

## CHAPTER 50 AIRCRAFT

Aircraft may be used for a wide range of activities, including point to point transport of personnel, equipment, and supplies. Tactical use may include applications such as retardant delivery, helicopter logistical and tactical support, air tactical and lead plane operations, suppression or pre-suppression reconnaissance, and aerial ignition.

### **AIRCRAFT MOBILIZATION** Refer to NMG 50

Units requiring aviation services other than those assigned to them, through preapproved agreements, or within their dispatch boundaries, can order additional aircraft from adjacent units or through NWCC. At preparedness Levels 3-5, NWCC will coordinate aircraft assignment and utilization in the Northwest Area. The control of the aircraft assigned to a unit will remain with the local unit. In situations where the Northwest Area Multi-Agency (NWMAC) group has been activated, the NWMAC will coordinate with NWCC and local units on allocation and prioritization of aviation resources.

### **AIRCRAFT SOURCES**

Sources for aircraft include agency-owned aircraft, Exclusive-Use and Call-When Needed (CWN) or On-Call Light Fixed Wing Aircraft and Helicopters. These aircraft may be ordered through established dispatch channels. Forest Service CWN helicopter contractors are assigned to a Host Forest Unit for administrative purposes and processing of Flight Invoices. Refer to CWN listing website:

<http://www.fs.usda.gov/detail/r6/fire-aviation/>

All agencies may use OAS aircraft source list at website: <http://oas.doi.gov/> Rental aircraft are signed up by the Office of Aviation Services (OAS) under an Aircraft Rental Agreement (ARA). Cooperator and military may be utilized provided an agreement and approval are in place.

All aircraft and pilots must be approved and carded by either USDA Forest Service (USFS) or Office of Aviation Services (OAS). Passengers of rental or contract aircraft are personally responsible for checking the aircraft and pilot approval certificates. The Aircraft Approval Certificate must be in the aircraft and the pilot must carry a Pilot Approval Certificate. If either is missing or not current, do not use the aircraft.

### **FLIGHT MANAGEMENT PROCEDURES** Refer to NMG 50

All point-to-point flights will be documented on the Aircraft Flight Request/Schedule form (Form 9400-1a). The Sending Unit is responsible for completion of the form and relaying to receiving units either by fax or electronic mail.

Sterile Cockpit at/near airports, all aircraft with agency communication radios will monitor FAA VHF air traffic frequencies and agency guard frequency (for emergency only) within 5 miles of controlled or uncontrolled airport. A standard protocol for flight following communications related to the sterile cockpit environments is as follows:

Departing aircraft will contact flight follower prior to taxi. (This insures that flight follower is aware of pending aircraft movement, that radios work, and that the frequencies are correct.)

After taxi, takeoff and when more than 5 miles from airport, aircraft manager or pilot will advise flight follower of position and direction of travel.

Flight manager or pilot will advise flight follower of position and intent to land.

At completion of taxi and prior to shutdown, flight manager or pilot will advise follower that the flight is terminated.

On departure air tankers will stop communicating on agency frequencies after reporting "rolling". All other aircraft will stop operation on agency radios before entering the active runway, or before rolling or before lifting off (helicopters). Once the aircraft has flown 5 miles from the airport resume routine check-in and communication procedures on agency radios.

On arrival all aircraft will cease communicating on agency frequencies (except for emergencies) at a distance of five miles from the airport. The pilot will radio the dispatcher and advise they are either under FAA control or five miles from landing. After landing, and once clear of the active runway, communication with dispatch or the base may resume.

There may be occasions where a wildfire occurs within five miles of an airport making it impossible to maintain the sterile cockpit until departing. Under these circumstances, the departing aircraft shall maintain a sterile cockpit until departing the traffic pattern and reaching final altitude. At this time the aircraft may resume any "mission required" communications on agency frequencies. The pilot will continue to monitor FAA VHF air traffic frequency until engaged in the firefighting activity but should continue to monitor the FAA frequency.

Upon completion of the wildfire mission or after being released, the pilot shall immediately select and monitor the FAA frequency, if not already monitoring it, and maintain a sterile cockpit until aircraft has taxied to stop.

**In addition to responsibilities in NMG 50 the Sending Units are to:**

- Ensure that all personnel are properly briefed on flight following procedures
- Ensure all personnel are familiar with aviation safety requirements prior to being transported in fixed-wing or rotor-wing aircraft
- Order an aircraft from vendor that meets safety/performance requirements and cost effectiveness for transport of personnel/cargo. Ensure the pilots file an FAA flight plan (an FAA-IFR flight plan if practical).
- Flight following the aircraft to its final destination in communication with the pilot and/or flight manager. Advise the pilot of any exception to routine flight following procedures: i. e. alternate telephone numbers, etc.
- Obtain ATD (Actual Time of Departure) from initial departure airport, from pilot/vendor or flight manager.
- Communicate to NWCC through established dispatch channels all flight plans that cross dispatch zone boundaries.
- Notify receiving units and NWCC of any delays/advances of a flight plan exceeding 30 minutes.
- Initiate search procedures for overdue aircraft. Utilize agency aircraft Search/Rescue Guide as appropriate and notify NWCC of overdue aircraft.
- Advise Unit Aviation Manager when pilot/or flight manager do not comply with their responsibilities as outlined in the unit aviation plan.
- Initiate an aircraft SAFECOM report if appropriate.

**In addition to responsibilities in NMG 50, the Receiving Units are to:**

- Notify the sending unit of any aircraft that has not arrived within 30 minutes of ETA. If problems are encountered contacting the sending/originating unit, contact NWCC.
- Assist in the search for overdue aircraft. Advise NWCC of action taken.

**AUTOMATED FLIGHT FOLLOWING (AFF) PROCEDURES** Refer to NMG 50**AIRCRAFT ACCIDENT/INCIDENT REPORTING**

Personnel shall report immediately all aircraft accidents/ incident to appropriate agency/department officials. 1-800-4-MISHAP (1-800-464-7427) Safecomms are to be submitted through interagency webpage: <https://www.safecom.gov/>

To report directly to FAA, Regional Operations Center in the northwest area is 425-227-1999, this is the number for 24 hour Accident and Incident Response.

**OVERDUE AND MISSING AIRCRAFT**

If an aircraft fails to arrive at its destination or fails to check in on the prescribed interval, initiate the Interagency Mishap Response Guide and Checklist.

**AIRBORNE THERMAL INFRARED (IR) FIRE MAPPING****INFRARED SERVICES/ PACIFIC NORTHWEST**

Infrared mapping services are available for use on any wildland fire activity and are obtained through NWCC in accordance with the National Infrared Operation Plan. Requests to NWCC will be via resource order in ROSS and will have a completed Infrared Scanner Request in NIROPS.

**LEAD PLANES** Refer to NMG 50 and NWMG 50 **USFS LEAD PLANES**

Lead planes are considered National Interagency Resources. Region 6 (USFS-Leased) will have the following King Air 90 aircraft available during the 2015 season. The WCF Use Rate for FY 2015 is \$589.00/Hr.

<b><u>BASE</u></b>	<b><u>A/C "N" NUMBER</u></b>
Redmond, OR	N224JE
Redmond OR	N61698
Redmond OR	N867P

**SMOKEJUMPER AIRCRAFT**

All smokejumper aircraft in the Northwest Area will be identified by using the word "Jumper" in front of the FAA identification number.

<b><u>BASE</u></b>	<b><u>AIRCRAFT TYPE</u></b>	<b><u>AIRCRAFT ID</u></b>	<b><u>FLIGHT RATE</u></b>
REDMOND	C-23 (SHERPA)	JUMPER 173Z	\$1900.00
REDMOND	C-23 (SHERPA)	JUMPER 175Z	\$1900.00
NORTH CASCADE	CASA 212	JUMPER 09	\$1430.00

## **AERIAL SUPERVISION**

### **AERIAL SUPERVISION ROLES AND RESPONSIBILITIES**

There are five types of aerial supervision resources and six aerial supervisor classifications. Although these positions are unique, they share the common purpose of facilitating safe, effective, and efficient air operations in support of incident objectives.

In the Northwest Area the following resources will be considered Tactical Aviation Resources: Airtanker, Heli-tanker, Seat, Lead Plane, ASM, Air Attack Platform, Smokejumper, Rappel and Heli-tack Operations ordered from neighboring geographic units utilizing the border agreements for initial attack without going through NICC. Resources are ordered using The Aircraft Resource Order form (TARO) with a follow up order in ROSS.

On Dispatch of Tactical Aviation resources, the Host Dispatch Office will send a commit message to all NW area units and NWCC.

The host unit dispatcher will place airtankers, heli-tanker, lead planes or ASM in alert status in accordance with Specific Action and Readiness Guide, and will respond to requests for initial attack flights to incidents.

Tactical aviation resources will be ordered based on the closest forces concept. Units requesting tactical aviation resources will provide the following information on the TARO and/or in ROSS.

1. Legal Description of fire.
2. Latitude and Longitude of fire.
3. Radio Frequencies to be used.
4. Ground Contact and/or air attack call sign
5. Flight Hazards (Military Training Routes and Special Use Airspace.
6. Other Aircraft in area.
7. Reload Base for Air tankers, SEATS, and Heli-tankers Site.
8. 2 VOR's and DME

### AERIAL SUPERVISION REQUIREMENTS

The use of a lead plane or ASM greatly increases the effectiveness, economy, and safety of air operations. The following table is found in the Interagency Aerial Supervision Guide which is available at: <http://www.nwcg.gov/pms/pubs/pms505/index.htm>

<b>Incident Aerial Supervision Requirements</b>		
When aerial supervision resources are co-located with retardant aircraft, they should be launched together on the initial order to maximize safety, effectiveness, and efficiency of incident operations. <b>Incidents with 3 or more aircraft over/assigned to them should have aerial supervision over/assigned the incident.</b> Federal policy dictates additional requirements as listed below.		
Situation	Lead/ATCO/ASM	ATGS
Airtanker not IA rated.	Required	
MAFFS	MAFFS Endorsed Lead/ASM	
VLAT	VLAT Endorsed Lead/ASM	
When requested by airtanker, ATGS, Lead, ATCO, or ASM.	Required	Required
Foreign Government airtankers.	Required if No ATGS	Required if no Lead/ATCO/ASM
Multi-engine airtanker: Retardant drops conducted between 30 minutes prior to, and 30 minutes after sunrise, or 30 minutes prior to sunset to 30 minutes after sunset.	Required if No ATGS	Required if no Lead/ATCO/ASM
Single engine airtanker (SEAT): Seats ARE REQUIRED TO BE "on the ground" by ½ hour after sunset.	See level 2 SEAT requirements	See level 2 SEAT requirements
Level 2 SEAT requirements: Level 2 rated SEAT operating over an incident with more than one (1) other tactical aircraft on scene.	Required if No ATGS	Required if No Lead/ATCO/ASM
Retardant drops in congested/urban interface areas	Order	May use if no Lead/ATCO/ASM
Periods of marginal weather, poor visibility or turbulence	Order	Order
Smokejumper or Paracargo aircraft with 2 or more Airtankers	Order if No ATGS	Order if No Lead/ASM
Incident has 2 or more branches		Order

#### Definitions of key aerial supervision terms

- **Required:** Aerial supervisory resources that shall be over the incident when specified air tactical operations are being conducted.
- **Ordered:** Aerial supervisory resources shall be ordered by the incident host. (Air tactical operations may be continued while the aerial supervision resource is enroute to the incident. Operations can be continued if the resource is not available).

**TACTICAL AVIATION RESOURCES PRIORITIZATION**

The criteria listed below will be used to set prioritization of airtankers, SEATs, Heli-Tankers, Lead Planes, and ASM1. When requesting, one of the above resources, the requesting unit will note the appropriate criteria number and threat on the resource order in the special needs box in ROSS.

**A. Airtanker, SEATs, and Heli-Tanker Criteria for Prioritization.**

1. Imminent threat to human life;
2. Imminent threat to communities, communities' infrastructure, historically significant cultural resources, commercial businesses and principal residences;
3. Threats to other structures and improvements such as seasonal homes, cabins and high value outbuilding;
4. Threats to natural resources;
5. Threats to low value structures.

**B. Lead Planes and ASM1 Criteria for Prioritization**

1. Imminent threat to human life;
2. There are multiple aircraft over the fire (or enroute) with no aerial supervision available other than the requested a Lead Plane or ASM1.
3. An ATGS or airtanker pilot has requested a Lead Plane or ASM1.
4. Homes and other structures within wildland/urban inter-face areas are threatened.
5. Visibility is significantly impaired by smoke.
6. There is not a reliable contract experienced in the effective use of retardant.
7. Multiple air tanker drops on the fire/complex.

**TACTICAL AND RECONNAISSANCE AIRCRAFT** Refer to NMG 50**LARGE TRANSPORT AIRCRAFT** Refer to NMG 50**HELICOPTERS****HELICOPTER TYPES**

- Type 1 helicopters have 16 or more passenger seats or a 5,000 lb. load capacity
- Type 2 helicopters have 10-15 passenger seats or a 2,500 lb. load capacity
- Type 3 helicopters have 5-9 passenger seats or a 1,200 lb. load capacity
- Type 4 helicopters have 4 or fewer passenger seats or a 600 lb. load capacity

**HELICOPTERS CALL-WHEN-NEEDED**

Type 3 helicopters may be ordered through established dispatch channels. Forest Service CWN helicopter contractors are assigned to a Host Forest Unit for administrative purposes and processing of Flight Invoices. Refer to website for CWN listing: <http://www.fs.usda.gov/detail/r6/fire-aviation/>

All agencies may use OAS aircraft source list for hiring type 3 helicopters. AMD website: <http://oas.doi.gov/>

The primary function of these helicopters is to provide fire protection for the local unit. Type 1 and type 2 CWN helicopters are administered by NICC. All ordering of type 1 and 2 helicopters will be done through normal dispatch channels to NICC. NWCC and NW dispatch offices can reassign type 1 and 2 helicopters to initial attack fires, if the new start is within fifty nautical miles of the helicopter assigned base of operation. NWCC will notify NICC of these actions. Other reassignments of type 1 and 2 helicopters will require prior approval from NICC.

**EXCLUSIVE USE CONTRACT HELICOPTER** Refer to NMG 50

Forest Service Exclusive Use Helicopters may be moved to an alternate base of operations with prior concurrence of the NWCC Emergency Operations Manager. These actions are taken at the direction of the host unit after checking with their Neighboring Units and Cooperators before committing helicopters to other projects.

The following actions require prior approval from the NWCC Emergency Operations Manager:

- Any planned action which makes the helicopter unavailable for dispatch for 30 minutes or more
- Assignment to a project fire
- Placing a backup helicopter on duty
- Reassignment to a new base of operation for 2 or more days
- Pre, post, and regular season “Add-on” helicopters when Agency Exclusive Use Helicopters are dispatched off unit, they will depart with their normal daily staffing unless additional personnel and/or equipment have been authorized.

**STATE OF WASHINGTON (WAS) HELICOPTERS**

The State of Washington (WAS) Department of Natural Resources has USFS inspected and approved helicopters and pilots for transporting external cargo, and conducting bucket operations within specified limitations. USDI agencies may utilize WAS helicopters and pilots in accordance with OAS acceptance of USFS approval.

Washington DNR pilots and aircraft are “Approved” for use each year by means of a “Cooperator Aircraft Letter of Approval” issued by the USFS Regional Aviation Officer and OAS on dual Agency Letterhead. The letter is required to be carried onboard all WAS aircraft utilized on Federal incidents. This letter lists all approved aircraft, service vehicles, pilots, and authorized missions. Helibase or helicopter managers must use this letter to verify approvals and qualification prior to assignment of any duties.

Washington Department of Natural Resources Manual requirements apply to WADNR personnel and equipment regarding Personal Protective Equipment (PPE), load calculations, flight following and flight/duty limitations. Only the pilot may be onboard during external load operations.

**HELICOPTER HOIST ORDERING PROCEDURES**

If a helicopter hoist medevac extraction is needed in Oregon or Washington, the Air Force Rescue Coordination Center (AFRCC) is the broker for this service, and can be reached at 1-800-851-3051. There are no guaranteed time frames for helicopter hoist extractions. For a complete listing, contacts, and map refer to the NWCC website: <http://www.nwccweb.us/logistics/aviation.asp> and for more information about hoist operations go to:

[http://www.fs.fed.us/fire/aviation/av\\_library/Revision\\_8\\_EHE%20Source%20List%20\(03-01-14\).pdf](http://www.fs.fed.us/fire/aviation/av_library/Revision_8_EHE%20Source%20List%20(03-01-14).pdf)

In a normal year the Oregon National Guard (ONG) is willing to relocate and provide exclusive support for wildland fire operations in the PNW. The ONG is able to provide this service and can be ordered via Oregon Department of Forestry thru Op Plan Smokey.

Mount Rainer and North Cascades National Parks will have one short-haul resource available between the two parks for local and extended response in Washington. Contact Puget Sound Interagency Communication Center 425-783-6150

Okanogan-Wenatchee NF will host a short-haul helicopter. This will be a new resource for the northwest in 2015. For more information, contact Central Washington Interagency Communication Center at 509-884-3473.

### **OREGON NATIONAL GUARD HELICOPTERS**

When coordinating resources working a federal fire, the USFS, will place requests through Oregon Department of Forestry, which acting as the lead state agency places the request with Office of Emergency Management. Refer to **JFHO ORNG EMERGENCY OPERATIONS PLAN; OPERATION SMOKEY**

**AIRTANKERS** Refer NMG 50 and Refer NWMG 50 and Airtanker Dispatch Guide Map, NWMG 80

### **AIRTANKER BASES**

Northwest Airtanker Bases have Host Dispatch Centers and associated units. The associated units may order air tankers directly from the Host Dispatch Office.

Units outside this association may order these aircraft as specified in Northwest Area Neighborhood Concept, NWMG 20, and Northwest Mobilization Guide to the dispatch offices identified as follows.

BASE	HOST	UNITS
Medford	MIC	UPF, EIC, KFC, SUF, KNF (R-5), SRF (R-5), LFC, MED, CBD, ROD, ORS, CDF THRU KNF/SRF, NZF WITH FOLLOW UP NWC
Redmond	COC	EIC, MAF, CCC-MHF, SUF, COC, LFC, SAD, BIC, VAD, ORS, KFC, GPF, UPF, WSA
La Grande	BMC	MAF, UMF, WWF, ORS, BIC, PAF(R-4), NPF(R-1)VAD
Klamath Falls	LFC	COC, RRF, LFC, KFC, CNP, BNP, UKR, UPF, ORS, KNF(R-5) NZF WITH FOLLOW UP THRU NWC, CDF (IA ONLY)
Moses Lake	CWC	COF, PSC, CCC-GPF, CWC, COA, YAA, SPA, SPD, CDP, COR, LPR, TBR, WAS, IPF(R-4)
Redding	NWC	SOUTHERN END BORDERING UNITS WILL ORDER IA AT'S THROUGH NWC, WHO WILL ORDER AND NOTIFY NICC

Host Base Dispatcher will send the Billing Forest a copy of the Resource Order, with estimated costs, as soon as completed. (For USFS incidents, the Billing Forest is referred to as "Fire Forest"). Host Base Dispatchers should refer to Forest service Handbook 6509.11K for billing procedures to USFS Units and Cooperators.

Lead planes, ASM, and Airtankers will contact the Requesting Unit Dispatcher upon arrival and upon departure. This information should be documented on the resource order form or the fire log and forwarded to Host Base Dispatcher.

### **STATE COOPERATOR AIRTANKERS**

The State of Oregon Department of Forestry has contract DC-7 airtankers. **These airtankers are not approved to be used on federal land.** Refer to Geographic Area Additional Aviation Asset Operation Plan for detail information. Refer to Oregon Department of Forestry Air Tanker Operations Plan.

### **USE OF NON-FEDERALLY APPROVED AIRCRAFT**

Under Clause 27 of the 2015 Master Cooperative Fire Protection Agreement, Independent Action, any agency may assign its respective aircraft to an incident in which a wildfire is deemed a threat to lands under its jurisdiction. In such instances, the resulting interagency mix of aircraft sharing the same airspace is allowed as long as common communications, command/control, and on-scene operating procedures exist to ensure a safe and efficient aviation operation.

If the decision is made to use an unapproved aircraft, the Line Officer must call the State Office/Regional Office (SORO) Duty Office (503-808-2775) advise him/her of the risk-informed decision, and document the decision. The SORO Duty Officer will then contact the Coordinator on Duty at the NWCC to notify them of the decision and request. The local dispatch center, in coordination with the NWCC, will attempt to replace the unapproved aircraft, with an approved, federal aircraft as soon as possible and make the appropriate notification.

The ODF airtankers may be used on Bureau of Land Management (BLM) and Forest Service lands in Oregon without prior Federal Line Officer approval only in the following instances:

- BLM lands covered by the Western Oregon Fire Suppression Contract.
- On incidents managed under State and Federal unified command in which the State retains operational control when utilizing ODF airtankers to protect its interests.

For additional questions please contact Aaron Schoolcraft, Pacific Northwest/Alaska Regional Aviation Officer, at 503-808-2359 or [aschoolcraft@fs.fed.us](mailto:aschoolcraft@fs.fed.us), or Kurt Kleiner, BLM State Aviation Manager, at [kkleiner@blm.gov](mailto:kkleiner@blm.gov) or 503-808-6593

**AIRTANKER EARLY ACTIVATION** Refer to NMG 50

**MODULAR AIRBORNE FIREFIGHTING SYSTEMS (MAFFS)** Refer to NMG 50

**SINGLE ENGINE AIRTANKERS (SEATS)** Refer to NMG 50 and Interagency SEAT Operations Guide

### **AIRTANKER DISPATCHES (LOADED VS EMPTY)**

Ordering Units may request air tankers loaded or empty. Some aircraft have capabilities and flight limitations which may preclude the dispatch of loaded air tankers.

### **AIRSPACE COORDINATION**

### **UNMANNED AIRCRAFT SYSTEMS**

UAS or “drones” may be used by federal agencies on incidents and projects only with prior planning,

consultation, and approval by the respective regional and national level agency Aviation Managers.

### **AIRSPACE COORDINATION**

It is essential that all personnel involved in flight planning and aviation operations read, understand, and implement the procedures outlined in the INTERAGENCY AIRSPACE COORDINATION GUIDE located at: [www.airspacecoordination.net](http://www.airspacecoordination.net). Roles and responsibilities are outlined in Chapter 2. Understanding and awareness of the procedures in the guide should improve aviation safety through coordinated use of the National Airspace System.

It is the Incident Units' responsibility to initiate de-confliction procedures for flights involving Military Training Routes or Special Use Airspace as outlined in the "Interagency Airspace Coordination Guide", Chapter 2 Roles and Responsibilities.

### **TEMPORARY FLIGHT RESTRICTIONS (TFR) FAR 91.137**

Temporary airspace restrictions will be established when incident related aviation activities present potential conflict with other aviation activities in the airspace.

To prevent congestion of nonessential aircraft over a disaster area, the Unit Dispatcher will:

1. Create a request for the TFR in ROSS under Aircraft, as well as completing the TFR request form.
2. Place the ROSS request to NWCC, along with a faxed copy of the completed TFR request form.

The current TFR request form is available at: [http://www.airspacecoordination.org/coord/tfr\\_request.pdf](http://www.airspacecoordination.org/coord/tfr_request.pdf)

The FAA requires that latitude/longitude information for TFR's must be provided in degrees, minutes and seconds, including reference to north latitude and west longitude. If second's information is not available, add two (2) zeros to the description. Do not use spaces, commas, or other symbols in the description. Example: ddmssN/ddmssW or 450700N/1175005W. The corner points should be listed in a clockwise sequence around the requested TFR to avoid "Bow tie" depictions.

TFR's involving Military Training Routes require additional notification of that closure to the scheduling military base. Refer to NMG 20 and NWMG 20

When restrictions are no longer needed, unit dispatchers will terminate, or downsize the TFR with NWCC.

### **AIRSPACE BOUNDARY MANAGEMENT PLAN**

Aerial operations on, or adjacent to, agency/cooperator boundaries and areas where a neighboring agency/cooperator provides fire suppression on lands administered by the adjoining agency/cooperator ("mutual aid," "shared" or "exchanged" initial attack areas or zones) require increased management and coordination. The requirement for increased management and coordination is due to the possibility of two or more agencies/cooperators conducting simultaneous, uncoordinated aviation operations within those areas that would unknowingly put the responding aerial resources within close proximity to one another, placing aircraft and crews at risk. The purpose of this plan is to identify such boundaries and initial attack zones and provides means of communication, coordination, and airspace de-confliction within those areas.

## GUIDELINES & PROCEDURES

An imaginary 10-mile-wide “neutral air” corridor will center on agency/cooperator boundaries. The “neutral air” for mutual or exchanged initial attack areas or zones will encompass the whole zone.

- Any agency conducting aerial operations within a corridor or zone will immediately notify the adjoining agency/ cooperator of such operations. This is accomplished to and from dispatch offices prior to the commencement of operations and when operations cease. Examples of aerial operations include recon, fire suppression missions, special aviation projects, resource management flights, helicopter logging, etc.
- Agency aircraft will establish contact on the assigned air- to-air frequency. Should contact not be made, the contact air-to-air frequency will be “Air Guard” 168 .625 MHZ. This frequency will be designated for initial contact and coordination between converging aircraft within corridors and zones only when contact is not otherwise possible. Because this frequency is programmed as the default receive frequency in all agency and contract aircraft FM radios, and is intended for initial contact and emergency purposes only, it is imperative that this frequency not be used for tactical or logistical purposes . If Air Guard is used to establish initial contact, aircraft are expected to switch to an alternate frequency (e.g. the local or incident air-to-air frequency, etc.)
- When aircraft from two or more adjoining agencies/cooperators are being committed to the same general area of a corridor/zone:
  - Considering complexity, dispatch an Air Tactical Group Supervisor (ATGS)
  - Approaching aircraft will establish air-to-air frequency contact prior to entering the area
  - Aircraft rely upon dispatch centers for current relevant information. Therefore, coordination between dispatch centers must occur prior to dispatch.
- When an aircraft is dispatched to an incident within a corridor/zone and no other aircraft are known to be present:
- The approaching aircraft will attempt to establish contact on the assigned frequency. If unsuccessful, Air Guard frequency 168 .625 MHZ will be used.
- Perform a high-level recon prior to low-level.
- Practice “see and avoid.”
- The dispatch initiating the flight will notify and coordinate with the adjoining agency/cooperator dispatch.
- Temporary Flight Restrictions (TFRs) within or in close proximity to corridors/zones will be coordinated and information shared between the responsible dispatch offices.

**AVIATION BOUNDARY OPERATIONS CHECKLIST**

The boundary zone between adjacent jurisdictional agencies has the potential for conflicted airspace when more than one center or agency dispatches aviation resources to these areas.

The definition of boundary zone area for the purposes of conflicting airspace will be defined as an area five (5) nautical miles either side of jurisdictional boundaries.

Aviation Dispatchers are responsible for assuring that agency aircraft dispatched to initial or extended attack incidents leave their bases with accurate mission information.

**IF AIRCRAFT ARE CROSSING OR WORKING IN CLOSE PROXIMITY TO UNIT BOUNDARIES, USE THE FOLLOWING CHECKLIST.**

HAVE NEIGHBORING DISPATCH CENTERS BEEN NOTIFIED OF YOUR RESPONSE? Yes No

HAVE COMMON FREQUENCIES BEEN ASSIGNED TO ALL RESPONDING AIRCRAFT? Yes No

IF EXTENDED ATTACK, HAVE DISPATCH CENTERS AGREED ON THE SINGLE ORDER POINT FOR INCIDENT RESOURCES? Yes No

ARE FLIGHT CREWS AWARE OF ORDER POINT AND FLIGHT FOLLOWING CENTER? Yes No

DO YOU HAVE AN EXISTING TEMPORARY FLIGHT RESTRICTION (TFR) ON YOUR UNIT? HAVE YOU NOTIFIED COOPERATING AGENCIES? Yes No

ARE THERE MILITARY TRAINING ROUTES, (MTR) OR SPECIAL-USE AIRSPACE (SUA) IN THE INCIDENT AREA? HAVE FLIGHT CREWS BEEN INFORMED? Yes No

AIRCRAFT WILL NOT BE DISPATCHED UNTIL CHECKLIST HAS BEEN COMPLETED AND INITIALED BY AIRCRAFT DISPATCHER.

**NEWS MEDIA AIRCRAFT**

Accredited news media aircraft are legally allowed inside a 91.137 (a) 2 TFR after filing a flight plan with the FAA. For further information, consult Chapter 6 of the Interagency Airspace Guide.

**MILITARY TRAINING ROUTES AND SPECIAL USE AIRSPACE**

Military Training Routes and Special Use Airspace often present conflicts with incident related aviation. Aviation activities will be identified by local units and the DOD units will be contacted for deconfliction. When requesting the interruption of MTR/MOA, Unit Dispatchers need to contact the scheduling activity/agency. For Military Training Routes, phone numbers of all scheduling activities are located in DOD AP-1B. For Special Use Airspace (Military Operations Areas, etc.), the name of the controlling agency is found on the appropriate aeronautical sectional chart. Refer to NMG 50 and the Interagency Airspace Coordination Guide for more information. To download the AP-1B, go to: <http://www.airspacecoordination.net> for a power point and text information on the process. (this is accessed through the NW Portal)

**AIRSPACE CONFLICTS REPORTING**

Violations of airspace restrictions must be reported immediately by telephone to the Air Route Traffic Control Center (SEATTLE or SALT LAKE CITY). The center can get an immediate response of the aircraft being reported and make positive identification of the aircraft required for follow-up action.

The “key” is immediate telephone notification! Violations need to be reported immediately to a Unit Aviation Officer (UAO) and the Interagency Airspace Coordinator. The Unit Aviation Officer will follow normal incident reporting procedures and follow up by submitting a SAFECOM report form, Refer to: Interagency Airspace Coordination Guide, Chapter 8, for further information.

**CRITICAL AIRSPACE CONTACTS** Refer to NWMG 70

### **TEMPORARY AIRPORT CONTROL TOWER OPERATIONS**

Air Traffic Control Specialists or Mobile Air Traffic Tower (MATC) assistance may be requested from the FAA when Air Operations in support of an incident becomes too complex or unsafe at uncontrolled airports or helibases. Requests will be sent to NWCC via a resource order in ROSS and will be accompanied with a Temporary Tower Request Form completed electronically (Refer to: Interagency Airspace Coordination Guide Chapter 11). A lead time of twenty four hours is requested by the FAA.

Ordering procedures and financial information is outlined within the FAA’s Western Service Area agreement located at [www.airspacecoordination.net](http://www.airspacecoordination.net). NWCC does not forward the request to NICC but will contact the FAA’s WSA Regional Operations Center (ROC) at 425-227-2200 and ask to speak to a duty officer regarding a Temporary Tower order. The ROC will connect NWCC with the appropriate FAA Duty officer. The ROC is the primary point of contact for the FAA for this request. NWCC will forward the Temporary Tower Request Form along with the aircraft resource order to the FAA duty officer at the time of the request. In addition, refer to Chapter 11, of the Interagency Airspace Coordination Guide for a helpful checklist that aids in the ordering and set up process of a temporary tower. The FAA will handle ordering a frequency for the Temporary Tower internally. If the FAA cannot supply radios, the incident COML will need to order radios. Notify Julie Stewart (Airspace Coordinator), when the control tower is ordered, at number 503-780-0097.

### **AIRPORT CLOSURES**

When the need for an airport closure is identified, contact should be made with the Agency Aviation Officer or Agency Aviation Safety Officer for information and assistance. (Reference The Interagency Airspace Coordination Guide).

### **BLASTING ACTIVITY**

The Department of Defense is concerned that electronic warfare equipment on certain military aircraft could initiate a premature explosion of blasting equipment. Blasting operations using “NONEL” (Non Electric Blasting Caps) are not at risk; i.e. Fireline Explosives. Operations using “EBC” (Electric Blasting Caps) are at risk of premature detonation under a variety of circumstances which could cause debris to affect low flying aircraft. Advance notice (24 hours) of planned blasting activity should be forwarded to appropriate DOD Scheduler.

### **TEMPORARY EMERGENCY RADIO FREQUENCY ASSIGNMENTS**

When the aircraft communication load on a going fire is too congested to be handled by existing fire and air operation networks, temporary emergency frequencies may be obtained from NICC as follows:

1. Unit Dispatcher should request FAA VHF Air to Air frequency through NWCC on an Aircraft Resource Order in ROSS. NWCC will place the order with NICC to obtain frequencies.
2. When the frequency is no longer needed, notify NWC and the center will close the order with NICC.

**DEDICATED RADIO FREQUENCIES** Refer to NMG 20 and the Pacific Northwest Interagency Aviation Frequency Guide.

### **SUNRISE / SUNSET TABLE**

These tables should be maintained at the local dispatch center and can be furnished upon request. The tables are available at: [http://aa.usno.navy.mil/data/docs/RS\\_OneYear.php](http://aa.usno.navy.mil/data/docs/RS_OneYear.php)

Select rise/set menu under the Astronomical Applications department. Then select the month, the day, the state, and the city. Click on the Get Data button to generate sunrise/ sunset table. It is also, recommended that you download the data and reformat the files so they will print on a single sheet.

### **AIRPORT GUIDE**

The airport guide (NWMG 50) has been prepared as a **reference guide** for dispatchers within the Northwest Area. The purpose of the guide is to assist these individuals in determining suitable airports for mobilization and demobilization of incident personnel. The guide is **NOT** intended to substitute the pilot's responsibility for flight planning. Information about unlisted airports and airfields can be found in local dispatch offices

## OREGON AIRPORT GUIDE

City		Latitude/ Longitude	Elevation	Runway length/width/surface	Nite/ILS Approved	Fuel	FBO (Phone) Available
Astoria	(AST)	46 09/123 52	015	5796/150/ Asph	Y/Y	Avgas/Jet	Port of Astoria (503-861-1212)
Baker City	(BKE)	44 50/117 48	3373	5097/100/Asph	Y/N	Avgas/Jet	Sundance Avtn(541-523-5663)
Bend	(BDN)	44 05/121 11	3453	5005/75/Asph	Y/N	Avgas/Jet	Flight Shop(541-388-0019)
Burns	(BNO)	43 35/118 57	4148	5100/75/Asph	Y/N	Avgas/Jet	Eagle Wing(541-573-6139)
Corvallis	(CVO)	44 29/123 17	246	5900/150/Asph	Y/Y	Avgas/Jet	Corvallis Aero Svc.(541-753-4466)
Denmark	(5S6)	42 51/124 31	214	5100/150/Asph	N/N	None	None
Eugene	(EUG)	44 07/123 13	365	8000/150/Asph	Y/Y	Avgas/Jet	Flightcraft(541-688-9291)
Florence	(6S2)	45 58/124 06	046	3000/60/Asph	Y/N	Avgas/Jet	Florence Avn(541-997-8069)
Gold Beach	(4S1)	42 24/124 25	016	3200/75/Asph	Y/N	Avgas/Jet	Admin Bldg(541-247-6269)
Grant Pass	(3S8)	42 30/123 22	1125	4000/75/Asph	Y/N	Avgas/Jet	GreatPacific Avn Svc (541-479-2230)
John Day	(GCD)	44 24/118 57	3697	4500/60/Asph	Y/N	Avgas/Jet	Admin Bldg (541-575-1151)
Joseph	(4S3)	45 21/117 15	4122	5200/60/Asph	Y/N	Avgas/Jet	JosephFuelingsuc (541-432-0433)
Klamath	(LMT)	42 09/121 43	4095	10301/150/Asph	Y/Y	Avgas/Jet	KlamathAcft(541-882-4681)
La Grande	(LGD)	45 17/118.00	2717	5600/100/Asph	Y/N	Avgas/Jet	AdminBldg(541-963-6615)
Lakeview	(LKV)	42 09/120 23	4733	5306/100/Asph	Y/N	Avgas/Jet	Goose Lake(541-947-4222)
Madras	(S33)	42 00/121 24	2434	5100/75/Asph	Y/N	Avgas/Jet	Mobley Avn(541-475-6947)
Medford	(MFR)	42 22/122 52	1335	8800/150/Asph	Y/Y	Avgas/Jet	Jet CenterNorth(541-770-5314)
Newport	(ONP)	44 34/124 03	160	5398/150/Asph	Y/Y	Avgas/Jet	Central ORCoast(541-867-3655)
North Bend	(OTH)	43 25/124 14	017	53321/150/Asph	Y/Y	Avgas/Jet	Coos Avn(541-756-5181)
Ontario	(ONO)	44 01/117 00	2193	4529/100/Asph	Y/N	Avgas/Jet	Ontario Avtn(541-889-9197)
Pendleton	(PDT)	45 41/118 50	1497	6300/150/Asph	Y/Y	Avgas/Jet	Pendleton Av(541-276-3373)
Portland	(PDX)	45 35/122 35	030	11000/150/Asph	Y/Y	Avgas/Jet	Flightcraft(503-331-4200)
Redmond	(RDM)	44 15/121 08	3077	7040/150/Asph	Y/Y	Avgas/Jet	Butler Acft(541-548-8166)
Roseburg	(RBG)	43 13/123 23	529	4600/100/Asph	Y/N	Avgas/Jet	AmeristarAiz(541-673-5706)
Salem	(SLE)	44 54/123 00	214	5811/150/Asph	Y/Y	Avgas/Jet	Salem Air Svc(541-364-0111)
The Dalles	(DLS)	45 37/121 09	247	5097/150/Asph	Y/Y	Avgas/Jet	FlightlineSvc(509-767-1134)
Troutdale	(TTD)	45 39/122 24	039	5399/150/Asph	Y/Y	Avgas/Jet	Premeir Aircraft (503-661-1044)
Vale	(S49)	43 57/117 15	2249	3872/65/Grvl	N/N	None	None

**WASHINGTON AIRPORT GUIDE**

City		Latitude/ Longitude	Elevation	Runway length/width/surface	Nite/ILS Approved	Fuel	FBO (Phone) Available
Bellingham	(BLI)	48 47/122 32	170	6701/150/Asph	Y/Y	Avgas/Jet	AvtnFueling(360-676-7624)
Boeing	(BFI)	47 31/122 18	018	10001/200/Asph	Y/Y	Avgas/Jet	Galvin (206-763-0350)
Burlington	(BVS)	48 28/122 25	144	5477/100/Asph	Y/N	Avgas/Jet	Corporate Air(360-757-7757)
Chehalis	(CLS)	46 40/122 58	173	5000/150/Asph	Y/N	Avgas/Jet	CentralRepr(360-748-0190)
Chewelah	(1S9)	48 18/117 44	2075	3446/48/Asph	N/N	None	None
Deer Park	(07S)	47 58/117 25	2210	6100/75/Asph	Y/N	Avgas/Jet	Partners Avn(509-276-8663)
Electric City	(3W7)	47 55/119 04	1590	4200/75/Asph	N/N	None	None
Ellensburg	(ELN)	47 01/120 27	1763	5500/150/Asph	Y/N	Avgas/Jet	MidStateAvn(509-962-7850)
Everett	(PAE)	47 54/122 16	606	9010/150/Asph	Y/Y	Avgas/Jet	EverettJet(425-355-6600)
Felts Field	(SFF)	47 40/117 19	1953	4500/150/Asph	Y/Y	Avgas/Jet	Felts Avn(509-535-9011)
Hoquiam	(HQM)	46 58/123 56	018	5000/150/Asph	Y/Y	Avgas/Jet	Flyfatboy(360-533-6655)
Moses	(MHW)	47 12/119 19	1185	13502/200/Asph	Y/Y	Avgas/Jet	AirAmerica(509-762-2222)
Olympia	(OLM)	46 58/122 54	206	5419/150/Asph	Y/Y	Avgas/Jet	PearsonAir(360-786-8333)
Omak	(OMK)	48 27/119 31	1305	4654/150/Asph	Y/N	Avgas/Jet	Terminal(509-826-6270)
Pasco	(PSC)	46 15/119 07	407	7700/150/Asph	Y/Y	Avgas/Jet	Bergstrom(509-547-6271)
Port	(CLM)	48 07/123 29	291	6347/150/Asph	Y/Y	Avgas/Jet	RiteBros.(360-452-6226)
Republic	(R49)	48 43/118 39	2519	3498/60/Asph	N/N	None	None
Seattle	(SEA)	47 27/122 18	433	11900/150/Asph	Y/Y	Avgas/Jet	ASIG(206-433-5481)
Spokane	(GEG)	47 37/117 31	2372	9000/150/Asph	Y/Y	Avgas/Jet	SpokaneAir(509-747-2017)
WallaWalla	(ALW)	46 05/118 17	1191	6528/150/Asph	Y/Y	Avgas/Jet	Blueridge Acft(509-529-4243)
Wenatchee	(EAT)	47 23/120 12	1245	5500/150/Asph	Y/Y	Avgas/Jet	ExecutiveFlt(509-884-1545)
Winthrop	(S52)	48 25/120 08	1694	5049/75/Asph	Y/N	Avgas/Jet	Adm (509-987-2031)
Yakima	(YKM)	46 34/120 32	1095	7603/150/Asph	Y/Y	Avgas/Jet	NolandDeco(509-248-1370)

**NORTHWEST HELIBASE INFORMATION**

<b>Base Name</b>	<b>Latitude/Longitude</b>	<b>Elevation (Feet)</b>	<b>Home Unit</b>	<b>Agency</b>
Burns	43 35 /118 57	4144	Burns	BLM
Chelan	47 52/119 55	1263	Wenatchee	USFS
Clearwater	46 12/117 34	5650	Umatilla	USFS
Ellensburg	47 01/120 31	1760	WA-SES	State of Washington
Enumclaw	47 10/121 59		WA-SPS	State of Washington
Frazier	45 09/118 13	4500	Umatilla	USFS
Ft. Rock	43 26/120 50	4520	Lakeview	BLM
Gerber	42 12/121 08	4930	Lakeview	BLM
John Day	44 24/116 57	3700	Malheur	USFS
Lakeview	42 09/12 23	4209	Lakeview	BLM
Merlin	42 30/123 23	1122	Siskiyou	USFS
Oakridge	43 45/122 30	1420	Willamette	USFS
Olympia	46 58/122 54	206	WA-WAS	State of Washington
Prineville	44 17/120 54	3246	Prineville	USFS Ochoco
Sled Spring	45 47/117 16	4500	Wallowa-	USFS Whitman
Tupper	45 04/119 29	4100	Umatilla	USFS
Vale	44 01/117 00	2190	Vale	BLM
Wenatchee	47 23/120 12	1249	Wenatchee	USFS

**AIRCRAFT TYPE AND CAPABILITES GUIDE****Fixed Wing Aircraft Information****Single Engine**

<b>Make/Model</b>	<b>Length (ft)</b>	<b>Wing Span (ft)</b>	<b>Cruise Speed (kts/mpH)</b>	<b>Payload (lbs)</b>	<b>Number of Seats</b>	<b>Required Runway Length (ft)</b>
Cessna 172	27	36	105/120	600	3	1500
Cessna 180	26	36	140/160	800	3	1500
Cessna 182	28	36	150/170	900	3	1500
Cessna 182RG	28	36	120/140	1100	3	1500
Cessna 185	26	36	109/125	1100	3	1700
Cessna 205	28	36	135/155	900	5	2000
Cessna 206	28	36	130/160	1100	5	1500
Cessna 207	32	36	130/160	1100	6	2000
Cessna 208	38	52	175/180	2500	8-12	2000
Cessna 210	28	37	155/190	1000	6	2000
Cessna 210 (Turbo)	28	37	165/190	1500	6	2500
Piper PA-18 Supercub	23	35	100/115	600	1	500
Piper PA-32R Lance	28	33	135/155	1100	5	2000
Beech Bonanza	26	34	165/190	950	4-5	2000
DHC-Beaver (Floats)	30	48	100/115	1400	6	1700

## Twin Engine

Make/Model	Length (ft)	Wing Span (ft)	Cruise Speed (kts/mpH)	Payload (lbs)	Number of Seats	Required Runway Length (ft)
Cessna 337 Skymaster	30	38	148/170	600	3	2000
Cessna 340	43	38	182/210	900	5	3000
Cessna 414	36	44	174/200	900	5	3000
Cessna 421 Golden Eagle	34	40	191/220	1600	7-9	3000
Cessna 441 Conquest I/II	39	49	252/290	1400	8	3000
Piper PA-23 Aztec	31	37	174/200	1000	5	2000
Piper PA-31 Chieftain	35	41	217/250	1800	8	3000
Piper PA-31T2 CheyenneXL	37	43	208/240	1300	7	3000
Piper PA-34 Seneca	29	39	190/230	1100	5	2000
Piper PA-42 Cheyenne II	43	48	273/315	2000	11	3300
Piper PA-42 Cheyenne II	43	48	295/340	2000	11	3300
Piper PA-44 Seminole	28	39	165/190	600	3	2000
Beech Craft Baron 55	55	38	187/215	1000	5	2000
Beech Craft Baron 58/P	30	38	187/215	1000	5	3000
Beech Craft King Air 90/100	36/40	50	226/260	1300	6	3000
Beech Craft King Air 200/350	44	55	278/320	2200	9-12	3300
Aero Commander 500	35	45	169/195	1100	5	3000
Aero Commander 690	44	47	247/285	1200	7	3000
Aero Commander 840	44	49	247/285	1600	9	3000
Partenavia P-63	31	39	161/185	1100	5	1600
Islander BN-2	36	49	130/150	2000	10	1500
DC-3 Turbo	58	96	182/210	5900	20-30	2000
Sherpas S-330 (C-23)	58	75	148/170	2200	20	2000
DHC-6 Twin Otter	53	65	148/170	3000	15-19	1500
Casa 212	50	62	169/195	3400	19	2500
MU-II	34	40	300/345	3350	9	1800

## Airtankers

Make/Model	Length (ft)	Wing Span (FT)	Cruise Speed (kts/mpH)	Contract Operating WT. (gal)	Retardant Load (gal)	# of Gates
C-130 MAFFS	99	133	239/275	108,537	3000	1
P2V	86	98	195/225	73,900	2082	6
CL-215	65	94	164/189	N/A	1300	2
AT802	35.5	58	165/190	16,000	799	Constant flow
Turbine Thrush (S2R-G10)	33	47.5	138/159	11,500	500	1-2
Turbine Thrush (S2R-T34)	33	47.5	138/159	10,600	400	1-2
Recip Thrush (S2R-600)	30	47.5	122/140	6,900	400	1-2
Drommeder (M18A)	31	58	112/130	11,700	500	1-2

**Helicopters****Type I**

<b>Make/Model</b>	<b>Length (ft)</b>	<b>Rotor Diameter (ft)</b>	<b>Bucket Size (gal)</b>	<b>Cruise Speed (kts/mpH)</b>	<b>Number of Seats</b>
K-Max (K1200)	52	48	900	80/92	N/A
Bell 214 B-1	62	52	660/880	140/160	15-20
Blackhawk UH-60	65	54	660	145/167	14-17
Sikorsky S61N	73	62	900	120/138	N/A
Boeing Vertrol 107	83	50	900-1000	120/138	N/A
Boeing 234 (CH-47)	99	60	3000	135/185	46
Sikorsky S-64 Skycrane	89	72	2000	80/92	N/A

**Type II**

<b>Make/Model</b>	<b>Length (ft)</b>	<b>Rotor Diameter (ft)</b>	<b>Bucket Size (gal)</b>	<b>Cruise Speed (kts/mpH)</b>	<b>Number of Seats</b>
Bell 204B UH-1B	55	48	240	90/104	10
Bell Super 204	56	48	324	90/104	10
Bell 205 A-1	57	48	324	90/104	14
Bell 212	58	48	324	100/115	13
Bell 412	56	48	420	110/115	13
Kaman H-43	25	47	324	85/98	N/A
Sikorsky S-58T	42	56	420	90/104	12-18

**Type III**

<b>Make/Model</b>	<b>Length (ft)</b>	<b>Rotor Diameter (ft)</b>	<b>Bucket Size (gal)</b>	<b>Cruise Speed (kts/mpH)</b>	<b>Number of Seats</b>
MD-500 (Hughes)	31	26	96-108	120/138	4
Bell 206 III Jet Ranger	39	33	96-108	97/112	3
Bell L-3 Long Ranger	43	37	96-144	110/127	6
AS-350 D-1 Astar	43	35	108-144	108/124	4
AS-350 B-2 Ecureuil	43	35	240	125/144	5
AS-355 F-1 Twin Star	43	35	108-144	115/132	4
SA-315 B Lamar	43	36	108	80/92	4
SA-316B AlouetteIII	42	36	144	80/92	6