This plan was developed and its use encouraged so that radio traffic for the tactical fire fighting pilots is reduced. This should allow them an increased ability to concentrate on their mission and will assist the ultimate goal of a safe operation.

AM FREQUENCIES

123.025	MNICS – AIR-AIR – ALL RISK FREQUENCY (call in 10 minutes out)
122.925	AIR-AIR & AIR-GROUND designated natural resources frequency
124.650	ALPHA – AIR-AIR – Initial Attack
119.950	BRAVO – AIR-AIR – Initial Attack
119.850	CHARLIE – AIR-AIR – Initial Attack
123.975	AIR-GROUND – Air Tanker Base Operations Within 10 Miles of Base
126.200	AIR-GROUND – CAMP RIPLEY – Miller Field
121.500	EMERGENCY LOCATOR TRANSMITTER (ELT)
123.100	EMS

FM FREQUENCIES

168.550N	ICS AIR-GROUND
155.340W	EMS
155.475W	MN SEF
151.340N Tone 110.9	DNR AIR-GROUND (Rx / Tx)
154.295W	FIRE MUTURAL AID **(also known as Statewide Fire)**
163.100N	MN Tanker Base Ramp Frequency

CHAPTER III: TEMPORARY FLIGHT RESTRICTIONS (TFRs)

WHEN REQUESTED AND WHERE POSSIBLE AND APPROPRIATE, TFR's SHALL BE IMPLEMENTED OVER INCIDENT AIRSPACE. THE MOST COMMON METHOD OF ESTABLISHING TFR's SHALL BE THRU MIFC AVIATION DISPATCH.

- **AUTHORITY**

The FAA is the only authority that can implement a TFR. The authority for agency personnel to request a TFR is found in 91.137 (a) (2).

- **PROCEDURE**

1. Determine the need for a TFR and/or deconfliction. This determination would likely originate with an Incident Commander, the ATGS, an aviation manager, or a dispatcher. The criteria for establishing the need may include:

   Lengthy air operation is anticipated: from several hours to several days.

   Operations are in congested areas or near an airport.

   There is a high potential for sightseer and/or media aircraft.

   Military training route is involved.

   Special use airspace is involved.

   Other considerations

2. MIFC Aviation Dispatch will:

   a. Plot the incident location on a map and verify the size of the TFR. The standard circular dimensions are 5 nautical miles laterally from the center of the incident and 2000' MSL. A large TFR may be advisable, but the FAA is not compelled to grant the dimensions requested. Factors that may affect TFR size include:

   Type and number of participating aircraft, which might mandate a higher, safe altitude for the ATGS.

Size, shape and rate of increase in the area of the incident (a non-circular TFR may be required).

Location of helibases, helispots and water sources.

Location of airports.

Other customary aviation activity in the area, including MTR(s), MOA(s), etc.

Safe entry and exit points for participating aircraft.

b. MIFC aviation desk helps requesting party complete the "Interagency Request for Temporary Flight Restriction" form.

c. MIFC Coordinator is notified of the request.

d. Farmington ARTCC (Minneapolis Center) is **faxed** the completed TFR request form to:
Control Room: 651-463-5836 (fax) 24/7
or Ops Support: 651-463-5668 (fax). M-F

e. The Watch Supervisor at ARTCC is called **to confirm request** at:
651-463-5580 (24/7 watch desk)
651-463-5537 (0700 – 1600 daily, M – F)
1-800-677-6466

f. A courtesy call to Princeton FSS to inform them of the TFR; the number to use is: **763-389-7110 (5:00 – 2300, 24/7)**

g. Call Military Operations Officer for the 148th Fighter Squadron if the TFR is on or within 10 nautical miles of a MTR or is within a MOA or a SUA. Phone number is: **218-788-7370.**

h. Notify requesting party that TFR is in effect.

i. Close the TFR as soon as it is no longer needed.

3. MIFC Aviation Dispatch also notifies of other TFR's in the area through the Aircraft Status Report.

- **TFR ENFORCEMENT**

To enforce a TFR violation, MIFC shall gather the appropriate information (utilizing available personnel – local DNR, Enforcement Pilots, etc.) and shall report the violations to the local Flight Standards District Office (FSDO).

FAA: FSDO = (612) 253-4400 **Minneapolis Flight Standards District**
M-F (0730-1600) **Minneapolis MN 55450**
Fax #: 612-253-4401

Alternate #: = (612) 253-4518 **Mr. Rich Egan**
M-TH (0600-1630)

Penalties for violating TFR(s):

1. **Certificate Suspension – 30 – 180 days and/or remedial training thru the program safety manager at the Flight Standards District Office (FSDO). Training may be ground school or flight instruction at pilot's expense. If pilot does not complete training, suspension will take place.**

2. **Certificate Revocation – Normally due to record falsification (ultra-lights have no certificates).**

3. **Fines – Up to $1,000.00 per violation.**

(See Appendix D For TFR Enforcement Documentation Example)

- **TYPES OF TFR(s) –**

A TFR (also known as a FDC NOTAM) is an area delineated for flight restrictions by the FAA for use by the requesting agency. Intrusions into a TFR may carry a penalty such as suspension of license. There are three kinds of TFR's that fall under FAR 91.137.

1. 14 CFR Section 91.137 (a) (1)

   Restrictions issued under this FAR prohibit all flight in the designated area except those participating in hazard relief activities. This is the most restrictive of the TFR(s) and is rarely issued for wild land fire incidents. It is more commonly used for the following:

   Toxic Gas Leaks
   Volcano Eruptions
   Nuclear Accident or Incident
   Hijacking Incidents
   Aircraft Accident Sites at the discretion of the FAA

2. 14 CFR Section 91.137 (a) (2) – To provide a safe environment for the operation of disaster relief aircraft. This is the most common of the TFR(s) being utilized by land management agencies that deal with wild land fires. Our TFR(s) over our fires will more than likely be issued under this paragraph. Some of the common uses of this TFR are:

   Wild land fires utilizing air resources
   Earthquakes, floods, tornadoes, hurricanes, etc.
   Aircraft accident sites

3. 14 CFR Section 91.137 (a) (3) – Issued to prevent unsafe congestion of sight seeing aircraft above an incident or event which may generate a high degree of public interest. This TFR is rarely used, except for some sporting events or accident sites. Agencies have attempted to get this type of TFR for prescribed burning and other management activities, but are rarely, if ever, issued by the FAA.

- **AUTHORITY TO FLY INSIDE A TFR –**

Regulations on who can fly within a TFR vary by the TFR(s). The following standards apply:

1. 91.137 (a) (1) – is the most restrictive of the 91.137 series of TFR(s). No aircraft can operate within the TFR unless they are participating in hazard relief activities and are under the direction of the official in charge.

2. 91.137 (a) (2) – most commonly used TFR for wild land fire. Certain aircraft are allowed to fly within the TFR. They are:

   Participating aircraft – aircraft under the direction of the official in charge.

   Law Enforcement – may show up without prior notification. We will continue to share frequency information and procedures to law enforcement with aviation assets.

   Media aircraft carrying properly accredited news representatives. They must file a flight plan with the appropriate FAA or ATC facility specified in the TFR NOTAM. They must stay above the altitude used by the disaster relief aircraft, unless authorized by the Air Tactical Group Supervisor. We will continue to share frequency information and procedures to the media as well.

   Airport Traffic – TFR(s) do not close airports. VFR traffic is allowed inside the TFR if the flight is conducted directly to or from an airport. TFR(s) in or near airports are a red flag, requiring a heightened sense of alertness.

   IFR Traffic – ATC approved IFR flight plans could be routed through a TFR.

3. 91.137 (a) (3) - Under this type of TFR, entry for non-participating aircraft are very similar to 91.137 (a) (2) - media, law enforcement, airport traffic, etc.

CHAPTER IV. INFORMATION AND EDUCATION

MIFC shall take an active role in reducing mid-air collisions and near misses through information and education as follows:

1. **Airport Mailings** - MIFC aviation personnel will periodically mail informational materials to public airports in the state of Minnesota, in the areas that commonly have wildfire. Mailings may include such things as: posters, letters or notices.

2. **News Releases** - The MIFC aviation desk will work with MIFC information personnel to issue news releases regarding airspace safety when timely and appropriate.

3. **DOT Notices** - MIFC aviation personnel will work with the D.O.T. – Division of Aeronautics to include incident airspace safety in their materials and handouts, such as the MN Airport Directory.

4. **Airport Notifications** - When possible and capable - Division personnel will notify adjacent airports and air traffic personnel regarding large aviation activity incidents.

5. **Pilot School Education** - MIFC aviation personnel are encouraged to work with schools and universities that train pilots, to include wild land fire and all risk incident airspace. Examples of schools are: Ely, Mankato, Crookston, Fargo, Inver Grove Heights, etc.

6. **Utilize FAA safety personnel** to help deliver our message: Primary contact is:

Jim Niehoff 612-253-4412
FAA Safety Team Program Managers

(See Appendix C for Examples.)

CHAPTER V. SPECIAL USE AIRSPACE (SUA)

The MIFC aviation desk shall continue to be pro-active in de-conflicting airspace in "Special Use Airspace."

1. MIFC generally conducts an annual meeting with local military contacts for coordination purposes.

2. MIFC aviation desk, during fire season, usually calls the military scheduling office each day at 0730 for MTR and MOA activity for the day if they have not previously received the information via fax or email.

3. DNR forestry flight crews are normally advised of MTR and MOA activity via the daily Aircraft Status Report.

4. If an incident impacts an MTR or MOA, the MIFC aviation desk contacts the military directly (or via ARTCC) to advise the military of the situation and requests an appropriate modification of military activity in the area – (perhaps a continuation of military flights at a higher altitude as opposed to a cessation/ceasing of all activity.)

It's important to note that military aircraft operate in full compliance with the FAR(s) whenever possible, and generally utilize SUA(s) when mission needs dictate deviation from civil flight rules. Contact the designated coordinating authority, listed in AP/1B, to de-conflict incident operations in or near SUA(s).

Special use airspace is established by the FAA – usually at the request of civilian agencies or military branch. It's a special designation alerting users to military activity, hazards, national security needs, and to segregate that activity from other airspace users to enhance safety. There are six different categories of SUA(s). They are:

a. Prohibited Areas (PA)
b. Military Operations Areas (MOA)
c. Restricted Areas (RA)
d. Alert Areas (AA)
e. Warning Areas (WA)
f. Controlled Firing Areas (CFA)

Within Minnesota we have three categories of SUA(s) –

- **Prohibited Areas (PA)** – The Boundary Waters Canoe Area Wilderness (BWCAW) falls into this category. The controlling agency is the U.S. Forest Service. Contact is Superior Dispatch at **218-327-4175**. The basic restriction is that all non-participating aircraft must maintain an altitude of 4,000 feet MSL over the BWCAW. A lifting of the restriction for fire can be granted by Superior Dispatch – keeping in mind that it will not automatically be given. For example, you're a Helicopter Manager in a DNR contracted helicopter and spot a smoke in the BWCAW. Superior Dispatch may clear you to check it out and provide location and a size-up, but may not grant permission to suppress. For a non-fire emergency such as a medevac, or for project work, Superior Dispatch must appeal to a higher authority, ultimately the Forest Supervisor. For example, possibility of aerial medevac will depend on the seriousness of the injury. Prohibited areas are charted on sectionals. They are identified by the letter P, followed by a number. Two separate PA(s) – P204 and P205, identify the Boundary Waters.

- **Restricted Areas (RA)** - We have one restricted area within the State of Minnesota. Camp Ripley, which is located in Central Minnesota. The controlling agency is the U.S. Army. Contact is Miller Operations at Miller Field: **320-616-2780**; direct line **320-616-2779** (Airfield). No specific ceiling restrictions – depends on current firing range activity. Pilots and/or aircraft managers can contact Miller Field on **126.200**. For traversing the camp, aircraft may be vectored higher or sent around, depending on type of ordnance in use. In a critical situation (structures in imminent danger of wildfire), the quickest way for our resources to arrive is to traverse the camp. If an incident is within the camp itself, contact Miller Field on **126.200** for clearance into the airspace.

  Restricted areas are charted on sectionals. They are identified by the letter R, followed by a number. Camp Ripley is R- 4301.

- **Military Operations Areas (MOAs)** - were established to contain certain military activities within geographic boundaries. In Minnesota, we have 3 MOA(s) – Beaver, Snoopy and Snoopy East (over Lake Superior). Civilian VFR and IFR flights are allowed within a MOA, even when the area is in use by the military. Clearance is not required; however, pilots must recognize when they are flying an active MOA and should take appropriate action. MOA(s) have a defined floor and ceiling, which can range up to the floor of Class A airspace (18,000').

MOA(s) are charted on the sectionals and identified by their respective name. Military pilots are exempt from the FAR(s) when conducting training within an active MOA. Speeds can be in excess of 250 knots below 10,000 MSL (i.e., Beaver MOA can be below 400 feet AGL).

CHAPTER VI. MILITARY TRAINING ROUTES (MTR)

The MIFC aviation desk shall continue to be pro-active in deconflicting airspace as it relates to military training routes. MIFC aviation desk will normally call the military scheduling office each day (during fire season) at 0730 for MTR activity on days we produce an "Aircraft Status Report".

The daily Aircraft Status Report will advise Division personnel of military training route activity. The Aircraft Status Report will normally be distributed daily when tactical aircraft are available for fire suppression.

These routes are provided for military training at speeds of more than 250 knots and at altitudes that range from the surface to 18,000'. Most operations are conducted well below 10,000' MSL. MTR(s) are depicted on sectionals with a solid gray line with a letter/number identifier. The solid gray line on the chart depicts the center line of the MTR. This can be misleading since the width of the route may not be uniform in reference to the line. Department of Defense publishes the handbook AP/1B, which provides a complete description of the MTR's, including hours of operation, geographical points of each segment, altitude limitations for each segment, route width, flight service stations within 100 nautical miles and more. The routes are most often designed for low level terrain following training missions.

Minnesota Military Training Routes (MTRs)

IR 605 – East flights from Beaver MOA to Snoopy MOA

IR 606 – West Flights from Snoopy MOA to Beaver MOA

VR 604 – East flights from near Lutsen – Swan River/Palisade – Malmo - Bruno – Holyoke and into Wisconsin

VR 607 – West flights from Wisconsin – Holyoke – Bruno – Malmo – Palisade – Swan River - Lutsen

CHAPTER VII. FIRE SUPPRESSION AIRCRAFT AND AIR TRAFFIC CONTROL

If a wildfire occurs within or adjacent to class B, C, or D airspace, and aerial firefighting resources are being utilized to suppress the fire, the following radio frequency management plan should be followed. All operations within Class B, C, and D airspace must be in accordance with FAR(s) 91.129 and 91.131.

AM (VICTOR) RADIO:

- **WITHOUT AIR ATTACK -**

All tactical aircraft must maintain communications with either Approach Control or Tower as directed by Approach at all times while in class B, C, or D airspace (FAR 91.131).

- **WITH AIR ATTACK –**

If requested by Air Attack and approved by the ATC, FAR 91.129 (b) allows for a deviation, which could allow the following scenario:

1. Air Attack would monitor and maintain communications with either Approach or Tower as directed by ATC. Air Attack Pilot would communicate/coordinate with ATC and tactical firefighting aircraft.

2. Tactical firefighting aircraft would communicate/coordinate with Air Attack on 122.925 or other approved frequency.

3. If above deviation from FAR(s) 91.129 and 91.131 are not requested and approved, all aircraft operating in class B, C and D airspace must maintain direct communications with ATC at all times.

MSP – ATCT	612-713-4010 612-713-4050 (24/7)
Watch Desk	651-463-5537 (0700 - 1600 M-F) 651-463-5580 (24 hr 24/7)

Airspace Definitions

Class G - (uncontrolled airspace) That airspace not designated as Class A, B, C, D, or E.

Controlled Airspace – An airspace of defined dimensions within which air traffic control service is provided to IFR flights and to VFR flights in accordance with the airspace classification. Controlled airspace is a generic term that covers Class A, Class B, Class C, Class D, and Class E airspace. Controlled airspace in the United States is designated as follows:

Class A - Generally, that airspace from 18,000 feet MSL up to and including FL600, including the airspace overlying the waters within 12 nautical miles of the coast of the 48 contiguous States and Alaska. Unless otherwise authorized, all persons must operate their aircraft under IFR.

Class B - Generally, that airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports in terms of IFR operations or passenger enplanements. The configuration of each Class B airspace area is individually tailored and consists of a surface area and two or more layers (some Class B airspace areas resemble upside-down wedding cakes), and is designed to contain all published instrument procedures once an aircraft enters the airspace. An ATC clearance is required for all aircraft to operate in the area, and all aircraft that are so cleared receive separation services within the airspace. The cloud clearance requirement for VFR operations is "clear of clouds."

Class C - Generally that airspace from the surface to 4,000 feet above the airport elevation (charted in MSQ surrounding those airports that have an operational control tower, are serviced by a radar approach control, and that have a certain number of IFR operations or passenger enplanements. Although the configuration of each Class C airspace area is individually tailored, the airspace usually consists of a surface area with a 5NM radius, and an outer circle with a 1 ONM radius that extends from 1,200 feet to 4,000 feet above the airport elevation. Each person must establish two-way radio communications with the ATC facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while within the airspace. VFR aircraft are only separated from IFR aircraft within the airspace.

Class D - Generally, that airspace from the surface to 2,500 feet above the airport elevation (charted in MSQ surrounding those airports that have an operational control tower. The configuration of each Class D airspace area is individually tailored and when instrument procedures are published, the airspace will normally be designed to contain the procedures. Arrival extensions for instrument approach procedures may be Class D or Class E airspace. Unless otherwise authorized, each person must establish two-way radio communications with the ATC facility providing air traffic services prior to entering the airspace and thereafter maintain those communications while in the airspace. No separation services are provided to VFR aircraft.

Class E - Generally, if the airspace is not Class A, Class B, Class C, or Class D, and it is controlled airspace, it is Class E airspace. Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. When designated as a surface area, the airspace will be configured to contain all instrument procedures. Also in this class are Federal airways, airspace beginning at either 700 or 1,200 feet AGIL used to transition to/from the terminal or enroute environment, enroute domestic, and offshore airspace areas designated below 18,000 feet MSL. Unless designated at a lower altitude, Class E airspace begins at 14,500 MSL over the United States, including that airspace overlying the waters within 12 nautical miles of the coast of the 48 contiguous States and Alaska. Class E airspace does not include the airspace 18,000 MSL or above.

CHAPTER VIII. AERIAL DETECTION DECONFLICTION

Airspace conflicts develop when smokes are detected near or adjacent to DNR Area forestry boundaries.

Detection aircraft from two or more Areas may respond to a common smoke while monitoring and transmitting on separate FM radio frequencies.

Aircraft responding to a common smoke while monitoring separate FM frequencies are a serious threat for mid-air collisions.

Area, Region and MIFC dispatchers play a significant role in reducing air space conflicts between detection and other suppression aircraft. Fire Program Team leaders, dispatchers, pilots, aerial observers, ATGS(s) and MIFC aviation staff also play a role.

Division personnel can reduce the threat of mid-air collisions by utilizing the following techniques:

1. **Increased utilization of the AM radio required in detection contracts**. Too often the AM radio is an underutilized tool in reducing airspace conflicts. The aircraft AM radio can be used to increase communication between aircraft. Too often the AM radio of detection aircraft are tuned to an airport Unicom or other frequency.

   Unless another frequency is being utilized, 122.925 is the common designated AM frequency for natural resources. Under most circumstances, detection aircraft while flying their route should monitor 122.925.

   NOTE: Exceptions may exist when at or near airports or large incident activity.

2. Follow **FTA (Fire Traffic Area)** procedures and have detection aircraft announce "In the Blind" 12 miles or 7 minutes out when approaching a wildfire on VHF AM 122.925. Detection aircraft should announce location, call sign, altitude and direction of travel. Departures from the airspace should also be announced.

3. **Detection Route Discipline:** Areas should train, brief and re-brief detection pilots and aerial observers about the importance of detection route procedures.

   Areas should set high standards for detection procedures. Detection aircraft should remain on their route until given permission to check out a smoke.

4. **Training of Detection Pilots and Observers:** Initial training and subsequent briefings need to include boundary area fire detection procedures. Dispatchers, pilots, observers, Team Leaders and aviation personnel need to remain vigilant in training **all** detection personnel of the potential hazards and deconfliction procedures relating to fires near an adjacent area boundary.

5. **Cockpit Resource Management procedures** and training can improve communications and see and avoid procedures. Knowing, understanding and establishing pilot and observer duties can improve cockpit efficiency and safety. When observers are used, splitting of the workload can improve the pilot's ability to communicate air to air and also get their eyes out of the cockpit and into the air space ahead.

6. **Provide Daily Briefings**. Brief, re-brief and de-brief are all procedures which are important to re-enforce the policy, procedures and expectations of aerial detection personnel.

7. **Increased Adjacent Area Coordination** needs to occur when a smoke has been detected near an Area's boundary.

   A. Telephone or radio call to adjacent Area

      1. Determine who has aircraft responding
      2. Identify aircraft and call signs
      3. Agree on a common frequency
      4. Notify pilots of frequency change
      5. Notify pilots of other aircraft en route
      6. Advise pilots and observers to maintain vigilance

   B. Consider monitoring adjacent Area aerial detection activity.

   C. Consider altitude separation for each detection aircraft responding

   D. Establish boundary procedures, train boundary procedures and brief all detection personnel on boundary procedures. Proper briefings and **clear** standard operating procedures can significantly reduce the risk.

CHAPTER IX. TEMPORARY AIR TRAFFIC SERVICES

If the need for temporary FAA flight control is needed; i.e., at a large incident with significant air traffic, a temporary tower or other temporary air traffic services will be requested via the MIFC aviation dispatch desk. MIFC aviation dispatchers shall order FAA assistance via the attached following agreement ***(see pages 28-39).***

CHAPTER X. UTILITY / RIGHT OF WAY DECONFLICTION PROCEDURES

Gas and oil transmission lines, other utility 'right of way' lines all routinely do aerial surveillance of their respective lines.

Aerial recon's consist of both rotor and fixed wing traffic. They operate at low level, do orbits over suspect areas, and can travel in any direction. We will use due diligence in keeping a watchful eye while operating within these utility 'right of ways'. We will also contact appropriate utility companies for any information they may have in regards to flight activity, etc. Phone numbers are often times posted on mile markers within the 'right of ways'.

When conducting operations within Utility companies 'right of way' lines, the following procedures will be adhered to:

- When establishing a landing area or a base for operation, ownership of land will be determined and permission will be acquired prior to use of the property. The land could be USFS, State of Minnesota, County land, Industrial land or privately held.

- Appropriate utility companies will then be contacted for any flight information they may have on utility recon's.

- Items to consider:

  - Where aircraft is based or flying out of.

  - Any appropriate frequency information.

  - Appropriate Unicom frequency.

On any visuals of aircraft, contact will be attempted utilizing the above information.

Enbridge Energy Company: 1-800-858-5253 (24/7 Emergency Line)

TransCanada / Great Lakes Gas Transmission Company: 1-800-447-8066 (24/7)

Superior WI office number: 715-394-1400 (Glenda)

INTERAGENCY AGREEMENT
for
AIR TRAFFIC CONTROL SERVICES AND TEMPORARY MOBILE AIR TRAFFIC CONTROL TOWER
among the
Bureau of Land Management
Bureau of Indian Affairs
Fish and Wildlife Service
National Park Service
of the
United States Department of the Interior
and the
Forest Service
of the
United States Department of Agriculture

and the
Federal Aviation Administration
of the
United States Department of Transportation

BLM Agreement No. 1422RAI080013
BIA Agreement No. RS08K42035
FWS Agreement No. 982108K002
FS Agreement No. 08-IA-11130206-084
NPS Agreement No. F9560080080
FAA Agreement No. AJR-OM-WSA-08-0365

I. INTRODUCTION.

Fire management and suppression in the Nation's wildlands is an on-going concern to the American public and to the Department of the Interior's Bureau of Land Management, Bureau of Indian Affairs, Fish and Wildlife Service, and National Park Service, and the Department of Agriculture, Forest Service, as well as to the Department of Transportation, Federal Aviation Administration (FAA), Western Service Area (WSA). The FAA-WSA includes the states of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming. Considerable cooperation and coordination exists among these agencies, which is critical to the success of fire management, suppression and safety. This agreement will herein after refer to the Federal Aviation Administration as the "FAA," and the federal Interagency Wildland Fire Management Agencies will hereinafter be referred to collectively as the "Wildland Fire Agencies."

The Wildland Fire Agencies are responsible for the stewardship and/or protection of lands owned or held in trust by the United States or under the jurisdiction of state agencies. A major wildland fire frequently requires the use of a strategically situated uncontrolled airport or site to serve as the staging area for aerial support activities. Mass deployment of personnel, supplies,

and equipment by large numbers of aircraft congests airspace at the airport/site in use. The Wildland Fire Agencies recognize the need for efficient safety services provided by FAA and agree to enter into an agreement with the FAA to provide temporary air traffic services and control towers on short notice.

The FAA is legally mandated to honor its commitment to keep the National Airspace System (NAS) operating safely and efficiently. In accordance with this mandate, the FAA will make a commitment to provide Air Traffic Control Specialists (ATCS) to meet the needs of the Wildland Fire Agencies under the terms of this agreement. The Wildland Fire Agencies recognize this mandated function of the FAA and the critical importance of the ATCS' role in wildland fire management.

II. AUTHORITIES.

A. Economy Act of June 30, 1932, as amended (31 U.S.C. 1535).

B. Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.).

C. National Park Service Organic Act of August 1916 (16 U.S.C. 1).

D. National Wildlife Refuge Administration Act of June 27, 1998 (16 U.S.C. 668dd).

E. National Indian Forest Resources Management Act of 1990 (25 U.S.C. 3101 *et seq.*).

F. Cooperative Forestry Assistance Act of 1978 (16 U.S.C. § 2101 *et seq.*).

G. 49 U.S.C. 106 (l) and (m).

III. PURPOSE.

The purpose of this Interagency Agreement is to identify the services and set forth the terms and conditions under which the FAA will continue to provide temporary air traffic services and equipment to support the Wildland Fire Agencies' management efforts.

IV. OBJECTIVES.

The objectives of this Agreement are:

A. Identify those services to be exchanged between the FAA and Wildland Fire Agencies;

B. Continue and maintain Interagency relationships; and

C. Define roles, responsibilities and fiscal processes of the FAA and Wildland Fire Agencies.

V. RESPONSIBILITIES.

The responsibilities and services listed are not all-inclusive, but are meant to provide the overall scope of products, services and activities exchanged or requested by the respective agencies. All services undertaken by the FAA and Wildland Fire Agencies under this agreement are subject to the availability of appropriated funds.

A. The FAA agrees to:

1. Provide air traffic control services.

2. Provide an FAA mobile ATCT, and/or other support equipment, to assist the firefighting effort. FAA personnel shall transport, assemble, disassemble, and maintain the FAA mobile ATCT when the unit is needed for firefighting services. Services are subject to the availability of FAA mobile ATCT and/or qualified FAA personnel needed at the time of requested service.
3. Provide adequate staffing of certified Control Tower Operators (CTO).
4. Provide airport traffic control service for aircraft operating to and from staging airport/helibases.
5. Provide frequency(s) for temporary tower and air traffic services.
6. Issue appropriate NOTAM's (Notice to Airmen) for the airport/helibase.
7. Retain the prerogative to terminate all or any part of the temporary airport traffic control services provided to the Wildland Fire Agencies should the FAA determine a requirement of higher priority that dictates the recall of all or some of its personnel and/or traffic control equipment.
8. Provide the Wildland Fire Agencies with 24 Hours/7 Days a Week Points of Contact (POC) for mobile ATCT/controller deployment; Appendix A, FAA Points of Contact of its Regional Operations Center (ROC). Changes to the POC will be provided to the participating agencies in writing separate from this agreement.

B. Wildland Fire Agencies agree to:

Requests for the initiation and termination of temporary tower services will be accomplished by Resource Orders through the Geographical Area Coordination Centers (GACC) notifying the FAA Points of Contact/ROC.

Procedures for obtaining services, on-site support of non-routine services can be viewed http://www.nifc.gov/nicc/logistics/coord_forms/temptower.pdf.

1. Operational support.
   a. Ensure appropriate base station(s) and/or handheld radio(s) are available for use if not provided by the FAA.
   b. Provide support equipment such as: binoculars, pens, note pads, anemometer, compass, weather equipment (wind/temperature/barometric pressure, etc.), wind sock, 24 hour clocks, and other equipment as necessary.
   c. Provide hook-ups, at Wildland Fire Agencies cost, or reimburse the FAA for the fuel costs for the engine generator (E.G.), or provide the fuel needed to support the E.G. in the temporary tower.
2. Provide logistical support.
   a. Restroom facilities shall be available to personnel on duty at the temporary ATCT site.
   b. Shelter from the elements to reduce fatigue and improve safety conditions while the FAA personnel are working. Provisions of Helibase or Airbase Operations trailers

are to be considered when available.

c. Reasonable protection and on-site safety-related instruction to FAA personnel assigned to temporary towers in fire areas.

3. Reimbursement to the FAA for the following activities associated with on-site air traffic control support:

   a. Costs incurred by the FAA Air Traffic Control Tower (ATCT) duty station related specifically to providing the requested services under this agreement.

   b. Costs above base salary including overtime incurred by the FAA ATCS.

   c. Costs for logistical and ATC support required by FAA personnel at operation sites, as appropriate.

   d. Costs for the replacement of equipment that is damaged or fails due to on-site incident conditions.

   e. All travel costs and lodging expenses are authorized as consistent with the policies in the Interagency Incident Business Management Handbook for federal employees, http://www.nwcg.gov/pms/pubs/iibmh. Whenever such transportation is to be by aircraft, it shall be in one that is properly equipped and certified for carrying passengers. Rental vehicles, or privately owned vehicle (POV) mileage, are authorized for ATCS' due to the substantial amount of equipment they are required to bring with them to an incident.

   f. Miscellaneous office supplies and equipment as appropriate and identified in the Interagency Air Space Coordination Guide necessary to accomplish on-site support. http://www.fs.fed.us/r6/fire/aviation/airspace/web/coord/index.html.

VI. JOINT RESPONSIBILITIES:

Participation in Interagency groups in meetings or teleconferencing at least annually to review the status of the current year operations and determine necessary changes. This may include estimating the costs and determining the recommended services and responsibilities among the partnering agencies for the out-year.

A. **Pre-season**:

1. Ensure that appropriate levels of communication are taking place prior to start of fire season.
2. Make updates to and disseminate (agency) points of contact list separate from this agreement and as warranted.
3. Address training needs and scheduling classes, as needed.
4. Update operational procedures documents, as needed and appropriate.

B. **Post-season**:

Conduct a post season meeting either on site or by teleconferencing or by other means to review the coordinated actions of the prior season and share any "lessons learned" and suggested improvements to the overall process.

VII. AVAILABILITY OF APPROPRIATED FUNDS.

The signatory agencies enter into this Agreement under the authority of the Economy Act (31 U.S.C. §1535); and their respective organic and appropriation acts.

The ability of the parties to carry out their responsibilities under this Interagency Agreement is subject to their respective funding procedures and the availability of appropriated funds. Should any party encounter budgetary shortfalls that may affect the activities to be carried out under this Interagency Agreement, that party will provide timely notification to the other party in writing. The Wildland Fire Agencies' funding is identified as no-year funding.

The signatory agencies recognize that, given the current administrative process for payments for fire suppression activities, it is not feasible to obligate the full amount of funds that may be required pursuant to this Agreement, because this Interagency Agreement does not constitute a binding obligation under 31 U.S.C. §1501 and since it cannot anticipate the specific goods or services for which payment will be requested, the individual payment amounts, or the responsible jurisdictional wildland fire management agency in each future case. This information can only be provided by Resource Orders executed when the goods or services are requested. At the same time, the signatory agencies recognize that Resource Orders are insufficient to constitute a binding obligation under the statute because there is no evidence of intent to be bound, no authorized signatures are present, and no legal authorities are cited, however, these requirements are satisfied by this Interagency Agreement. The two documents, when taken together, contain all the elements required for a contingent liability obligation under the statute. Hence, the signatory agencies agree that this Interagency Agreement shall automatically be incorporated by reference into any Resource Orders issued under it for ATCS services and products, and that an obligation of funds will occur by the responsible agency at the time the FAA presents a copy of this Agreement and the Resource Orders for payment.

VIII. REIMBURSEMENT AND ACCOUNTING ARRANGEMENTS.

A. Billing and collection procedures will follow the Intra-governmental Payment and Collection (IPAC) system process.

B. Wildland Fire Suppression Activities: Obligation of funds and reimbursement of expenditures under this subsection are under the Economy Act (31 U.S.C. 1535). Total reimbursable costs are estimated at $2,500,000.00 per fiscal year. In the event this amount is insufficient for a particular fiscal year, this Agreement may be modified to increase the amount of funding, subject to the availability of funds. This Agreement is automatically incorporated by reference into any Resource Order that is issued under it, constituting a binding obligation. The Wildland Fire Agencies warrant that they will ensure the funds will be available when the obligations are recorded. The recording of the obligations will occur upon the receipt of the billing/expenditures invoice by the applicable Wildland Fire Agency from the FAA. The billing invoice, inclusive of copies of this Agreement or reference to its applicable document number(s), the Resource Order(s) copy, and expenditure documentation, will define the specific services, supplied goods and costs for each order, and subsequent obligation and payment by the applicable jurisdictional Wildland Fire Agency.

Description of Reimbursable Item	Est. Costs
Provision for Temporary Towers Per Fiscal Year	$ 1,976,285
	0
	0
Subtotal	$ 1,976,285
Overhead @ 26.5%	523,715
Per Fiscal Year, Total Estimated Costs *	$ 2,500,000

* - Total Estimated Costs are a Contingent Liability Amount - no actual funding is provided at document signing.
- Actual FAA costs will be incurred and invoiced on a Wildland Fire incident specific basis.
- The FAA will invoice for all costs associated with the deployment, manning and return to base location of a temporary tower in response to a specific Wildland Fire incident.
- To facilitate invoicing the Wildland Fire Agencies will identify to the FAA the specific Government entity(ies) affected by a specific Wildland Fire incident.

FY 2008	**10/01/07 – 09/30/08**	**$2,500,000**
FY 2009	**10/01/08 – 09/30/09**	**$2,500,000**
FY 2010	**10/01/09 – 09/30/10**	**$2,500,000**
FY 2011	**10/01/10 – 09/30/11**	**$2,500,000**
FY 2012	**10/01/11 – 09/30/12**	**$2,500,000**

1. Reimbursement payments for suppression-related activities will be accomplished by submission of billing invoices by FAA, which are inclusive of copies of the Resource Orders that define the requested services and goods, and the expenditure back-up documentation to the responsible jurisdictional wildland fire agency. The FAA will charge an indirect/administrative overhead rate commensurate with their annual approved rate on all invoiced charges. Items to be included are listed as follows.

   a. The fire name, jurisdictional unit, and incident number (The copy of the Resource Order), generally includes this information as does the ATCS Reimbursement Expense Form;

   b. Applicable support documentation requirements, e.g. copy of FAA's expense spreadsheet, and required agency data elements;

   c. A copy of this Interagency Agreement complete with signatures, or the agency's agreement document number for subsequent billings;

   d. Identification of FAA's financial contact (see Appendix A); and

   e. IPAC billings are to be submitted to the appropriate payment center by the FAA within ninety (90)-days of completion of service.

2. It is the responsibility of the requesting agency/office to develop and process a unilaterally signed funding document (containing the necessary elements of a U.S. Government funding document), or as otherwise authorized through the individual agencies' policies, to obligate funds and provide a signed/executed original of the funding document to the FAA Contracting Officer. The funding document should list the issuing agency's Agency Locator Code (ALC). It is also the responsibility of the

requesting agency/office to:

a. Conduct any required verification of costs, authorization of expenditures and reconciliation of payment;

b. Provide the document number of the funding obligation, required agency data elements and billing instructions to the FAA office that provided the service; and

c. Provide information to FAA regarding which payment center to send the billings for processing.

IX. TERM OF AGREEMENT.

The effective date of this Agreement will commence upon full execution of the final signature by the identified signatory agencies, and will include appropriate accrued costs for continuation of service effective October 01, 2007, and shall remain in effect through September 30, 2012, or until such time as the Interagency Agreement is terminated by mutual agreement. The Agreement shall be reviewed by all participants to determine its suitability for renewal, revision, or termination in accordance with Section X. If this Agreement is extended, the extension must be in writing, and approved and signed by authorized signatories for the agencies.

X. TERMINATION AND SEVERABILITY.

Any signatory may terminate their participation in this Interagency Agreement by written notice to all other signatories at any time before the date of expiration upon thirty (30) days written notice of such termination. Full credit shall be allowed for each affected party's expense and all non-cancelable obligations properly incurred up to the effective date of termination. The remaining signatories may continue the provisions of this Interagency Agreement as long as the FAA remains a signatory.

Nothing herein is intended to conflict with current DOT, DOT/FAA, USDA or DOI directives. If the terms of this Interagency Agreement are inconsistent with existing directives of either of the agencies entering into this Interagency Agreement, then those portions of the Interagency Agreement that are determined to be inconsistent shall be invalid but the remaining terms and conditions not affected by the inconsistency shall remain in full force and effect. At the first opportunity for review of the Interagency Agreement, all necessary changes will be accomplished either by an amendment to this Interagency Agreement or by entering into a new agreement, whichever is deemed expedient to the interest of all Parties.

XI. RESOLUTION OF DISAGREEMENT.

Should disagreement arise on the interpretation of the provisions or implementation of this agreement, the dispute shall be resolved pursuant to the Business Rules for Intragovernmental Transactions delineated in the Treasury Financial Manual, Vol.1, Bulletin 2007-03, Section VII (Resolving Intra-governmental Disputes and Major Differences).

XII. MODIFYING THE AGREEMENT.

Any signatory agency may initiate the modification of this Interagency Agreement to incorporate any changes that are mutually agreed to by the participants. Such modifications shall be in writing and shall identify the specific activities, the total amount of funds applicable to the modification, as appropriate, and any other pertinent details of the modification. The BLM is designated as the agency responsible for all administrative oversight and preparation of modifications to this agreement. The modification(s) shall not take effect until documented and signed by authorized signatories for the agencies.

XIII. PRINCIPAL CONTACTS.

See attached Appendix A

XIV. SIGNATORY.

This Agreement shall be effective with and upon full execution of the final signature by the identified signatory agencies, and it will remain in effect until September 30, 2012, or until such time as the Interagency Agreement is modified or terminated by mutual agreement.

for

7/23/08

Mark Reeves, Director
Western Service Center
DOT, Federal Aviation Administration

Date

2008-Jul-22

David M. Klinger, Contracting Officer
Western Service Area, Acquisition Gp. - LA
DOT, Federal Aviation Administration

Date

08-01-08

Timothy M. Murphy, Deputy Assistant Director
Fire and Aviation (Boise)
DOI, Bureau of Land Management

Date

8/1/08

Julie Whaley, Supervisory Procurement Analyst
Bureau of Land Management- Fire and Aviation (Boise)

Date

Brian McManus, Chief
Branch of Fire Management
DOI, Fish and Wildlife Services

8-1-08
Date

see attached
Nedra Stallone, Contracting Officer
Fish and Wildlife Services – Division of Contracts and Facilities Management

Date

Lyle Carlile, Director
Branch of Fire Management
DOI, Bureau of Indian Affairs

8/1/08
Date

see attached
Byron J. Green, Contracting Officer
Bureau of Indian Affairs - Branch of Fire Management

Date

Tom Nichols, Division Chief
Division of Fire and Aviation
DOI, National Park Service

8/1/08
Date

see attached
Mary Ray, Contracting Officer
National Park Service – Washington Office

Date

Karyn L. Wood, Assistant Director, Operations
Fire and Aviation Management
USDA, Forest Service

8.1.08
Date

Cheryl Molis, Administrative Manager
USDA, Forest Service- Fire and Aviation Management

8-1-08
Date

APPENDIX A

The Points of Contact are responsible for coordinating the current year operations and determine necessary changes, an annual review of the currency and adequacy of this Agreement among the signatories. Changes to the Points of Contact can be made by written notification to the participating agencies.

For the FAA:	**For the Interagency Wildland Fire Agencies:**
Operations Support Group Contact Ron Spina Western Service Center 1601 E. Valley Rd. Renton, WA 98057 Mail Address: FAA Northwest Mountain Regional Office 1601 Lind Ave. S.W. Renton, WA 98057 425/203-4519 Office 425/203-4505 Fax 425/308-4527 Cell ronald.spina@faa.gov Alternate: William "Bill" Buck Western Service Center 1601 E. Valley Rd. Renton, WA 98057 Mail Address: FAA Northwest Mountain Regional Office 1601 Lind Ave. S.W. Renton, WA 98057 425/203-4542 Office 425/203-4505 Fax 425/698-5953 Cell william.buck@faa.gov	Technical Contact Interagency Airspace Coordinator Julie Stewart 333 SW First Avenue PO Box 2965 Portland OR 97204 503/808-6728- Office 503/780-0097 – Cell julie_stewart@or.blm.gov
Agreement/Contracting Contact David M. Klinger Western Logistics Service Area Acquisition Group – Los Angeles P.O. Box 92007/FAA/AWP-52 Los Angeles, CA 90009-2007 310/725-7552 Office 310-725-6842 Fax david.klinger@faa.gov	Agreement/Contracting Contact Grants and Agreements Specialist Sherry Garey Bureau of Land Management, Fire &Aviation 3833 S. Development Avenue Boise ID 83705-5354 208/387-5360 – Office 208/387-5574 – Fax sherry_garey@nifc.blm.gov

Western Service Area – Business Services WSA Reimbursable Agreements Program Analyst Barbara Porter Western Service Center 1601 E. Valley Rd. Renton, WA 98057 Mail Address: FAA Northwest Mountain Regional Office 1601 Lind Ave. S.W. Renton, WA 98057 425/203-4238 Office 425/203-4238 Fax barbara.porter@faa.gov	Contracting Contact Procurement Analyst Julie Whaley Bureau of Land Management, Fire &Aviation 3833 S. Development Avenue Boise ID 83705-5354 208/387-5546 – Office 208/387-5574 – Fax Julie_whaley@nifc.blm.gov
Western Service Area Planning and Requirements Planning Specialist Marci Hollingsworth Western Service Center 1601 E. Valley Rd. Renton, WA 98057 Mail Address: FAA Northwest Mountain Regional Office 1601 Lind Ave. S.W. Renton, WA 98057 425/203-4637 Office 425/203-4624 Fax marci.hollingsworth@faa.gov	Contracting Contact Administrative Manager Cheryl Molis U.S. Forest Service, Fire Operations, FAM 3833 S. Development Avenue Boise ID 83705-5354 208/387-5680 – Office 208/387-5398 – Fax cmolis@fs.fed.us
	Contracting Contact Contracting Officer Byron J. (BJ) Greene, Jr. Bureau of Indian Affairs Division of Acquisitions Reston VA 20191 703/390-6491-Office 703/390-6582-Fax byron.greene@bia.gov
	Contracting Contact Contracting Specialist Mary Ray National Park Service 7333 W. Jefferson Ave., Ste 130 Lakewood CO 80235 303/987-6719-Office 303/969-2402-Fax mary_ray@nps.gov

	Contracting Contact Contracting Officer Nedra Stallone U.S. Fish and Wildlife, Div. of Contracts 4401 N. Fairfax Drive Arlington VA 22203 703/358-2221-Office nedra_stallone@fws.gov

CHAPTER XI. REMOTELY OPERATED AIRCRAFT (ROA'S) or UNMANNED AERIAL VEHICLES (UAV'S)

REMOTELY OPERATED AIRCRAFT (ROA'S)
OR
UNMANNED AERIAL VEHICLES (UAV'S)

The FAA has officially changed the designation of UAV's to **Remotely Operated Aircraft (ROA).** ROA's have several functions in Civilian Airspace throughout the Nation, some of the functions are: law enforcement, homeland security, fire fighting, weather prediction, and tracking missions. Commercial companies are exploring a wide variety of applications that were unimagined just a decade ago.

All ROA's in civilian airspace are required to have a Certificate of Authorization (COA) issued by the FAA. The COA requires the operator to detail how they will de-conflict with civil aircraft.
The primary methods of de-confliction are:

1. Altitude Separation
2. Notice via TFR
3. Chase Aircraft
4. Ground Control with on board forward cameras
5. Automated TCAS
6. Or other

ROA's in Minnesota
The primary ROA operating in the state originates in Grand Forks, ND from the Air Force Base and is operated by the US Customs and Border Protection Agencies. The function of this ROA is to patrol the U.S. border with Canada. The **operating altitude** for this aircraft is between **19,000** and **28,000 feet**. The operational effectiveness of this ROA is lost below 19,000 feet. So the only time that the ROA would be in our common altitude operating areas is upon takeoff and landing.

On occasion Camp Ripley (restricted airspace) near Little Falls, MN hosts companies such as Lockheed to train their ROA pilots. This is the only other known operating location at this time. While training, the ROA's stay within the restricted airspace of the Camp.

Contact Information: 701-747-8116 (primary number to use)

Christopher T. Bacon
(701)330-9027 cell
(701)747-8114 office
Christopher.t.bacon@cbp.dhs.gov
Border Patrol Director

Joe Pavero
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APPENDIX A: DEFINITIONS/ACRONYMS

Definitions	Acronyms
Temporary Flight Restrictions	TFR
Special Use Areas	SUA
Military Training Routes	MTR
Federal Aviation Administration	FAA
Flight Standard District Office	FSDO
Air Route Traffic Control Center	ARTCC
Prohibited Areas	PA
Military Operations Areas	MOA
Restricted Areas	RA
Alert Areas	AA
Warming Areas	WA
Controlled Firing Areas	CFA
Flight Traffic Areas	FTA
Incident Command System	ICS
Pilot in Command	PIC
Notice to Airmen	NOTAM
Air Tactical Group Supervisor	ATGS
Estimated Time of Arrival	ETA
National Interagency Coordination Center	NICC
Eastern Area Coordination Center	EACC
Geographical Area Coordination Center	GACC
Minnesota Interagency Fire Center	MIFC
Superior National Forest	SUF
Chippewa National Forest	CPF
Department of Natural Resources	DNR
Bureau of Indian Affairs	BIA
United States Fish & Wildlife	USFW
Civil Air Patrol	CAP
Emergency Medical Services	EMS
Bureau of Land Management	BLM
United States Forest Service	USFS
Air Operations Branch Director	AOBD
Mean Sea Level	MSL
Above Ground Level	AGL

APPENDIX B: INTRUSION SAFECOMS

SAFECOM

AVIATION SAFETY COMMUNIQUE

Reported By (Optional)

Name Dan Hertle **Phone** 218-246-8343
Organization **DNR Forestry** **Date** 04-29-03

EVENT

Date 04 (Mo) 27 (Day) 2003 (Year) **Local Time** 1700 (24 Hour Clock) **Injuries?** Y **N** **Damage** Y **N**
Location Snowshoe Lake Fire, Sec. 20 T58N R25W (Airport, City, Lat.../Long, or Fire Name) **State** MN

MISSION

Type Fire Detection (Pax, Cargo, Recon, Sling, Long line, Rappel, etc.) **Procurement** Contract (Contract, CWN, Rental, Fleet, Cooperator, etc.)
Number of Persons On board 2 (Circle) **Special Use?** Y **N** (Circle) **Hazardous Materials Onboard?** Y **N**
Departure Point GPZ **Destination** Deer River Detection Route

AIRCRAFT

N # N6418D **Manufacturer** Cessna **Model** 172
Owner/Operator Airways Aviation **Pilot**

NARRATIVE: **Please provide a brief explanation of the event.**

Alpha-22 reported a smoke within the Federal Protection Area. Grand Rapids Dispatch notified Chippewa Dispatch of the fire. Chippewa Dispatch requested Alpha-22 to stay over the fire until Engine 631 arrived. While scanning the Chippewa frequency, Alpha-22 realized that Fire Bird had also been dispatched to the fire. Alpha-22 contacted Fire Bird to let them know their position and altitude. Shortly there after Fire Bird was turned around and North Patrol was sent to the fire. Again Alpha-22 made contact with the incoming aircraft and notified them of their position and altitude. Because of the presence of North Patrol, Alpha-22 returned to its detection route without being released from the fire.

The directing of two additional aircraft into the same airspace was done without notifying the reporting aircraft. All three aircraft were operating at the same altitude at the same time. Although neither aircraft got closer than six to ten miles, an incident could have occurred if the observer hadn't been alert.

The observer is also a commercial pilot and is very experienced at doing detection. A less experienced observer may not of Recognized the situation that was developing.

To minimize aerial detection confliction, dispatchers need to keep the aircraft over their incident informed of other responding aircraft.

CHIEF PILOT NOTES:

Chippewa Dispatch was trying to contact Alpha 22 and the Blackduck/Effie detection planes on the Chippewa frequency. I feel because the handheld radios in the airplanes are in the scan mode, all of the Chippewa dispatch transitions were not heard by the detection planes.

Experienced pilots and observers along with a scannable, multi-channel radio were able to receive and transmit information faster than the Chippewa dispatch.

Scannable radios are good – but some vital information can be missed.

SAFETY ADVISOR NOTES:

Scanning needs to be held to a minimum.

This form is used to report any condition, observance, act, maintenance problem, or circumstance which has potential to cause an aviation-related mishap.

SAFECOM

AVIATION SAFETY COMMUNIQUE

Reported By (Optional)

Name Terry Novak **Phone** 218-732-3309
Organization DNR Forestry **Date** 4/28/03

EVENT

Date 04 (Mo) 27 (Day) 03 (Year) **Local Time** 1545 (24 Hour Clock) **Injuries?** Y **N** (Circle) **Damage** Y **N**
Location Red Lake Fire 540 (Airport, City, Lat.../Long, or Fire Name) **State** MN

MISSION

Type Retardant Dropping (Pax, Cargo, Recon, Sling, Long line, Rappel, etc.) **Procurement** Contract - BIA (Contract, CWN, Rental, Fleet, Cooperator, etc.)
Number of Persons On board 1 **Special Use?** **Y** N (Circle) **Hazardous Materials Onboard?** Y **N** (Circle)
Departure Point Bemidji Airport **Destination** Fire 540

AIRCRAFT

N # T-444 **Manufacturer** Snow **Model** AT-802
Owner/Operator Queen Bee **Pilot** Larson

NARRATIVE: **Please provide a brief explanation of the event.**

Tanker 444 was returning to the fire with a load of retardant. Before he was on scene, T-263 (a CL-215) started dropping water on the fire. T-444 reported in 10 miles out and was told to over fly the fire at 2,500' MSL (approx. 1300' AGL). Air attack was at 3,000' – T-263 low level.

T-444 over flew the fire but dropped down to T-263's altitude without notifying anyone. As T-263 was on final, T-444 flew parallel to and passed T-263 at the same altitude. T-263 told him to pull up and there was no reply. T-263 dropped his load and announced he was breaking right. He asked for better altitude management.

In debriefing, T-444's pilot stated that he had T-263 in sight and was no factor. Myself and T-263's pilots were quite concerned as we didn't know T-444's intentions.

This form is used to report any condition, observance, act, maintenance problem, or circumstance which has potential to cause an aviation-related mishap.

SAFECOM

AVIATION SAFETY COMMUNIQUE

Reported By (Optional)

Name Terry Novak **Phone** 218-828-2575
Organization MN DNR **Date** 4/10/03

EVENT

Date 4/10/03 (Mo Day Year) **Local Time** 1505 (24 Hour Clock) **Injuries?** ___Y _X_ N **Damage** __Y _X_ N
Location 5 Miles NE. of the Brainerd Airport (Airport, City, Lat.../Long, or Fire Name) **State** MN

MISSION

Type Retardant Dropping (Pax, Cargo, Recon, Sling, Long line, Rappel, etc.) **Procurement** CWN (Contract, CWN, Rental, Fleet, Cooperator, etc.)
Number of Persons On board 2 **Special Use?** __Y _ X _ N **Hazardous Materials Onboard?** __ Y _X_ N
Departure Point Brainerd Air Tanker Base **Destination** Wildfire 5 miles NE. of base

AIRCRAFT

N # 26AU **Manufacturer** Lockheed **Model** P3A
Owner/Operator Aero Union Corporation **Pilot** Hock / Lesley

NARRATIVE: **Please provide a brief explanation of the event.**

As T-26 was dropping the last ½ of its load another aircraft flew over the fire . It was parallel to and slightly in front of T-26. Separation was approximately 200 yards horizontal and was **LOWER** than T-26. It did not activate T-26's TCAS nor respond to calls on Unicom. Type of aircraft is unknown – white, small low wing airplane. Tanker 26 never saw the plane.

Safety Advisor Notes: Excellent reminder to be "HEAD'S UP" for other aircraft. A news release will be sent out by MIFC reminding pilots to avoid fires and be alert for firefighting aircraft.

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SAFECOM

AVIATION SAFETY COMMUNIQUE

Reported By (Optional)

Name Jon Coil **Phone** 218-647-8268

Organization MN-DNR **Date** 4/27/04

EVENT

Date 4 (Mo) 27 (Day) 2004 (Year) **Local Time** 1405 (24 Hour Clock) **Injuries?** Y **N** (Circle) **Damage** Y **N** (Circle)

Location Blackduck Detection Route (Airport, City, Lat.../Long, or Fire Name) **State** MN

MISSION

Type Detection (Pax, Cargo, Recon, Sling, Long line, Rappel, etc.) **Procurement** Contract (Contract, CWN, Rental, Fleet, Cooperator, etc.)

Number of Persons On board 2 **Special Use?** Y **N** (Circle) **Hazardous Materials Onboard?** Y **N** (Circle)

Departure Point Big Fork **Destination** Detection Route

AIRCRAFT

N # N739 XK **Manufacturer** Cessna **Model** 172

Owner/Operator Airway Aviation **Pilot** Roland Heaton

NARRATIVE: **Please provide a brief explanation of the event.**

On routine detection flight for the Blackduck Area between checkpoints 1 and 2, we looked at a previous day fire in Sec 30-151-32. We were continuing to checkpoint 2 and were just off the SE corner of Lower Red Lake when pilot Heaton noticed a plane in front of us. The plane passed directly over us about 200 feet above us. Pilot Heaton recognized the tail # as 7NR and called 7NR on 122.925. Pilot Ettl answered and said he was on the SE corner of Lower Red Lake but hadn't seen us.

Safety Advisor Note:

Near Mid Air Collisions (NMAC's) are extremely serious situations which need to be reported. NMAC's generally include the element of surprise. Methods to avoid Mid Air collisions include:

1) Vertical separation – MIFC Logistical support flight are generally flown at 3,000 feet MSL, due to most detection routes being flown at 2500 MSL or less.
2) Horizontal separation – knowing the general Area's or routes flown by other aircraft and staying clear of smoke and other activity that have other aircraft assigned.
3) Communications on Area and common VHF – AM radio frequencies to determine other aircraft locations.
4) Practicing good cockpit resource management, staying alert, keeping your eyes outside the cockpit, and adhering to see and avoid techniques.

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SAFECOM

AVIATION SAFETY COMMUNIQUE

Reported By (Optional)

Name Steve Newbloom **Phone** 218-879-0823

Organization DNR Forestry **Date** 05/06/2004

EVENT

Date 05 06 2004 **Local Time** 1535 **Injuries?** N **Damage** N
(Mo Day Year; 24 Hour Clock)

Location 46 33.133 92 53.414 **State** MN
(Airport, City, Lat.../Long, or Fire Name)

MISSION

Type Detection **Procurement** Contract
(Pax, Cargo, Recon, Sling, Long line, Rappel, etc.; Contract, CWN, Rental, Fleet, Cooperator, etc.)

Number of Persons On board 2 **Special Use?** N **Hazardous Materials Onboard?** N

Departure Point TWN **Destination** TWN

AIRCRAFT

N # 9011T Manufacturer Cessna **Model** 182

Owner/Operator Anderson Aero **Pilot** Mark Lande

NARRATIVE: **Please provide a brief explanation of the event.**

An incident occurred in the Cloquet detection area. Our detection plane spotted a smoke in the Sandstone area. The detection observer radioed that they would check it out. The dispatcher informed St. Louis 1 to "Standby" while a call was made to the Sandstone dispatch.

Upon calling Sandstone, Cloquet dispatch was informed that they had their detection plane heading towards the reported smoke. Cloquet dispatch called St. Louis 1 to inform them that they could resume their route. Detection then informed dispatch that they were over the fire.

Cloquet dispatch immediately informed St. Louis to go back to the Cloquet area and resume their route. Dispatch and the observer discussed the incident. The observer was reminded of the protocol used for flying into another Area's air space.

FORESTRY CHIEF PILOT'S NOTES:

We have procedures for crossing area boundaries; they are reviewed at Fire Team Leader meetings, Dispatcher Meetings and at pre-season detection start up meetings. The observer is the person in charge of the flight. The pilot takes direction from the observer. The person managing the individual detection contract should review the procedures for crossing Area boundaries with their observers and pilots. Make people accountable for their actions. This is not the only Area having this problem.

SAFETY ADVISOR'S NOTES:

We have established good procedures to help avoid mid air collision or near mid air collisions in these types of situations. Now we need to identify why we continue to have these types of incidents despite our procedures: Supervision failure? Training failure? Communication failure? Inadequate briefings? Other?

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SAFECOM

AVIATION SAFETY COMMUNIQUE

Reported By (Optional)

Name Jody Leidholm **Phone** 218-278-6651
Organization **DNR Forestry - ATGS** **Date** 10-26-00

EVENT

Date 10 (Mo) 19 (Day) 00 (Year) **Local Time** 1530 (24 Hour Clock) **Injuries?** Y **N** (Circle) **Damage** Y **N** (Circle)
Location **Carlos Avery Fire** **State** MN
Airport, City, Lat.../Long, or Fire Name

MISSION

Type Media Helicopters -Bell 206 **Procurement** N/A - Media / TV
Pax, Cargo, Recon, Sling, Long line, Rappel, etc. Contract, CWN, Rental, Fleet, Cooperator, etc.

Number of Persons On board ____ (Circle) **Special Use?** Y N (Circle) **Hazardous Materials Onboard?** Y **N**
Departure Point Mpls / St. Paul **Destination** Carlos Edge Fire

AIRCRAFT

N # 111AR **Manufacturer** Bell (Blue - w/Red ■9" **Model** 206?
Owner/Operator KMSP Channel 9 **Pilot**

NARRATIVE: **Please provide a brief explanation of the event.**

While working 2 Type III helicopters, 1 SEAT, and 1 CL 215 Air Tanker on initial attack, I sighted a Blue Helicopter that appeared to be a Jet Ranger flying at or below the same altitude as the Air Attack Platform - 2500 MSL. It had a large number ■9" painted on the side that looked exactly like the KMSP Channel 9 logo form Mpls/St. Paul. I tried to contact him on 122.92 as well as various UNICOM Frequencies. Since I was busy watching him and the other aircraft, which I had notified of the traffic, I asked my pilot, Jack Huhta to see if he could get the helicopter up on frequency. He contacted MSP approach and found out that the (ch9) was up on approach freq. So approach contacted the Ch. 9 Media ship and instructed him to contact us on 122.925. He contacted us and we talked. Channel 9 media ship was nearly done filming by this time but we gave him an altitude clear of other traffic for his time remaining. He then contacted us for departure and we cleared him southbound at days end, I informed dispatch of this situation and was assured follow-up phone calls would be made to avoid further situations like this.

This form is used to report any condition, observance, act, maintenance problem, or circumstance which has potential to cause an aviation-related mishap.

SAFECOM

AVIATION SAFETY COMMUNIQUE

Reported By (Optional)

Name Jody Leidholm **Phone** 218-278-6651
Organization **ATGS - DNR Forestry** **Date** 10-26-00

EVENT

Date 10 (Mo) 19 (Day) 00 (Year) **Local Time** N1630 (24 Hour Clock) **Injuries?** Y **N** (Circle) **Damage** Y **N** (Circle)
Location **Carlos Edge Fire near Coon Lake** **State** MN
Airport, City, Lat.../Long, or Fire Name

MISSION

Type Fire Suppression - Buckets **Procurement** Cooperator
Pax, Cargo, Recon, Sling, Long line, Rappel, etc. Contract, CWN, Rental, Fleet, Cooperator, etc.

Number of Persons On board 1 **Special Use?** Y N (Circle) **Hazardous Materials Onboard?** Y **N** (Circle)
Departure Point St. Paul - Holman Field **Destination** Carlos Edge Fire

AIRCRAFT

N # Guard 437 & 720 **Manufacturer** Bell **Model** UH - 1
Owner/Operator Minnesota National Guard **Pilot**

NARRATIVE: **Please provide a brief explanation of the event.**

Air Attack 2 was dispatched to Carlos Avery at 1415 form Brainerd with T-266 for Initial Attack on what would later become the Carlos Edge Fire. T-459 (SEAT) was dropping retardant on the right flank and helicopters 85BH and 1AF were starting bucket work on the left flank. I assigned T-266 to the left shoulder and head of the fire and he was scooping out of Coon Lake about 2 miles west of the fire. This was the strategy for about 2 hours until the fire escaped around Little Coon Lake. We then concentrated on the left flank trying to steer the fire more easterly away from a number of homes to the north.

At about 1630, pilot of 1AF sighted a green Huey northbound and just west of the fire. I notified the other A/C (T-459 was not on the scene) and they all had a visual on the Huey. I had T-266 hold to the west temporarily until the Huey was clear as we had no radio contact with him. He passed directly between the lake and the fire.

Several attempts were made to contact the Huey on 122.925 as well as various unicom freq. With no reply so we followed him northbound thinking he was headed for Camp Ripley. He then turned 180 degrees and landed near some large buildings in what I think was the town of Linwood. I then contacted Mike Aultman (operations) who was near an officer of the National Guard who was able to contact the Huey and have him come up on 122.925. Operations then informed me to expect a total of 3 Hueys.

At this point, I was unaware that the Guard helicopters had been requested nor was I informed as to what their mission was, buckets, evac, medivac ? In the end, we ended up with 2 Hueys - 770 and 437. No one in the air to my knowledge saw or heard Guard 437 enter the airspace.

Before lifting with a bucket, Guard 770 contacted me on 122.925 for permission to take off and I put 770 and 437 to work on the slopover on the right side. Once they were up on 122.925 no other problems were encountered and the pilots were good to work with.

It is apparent to me that we need to improve our procedures for ordering, dispatching, and briefing of National Guard helicopters and pilots to wildfire or All Risk Incidents.

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SAFECOM

AVIATION SAFETY COMMUNIQUE

Reported By (Optional)

Name Mark A. Anderson **Phone** 320-532-3137
Organization DNR Forestry **Date** 4-02-00

EVENT

Date 4 (Mo) 02 (Day) 00 (Year) **Local Time** _____ (24 Hour Clock) **Injuries?** Y **N** (Circle) **Damage** Y **N** (Circle)
Location Wyanett Twnshp Camb Area Fire 16-36-25 **State**
Airport, City, Lat.../Long, or Fire Name

MISSION

Type Initial Attack - Isanti County **Procurement** Contract
Pax, Cargo, Recon, Sling, Long line, Rappel, etc. Contract, CWN, Rental, Fleet, Cooperator, etc.

Number of Persons On board _____ (Circle) **Special Use?** Y **N** (Circle) **Hazardous Materials Onboard?** Y **N**
Departure Point PNM / Princeton Airport **Destination** Fire IA / Camb Area 16-36-25

AIRCRAFT

N # 39102 **Manufacturer** Bell Helicopter **Model** BIII Jet Ranger

Owner/Operator Hillcrest Aircraft Co **Pilot** Michael Wilton

NARRATIVE: **Please provide a brief explanation of the event.**

SUBJECT: DETECTION AIRCRAFT:
At morning briefing between helitack and tanker personnel, the subject was brought up that detection plane For St. Cloud area was flying too low (500' agl and below. Hillcrest helicopter 102 had the detection plane in his air space when he was doing bucket work the previous week in Benton County. Air Attack (Terry Novak) said he'd check into it and St. Cloud dispatch was notified to inform detection to stay higher.

At 1:20 p.m. we were dispatched to a fire in Isanti County (16-36-25). Approximately . to 1 mile out we noted Charlie 1 directly on our heading in a right hand turn 1/4 to . mile out at our elevation 500' AGL Michael Wilton, 102's pilot asked me to have detection climb to a higher orbit. I relayed the message to detection. Detection did not acknowledge immediately. At this point, Cambridge dispatcher repeated my message and detection acknowledged and began climbing.

*At no point during this time were we in any immediate danger, but it should be noted that if the area was real smokey or if there were more aircraft in the vicinity, the outcome could be drastically different.

FWOS NOTE: Please remind detection pilots to maintain an altitude well above 500' above ground level and monitor VHF-AM 122.925.

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SAFECOM

AVIATION SAFETY COMMUNIQUE

Reported By (Optional)

Name Greg Johnson **Phone**
Organization DNR Forestry **Date** 4-9-00

EVENT

Date 4 (Mo) 09 (Day) 2000 (Year) **Local Time** 1500 (24 Hour Clock) **Injuries?** Y **N** (Circle) **Damage** Y **N** (Circle)
Location **Forest Lake** **Fire** #51 (Taconite) (Airport, City, Lat.../Long, or Fire Name) **State** MN

MISSION

Type Bucket Work (Pax, Cargo, Recon, Sling, Long line, Rappel, etc.) **Procurement** CWN (Contract, CWN, Rental, Fleet, Cooperator, etc.)
Number of Persons On board 4 during recon, 0 for bucket work **Special Use?** Y **N** (Circle) **Hazardous Materials Onboard?** Y **N** (Circle)
Departure Point Forest Lake Helibase **Destination** Ham Lake Fire

AIRCRAFT

N # 56P **Manufacturer** Bell **Model** 206BIII

Owner/Operator Ideal Helicopters **Pilot** Jeff McDermott

NARRATIVE: **Please provide a brief explanation of the event.**

While en route to a dispatched fire, we contacted the detection plane. We were in bound at 1500' for size-up and 360E when another helicopter (Dark R22) was encountered at same altitude. He broke off to his left and we continued on recon. When we set down to hook up bucket, he was still orbiting. We tried to make contact but were unable and not sure if detection plane had contact either. One other helicopter also made one loop around fire and left - also no contact. Finished fire and returned to Forest Lake helibase. We have people working on finding where these helicopters are coming from.

HOS NOTE: Thanks Greg for a good SAFECOM. This is one example of the activity in Metro Region. I have received several similar reports. In order to improve the situation, we are:
1.) Meeting with Robinson 22 flight instructors at Crystal Airport.
2.) Doing our annual airport mailing with our message to stay away from fire.
3.) Putting out a news release on giving firefighting pilots their space.
4). Putting out a news release on TFR•s.
5.) Asking all aviation folks to look up, look around and look out.
*Do good briefings * Be an active ■part• of the flight crew.

Thank you for your efforts. Sheldon Mack

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SAFECOM

AVIATION SAFETY COMMUNIQUE

Reported By (Optional)

Name Mike Eilers **Phone**

Organization DNR Forestry **Date** 4-26-00

EVENT

Date 4 (Mo) 25 (Day) 00 (Year) **Local Time** 1505 (24 Hour Clock) **Injuries?** Y **N** (Circle) **Damage** Y **N** (Circle)

Location Forest Lake Fire #66 (Airport, City, Lat.../Long, or Fire Name) **State** MN

MISSION

Type Bucket / I.A. (Pax, Cargo, Recon, Sling, Long line, Rappel, etc.) **Procurement** CWN (Contract, CWN, Rental, Fleet, Cooperator, etc.)

Number of Persons On board 0 **Special Use?** Y **N** (Circle) **Hazardous Materials Onboard?** Y **N** (Circle)

Departure Point Forest Lake Base **Destination** Holly Fire

AIRCRAFT

N # 2756P **Manufacturer** Bell **Model** 206 BIII

Owner/Operator Ideal Helicopters **Pilot** Jeff McDermott

NARRATIVE: **Please provide a brief explanation of the event.**

While working a fire for approximately 20 - 25 minutes, 56P pilot Jeff McDermott noticed a shadow of another aircraft directly overhead. Shortly after that, 56P was advised by I.C. Tom Lynch to be aware of a helicopter flying over the fire. Later questioning pilot and I.C. determined that 56P was at 100' agl with a bucket of water when the Robinson 22 helicopter overflew 56P at a agl of 300' - 400' and never returned. A tail # was observed by I.C. Lynch. This same helicopter has been seen repeatedly on other fires flying in unexpectedly/unannounced at an agl of less than 500' for a short overflight and then leaving again. Action will be taken to try to keep this helicopter/pilot from showing up unannounced and causing a possible aviation incident or accident.

This form is used to report any condition, observance, act, maintenance problem, or circumstance which has potential to cause an aviation-related mishap.

SAFECOM

AVIATION SAFETY COMMUNIQUE

Reported By (Optional)

Name Doug Lloyd **Phone** 218-327-4529
Organization DNR Forestry **Date** 5-04-00

EVENT

Date 5 04 00 (Mo Day Year) **Local Time** 1030 (24 Hour Clock) **Injuries?** Y **N** (Circle) **Damage** Y **N** (Circle)
Location Elbow Lake Fire 48E 0.85' 92E 33.617' (Airport, City, Lat.../Long, or Fire Name) **State** MN

MISSION

Type Buckets (Pax, Cargo, Recon, Sling, Long line, Rappel, etc.) **Procurement** Cloquet Contract (Contract, CWN, Rental, Fleet, Cooperator, etc.)
Number of Persons On board 1 **Special Use?** Y N (Circle) **Hazardous Materials Onboard?** Y **N** (Circle)
Departure Point Elbow Lake Helibase **Destination** Elbow Lake Fire

AIRCRAFT

N # 589 **Manufacturer** Bell **Model** 206 BIII
Owner/Operator Cascade Helicopter **Pilot** Bill Lovitt

NARRATIVE: **Please provide a brief explanation of the event.**

Pilot Lovitt reported a helicopter that flew through our airspace over the Elbow Lake Fire. A TFR was in place at the time. Helibase tried to contact unidentified helicopter on our Victor AM freq with no response. Ship flew through fire area and then departed. Was not a threat to our operations. Lovitt thought a camera was on board. Possibly a media ship.

HOS Note: Thanks Doug. Good Safecom. The attached safety alert was posted on our web site and sent to the media. The 122.925 Victor is our normal I.A. frequency. Incident AM frequencies can change. We will continue to work hard at minimizing unannounced aircraft on fires. Good example that TFR's are not a fix-all. Keep alert and fly safe!

Sheldon

May 5, 2000 Safety Alert:

We received notification that what was assumed to be a media helicopter was flying over the Elbow Lake Fire on May 4. They did not respond to contact from the aircraft working on the fire. A temporary flight restriction was in place.

PLEASE REMIND YOUR PILOTS FOR THE SAFETY OF EVERYONE INVOLVED, IT IS OF UTMOST IMPORTANCE WE COMMUNICATE ON VICTOR 122.925. THERE WERE 10 AIRCRAFT WORKING ON THE FIRE. WE WILL MAKE EVERY EFFORT TO ACCOMODATE YOU, BUT WE MUST MAINTAIN A SAFE OPERATION.

Thank you for your cooperation!
MN Interagency Fire Center

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SAFECOM

AVIATION SAFETY COMMUNIQUE

Reported By (Optional)

Name_____ **Phone**
Organization _____ **Date**

EVENT

Date 10 (Mo) 21 (Day) 00 (Year) **Local Time** 1530 (24 Hour Clock) **Injuries?** Y **N** (Circle) **Damage** Y **N** (Circle)
Location **Carlos Avery Fire** **State** MN
Airport, City, Lat.../Long, or Fire Name

MISSION

Type Air Attack **Procurement** CWN
Pax, Cargo, Recon, Sling, Long line, Rappel, etc. Contract, CWN, Rental, Fleet, Cooperator, etc.

Number of Persons On board 2 **Special Use?** **Y** N (Circle) **Hazardous Materials Onboard?** Y **N** (Circle)
Departure Point ANE **Destination**

AIRCRAFT

N # 111AR **Manufacturer** Beechcraft **Model** 65
Owner/Operator Bemidji Aviation **Pilot** Breuer

NARRATIVE: **Please provide a brief explanation of the event.**

While flying air attack over the Carlos Avery Fire on Sunday, October 22, our TFR airspace was violated by intruders on numerous occasions, most of the violations occurred from 1400 local time to the time we left (because we felt safety was compromised) about 1535.

Listed below is the approximate chronological order of events:

1400 - 1420 Several intruders a fair distance away from us
1424 - 1450 White float plane enters airspace and flies all over in the airspace, we follow him to landing on lake, called in ground personnel to talk to him
1450 - 1515 One or two more intruders a fair distance away
1518 Yellow Piper Cub enters airspace south to north 1,800' msl, tail #NC21478
1530 White Cessna 172 or 182 flies right over the top of us 200' - 300' higher than us (at this time we decided to cease air operations)

We feel it would keep TFR airspace violations down if the TFR was better disseminated, possible actions follow:

1) Fax TFR to all airports within 100 NM with instructions to post
2) Involve news media in TFR dissemination

FWOS notes: Good call shutting down operations! This is another reminder that a TFR does not ensure clear airspace. **SEE AND AVOID!!** Follow up is underway with the F.A.A.

This form is used to report any condition, observance, act, maintenance problem, or circumstance which has potential to cause an aviation-related mishap.

SAFECOM

AVIATION SAFETY COMMUNIQUE

Reported By (Optional)

Name Ron Goetzinger **Phone** 218-485-5400
Organization **DNR Forestry** **Date** 4/30/01

EVENT

Date 4 28 01 **Local Time** _____ **Injuries?** Y **N** **Damage** Y **N**
Mo Day Year 24 Hour Clock Circle Circle
Location **Moose Lake Area - Sawmill Fire** **State** MN
Airport, City, Lat.../Long, or Fire Name

MISSION

Type Tactical Suppression **Procurement**
Pax, Cargo, Recon, Sling, Long line, Rappel, etc. Contract, CWN, Rental, Fleet, Cooperator, etc.

Number of Persons On board _____ **Special Use?** Y N **Hazardous Materials Onboard?** Y N
Circle Circle
Departure Point Anoka County Airport **Destination** Willow River, MN

AIRCRAFT

N # _____ **Manufacturer** _____ **Model**

Owner/Operator _____ **Pilot**

NARRATIVE: **Please provide a brief explanation of the event.**

Air Attack 4 and T-266 were dispatched from Anoka County Airport to a fire near Cass Lake, MN. They were diverted to the Sawmill Fire near Willow River in the Moose Lake Area. On approach to the fire, Air Attack 4 contacted the fire personnel for information about the fire and other aircraft. Frequency 122.925 was established as the air-to-air frequency. The detection plane, Moose 1, was told to go up to 3,000 feet so the tanker and helicopter operations could be conducted safely with vertical separation below 2,500 feet. There was some difficulty maintaining air to ground communications so the air-to-air communications were being handled by the air attack pilot. The detection plane continued its route after a short time. At some point, air attack had some communication interference from other incidents using 122.925 also. Air Attack 4 decided to change from 122.925 to 123.025 from the yellow-green plan. All incident aircraft confirmed the change. The detection plane, while on his route, was unaware of the frequency change. As the detection plane approached the incident air space again, he was unable to contact air attack on 122.925. What is the corrective action needed for this circumstance?

Air Attack should notify the local Area Dispatcher of the frequency change so that the detection plane can be notified prior to completing a route and re-approaching incident airspace.

c:\safecoms\sawmillfire.wpd

This form is used to report any condition, observance, act, maintenance problem, or circumstance which has potential to cause an aviation-related mishap.

SAFECOM

AVIATION SAFETY COMMUNIQUE

Reported By (Optional)

Name Larry Zajanc **Phone** 208-523-1412
Organization USFS **Date** 10-20-00

EVENT

Date 10 (Mo) 20 (Day) 00 (Year) **Local Time** 0830 (24 Hour Clock) **Injuries?** Y **N** (Circle) **Damage** Y **N** (Circle)
Location Carlos Avery Fire (Airport, City, Lat.../Long, or Fire Name) **State** MN

MISSION

Type Air Attack (Pax, Cargo, Recon, Sling, Long line, Rappel, etc.) **Procurement** Fleet (Contract, CWN, Rental, Fleet, Cooperator, etc.)

Number of Persons On board 2 **Special Use?** **Y** N (Circle) **Hazardous Materials Onboard?** Y **N** (Circle)
Departure Point Princeton **Destination** Carlos Avery Fire

AIRCRAFT

N # 37250 **Manufacturer** Cessna **Model** 310
Owner/Operator Division of Enforcement **Pilot** Jack Huhtaa

NARRATIVE: **Please provide a brief explanation of the event.**

On Friday, October 21, 00, while flying air attack over the Carlos Avery Fire, numerous aircraft had intruded into restricted airspace.

A 180, 182, 206 (Amphib Floats) and a Citabria were observed within the TFR.

The 206 (Amphib) had passed within 500' of our flight path. Attempts to contact the intruding aircraft were unsuccessful.

I contacted air support and informed him of the situation.

Upon landing at Anoka County, the tower was notified and reminded of the TFR, for announcement to departing aircraft.

FWOS notes: Another reminder that a TFR does not ensure clear airspace. **SEE AND AVOID1**

This form is used to report any condition, observance, act, maintenance problem, or circumstance which has potential to cause an aviation-related mishap.

APPENDIX C: INFORMATION & EDUCATION

NEW – TO BE DISTRIBUTED TODAY – 10-26-00

GENERAL AVIATION PILOTS HINDER FIRE SUPPRESSION EFFORTS AND ARE ASKED TO STAY 5 MILES AWAY AND 5,000' ABOVE FIRES

Forest Lake, MN: Aerial firefighters were forced to curtail their suppression efforts on 10-21-00, due to repeated invasions of the airspace immediately around the Carlos Edge Fire. The airspace within a 15-mile perimeter of the center point of the fire has been legally restricted. This Temporary Flight Restriction (TFR) is granted in accordance with FAR 91.137 of the FAA's rules. This restriction also allows law enforcement aircraft, and media aircraft if they operate at an altitude above suppression aircraft efforts. Other aircraft need clearance from the controlling office.

Violation of the Temporary Flight Restriction is being turned over to the Federal Aviation Administration for investigation and enforcement. Pilots found violating the Temporary Flight Restrictions may be subject to pilot certificate suspension or revocation and/or fines.

Additional Information:

A TFR is commonly placed on all large wild land fires to create a safer environment for firefighting aviators. Typically, hundreds of similar restrictions are in effect throughout the United States during fire season. Helicopters, air tankers and light fixed wing aircraft are used to aid in controlling wild land fires. This choreographed attack demands that pilots be in communication with each other.

A coordinated effort can be challenging, even if the flights are taking place in perfect conditions. Wild land aviators must perform their task in less than ideal conditions. Congested airspace, smoke from the fire, strong winds, power lines, radio towers and the concentration needed to fly low level and hit their target are all part of the aerial firefighter's environment. Combine these conditions with general aviators flying to "check out the fire" and the results could easily be disastrous.

On large fires, there is normally an airborne air traffic coordinator who works for the responsible agency suppressing the wildfire. This person is known as the Air Tactical Group Supervisor, or Air Attack. It is the Air Attack's job to coordinate aerial and ground forces on the fire. If airspace safety is compromised by transient aircraft, the Air Attack may decide to suspend aerial firefighting efforts until the airspace is clear.

This is what happed on 10-21-00 on the Carlos Edge Fire. It also happened a few years ago during the flood on the Red River when the downtown area of Grand Forks, North Dakota was on fire. In both cases, air tanker mission has to be canceled. When this happens, the results can greatly affect firefighting safety in the air and the ground. A delayed response allows the fire to spread, consuming more acreage, forests, and homes.

FLY CLEAR
of WILDFIRES and SMOKE
for your safety and the safety of the aerial firefighters

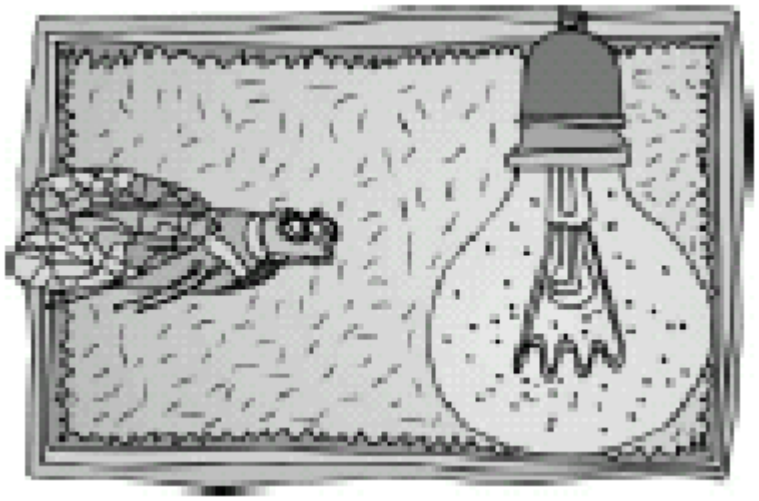
- Do not approach to investigate.
- Do not risk a violation.
- Report suspicious smoke to nearest flight service station.
- Airspace surrounding a wildfire may be restricted. (FAR 91.137)
- Restrictions vary with the size of the incident.
- Even a single smoke could have aerial firefighters already on site.

Your local Division of Forestry

Field Unit _____

Phone No. _____

For additional information visit www.fl-dof.com
Florida Department of Agriculture and Consumer Services
BOB CRAWFORD, Commissioner



Don’t be like a moth to a flame!
AVOID AIRSPACE CONFLICTS

Check NOTAMS for temporary flight restrictions

General aviation pilots are asked to stay 5 miles away From and 5,000 feet above all fires!

Even if no fire fighting aircraft are visible, general aviators Should assume they are in the airspace around a fire.

General aviators are asked to avoid the immediate airspace around ALL fires. This will allow a safer environment for all emergency response aircraft.

Wild land fire aviators must perform their tasks in less than ideal conditions. Congested airspace, smoke, strong winds, power lines, radio towers, and the concentration needed to fly at low levels and hit their targets, are all part of the aerial firefighter’s environment. Combine these conditions with general aviators flying to “check out the fire” and the results could easily be disastrous.

Aviation Safety Offices

DNR FIREFIGHTERS ASK PILOTS FOR THEIR HELP

Cooperation from all pilots is being requested to ensure a safe environment for aerial firefighting aircraft and crews.

In Minnesota during periods when weather and fuel conditions cause our forests and wetlands to be in the moderate to high fire danger range, the DNR uses helicopters and airplanes as part of their firefighting arsenal. During these periods, 40 - 50 aircraft may be working or on stand-by every day for aerial delivery of water, retardant, firefighters, cargo and for fire detection.

Aircraft and crews are strategically located around the State to quickly respond to wildfires. One or more aircraft may be dispatched to any fire in the State within minutes after it starts, depending on what is burning and the values that are threatened by the fire.

According to Bill Schuster of the Minnesota Interagency Fire Center in Grand Rapids, sometimes conflicts arise between private aircraft and firefighting aircraft when they find themselves in the same airspace. Bill is a Helicopter Operations Coordinator for the DNR and has been involved with aerial firefighting since 1982. He says that some private pilots seem to be naturally attracted to smoke and will change their course or even take a quick flight just to see what's burning. He and his colleagues have seen this type of behavior occur all over the nation which sometimes causes air operations to be suspended until the airspace can be cleared.

Given the extensive use of aerial firefighting resources, We need to change the culture of pilots. Our goal is to obtain an area free of non-emergency aircraft within a 5 mile radius below 5,000' MSL from all fires. In Minnesota, the average elevation above Mean Sea Level (MSL) is 1500' and the DNRs request will give the firefighters 3,500' to work in and provide separation between their airplanes and helicopters.

Often, a large fire takes firefighters several days to control, similar to the Andover fire in 1999 and the Carlos Edge fire of this past October, or the fires that occurred this past summer in the Western United States. A Temporary Flight Restriction (TFR) is requested by the firefighting agency and is placed over the area by the FAA.

Any pilot of a non-emergency relief aircraft who flies into this restricted airspace without permission is subject to penalties that are assessed by the FAA. These penalties may include remedial training, Pilot Certificate suspension or revocation, and/or fines of up to $1,000 per occurrence. These TFRs seem to work on a large fire that burns for several days where the general public is aware of the situation and if pilots obtain a briefing before their flight to check current Notices to Airmen (NOTAMs).

Over 99% of the wildfires that occur in Minnesota are smaller, quick moving, wind driven type fires that do most of their damage within the first few hours after they start. With the ever increasing urban interface (areas where people are building in forests and near wetlands) Minnesota firefighters are forced to be more aggressive with their assault on wildfires. This aggressive assault includes the extensive use of aircraft.

On most of the fires in Minnesota, there simply is no time to request, place and notify pilots of a flight restriction. "Voluntary cooperation by all pilots in the State will be much more effective", says Schuster. "We are asking for the professional courtesy of all pilots to stay 5 miles and 5,000' MSL from fires so we can do our job safely, efficiently and effectively."

APPENDIX D: TFR ENFORCEMENT EXAMPLE

U.S. Forest Service
Bureau of Indian Affairs
National Park Service

MN Department of Natural Resources
U.S. Fish and Wildlife Service
MN Department of Public Safety
Emergency Management

"Minnesota's Emergency Response Agencies"

For Immediate Release
Contact: Fire Aviation Desk, (218) 327-4573 or Fire Information, (218) 327-4564

General Aviation Pilots Pose Threat to Firefighters, Public

Friday, October 27, 2000, Grand Rapids, Minn. – Minnesota Interagency Fire Center (MIFC) officials say they will pursue violations of temporary restrictions of flight space over wild land fires. Sheldon Mack, Helicopter Specialist at MIFC, said, "We are disturbed by the number of general aviation pilots that ignore temporary flight restrictions and want them to know they pose a threat to lives and property of citizens, as well as the firefighters." This type of restriction is regularly placed over wild land fires because air support is often critical to extinguishing the fire.

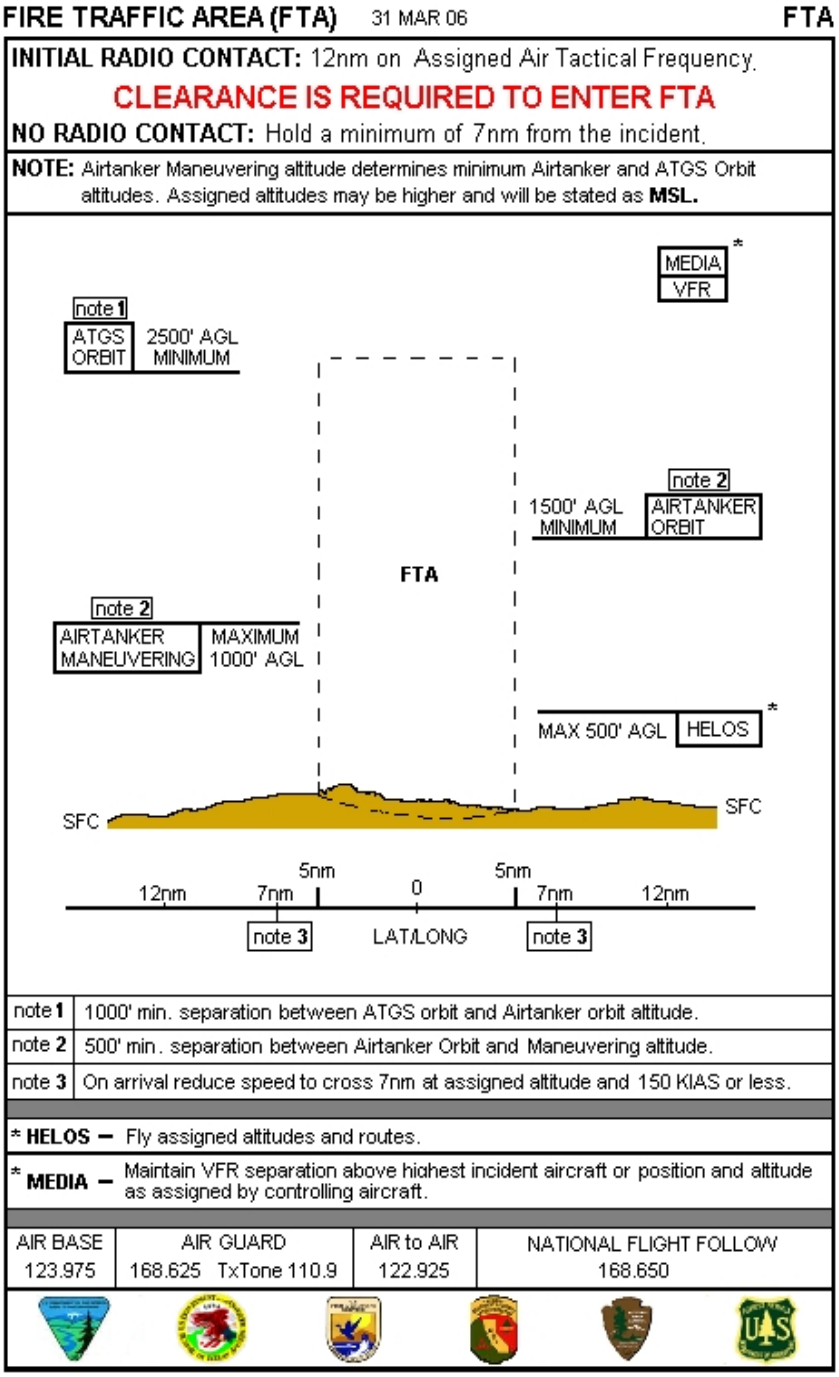
During a year when fire blazed across the state, temporary flight restrictions were set in place many times. A Temporary Flight Restriction (TFR) is granted in accordance with FAA regulations. The TFR allows for law enforcement and media aircraft if they operate at an altitude above suppression efforts. Other aircraft need clearance from the controlling office. Violation of the TFR is turned over to the FAA for investigation and enforcement. Pilots found in violation may be subject to pilot certification suspension or revocation, or fines.

MIFC officials offer this advice to general aviation pilots: Make yourself aware of any temporary flight restrictions in effect before departing. If you see smoke or hear of a fire, avoid it. Resist the urge to go "have a look". You will be endangering the lives of firefighters and the public.

Recently, air operations were suspended on an 8,500-acre fire near Wyoming, Minnesota that burned four homes and threatened hundreds more, forcing evacuation and road closures. This case has been turned over to the FAA. Numerous other instances have occurred in which aerial operations were almost curtailed due to close calls with sightseers making over flights of a fire.

Mack said, "Suppressing wild land fires is like any other emergency when the public is required to give ample space for emergency equipment. In the case of fires, aircraft are part of the suppression efforts, including EMS helicopters or law enforcement aircraft". Even during the best weather conditions, aerial firefighting operations can be complicated. The complexity is compounded because firefighters must hit targets while flying in congested airspace, often near power lines and radio towers with adverse weather and smoke conditions.

APPENDIX E: FIRE TRAFFIC AREA PROCEDURES



3 C'S
COMMUNICATIONS
CLEARANCE
COMPLY

DO NOT PENETRATE THE FTA IF YOU CANNOT COMPLY WITH A CLEARANCE

NOCOM
IF COMMUNICATIONS ARE NOT ESTABLISHED, HOLD AT THE 7NM RING UNTIL THEY ARE ESTABLISHED!!!

APPENDIX F: AIR TACTICAL GROUP SUPERVISORS (ATGS) – ROLES AND RESPONSIBILITIES

ATGS ROLES & RESPONSIBILITIES

The Air Tactical Group Supervisor works for the Incident Commander.
Air Tactical Group Supervisor (ATGS): An ATGS is an airborne air traffic controller.

Duties include:

- Provide airspace supervision, including holding patterns and altitudes
- Coordinate flights of all aircraft
- Develop, recommend and implement air-to-air communication plans
- Develop, recommend and implement air-to-ground communication plans
- Make tactical recommendations
- Triage structures
- Assign aircraft specific tasks
- Brief pilots on strategy and tactics
- Provide safe separation of all aircraft
- Assess situation, aircraft hazards and potential problems
- Establish flight patterns – approve any changes
- Clears ground resources
- Establish geographical operating separation
- Determine air safety requirements and procedures
- Takes appropriate action on aircraft incidents and accidents
- Determines and recommends aircraft needs over incidents
- Recommends temporary flight restrictions
- Coordinates with media, Enforcement and other agencies over the fire
- Enforces safety & operating procedures
- Determine aircraft capabilities and limitations
- Inform Incident Commander of overall incident conditions
- Requests subsequent drops
- Requests additional aircraft as necessary
- Return aircraft to base when not needed
- Brief ground resources on potential safety concerns and fire behavior
- Conduct daily de-briefings with all incident aircraft
- Recommend other resources needed (besides aircraft

Aerial supervision will be dispatched, when available, for initial attack and extended attack to enhance aviation efficiency and safety.

The ATGS also may advise, regarding:

1. Fire Behavior

2. Safety
    a. Spread relative to congested areas and fire resources
    b. Adverse fire behavior, which may endanger workers
    c. Location of escape routes and safety zones
    d. Safety of ground personnel and equipment
    e. Air operations safety

3. Fire Tactics and Use of Resources
    a. Direction and rate of spread
    b. Access
    c. Anchor points
    d. Water source
    e. Effectiveness of attack
    f. Location of spot fires

4. Number and type of aircraft needed

5. Appropriate use of all aviation resources

The ATGS role in coordinating ground and aviation resources is critical. An ATGS's primary responsibility is the coordination of aircraft operations operating on an incident.

ATGS's Initial Attack Responsibilities with no IC: The ATGS's role and responsibilities may vary somewhat between initial attack and project incidents. The presence of an IC on the initial attack incident, and the experience level of the Initial Attack IC will determine the ATGS role. The ATGS will have these responsibilities when making an initial attack with no IC.

1. Makes initial assessment of incident and/or fire behavior.

2. Recommends dispatch of specific resources based on access, tactical capability, known availability, response time, fire behavior and expected spread.

3. Gives periodic status reports to dispatch/unit.

4. Develops tactical plan and assigns arriving resources based on the strategy.

5. Until a qualified IC arrives on-scene, the responsible agency may temporarily rely on the ATGS for tactical assignments. Upon arrival of an IC, the ATGS will assume the "normal ATGS role".

6. Brief ground resources on potential safety concerns and fire behavior.

ATGS Roles in Multiple Fire Situations: Some fire management units activate the ATGS position when multiple fires start. The ATGS can provide the following services and intelligence information:

1. Provide fire detection and location. Accurate locations using “legal description”, latitude and longitude, VOR and radial.

2. Prioritize incidents based on:

    a. Threat to life and property, congested areas
    b. Land use management designation
    c. Fire behavior – current and expected
    d. Expected fire spread/size
    e. Environmental sensitivity
    f. Political considerations
    g. Potential resource loss

3. Assess access to the incident. Distance and time requirements.

4. Recommend the best resource(s) to commit to the incident, based on resource capability, mode of access, probably availability and response time.

5. Develop an initial attack strategy and tactical plan based on fire behavior elements and types/numbers of air and/or ground resources responding within specific time frames.

6. Direct fire resources as per strategy/tactical plan until a qualified IC arrives on-site.

7. Collect and report intelligence information for dispatch and the IC.

8. Re-assign resources to higher priorities if they develop.

ATGS and Ground Resources

Issues that need improvement:

***ATGS “In-the-Know”:** The ATGS works for the IC; however, IC’s Division Supervisors, Helicopter Managers or others should not re-position aircraft without coordinating thru the ATGS.

***ATGS Overload:** The ATGS workload is extensive. They will help in any way they can; however, the ATGS should not be relied upon to perform duties commonly assigned to ground personnel.

***Radio Discipline:** While most of us listen to 1 radio, the ATGS has to listen to two (2) or more. Please keep radio messages short, concise and to the point.

***Radio Frequency:** There are several options available to reduce or “breakdown” the radio traffic. Breakdown radio traffic when appropriate; i.e., area/tactical/divisions/air-to-ground, etc.