APPENDIX A: HELICOPTER MANAGEMENT FORMS AND CHECKLISTS

I. **Introduction.** This appendix provides standardized forms for the management and operation of a single helicopter. Such standardization helps to implement common procedures among participating agencies to meet mutual safety, efficiency, fiscal management, and contract administration objectives. The forms also provide a basis for training development and presentation.

II. **Applicability.** The forms in this appendix are to be utilized by Helicopter Managers, whereas those in Appendix B are to be utilized in the management of helibases.

However, several of the Helicopter Management (HCM-series) forms contribute to the informational requirements of the Helibase Management (HBM-series) forms. It is therefore essential that Helicopter Managers use these forms as appropriate or required when operating as part of a helibase organization.

Some of the forms are required for all helicopter operations, some are required only for incident operations. Others are optional and may be used at the discretion of the Helicopter Manager or local aviation management staff as part of the unit's helicopter operation. Certain optional forms may be required by the air operations staff at an incident or project due to a specific management informational need.

The use and applicability of other contracting forms such as Contract Instruction, Notice to Proceed, etc., are discussed in agency contract administration guides.

Chart A-1 on the following pages is a summary listing of the HCM-series forms, including information concerning the purpose of the form, the HCM test form number, whether a form is optional or required for all or only certain situations, responsibility for completion, and frequency of completion. The Helicopter Manager may use this chart as a quick-reference guide to form requirements. The pages following the chart contain a comprehensive discussion of each form.

Helicopter Managers, both exclusive use and Call-When-Needed (CWN), should obtain sets of all forms so that they may respond to different management requirements encountered.[1] Recognizing that at most incidents, or prior to a project's start that copies may be reproduced, Chapter 9 provides recommendations concerning the number of forms to carry in the Helicopter Manager's Kit.

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[1] All HCM- and HBM-series forms are "Test" forms. Until such time as these forms are officially approved and NFES numbers assigned, copies should be reproduced locally. See the Forms Package at the end of the guide for camera-ready copies.

CHART A-1: Requirements For Completion And Submission Of Helicopter Management (HCM) Forms

REFER TO LATER SECTIONS OF THIS APPENDIX FOR ADDITIONAL AND MORE SPECIFIC INFORMATION CONCERNING THE PURPOSE, APPLICABILITY, INSTRUCTIONS AND RESPONSIBILITY FOR COMPLETION, AND ROUTING AND FILING OF THESE FORMS

FORM NAME	PURPOSE	IHOG OR OTHER # REQUIRED OR OPTIONAL (FOR)	INDIVIDUAL RESPONSIBLE FOR COMPLETION	FREQUENCY	REMARKS
AIRCRAFT CONTRACT DAILY DIARY	To provide daily documentation of contract activities, significant occurrences, deficiencies, actions by the contractor or government, etc.	HCM-1 **REQUIRED** for: Fire and Project Exclusive-Use Contracts; Fire CWN	Helicopter Manager	Daily.	Actions, discrepancies, etc. should be documented on the form at the time of occurrence.
HELICOPTER AND SERVICE TRUCK PRE-USE CHECKLIST	To ensure helicopters and service trucks meet requirements and specifications as contained in the contract or rental agreement.	HCM-2 **REQUIRED** for: Fire rental/CWN	Helicopter Manager	Prior to use.	Discrepancies must be reported immediately to the aircraft contracting organization, as well as to the State, Area, or Regional Aviation Officer or his/her representative. Do not use an aircraft or service truck with discrepancies until discrepancies are corrected and/or approval is received.
AIRCRAFT FUEL FACILITY INSPECTION LOG	To provide an inspection format of aircraft fuel facilities to ensure that fuel quality is maintained and fuel spills do not occur.	HCM-3 **REQUIRED** for: See Remarks	Helicopter Manager or local Aviation Manager	Daily, weekly, monthly and/or annually (depending on checklist item)	All fixed or mobile facilities operated by the government, or for fixed facilities operated by a vendor which are located on government land. The vendor is responsible for inspecting vendor-owned facilities, or government-owned facilities for which the vendor is contractually responsible.
HELICOPTER TURBINE ENGINE POWER CHECK	To gather engine performance data which, when graphed with subsequent power checks, may indicate power fluctuations that might lead to engine failure.	HCM-4 **REQUIRED** for: All helicopters	Pilot	Every 10 hours of flight.	Data is graphed onto Form HCM-5, Helicopter Turbine Engine Performance Analysis Chart

CHART A-1: Requirements For Completion And Submission Of Helicopter Management (HCM) Forms

REFER TO LATER SECTIONS OF THIS APPENDIX FOR ADDITIONAL AND MORE SPECIFIC INFORMATION CONCERNING THE PURPOSE, APPLICABILITY, INSTRUCTIONS AND RESPONSIBILITY FOR COMPLETION, AND ROUTING AND FILING OF THESE FORMS

FORM NAME	PURPOSE	IHOG OR OTHER # REQUIRED OR OPTIONAL (FOR)	INDIVIDUAL RESPONSIBLE FOR COMPLETION	FREQUENCY	REMARKS
HELICOPTER TURBINE ENGINE PERFORMANCE ANALYSIS CHART	To graph the data collected every 10 hours from Form HCM-4, Helicopter Turbine Engine Power Check.	HCM-5 **REQUIRED** for: All helicopters	Pilot	Every 10 hours of flight.	To be carried in Service Truck on off-unit dispatches.
HELICOPTER INFORMATION SHEET	To provide the Helibase Manager and other Air Operations Branch personnel with information concerning the pilot, ground crew (driver/mechanic) and aircraft assigned to multiple-aircraft helibases.	HCM-6 **OPTIONAL** until required by Incident or Project Air Operations staff	Helicopter Manager	Prior to or immediately after arrival at incident or project.	Complete most information at beginning of contract or CWN use; submit to Helibase Manager on arrival.
HELICOPTER CREW INFORMATION SHEET	To provide the Helibase Manager and Air Operations Branch personnel with information concerning helicopter crews assigned to helicopters at incident or project helibases.	HCM-7 REQUIRED for: all helicopters/crews	Helicopter Manager	Prior to or immediately after arrival at incident.	Complete most information at beginning of contract or CWN use; submit to Helibase Manager on arrival.
HELICOPTER LOAD CALCULATION	To ensure that the aircraft is capable of carrying a specified load to an identified elevation at a given density altitude.	HCM-8 (OAS-67 or FS 5700-17 or state/local agency format) **REQUIRED** for: All helicopters	Helicopter Manager and Pilot	Prior to flight at a given temperature, elevation, and fuel load	Start of operations and upon increase in temperature, payload, or altitude; posted at helibase or helispot each morning
HELICOPTER PASSENGER/ CARGO MANIFEST	To enable the helicopter manager to manifest successive trips using the Allowable Payload (or a current Allowable given fuel consumption) on the applicable Helicopter Load Calculation.	HCM-9 (NFES 0086) **REQUIRED** for: All helicopters	Helicopter Manager	Prior to each flight leg, provided a load calculation has been completed	Use when making multiple trips off one load calculation.

CHART A-1: Requirements For Completion And Submission Of Helicopter Management (HCM) Forms

REFER TO LATER SECTIONS OF THIS APPENDIX FOR ADDITIONAL AND MORE SPECIFIC INFORMATION CONCERNING THE PURPOSE, APPLICABILITY, INSTRUCTIONS AND RESPONSIBILITY FOR COMPLETION, AND ROUTING AND FILING OF THESE FORMS

FORM NAME	PURPOSE	IHOG OR OTHER # REQUIRED OR OPTIONAL (FOR)	INDIVIDUAL RESPONSIBLE FOR COMPLETION	FREQUENCY	REMARKS
SINGLE HELICOPTER LOAD CAPABILITY PLANNING SUMMARY	To enable the helicopter manager to plan mission loads safely and efficiently to different elevations at different temperatures at varying fuel loads.	HCM-11 **OPTIONAL** for: Fire and Project helicopters	Helicopter Manager	One-time; adjustments necessary if crew makeup changes.	Must be based on completed and signed load calculations for all elevations and temperatures shown or applicable
FLIGHT ORDER: HELICOPTER	To provide the helicopter manager and Pilot with dispatch information critical to flight safety and efficiency.	HCM-12 **OPTIONAL** for: Fire helicopters	Helicopter Manager	Upon dispatch of aircraft to incident.	Used on initial attack
FIRE HELICOPTER CREW ACTION REPORT	To document the types of operations for which aircraft was used on incidents and document crew training and experience on incidents or projects.	HCM-13 **OPTIONAL** for: Fire helicopters	Helicopter Manager	After each incident.	Documents training received. Contributes to year-end crew/aircraft summary.
PILOT FLIGHT TIME/DUTY DAY CUMULATIVE LOG	To enable the helicopter manager to track contract or CWN pilot duty day and flight time so that limitations are not exceeded.	HCM-14 **REQUIRED** for: See Remarks	Helicopter Manager	Daily	Required for all contract aircraft, both fire and project. It is also mandatory for rental/CWN fire aircraft. It is also required for project rental/CWN helicopters utilized for more than four continuous days.
DRIVER DRIVING TIME/DUTY DAY CUMULATIVE LOG	To enable the helicopter manager to track contract or CWN driver duty day and driving time so that limitations are not exceeded.	HCM-15 **REQUIRED** for: See Remarks	Helicopter Manager	Daily	Required for all contract aircraft, both fire and project. It is also mandatory for rental/CWN fire aircraft. It is also required for project rental/CWN helicopters utilized for more than four continuous days.

CHART A-1: Requirements For Completion And Submission Of Helicopter Management (HCM) Forms

REFER TO LATER SECTIONS OF THIS APPENDIX FOR ADDITIONAL AND MORE SPECIFIC INFORMATION CONCERNING THE PURPOSE, APPLICABILITY, INSTRUCTIONS AND RESPONSIBILITY FOR COMPLETION, AND ROUTING AND FILING OF THESE FORMS

FORM NAME	PURPOSE	IHOG OR OTHER # REQUIRED OR OPTIONAL (FOR)	INDIVIDUAL RESPONSIBLE FOR COMPLETION	FREQUENCY	REMARKS
MECHANIC DUTY DAY CUMULATIVE LOG	To enable the helicopter manager to track Mechanic duty day so that limitations are not exceeded.	HCM-16 **REQUIRED** for: See Remarks	Helicopter Manager	Daily	Required for all contract aircraft, both fire and project. It is also mandatory for rental/CWN fire aircraft. It is also required for project rental/CWN helicopters utilized for more than four continuous days.
HELICOPTER DAILY USE AND COST SUMMARY	To summarize daily use and costs for each individual helicopter on an incident or project.	HCM-17 **REQUIRED** for: Fire Helicopters on incidents to which a Type I or II Incident Management Team has been assigned	Helicopter Manager	Daily	Must be completed at end of operational period from load calculations and manifests. Form HBM-10, Helibase Daily Use and Cost Summary is completed from individual helicopter summaries.
HELIBASE DIRECTORY INFORMATION SHEET	To supply information for update of the Geographic Area Helicopter Base Directories.	NA **OPTIONAL**	Helicopter Manager or Local Fire Management	Annually at date specified by Area	Submitted to Geographic Area Aviation Offices for annual update of Helibase Directories.
HELICOPTER CREW/BASE READINESS EVALUATION	To identify and correct any safety or operational deficiencies related to the helicopter base or crew.	NA **OPTIONAL** (May be required by individual agency manual direction)	Regional, Area, or State Aviation Management	Annually	Completed for all contract helicopters and crews stationed at permanent helibases.
AGENCY FLIGHT PAYMENT DOCUMENT	To document flight and other charges for payment to the vendor, or to document utilization of agency-owned aircraft.	OAS-23, OAS-2, FS 6500-122, or State or Local Agency format **REQUIRED** for: All helicopters	Vendor and Helicopter Manager, or Agency Pilot	Daily	See Appendix D for completion instructions.

III. Helicopter Management (HCM) Forms.

A. Aircraft Contract Daily Diary (HCM-1). (See Exhibit A-1.)

1. **Purpose.** The purpose is to provide daily documentation of contract activities.

2. **Applicability.** The form is required for all exclusive-use contract helicopters, both fire and project, as well as fire CWN. Its use is also encouraged for rental helicopters utilized for more than one day.

3. **Responsibility and Instructions for Completion.** See Exhibit A-1. It is the responsibility of the Helicopter Manager to complete the form on a daily basis. The Helicopter Manager should document significant occurrences, deficiencies, actions by the contractor or government, etc.

   If nothing of significance occurred, an entry indicating such should be made. Higher levels in the contract administration structure (for example, the Contracting Officer's Representative) are encouraged to utilize a continuous documentation log rather than the single-sheet format shown here.

   Completion is self-explanatory. Refer to Appendix D, Contract Administration and Agency Flight Payment Documents, for further information.

4. **Routing and Filing.** Routing and filing is indicated at the bottom of the form and is as follows:

   # White - Project Inspector (PI in USDI) or Contracting Officer's Representative (COR in USDA-FS)
   # Yellow - Contracting Officer
   # Pink - Local Air Officer (USDA-FS), State/Regional/Area Air Officer (USDI), or as identified by state/local agencies

   Copies should be routed to appropriate personnel concurrently with copies of agency flight payment documents.

5. **Posting.** None.

6. **Related Forms.** Form HCM-2, Helicopter and Service Truck Pre-Use Checklist, is the start of contract documentation for CWN helicopters.

   Certain occurrences that are documented on the Aircraft Contract Daily Diary may require submission of an agency incident/hazard report.

Example A-1: Example of Form HCM-1 (Test) Aircraft Contract Daily Diary

OAS-137 (09/01)

AIRCRAFT CONTRACT DAILY DIARY

CONTRACT #:	**ITEM:**	**PAGE ____ OF ____**	**DATE:**
1. CONTRACTOR:		**7. DESIGNATED BASE:**	
2. A/C MAKE/MODEL & FAA #:		**8. CURRENT AIRCRAFT LOCATION:**	
3. PILOT(S) ON DUTY:		**9. ACTIVITY:** Ferry ____ Training ____ Project ____ Large Fire Support ____ Standby ____ Initial Attack ____	
4. MECHANIC(S) ON DUTY:		**10. OTHER AIRCRAFT ON BASE:**	
5. DRIVER(S) ON DUTY:		**11. WEATHER:**	
6. TOTAL # OF CONTRACTOR PERSONNEL:		**12. LOCAL FUEL PRICE:**	

13. PAY ITEMS	BEGIN	END	TOTAL	EXT	**14. SPECIAL EQUIPMENT**	HR/DAYS	COST
AVAILABILITY							
FLIGHT TIME							
SERVICE MILES							
PILOT DUTY							
DRIVER DUTY							
MECHANIC DUTY							

15. AIRCRAFT STATUS: (Maintenance performed, power trend analysis completed, reasons for any unavailability, etc.)

16. NARRATIVE REPORT: (Include problems encountered, official visits or inspections, SAFECOMs submitted, etc.)

17. MISCELLANEOUS COSTS: (contractor purchased permits, fees, travel, etc; to be reimbursed by Govt.)

18. GOVT. REPRESENTATIVE NAME/TITLE (Print):	**GOVT. REPRESENTATIVE SIGNATURE:**	**DATE:**

B. **Helicopter and Service Truck Pre-Use Checklist (HCM-2 Test).** (See Exhibit A-2.)

1. **Purpose.** The purpose is to ensure fire CWN or fire rental helicopters meet requirements and specifications as contained in the procurement document.

2. **Applicability.** The form is required to be completed for all fire CWN or fire rental helicopters prior to use. It may also be utilized for project rental helicopters as a checklist to document the condition of the helicopter. However, not all of the items indicated as required for fire are required for projects.

3. **Responsibility and Instructions For Completion.** See Exhibit A-2. Pre-use inspections should be accomplished prior to arrival of the helicopter at the incident by either the Helicopter Manager, an agency aircraft inspector, or other authorized aviation management personnel.

   The Helicopter Manager is responsible for either ensuring the inspection has been completed (ask for signed copy from vendor), or completing the checklist prior to the utilization of the helicopter.

   Discrepancies must be reported immediately to the aircraft contracting organization, as well as to the State, Area, or Regional Aviation Officer or his/her representative. Do not use the aircraft until discrepancies have been rectified and/or permission is given to utilize the aircraft.

   Completion is self-explanatory.

4. **Routing and Filing.** Routing and filing is indicated at the bottom of the form:

   White - Contracting Officer
   Yellow - Aircraft Maintenance Inspector (OAS, USDA-FS, or State/Local agency)
   Blue - Vendor
   Green - Originator (individual completing the checklist)

5. **Posting.** None.

6. **Related Forms.** Form HCM-1, Aircraft Contract Daily Diary, should be initiated simultaneously with the Helicopter and Service Truck Pre-Use Checklist.

   Discrepancies should be noted on the Daily Diary.

Exhibit A-2: Example of Form HCM-2 (Test)
Helicopter and Service Truck Pre-Use Checklist

HELICOPTER & SERVICE TRUCK PRE-USE CHECKLIST

GENERAL		HOBBS READING:
DATE:	AIRCRAFT MAKE/MODEL:	FAA REGISTRATION #:
VENDOR:		
PILOT(S) NAME(S): CARD EXPIRATION DATE(S): PILOT(S) CARDED FOR INTENDED MISSION(S)?: ( ) YES ( ) NO		
A/C CARD EXPIRATION DATE:	A/C CARDED FOR INTENDED MISSION(S)?:	
DEPT. BASE:	DEPARTURE HOBBS READING:	ARRIVAL HOBBS READING:

LOGBOOK REVIEW		
50/100-HR, PROGRESSIVE, OR OTHER INSPECTION PROGRAM UP-TO-DATE?	( ) YES	( ) NO
ENTRIES INDICATING DAMAGE TO AIRCRAFT?	( ) YES	( ) NO
POWER CHECK COMPLETED/RESULTS SATISFACTORY?	( ) YES	( ) NO
COMMENTS ON LOGBOOK:		

CONDITION OF HELICOPTER

ITEM	OK	DOCUMENT INOPERABLE OR DAMAGED EQUIPMENT (DENTS, TEARS, LEAKS, ETC.)
Skin and Exterior		
Windows		
Doors		
Upholstery		
Cargo Compartment		
Skids/Wheels		
Fixed Tank		
Bucket		
COMMENTS:		

REQUIRED HELICOPTER EQUIPMENT INSTALLED AND OPERATIVE (CONSULT CONTRACT)

ITEM	YES	NO	ITEM	YES	NO
Seat Belts and Harnesses			Strobe Light(s)		
Hi-Visibility Paint On Main Rotor Blades			Survival Kit		
9600-Channel Radio			First Aid Kit		
VHF-AM 720-Channel			Fire Extinguisher(s)		
Auxiliary Radio Adapter			Cargo Hook		
Loran/GPS			Convex Mirror		
High Skid Gear			Bucket		
Nine-Pin Plug (Type 3 helicopters only)			Other:		
COMMENTS:					

REQUIRED SERVICE TRUCK EQUIPMENT INSTALLED AND OPERATIVE (CONSULT CONTRACT)

ITEM	YES	NO	ITEM	YES	NO
Spare Set Of Filters			Filter Change Date Placarded		
Fire Extinguisher(s) Current			Ground Cables		
Hazmat Marking and Placards			Fuel Quality Control Log		
Inspection Sticker			Absorbent Materials For Spills		
COMMENTS: Beginning Odometer Mileage:					

SIGNATURE OF INSPECTING GOVT. REPRESENTATIVE:	PRINT NAME	DATE

WHITE: CO YELLOW: AGENCY MAINT. INSPECTOR BLUE: CONTRACTOR GREEN: HELIC MGR

HCM-2 (Test)
(May, 1994)

C. **Vendor Fuel Quality Control Log.** (See Exhibit A-3.)

1. **Purpose.** The purpose is to ensure that the fuel contained in the service truck is clean and dry by requiring the helicopter vendor to document fuel quality.

2. **Applicability.** The vendor is responsible, per the procurement document, to document fuel inspection criteria. Differing formats are used by different vendors, but the criteria remain the same.

3. **Responsibility and Instructions For Completion.** See Exhibit A-3 for a sample vendor format. The vendor is responsible for completing the form.

   The Helicopter Manager is responsible for ensuring that it has been completed according to criteria specified in the procurement document.

   Completion is self-explanatory. Refer to Chapter 13, Fueling Operations, for further information concerning vendor-operated fuel caches located on government land.

4. **Routing and Filing.** No routing is necessary. The vendor must keep the documentation on file for the period specified by the procurement document.

5. **Posting.** None.

6. **Related Forms.** None.

Exhibit A-3: Example of A Vendor Fuel Quality Control Log

VENDOR SUMP LOG

C - Clear
CL - Cloudy
W - Water

	DAILY SUMP			GAUGES		
Date	Tank	Filter	Nozzle	Closed	Open	Initials

D. **Aircraft Fuel Facility Inspection Log (HCM-3 Test).** (See Exhibit A-4.)

1. **Purpose.** The purpose is to provide an inspection format for aircraft fuel facilities to ensure that fuel quality is maintained and fuel spills do not occur.

2. **Applicability.** The form is required to be completed for all fixed or mobile helicopter fueling facilities operated by the government, or for fixed facilities operated by a vendor and that are located on government land.

3. **Responsibility and Instructions For Completion.** See Exhibit A-4. The vendor is responsible for inspecting vendor-owned facilities located on government land, or government-owned facilities for which the vendor is contractually responsible (for example, the vendor is required to maintain and fill a remote fuel cache).

   The government shall ensure that inspections are performed with the frequency indicated.

   A government representative (for example, the Helicopter Manager or local unit Aviation Manager) is responsible for inspecting Government-owned facilities.

   Items are checked according to the frequency indicated. Refer to Chapter 13, Fueling Operations, for further information.

   Remote facilities for which the required frequency of inspection (for example, daily or weekly checklist items) is not feasible must be fully inspected prior to the use of fuel in the facility.

4. **Routing and Filing.** For facilities for which the vendor is responsible, the vendor shall provide the government representative (for example, the Helicopter Manager or Project Inspector) with a copy of each monthly inspection. A copy shall be furnished to the Contracting Officer's Representative (COR) in USDA-FS, the Contracting Officer's Administrative Representative (COAR) in USDI, and to an appropriate individual as identified by state and local agencies.

   For facilities for which the government is responsible, the contract Project Inspector shall furnish a copy of each monthly inspection to aviation management personnel as identified by the agency.

5. **Posting.** None.

6. **Related Forms.** Any discrepancies regarding facilities for which the vendor is responsible should be noted on Form HCM-1, Aircraft Contract Daily Diary. The Helicopter Manager should file an agency incident/hazard report concerning any fuel cache discrepancies, regardless of who has the responsibility for maintaining the site. For fuel spills at the site, other local, state, and federal reporting regulations apply.

Exhibit A-4: Example of Form HCM-3 (Test) Aircraft Fuel Facility Inspection Log

FACILITY: _____ **GRADE FUEL** _____ **MONTH:** _____

AIRCRAFT FUEL FACILITY INSPECTION LOG

Use only for govt-operated sites, or vendor sites located on government lands. The inspector must note in each block either PASS or FAIL. For remote sites which are not used or cannot be inspected with the frequency indicated, perform a complete inspection at least monthly or at the time the facility is next utilized, whichever is soonest. Document and report discrepancies on an agency incident/hazard report.

DATE	CONTAMINATION (Water, Particles) (Daily)	DIFF. PRESSURE (Daily)	LEAKS (Daily)	HOSES NOZZLES SCREENS (Daily)	STRAINERS (Daily)	FIRE EXTINGINGUISHER (Weekly)	FUEL FLOW RATE (Weekly)	PUMPS MOTORS VALVES (Monthly)	BOND/ GROUND (Monthly)	INSPECTOR INITIALS
01										
02										
03										
04										
05										
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08										
09										
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HCM-3 (Test)
(May 1994)

E. **Helicopter Turbine Engine Power Check (HCM-4 Test).** (See Exhibit A-5.)

1. **Purpose.** The purpose is to gather engine performance data which, when graphed with subsequent power checks, may indicate power fluctuations that potentially could lead to engine failure.

2. **Applicability.** The vendor or agency Pilot is required to complete the power check every 10 hours of flight for all fire exclusive-use and fire CWN helicopters and for project exclusive-use contracts.

3. **Responsibility and Instructions For Completion.** See Exhibit A-5. The Pilot is responsible for completing the form and furnishing a copy to the Helicopter Manager.

   Record O.A.T and pressure altitude. Since power check procedures differ according to make and model of aircraft, refer to the Flight Manual and record appropriate readings according to procedures specified.

   Chart definitions are as follows:

   # O.A.T = Outside Air Temperature
   # N1 = Gas Producer Speed
   # N2 = Engine RPM
   # T.O.T. = Turbine Outlet Temperature
   # T.P.T. = Tail Pipe Temperature
   # I.T.T. = Inter Turbine Temperature
   # Type of Check = Hover
   # Performance Reading = TOT/ITT values and/or % of RPM from aircraft instruments
   # Chart Reading = TOT/ITT values and/or % of RPM from performance chart
   # Margin Difference = The difference between the aircraft performance and chart values

   Margin difference shall be recorded on Form HCM-5, Helicopter Turbine Engine Performance Analysis Chart, and retained with aircraft logbooks (to be carried in service truck on off-unit dispatches) for the contract period.

4. **Routing and Filing.** The Pilot furnishes the Helicopter Manager with a copy of the Power Trend Analysis; it becomes part of the Contract File.

5. **Posting.** None.

6. **Related Forms.** Information is transferred to Form HCM-5, Helicopter Turbine Engine Performance Analysis Chart. The Helicopter Manager should document discrepancies on the agency incident/hazard report and on Form HCM-1, Aircraft Contract Daily Diary.

Exhibit A-5: Example of Form HCM-4 (Test)
Helicopter Turbine Engine Power Check

HELICOPTER POWER CHECK TURBINE ENGINE		Type: Model: FAA No.: Eng. No.: Contractor:
Pilot:		
Hr. Meter:	Date:	
ITEM *	VALUE	
OAT		Type of Check:
Pressure Altitude		
Torque or Pitch Indications		Performance Reading:
N_1 - Compressor		
N_2 - Power Turbine		
EGT		Chart Reading:
TOT		
TPT		
ITT		Margin Difference:
Correction Factor		

*** Use only items applicable to type of helicopter.**

HCM-4 (Test)
(May, 1994)

F. Helicopter Turbine Engine Power Trend Analysis Chart (HCM-5 Test). (See Exhibit A-6.)

1. **Purpose.** The purpose is to graph the data collected every 10 hours from Form HCM-4, Helicopter Turbine Engine Power Check. When graphed with subsequent power checks, power fluctuations that might lead to engine failure may be indicated.

2. **Applicability.** A graph entry is required to be completed every 10 hours of flight for all fire exclusive-use and fire CWN helicopters and for project exclusive-use contracts.

3. **Responsibility and Instructions for Completion.** See Exhibit A-6. The Pilot is responsible for graphing the data.

4. **Routing and Filing.** None.

5. **Posting.** The graph should be posted at the permanent helibase and taken with the service truck (not the helicopter) on off-unit incidents or projects.

6. **Related Forms.** Form HCM-4, Helicopter Turbine Engine Power Check, is utilized to record values for input to the Trend Analysis.

   The Helicopter Manager should document discrepancies on the agency incident/hazard report and note them on Form HCM-1, Aircraft Contract Daily Diary.

Exhibit A-6: Example of Form HCM-5 (Test)
Turbine Engine Performance Analysis Chart

TURBINE ENGINE PERFORMANCE ANALYSIS HELICOPTER FAA # _____ MAKE/MODEL _____ ENGINE # _____

0

DATE						
OAT						
HOBBS						

HCM 05-TEST 4-18-2000

G. **Helicopter Information Sheet (HCM-6 Test).** (See Exhibit A-7.)

1. **Purpose.** The purpose is to provide the Helibase Manager and other air operations branch personnel with information concerning the helicopter, the Pilot, and the vendor's ground crew (driver/mechanic) assigned to multiple-aircraft helibases.

   It summarizes most, if not all information relating to each individual helicopter operation at a helibase, thus relieving the Helibase Manager from having to obtain this information at various times over the course of the incident or project.

2. **Applicability.** The form is optional for both fire and project operations until submission is required by a member of the air operations branch (for example, the Helibase Manager, Air Support Group Supervisor, etc.).

3. **Responsibility and Instructions For Completion.** See Exhibit A-7. Individual blocks on the form are self-explanatory.

   The Helicopter Manager for both exclusive-use contracts and CWN is responsible for completing the form prior to or immediately after arrival at an incident or project helibase.

   The Helibase Manager is responsible for obtaining the Information Sheet immediately upon arrival of a helicopter at an incident or project.

   a. **Exclusive-Use Helicopters.** All information available at the start of the season should be entered, and multiple copies made for distribution upon arrival at an incident or project. Information concerning Incident/Project Order Number, Aircraft Request Number, and Maintenance And Vendor Crew Information should be completed upon arrival at an incident or project.

   b. **Call-When-Needed Helicopters.** All information should be completed when the CWN crew assembles and joins up with the helicopter.

4. **Routing and Filing.** The form is submitted to the Helibase Manager upon arrival at an incident or project. The Air Support Group Supervisor or Air Operations Branch Director is responsible for routing an informational copy to the Resources Unit Leader.

5. **Posting.** None.

6. **Related Forms.** Form HCM-7, Helicopter Crew Information Sheet, should be submitted concurrently. Information from the Helicopter Information Sheet is used to complete Form HBM-3, Helibase Aircraft Information Summary (see Appendix B). The Helibase Manager should ensure that information on this form is also entered on Form ICS-211, Incident Check-In List (see Appendix B).

Exhibit A-7: Example of Form HCM-6 (Test) Helicopter Information Sheet

DATE:___/___/__

HELICOPTER INFORMATION SHEET

(SUBMIT TO HELIBASE MANAGER IMMEDIATELY UPON ARRIVAL)

MAKE AND MODEL:

N

A/C INC/PROJ ORDER NO:	*REQUEST NO:* **A-**	
CHECK ONE: ◯ EXCLUSIVE-USE CONTRACT ◯ CALL-WHEN-NEEDED ◯ AGENCY-OWNED ◯ OTHER (EG, Military):	CHECK ONE: ◯ TYPE 1 HELICOPTER ◯ TYPE 2 HELICOPTER ◯ TYPE 3 HELICOPTER LIMITED (RESTRICTED)? ◯ **YES** ◯ **NO**	COLOR OF AIRCRAFT: PASSENGER SEATS:
AGENCY AND HOME UNIT:		PHONE: ( )
COAR/COR NAME:		PHONE: ( )
CONTRACTING OFFICER NAME:		PHONE: ( )
COMPANY NAME/CONTACT:		PHONE: ( )

TYPE BUCKET/FIXED-TANK	CARRIED ON BOARD?	CAPACITY	FOAM INJECTION?
	◯ **YES** ◯ **NO**		◯ **YES** ◯ **NO**
	◯ **YES** ◯ **NO**		◯ **YES** ◯ **NO**

OTHER CAPABILITIES, AVIONICS, ETC.

SPECIFIC CAPABILITIES	
LONGLINE/REMOTE HOOK?	◯ **YES** ◯ **NO**
CAROUSEL?	◯ **YES** ◯ **NO**
CARGO LETDOWN?	◯ **YES** ◯ **NO**
RAPPEL?	◯ **YES** ◯ **NO**
SHORT-HAUL RESCUE?	◯ **YES** ◯ **NO**
AERIAL IGNITION?	◯ **PSD** ◯ **HELITORCH**

VENDOR SERVICE TRUCK		**GOVERNMENT HELITENDER (CREW CHASE TRUCK)**		
MAKE AND MODEL		MAKE AND MODEL		4 WD? ◯ **YES** ◯ **NO**
LICENSING STATE AND NO.		LICENSE STATE AND NO:		TRAILER? ◯ **YES** ◯ **NO**
AVIATION FUEL TANK CAP.		NUMBER OF SEATS		OTHER:

FT/HR:	HOURLY AVAIL:	HRS GUAR/DAY:	SUBSISTENCE/DAY:	NO. OF VENDOR CREW:

MAINTENANCE AND VENDOR CREW INFORMATION

CURRENT HOBBS: _____ NEXT 100-HOUR DUE AT: _____

	POSITION	NEXT SCHED.	DATE RELIEF

IF APPLICABLE, VENDOR CREW'S LODGING FACILITY: PHONE:

REMARKS:

HCM-6 (Test)
(May, 1994)

H. Helicopter Crew Information Sheet (HCM-7 Test). (See Exhibit A-8.)

1. **Purpose.** The purpose is to provide the Helibase Manager and other air operations branch personnel with information concerning helicopter crews assigned to helicopters at incident or project helibases. It identifies order numbers for CWN crews, qualifications, training needs, days off, etc.

   It relieves the Helibase Manager from having to obtain this information at various times over the course of the incident or project. It is especially valuable for filling helibase positions and training assignments.

2. **Applicability.** The form is optional for both fire and project operations until submission is required by a member of the air operations branch (for example, the Helibase Manager, Air Support Group Supervisor, etc.).

3. **Responsibility and Instructions For Completion.** See Exhibit A-8. Individual blocks on the form are self-explanatory.

   The Helicopter Manager for both exclusive-use contracts and CWN is responsible for completing the form prior to or immediately after arrival at an incident or project helibase.

   The Helibase Manager is responsible for obtaining the Information Sheet immediately upon arrival of a helicopter at an incident or project.

   a. **Exclusive-Use Helicopters.** All information available at the start of the season should be entered, and multiple copies made for distribution upon arrival at an incident or project. Information concerning Incident/Project Order Number, Aircraft Request Number and Last Day(s) Off is to be completed upon arrival at an incident or project.

   b. **Call-When-Needed Helicopters.** All information should be completed when the CWN crew assembles and joins up with the helicopter.

4. **Routing and Filing.** The form is submitted to the Helibase Manager upon arrival at an incident or project. The Air Support Group Supervisor or Air Operations Branch Director is responsible for routing an informational copy to the Resources Unit Leader.

5. **Posting.** None.

6. **Related Forms.** Form HCM-6, Helicopter Information Sheet, should be submitted concurrently. Information from the Helicopter Crew Information Sheet is used to complete Form HBM-1, Helibase Organization Chart, ensuring that only qualified individuals fill helibase positions. Helibase Managers should ensure that information on this form is also entered on Form ICS-211, Incident Check-In List.

Exhibit A-8: Example of Form HCM-7 (Test) Helicopter Crew Information Sheet

HELICOPTER CREW INFORMATION SHEET

(SUBMIT TO HELIBASE MANAGER IMMEDIATELY UPON ARRIVAL)

CREW NAME OR RESOURCE ID #:

AIRCRAFT INCIDENT/PROJECT ORDER NUMBER: _____-_____-_____ *AIRCRAFT REQUEST NUMBER:* _____

TYPE OF CREW: ( ) ATTACHED TO CONTRACT HELICOPTER (Do **Not** Enter Incident Order/Request Numbers For Each Individual)
( ) ATTACHED TO CWN HELICOPTER (Enter Overhead "O" Incident Order/Request Numbers In Column Next To Each Individual's Name)

NAME	ORDER/ REQUEST #	TRANSPORT METHOD	RETURN TO (CITY)	LAST DAY OFF	QUALIFICATIONS/ SPECIAL SKILLS	TRAINING NEEDS
Helicopter Manager						
Assistant Manager						
Lead Crewperson						
Crewperson						
Crewperson						
Crewperson						
Crewperson						
Crewperson						
Crewperson						
Crewperson						

HCM-7 (Test)
(May, 1994)

I. Helicopter Load Calculation (HCM-8).[2] (See Exhibits A-9, and A-10.)

1. **Purpose.** The purpose is to ensure that the aircraft is capable of carrying a specified load to an identified elevation at a given density altitude.

2. **Applicability.** This form is required to be completed daily for all helicopter flights prior to the start of operations. A minimum of one calculation must be made, with subsequent loads manifested. Additional calculations may be required as conditions change.

   Form HCM-11, Single Helicopter Load Capability Planning Summary - Multiple Helispots And Fuel Loads, may be used to summarize load calculation information and plan flights. However, data for altitudes, temperatures, and fuel weights indicated on Form HCM-11 must be supported by load calculations completed off the appropriate chart(s).

3. **Responsibility and Instructions For Completion.** See Exhibits A-9, and A-10. Refer to Chapter 7 for further information.

   # For USDI agencies, the Pilot is required to complete Blocks 1-15. For USDA-FS, the Pilot is required to complete Blocks 1-15.

   # The Pilot must utilize the applicable charts in the aircraft flight manual, referencing them each time a load calculation is initiated. The Helicopter Manager is responsible for ensuring that the Pilot does this.

   # The Pilot signs after the Helicopter Manager has completed the remainder of the form.

   # One copy is always left on the ground at takeoff site, or, if no one is at the takeoff site, the flight following facility must be informed of personnel on board (the form must still be completed).

   # Starting and ending Hobbs Meter readings should be entered on the form for later completion of the agency flight payment document, as well as other reports (for example, Form HCM-17, Helicopter Daily Use and Cost Summary).

   Specific instructions for completion of the USDI and USDA-FS versions of the load calculation follow. Instructions for completion of the CDF load calculation are included on Exhibit A-10. Other state and local agencies should reference agency guidance.

[2] Utilize Form OAS-67, FS-5700-17, or format approved by state agency until common interagency form is approved and published.

ITEM	DEPT OF INTERIOR	USDA-FOREST SERVICE
General	Complete a load calculation for all flights. For repetitive flights, one calculation is valid between like [points of similar elevation] as long as loads do not exceed that authorized by the calculation for the initial flight, and weather conditions do not change.	Complete a load calculation for all flights--contracts, "offers," or military.[1] For repetitive flights, one calculation is valid between like points of similar elevation as long as loads do not exceed that authorized by the calculation for the initial flight, and weather conditions do not change.
Specific	Pilot completes Items 1 through 13. Helicopter Foreman or Officer completes the balance of the form.	Pilot completes Item 1 through 11; Helicopter Foreman or Officer in charge completes the balance of the form.
1	DEPARTURE BASE - Read altimeter when set to 29.92.	PRESSURE ALTITUDE - Read altimeter when set to 29.92.
2	DESTINATION BASE - Use MSL/Elevation.	PRESSURE ALTITUDE - Use MSL/Elevation until available.
3	HELICOPTER EQUIPPED WEIGHT - Empty weight of A/C + weight of accessories required for mission + weight of oil.	HELICOPTER EQUIPPED WEIGHT - Empty weight of A/C (obtained from Pilot) + weight of accessories required for mission + weight of oil.
4	FLIGHT CREW WEIGHT - Weight of Pilot (and any additional crew members) + their personal gear.	FLIGHT CREW WEIGHT - Weight of Pilot (and any additional crew members) + his/her (their) personal gear.
5	FUEL - AvGas = 6.0 lbs./gal. Jet Fuel (JP) = 7 lbs./gal.	FUEL - AvGas = 6.0 lbs./gal. Jet Fuel (JP) = 7 lbs./gal.
6	OPERATING WEIGHT = Add Items 3,4, and 5.	[No instructions.]
7	COMPUTED GROSS WEIGHT - Obtain weight from A/C Hover-in-Ground-Effect (HIGE) Chart using External Load Chart if available. Sling load missions and adverse terrain or adverse weather, etc. flights will be computed from A/C Hover-Out-of-Ground-Effect (HOGE) Charts.	COMPUTED GROSS WEIGHT - Obtain weight from A/C Hover in Ground Effect (HIGE) Chart using pressure altitude and temperature. Sling load missions and adverse terrain or adverse weather, etc. flights will be computed from A/C Hover Out of Ground Effect (HOGE) Charts. (Use external load charts and/or external load limits.)
8	WEIGHT REDUCTION - Enter applicable weight reduction for helicopter model as shown in Weight Reduction Chart.	WEIGHT REDUCTION - Enter applicable weight reduction for helicopter model as shown in Weight Reduction Chart.
9	ADJUSTED WEIGHT - 7-8.	[No instructions.]
10	TAKEOFF AND LANDING LIMITS - Enter applicable Takeoff and Landing Weight Limit as found in LIMITATIONS section of Handbook.	TAKEOFF AND LANDING LIMITS - Enter applicable Take-Off and Landing Weight Limit as found in LIMITATIONS section of Handbook.
11	SELECTED WEIGHT - If line 9 is greater than line 10, line 9 may be used for JETTISONABLE loads. However, the lowest weight, line 9 or 10, will be used for NON-JETTISONABLE loads.	SELECTED WEIGHT - If line 9 is greater than line 10, line 9 may be used for JETTISONABLE loads. However, the lowest weight, line 9 or 10, will be used for NON-JETTISONABLE loads.
12	OPERATING WEIGHT - Item 6.	[No instructions.]
13	ALLOWABLE LOAD - The maximum allowable weight (passenger and/or cargo) that can be carried for the mission.	ALLOWABLE LOAD - The maximum allowable weight (passenger and/or cargo) that can be carried for the mission.

[1] Note that the Performance Planning Card (PPC) system for military aircraft is allowed in lieu of a load calculation.

ITEM	DEPT OF INTERIOR	USDA-FOREST SERVICE
14	PASSENGERS AND/OR CARGO - Enter passenger weights and/or type and weights of cargo. Manifest all passengers by name for each flight.	PASSENGERS AND/OR CARGO - Enter passenger weights and/or type and weights of cargo. Manifest all passengers by name for each flight.
15	ACTUAL PAYLOAD - Total of all weights listed in Item 14.	ACTUAL PAYLOAD - Total of all weights listed in Item 14.
16	ACTUAL GROSS WEIGHT - The total of weights in Item 12 and 15.	ACTUAL GROSS WEIGHT - The total of weights in Item 12 and 15.

4. **Routing and Filing.**

   - **Fire.** At the termination of fire assignments, the Helicopter Manager is responsible for submitting copies of all load calculations, with copies of manifests attached, to the Helibase Manager. These copies become part of the incident file.

   - **Project.** At the termination of project missions, the Helicopter Manager is responsible for submitting all load calculations, with manifests attached, to the predetermined agency Aviation Manager or designee (for example, the Dispatcher). That individual includes the load calculation(s) as part of the flight file.

5. **Posting.** At incident helibases, load calculations for each helicopter for a variety of altitudes and temperatures shall be posted on the display board. A standard fuel load for similar makes/models helicopters should be utilized.

6. **Related Forms.** Form HCM-9, Interagency Helicopter Passenger/Cargo Manifest, is used to document manifest information under one "umbrella" load calculation. Form HCM-11, Single Helicopter Load Capability Planning Summary - Multiple Helispots And Fuel Loads, may be used to summarize load calculation information. Form HBM-4, Load Capability Planning Summary (By Multiple Helispots), and HBM-5, Load Capability Planning Summary (By Single Helispot), are completed from individual load calculations. Load calculation, manifest, and flight time information is summarized on Form HCM-17, Helicopter Daily Use and Cost Summary, and is utilized to complete the agency flight payment document.

Exhibit A-9: Example of Form OAS-67
USDI Helicopter Load Calculation

U.S. DEPARTMENT OF THE INTERIOR
HELICOPTER LOAD CALCULATION

HELICOPTER
MODEL _____
NO. _____

Pilot	Project	**Date**
		Time
1. Departure Base		**Pressure ALT**
		Temperature
2. Destination Base		**Pressure ALT**
		Temperature
3. Helicopter Equipped Weight		
4. Flight Crew Weight		
5. Fuel (Gals. X lbs.)		
6. Operating Weight	**IGE**	**OGE**
7. Computed Gross Weight		
8. Fixed Weight Reduction		
9. Adjusted Weight (7 Minus 8)		
10. Takeoff/Landing Limits (Handbook Limitation Section)		
11. Selected Weight (Lowest of 9 or 10 for Nonjettisonable)		
12. Operating Weight (Line 6)		
13. Allowable Payload		
14. Passengers and/or Cargo	Names	Weight
15. Actual Payload		
16. Actual Gross Weight (12 Plus 15) (Must Not Exceed Line 11)		
Pilot	**Foreman**	

OAS-67 (02/81)

Exhibit A-10: Example of Form FS-5700-17
USDA-FS Helicopter Load Calculation

USDA-FOREST SERVICE

HELICOPTER LOAD CALCULATION
(Ref. FSH 5709.12)

PILOT	HELICOPTER NO. & MODEL	DATE
PROJECT		TIME
1a. DEPARTURE BASE	1b. PRESSURE ALT.	1c. TEMPERATURE
2a. DESTINATION	2b. PRESSURE ALT.	2c. TEMPERATURE
3. HELICOPTER EQUIPPED WEIGHT		
4. FLIGHT CREW WEIGHT		
5. FUEL *(Gal.* ____ *x* ____ *lbs.)*		
6. OPERATING WEIGHT *(3 + 4 + 5)*	HIGE	HOGE
7. COMPUTED GROSS WEIGHT		
8. WEIGHT REDUCTION		
9. ADJUSTED WEIGHT *(7 minus 8)*		
10. TAKEOFF AND LANDING LIMITS *(Handbook, Limitation Section)*		
NOTE: USE LOWEST WEIGHT *(9 or 10)* FOR NONJETTISONABLE LOADS.		
11. SELECTED WEIGHT *(From 9 or 10)*		
12. OPERATING WEIGHT *(Line 6)*		
13. ALLOWABLE PAYLOAD *(11 minus 12)*		
14. PASSENGERS AND/OR CARGO		
15. ACTUAL PAYLOAD		
16. ACTUAL GROSS WEIGHT *(12 plus 15)* *(Must not exceed 11)*		
HELICPTER FOREMAN *(Signature)*		
PILOT *(Signature)*		

FS-5700-17 (5/81)

INSTRUCTIONS

ITEM

1-15 Pilot completes 1-15. Helitack Captain or Officer completes the balance of the form.

1. **PRESSURE ALTITUDE.** Read altimeter when set to 29.92. **TEMPERATURE.** Record in degrees Celsius from aircraft Outside Air Temperature Gauge.

2. **PRESSURE ALTITUDE.** Use MSL/Elevation from Aeronautical Chart until field elevation is available. **TEMPERATURE.** Record in degrees Celsius using standard lapse rate.

3. **HELICOPTER EQUIPPED WEIGHT.** Empty weight of A/C obtained from A/C weight and balance record. Include weight of accessories and oil.

4. **FLIGHT CREW WEIGHT.** Weight of Pilot(s) and additional crew member (s) plus flight and personal gear.

5. **DEPARTURE FUEL.** AvGas = 6.0 lbs/gal. Jet Fuel = 6.8 lbs/gal.

6. **FOAM.** Foam concentrate = 8.7 lbs/gal.

8. **DESTINATION FUEL.** Subtract en route fuel consumption weight from operating weight to determine destination operating weight (line 14).

9. **COMPUTED MAXIMUM GROSS WEIGHT.** Obtain departure and destination gross weights from appropriate HIGE/HOGE performance charts contained in A/C flight manual. Internal load flights landing in adverse terrain and external load missions will be computed from HOGE performance charts.

10. **WEIGHT REDUCTION.** Enter applicable weight reduction for helicopter model as shown on Weight Reduction Chart. External water/retardant loads that can be safely released do not require downloading at Pilot's discretion.

12. **TAKEOFF AND LANDING LIMITS.** Enter applicable Takeoff And Landing Weight Limit as found in the Limitations section of Handbook.

13. **SELECTED WEIGHT.** If line 11 is greater than line 12, line 11 may be used for JETTISONABLE loads. However, the lowest weight, line 11 or 12, will be used for NON-JETTISONABLE loads.

Exhibit A-11: Example of Form FC-67 CDF Helicopter Load Calculation

Exhibit A-10 Example of Form FC - 67
CDF Helicopter Load Calculation

CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION HELICOPTER LOAD CALCULATION	CDF	COPTER NO. AND MODEL		
PILOT		MANAGER		
MISSION		DATE	TIME	
1. DEPARTURE BASE		PRESS. ALT.	TEMP.	
2. DESTINATION		PRESS. ALT.	TEMP.	
3. HELICOPTER EQUIPPED WEIGHT				
4. FLIGHT CREW WEIGHT				
5. DEPARTURE FUEL (GALS X LBS)				
6. FOAM (GALS X LBS)				
7. OPERATING WEIGHT (3 4 5 6)				
8. EN ROUTE FUEL (lbs) Reduce Destination Operating Weight by this amount.	DEPARTURE	DESTINATION		
	HIGE	HIGE	HOGE	
	INTERNAL	INTERNAL	INTERNAL	EXTERNAL
9. COMPUTED MAX GROSS WEIGHT				
10. WEIGHT REDUCTION				
11. ADJ. MAX GROSS WT. (9 minus 10)				
12. TAKEOFF/LANDING LIMITS				
13. SELECTED WEIGHT (11 or 12)				
14. OPERATING WEIGHT (line 7)				
15. ALLOW. PAYLOAD (13 minus 14)				
16. PASSENGER/CARGO MANIFEST		PASSENGER/CARGO WEIGHT		
17. INITIAL ATTACK TOOLS				
18. WATER BUCKET				
19. WATER/RETARDANT (gals)				
20. ACTUAL PAYLOAD (15 or less)				
HELITACK CAPTAIN (Signature)	PILOT (Signature)			
FORM FC - 67				

14. **OPERATING WEIGHT.** Departure operating weight from line 7. Destination operating weight is determined from enroute fuel consumption reduction.

15. **ALLOWABLE PAYLOAD.** The maximum allowable passenger and/or cargo weight that can be carried for the mission.

16. **PASSENGER AND/OR CARGO MANIFEST.** Manifest departure passengers by name and/or cargo, by type, for each flight. List weights, including personal gear, in appropriate internal or external load column. Departure passengers and cargo shall be determined by destination capabilities.

18. **WATER/RETARDANT.** List gallons that bucket has been adjusted for or tank will be filled to. Weight = 8.3 pounds per gallon.

20. **ACTUAL PAYLOAD.** Total of all weights in Item 16. Shall not exceed the allowable payload (line 15).

J. Interagency Helicopter Passenger/Cargo Manifest (HCM-9 Test).[4]

(See Exhibit A-12.)

1. **Purpose.** The purpose is to enable the Helicopter Manager to manifest successive trips using the allowable payload (or a current allowable, given fuel consumption) on the applicable Helicopter Load Calculation.

> **NOTE:** A new Load Calculation does not have to be completed each time the helicopter takes off, provided that the operating weight of the helicopter, temperature, and pressure altitude in the area of operations have not increased beyond those specified on the calculation. The Passenger/Cargo Manifest may be used instead.

2. **Applicability.** If successive trips are made under one load calculation, then the manifest is required for documentation and to ensure the allowable is not exceeded. Each manifested trip's actual payload must not exceed the allowable payload in Block 13 of the load calculation. Once there is an increase in either operating weight (for example, more fuel added), in the temperature, and/or in the pressure altitude used to compute the original maximum allowable payload, then a new load calculation must be completed.

3. **Responsibility and Instructions For Completion.** See Exhibit A-12. Refer to Chapter 7 for further information.

   It is the responsibility of the Helicopter Manager or other authorized individual (for example, a Loadmaster) to complete the manifest prior to each flight leg flown. It is the responsibility of the Pilot to ensure the actual payload on a manifest does not exceed the allowable payload on the load calculation.

> **NOTE:** Handcrews will usually provide a pre-completed manifest utilizing Form HCM-10, Handcrew Passenger/Cargo Helicopter Manifest. This format saves a significant amount of time, and its use is strongly encouraged. See Appendix A, III.K, for instructions concerning use of this form.

Specific instructions for completion of the manifest are as follows:

[4] Utilize NFES 0086 or format approved by state or local agency until common interagency form is approved and published.

ITEM	INSTRUCTIONS
A/C No.	Enter the FAA registration number of the helicopter.
Date	Enter today's date.
Allowable Payload _____ **At** _____ **Lbs Fuel**	Enter the allowable payload indicated on the load calculation form calculated for the density altitude of the destination for this trip. FORMULA: Pounds Fuel on Load Calc (Minus) Current Gals On Board x 7.0 (Jet A) or 6.0 (AvGas) ---------- = Additional Allowable To Be Added to The Allowable On Load Calc (Provided that conditions of temperature or altitude have not increased beyond that indicated on the load calculation.)
#	Enter the trip or passenger number (optional).
Name/Cargo	Enter individual's name or type/kind of cargo. For water, foam, or retardant drops, enter "1 Foam Drop" or "1 Water Drop", as appropriate.
Weight	Enter passenger's or cargo's weight. Do not estimate. For water, foam, or retardant drops, enter the number of gallons, not the weight.
Actual Payload	The actual payload for a trip should be entered in the right-hand column (note that more than one trip may be documented on the manifest).
Manifest Preparer	Individual preparing the manifest signs (Helicopter Manager or designee).

4. **Routing and Filing.**

   # **Fire.** At the termination of fire assignments, the Helicopter Manager is responsible for submitting copies of all load calculations, with manifests attached, to the Helibase Manager. These copies become part of the incident file.

   # **Project.** At the termination of a project helicopter flight, the Helicopter Manager is responsible for attaching all manifests to their appropriate load calculation and submitting them to the predetermined agency Aviation Manager or designee (for example, the Dispatcher)). That individual includes the manifests as part of the flight file.

5. **Posting.** None.

6. **Related Forms.** Form HCM-8, Helicopter Load Calculation, is used to document manifest information under one "umbrella" load calculation. Form HCM-10, Handcrew Passenger/Cargo Helicopter Manifest, may be utilized to manifest handcrews. Load calculation and manifest totals are collated on Form HCM-17, Helicopter Daily Use and Cost Summary. Manifests are utilized to complete the agency flight payment document.

Exhibit A-12: Example of Form HCM-9
Interagency Helicopter Passenger/Cargo Manifest

INTERAGENCY
HELICOPTER PASSENGER/CARGO MANIFEST

HELI. NO. _____

DATE _____

ALLOWABLE PAYLOAD _____ AT _____ LBS. FUEL

CURRENT FUEL _____ CURRENT ALLOWABLE _____

#	NAME/CARGO	WEIGHT
	ACTUAL PAYLOAD	

MANIFEST PREPARER _____

K. **Handcrew Passenger/Cargo Helicopter Manifest (HCM-10 Test).** (See Exhibit A-13.)

1. **Purpose.** The purpose is to enable the Helicopter Manager to manifest a handcrew quickly and efficiently using the appropriate allowable payload of various helicopters available for personnel transport.

2. **Applicability.** The form is optional, but may be required by the Helibase Manager. The form should be utilized for all handcrew transport operations.

3. **Responsibility and Instructions For Completion.** See Exhibit A-13. Refer to Chapter 7 for further information.

   It is the responsibility of the Helicopter Manager to obtain the pre-completed manifest from the crew superintendent.

   Specific instructions are as follows:

ITEM	INSTRUCTIONS
Date	Enter today's date.
Destination	Enter the crew's destination (for example, H4). It is assumed that the entire crew has the same destination. If destinations are not similar and if they differ in altitude and temperature (resulting in different allowable payloads), then the standard manifest should be utilized.
Allowables For Aircraft Being Utilized	Enter the FAA Registration Number of all helicopters available and the allowable payload of each for the destination of the crew.
HIGE/HOGE	Enter HIGE or HOGE allowable payloads for the landing site.
TRP #	Enter the trip number (optional).
A/C N#	Enter the FAA Registration Number of the helicopter being utilized to transport the load.
NAME/WT	Names should be already entered in the order the crew superintendent wishes the crew transported to the destination. Each crew member's clothed weight, including personal fireline gear should also have been previously entered. Note that chain saws, handtools, and other gear (for example, overnight gear, pumps, etc.) can be entered on a separate trip load at the bottom.
CG WT.	This column allows the entry of miscellaneous cargo weights (for example, chain saws, handtools, and other gear) that will be transported on the trip with personnel.
Trip Weight	For this trip only, enter subtotaled weight of passengers and/or cargo. Compare with allowable indicated at the top for the helicopter being utilized. The actual must be less than the allowable.
Manifest Preparer	Individual preparing the manifest signs (Helicopter Manager or designee).

4. **Routing and Filing.**

Fire. At the termination of the operational period, the manifester is responsible for ensuring the appropriate Helicopter Managers are furnished with copies of all Handcrew Passenger/Cargo Helicopter Manifests utilized during the period. The Helicopter Manager is then responsible for submitting copies of all manifests, with load calculations attached, to the Helibase Manager. These copies become part of the incident file.

Project. At the termination of a project helicopter flight, the Helicopter Manager is responsible for attaching all Handcrew Passenger/Cargo Helicopter Manifests to their appropriate load calculation and submitting them to the predetermined agency Aviation Manager or designee (for example, the Dispatcher)). That individual includes the manifests as part of the flight file.

5. **Posting.** None.

6. **Related Forms.** Form HCM-8, Helicopter Load Calculation, is used to document manifest information under one "umbrella" load calculation. Load calculation and manifest totals are collated on Form HCM-17, Helicopter Daily Use and Cost Summary. Manifests are utilized to complete the agency flight payment document.

Exhibit A-13: Example of Form HCM-10 (Test)
Handcrew Passenger/Cargo Helicopter Manifest

HANDCREW PASSENGER/CARGO HELICOPTER MANIFEST

DATE: _____

DESTINATION: _____

ALLOWABLES FOR AIRCRAFT BEING UTILIZED					
	N	N	N	N	N
HIGE					
HOGE					

TRIP #	A/C N#	NAME	WT	CG WT	TRIP WT
		CHAINSAWS			
		HANDTOOLS			
		OTHER:			

MANIFEST PREPARER: _____

HCM-10 (Test)
(May 1994)

L. Single Helicopter Load Capability Planning Summary - Multiple Helispots and Fuel Loads (HCM-11 Test). (See Exhibit A-14.)

1. **Purpose.** The purpose is to enable the Helicopter Manager to plan mission loads safely and efficiently to different elevations or helispots at different temperatures with different fuel loads.

2. **Applicability.** The form is optional, but should be used on incidents or projects where multiple helispots have been established. It may be required by the incident air operations staff.

3. **Responsibility and Instructions For Completion.** See Exhibit A-14. The Helicopter Manager is responsible for ensuring the form is completed and updated as new helispots are established.

   # **Block 1: Aircraft Information.** Enter information as indicated.

   # **Block 2: Allowable Payloads.** Complete the matrix by calculating allowable payloads, both HIGE and HOGE, with full or working fuel load, to different helispots or elevations for temperatures appropriate to the area.

   It is essential that the load calculation form and appropriate flight manual performance charts be utilized to determine allowable payloads. A load calculation form must be completed for every temperature, elevation, and fuel load indicated on the form. However, once a load calculation is completed, the information on Form HCM-11 may be utilized in conjunction with the Helicopter Passenger/Cargo Manifest.

   # **Block 3: Payload Adjustments.** Depending on the size helicopter and fuel capacity, enter increased payload capability in pounds as fuel weight is reduced.

   Utilizing the load calculation form, Form HCM-11 should be updated as additional helispots are established.

4. **Routing and Filing.** At multiple-aircraft helibases, the Helicopter Manager should submit the form to the Helibase Manager.

5. **Posting.** The form should be posted on the helibase display board.

6. **Related Forms.** Form HCM-8, Helicopter Load Calculation, is used to calculate information. Loads are documented on HCM-9, Helicopter Passenger/Cargo Manifest or Form HCM-10, Handcrew Passenger/Cargo Helicopter Manifest. Form HBM-4, Load Capability Planning Summary (By Multiple Helispots), Form HBM-5, Load Capability Planning Summary (By Individual Helispot), and Form HBM-5, Resource Capability Planning Chart may be completed from information supplied by Form HCM-11.

Exhibit A-14: Example of Form HCM-11 (Test) Single Helicopter Load Capability Planning Summary - Multiple Helispots and Fuel Loads

SINGLE HELICOPTER LOAD CAPABILITY PLANNING SUMMARY - MULTIPLE HELISPOTS AND FUEL LOADS

DATE: _____/_____/_____

BLOCK 1: HELICOPTER INFORMATION		
DATE:	MAKE/MODEL:	PILOT:
A/C EQUIPPED WEIGHT: FLIGHT CREW WT:	FULL FUEL WT: _____ AT _____ GALLONS	WORKING FUEL WT: _____ AT _____ GALLONS

BLOCK 2: ALLOWABLE PAYLOADS	HELISPOTS OR PRESSURE ALTITUDE IN 500-FOOT INCREMENTS						
	HELIBASE						
ELEVATION							
TEMP	ALLOWABLE PAYLOADS AT FULL OR WORKING (Circle One) FUEL WEIGHT : HIGE / HOGE						
5C OR 41F	/	/	/	/	/	/	/
10C OR 50F	/	/	/	/	/	/	/
15C OR 59F	/	/	/	/	/	/	/
20C OR 68F	/	/	/	/	/	/	/
25C OR 77F	/	/	/	/	/	/	/
30C OR 86F	/	/	/	/	/	/	/
35C OR 95F	/	/	/	/	/	/	/
40C OR 104F	/	/	/	/	/	/	/
45C OR 113F	/	/	/	/	/	/	/
50C OR 122F	/	/	/	/	/	/	/

BLOCK 3: PAYLOAD ADJUSTMENTS. ADD THESE WEIGHTS TO ALLOWABLE PAYLOAD ONLY IF THE REMAINING FUEL IS EQUAL TO OR LESS THAN THE FULL OR WORKING FUEL WEIGHT AS INDICATED ABOVE.

IF _____ GALS FUEL, THEN ADD _____ LBS IF _____ GALS FUEL, THEN ADD _____ LBS IF _____ GALS FUEL, THEN ADD _____ LBS

IF _____ GALS FUEL, THEN ADD _____ LBS IF _____ GALS FUEL, THEN ADD _____ LBS IF _____ GALS FUEL, THEN ADD _____ LBS

HCM-11 (Test)
(May, 1994)

M. **Flight Order: Helicopter (HCM-12 Test).** (See Exhibit A-15.)

1. **Purpose.** The purposes of the form are to:

   # Provide the Helicopter Manager and Pilot with dispatch information critical to flight safety and efficiency (note that block numbers correspond exactly to those on the dispatcher's Resource Order);

   # Provide accurate information concerning individual incidents during multiple-fire situations;

   # Provide information (for example, incident number and Hobbs Meter start/end readings) essential for accurate completion of agency payment documents.

2. **Applicability.** This form is optional. If utilized, it should be completed for all fire helicopter initial attack missions, both exclusive-use contract and CWN. It is not intended to be used for mission dispatch, other than initial attack, at incident helibases.

3. **Responsibility and Instructions For Completion.** See Exhibit A-15. The Helicopter Manager completes the form. The Dispatcher provides the information to the Helicopter Manager prior to or immediately after dispatch by phone or by radio. Information in Block 11 should be received prior to takeoff or must be received prior to entry into the air operations area.

   Completion is self-explanatory. Block 15 at the bottom has been provided so that aircraft time may be split among a number of separate initial attack fires.

4. **Routing and Filing.** Copies are kept as part of the helicopter crew file.

5. **Posting.** None.

6. **Related Forms.** Agency flight payment document can be completed from information entered (for example, billing numbers, Start/End Hobbs).

Exhibit A-15: Example of Form HCM-12 (Test) Flight Order: Helicopter

ITEMS 1-10 AND 12-15 OPTIONAL; UNLESS LOCATION IS YET TO BE DETERMINED, DISPATCH MUST FURNISH INFORMATION ENCLOSED IN ITEM 11 TO AIRCREW PRIOR TO ENTRY OF AIRCRAFT INTO OPERATIONAL AREA

FLIGHT ORDER: HELICOPTER	2. INC/PROJ NAME:	1. INITIAL DATE/TIME:
3. INC/PROJ ORDER #:	3a. AGENCY BILLING #:	3b. OTHER AGENCY BILLING #:
4. OFFICE REFERENCE #:	5. DESCRIPTIVE LOCATION OR RESPONSE AREA:	
6. SEC: TWN: RNG: MDM:		7. MAP REFERENCE:
8.INCIDENT OR BASE PHONE #:	9. JURIS/AGENCY:	10. ORDERING OFFICE:

11. A/C INFO:	LAT:		LONG:		
BEAR (DEG)	DIST (NM)	BASE/ OMNI	( ) Aircrew To Confirm Lat/Long On Arrival:		
			AIR CONTACT:	FREQUENCY:	TONE
		HELIBASE	GRND CONTACT:	FREQUENCY:	TONE
OTHER AIRCRAFT IN AREA:					
KNOWN HAZARDS:					
MILITARY TRAINING ROUTE(S) ON OR NEAR INCIDENT ( ) YES ( ) NO					
INCIDENT WITHIN OR NEAR SPECIAL-USE AIRSPACE ( ) YES ( ) NO					
91.137 AIRSPACE RESTRICTION: ( ) NONE NEEDED ( ) REQUESTED ( ) IN EFFECT					
OTHER FIRES IN AREA (INITIAL ATTACK ONLY): ( ) YES ( ) NO					

12. REQ NO.	ORDERED DATE/TIME	FROM/ TO	RESOURCE REQUESTED	NEEDED DATE/TIME	**ETA**
A-					

12a. Fuel and/or Chase Truck To Depart On: ___/___/___ At _____ To
(Road Directions):

13. Special Equipment: ( ) Bucket With A/C ( ) Chain Saw
( ) Other:

14. REMARKS (Environmental Considerations, Special Instructions, Additional Hazards):

15. START HOBBS: END HOBBS: TOTAL:

HCM-12 (Test)
(May, 1994)

N. **Helicopter Crew Action Report (HCM-13 Test).** (See Exhibit A-16.)

1. **Purpose.** The purpose is to document general aircraft utilization (initial attack as opposed to extended/large fire use) and crew training and experience on incidents.

2. **Applicability.** This form is optional.

3. **Responsibility and Instructions For Completion.** See Exhibit A-16. The Helicopter Manager is responsible for completing the form. Completion is self-explanatory.

4. **Routing and Filing.** No routing is necessary. Copies are kept as part of the helicopter crew file, and should be kept indefinitely in case historical data on helicopter and crew utilization is requested.

5. **Posting.** None.

6. **Related Forms.** Form HCM-7, Helicopter Crew Information Sheet, may be updated off the Helicopter Crew Action Report. Information from the previous year may be used to complete a crew member's NIFQS card.

Exhibit A-16: Example of Form HCM-13 (Test)
Helicopter Crew Action Report

HELICOPTER CREW ACTION REPORT

I. AIRCRAFT INFORMATION

DISPATCHED ON ___/___/___ RETURNED TO BASE ON: ___/____/___ INCIDENT #: _____

TOTAL A/C DAYS ON INCIDENT: _____

TYPE OF INCIDENT: ◯ IA/EXTENDED ATTACK ◯ LARGE INCIDENT SUPPORT

II. CREW INFORMATION AND EXPERIENCE RECORD

Name	Position On Incident	From	To	Name	Position On Incident	From	To

TOTAL CREWMEMBER DAYS ON INCIDENT: _____

III. REMARKS:

HCM-13 (Test)
(May, 1994)

O. Pilot Flight Time/Duty Day Cumulative Log (HCM-14 Test), Driver (Helicopter Attendant) Driving Time/Duty Day Cumulative Log (HCM-15 Test), and Mechanic Duty Day Cumulative Log (HCM-16 Test).

(See Exhibits A-17, A-18, and A-19.)

1. **Purpose.** The purpose of these forms is to enable the Helicopter Manager to track contract or CWN Pilot, Driver, and Mechanic flight time or driving time (as applicable), as well as each's duty day, so that limitations are not exceeded.

2. **Applicability.** This form is required for all contract aircraft. It is also mandatory for CWN and rental aircraft utilized for more than four continuous days. It is advisable to initiate these forms immediately at the start of any incident CWN or rental use.

3. **Responsibility and Instructions For Completion.** See Exhibits A-17, A-18, and A-19. Completion is self-explanatory. Helicopter Managers are responsible for making entries to the form on a daily basis for the period of the contract, or, for CWN, for the period of use.

   It is the responsibility of Helicopter Managers to inform the Helibase Manager of flight time, driving time, or duty day limitations that may interfere with planned operations.

4. **Posting.** None at incident helibases. It may be posted at the permanent helibase for exclusive-use contracts crews, but must be taken on off-unit dispatches.

5. **Routing and Filing.** No routing is necessary. Completed logs become part of the contract file.

6. **Related Forms.** Form HCM-1, Aircraft Contract Daily Diary. An agency incident/hazard report is submitted if limitations are exceeded.

Exhibit A-17: Example Of Form HCM-14 (Test)
Pilot Flight Time/Duty Day Cumulative Log

PILOT FLIGHT TIME/DUTY DAY CUMULATIVE LOG

Pilot Name:	**Information From Last Log:**	Last Date(s) Off-Duty: Cumulative FT Last 5 Consecutive Days On Duty:

INSERT DATES OF NEXT 7 DAYS IN BOXES							
EARLIEST PILOT COULD BE ON DUTY							
ACTUAL ON DUTY TIME (Including Preflight)							
ADD 14 HOURS FOR MAXIMUM DUTY DAY	+ 14 Hrs	+ 14 Hrs	+ 14 Hrs	+ 14 Hrs	+ 14 Hrs	+ 14 Hrs	+ 14 Hrs
= MUST BE OFF-DUTY AT:	=	=	=	=	=	=	=
ACTUAL OFF-DUTY TIME:							
CUMULATIVE FLIGHT TIME PREVIOUS 5 DAYS							
+ TOTAL FLIGHT TIME TODAY	+	+	+	+	+	+	+
= TOTAL FLIGHT TIME THIS 6-DAY PERIOD *	=	=	=	=	=	=	=

INSERT DATES OF NEXT 7 DAYS IN BOXES							
EARLIEST PILOT COULD BE ON DUTY							
ACTUAL ON DUTY TIME (Including Preflight)							
ADD 14 HOURS FOR MAXIMUM DUTY DAY	+ 14 Hrs	+ 14 Hrs	+ 14 Hrs	+ 14 Hrs	+ 14 Hrs	+ 14 Hrs	+ 14 Hrs
= MUST BE OFF-DUTY AT:	=	=	=	=	=	=	=
ACTUAL OFF-DUTY TIME:							
CUMULATIVE FLIGHT TIME PREVIOUS 5 DAYS							
+ TOTAL FLIGHT TIME TODAY	+	+	+	+	+	+	+
= TOTAL FLIGHT TIME THIS 6-DAY PERIOD *	=	=	=	=	=	=	=

Max Flight Time = 8 Hours Max Duty Day = 14 Hours Min Rest Period = 10 Hours Required Days Off = 2 Days in 14

(For state and local agencies, duty day/flight time limtations, rest periods, and required days off may vary from the USDA-FS and USDI standards indicated.)

* For federal agencies, a maximum of 42 hours flight time may be flown during any consecutive six-day period. When a pilot acquires 36 or more flight hours in a consecutive six-day period, the pilot will be given the following 24-hour period off duty for rest, or in the conterminous United States will be given the following full calendar day off for rest. Following any mandatory rest period, a new six-day cycle begins.

HCM-14 (Test)
(May, 1994)

Exhibit A-18: Example Of Form HCM-15 (Test)
Driver (Helicopter Attendant) Driving Time/Duty Day Cumulative Log

DRIVER (HELICOPTER ATTENDANT) DRIVING TIME/DUTY DAY CUMULATIVE LOG

Driver Name	Information From Last Log	
	Last Date(s) Off-Duty:	Cumulative Driving Time Last 5 Consecutive Days On Duty:

INSERT DATES OF NEXT 7 DAYS IN BOXES							
EARLIEST DRIVER COULD BE ON DUTY							
ACTUAL ON DUTY TIME (Including Preflight)							
ADD 16 HOURS FOR MAXIMUM DUTY DAY	+ 16 Hrs	+ 16 Hrs	+ 16 Hrs	+ 16 Hrs	+ 16 Hrs	+ 16 Hrs	+ 16 Hrs
= MUST BE OFF-DUTY AT:	=	=	=	=	=	=	=
ACTUAL OFF-DUTY TIME:							
CUMULATIVE DRIVING TIME PREVIOUS 5 DAYS							
+ TOTAL DRIVING TIME TODAY	+	+	+	+	+	+	+
= TOTAL DRIVING TIME THIS 6-DAY PERIOD	=	=	=	=	=	=	=

INSERT DATES OF NEXT 7 DAYS IN BOXES							
EARLIEST DRIVER COULD BE ON DUTY							
ACTUAL ON DUTY TIME (Including Preflight)							
ADD 16 HOURS FOR MAXIMUM DUTY DAY	+ 16 Hrs	+ 16 Hrs	+ 16 Hrs	+ 16 Hrs	+ 16 Hrs	+ 16 Hrs	+ 16 Hrs
= MUST BE OFF-DUTY AT:	=	=	=	=	=	=	=
ACTUAL OFF-DUTY TIME:							
CUMULATIVE DRIVING TIME PREVIOUS 5 DAYS							
+ TOTAL DRIVING TIME TODAY	+	+	+	+	+	+	+
= TOTAL DRIVING TIME THIS 6-DAY PERIOD	=	=	=	=	=	=	=

Max Driving Time = 10 Hours Max Duty Day = 16 Hours Min Rest Period = 8 Hours Required Days Off = 2 Days in 14

(For state and local agencies, driving limtations, rest periods, and required days off may vary from the USDA-FS and USDI standards indicated.)

HCM-15 (Test)
(May, 1994)

Exhibit A-19: Example of Form HCM-16 (Test)
Mechanic Duty Day Cumulative Log

MECHANIC DUTY DAY CUMULATIVE LOG

MECHANIC NAME							
INSERT DATES OF NEXT 7 DAYS IN BOXES							
EARLIEST MECHANIC COULD BE ON DUTY							
ACTUAL ON DUTY TIME (INCLUDING PREFLIGHT)							
ADD 16 HOURS FOR MAXIMUM DUTY DAY	+ 16 HRS.	+ 16 HRS.	+ 16 HRS.	+ 16 HRS.	+ 16 HRS.	+ 16 HRS.	+ 16 HRS.
= MUST BE OFF-DUTY AT:	=	=	=	=	=	=	0
ACTUAL OFF-DUTY TIME:							

INSERT DATES OF NEXT 7 DAYS IN BOXES							
EARLIEST MECHANIC COULD BE ON DUTY							
ACTUAL ON DUTY TIME (INCLUDING PREFLIGHT)							
ADD 16 HOURS FOR MAXIMUM DUTY DAY	+ 16 HRS.	+ 16 HRS.	+ 16 HRS.	+ 16 HRS.	+ 16 HRS.	+ 16 HRS.	+ 16 HRS.
= MUST BE OFF-DUTY AT:	=	=	=	=	=	=	0
ACTUAL OFF-DUTY TIME:							

INSERT DATES OF NEXT 7 DAYS IN BOXES							
EARLIEST MECHANIC COULD BE ON DUTY							
ACTUAL ON DUTY TIME (INCLUDING PREFLIGHT)							
ADD 16 HOURS FOR MAXIMUM DUTY DAY	+ 16 HRS.	+ 16 HRS.	+ 16 HRS.	+ 16 HRS.	+ 16 HRS.	+ 16 HRS.	+ 16 HRS.
= MUST BE OFF-DUTY AT:	=	=	=	=	=	=	0
ACTUAL OFF-DUTY TIME:							

Man Duty Day = 16 Hours **Min Rest Period = 8 Hours** **Required Days Off = 2 Days in 14**
(For state and local agencies, driving limitations, rest periods, and required days off may vary from the USDA-FS and USDI standards indicated.)

P. **Helicopter Daily Use and Cost Summary (HCM-17 Test).** (See Exhibit A-20.)

1. **Purpose.** The purpose is to enable the Helicopter Manager to summarize daily use and costs for the helicopter.

2. **Applicability.** The form is required on incidents to which a Type I or II Incident Management Team (IMT) is assigned.

   However, the air operations staff on a Type I or II Team will usually require that the Helibase Manager(s) submit summaries from the day of initial attack. Helicopter and Helibase Managers should therefore be prepared to furnish this information once an IMT is assigned.

   It may also be required on projects at the Project Aviation Manager's option.

3. **Responsibility and Instructions For Completion.** See Exhibit A-20. See Chapter 15 and Appendix B for further information.

   Each Helicopter Manager is responsible for completing the Helicopter Daily Use and Cost Summary at the end of each day's operational period. The Helicopter Manager submits it to the Helibase Manager.

   Use totals are gathered from load calculations and manifest forms. The Helicopter Manager should ensure:

   # If daily flight guarantees are not met for CWN or rental helicopters, that these costs are included on the summary.

   # If daily/hourly availability or guarantee costs on exclusive-use contract helicopters are already paid from presuppression funding, that these costs are not included on the summary.

   Mobilization costs (for example, ferry time to the incident, service truck miles, etc.) must be included on the first Summary submitted. Demobilization costs should be estimated and a final Summary submitted to the Helibase Manager prior to the departure of the helicopter from the incident or project.

4. **Posting.** None.

5. **Routing and Filing.** The Helicopter Manager gives the summary to the Helibase Manager. A copy of each helicopter's cost summary should be made part of the helibase file.

6. **Related Forms.** Helicopter load calculations and manifests forms are used to complete the Summary. The Helibase Manager completes Form HBM-10, Helibase Daily Use and Cost Summary, from helicopter summaries.

Exhibit A-20: Example of Form HCM-17 (Test)
Helicopter Daily Use and Cost Summary

HELICOPTER DAILY COST SUMMARY	A/C N#:	MAKE/MODEL:

HELIBASE: MGR NAME:

____ CWN ____ CONTRACT ____ OTHER (Specify):

TYPE HELIC: _____1 _____2 _____3

HOBBS STOP:		
HOBBS START:	RATE	TOTAL COST
FLIGHT HOURS:	$	$
AVAIL (HRS OR DAY):	$	$
EXT PILOT STBY:	$	$
EXT MECH STBY:	$	$
EXT DRIVER STBY:	$	$
PD # PERSONS:	$	$
SERVICE TRUCK/DAY:	$	$
SERVICE TRUCK MILES:	$	$
ADDIT COST:	$	$
ADDIT COST:	$	$
TOTAL COSTS FOR DAY:		$

USE SUMMARY:

TOTAL PAX	TOT LBS CARGO	TOT GALS WATER	TOT GALS RETARDANT	TOT GALS FOAM

COST APPORTIONMENT (if applicable):

AGENCY	PERCENT	COST
		$
		$
		$

MGR SIGNATURE:

PILOT SIGNATURE:

HCM-17 (Test)
(May, 1997)

Q. **Aircraft Safety Briefing.** (See Exhibits A-21 and A-22.)

1. **Purpose.** The purpose is to provide a format for accomplishing aircraft passenger briefings.

2. **Applicability.** The format is optional. However, all items contained in this format must be covered in any briefing given to passengers by the Pilot and by a Helicopter Manager, Project Flight Manager, or individual manifesting personnel for transport.

3. **Responsibility and Instructions For Completion.** See Exhibits A-21 and A-22. The Pilot and the Helicopter Manager, Project Flight Manager, or individual manifesting personnel for transport is responsible for covering the items on the briefing card.

4. **Posting.** None. However, a copy may be posted on the helibase display board. It is recommended that a copy be posted in full view in the passenger staging area.

5. **Routing and Filing.** None.

6. **Related Forms.** None.

Exhibit A-21: Standard Aircraft Safety Briefing (FRONT)

AIRCRAFT SAFETY BRIEFING (FRONT)

It is recommended that passengers be briefed in groups rather than individually.

MANAGER BRIEFING TO PILOT AND PASSENGERS GENERAL-

1. **Pilot Card:** Qualified and current for aircraft type and mission.
2. **Aircraft Card:** Aircraft Approved for mission?
3. **Flight Plan/Resource Tracking:** FAA or Agency flight plan filed; Resource Tracking procedures identified
4. **Flight Following/Radio Equipment:** Flight following procedures in place; radio equipment is adequate and operational
5. **Nature of Mission:** Pilot briefed on nature and sequence of mission
6. **Analysis of Known Hazards:** Known hazards discussed; high-level recon prior decent to low-level
7. **PIC Concept:** Pilot shall not be pressured into performing missions beyond pilot's capability or that of the aircraft

PILOT OR MANAGER BRIEFING TO PASSENGERS

1. Personal Protective Equipment:* Appropriate head protection (see Chart 9-1); Nomex clothing; ear and eye protection; boots; other survival equipment as applicable (PFD, life rafts, etc.)

2. Approach and departure paths:
- When landing in helicopters in uneven terrain, always approach and depart from the downslope (lower) side
- Approach and depart helicopters in a crouch
- Keep in pilot's field of vision at all times
- Stay clear of the landing area when helicopters are landing or departing
- Never go near the tail of helicopters; do not approach airplanes from the front

3. Tools and Equipment:
- Secure hand tools and equipment awaiting transport (will not blow into rotor system)
- Carry tools or other long objects parallel to the ground, not over the shoulder into the air
- Make assignments for carrying tools/equipment to and from the helicopter or airplane

* PPE required for special use airplane missions and all helicopter flights. Available and worn by all passengers, pilot(s), and aircrew members.

Exit A-22: Standard Aircraft Safety Briefing

PILOT OR MANAGER BRIEFING TO PASSENGERS (CONT)

4. **Seating in Aircraft:**
- No movement between seats unless authorized by pilot
- Seat belt fastened at all times
- Unbuckle only when specifically directed to do so by pilot or helicopter loading/unloading personnel
- Follow the instructions of pilot
- Know location of first aid kit, survival kit, fire extinguisher, ELT (Emergency Locator Transmitter), fuel shutoff switch, radio operation, oxygen (if available)

5. **Security of Equipment:**
- Loose items secured and manageable; all baggage secured in aircraft or in compartment
- Never throw any object from a helicopter or airplane
- Around helicopters, never reach up or dart after a hat or other object that has become unsecured

6. **Smoking:** Rules in and around aircraft

7. **Emergency Exits:** Location and use

HELICOPTER IN-FLIGHT EMERGENCY PROCEDURES

Follow instructions of pilot/helicopter personnel
Fasten seat belt and shoulder harness; secure gear
Appropriate head protection properly worn
Forward facing passengers restrained with shoulder harnesses, sit in full upright position with head an back against seat and arms folded across chest
Forward facing passengers without shoulder harness: bend forward at waist, grasp arms under legs and place head between knees
Aft (rearward) facing passengers, sit in full upright position with head and back against seat
side facing passengers, bend forward at waist, grasp arms under legs and place head between knees
Assist any injured person who cannot leave the aircraft
Move clear of the aircraft only after rotor blades stop or when instructed to do so by the pilot or helicopter crew
Assess situation, follow pilot/helicopter manager instructions, render first aid, pilot and/or helicopter manager to remove first aid kit, radio, ELT, and fire extinguisher.

R. **Helibase Directory Information Sheet.** (See Exhibits A-23 through A-25.)

1. **Purpose.** The purpose is to supply information for update of geographic area Helicopter Base Directories.

2. **Applicability.** The format is optional. It may be completed for all permanent helibases operated by an agency.

3. **Responsibility and Instructions For Completion.** If utilized, the local Helicopter Manager or unit Aviation Manager is responsible for completing the form annually in time for the geographic area's Directory to be published. The format shown on the following pages in Exhibits A-23 through A-25 may be used. Completion is self-explanatory.

4. **Posting.** None. However, a copy should be included in the Base Operations Plan or Supplement.

5. **Routing and Filing.** After completion, the form is routed to the individual or unit responsible for publishing the Directory.

6. **Related Forms.** None. Information may be utilized to update the Computer-Aided Aviation Hazard Information System (CAHIS).

Exhibit A-23: Example of Helibase Directory Information Sheet (Page 1)

HELIBASE DIRECTORY

Revision Date: _____

A. GENERAL

BASE NAME:	OPERATING AGENCY:	UNIT:	STATE:

B. FLIGHT INFORMATION

FAA OR, IF NON-AIRPORT, AGENCY DESIGNATOR FOR BASE:				
LATITUDE:	LONGITUDE:	TOWNSHIP:	RANGE:	SECTION:
GEOGRAPHIC LOCATION (eg, from nearest town):				
VOR	RADIAL	DISTANCE	ELEVATION:	
PREVAILING WINDS: FLIGHT PATTERN:				
LOCAL UNIT DISPATCH FM FREQUENCY(IES):				
BASE AM RADIO FREQUENCY:				
BASE FM FREQUENCY:				
FLIGHT HAZARDS (Describe):				

Exhibit A-24: Example of Helibase Directory Information Sheet (Page 2)

C. GENERAL BASE AND DISPATCH INFORMATION.

HELIBASE CAPACITY (# Pads): TYPE HELICS:	BASE PHONE NUMBER(S): FAX NUMBER:	
LOCAL UNIT DISPATCH PHONE NUMBER: ( ) LOCAL UNIT DISPATCH FAX NUMBER: ( )		
LODGING: RESTAURANTS:		
FUEL AVAILABILITY		
TYPE:	LOCATION:	
DISTANCE BY GROUND: DISTANCE BY AIR:		
VENDOR:	PHONE:	AFTER-HRS:
OTHER REFUELING LOCATIONS FOR FUEL TRUCK:		
BASE FACILITIES		
Warehouse/Storage?	Electricity?	Potable Water?
Pilot Standby/Rest?	Crew Standby/Rest?	Refrigerator?
Shower?	Toilet?	Office Space?
LANDING PAD FACILITIES		
Water?	Electricity?	Lights?
Air?	Perimeter lights?	Retardant?
Commercial airline service available at (Nearest):		
REMARKS:		

Exhibit A-25: Example of Helibase Directory Information Sheet (Page 3)

D. HELIBASE DIAGRAM

S. **Helicopter Crew and Helicopter Base Readiness Evaluation.** See Appendix E for information concerning the Evaluation.

T. Agency Flight Payment Documents. See Appendix D for information concerning the completion of agency flight payment documents.