SPECIAL OPERATIONS 8338
(Revised September 2001)

AIRLIFT OPERATIONS 8338.1
(Revised September 2001)

Each region is required to develop an 'Airlift Operations Plan' for handling large scale air transport operations from airports within the region. Elements that will be identified and provided for in this plan can be found in exhibit Region Airlift Operations Plan Elements.

MILITARY AIR TRANSPORT 8338.1.1
(Revised September 2001)

CDF may use military aircraft for airlift and other incident transport operations under agreement with the California Military Department and the US Forest Service.

The Governor's office has pre-approved the direct request of up to five fixed-wing and five helicopter units.

- Additional aircraft, if available, may be obtained with approval by the Governor's office.

The California Air National Guard's main resource for long distance airlift operations is the Lockheed C-130 Hercules. These aircraft can be used for transporting crews and heavy automotive equipment, such as fire engines. C-130 transports are normally manned by a pilot, copilot, flight engineer and a loadmaster.

- The National Guard loadmaster is responsible for directing the loading of the aircraft.

- The CDF airlift liaison officer must supply the loadmaster with data needed for determining aircraft weight and balance and correct load distribution.

- The information regarding standard airlift modules and the loading specifications for CDF vehicles is located in the 7700 Handbook, Emergency Incident Management Procedures Handbook.

- Several safety regulations must be observed before allowing vehicle and/or passenger loading for air transport. The military loadmaster will normally brief personnel regarding safety items prior to beginning operations. The airlift liaison officer will assist the loadmaster in ensuring that safety requirements are met.

MODULAR AIRBORNE FIREFIGHTING SYSTEM (MAFFS) 8338.2
(Revised September 2001)

Military Airtankers

Agreements with the US Forest Service and the State of California Military Department include provisions for CDF use of Air National Guard and Air Force Reserve C-130 aircraft equipped with removable aerial retardant delivery systems. Detailed information on the MAFFS program is included in the annual MAFFS Operating Plan issued by the US Forest Service Fire and Aviation Management Washington Office.

MAFFS PROGRAM OBJECTIVES AND PROCEDURES 8338.2.1
(Revised September 2001)

MAFFS aircraft are intended for activation and use when regular fire agency and private sector airtanker resources are depleted or not readily available. Federal law prohibits use of MAFFS units if these conditions are not met. MAFFS units will be the first released from the incident.

MAFFS units are stationed at:

146th Airlift Wing, Port Hueneme, CA
145th Airlift Wing, Charlotte, NC
153rd Airlift Wing, Cheyenne, WY
302nd Airlift Wing, Peterson AFB, CO

Each airlift wing can activate 2 C-130 aircraft equipped with MAFFS units. Activation time ranges from 12 to 24 hours, depending on availability of aircraft and flight crews.

MAFFS operations will normally be limited to airfields specified in the MAFFS Operating Plan. Approved airfields in California are:

Channel Islands ANG Station, Port Hueneme
Chico
Fresno
Mather (Sacramento)
Redding
San Bernardino International (Norton)

Operating plans are being developed for additional airfields, including:

Bakersfield
McClellan (Sacramento)
Thermal
Castle (Merced)
Los Alamitos
Brown Field (San Diego)
Vandenberg AFB

ACTIVATION OF MAFFS AIRCRAFT 8338.2.2

(Revised September 2001)

The State of California can activate the 2 MAFFS units assigned to the 146th Airlift Wing under the authority of the Governor of California. Activation of the remaining 6 out-of-state MAFFS units in response to a CDF request can only be accomplished by the US Forest Service.

Activation of MAFFS units is requested through normal resource ordering channels, to the Sacramento CC. Requests to utilize MAFFS are reviewed by the Deputy Director for Fire Protection. If approved, a request for up to 2 MAFFS is placed with the OES Warning Center. OES evaluates the request, and if they approve, the request is placed with the California National Guard Joint Operations Center.

Requests for more that 2 MAFFS units are placed with the US Forest Service at North Ops or South Ops, as appropriate. In that case, the 2 California MAFFS and any additional MAFFS required will ALL be activated by the US Forest Service.

See 8100 Command and Control Handbook, Procedure No. 327 for detailed ordering instructions.

OPERATIONAL USE OF MAFFS AIRCRAFT 8338.2.3

(Revised September 2001)

MAFFS operations require use of a MAFFS-qualified USFS lead plane. These are requested from the US Forest Service at North Ops or South Ops, as appropriate.

MAFFS flight crews are limited to 12 hours duty time and 7 hours flight time per day, for six consecutive days, followed by one day off.

MAFFS units have a maximum retardant capacity of 3,000 gallons. The retardant is delivered in either a single trail/half load pattern or a dual trail/full load pattern. Retardant is expelled under air pressure from 2 large nozzles that protrude from the rear cargo door of the C-130.

MAFFS aircraft are equipped with USFS airtanker radios.

MAFFS OPERATING REQUIREMENTS

MAFFS operating requirements and limitations include:

Crew Hours

MAFFS crews are limited to 12 hours of duty per day, including no more than seven hours of flight time. They may be used for six consecutive days with the seventh day off.

Pre-Mission Systems

If a MAFFS crew has flown no low-level check missions within the preceding 60 days, a static system check and one practice drop flight is required.

Coordination

MAFFS air tankers require a USFS lead plane for incident operations.

Communications

MAFFS aircraft will meet incident operating requirements for primary VHF-FM but do not have full backup frequency capabilities. They are equipped with 360 channel VHF-AM radios for FAA communications and are thus limited to a two decimal point megahertz (mHz). split, i.e., 122.85, 122.90, etc.

Safety Standard air tanker and Air Force operating safety procedures will be used, including the following special precautions:

Air Force fueling procedures (to be directed by the loadmaster.)

Hearing protection for ground crews is critical.

Low visibility of camouflaged aircraft requires extra precautions and positive traffic control procedures in incident operating areas.

MAFFS STAFFING AND SUPPORT REQUIREMENTS 8338.2.4

(Revised September 2001)

Each MAFFS activation requires one qualified fire Agency MAFFS Liaison Officer (MLO) and one military Air Force Mission Commander (AFMC).

For a State Activation (two airplanes) a qualified Assistant MAFFS Liaison Officer (AMLO) may serve in the MLO capacity.

Staffing requirements are detailed in the MAFFS Operating Plan. Required positions include:

MAFFS Liaison Officer
Assistant MAFFS Liaison Officer: 1 or more
MLO trainee
Timekeeper
Contracting Officer
Facilities Unit Leader or Logistics Chief
MAFFS Airtanker Base Manager
MAFFS Airtanker Base Specialist: 1 or more
MAFFS Information Officer
MAFFS maintenance personnel (contract)
ICS qualified Safety Officer
ICS qualified Security Manager
Security Officers
Portable retardant base (contract)
Other positions will be assigned as needed.

All MAFFS mission support requirements, including fuel, lodging, food, transportation, etc. will be addressed by the MAFFS Liaison Officer, the Air Force Mission Commander, and subordinate staff.

REQUIRED SUPPORT EQUIPMENT

MAFFS operations require the following support equipment:

- **Communications** - The receiving USFS region will furnish a Motorola Syncom 9600 channel VHF-FM radio. They will also provide an electronics technician to install the radio into the aircraft. The USFS liaison officer will have the avionics schematics, wiring harness and antenna.

- **Compressors** - Two air compressors come with the MAFFS system and must be located adjacent to the retardant loading pad.

- Each compressor engine uses about 10 gallons of automotive fuel per day.

- **Battery Charger** - A 28-volt battery charger is needed for operating MAFFS internal controls.

- **Forklift** - A minimum 6,000-pound capacity forklift with long forks is required to off load the compressors and set up the MAFFS system.

- **Fuel Tender** - Requires JP4 or Jet A fuel. Military sources are preferred, but fuel can be purchased commercially.

- **High Visibility Kit** - If needed, materials for improving the visibility of the aircraft will be requested from the military unit providing MAFFS support. High visibility material should be applied to at least five feet of camouflaged C-130 wing tips, using either water removable 'Day-Glo' paint or visibility tape.

MAFFS OPERATING REQUIREMENTS

MAFFS operating requirements and limitations include:

Crew Hours: MAFFS crews are limited to 12 hours of duty per day, including no more than seven hours of flight time. They may be used for six consecutive days with the seventh day off.

Pre-Mission Systems: If a MAFFS crew has flown no low-level **Check** mission within the preceding 60 days, a static system check and one practice drop flight is required.

Coordination: MAFFS air tankers require a USFS lead plane for incident operations.

Communications: MAFFS aircraft will meet incident operating requirements for primary VHF-FM but do not have full backup frequency capabilities. They are equipped with 360 channel VHF-AM radios for FAA communications and are thus limited to a two decimal point megahertz (mHz). split, i.e., 122.85, 122.90, etc.

Safety: Standard air tanker and Air Force operating safety procedures will be used, including the following special precautions:

- Air Force fueling procedures (to be directed by the loadmaster.)
- Hearing protection for ground crews is critical.
- Low visibility of camouflaged aircraft requires extra precautions and positive traffic control procedures in incident operating areas.

MILITARY HELICOPTERS 8338.3

(Revised September 2001)

CALIFORNIA NATIONAL GUARD (CNG) HELICOPTERS 8338.3.1

(Revised September 2001)

The California National Guard has helicopter resources available for use in firefighting assignments. As with MAFFS aircraft, federal law prohibits the use of military helicopters in firefighting operations unless there are no fire agency or private sector helicopters immediately available.

Use of California National Guard helicopters in firefighting missions is governed by the "California Interagency Military Helicopter Firefighting Program" Operating Plan. Consult the Operating Plan for detailed information on program operation and responsibilities of assigned personnel.

CNG units providing helicopters for firefighting operations are:

Company B, 1st, 140th General Support Aviation Battalion, Los Alamitos Army Aviation Support Facility: UH60A Blackhawk helicopters
126th Medical Company (Air Ambulance). Mather Army Aviation Support Facility: UH-60A Blackhawk helicopters
Company G, 140th Aviation Battalion, Stockton Army Aviation Support Facility: CH-47 Chinook helicopters

CNG HELICOPTER PROGRAM OBJECTIVES AND PROCEDURES 8338.3.2

(Revised September 2001)

The objective of the California Interagency Military Helicopter Firefighting Program is to provide California state and federal wildland fire agencies with well-equipped and well-trained military helicopter flight crews capable of providing significant firefighting assistance.

The key to the success of this program is the Support Facility Working Group. This is a permanent working group comprised of 2 CDF, 2 USFS, and 2 CNG personnel for each facility. The working group maintains a year-round working relationship, and is responsible for scheduling annual flight crew and Military Helicopter Manager training and the maintenance of all assigned equipment, including water buckets, foam injection systems, radios, cellphones, bucket repair kits, and other equipment.

ACTIVATION OF CNG HELICOPTERS 8338.3.3

(Revised September 2001)

Requests for activation of CNG helicopters are routed through normal resource ordering channels to the Sacramento CC. The request will be reviewed by the Deputy Director for Fire Protection, and if approved, will be placed with the OES Warning Center. OES evaluates the request, and if approved, they will place it with the California National Guard Joint Operations Center.

See 8100 Command and Control Handbook, Procedure No. 390 for additional details.

OPERATIONAL USE OF CNG HELICOPTERS 8338.3.4

(Revised September 2001)

Each CNG unit can activate up to 5 helicopters. Activation time ranges from 12 to 24 hours, depending on availability of aircraft and flight crews. Each helicopter comes with a CDF airtanker radio, water bucket, foam injection system, and a flight crew trained in bucket operations.

The Chinook can carry a maximum of 2,000 gallons, or up to 29 passengers.

The Blackhawks can carry a maximum of 780 gallons, or up to 11 passengers.

Operational capacities for both helicopter types are usually lower due to density altitude limitations.

CALIFORNIA ARMY NATIONAL GUARD HELICOPTER OPERATING REQUIREMENTS AND LIMITATIONS INCLUDE:

Crew Hours: The pilot duty and flight time limits that apply to CDF pilots, unless more restrictive hours are specified.

Missions: Personnel and internal cargo transport operations are authorized. No retardant dropping or external load operations are authorized with the exception of Aviation Management approved water dropping operations.

Communications: VHF-FM and VHF-AM capabilities specified for CDF incident operations.

Safety: Standard incident and military operating procedures and the following special precautions:

- Hearing protection for ground crews is especially critical when working near turbine engines.
- The safer of CDF and National Guard fueling procedures will be used.
- Camouflage paint schemes of military helicopters require positive traffic control and extra precautions by all pilots operating in the incident area.

CNG HELICOPTER STAFFING AND SUPPORT REQUIREMENTS 8338.3.5

(Revised September 2001)

When CNG helicopters are activated, a pre-designated Agency Aviation Military Liaison (AAML) should be assigned to report immediately to the appropriate Army Aviation Support Facility to assist the military flight crews with preparation for the fire assignment. Once the helicopters are ready to depart for the incident, the AAML should either fly with them or drive to the incident. There he serves as the supervisor of the fire agency Military Helicopter Managers.

In addition, one qualified Military Helicopter Manager (MHEM) must be assigned to each. It is preferred that the MHEM report to the Army Aviation Support Facility and fly to the incident with the military flight crew. The MHEM is the on-board firefighting advisor to the flight crew.

CNG flight crews will operate shifts of 12 hours on duty and 12 hours off duty, and are limited to 7 hours of flight time per duty day. Pilots and flight crewmembers accumulating 30 or more hours of flight time in any 6 consecutive days shall be off duty the following day, and shall not work more than 12 consecutive days without 2 days off. A day off must be at least 24 hours, during which pilots and crew shall not be subject to call-up for duty.

CNG will assign a military Officer-In-Charge (OIC) and an Air Mission Commander (AMC) to each incident utilizing CNG helicopters. If two or more helicopters are assigned, a CNG Military Liaison Officer will also be assigned by CNG.

Communications: A radio pack-set having the VHF-FM tactical and logistics frequencies to be used with accessories for installation in the helicopter radio/intercom system. Radios are available through CDF ECC and are assigned to the state military at Mather, and at Los Alamitos Reserve Training Center.

Fuel Tender(s): The correct jet fuel grade for the type(s) of helicopters being used, usually either Jet A or JP4. Check for fuel grades needed and consumption rates when ordering helicopters. All of the helicopters consume large quantities of fuel and planning is necessary to locate adequate fuel sources.

Auxiliary Power: Check the needs and specifications for ground power units to facilitate helicopter engines starting when ordering military helicopters.

High Visibility Markings: Army National Guard helicopters will be painted with high visibility markings for incident operations as specified in Pilot, Aircraft and Operator Requirements, Section 8370, of this handbook.

FEDERAL MILITARY HELICOPTERS 8338.3.6

(Revised September 2001)

Federal military helicopters are activated by the National Interagency Fire Center (NIFC) in Boise when no other helicopter resources are available for filling requests from federal or state agencies.

Federal military helicopters may also be available for water dropping and support assignments by way of written cooperative agreements between CDF units and individual military bases.

In either case, federal military helicopter operations are to be conducted in accordance with the NIFC “Military Use Handbook” (NFES 2175).

(see next section)

(see HB Table of Contents)

(see Forms or Forms Samples)