Chapter 50 – Aircraft

NISRM- Chapter 50 Aircraft

The paramount consideration for aircraft use in California is to conduct all operations safely and reduce risk exposure.

Aircraft Administration

Bureau of Land Management

The California State Aviation Manager (SAM) is located at the California State office. The State Aviation Manager provides guidance to two Unit Aviation Managers (UAM) located in Bakersfield and Susanville. These UAMs coordinate the daily fire, law enforcement and administrative aviation use in their geographical areas. All requests for incident support and administrative flights will be made through the Interagency Communication Centers identified in those geographic areas.

Geographic area communication centers are as follows.

- Northern California District (NOD) - Susanville Interagency Fire Center (SIFC)
- Owens Valley District (OVD) - Owens Valley Interagency Communication Center (OVICC)
- Central California District (CND) - Central California Interagency Communications Center (CCCC)
- California Desert District (CDD) - Federal Interagency Communications Center (SBCC)

Requests for administrative flights for the California State Office are requested and processed through the SAM in coordination with Northern California Geographic Area Coordination Center.

CAL FIRE

CAL FIRE Aviation is integrated within two organizational classifications: Aviation Management Unit (AMU) and Tactical Air Operations (TAO) are both under the direction of Fire Protection. Program responsibilities overlap in many areas; the following only serve to identify accountability:

AMU:

- Aviation Policy and Procedure
- Maintenance of both fixed and rotor wing aircraft
- Aviation Life Support Equipment (ALSE)
- Aviation Safety
- Management of aviation contract personnel
- Maintenance staff
- Fixed wing pilots
- Management of Call When Needed (CWN) and any Exclusive Use (EU) contracts

TAO:

- Command and Control
- Fire chemicals
- Base operations and standardization
- Aviation Training and Standards of CAL FIRE personnel Military Program Coordination
- Title 10 assets
- MAFFS
- California National Guard
- Operational technical assistance
- UAS Operations

Forest Service

The Regional Aviation Group (RAG) is divided into operational areas to better serve the Units in the region. All Units should direct requests for technical assistance to the office designated to serve them. There will be personnel at each location to assist the Units in all aspects of aviation. All requests for incident support and administrative flights will be made through the appropriate GACC. NOPS will be the dispatch point for the McClellan Office and Redding Aviation Units. SOPS will be the dispatch point for the Lancaster Aviation Unit. Aviation Units needing assistance should make requests to the dispatch office that serves them.

Designated Operational Areas and Units served are:

- Lancaster Aviation Unit - ANF, BDF, CNF, INF, LPF, SQF, SNF, STF and OSC
- Redding Aviation Unit - ENF, KNF, LNF, MDF, MNF, PNF, TMU, TNF, SHF, SRF and ONC

It is the responsibility of the Aviation Units to furnish the appropriate GACC, a duty schedule during the fire season for all pilots, inspectors and aircraft status.

Fire and Aviation Safety Teams (FAST) assist agency administrators during periods of high fire activity by assessing policy, rules, regulations, and management oversight relating to operational issues. For more information reference the National Interagency Standards for Resource Mobilization, Chapter 20.

Aviation Safety Assistance Teams (ASAT) enhance safe, efficient, and effective aviation operations. An ASAT provides assistance to Unit and Aviation Managers, flight crews, and Incident Management Teams for increasing, ongoing, or declining incident aviation activity. For more information reference the National Interagency Standards for Resource Mobilization, Chapter 20.

National Park Service

The National Park Service Aviation program is managed by the Regional Aviation Manager (RAM), locally at the Park level by the Fire Management Officer or Park Aviation Officer. In California, there are two National Park Service helicopters, one Type 2 Standard in Yosemite National Park and a Type 3 Standard in Sequoia and Kings Canyon National Park. The primary mission for these helicopters is wildland fire response and all hazard missions including short haul emergency extraction on a case by case basis. All requests should be routed through unit dispatch centers. Assignment length can be negotiated with the Park Fire Management Officer or Park Aviation Officer.

Federal Cooperator Aircraft Use

Cooperator aircraft to the Forest Service and Office of Aviation Services (OAS) (state contracted, state owned, state managed National Guard aircraft, county, city, or other) may be used on federal fires under the following conditions:

- The pilot and aircraft have been approved in writing for the mission by the Forest Service Regional Aviation Officer (RAO) or the DOI Western OAS office.
- A written Memorandum of Understanding (MOU), interagency agreements or other document that authorizes their use and payment.
- The cooperator aircraft will be operated within any limits on its use established in written approval.
- The cooperator aircraft will be used only in situations where federal aircraft are not available.
- The cooperator aircraft will be released when federal aircraft become available.

In the initial attack period, aircraft will be filled using the “closest resource concept”. In the extended attack period, using cooperator-owned aircraft prior to exhausting contracted resources must involve a "significant and imminent threat to life or property”.

Length of Assignment

All length of assignment rules apply to aviation resources personnel, including aircraft pilots (Notwithstanding the FAA and agency day off regulations). Contracted aircraft are not restricted by length of assignment. In order to limit disruption to operations, reduce strain on the ordering system, and reduce unnecessary mobilization and demobilization of these high-cost resources. Exclusive Use personnel are expected to utilize a personnel rotation schedule that meets staffing criteria required of the resource.

Aircraft Ordering Procedures

Initial Attack Ordering

The GACC will be notified of movement of all initial attack aircraft.

To expedite the closest available aircraft to initial attack fires, the Units will announce on the intercom when there is a status change of their Aircraft:

- Brought on early in the morning or down staffed for the evening
- Out of service mechanical and back in service
- Visibility conditions (smoke, fog, etc.)
- On a delay for any reason with expected time of delay

This procedure will increase the efficiency of the GACC to facilitate requests for aircraft, especially during lightning events and periods of increased initial attack activity.

“Closest resource concept” will be followed by all agencies for IA and is defined as: Regardless of the controlling agency, the agency resource that has the shortest distance to reach a predetermined incident location first will be dispatched. Established dispatch channels will be followed at all times. When multiple agency aircraft are available at a base, the agency specific aircraft will be dispatched to that agency’s incident first. When an aircraft is on base and in the IA Zone of Influence, Units will order

directly from the administering base, via the intercom for initial attack. Requests for the aircraft when the closest base is vacant will be ordered via intercom through the GACC.

The GACC will fill orders from the most appropriate source available. The most appropriate source will be determined on the basis of urgency, resource availability, delivery time, reasonable cost effectiveness, impact on other units, and consideration of the overall fire program.

The following information is required:

The GACCs are responsible for the strategic movement of aircraft throughout the state, as needs dictate. The CA Interagency Aircraft Dispatch script (FC 106/eFC 106) will be used by all Units ordering aviation resources. Refer to Appendix page 180.

- Incident Name
- Order number
- Location: Descriptive location; section, township, and range: latitude/longitude When giving latitude and longitude use the format of degrees, decimal minutes (DD mm.mm)
- IP (Initial Point): When applicable, include name, latitude/longitude and altitude.
- Air Tactics/Air to Air FM, repeater tone if applicable
- Victor/Air to Air AM
- Air to Ground FM, repeater tone if applicable
- Ground Tactics/FM
- Command Frequency/FM, repeater tone
- Request number
- Other Aircraft
- Hazards

Unless specified by Unit standard response plan, initial attack aircraft orders in the current ordering system of record should be ordered as:

- FWAA - Fixed Wing, Air Tactical
- FWLP - Fixed Wing, Leadplane
- FASM - Fixed Wing, Aerial Supervision Module (ASM)
- ATTA - Airtanker, Any Type
- HE1S - Helicopter, Type 1, Standard (with crew) OR
- HE2S - Helicopter, Type 2, Standard (with crew)
- HE1R - Helicopter, Type 1, Restricted (no crew) OR
- HE2R - Helicopter, Type2, Restricted (no crew)
- SMIA - Load, Smokejumper, Initial Attack

Aircraft call signs and ETA's will be relayed at the time of departure from the base

Very Large Airtankers (VLATs) may be used on CAL FIRE incidents to augment Type 1, 2, and Type 3 Multi-engine air tankers and not as a replacement.

Additional Aircraft Requests

Once the aircraft identified by the initial response plan have been committed, all additional requests will be placed with the GACC by ICS standard types. Additional aircraft ordered may not be the closest based on GACC operational needs.

All requests for agency initial attack or extended attack aircraft will be ordered through the GACC via the Intercom. The FC 106 script will be used to ensure all required information is conveyed in a standard format. A new FC 106 will be generated and read daily for each fire that goes into extended attack when one of the following criteria are met:

- Fixed-Wing aircraft assigned
- There is a change in frequencies
- There is a new request for aircraft

A new FC-106 is not required when there are no fixed wing assigned and there are no other changes to the incident.

Single Engine Airtankers (SEATs) may be used under the following conditions:

- Used as initial attack airtanker as long as it is the closest resource, and the pilot is IA qualified.
- If pilot is not IA rated aerial supervision must be present.
- Used with other airtankers only if a Lead Plane, Air Attack or ASM is present.
- If the request is filled with a DOI On-Call SEAT, SEMG or ATBM must be identified with contact information and documented in the Special Needs of the resource order block before NICC assigns a SEAT.
- On CAL FIRE incidents, may only be used to augment Type 1, 2 and Type 3 Multi-engine Airtankers and not as a replacement.

Airtanker Dispatch Rotation

When more airtankers are available at the base than originally requested or allotted for the incident, the Host Unit or air attack base can request rotational use of all available airtankers. The air attack base or unit will initiate the request for rotation and route it through the ECC and GACC for consideration.

At no time will additional rotation airtankers exceed the number of airtankers originally allotted to be flying on the incident.

Each airtanker assigned to the incident will be issued its own “A” request number.

For airtanker rotation, reference NWCG Standards for Airtanker Base Operations, PMS 508

Aircraft Diverts

Diverts

This divert policy applies to all incidents regardless of size. All agencies should utilize the closest available airtanker on a new incident.

No Divert

When the IC recognizes critical fire advances and has urgent need for continued air support for the direct and immediate threat to life of a firefighter or a civilian by the approaching fire front, the IC shall

immediately contact their dispatch and request a "no divert" for a specified number of aircraft. The dispatch center will immediately relay the request to the appropriate GACC via intercom. It is necessary for the dispatch center to include in the transmission, the life threat and the specific number of tankers being requested in the no divert.

Example: "On the Salt Fire, requesting a "no divert" for two airtankers due to immediate life threat to firefighters and civilians."

The GACC will determine the number of tankers approved for the "no divert" based on the operational needs of the region/state.

The "no divert" status will be reevaluated every 30 minutes. When the "no divert" is no longer needed as determined by the IC, the IC will immediately advise the dispatch center and cancel the "no divert". The dispatch center will then contact the appropriate GACC over the intercom with the cancel.

Airspace Coordination

Fire Traffic Area (FTA)

FTA is the initial attack airspace structure over a wildland fire.

For examples of FTA refer to the Appendix for a link to this information.

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. The FAA requires that latitude/longitude information for the TFR must be provided in degrees, minutes, and seconds, including reference to north latitude and west longitude. If seconds' information is not available, add two (2) zeros to the description. Do not use spaces, commas, or other symbols in the description. Example: ddmmssN/dddmmssW or 450700N/1175005W.

When requesting a polygon TFR the corner points should be listed in a clockwise sequence starting with the Northwest point, around the requested TFR to avoid "bow tie" depictions.

Units are responsible for initiating and cancelling all TFR requests with a phone call and completion of the Interagency Request for Temporary Flight Restrictions form (FAR part 91.137), to the appropriate GACC, as well as processing requests in the current ordering system of record. This form is located at: https://gacc.nifc.gov/oscc/logistics/aviation/docs/2016_TFR.pdf and the link to this form may also be found in the California Interagency Standards for Resource Mobilization Appendix. All TFR violations must be reported immediately to the GACC.

GACCs are responsible for coordinating the issuance and cancellation of all TFR requests with the FAA. During high incident activity an Airspace Coordinator may be requested. The GACC will contact the Air Route Traffic Control Center (ARTCC) and military facility if applicable.

Media aircraft, medical aircraft and law enforcement aircraft are allowed in the TFR as long as they contact the air attack on the posted Air to Air frequency to request permission prior to entering the area and at what altitude.

Non-Agency, Non-Cooperator UAS TFRs (91.137(a)(1))

Reference Interagency Aviation Bulletin23-06: https://www.fs.usda.gov/sites/default/files/2024-02/IAIB-23-06.pdf

Due to potential conflicts with Non-Agency, Non-Cooperator UAS Temporary Flight Restrictions (TFRs) associated with Beyond Visual Line of Sight (BVLOS) Special Government Interest (SGI) waivers, the Federal Aviation Administration (FAA) has agreed to actively assist with mitigating any potential adverse impacts. If a conflict arises, there is a coordinated procedure to request an SGI associated BVLOS TFR to be canceled. The planned implementation date is September 1, 2023.

Procedures:

- If an Initial Attack occurs at the same time / location or area as a 91.137(a)(1) TFR, the respective GACC will call the FAA SOSC at 202-267-8276 to inform them that the TFR needs to be cancelled.
- Once the UAS has been reported to be on the ground, the SOSC will cancel the TFR.
- Submit a SAFECOM if engagement is delayed and report to your GACC Aircraft Coordinator
- Reference internal best practices for procedures.

Airspace Conflicts

Consult the NWCG Standards for Airspace Coordination at: https://www.nwcg.gov/publications/520

The Aircraft Conflict Initial Report can be accessed at https://www.nwcg.gov/tags/iasc

Aviation personnel have a responsibility to identify and notify the Domestic Event Network (DEN) and report conflicts and incidents through the Interagency SAFECOM (Safety Communication) System to assist in the resolution of airspace conflicts. Notification to the DEN should be timely and by phone at 202-267-4700, option 1. When a conflict or incident occurs, it may indicate a significant aviation safety hazard. Conflicts may include Near Mid Air Collisions (NMAC), TFR intrusions, and FTA communication non-compliance. Further guidance is available in the NWCG Standards for Airspace Coordination.

Military Training Routes (MTR) and Special Use Airspace (SUA)

Military Training Routes and Special Use Airspace present conflicts with incident related aviation activities and will be identified by local Units. One source for this information is AP1B, Flight Information Publication, “Military Training Routes”. Each ECC should download a current edition of AP1B.book (jcs.mil). Special Use Airspace may be found on Sectional Aeronautical Charts. Critical airspace information pertinent to flight should be organized for easy and rapid utilization, i.e., displayed on dispatching hazard maps. Special Use Airspace (SUA) includes Low Altitude Tactical Navigation Areas (LATN), Military Operations Areas (MOA), Restricted Areas (RA), Prohibited Areas (PA), Alert Areas (AA), Warning Areas (WA), and Controlled Firing Areas (CFA). Units may obtain operational agreements with the military units having control over any Special Use Airspace in their area and keep the military advised of all activities (fire and non-fire) that may be occurring inside these areas. Units will follow up with notification to the GACC.

For deconfliction of Special Use Airspace, refer to the Documentation of Contacts Requesting Deconfliction of Airspace by the Military, the link to this form is found in Appendix..

Incident Related

When air activities of an unplanned nature (i.e., fire or flood) occur that may conflict with an MTR or an SUA the GACC Aviation Coordinator will contact the responsible military originating or scheduling facility to notify them of the situation and gather information on whether the routes are active. Provide the following information:

- MTR number and points along the route where incident is located.
- Whether route needs to be closed or altitude adjusted so route can remain operational and safe.
- Hours the restriction/change is to be in effect.
- Temporary airspace restriction, TFR (91.137) is filed with the FAA. If a TFR has not been requested through the FAA, the request to the military is considered a voluntary cessation of activity(s); it is between the agency and the military. Any conflicts arising will need to be coordinated directly with the military as no FAA air space restriction has been violated. All conflicts should be reported on SAFECOM Report (or OAS-34), to the Regional/State Aviation Safety Officer.

Intercom Traffic Related to Military Deconfliction

If an MTR or SUA is present, the GACC or the local ECC may announce “Aircraft Hazard MTR” and/or “Aircraft Hazard (Insert Name) MOA.” This identifies an MTR or SUA in the area of the incident. The status “unconfirmed” or “hot/active” will be announced after deconfliction with the scheduling facility by the GACC.

ECCs and/or tanker bases will notify responding aircraft of status provided by GACC. “Hot/Active” indicates that verbal confirmation has occurred with the scheduling facility and there is current or planned activity in that area. “Unconfirmed” indicates there was an attempt to contact the scheduling facility and it was unsuccessful.

Non-Incident Related

When a Unit schedules an air activity project that may conflict with a MTR, the GACCs Aircraft Coordinator will assist with the operating procedures and ensure that the use of the MTR is coordinated with the responsible military facility. The project needs must be made known to the GACCs Aircraft Coordinator at least two days prior to starting the project to allow time to coordinate with the military, so they may adjust their schedules if needed.

Temporary Airport Control Tower Operations

Requesting FAA Air Traffic Control Support - When aviation operations in support of an incident become too complex or unsafe at uncontrolled airports or helibases, the FAA may be requested to provide air traffic control support.

GACCs within the FAA’s Western Service Area (AK, AZ, CA, CO HI, ID, MT, NV, OR, UT, WA, and WY) may request FAA Air Traffic Control support through the Western Service Area Agreement or through a contract vendor. A lead time of 24 hours is desirable when ordering. If the FAA cannot supply radios, the incident COML will order radios as a Supply request through established ordering channels. Requesting Units are required to provide full support and subsistence for FAA assigned personnel, as needed, per FAA Agreement.

Temporary Airport Control Tower
Requesting Unit must complete and submit Temporary Airport Control Tower Form to the

GACC: https://www.nifc.gov/sites/default/files/document-media/temptower.pdf

If a VIPR Vendor is not available the GACC will contact the FAA for a Temporary Tower Request. For a CAL FIRE request this must go through the HEMS ordering system.

The GACC will contact the FAA's WSA Regional Operations Center (ROC) at 206-231-2420 and ask to speak to a duty officer regarding a Temporary Tower order. The ROC will connect the GACC with the appropriate FAA Duty officer. The Temporary Tower Request Form along with the aircraft resource order will be forwarded to the FAA at the time of the request. In addition, there is a helpful checklist in Chapter 11 of the Interagency Airspace Coordination Guide that aids in the ordering and set up process of a temporary tower.

Ordered in the current ordering system of record as: STMT – Service - Temporary Tower

For more information on airspace coordination refer to the NWCG Standards for Airspace Coordination | NWCG.

Air Communication

National Air Guard - 168.6250 MHz (Tx 110.9 Rx 110.9) - A National Interagency Air Guard frequency for government aircraft will be used for emergency aviation communications. Continuous monitoring of this frequency in narrowband mode is mandatory by Federal agency dispatch centers.

Restricted to the following use:

- Air-to-air emergency contact and coordination
- Ground-to-air emergency contact
- Air Guard Channel is not available for tactical frequency or use

National Flight Following - 168.6500 MHz (Tx 110.9 Rx 110.9) is used to monitor interagency and contract aircraft. This frequency is used for flight following of official aircraft and is not intended to be used for tactical communications or incident operations. All Federal dispatch centers will monitor the National Flight Following frequency at all times.

Restricted to the following use:

- Flight following, the dispatching of local aircraft, and/or redirection of aircraft
- Air to Ground and Ground to Air administrative travel, not tactical communications
- Not authorized for ground to ground traffic

Pre-Assigned Aviation Frequencies
In order for aircraft communications to be manageable and functional, air frequencies are preassigned on a temporary basis to expedite initial attack but will remain under the control of the GACC.

Once aviation resources have launched to an initial attack incident the aviation frequencies will not be changed due to a change in jurisdiction or transfer of the ordering point, until the end of the operations shift. An air frequency may be changed if there is a safety issue with the frequency.

Occasionally the preassigned frequencies will have to be withdrawn from a Unit to serve multiple incidents on another Unit. In that event, alternative frequencies will be provided by the GACC. A complete listing of pre-assigned frequencies can be obtained by contacting the Federal Aviation Coordinator at the GACC.

Requesting Additional Aircraft Frequencies

Initial Attack

When the aircraft communications load on an on-going incident is too congested to be handled by existing incident and air operations networks, temporary frequencies can be obtained. The IC should request additional frequencies.

Extended Attack

Extended Attack operations will be required to order new aviation frequencies allowing IA frequencies to be released. The IC will request replacement of initial attack frequencies as soon as the fire is expected to enter extended attack.

The Unit will request the following frequencies from the GACC: FQFM - Air to Air FM (Air Tactics), FQAA - Air to Air AM (Victor), and FQAG - Air to Ground (FM).

The GACC will be notified of all frequency releases.

Aircraft Flight Plan

For the link to the Aircraft Flight Request form (FS 9400-1a), refer to the Appendix page 180.

Federal

Reference Chapter 50 of the National Interagency Standards for Resource Mobilization or the Agency Aviation Management Plan.

In addition to FAA flight plans, which are required for all IFR flights, all agency contracted aircraft will file an agency flight plan with the originating unit ECC for all missions, with the exception of initial attack responses.

CAL FIRE

Only administrative flights require a flight plan.

Reference CAL FIRE Handbook 8300

Aircraft Flight Following

These procedures for flight following apply to all aircraft which move across Unit or Geographical boundaries. Flight following is the primary responsibility of the unit scheduling the flight (sending unit) and will remain so until transferred through a positive, documented handoff. If the flight will cross "traditional dispatch boundaries," the originating dispatch office must coordinate with the affected units and establish if the aircraft will be flight followed for the duration of the flight from the originating office or handed off when borders are crossed. Either option is acceptable but must be communicated and understood between dispatch offices and pilot/flight managers. The method to be used will be determined between the pilot and the dispatch office prior to departure. Receiving and intermediate units will only get involved in tracking the aircraft when requested by the sending unit or when the aircraft is overdue.

Once an aircraft has become airborne the flight manager/pilot will contact the ECC and relay the following information, this information will also be relayed when the aircraft is handed off to another unit for flight following responsibility:

- Aircraft tail number/Call sign
- Number of souls on board
- Amount of fuel on board (hours/mins)
- Estimated flight time to destination and/or first fuel stop.
- Aircraft will advise on method of flight following (AFF is the preferred method).

Types of Approved Flight Following Methods

Automated Flight Following (AFF). AFF displays real time information regarding an aircraft's location, speed, heading, altitude, and flight history.

Federal: For more information see the National Interagency Standards for Resource Mobilization, Chapter 50.

CAL FIRE: Reference the CAL FIRE Handbook 8150-4.

Web link for AFF: https://www.aff.gov/

Radio check-in/check-out**.** Flight following requires verbal communication via radio every 15 minutes. The ECCs will log the aircraft call sign, latitude, longitude and heading.

- National Flight Following (168.6500) Federal. Can be used for flight following of official aircraft and for aircraft dispatching and divert.
- Local Frequencies can also be utilized for flight following.

Flight Following Responsibilities

Sending Unit

- Ensure that the flight crews are properly briefed on flight following procedures, responsibilities, and frequency. Flight follow the aircraft to its final destination. Advise the pilot of any exceptions to routine flight following procedures. Obtain Actual Time of Departure (ATD)from initial departure airport from pilot/vendor or chief-of-party.

- Communicate to local GACC through established ordering channels all aircraft flight plans which cross Unit or GACC Boundaries. All ECC's will advise the GACC of all aircraft movement. The originating dispatch will ensure that their telephone number appears on the flight plan.
- Notify GACC of any delays/advances of a flight plan exceeding 30 minutes.
- Initiate appropriate procedures for overdue/missing aircraft. Utilize agency Aircraft Search/Rescue Guides as appropriate and notify GACC of overdue aircraft. CAL FIRE reference the CAL FIRE Handbook 8100, Procedure 8150-1 for Aircraft Accident/Incident Procedure, Procedure 8150-3 Overdue and Missing Aircraft, and Procedure 8150-4 Flight Following.

Pilot

- Receive briefing of flight following procedures from sending ECC.
- File an FAA flight plan.
- Obtain and carry the sending ECC, GACC's and NICC's 24 hour telephone numbers. Contact sending ECC at time of initial departure and provide ATD.
- Contact sending ECC while enroute as directed.
- Call originating/receiving ECC upon arrival at destination.

Receiving Unit

- Notify the sending unit of any aircraft which has not arrived within 30 minutes of ETA.
- If problems are encountered contacting the sending unit, contact the GACC for assistance.

Sending GACC

- Forward flight plan information to the receiving GACC
- If flight crosses GACC boundaries outside of California, forward to NICC.
- Notify receiving GACC and NICC of any delays/advances of flight plan exceeding 30 minutes.
- Immediate notification to NICC when a Federal aircraft on GACC to GACC flight is overdue/missing.
- Immediate notification to CAL FIRE Region Duty Officer when a CAL FIRE aircraft is overdue/missing.
- Immediate notification to Forest Service Regional Aviation Safety Officer or respective DOI Aviation Managers when a Federal aircraft is overdue/missing.
- Coordinate with units/GACCs/NICC in searches for overdue/missing aircraft.

Receiving GACC

- Relay flight plans to all units affected by the flight plan through established dispatch channels.
- Notify intermediate or receiving units of any delays/advances of flight plan exceeding 30 minutes.
- Coordinate with intermediate or receiving units in searches for overdue/missing aircraft.

NICC

- Monitor federal flight plans for additional utilization.
- Coordinate with sending and receiving GACCs in searches for overdue/missing aircraft.

Aircraft Release

All aircraft users should anticipate that tactical aircraft could be reassigned to new incidents at any time, especially upon the completion of the current assignment.

At no time will supervisory aircraft or the ECC release positive control of any tactical aircraft until approved by the GACC. Flight following will be performed on all released tactical aircraft.

Units may release charter and CWN aircraft to the vendor without flight following, providing there are no agency passengers or cargo on board and will make notification to the GACC.

All airtankers will be released daily and reordered for next day's shift by 1900 hours by the unit ECC, under a new request number. If aircraft is needed for the next day place request to the GACC prior to 1900 hrs the day before.

All federal aerial supervision aircraft may remain on their original request number (A#) until released from the incident, diverted to another incident, or going on days off. On State incidents, all (state and federal) aerial supervision aircraft will be released at the end of each day. They need to be reordered for next day's shift by 1900 hours, under a new request number.

Notification for Aircraft Accident or Incident With Serious Potential

Upon notification of an aircraft accident or incident with serious potential the following notifications will be made:

Federal

Unit - Immediately notify their Aviation Officer or UAM, Unit Duty Chief, Agency Administrator, and GACC Federal Aircraft Coordinator.

Federal Aircraft Coordinator – Notify the GACC Duty Chief, the Regional Aviation Safety Officer, the Regional Aviation Officer and NICC Coordinator-On-Duty (COD).

State

Unit - Notify through the Unit Duty Officer chain-of-command, the Unit Duty Chief

Unit Duty Chief - Notify through the Duty Chief chain-of-command, the Region Duty Chief, Sacramento Fire Protection Duty Chief and Tactical Air Operations Duty Officer.

Unit Duty Officer - Notify the Aviation Safety Officer via the Aviation Management Unit (AMU). Reference the CAL FIRE Handbook 8100, procedure 8150-1 and 8150-2.

Air Tactical Supervision

Refer to the "Aerial Supervision Aircraft" chart at the end of this chapter for a listing of identifiers, locations, pilots and qualifications.

Aviation operations on an incident are often conducted under extremely adverse flight conditions such as congested airspace, reduced visibility, adverse weather conditions and mountainous terrain, all of which

add to the complexity of aircraft operations over an incident. For Fire Traffic Area over an incident, refer to the Appendix page 180 for a link to this information.

Air Tactical Supervision Over an Incident.

Individual situations with their inherent complexities dictate the level of supervision required to safely and effectively conduct an aerial suppression operation. This section identifies levels of Air Tactical Supervision required over an incident and summarizes the intent of USFS, DOI and CAL FIRE manual directives. Reference the Interagency Aerial Supervision Guide.

Aerial Supervision Requirements

Aerial supervision requirements are defined by the Interagency Aerial Supervision Guide per the chart below. The following terms are used in the chart.

Required: Aerial supervisory resource(s) that shall be over the incident when air tactical operations are being conducted.

Ordered: Aerial supervisory resources shall be ordered by the appropriate controlling entity. (Air tactical operations may be continued while the aerial supervision resource is enroute to the incident or is on order. Operations can be continued if the resource is not available.)

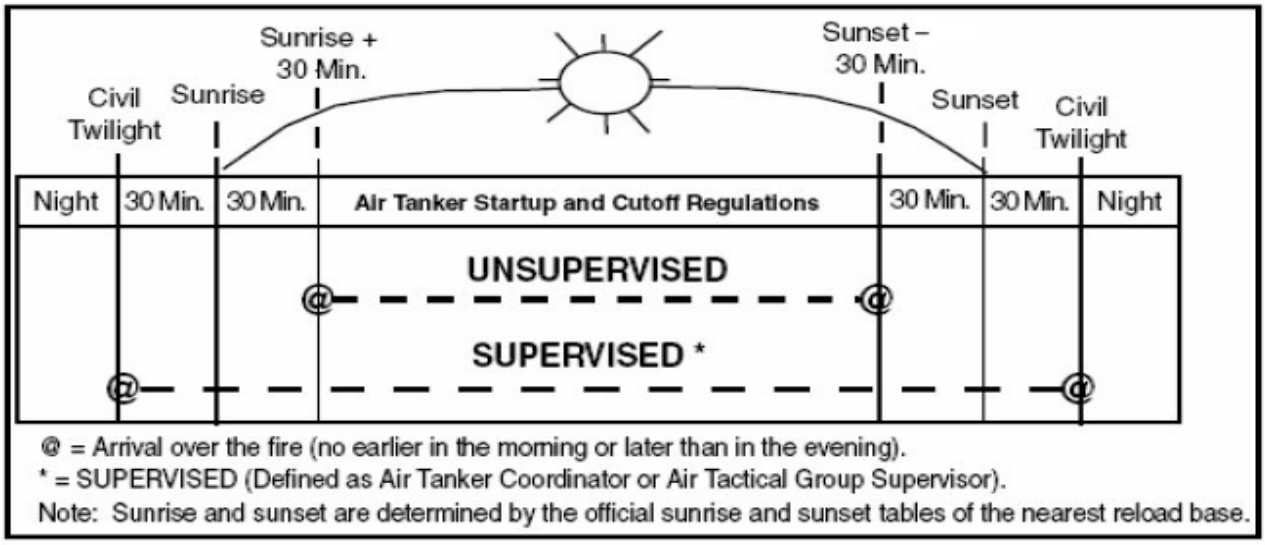
Over: The air tactical resource is flying above or is in a holding pattern adjacent to the incident.

Assigned To: Tactical resource allocated to an incident. The resource may be flying to and from, or on hold at a ground site.

Incident Aerial Supervision Requirements

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. Incidents with three or more aircraft over/assigned to them should have aerial supervision over/assigned the incident. 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 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



* The chart above does not apply to Night Aviation Operations. Airtanker dispatch, use the official sunrise, start-up, cutoff, and sunset times of the Airtanker Base nearest the fire.

Aerial Supervision Module (ASM)

The ASM is a fixed wing platform that utilizes two crewmembers to perform the functions of a traditional air attack and when necessary, performs low-level operations including Lead profiles. The ASM requires both crewmembers to be trained as a team, utilizing Crew Resource Management (CRM) skills and techniques to enhance safety, efficiency and effectiveness. Module operations require a fluid relationship between crewmembers that incorporates task sharing and coordination. The ASM provides aerial supervision in support of incident objectives.

An ASM is formed by pairing an ASM qualified Lead Pilot and an ASM qualified ATGS. An ASM can perform Lead Plane duties and Air Attack duties at the same time.

National designators will be used to identify the operating agency and crewmembers. For Forest Service ASM units, the Lead Plane call sign will be used, and “Bravo” will replace “Lead”. For example: Bravo 5-2. For CAL FIRE ASM units, the call sign “Charlie” will be used. For BLM ASM units, call sign “Kilo” will be used.

All dispatching of Lead Planes/ASMs will be done by the GACCs. Normal ordering procedures will be followed.

The GACC Federal Aircraft Coordinators will coordinate with the Aviation Group for the availability and assignments for all Federal Lead/ASM planes assigned to California. Refer to end of this chapter for a complete listing of pilots, locations, qualifications, and identifiers.

GACCs will be responsible for the Aircraft Flight Request/Schedule, form 9400-1a (flight strip), when needed for the aircraft.

CAL FIRE may, upon request, provide up to three qualified Lead plane/Aerial Supervision modules. Minimum status includes MAFFS and VLAT lead qualifications.

Airtankers

Airtanker Standard ICS Types

Catalog Item	Capacity (Minimum)	ICS Type
VLAT	5000+ gallons	1
1	3,000 to 4,999 gallons	1
2	1,800 to 2,999 gallons	2
3	800 to 1,799 gallons	3
4	up to 799 gallons	4

Very Large Airtanker (VLAT)

VLATs can only be reloaded at specific bases. They are identified in the "Airtanker Bases" chart at the end of this chapter.

DC-10

These aircraft can be used on all lands in California and if available, may require up to 24 hours for activation. These aircraft are best utilized on rapidly emerging fires which are, or will be moving into the extended attack phase. Consider using the DC-10 (12,000 gallons) if you are anticipating continuous use of multiple Type 1 and Type 2 Airtankers.

Ordered in the current ordering system of record as: VLAT - Airtanker, VLAT

Type 1 Airtanker

Lockheed L-188 Electra/C-130/BAE-146/RJ-85 and MD-87:

They can each carry a minimum of 3,000 gallons. The Electra is not approved for use within federal jurisdiction, unless it is a situation that requires immediate action to prevent the loss of life and property and has been authorized by the Regional Aviation Officer. This approval will be on a case by case basis. Any qualified Federal or State Lead Plane can lead the Electra.

Ordered in the current ordering system of record as: LAT1 - Airtanker, Type 1

Type 2 Airtanker

Lockheed P-3 Orion:

These aircraft can carry a minimum of 1,800 gallons

The Lockheed P-3 Orion is not approved for use within federal jurisdiction, unless it is a situation that requires immediate action to prevent the loss of life and property and has been authorized by the Regional Aviation Officer. This approval will be on a case by case basis. Any qualified Federal or State Lead Plane can lead the Lockheed P-3 Orion

Ordered in the current ordering system of record as: LAT2 - Airtanker, Type 2

Type 3 Airtanker

S2-T Tracker

These aircraft can carry a minimum of 800 gallons

Ordered in the current ordering system as: ATM3 - Airtanker, Type 3 (Multi-Engine)

CL-215 and CL-415

The CL-215 and 415 are approved water scooping aircraft in California. The CL-215 carries 1,400 gallons maximum and the CL-415 carries 1,600 gallons maximum.

Ordered in the current ordering system of record as: ATM3 - Airtanker, Type 3 (Multi-Engine)

Special Needs: Scooper

Air Tractor AT-802 F

Single engine airtanker capable of carrying 800 gallons.

Ordered in current ordering system of record as: ATS3 - Airtanker, Type 3 (Single Engine)

Type 4 Airtanker

Air Tractor AT-802 and AT-602/Turbine Thrush/Turbine Dromader/Piston Dromader:

These aircraft can carry a maximum of 799 gallons.

Ordered in current ordering system of record as: ATS4 - Airtanker, Type 4 (Single Engine)

Federal Modular Airborne Firefighting Systems (MAFFS)

MAFFS are military transport aircraft reconfigured to deliver retardant. They are activated to augment and enhance contract and agency airtanker capabilities. The Air Force requests a 24 hour lead time, however, in some cases they can expedite mobilization. Requests will be placed through normal dispatch channels in the current ordering system of record.

MAFFS can only be reloaded at specific bases. They are identified in the “Airtanker Bases” chart at the end of this chapter.

CAL FIRE requests for MAFFS activation follow CAL FIRE Handbook 8100 procedure 8151-6.

Ordered in the current ordering system of record as: LAT1 - Airtanker, Type 1.

Smokejumper Aircraft

California Smokejumpers and aircraft are national resources, administered and managed by the GACCs. Priorities for their use are established nationally.

Region 5 maintains two smokejumper (para-cargo) fixed wing aircraft during the active fire season that are based at Redding. They are identified as "Jump 5-1" and "Jump 5-2".

NOPS will determine the number of aircraft and Smokejumpers available for a given day.

Smokejumpers arrive at an incident with tools and supplies for three days of fire suppression activity. The smokejumper incident commander will contact the ordering Unit and arrange for incident demobilization.

Responsibility for arranging transportation of smokejumpers back to their base lies with the ordering Unit. If problems arise, contact the GACC for assistance.

Satellite Bases

When smokejumpers are being deployed to SOPS, satellite bases may be activated. When a SOPS satellite base is activated, a smokejumper liaison will be assigned by the NOPS smokejumper base.

When there is an activation of a satellite base in SOPS jurisdictional area, the operational control of the satellite base will remain under SOPS. The smokejumper plane and the smokejumpers themselves will be hosted by SOPS and be requested on OSC preparedness/preposition order.

NOPS will fill all requests for smokejumpers, para-cargo, smokejumper/para-cargo aircraft, and necessary supplies for all smokejumper satellite base operations. NOPS smokejumper base will ensure that all satellite smokejumper bases are properly outfitted. Any additional orders for smokejumpers, para-cargo, supplies, and aircraft will be made through NOPS.

All requests from a SOPS Unit for smokejumpers when there is an activated satellite base will be processed through normal dispatch channels. All agencies will place the request for smokejumpers as an "A" number as "Fixed Wing, Smokejumper", located under Fixed Wing in the current ordering system of record.

Satellite base resources; smokejumpers, supplies, and aircraft in SOPS will be demobilized through SOPS in coordination with NOPS.

Para-Cargo Delivery

The Smokejumper Unit is charged with maintaining the para-cargo delivery system the following information is needed to fill a para-cargo request:

- Desired Cargo
- Incident name, order number and "A" request number
- Location of drop zone (Legal or Latitude/Longitude)
- Ground contact
- Desired time of delivery

Almost all fire cache items can be delivered via para-cargo. In addition, special items such as fresh food, drinking water and sack lunches can also be delivered. Emergency medical care and rescue equipment can

be delivered via para-cargo. The smokejumper unit maintains six trauma kits with IV fluids and TRS litters rigged for Para-cargo delivery, every Smokejumper aircraft carries one of these kits available for order at all times. Additional trauma kits/TRS litters, a basket litter with wilderness wheel, and an AED are available for order from the Redding base. IV starts must only be administered by qualified individuals.

The time frames for delivery of para-cargo are dependent on the availability of requested items, aircraft, cargo riggers and cargo droppers. As a general rule, any fire cache items can be ready within two hours and special items within four hours. Orders placed after dark can be prepared at night and delivered at dawn.

Para-cargo weight capacities vary for aircraft assigned.

Para-Cargo orders are requested in the current ordering system of record as Aircraft, Fixed Wing, and Cargo.

Incident Awareness and Assessment (IAA)

Incident Awareness and Assessment (IAA) is the use of remote sensing technology for gathering and disseminating timely and usable information throughout all stages of wildfire and other emergency incidents that federal, state, and local emergency services agencies respond to. In the context of wildland fire response, IAA information provides critical situational awareness for fireline personnel, Incident Management Teams (IMT), fire managers, and agency administrators to inform tactical and strategic decisions. IAA capabilities include, but are not limited to, the following:

- Electro-optical (EO) still images
- Infra-red (IR) still images,
- EO and IR Full Motion Video (FMV)
- Mapping Products
- Heat Detection
- All Risk Incidents

Products are available at multiple time scales ranging from near real-time to periodic refresh at daily or sub-daily frequency. Systems intended for wildland fire operations are evolving and currently include small hand-held devices, sensors on manned or unmanned aircraft, and satellites.

Links

IAA Hub Site: Incident Awareness and Assessment (IAA) Hub

Request IAA Support: IAA Mission Request Form (NIFC ArcGIS Online account required)

Products and new detections may come through several sources depending on the platform assigned to the mission, including the following:

- Fire EGP Fire Enterprise Geospatial Portal (wildfire.gov)
- To obtain an account, please contact your Regional Intelligence office.
- Platform specific information methods (i.e. FIRIS Slack Channel)
- Email to the Point of Contact (POC) identified in the IAA request form. There can be multiple POCs and contact methods entered.
- IAA Detection (Sensored Aircraft) map – on the IAA hub below the IAA Mission Request Status Viewer, only for new detections,
- Radio voice communication with aircraft

Further Assistance

Both GACCs have several personnel who can help answer questions on IAA topics. Please reach out to Predictive Services, Intel, or the aircraft coordinator at the appropriate GACC for support."

Infrared Aircraft

Infrared mapping services are available for use on any wildland fire activity and are obtained through the appropriate GACC in accordance with the National Infrared Operations Plan.

Requests to the GACC will be via current ordering system of record and a completed Infrared Aircraft Scanner Request form, submitted on-line from the National Infrared Operations (NIROPS) website: https://fsapps.nwcg.gov/nirops/users/login . If internet is unavailable, a faxed copy to the GACC will be accepted. Request(s) need to be received at the NICC by 1500 Mountain Time to be scheduled for that night's flight, which means they must be received by the GACC no later than 1345 Pacific Time.

For the Infrared Aircraft Scanner Request Form, refer to the link found in the Appendix.

A qualified Infrared Interpreter (IRIN) must be confirmed or in place at the time of the Infrared flight. Refer to Chapter 20, Specialized Overhead.

Ordered in the current ordering system of record as: SIRF - Service – Infrared Flight

Night Aviation Operations

CAL FIRE

Requests for tactical night flying aviation resources shall be initiated by the on-scene incident commander and/or on-scene aerial supervisor. Unit Duty Chief approval for the request must be obtained prior to placing to the Region OCC.

Vina, Alma, Hollister, Prado, and Hemet are night operations capable.

Forest Service

An exclusive use air attack platform and helicopter will be available during fire season for night aviation operations. The night air operations will be hosted on the Angeles National Forest. The NAO aircraft have a one hour I/A response range, helicopter 90 nautical miles and air attack 240 nautical miles and will support wildfire suppression on Forest Service protected lands, including communities and homes within and adjacent to the Angeles, Cleveland, and San Bernardino National Forests, and the Southern half of the Los Padres and Sequoia National Forests (South of HWY 166).

Prior to committing night air operation resources outside the above approved locations approval must be granted from South Ops Duty Chief. The approval or denial of the request will be documented in the current ordering system of record by the South Ops GACC.

For a copy of the Region 5 Night Air Operations Mobilization and Notification Procedures please refer to the “Region 5 Night Air Operations Mobilization and Notification Procedure.

2020 Night Air Operations Dispatch Procedures.docx.pdf (nifc.gov)

Local Government night flying resources can be requested through your CAL OES Operational area via CFAA

Order in current ordering system of record as: FWAA - Fixed Wing, Air Tactical, Special needs: Night Ops

Order in current ordering system of record as: HE2S - Helicopter, Type 2 Standard, Special needs: Night Ops

Mobile Retardant Base

A mobile retardant base sometimes called portable retardant base, is an easily transportable retardant mixing and delivery system that can be established at airports or other incident locations to support fixed or rotary wing operations. The reporting location and the contact name and number must be in the resource order.

Federal

Order in the current ordering system of record and place to the appropriate GACC: SMRB – Service - Mobile Retardant Base.

CAL FIRE

Order in the current ordering system of record as: SMRB – Service - Mobile Retardant Base. Unit needs to contact CAL FIRE current contracted retardant vendor, local CAL FIRE airbase can provide this information.

Cooperators

Cooperator helicopters can be used if proper agreements, approvals, and procedures are in place. Reference Interagency Aerial Supervision Guide.

Helicopters

Helicopter Standard ICS Types

Restricted Helicopters (R): no passenger carrying, external cargo only. Standard Helicopters (S): passenger carrying, internal cargo and external cargo.

Type*	Bucket or Tank size		Seats (including pilot)
1	700	gallons	16
2	300	gallons	10
3	100	gallons	5
4	75	gallons	3

* Type is based on water carrying capacity and passenger capability.

Type 2S with crew (or alternately 1S for CALFIRE) is the standard IA helicopter.

Type 3S with crew are additional IA helicopter.

A Host Unit may use their Type 3S helicopters on local IA response. Type 1 Restricted are Large Fire Support helicopters (LFS).

CALFIRE is currently transitioning their Helicopter fleet to the new Sikorsky S70i platform which is classified as a Type 1S. You will see both Type 1S and 2S as a standard IA response.

Air Rescue

CAL FIRE

All CAL FIRE helicopters can perform rescue operations. This capability is intended for use on incidents to rescue trapped or endangered firefighters and citizens when there is no other feasible alternative for evacuation.

Local Government

Local Government hoist resources can be requested through your CAL OES Operational area via CFAA.

Federal

Federal short-haul programs must be approved by National Park Service and Forest Service offices. Any exemption to the plan must be represented by the program through the region for approval by the National Aviation Office (NPS) or Directory of Fire and Aviation (FS).

Forest Service Emergency Medical Short-Haul Operational Plan

National Park Service

NPS has 2 helicopters based at Yosemite National Park at Crane Flat (Type 2S) and Sequoia/Kings National Park at Ash Mountain (Type 3S). Both helicopters serve as the parks' primary rescue/life flight helicopter for life threatening emergencies and may not always be available.

NPS Helicopter Short-haul Operations Plan

Forest Service Short- Haul Orders

Orders for aircraft and short-haulers will be coordinated with the GACC and/or NICC and placed through normal channels. At a minimum, orders shall be filled with (6) Short-Haulers and a manager to support needs documented on the aircraft order through current ordering system. The Short-Haul spotter/manager will determine transportation needs for the additional short-haulers on the order.

Ordered in current ordering system of record as: SHLR - Short-Hauler

Short-Haul Helicopter: Standard Category Type 3;

Selected features identified as “Special Needs”: Short-haul capability

Refer to the “Helicopter Interagency Emergency Helicopter Extraction Source List:

Interagency Emergency Helicopter Extraction Source List | NWCG

Federal Helicopter Rappelling

Helicopter rappelling performed by qualified Helitack modules can be utilized for a variety of missions where conventional means of delivering personnel by ground or by other aerial platform is prohibitive due to time, geographical features, or other environmental conditions. Either a booster or CWN rappeler can be ordered through normal dispatch channels.

Refer to the “Helicopter” chart at the end of this chapter for a listing of rappel qualified helicopters.

Ordered in current ordering system of record as: RPIA – Load, Rappeller, Initial Attack

Booster Load of Rappelers

Overhead, HRAP – Helicopter Rappeller

Project Helicopter

Forest Service

Request for helicopter services when the Forests local exclusive use helicopter is unavailable or the Forest does not have an exclusive use helicopter.

For Type 1 limited helicopter or Type 2 standard/limited helicopter requests will be passed up to NICC for processing. Requests for Type 3 helicopters are processed at the GACC.

When requesting a helicopter for a project this additional information needs to be included:

- Type of helicopter needed
- Contact Name and Telephone number for Project Manager
- Contact Name and Telephone number for Helicopter Manager
- Approximate project length
- Fuel Truck, if needed

A copy of the Commitment of Fund Obligation (FS-6500-224) and a copy of the Project Aviation Safety Plan (PASP) or Mission Aviation Safety Plan (MASP) needs to be sent to dispatch and forwarded on to the GACC.

The GACC will either process the order if it is for a Type 3 helicopter or place the order up to NICC. If the request needs to go to NICC then a copy for Commitment of Funds Obligation Form and the signature page of the PASP/MASP will be sent to NICC for the contracting officer and the National Helicopter Specialist.

NICC will process the request by filling with an exclusive use helicopter with a modified contract or CWN helicopter.

Call When Needed (CWN) Aircraft

Call signs for CWN aircraft will be the last three numbers of the FAA tail number.

For the link to the Passenger and Cargo Manifest Form for CWN flights, refer to Appendix.

CAL FIRE

Unit ECCs are authorized to directly hire CWN aircraft. Reference CALFIRE Handbook 8100, procedure 8151-4.

If incident activity prohibits the ECC personnel from implementing the CWN hiring process, contact the GACC for assistance.

All payments are processed through the Unit's finance office utilizing the CAL FIRE 62 Emergency Aircraft Use Invoice.

Department of the Interior

A list of approved CWN aircraft and pilots are available via the Internet at: Aviation Support | IBC Customer Central (doi.gov) and is maintained by the Office of Aviation Services (OAS). DOI agencies are required to use the OAS Source List when ordering and utilizing CWN aircraft and pilots.

All Type 3 CWN helicopters that are located within the administrative jurisdiction of a BLM District may be ordered by the appropriate ECC from the OAS Source List. The ordering Unit will order or provide a qualified helicopter manager and crew members.

CWN Helicopter Selection Factors:

- Closest forces
- Cost effectiveness
- Performance specifications for density altitude/high altitude operations
- Carded and contracted for local or emergency use
- Special applications such as helitorch, fixed tank, long line, etc.
- Daily availability based on expected duration of assignment and projected use.

Type 1 and 2 helicopters are available under National Contract and will be requested through the GACC by ICS type and specifications.

CWN Inspection Criteria

All DOI helicopters are solicited and inspected by the OAS. The OAS and Forest Service will honor each other's inspection certifications. If the aircraft is not used immediately, it must be reinspected by the Project Inspector for contract compliance prior to use. This inspection includes checking all required equipment for installation and function. In addition, the logbook will be reviewed to see that the aircraft has not been damaged and that it is in compliance with required inspections (10-hour, annual, etc.).

CWN Forest Service

All CWN aircraft and helicopter contracts will be managed by the NICC, in reference to the National Interagency Standards for Resource Mobilization.

CWN Helicopter Modules – Forest Service

Call When Needed (CWN) helicopters will be managed by a qualified module when assigned for incident use. For project work, a qualified helicopter manager (HMGB) will be assigned as a minimum on federally hired CWN helicopter contracts.

Forest Aviation Officers are responsible for ensuring all Flight/Aircraft Use Report (FS 122s) are submitted into the ABS system for CWN aircraft used on their Forests. All payments will be processed through Aviation Business System (ABS) website. CWN Managers are responsible for providing performance evaluation forms to the GACC Aviation Coordinator for payment management in ABS.

For all non-fire projects, a copy of the PASP/MASP needs to be provided to the Unit and GACC by the Project Manager.

Module Requirements:

HELICOPTER TYPE	FAA STANDARD/TRANSPORT CATEGORY	FAA STANDARD CATEGORY Temporarily Designated for Limited Use	FAA CATEGORY Permanently Designated for limited Use or FAA Restricted Category
1	Manager * Plus four (4) Helicopter Crew Members**	Manager * Only	Manager * Only
2	Manager * Plus four (3) Helicopter Crew Members	Manager * Only	Manager * Only
3	Manager * Plus four (2) Helicopter Crew Members	Manager * Only	Manager * Only

*If the intended use is for Forest Service or DOI initial attack, the helicopter manager request must specify that a fitness level of arduous is required. Any other qualification requirements (ICT4, etc.) must also be specified in Special Needs. Remember to specify where the HMGB and helicopter are going to marry-up, also notated in Special Needs.

** Forest Service no longer allows passenger transport in Type 1 helicopters with the exception of authorized military helicopters.

Large Transport Aircraft

Federal

Large transport aircraft are used to mobilize and demobilize large volumes of overhead, crews, equipment and supplies nationally and internationally.

Large transport aircraft are National Resources and requests are filled at the national level (NICC) after the request has been initiated at the GACC by the Aircraft Coordinator.

The GACCs will place these requests with NICC at least 48 hours before the flight is needed.

UAS Ordering

Beginning 2024 all UAS will now be ordered as Aircraft A#'s and rostered with appropriate personnel (subordinates). https://uas.nifc.gov/uas-ordering

UAS Typing and Call Signs

The Forest Service has adopted NWCG standards for UAS typing and call signs utilized in emergency response activities. UAS are built in a multitude of configurations, which makes classification difficult. All UAS have varying capabilities and limitations. Utilization of the appropriate make and model is essential to ensure requested product is delivered. For example: some UAS have fixed cameras and others are on a gimbal- based system with interchangeable sensors. This section is intended to provide generic operational characteristics.

UAS Call Signs

Incident Operations

Call signs will only be provided to UAS that will be utilized on incident operations. Unmanned Aircraft System Pilots (UASP) will follow established incident communications protocols by utilizing current NWCG PMS 515 policy, as instructed in S-373 or RT-373. See Table 2.

If a fire aircraft is supporting non-incident operation, call signs will carry over.

Non-Incident Operations

Call signs will be assigned by the National UAS Fleet Manager, to the aircraft and utilized during communications. (e.g UR4-last 2 of assigned FAA Certificate Number)

Type of Aircraft (Unmanned – U)

Configuration (Fixed or Rotor – (F/R) Foxtrot/Romeo *phonetic alphabet

Endurance Type (1-4) *see table below

FAA Certificate Number (Agency designated number)

Table 2. UAS Types and Statistics (Source: NWCG-PMS 515).

Type	Configuration	Endurance	Data collection altitude (agl-feet)	Max. range (miles)	Typical Sensors*
1	Fixed-wing Rotorcraft	6-14 hours NA	3,500-8,000 NA	50 NA	EO/Mid-wave IR High quality IR
2	Fixed-wing Rotorcraft	1-6 hours NA	3,500-6,000 NA	25 NA	EO/Long-wave IR Moderate quality IR
3	Fixed-wing Rotorcraft	20-60 minutes 20-60 minutes	2,500 and below 2,000 and below	5 5	EO/IR Video and stills Moderate quality IR
4	Fixed-wing Rotorcraft	Up to 30minutes Up to 20 minutes	1,200 and below 1,200 and below	<2 <2	EO/IR Video and stills Moderate quality IR

*Sensor payloads are variable but typically include daylight (electro-optical), infrared (IR), thermal, or mapping cameras. Type 1 and 2 UAS carry multiple camera types in a gimbaled configuration.

Operational Characteristics

Type 1 and 2

These aircraft will generally be operated by contractors and provide strategic situational awareness (SA), mapping and intelligence surveillance and reconnaissance (ISR), provide data for monitoring, measuring, assessments, and planning for natural resource management purposes.

- They typically operate above all other incident aircraft.
- Communications are maintained with the UAS crew on the assigned Victor (AM) or air-to-ground (FM) frequencies.
- All Type 1 and 2 contract aircraft will be equipped with Mode C transponders.
- Typical aircraft are the Scan Eagle, Aerosonde, or Silent Falcon.

Type 3 and 4

These aircraft are generally agency operated and perform tactical SA or mapping missions on/near the fire line or incident. Smaller scale monitoring, measuring, aerial photography for resource projects.

- Most do not carry transponders.
- Communications are maintained with the UAS crew only on assigned FM frequencies.
- None are equipped with Automated Flight Following (AFF) equipment.
- Typical aircraft are the Anafi USA GOV, Freefly AltaX

Aerial Supervision Aircraft

GACC	AIR ATTACK	UNIT	BASE/FAA ICAO
North Ops	5	KNF	Siskiyou – SIY
North Ops	6	LNF	Chester – O05
North Ops	17	TNF	Grass Valley – GOO
North Ops	50	ONC	Redding – RDD
North Ops	110	MEU	Ukiah – UKI
North Ops	120	HUU	Rohnerville – FOT
North Ops	140	LNU	Sonoma – STS
North Ops	210	BTU	Chico – CIC
North Ops	230	NEU	Grass Valley – GOO
North Ops	240	RDD	Redding – RDD
North Ops	651	CDF	McClellan – MCC
North Ops	652	CDF	McClellan – MCC
North Ops	653	CDF	McClellan – MCC
North Ops	655	CDF	McClellan – MCC
North Ops	656	CDF	McClellan – MCC
North Ops	658	CDF	McClellan – MCC
North Ops	659	CDF	McClellan – MCC
South Ops	7	LPF	Santa Maria – SMX
South Ops	12	BDF	San Bernardino – SBD
South Ops	15	SNF	Fresno – FAT
South Ops	51N	ANF	Fox Field – WJF
South Ops	52	BDF	San Bernardino – SBD
South Ops	310	RRU	Hemet/Ryan – HMT
South Ops	330	SDU	Ramona – RNM
South Ops	340	SLU	Paso Robles – PRB
South Ops	410	TUU	Porterville – PTV
South Ops	430	FKU	Fresno – FAT
South Ops	440	TCU	Columbia – O22
South Ops	460	BEU	Hollister – CVH

Airtanker Bases

Air Tanker Base Directory [Fire Enterprise Geospatial Portal (wildfire.gov)]

GACC	AIRTANKER	BASES	AGENCY	AIRCRAFT APPROVED*
North Ops		Chester (O05)	USFS	S2, L, S
North Ops	T-93	Chico (CIC)	CAL FIRE	S2, L, M, S
North Ops	T-88, T-89	Grass Valley (GOO)	CAL FIRE	S2, S
North Ops		Klamath Falls, OR (LMT)	USFS	S2, L, S, M
North Ops	T-94, T95	Redding (RDD)	CAL FIRE/ USFS	S2, L, S
North Ops	T-96	Rohnerville (FOT)	CAL FIRE	S2, L, S
North Ops	T-85, T-86	Sonoma (STS)	CAL FIRE	S2, L, S
North Ops		Stead, NV (RTS)	BLM	S2, L, S, M
North Ops	T-90, T-91	Ukiah (UKI)	CAL FIRE	S2, S
South Ops	T-82, T-83	Columbia (O22)	CAL FIRE	S2, S
South Ops		Fresno (FAT)	USFS	S2, L, S, M
South Ops	T-72, T-73	Hemet/Ryan (HMT)	CAL FIRE	S2, S
South Ops	T-79, T-80	Hollister (CVH)	CAL FIRE	S2, S
South Ops		Lancaster (WJF)	USFS	S2, L, S
South Ops	T-74, T-75	Paso Robles (PRB)	CAL FIRE	S2, L, S, M
South Ops	T-76, T-78	Porterville (PTV)	USFS/CAL FIRE	S2, L, S
South Ops	T-70, T-71	Ramona (RNM)	CAL FIRE	S2, S
South Ops		San Bernardino (SBD)	USFS/BLM	S2, L, S, M, V
South Ops		Santa Maria (SMX)	USFS	S2, L, S, M, V

Reload Bases

GACC	AIRTANKER	BASES	AGENCY	AIRCRAFT APPROVED
North Ops	T-100	McClellan (MCC)	CAL FIRE	S2, L, S, V
North Ops		Siskiyou (SIY)	USFS	S2, L, M, S
South Ops		Bishop (BIH)	USFS/BLM	
South Ops		Brown Field (SDM)	CAL FIRE	S
South Ops		Channel Islands (NTD)	CAL FIRE	S2, L, S

APPROVED AIRCRAFT LEGEND — Additional reload bases may be approved

S2=CAL FIRE Air Tanker — L=Large Air Tanker (LAT) — M=MAFFS

S=Single Engine Air Tanker (SEAT) — V=Very Large Air Tanker (VLAT)

MAFFS Operating Bases

GACC	AIRPORT NAME	LOCATION	REMARKS
North Ops	Chico	Chico	R
North Ops	McClellan ATB	Sacramento	H/F Portable Retardant Plant
South Ops	Fox	Lancaster	R
South Ops	Fresno Air Terminal	Fresno	R limit 4 Aircraft
South Ops	NTD Channel Islands ANGS	Ventura	H/F Portable Retardant Plant
South Ops	Paso Robles Base	Paso Robles	R
South Ops	San Bernardino International	San Bernardino	R/H/F/ Portable Retardant Plant
South Ops	Santa Maria	Santa Maria	R
Northwest	Kingsley Field	Klamath Falls, OR	R/H/F
Great Basin	Reno/Stead	Reno, NV	R
R= Reload H= Hub F=Full Activation Additional reload bases may be approved			

Helicopters

Aircraft are assigned numbers and are prefixed in California with the word “Copter". Helicopters from other regions may use the word “Helicopter”.

Federal Helicopters

GACC	HELICOPTER	FOREST/PARK/DISTRICT	BASE
North Ops	502	Klamath – KNF	Scott Valley – A30
North Ops	503	Klamath - KNF	Scott Valley – A30
North Ops	506	Shasta - Trinity - SHF	Trinity – TRI
North Ops	510	Lassen - LNF	Chester – 5Q2
North Ops	512	Plumas - PNF	Quincy – 72CA
North Ops	514	Tahoe - TNF	Grass Valley – GOO
North Ops	516	Eldorado - ENF	Pacific – PAC
South Ops	517	Stanislaus - STF	Bald Mt – 76CA
South Ops	520R	Sierra - SNF	Trimmer – TRM
South Ops	522	Sequoia - SQF	Peppermint – PMT
South Ops	523	Sequoia - SQF	Kernville – L05
South Ops	525	Inyo - INF	Independence – 207
South Ops	527	Los Padres - LPF	Arroyo Grande – ARG
South Ops	528	Los Padres - LPF	Santa Ynez – IZA
South Ops	530	Los Padres - LPF	Chuchupate – CHU
South Ops	531N	Angeles - ANF	Fox Field - WJF
South Ops	532	Angeles - ANF	Fox Field - WJF
South Ops	534	San Bernardino - BDF	Heaps Peak – HPS
South Ops	535	San Bernardino - BDF	Keenwild – KEN
South Ops	538	Cleveland - CNF	Ramona – RNM
South Ops	551	Yosemite - YNP	Crane Flat – CFL
South Ops	552	Sequoia NP - KNP	Ash Mountain – 2CA0
North Ops	553	BLM Susanville - NOD	Ravendale – RAV
South Ops	554	BLM CA Desert - CDD	Apple Valley – 10CA
R = Rappel		N = Night Ops	

Federal Type 1 Helibases

GACC	HEAVY BASES	FOREST/AGENCY	BASE
North Ops	Type 1L	Placerville - PVF	Pacific - PAC
North Ops	Type 1L	Lassen - LNF	Chester - 5Q2
North Ops	Type 1L	Klamath - KNF	Siskiyou - SIY
North Ops	Type 1L	Tahoe - TNF	Truckee - TRK
South Ops	Type 1L	San Bernardino – BDF	San Bernardino – SBD
South Ops	Type 1L	Cleveland – CNF	Kitchen Creek – 00CN
South Ops	Type 1L	Sierra – SNF	Fresno - FAT
South Ops	Type 1L	Los Padres – LPF	Casitas - CAS
South Ops	Type 1L	Sequoia – SQF	Porterville - PTV
South Ops	Type 1L	Inyo – INF	Bishop - BIH

CAL FIRE

HELICOPTER	TYPE	UNIT	BASE
601	T1S	CAL FIRE Helicopters will rotate between bases based on operational need	North Ops – AMU - McClellan - MCC North Ops – MEU - Howard Forest - HFS North Ops – HUU – Kneeland – O19 North Ops – LNU - Boggs Mountain - BGS North Ops – SCU - Alma - ALM North Ops – LMU - Beiber - BBR North Ops – TGU - Vina - VNA South Ops – RRU - Hemet/Ryan - HMT South Ops – BDU - Prado - PDO South Ops – TCU - Columbia - O22 South Ops – BEU - Hollister - CVH
602	T1S		
603	T1S		
604	T1S		
605	T1S		
606	T1S		
607	T1S		
608	T1S		
609	T1S		
610	T1S		
611	T1S		
612	T1S		
613	T1S		
614	T1S		
615	T1S		
616	T1S		
620	T2S		
621	T2S		
622	T2S		
623	T2S		
624	T2S		

Contract Counties

HELICOPTER	AGENCY/UNIT	BASE
ORC 1 T2S	Orange County Fire – ORC	Fullerton - FUL
ORC 2 T2S	Orange County Fire – ORC	Fullerton - FUL
H 76 T2S	Orange County Fire – ORC	Fullerton - FUL
HT 47 T1R	Orange County Fire – ORC	Fullerton - FUL
HT 55 T1R	Los Angeles County Fire – LAC	LAC Helicopters rotate between three helibases: Brackett Field - POC Barton Heliport - PAI Camp 8 Heliport - CL72 (located in Malibu)
Copter 11 T2S	Los Angeles County Fire – LAC	
Copter 12 T2S	Los Angeles County Fire – LAC	
Copter 14 T2S	Los Angeles County Fire – LAC	
Copter 15 T1S	Los Angeles County Fire – LAC	
Copter 16 T1S	Los Angeles County Fire – LAC	
Copter 17 T2S	Los Angeles County Fire – LAC	
Copter 18 T2S	Los Angeles County Fire – LAC	
Copter 19 T1S	Los Angeles County Fire – LAC	
Copter 21 T1S	Los Angeles County Fire – LAC	
Copter 22 T1S	Los Angeles County Fire – LAC	
VNC 2 T1S	Ventura County Fire - VNC	Camarillo - CMA
VNC 4 T1S	Ventura County Fire - VNC	Camarillo - CMA
VNC 5 T2S	Ventura County Fire - VNC	Camarillo - CMA
VNC 6 T2S	Ventura County Fire - VNC	Camarillo - CMA
VNC 8 T2S	Ventura County Fire - VNC	Camarillo - CMA
VNC 9 T2S	Ventura County Fire - VNC	Camarillo - CMA
SBC 964 T1S	Santa Barbara County Fire- SBC	Santa Ynez - IZA
SBC 308 T2S	Santa Barbara County Fire- SBC	Santa Ynez - IZA
SBC 3 T2S	Santa Barbara County Fire- SBC	Santa Ynez - IZA
SBC 4 T2S	Santa Barbara County Fire- SBC	Santa Ynez - IZA
KRN 407 T2S	Kern County Fire-KRN	Keene Summit - KEE
KRN 408 T2S	Kern County Fire-KRN	Keene Summit - KEE