

Washington State
Department of Natural Resources

**Fire Aviation Helicopter/Helitack Program
Operations Plan**

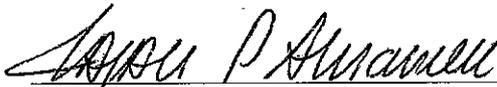
June 2011
Version 1

Washington State Department of Natural Resources

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Approved by:



Joseph Shramek, Division Manager
Resource Protection Division

6/10/11

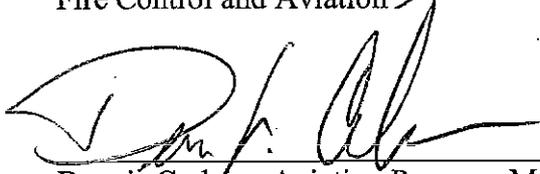
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6/10/11

Date

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INTRODUCTION

I. Purpose.

The Washington State Department of Natural Resources (DNR) has developed this helicopter operations plan to:

- Assist agency personnel in the administration, management and use of the DNR's helicopter and Helitack operations.
- Provide agency procedures for aviation operators and other interested parties.

II. Objectives.

The objectives of the DNR Helicopter Operations Plan are to:

- Promote safe, cost-efficient and effective helicopter services in support of agency and interagency goals and objectives.
- Define and standardize DNR helitack and helicopter management and operational procedures for helicopter users and participating agencies.
- Provide a framework within which DNR Regions and local units can provide supplemental, site-specific guidance.

III. Scope.

The procedures contained in this guide apply to all DNR helicopter and helitack program operations. The DNR uses the Interagency Helicopter Operations Guide (IHOG) as a guide, not as official policy. The DNR will follow the IHOG guidance on fires where jurisdiction is of the governing agency for which the IHOG is policy, with the exception of the "Agency Variances" which pertain to DNR. *A copy of the "Agency Variances" is attached at the end of this document and can also be found in the DNR "Aviation Management Plan."*

IV. Mission.

The primary mission for DNR's helicopters is to provide direct aviation support for initial attack wildfire suppression operations on DNR-protected lands. Assignments to extended attack and large fire support, or for other purposes, will be on a case-by-case basis. Medical evacuations are not a part of DNR's stated mission and this function is to be performed only as a last resort in the case of a life threatening injury or illness. DNR or DNR contracted helicopters are not to be assigned to medical evacuation missions on Incident Action Plans (IAP's).

Helicopters will be dispatched using the following criteria (in the priority order as follows):

1. Wildfire threat to human life, on any jurisdiction.
2. Wildfire threat to natural resources
 - a. First priority – initial attack (DNR, other agency, outside of Washington).
 - b. Second priority – extended attack (DNR, other agency, outside of Washington).
 - c. Third priority- large incident support (DNR, other agency, outside of Washington).
3. Wildfire threat to developed property.

Though the top priority is initial attack, the DNR helicopters can be utilized for extended attack or large incident support provided that they can immediately be reassigned to initial attack duties when the need arises or is anticipated.

ADMINISTRATION

I. Methodology: Process for Plan Approval and Revision

The DNR will annually review this Plan and make changes as necessary. Corrections and suggestions should be addressed following the chain of command, then routed through the DNR Fire Aviation Program Helicopter Manager, Southeast Region Fire District Helicopter Manager, and the Helitack Operations Helicopter Manager. Items pertaining to life and safety will be addressed immediately. These revisions or alerts will be made known to all field and office personnel via statewide memorandum. Items not pertaining to life and safety--such as suggestions for operational change or new inclusions to the plan may be submitted at the DNR's annual Aviation Meeting in October for consideration in the following year's rewrite. Revisions will be added to the original document with notation of revision date (Example: "Helicopter Maintenance & Servicing (Revised June __, 2006)"). Changes to the Helicopter Operations Plan are approved by the Resource Protection Division Helicopter Manager and go into effect immediately following approval.

Once approved, the DNR Helicopter Operations Plan constitutes the operating procedures of the DNR Aviation Program.

Distribution

Copies of this document will be distributed to each DNR Region, as well as to user programs, and cooperator agencies. Dispatch centers dealing with DNR aircraft should also possess a current copy of the document and be forwarded any memorandum regarding Safety Alerts or Directives. Copies of this document are available from DNR's fire aviation website or may be requested through:

DNR Fire Aviation Section
Resource Protection Division
Washington Department of Natural Resources
PO Box 47037
1111 Washington Street, SE
Olympia, WA 98504-7037
1(360) 902-1300

II. Safety

- **Safety is the number one responsibility of every person working with or around helicopters.**
- No aircraft will be flown with a known "Safety of Flight" discrepancy unless approved by an authorized agency aircraft mechanic.
- Except when extreme conditions justify flight operations no aircraft will be flown without operable communication equipment.
- The Pilot is the final authority on the safe operation of the assigned helicopter and the Helicopter Manager has final mission authority for the assigned aircraft.

III. Organization

The DNR Resource Protection Division (RPD) Aviation team manages all DNR helicopters, as well as Exclusive Use and Call When Needed (CWN) contracted aircraft. The Helicopter Program Coordinator, Pilots and maintenance staff work under the direction of the RPD Fire Aviation Section Helicopter Manager. The helitack crew works under the

direction of the DNR-SE Region Helitack Operations Helicopter Manager, Managed by the Fire Program District Helicopter Manager. The RPD Pilots and mechanics duty station is Olympia and Ellensburg is the duty station for the Helicopter Coordinator, Chief Pilot and all SE Region helitack personnel. RPD is responsible for ensuring all Pilots and mechanics are properly trained in accordance with DNR policies and operating procedures and SE Region is responsible for training of helitack program members. RPD is responsible for all Pilot and mechanic hiring, evaluation, travel payment, processing Time and Activity Reports (TARs) and handling personnel issues in collaboration with Human Resources Division (HRD). SE Region provides comparable functions for helitack program employees.

IV. Personnel Contact List

- For contact information, refer to the DNR -- Aviation Operating Plan and/or CWICC Interagency Mobilization Guide (access for DNR employees only).
- In addition, other contact information may be gained upon request through DNR division and region phone contact lists.

V. Training

- Annual training for helitack crewmembers is the responsibility of the Helitack Operations Helicopter Manager in coordination with DNR-SE Region Fire Program District Helicopter Manager and DNR-SE Region Training Coordinator.
- Annual helitack/Pilot training is the responsibility of the Helitack Operations Helicopter Manager and the Chief Pilot as directed through the DNR-SE Assistant Region Helicopter Manager and RPD Assistant Division Helicopter Manager, respectively.

VI. Equipment and Vehicles

- RPD is responsible for the procurement and maintenance of all revolving fund vehicles as well as Federal Excess Personal Property (FEPP) and Fire Fighter Property (FFP) vehicles. Equipment to support helitack operations is typically assigned to DNR-SE with the approval of the SE Region Helicopter Manager (RM). If the RM accepts responsibility for the equipment, then maintenance and operations responsibility shifts to the region.

VII. Responsibilities

A. Fire Aviation Program Helicopter Manager

This position reports to the RPD Assistant Division Helicopter Manager for Fire Control and Aviation and is responsible for:

- Day-to-day implementation of the DNR Aviation Program policy and procedures.
- Program safety and preparedness.
- Supervision of the Helicopter Program Coordinator, Chief Helicopter Pilot, and the Aviation Maintenance Supervisor.

B. Helicopter Program Coordinator

This position reports to the Fire Aviation Program Helicopter Manager and is responsible for day-to-day helicopter operations coordination in collaboration with the RPD's Emergency Operations Helicopter Manager including:

- Evaluating and updating all documents pertinent to helicopter operations.
- Coordinating helicopter pre-positioning operations with regions.

- Coordinating with region dispatch offices and DNR regional fire Helicopter Managers.
- Ensuring all flight logs are completed and verifies helicopter billing documents.
- Coordination of Pilot rotations to insure proper staffing.
- Coordination of scheduled and unscheduled maintenance with Aviation Maintenance Supervisor.
- Insures daily provision of DNR helicopter status report to the Resource Protection Division emergency operations Helicopter Manager, Region dispatch offices and other interested personnel, and posts a copy on DNR's Internet site.
- Receiving and ensuring the processing of helicopter fuel slips, FEPP rig fuel and mileage slips.

C. Chief Helicopter Pilot

This position reports to the Fire Aviation Program Helicopter Manager and is responsible for day-to-day helicopter flight operations in coordination with RPD's Helicopter Program Coordinator including:

- Recruiting, evaluating and recommending helicopter Line Pilots and Line Pilot Trainers for employment.
- Ensuring helicopter program safety.
- Developing implementing and providing training for helicopter Pilots.
- Conducting flight reviews and evaluating and taking corrective action with Pilots.
- Serving as the primary technical expert in helicopter operations.
- Serving as a line Pilot when needed.
- Serving as a test Pilot when needed.

D. Helitack Operations Manager

This position reports to the SE Region Fire Operations Helicopter Manager and is responsible for daily management and supervision of the helitack crews including:

- Ensuring daily and mission specific safety briefings.
- Ensuring a safe working environment for assigned crews.
- Ensuring a harassment free work environment for assigned crews.
- Ensuring crew and aircraft readiness.
- Ensuring Fuel Truck Driver duty hour standards and crew work rest ratio periods are met.
- Ensuring CDL Fuel Truck Drivers comply with Federal DOT and Agency laws, policies procedures and guidelines.
- Acting as liaison between Pilots/crew members, region staff and RPD.
- Providing oversight of helitack crew members and fuel truck Fuel Truck Drivers assigned to the helicopter.
- Ensuring all helitack staff members meet PMS 310-1 standards for qualified positions.
- Ensuring all helicopter equipment assigned is maintained and in good working order.
- Ensuring all evaluations for helitack staff members are completed.
- Ensuring all travel vouchers, TARS, MERS, leave requests, receipts and new employee paper work is completed in a timely manner.
- Ensuring helicopter equipment maintenance and inspections are done in accordance with the RPD, DNR -- Aviation Maintenance Operations Manual.
- Ensuring and maintaining a proper inventory of all equipment assigned to the DNR SE Region Helitack.

E. Helitack Crew Supervisor

This position reports to the Helitack Operations Helicopter Manager and is responsible for:

- Ensuring a safe working environment for all assigned crews.
- Completing employee evaluations for assigned crew members.
- Ensuring all travel vouchers and time reports are completed in a timely manner for assigned crews.
- Directing work projects at DNR staging facilities, Helibases and during fire assignments.

F. Helicopter Manager

The Helicopter Manager is:

- the responsible person for the safe and efficient use of the helicopter, crew and support equipment,
- the liaison between the Helitack module and the incident commander and either, CWICC, NEWICC or the project Helicopter Manager,
- responsible for the security of the assigned aircraft while on incidents and at staging locations.

The Helicopter Manager insures equipment and crew readiness at the beginning of each shift including:

- helicopter bucket and lines are ready and secure,
- the remote hook is available on the fuel truck,
- all crew gear is secured,
- an adequate number of handheld radios are onboard,
- a Gazetteer Map is onboard,
- the dip-site management GPS is onboard with spare batteries
- foam tanks are filled,
- the aircraft has been cleaned,
- an adequate supply of duct tape is onboard,
- the assigned Pilot completes the load calculation form,
- the load manifest is complete,
- participation in bi-weekly conference calls or meetings with supervisors as scheduled.

The Helicopter Manager must be fully of using:

- the aircrafts GPS
- a handheld GPS
- the aircraft FM and Victor radios
- a Gazetteer Map
- an Aviation Sectional Chart
- coordinates for navigation
- township, range and section information for navigation

The Helicopter Manager performs a daily operational briefing with Pilot and crew using the "*Helitack Helicopter Manager Briefing Check list*" at the start of each shift (see appendix 3). If a Pilot or another other Helicopter Manager is not present for the briefing the Helicopter Manager and the Pilot will conduct a briefing at the earliest time possible upon arrival of both parties.

G. Helicopter Pilot

The Helicopter Pilot:

- Adheres to Federal Aviation Regulations (FAR's) and DNR regulations.
- Functions as Pilot in Command (PIC) for operational fire fighting.
- Performs flight following as required by the agency. *See DNR -- Aviation Program Operations Manual- Chapter 8.*
- Insures all helicopter equipment and communications equipment is safe for flight.
- Performs pre-flights and tracks flight times on approved agency forms.
- Completes helicopter load calculations in accordance with IHOG, *chapter 7* and in accordance with WA DNR "variances" to the IHOG.
- Provides a first or second-class FAA Medical Certificate (valid from May 1st through November 15th annually, at Pilot's expense, before February 28th.. A copy is forwarded to the Aviation Program Helicopter Manager.
- Performs preflight safety briefings for passengers or delegates the briefing responsibility to qualified personnel.

Pilot experience and qualifications are available in the Position Description Forms for Line Pilots and Line Pilot/Trainers.

H. Helitack Squad Boss

This position reports to the Helitack Operations Helicopter Manager and:

- Assists the Helicopter Manager insure equipment and crew readiness,
- Is responsible for the care and maintenance of tools on the assigned helicopter,
- Assists the Helicopter Manager in directing assigned crews in all fire operations,
- Assists the Helicopter Manager and crew supervisors in assigning duties and directing assigned crews during staging operations,
- Acts as liaison between assigned crews and Helicopter Managers,
- Occupies the right rear outside seat during all flight missions when the crew is in flight.

I. Helitack Fuel Truck Fuel Truck Driver

The Fuel Truck Fuel Truck Driver:

- Adheres to the Federal DOT and department driving regulations and standards,
- Insures the assigned vehicle is operated in a safe and efficient manner,
- Insures the assigned vehicle is fire ready at all times,
- Insures Jet A fuel meets the DNR Aviation Program fuel quality standards,
- Is competent in the use of the truck's GPS, mobile radios and handheld radios,
- Insures fuel truck deficiency reports are accurate and up to date at the start of and end of each work shift
- Is responsible for the inventory and assurance that the truck has all assigned equipment on board.

J. Helitack Crew Member

The Helitack Crew Member:

- Performs assigned duties, including fire suppression actions, in a safe manner at all times,
- Adheres to the policy and standard operating procedures set forth by the agency,
- Is respectful of other crew members and insures a harassment free environment at all times,
- Is competent in the use of the standard Interagency Helicopter Hand signals.

VIII. Helicopter and Fuel Truck Rates.

Routine, non-emergency, aircraft, Pilot and maintenance expenses are funded through the Natural Resources Equipment Fund (NREF) 86K program. Fire related flight times and expenses are normally funded through the emergency fire suppression fund (221, 222 or 223 program indices). Flight hours are recorded and tracked daily on the Aircraft Flight Logs. Pilots record flight time from the helicopters HOBBS meter and correlate this information with the incident and mission type. Helicopter fire missions are assigned a program/incident code which is recorded on the Helicopter Manager's form entitled Helitack Fire Time and Extra Hours Report. Billing and cost recovery are performed by RPD accounting staff, in close coordination with dispatcher and region billing representatives.

Aircraft rates are reviewed annually, and adjusted annually in April for fiscal year commencing on July 1st. The rates for calendar year 2011 as found in DNR -- Wage and Equipment Rates and are as follows:

UH-1H "Huey" Helicopters	\$2,600 per hr.
FEPP Chase Rigs	Incidents will incur all vehicle fuel cost

All DNR revolving fund vehicles are billed at the mileage rate set by the equipment fund Helicopter Manager.

OPERATIONS

I. General Operations

All aircrew members are to maintain situational awareness, remaining alert and identifying potential hazards during all phases of aircraft operations. All helicopter operations are planned with the utmost consideration given to safety. When a DNR helicopter is operated with two DNR Pilots onboard (including training flights), one is designated as Pilot-in-Command (PIC) of the aircraft. The PIC determination is based on Pilot seniority in DNR, unless otherwise determined by the Fire Aviation Program Helicopter Manager. The Chief Pilot maintains a Pilot seniority list and reviews the list with the helicopter Pilots during spring training. The PIC has ultimate authority over flight operations and safety.

Communications

DNR and contracted helicopters are equipped and use Automated Flight Following (AFF) as the primary method for flight following. The helicopter and the dispatch center(s) responsible for tracking a helicopter perform flight following in accordance with the *National Interagency Mobilization Guide, Chapter 20, Administrative Procedures, # 24.3.1, Automated Flight Following Requirements and Procedures*. The National Mob Guide is located at the following web site:

<http://www.nifc.gov/nicc/mobguide/index.html>

All Pilots will turn on the AFF system aboard the aircraft during any flight that is outside of visual or immediate response by the supporting crew, or when other aircraft are in the general area.

The approved web based tracking system for the Flight Following DNR helicopters or DNR contracted helicopters is aff.gov.

If AFF fails flight following will be done in accordance with the DNR -- Aviation Program Operating Plan- Chapter 8, and the IHOG. Normally flight following will be done in, at minimum, 15 minute intervals. Dispatch centers will, at minimum, give the Helicopter Manager or his/her representative a flight following, air to ground and air-to-air frequency.

When a DNR helicopter is in radio communication with an FAA facility or airport the Pilot uses the full call sign of the helicopter. When approaching a Fire Traffic Area (FTA) the Helicopter Manager contacts the Air Attack when at 12 NM, and no less than at 7 NM, from the FTA. When a lead plane is in the FTA without an Air Attack the helicopter Pilot contacts the lead plane Pilot on the assigned frequency. **If no communication is established with aircraft known to be on scene, the DNR helicopter or DNR contract helicopter will not continue closer than 7 NM until positive communication is established with other aircraft in the FTA.**

All DNR aircraft and support vehicles are equipped with adequate and reliable radio communication equipment. All aviation personnel are required to use Clear Text and standard Incident Command System (ICS) terminology.

For more information on communications see I, General Operations, Initial Attack. *Also note that communications will be in accordance with the DNR Aviation Program Operating Plan.*

Helicopter Dispatch

The Helicopter Manager will provide a briefing to the Pilot and fuel truck Fuel Truck Driver and may brief the crew, if practical, prior to launching on a new mission. The Helicopter Manager and Pilot insure all gear is secure within and around the aircraft.

The Helicopter Manager discusses with the Pilot the:

- Destination,
- Requesting agency,
- Other aircraft assigned to the incident,
- Air to ground frequency, and
- Air to air frequency before departure.

The Helicopter Manager and Pilot plan the flight to include:

- Flight route,
- Air space consideration,
- Fuel duration and location,
- Method of Flight Following

The Helicopter Manager provides the Fuel Truck Fuel Truck Driver with the incident location and destination.

Planning

Pilots and Helicopter Managers evaluate and perform risk assessments for every mission. They collaboratively evaluate every mission for hazards that could affect the safety of the flight. Hazards include, but not limited to:

- Weather,

- Time of flight,
- Terrain,
- Equipment,
- Training and proficiency level of personnel,
- Wires, snags and other obstacles,
- Extreme fire behavior,

Each crewmember is expected to identify unknown hazard which they observe. Pilots perform a high-level reconnaissance before descending below 500 feet Above Ground Level (AGL). Helitack crewmembers and Helicopter Managers must not exert pressure upon the Pilot to perform missions or maneuvers with which the Pilot deems unsafe. Pilots and/or Helicopter Managers can use *IHOG chapter 3* as a guide to assist with risk management and risk assessment.

Pilot Duty Limitations

Pilot duty day and flight time limitations are in accordance with *IHOG exhibit A-17* except as noted in the *Washington State DNR Variances to the IHOG, Appendix 1 Page 46. (May 13, 2001.)*

- Flight time will not exceed 8.0 hours per day, with no more than 7.0 hours of external load operations.
- Maximum duty day will not exceed 14 hours while in flight status
- The flight crew (Pilot(s)) will have a minimum of 10 consecutive hours of off-duty crew rest before returning to status the following day. Time spent in transportation, not local in nature, is not considered part of a rest period.

National Guard. The National Guard follows aircraft operations and flight rules as set forth in their operational policies and procedures. While flying on fires or incidents for the DNR, and when a conflict in regulations occurs, the National Guard will follow the more restrictive of the policies. For guidance in military use, DNR personnel can consult the Military Use Handbook (2006) (NFES 2175) or speak with a military liaison.

Life-threatening Situations

In rare instances a life-threatening situation may cause a Pilot to determine the need to exceed duty hour limitations. In the event that this occurs, the Pilot must use his/her best judgment, and must not let the urgency of the situation affect the safety of the crew or of him/herself. Any duty hour violations made will be documented, through the SAFECOM process, by the Pilot and Helicopter Manager.

Fuel Truck Fuel Truck Driver Limitations

DNR fuel truck operations are conducted in accordance with all the Washington Administrative Codes, Revised Codes of Washington and 49 CFR. In addition, Fuel Truck Drivers maintain the Fuel Truck Driver log book daily, even on the days when driving does not occur. DNR has established a 12 day duty limit, a 10 hours per day maximum drive limit and a shift length not to exceed 15 hours per day for all helicopter fuel truck Fuel Truck Drivers. If circumstances cause the shift length to exceed 15 hours, the Fuel Truck Driver is restricted from driving during these extended hours and must have 8 hours off duty before returning to driving status.

Exception- A Fuel Truck Driver, not assigned to the helitack crew or assigned to an incident, who is driving a truck over the road to fill other trucks will comply with the rules found in CFR 49, part 395, Hours of service of Fuel Truck Drivers. The hours of such a Fuel Truck Driver will not exceed 11 hours driving during a 14-hour duty day, and will have 10 consecutive hours off duty before returning to drive status.

Fuel Truck Drivers will have one full calendar day off duty after working 12 consecutive days. After working 12 consecutive days, the Fuel Truck Driver will be paid for an 8 hr shift during the one full calendar day off, if that day falls on a regular scheduled workday.

DOT regulations require Fuel Truck Drivers to perform pre-trip inspections and mitigate any problems prior to starting the trip. Fuel Truck Drivers will perform a walk around every 100 miles or every 2 hours, and stop at weigh stations while not responding to an incident.

The Helicopter Manager may authorize the Fuel Truck Driver to go to a motel for rest if the Helicopter Manager feels it is in the best interest of the Fuel Truck Driver to minimize fatigue. The Fuel Truck Driver may exceed his/her duty hour limits in the case of an emergency with written permission from the Incident Commander, and the Fuel Truck Driver agrees to the exceeding of the duty limits.

Per FMCSR 177.817 (Federal Motor Carrier Shipping Regulations) cargo manifest/shipping papers must be completed and carried for transportation of hazardous materials. The cargo manifest/shipping papers must be within the Fuel Truck Driver's reach, on top of other papers, and must be left on the Fuel Truck Driver's seat or on the vehicle dashboard when the Fuel Truck Driver is out of the vehicle.

Contracted fuel truck Fuel Truck Drivers will follow all the rules and regulations IAW the state and federal DOT.

DNR occasionally uses CDL qualified agency personnel to operate the aviation fuel support vehicles. Fuel support vehicle operators who are not familiar with helicopter operations may drive the vehicle but will not engage in hot fueling or helitack specific operations. Conversely fuel support operators such as an aviation mechanic may engage in hot fuel operations or helicopter bucket hook up operations but will not engage in other helitack specific operations or fuel truck driving unless they possess a current CDL. Helicopter support vehicle operators' limitations will be reviewed by the Helicopter Coordinator and Helitack Helicopter Manager, or his/her representative and approved for appropriate vehicle operations on a case by case basis.

Duty Station

Each DNR helicopter Pilot's duty station is Olympia. DNR or DNR contracted helicopters can be staged or prepositioned to any area of the state for any part of the fire season. The DNR Fire Aviation Section delegates to Region staff the operational authority for initial attack on DNR-protected lands or lands in which that Region has formal agreements, when helicopters are staged or detailed within their jurisdictional boundaries. While on fires, the Incident Commander exercises operational control of the helicopter(s), assigned crew and Pilots. Ultimate authority over all DNR or DNR contracted helicopters resides within the DNR Resource Protection Division.

Fire Operations

During fire operations the Helicopter Manager will insure the helicopter remains "Initial Attack" ready. The standard operating procedure should include the Helicopter Manager ensuring the helicopter and crew remains dispatch able within 30 minutes of a call for a new assignment.

The Helicopter Manager's priority on all incidents is to insure the helicopter is operational; keeping the helicopter and associated equipment (i.e. bucket, lines, and nets) fire ready. Crew management and deployment issues are the second priority.

The Helicopter Manager may elect to leave a minimum of one crew member at the landing site to insure the mission readiness of the assigned helicopter.

The Helicopter Manager will not staff more than one incident unless the Helicopter Manager can maintain initial attack readiness, has the appropriate personnel too safely and effectively staff multiple incidents, and the incidents are within close proximity, such as same drainage or ridge top. While assigned to an incident, the helicopter will not be redirected to an additional incident without the Helicopter Manager's approval in advance.

The Helicopter Manager and Pilot will insure the helicopter is refueled prior to departing any incident, unless flight time beyond destination is precluded by duty or flight time limitations. This fueling requirement is for the purpose of maintaining initial attack readiness.

The Helicopter Manager and crew will not be provided motel accommodations unless approved by the Helitack Program Helicopter Manager or higher authority level.

Assignments and Responsibilities

The primary duty of the Pilot and crew is to insure the assigned helicopter and associated equipment is airworthy and can perform the assigned mission. Pilots should coordinate non-helitack assignments with the Crew Supervisor or Helicopter Manager to assure that all necessary maintenance and repair work on the helicopter and assigned equipment is accomplished prior to accepting assignments. Helitack crews will attempt to launch in the minimum time possible consistent with safety and operational requirements. **The performance standard is five minutes from receipt of dispatch orders to aircraft start-up.**

All aircrew and ground personnel assigned to fire-ready aircraft will be dispatch-ready during all hours of their shift. Personnel will monitor radios and/or telephones, and will advise their supervisor of their location when away from the immediate work area.

All aircrew and ground personnel are responsible for maintaining a safe work environment by monitoring base working conditions and co-worker physical/mental conditions, and by following safe operational practices. Any notice of an unsafe work environment must be immediately mitigated, as per DNR policy and procedures. To maintain safe working conditions, employees should:

- Remain alert attuned to potential safety problems and take positive action to reduce risk and mitigate hazards,

- Correct problems as quickly as possible, keeping others informed—make sure that all persons affected are advised of safety hazards that cannot be immediately mitigated,
- Inform Helicopter Managers and supervisors of safety issues as they are discovered or as they occur,
- Be aware of their physical limits, and the limits of co-workers, and plan accordingly,
- Watch for signs of fatigue in self and others (*fatigue often manifest itself in the form of mistakes in performing routine jobs, and is often be indicated by altered attitudes and a reduced concern for safety and mission objectives*),
- Insure everyone is trained to perform the expected task safely.
- Communicate using briefing, debriefing and After Action Reviews (AAR's).

While on assignments, the Helicopter Manager's duties include, keeping the Incident Commander or Region Helicopter Manager (or his/her representative), informed regarding status of the helicopter module including:

- Helicopter availability and maintenance needs,
- Pilot's flight status and duty day limitations,
- Fuel truck Fuel Truck Driver status and fuel availability,
- Crew availability,
- Equipment availability.

Landing Site Selection

The Pilot and Helicopter Manager must agree on the following criteria before proceeding into unimproved landing areas:

- The Pilot will consider the safety of the aircraft and crew,
- The Helicopter Manager will consider fire safety, efficiency and effectiveness of the landing site.

When selecting a site for fueling operations the Helicopter Manager (or representative), should seek permission from the landowner before landing or as soon as possible thereafter. If a landowner does not grant permission the Pilot and Helicopter Manager must select a new landing site. Unless it conflicts with the criteria stated above, helicopter landing sites in must be in accordance with the IHOG, Chapter 8.

Water Source Selection

Pilots and Helicopter Managers request permission from the Region, dispatch center or Incident Commander before dipping out of a water source that has a fence, a security system around the water source, or a water source that appears suspect as a hazardous dip site. Helicopter Managers are responsible for ensuring the dip site is of non hazardous nature by plotting known hazardous dip sites on a GPS, gazetteer, or other similar maps. RPD, through the Emergency Operations Communication Center (EOCC), is responsible for providing DNR Helicopter Managers with a current list, identified by latitude and longitude, of known hazardous water sources throughout the state. Pilots should use the closest acceptable water source to the fire while considering safety. The helicopter Pilot, Helicopter Manager or Incident Commander (or his/her representative) can choose to position a dip site Helicopter Manager at any dip site to insure the security and safe use of the site.

Initial attack

Helicopter Managers are expected to perform all fire related radio communications while managing a helicopter. Helicopter Managers are expected to advise dispatch centers and fire Helicopter Managers regarding fire behavior and complete a fire behavior report using the standard "fire behavior" reporting card. Upon arriving at an incident, if the helicopter

is the first resource on-scene, the Helicopter Manager may be expected to function as the Incident Commander until relieved of that duty. Pilots are expected to maintain all air-to-air radio communications. The DNR Hueys will be staffed with a minimum of one designated Helicopter Manager and up to five additional crewmembers. Helicopter Managers are expected to supervise helitack crew members in all fire and helicopter operations including:

- Bucket hook-up,
- Fire line construction and hose lays,
- Mop-up,
- Directing bucket drops and cargo, and
- Helicopter hand signals.

DNR's initial attack helicopters are outfitted with the necessary equipment to fight fire during the first operational shift. The hosting Region or incident management team may need to provide necessary equipment beyond the first operational shift. For information on communications see *I, General Operations, Communications*, above.

Extended attack

While on extended attack incidents the Helicopter Manager is expected to keep the IC (or his/her representative) informed regarding crew status, Pilot duty hours, Fuel Truck Driver duty hours and helicopter availability. Initial attack is the primary responsibility of the DNR helicopters, therefore the Helicopter Manager, in conjunction with the Helicopter Program Coordinator, keeps the IC (or his/her representative) apprised of the DNR helicopter initial attack responsibility. The Helicopter Manager is expected to supervise helitack crew members in all extended attack helicopter operations to include:

- Helibase radio operations,
- Marshaling the helicopter using standard helicopter hand signals,
- Cargo preparations,
- Helispot management, and
- Helibase incident management familiarization.

Passenger Transport

Any Pilot carrying passengers or cargo in DNR aircraft or DNR contracted aircraft will insure that a cargo manifest has been completed prior to each flight. One copy of this manifest will be retained in the aircraft, and the other at the departure point. Load and/or personnel changes occurring at intermediate stops will be noted on the manifest.

- No DNR or DNR contracted employee will be a passenger or an aircrew member on any aircraft that is classified as Restricted Category.
- All helicopter crew members not possessing a firefighter qualifications card who are transported in a DNR or DNR contracted aircraft receive a passenger briefing before each flight, prior to boarding.
- The Helicopter Manager is responsible for ensuring that only passengers essential to the accomplishment of the mission are aboard the aircraft. The Helicopter Program Coordinator or the Fire Aviation Program Helicopter Manager must be contacted if questions arise regarding the status of a passenger.
- A minimum of one qualified Helicopter Crewmember will assist in the loading and unloading of passengers.
- Authorized passengers approved for DNR flights must be on official state business and/or be essential to the official mission. Passengers are not limited to State employees and they may include:
 - a) Contractors hired by the state,

- b) Contract maintenance personnel,
- c) Other state, federal, city, and county employees,
- d) Volunteer firefighters on state or county fires,
- e) Detailers/trainees from cooperator agencies (as well from within the DNR),
- f) Persons needing assistance (such as evacuations or medical aid flights),
- g) Emergency response personnel,
- h) Media personnel with approval of the IC on Type 1, 2, and 3 fires and with approval from an assistant Region Helicopter Manager (or equivalent Helicopter Manager) on DNR fires, and only when the flight is in the best interest of the DNR.

For further information pertaining to passenger briefing see Appendix 2, Standard Aircraft Briefing.

Passenger Conduct. No passenger or crewmember is permitted to board a DNR aircraft if acting irrationally or abnormally or under the apparent influence of alcohol or drugs, unless under the care of an attendant. Smoking is not allowed aboard DNR aircraft, or within 50' of the aircraft.

Weapons in Aircraft. Dangerous or deadly weapons, to include firearms and long bladed knives, are not permitted on DNR aircraft. The exceptions are employees of government agencies who are authorized to carry these weapons as part of their duties. In these instances, the Pilot must be made aware of their existence in advance. CWN aircraft must abide with Federal Aviation Administration rules pertaining to the transportation of hazardous materials.

External load operations

All DNR helicopters are configured to operate from the left or right seat for external load operations. Helicopters are operated as follows:

- Water buckets and lines are placed at the front of helicopter when being attached to the helicopter, unless the Pilot and Helicopter Manager approve of placement to the side.
- Buckets are hooked to a 75 foot long line (minimum), while performing vertical reference operations.
- Pilots do not perform water or cargo drops without a ground contact unless specifically requested by the IC or dispatching center. Pilots do not perform water or cargo drops in congested areas without a ground contact.
- Pilots avoid making spot water drops on structures.
- Pilots are individually qualified at the following levels by the Chief Pilot and/or a USFS inspector as follows: belly hook, 75 foot long line, 150 foot long line,
- All operations are conducted based on individual Pilot qualifications,
- An aircrew member may be aboard an aircraft during external load operations only when:
 - a) The safety of the mission can be substantially enhanced,
 - b) The capability of the helicopter is not significantly reduced,
 - c) The helicopter is not in the restricted category.

The Pilot has final authority regarding carrying an aircrew member during external load operations.

- Prior to any external load operations the Pilot, Helicopter Manager or their designated representative will inspect all long line equipment and cargo.
- The Pilot and crew will perform an electrical check on the bucket, cargo and remote hooks prior to bucket or long line operations.

- Hover hook-ups will only be done using two qualified crewmembers.
- DNR helicopters and Pilots are not approved for any cargo let down, rappel or para-cargo operations.
- All containers containing hazardous materials will be clearly marked "Haz Mat".
- All hazardous materials will be transported in the original or an approved container. No container leaking fluid will be transported. See section I, *General Operations, Hazardous Materials*, for further information pertaining to hazardous materials.
- All cargo weights will be actual weights. If scales are not available the helicopter personnel can use an agency approved "helicopter equipment weight" chart. If none of the above is available helicopter personnel may estimate weights, but if weights are estimated the Pilot will use the load calculation weight reduction for all loads unless the helicopter is equipped with a load cell.
- All DNR employees who work external load operations with a DNR helicopter, or helicopter contracted by the DNR, will be HECM qualified or have received A219, Long Line Remote Hook training, and be HELR qualified.
- Pilots will only fly missions for which they are carded, or in the case of the DNR Pilots, qualified, to fly.

Foam

DNR helicopters may be equipped with the ability to use foam as a suppressant. The foam delivery system uses regular wild land fire suppression foam. When working with foam DNR employees need to take the following precautions:

- Use caution when working with foam, as it can be extremely slippery. Helicopter skids and steps should be rinsed of foam spills regularly. Small spills can be disposed of by diluting the foam solution with a thorough flushing of water. Eye protection will be worn when pouring foam into the tanks, and the use of waterproof gloves is recommended. Foam can be severely irritating to the eyes and skin, and any exposure should be mitigated through repeated flushing with clean water. Avoid inhalation of foam fumes, as they can irritate the lining of the nose and mouth.
- Eye protection will be worn when pumping or pouring foam.
- Helicopter skids and foam tanks should be rinsed regularly.
- Foam will not be dropped near water sources.
- Avoid inhalation of foam fumes.

Internal Cargo.

All internal cargo will be inspected prior to loading.

- The Pilot will approve all cargo prior to loading.
- All cargo will be secured to the floor or walls using tie down straps, or properly secured using a cargo restraint system.
- All cargo will be loaded in accordance with the Helicopter Operations Manual "Weight and Balance" limitations.
- All containers containing hazardous materials will be clearly marked as "Haz Mat".

No fluids considered hazardous material will be transported in a non-approved container, and containers will be properly secured to the floor or contained in a metal box, or similar container, which is properly secured to the aircraft. See *hazardous materials* below, for further information.

Hazardous Materials

DNR personnel will follow the guidelines set forth in the DNR Aviation Transport of Hazardous Materials Exemption and the interagency Transport of Hazardous Materials Guide, <http://amd.nbc.gov/safety/library/hazmathb0105.pdf>. The DNR sets these

guidelines in place for safety reasons. The DNR is not bound by 49 CFR Parts 171-175 except when traveling by, or when contracting, commercial aircraft. Although the DNR's status is not commercial, the DNR has become a co-signatory to the USDA-FS/USDI 49 CFR Parts 171-175 Exemption Letter granted by the United States Department of Transportation. Copies of the DNR Aviation Transport of Hazardous Materials Guide can be acquired through Resource Protection Division or for DNR personnel can be found on the DNR intranet, Share point, Aviation, Transport Hazmat. In addition, copies of the special permit authorization granting party status to the DOT-SP 9198, IAW 49 CFR, Part 107.107 (Hazardous Materials Regulations) can be acquired through Resource Protection Division.

Definition: Hazardous materials are substances that are identified, classified, and regulated in the Code of Federal Regulations, Title 49 and Hazardous Materials Regulations part 175. A hazardous material is a substance or material that has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce and which has been so designated. This includes, but is not limited to:

- Saw and pump gas.
- Saw and pump oils.
- Solvents.
- Drip torch fuel.
- Propane.
- Fusees.
- Flares and similar firing devices.
- Weapons.
- Pepper spray.
- Batteries.

For further information pertaining to weapons refer to section *I, General Operations, Passenger Transport*, in this document.

Medical Evacuation

During incidents of type 1, 2 or 3 complexity, the incident commander is responsible to insure that IHOG form HJA-4A, *Emergency Rescue information*, located in Appendix B, is completed and posted at the helibase. In addition, IHOG form HJA-4B, *Emergency Medivac/Medical Transport Request*, also located in Appendix B, or other agency approved helicopter ambulance request form, will be completed as is practicable on any incident type if a medical evacuation is requested at an unknown landing spot. Copies of these forms can also be found at the end of this document.

DNR helicopters and crews are not trained or equipped to perform medivac missions and are not to be assigned medivac missions during fire operations or on an incident action plan. Exception: DNR helicopters will only be used for medivac missions when a person(s) sustains life threatening injuries or illness and when waiting to transport the person by other means would be more life threatening.

If a DNR helicopter is used as a last resort to perform a medical evacuation, the Pilot, Helicopter Manager and crew performing the evacuation will perform a safety briefing and a risk assessment. Part of the risk assessment process should include, but not be limited to: reviewing IHOG form HJA-4A (Emergency Rescue Information); IHOG form HJA-4B (Emergency Medivac/Medical Transport Request); and assessing and ensuring that clear

communications are established. During the medical evacuation the Pilot and Helicopter Manager will perform an additional risk assessment prior to approaching the evacuation site.

Prior to any medical evacuation operation, the incident commander or his/her designee will establish and coordinate dispatch procedures with the local dispatch center.

All medical evacuations on DNR fires, or performed by a DNR helicopter, will be in accordance with IHOG Chapter 8 *Number III. A. Landing at an Unimproved Landing Site*. The Pilot or Helicopter Manager will insure radio communications are established at the evacuation site prior to landing.

DNR helicopters will never be used to perform an evacuation with an external basket, litter or any other type of short haul equipment. Medical evacuation missions will only be performed with both skids on the ground prior to loading the patient(s). All medical evacuation personnel, including aircrew, will be loaded internally and be secured in the upright position or secured to the floor if a patient cannot sit in the upright position.

Additional information on helicopter hoist capability in the Pacific Northwest can be obtained in the Northwest Interagency Mobilization Guide, Chapter 20.

Helicopter Fueling

Fuel trucks may be equipped with Closed Circuit Refueling (CCR) systems to prevent spills, minimize fuel contamination, and prevent the escape of flammable fuel vapors. Rapid refueling "hot fueling" (fueling with the helicopter engine still running) is approved when a CCR nozzle is in use, and:

- The fuel truck is outside of the rotor diameter.
- There are no passengers onboard the aircraft.
- The Pilot remains at the aircraft controls.
- When, at minimum, one 20 lb. B/C fire extinguisher(s) is available for the fuel handler.
- The aircraft is shut down every other fuel cycle to prevent Pilot fatigue.
- When on a Federal fire the Government has requested or pre-approved use of CCR methods.

Aircraft Fueling will be done with the following safety precautions:

- The fuel truck will be bonded (grounded) to the aircraft, and the fueling nozzle will be bonded to the aircraft.
- Fueling will not be done with any open ignition source within 50', or 100' when the aircraft is directly downhill or downwind. Note, smoking is considered an open ignition source.
- The fuel nozzle will be attended at all times while fueling is in progress.
- Two 20 lb. B/C fire extinguishers will be on scene, and easily accessible.
- Fuel handlers will wear eye and ear protection (hot fuel only), long-sleeve pants and shirts (Nomex is acceptable), leather boots, gloves, and hard hat (CCR, hot fueling only).
- Only necessary personnel should be within the "safety circle" during fueling operations.
- A spill kit is on site

Personal Protective Equipment (PPE)

Personal protective clothing and equipment for Pilots, helitack crews, and passengers will be in accordance with IHOG standards (Chart 9-1: Personal Protective Equipment Requirements for Flight Missions) for all incidents and training flights, and is highly recommended at all times (including flight in contracted helicopters while performing project work or field assignments.).

Pilot Qualifications. DNR and DNR-contracted Pilot qualifications will be in accordance with *Chapter 3 of the DNR Aviation Operations Plan*.

Flight limitations.

- Operational Flight Routes. Helicopters will not be flown into conditions below the minimums prescribed in CFR, FAR Part 91.
- Temporary Flight Restrictions (TFR's). DNR aircraft Pilots will keep themselves updated daily on the status of any TFRs in areas of expected or potential flight. Pilots must not knowingly violate a TFR. *For more information, see DNR Aviation Program Operating Plan, Chapter 9, Section VIII, subsection "Airspace Coordination and TFRs."*
- Flight Following. *See DNR Aviation Program Operating Plan Chapter 8, Section VII "Flight Following and Fire Contact." Standards set forth in Chapter 8 will apply to helicopters whether on an incident, or not (such as for training flights.)*
- Weather/Wind Limitations. DNR helicopters follow the manufacturer's specifications for wind and take-off and landing limitations. Refer to the *UH-IH flight manuals*. Pilots will not attempt start up or flight in any conditions set forth by the manufacturer as unsafe. The general wind limitation for type II helicopters, as set forth in the IHOG, is steady winds of 40 knots, or a maximum gust spread of 15 knots.

No aircraft will intentionally be flown in to known icing conditions. No aircraft will intentionally be flown into known or forecasted extreme or severe turbulence. No aircraft will intentionally be flown into thunderstorms.

- Night & Instrument Flight. Only operations under daytime Visual Flight Rules (VFR) as described in FAR Part 91, are allowed for department helicopters.

DNR helicopters are limited to day flight only between the periods of time ½ hour before official sunrise to the period of time ½ after official sunset. In mountainous terrain, which compounds the effects of low sun angle, visibility can be severely compromised before sunset. Therefore, operating hours may be further limited at the discretion of the Pilot or Helicopter Manager due to diminished visibility caused by smoke, shadows, etc.

For current daily sunrise/sunset charts see <http://aa.usno.navy.mil/>

- Flight hazards. Local flight hazard maps for areas of base operations should be posted at the aircraft bases, and updated/reviewed annually. Any known flight hazards will be communicated to participating and visiting aircraft. On large incidents with helibases, flight hazard maps should be provided and posted by the helibase Helicopter Manager.
- Visibility. Minimum visibility requirements, as set forth in FAR Part 91, will be adhered to. On incidents, the minimum allowable visibility is ½ mile.
- Flight altitudes. All aircraft will maintain an altitude of at least 500' AGL (above ground level) when operating on incidents, unless specific operations require descent below 500'. Some examples include: helicopter take-offs and landings, special helicopter traffic patterns, helicopter water and foam drops, helicopter low-level

reconnaissance or mapping. When not on incidents, or when in transit to/from an incident, aircraft will adhere to the altitude requirements of FAR Part 91.

- Over water flights. When flying over water and beyond power-off auto rotate distance to shore, all passengers, crewmembers, and Pilots will be required to wear approved and fitted personal flotation devices (PFD). Pilots and helitack personnel will insure all passengers are briefed on PFD use prior to departure, and will insure the flotation devices are properly adjusted. Flotation devices, like other survival equipment, should be inspected annually in accordance with the provisions contained in the owner's manual.
- Volcanic ash environment. DNR helicopter operations in volcanic ash will be in accordance with chapter 4, *DNR Aviation Manual* and in accordance with the *DNR Maintenance Manual*.
- Use of airports and airspace: landing areas and flight routes. While working for the State of Washington, all DNR Pilots and contracted Pilots will observe all normal traffic patterns, procedures, and regulations associated with the use of airports. All applicable CFRs, including those pertaining to Temporary Flight Restrictions, will be adhered to. Special care should also be exercised when maneuvering near light aircraft due to the potential for damage caused by rotor wash.
- Remaining at the aircraft controls. The helicopter Pilot in Command (PIC) will not leave the controls of the aircraft while the rotors are turning, regardless of the rotor speed, unless there is another qualified helicopter Pilot at the controls, or unless the controls are locked and the PIC remains within the area of the rotor arc (for example, to check that the cargo or passenger doors are secure when other personnel are not available to do so).

Weight and Balance

- A current weight and balance will be computed before any DNR aircraft is flown.
- All DNR aircraft will be weighed empty and a new weight and balance calculated and recorded at least every 3 years. Results will be recorded on DD Form 365B or similar form.
- Weight and balance computations for the most forward and rearward loading conditions that will allow the aircraft to stay within the allowable center of gravity range and weight limitation will be calculated and recorded on DD Form 365F or similar form.
- Load calculations will be computed at the start of each shift.
- Completion of a new load calculation is required for significant changes in conditions (significant changes can be described as an elevation change of plus or minus 1,000 feet or a temperature change of plus or minus 5 degrees Celsius).
- In the event that a cargo scale is unavailable, helicopter Pilots or Helitack crewmembers may estimate the weight of individual cargo items using pre-made reference sheets. Document on the load manifest that weights are estimated and not actual. Estimations, however, should be avoided when at all possible, if scales are readily available.
- The Pilot-in Command is responsible for the load calculation's accuracy and completeness.
- In addition, load calculations will be completed in accordance with *IHOG, chapter 7, load calculations and manifests*.
- Record keeping: One copy of the base weight and balance will remain with aircraft records aboard the helicopter and the other will be kept in the aircraft master record file at the Olympia maintenance facility.

Grounding of DNR or DNR Contracted Helicopter

Safety is always paramount and each Pilot is responsible to insure that he/she is at peak mental and physical condition to assume a flight role. If for any reason a Pilot feels unprepared to fly, the Pilot will temporarily suspend themselves from those duties and take appropriate action to rectify the condition.

- Temporary suspension or grounding of a Pilot will occur when there is an “Imminent Danger,” or there is a history of repeat poor performance suggesting the potential for “Imminent Danger.” Imminent danger is defined as any condition or practice where a danger exists which could reasonably be expected to cause death or serious physical harms immediately or before the danger can be eliminated through normal procedures.”
- Crew Supervisors, aircraft Base Helicopter Managers, and Helicopter Managers may suspend (temporarily “ground”) operations, or in the case of contracted aircraft, they can refuse the contractor’s services. Long-term grounding, suspension or revocation of DNR Pilot privileges, will be determined by the Resource Protection Division Helicopter Manager.
- Pilots may refuse to fly any DNR helicopter they believe to have a “safety of flight” discrepancy or an aircraft they believe to be non-airworthy.
- No aircraft will be flown that is not *in accordance with the aircraft Operations Manual and the DNR Aviation Maintenance Manual.*

Grounding is required when any of the following conditions exist:

1. Structural damage is noted, or as the result of an accident or incident. On-site inspection by DNR maintenance personnel is required, and a written release must be signed before the aircraft may be released for flight.
2. Failure of any equipment that adversely affects characteristics of flight.

When the airworthiness of a helicopter is in doubt, ground the aircraft, and contact DNR maintenance staff.

Accident and Incident reporting

All aviation accidents or incidents, as well as accidents involving any fueling or support vehicles, must be reported as soon as practical to the immediate supervisor and to the DNR Helicopter Program Coordinator. The agency Initial Incident Report and /or SAFECOM form must be submitted to the DNR Helicopter Program Coordinator within two days of the accident or incident. The coordinator will forward copies to the DNR Chief Pilot for follow-up and to the DNR Fire Aviation Program Helicopter Manager for review within three working days of the event.

All SAFECOMS submitted for a DNR aircraft will be filed through the controlling agencies process, but copies will follow the same process as if on a DNR incident. *Initial Incident Report forms (# HH-13) can be downloaded from the DNR Intranet - Incident Reporting Site. SAFECOMS can be obtained at <https://www.safecom.gov/>.*

All SAFECOMS and IIRs will be completed in accordance with the Washington State DNR Aviation Operating Plan and per DNR Policy PR22-004, Reporting Incidents.

If the accident or incident involves an agency vehicle, then a Vehicle Accident Report will be submitted. Vehicle Accident Report, WA State Form # 137, can be found on the Washington State Government Internet site, or through a local DNR Region office.

The Washington State Patrol's (WSP) Vehicle Collision Report 3000-345-161 must be completed when a collision occurs that results in an injury or in which any person's property sustains damage in the amount of \$500.00 or more. This report is, and should be mailed to WSP once completed.

For further information pertaining to aviation safety or reporting hazards, accidents and mishaps, crash rescue, emergency response and risk management refer to # 17, Operations and the *DNR Aviation Operating Plan chapter 2, Aviation Safety, Security and Emergency Response, and IHOG chapter 12, Protection and Crash-Rescue and IHOG chapter 3, Operation Planning*

Fuel Truck Breakdown and Accident Procedures

In the event a DNR fuel truck Fuel Truck Driver has an accident or a break down the Fuel Truck Driver should:

- Pull the vehicle off the road as far as possible
- Avoid stopping near congested areas if possible
- Immediately turn on 4 way flashers
- Set out reflective warning triangles in accordance with 49 CFR 392.22(b)
- Stay with the placarded vehicle
- Determine the cause of the breakdown, if possible, and arrange for necessary repairs
- Contact dispatch with status, have dispatch contact supervisor, and the helicopter program coordinator.
- Mark the time and location of breakdown in the Fuel Truck Drivers log book
- The placarded vehicle should not be repaired inside any building unless:
 - a) No person uses heat, flame or spark producing devices to repair or maintain the cargo or fuel containment system (49 CFR 177.854(g (1))
 - b) No person performs repairs or maintenance on the vehicle unless:
 - the vehicle's cargo and fuel containment systems are closed (except as necessary to maintain or repair the vehicle's motor) and
 - they show no indications of leakage
 - a means is provided, and a person capable of operating the motor vehicle is available, to immediately remove the vehicle in an emergency
 - the placarded vehicle is removed from the enclosed area upon the completion of work
 - all sources of spark, flame or glowing heat within the enclosed area are extinguished, made inoperable or rendered explosion-proof (exception: electrical equipment on the vehicle necessary to accomplish the maintenance function.)
- If it becomes necessary to transfer the fuel load en route, Fuel Truck Drivers must:
 - a) Have explicit permission from their supervisor to do so.
 - b) Set up all emergency warning devices.

Maintenance and Tracking

DNR helicopter maintenance is done in compliance with the DNR Maintenance Operations Manual and US Army Technical Manuals. The department will conform as a matter of policy to requirements listed in the NASF Cooperators Aviation Standards for

Interagency Fire (Rev 1 Dated 5/19/2010) and the Supplement for UH-1H Instructions for Continued Airworthiness (Rev 1, Dated 5/18/2010).

DNR Helicopters

- The Helicopter Manager will contact the Helicopter Program Coordinator with a maintenance and operations status report when a significant change occurs. The Pilot and Helicopter Manager need to coordinate any unscheduled, safety of flight, maintenance with:
 - a) The Maintenance Supervisor or Line Mechanic in the absence of the maintenance supervisor.
 - b) The Helicopter Coordinator.
- The Helicopter Manager will coordinate scheduled or non-safety of flight maintenance with the Helicopter Program Coordinator or with the Maintenance Supervisor in the absence of the Helicopter Coordinator.
- The Helicopter Program Coordinator will provide a daily helicopter status to the Maintenance Supervisor to include:
 - a) Location of helicopters,
 - b) Current Hobbs meter reading on each helicopter,
 - c) Non-safety of flight maintenance needs or issues.
- Pilots will report all discrepancies on the agency approved Discrepancy Form.
- Scheduled maintenance on DNR helicopters can be performed as early as 3.5 hours prior to and up to 3.5 hours beyond the scheduled time. **Exception: 150-hour/primary inspections can be done any time prior to 150 hours.** The 150 hr inspections should be performed in the DNR hanger in Olympia, or a similar facility.
- Pilots and/or helitack crew supervisors are responsible for maintaining clean helicopters to include but not limited to:
 - a) Removing grease from the rotors, rotor head, engine deck and belly with rags as required, especially following scheduled maintenance.
 - b) Washing and waxing the fuselage.
 - c) Washing all rotor blades at least every 25 operating hours with mild soap and cold or lukewarm water including rinsing thoroughly and wiping dry.
Do not use wax on blades.
 - d) Keeping the interior (including wall and ceiling panels) clean and free of grease, oil, dirt, foreign and unnecessary objects - at all times.
 - e) Keeping all windows, including chin bubbles, clean at all times. Use approved window cleaner and wipes at all times. The fire aviation maintenance supervisor will provide appropriate wipes, cleaner and training.
- An assigned Pilot, with approval in advance from the DNR Aviation Maintenance Supervisor, may perform minor repairs to the helicopter exterior and interior, *in accordance with the Maintenance Operations Manual and FAR Part 43.*
- Pilots or helitack personnel may perform bucket and foam system maintenance at the discretion of the DNR Aviation Maintenance Supervisor. An annual field training session will be held to train helitack crew and Pilots in bucket maintenance.
- No alterations to helicopter support equipment will be made without approval from the aviation maintenance supervisor. Helicopter support equipment will include but is not limited to:
 1. Buckets
 2. Long lines
 3. Hooks
 4. Swivels
 5. Lead Lines

6. Shackles and G-rings

- While on extended attack, if the Pilot and the Helicopter Manager conclude a mechanic is needed on site, the Helicopter Manager will contact the Helicopter Program Coordinator. The program coordinator and Aviation Maintenance Supervisor will evaluate the availability of a mechanic.
- Pilot-reported mechanical discrepancies will be corrected as required at the discretion of the Aviation Maintenance Supervisor or a mechanic.

DNR and DNR Contracted Helicopters

- During Pilot pre-flight and post-flight inspections, any aircraft deficiencies will be noted in the aircraft logbook and mitigated. If deficiencies are of a significant nature—affecting safety—they will be immediately made known to the Helicopter Manager and the Aviation Maintenance Supervisor or DNR mechanic on-site, and will be corrected before further flight occurs.
- On Federal fires, maintenance deficiencies may also require “sign-off” by the Regional Aviation Maintenance Inspector, which can often be done with a phone call placed by a department mechanic and/or the contractor’s mechanic.
- The Pilot will perform a Health Indicator Test (HIT) in accordance with the DNR -- Aviation Maintenance Operations Manual. The HIT check will be completed every 7 days or every 10 flight hours.
- Pilots will perform a preflight inspection at the end, or at the start of a flight day. If the Pilot chooses to do a pre flight inspection at the start of the flight day, the preflight should be started within 15 minutes upon arriving for shift. The inspection will include ALL the items listed on the inspection sheet in the flight logbook.
- Fuels, oils and other fluids used for aircraft will be *in accordance with the DNR Maintenance Operations Manual and the helicopter’s operations manual.*
- DNR mechanics may be required to perform scheduled and unscheduled maintenance while helicopters are on fires or detailed to the regions.
- All aircraft fluid levels will be checked each time the aircraft is fueled, with the exception of hot refueling operations.
- Safety of flight items must be either corrected before flight operations begin or authority for flight must be obtained from the Chief Helicopter Pilot or the Aviation Maintenance Supervisor.

Base Helicopter Managers, crew supervisors, Pilots and all aircrew members are responsible for performing daily inspections of the helibase and aircraft to detect safety or operating problems. Inspections should include:

- Aircraft preflight checks,
- Crew readiness inspections,
- Vehicle walk-around inspections,
- Inspection of the general condition of facilities, work areas, public viewing areas, aircraft parking pads and taxiways,
- Checking operating condition of equipment and systems,
- Ensuring security of facilities, aircraft, vehicles, equipment, fuel, communications systems, and tools,
- Checking for oil or fuel spills in work areas and on taxiways or aircraft pads,
- Checking for Foreign Objects & Debris (FOD) around parking pads and taxiways.

In addition to daily inspections, Resource Protection Division may on an annual or random basis inspect any or all fire aviation staging and fire assignment locations.

Maintenance of Call-When-Needed (CWN) Helicopters:

During operations on DNR fires, Helicopter Managers need to contact the USFS Region 6 Aircraft Maintenance Inspector for assistance with federally carded CWN helicopter maintenance issues. In addition, the Helicopter Manager will be responsible for notifying the DNR Helicopter Program Coordinator with any CWN helicopter maintenance issue or problems when using DNR certified helicopters.

If the Region 6 maintenance inspector is unavailable, the Helicopter Manager will contact the DNR Helicopter Program Coordinator, who will then coordinate CWN maintenance issues with the DNR Aviation Maintenance Supervisor, or his representative. All maintenance issues will be reported in accordance with the DNR SAFECOM and IIR process. For more information refer to section I, *General Operations, Accident and Incident Reporting*.

II. DNR Helicopter and Helitack Operations.

The Helicopter Manager or Pilot may request a sterile cockpit (no unnecessary conversation) during any phase of flight. Maintenance inspections and repairs that field personnel may or may not perform will be in accordance with the *DNR Maintenance and Operations Manual*.

Pilot and Helitack Training.

- All DNR Pilots will be trained in accordance with the DNR helicopter Pilot training manual. New Pilots will be evaluated on all tasks contained in the manual.
- All DNR Pilots will demonstrate the ability to perform helicopter flight operations at the beginning of each season.
- DNR Pilots and helitack crew will participate in field training at the beginning of each season. Field training will include, but is not limited to: dip tank work, hover hook-ups, long line and bucket work to include: calling bucket drops, maneuvering the helicopter and directing and hooking up external loads.
- All Pilots will, at a minimum, complete a bi-annual flight review in accordance with 14 CFR Part 61.56. Flight reviews will be conducted prior to the start of fire season. *All Pilots new to the DNR will complete a bi-annual review prior to the start of their first fire season.*
- Two hours per month, each Pilot, is allotted for Pilot and crew proficiency training. This training will be at the discretion of the individual Pilot and/or Chief Pilot or Helicopter Coordinator.
- Helitack crewmembers will meet the minimum qualifications listed in PMS 310-1. Each crewmember will attend S-271 (Helicopter crew member) prior to functioning as a helicopter crewmember trainee.

Dispatch Phase. All crew members will secure their work area prior to gathering at the aircraft. The crew will un-tie the rotor blades, turn the rotor to the 10 o'clock position and then place rotor tie down in rear compartment. The Fuel Truck Driver will receive a briefing from the Helicopter Manager or his or her designee after each dispatch prior to starting the mission. The briefing will include, but is not limited to, the incident location and destination (if different than incident location). The Fuel Truck Driver will perform a final walk around of the fuel truck to insure there is no loose gear, cabinets are locked, the rear gate is secured in the closed position and the ladder is secured in the upright position. Fuel Truck Drivers are required to wear fire boots at all times while driving DNR support trucks. Prior to departure, the Fuel Truck Driver will initiate his/her Fuel Truck Driver Log Book, complete a manifest and plan a route using GPS and/or Gazetteer.

The Fuel Truck Driver will provide dispatch with the following information prior to departure:

- Aircraft the fuel truck is supporting
- ETA
- Departure Location
- Destination

For further information on Pilot and Helicopter Manager briefing, refer to *Helicopter dispatch, section I, general Operations*, above. In addition, for further information on planning, refer to *Planning, General Operations, section I*, above.

Aircraft Start Up and Take-off Phase. The Helicopter Manager and Pilot will insure all gear is secure and the main rotor blade is untied and turned to the 10 o'clock position. In addition, the Helicopter Manager will insure:

- The flight crew is wearing proper PPE
- Positive communication is confirmed between Pilot and crew
- Crew insures doors are closed
- All external cargo doors are secure

The Pilot will start the aircraft utilizing the Aircraft Starting Checklist. The Pilot will insure all external cargo doors are secure, no loose gear is in cockpit, rotor blades are untied and rotor tie downs are properly stored. The Pilot may direct the crew when to close doors upon take off after clearing all obstacles.

The flight crew will communicate to the Pilot any unknown aerial hazards including other aerial traffic. The rear passengers closest to the doors will remain with the doors open until directed by the Pilot to close them. All non-essential communications will remain at a minimum until busy traffic area is cleared.

The Helicopter Manager will program the GPS and establish flight following. When establishing flight following the Helicopter Manager will provide dispatch with:

- Aircraft fuel duration
- Number of passengers
- ETA
- Departure location
- Destination

For further information pertaining to flight following refer to *I, General Operations, Communications*, above.

The entire air crew, when in the helicopter during start up and flight, must wear a: flight helmet, Nomex shirt, Nomex pants, Nomex or leather gloves, leather boots and seat belts.

Enroute Phase. The Helicopter Manager will maintain communication with dispatch during the entire flight in accordance with *I, General Operations, Communications*.

The Helicopter Manager will assist the Pilot with navigation and hazard identification and should obtain pertinent fire information to brief Pilot and crew while in route to the incident. The Pilot will maintain air to air ("victor radio") communications with other aircraft and maintain situational awareness. The squad boss and crew will insure no loose gear and all equipment remains secure during the flight.

While en-route to any incident, the Fuel Truck Driver will contact the assigned dispatch office every hour to give a position report and updated ETA. The Fuel Truck Driver will comply with all Federal DOT, State DOT and DNR driving regulations. The Fuel Truck Driver should attempt contact with the Helicopter Manager to coordinate fueling location (or Pilot, if the Helicopter Manager cannot be contacted) one hour prior to arrival at the scheduled destination. If the Fuel Truck Driver cannot reach the destination prior to reaching duty limitations, he/she will advise the Helicopter Manager as soon as possible by cell phone or through dispatch. Upon dispatch to any incident, the Helicopter Manager and Fuel Truck Driver may pre-arrange, knowing the Fuel Truck Driver will not reach the incident without impacting duty limitations, an alternate destination for the Fuel Truck Driver, then continuing the drive the next duty day.

For further information pertaining to Fuel Truck Driver regulations refer to **section I, General Operations, Fuel Truck Fuel Truck Driver Duty Limitations.**

Arrival Phase. The Helicopter Manager will insure the Pilot maintains the Fire Traffic Area (FTA) by contacting other air resources; starting at 12 NM, and prior to 7 NM. If no contact is made with other known air resources, the aircraft will not proceed within a 7 NM radius until positive contact is established with personnel on fire and permission is granted to enter FTA.

The Helicopter Manager will provide an assigned command frequency and provide dispatch and incoming resources with a fire size up report. The Helicopter Manager will contact the assigned ground contact or air attack to help prioritize aircraft and crew missions prior to landing. The Helicopter Manager and Pilot will select and discuss the intended landing site in accordance with; section I, *General Operations, Landing site selection.* The Pilot will perform a recon of the intended landing site to identify hazards, and may perform a recon of the incident dip sites to assist in mission planning.

The assigned squad boss and crew should assist the Pilot and Helicopter Manager in water source selection. The Helicopter Manager is responsible for ensuring proper “non-hazardous” dip site selection. Refer to *Hazardous Dip Site Procedures* in the *DNR Helicopter Operations* plan.

If no other air resources are on scene and the FTA is not established. The first aircraft may proceed directly to the incident.

Upon arrival at any incident, the Fuel Truck Driver will notify the assigned dispatch center of his/her arrival. In addition, the Fuel Truck Driver will record the date, time, location (latitude and longitude), known hazards, and any damage he/she might have done while operating at any fueling site.

The Fuel Truck Driver may have to select the fueling site. The Fuel Truck Driver will attempt to obtain landowner permission prior to using any landing site if it is known to be on private property. If the landowner cannot be contacted, the Fuel Truck Driver or Helicopter Manager will continue to try and make contact during operations.

For information regarding fuel site selection, refer to *IHOG, Chapter 8, Helicopter Landing Areas* and *IHOG, Chapter 13, Fueling Operations, Section X-Fueling Site Layout.*

Landing Phase. The Helicopter Manager and crew will assist the Pilot by identifying any unknown hazards. When flying the Pilot may direct the crew to open the doors to assist with maintaining skid, tail, and main rotor clearance during the landing phase. During the landing, the flight crew will maintain a sterile cockpit other than communication essential to the mission.

Post Landing Phase. After the aircraft is securely landed the Pilot will inform the crew when it is safe to unbuckle and exit the aircraft. At this time the Pilot and/or Helicopter Manager will advise the crew of any known hazards such as, but not limited to; slope or other hazards near and around the landing area. The Pilot may assist the crew with bucket set up if desired, but will lock the flight controls and remain within the rotor disc while rotor blades are turning. Before exiting the aircraft, the Helicopter Manager will inform the crew of the planned aircraft mission and will brief the Pilot on the incident radio frequencies. In addition, the Helicopter Manager will terminate flight following at this time.

After exiting the aircraft the crew will use the following steps to unload the aircraft support and fire equipment:

- Buckle all seat belts when departing aircraft
- Secure all communication drop cords to sound proof material or to a hard point
- Unload fire line bags on right side 5' to 10' from skids
- Unload tool bags, place them on the left side of the helicopter 5' - 10' from the skids
- Place the long line to left side of helicopter
- Place the bucket at 10 o'clock position 5' to 10' off the aircraft nose (Long Line)
- Place the bucket just in front of aircraft nose (Belly Hook)
- Insure the aircraft cargo net is buckled before aircraft departure
- Perform a "1" check (Cargo Hook) and "3" check (Remote cargo hook, or bucket check) prior to external load missions

The Helicopter Manager at this time should coordinate with the Fuel Truck Driver regarding the first fueling source or fueling location.

Lift Off Phase. The flight crew will inspect all external loads prior to and during takeoff to insure load is secure for safe flight. The flight crew will maintain situational awareness of the aircraft during takeoff and landing to assist the Pilot to insure the aircraft is clear of all obstacles. In addition, the Helicopter Manager will:

- Insure all gear is secure prior to aircraft lift off.
- Locate the crew at a 10 o'clock position 75' to 100' out from helicopter prior to lift off
- Assign one crew member as parking tender with radio, utilizing hand signals to direct Pilot IAW *S-271, Helicopter Crew Member Training*
- Will establish positive communication with the Pilot prior to aircraft lift off
- Insure all gear is consolidated to left of landing pad 5' to 10' from skids after lift off
- The parking tender will assist the Pilot during takeoff using the standard Interagency Helicopter Hand Signals and radio. For further information on Interagency Hand Signals refer to Appendix A.

Crew Pick-up Phase. During the pick-up phase the crew will be located at the 10 o'clock position 75-100 feet from the intended landing pad. All crew members will be wearing

appropriate PP&E including eye protection and flight helmet. The Helicopter Manager or his/her designee will be identified as the parking tender with a radio and will establish positive communication with the Pilot prior to landing. The parking tender will provide guidance to the Pilot during landing, as needed, utilizing a hand held radio and standard Interagency Helicopter Hand Signals. The Pilot and Helicopter Manager will agree whether the pick up phase will be done while the helicopter is running and rotors are still turning. Upon the Pilot landing the helicopter crew will:

- Approach the helicopter in full view of the Pilot when rotors are turning.
- Prepare the bucket and line for loading
- Whenever possible remain within the rotor disc during loading operation when rotors are turning
- Load helicopter bucket, line and fire equipment
- If the Pilot is assisting he/she will lock all flight controls and remain within the rotor disc while rotors are turning
- The flight crew will prepare for takeoff IAW section II, *DNR Helicopter and Helitack Operations, AC start up and Take off Phase* above

If the crew arrives to the aircraft after the Pilot has landed, the crew will approach the aircraft in full view of the Pilot when rotors are turning. While remaining within the rotor disc, the crew will put on their flight helmets and proceed to load bucket and gear.

For further information on bucket storage and loading aircraft please refer to section II, *Helicopter and Helitack Operations, Bucket Storage and Set up* below.

Bucket Storage and Set Up. Bucket tie downs, sock and exterior bucket straps will be stowed in the bucket bag, and the bucket bag will be stored on the right side, secured by the attached cargo net. The bag will then be hooked to the transmission wall using a carabineer type hook. The bucket set up will be the same for both type aircraft. The only factor that will differ is whether a Pilot is belly hooked or long lined. If a Pilot chooses to belly hook the bucket, set up process will be the same with the exception that the bucket will be placed on the Pilot side at the nose of the AC during hook up. The following steps will be used when hooking up a bucket after the bucket is placed for set up:

- 1) Run bucket cables from front of AC to back between the skids, with power head facing up (be sure not to run bucket cables over or under skids).
- 2) Hook the power head to the cargo hook with the power head facing forward.
- 3) Attach the bucket electrical plug into the AC electrical plug, running the electrical line behind the cargo hook, not in front, on the cargo hook
- 4) Tape the bucket and AC electrical plugs together with one wrap of green duct tape.
- 5) Hook the bucket foam connector to the AC
- 6) Tape the long line electrical plug to the bucket electrical plug with one wrap of green duct tape (long line)
- 7) Tape the connector pin at the bucket and long line connection to prevent pin from backing out
8. Turn foam valve to on position
- 9) Perform a 1 (cargo hook) and 3 (bucket release) check prior to lift off

For additional information pertaining to bucket set up refer to section II, *Helicopter and Helitack Operations, Loading Helicopter* below.

Loading Helicopter. All helicopter and fire support gear loaded into a DNR helicopter will be secured to the aircraft. All sharp items, such as hand tools or chain saws, will have a tool guard or chain guard. The Helicopter Manager and Pilot will insure there is no loose

gear in the helicopter prior to and during flight. The following will be a minimum guide when storing or loading gear in a DNR helicopter during routine flight operations:

Huey

- All fire support tool bags will be loaded on left side secured within attached cargo net
- All crew support bags will be placed on the right side of the aircraft secured within the attached cargo net
- Bucket will be stored behind the Pilot and Helicopter Manager seats, secured to the floor utilizing 2 ratchet style tie down straps
- Long line will be stored in a bag behind the Pilot seat (left front) secured to the floor
- Rotor tie downs will be placed in rear cargo compartment

Fueling Operations. The Fuel Truck Fuel Truck Driver will be responsible for maintaining a 100 foot safety circle around the landing pad and fuel truck whenever a helicopter is present at the fuel truck, with rotors turning, during takeoff and landing or during hot fueling of an aircraft. The Helicopter Manager will be responsible for the management of the assigned fuel truck and Fuel Truck Driver. Because fuel is so crucial for the Pilot and Helicopter Manager to perform their missions, no other person, including dispatch, should re-direct the Fuel Truck Fuel Truck Driver without first consulting with the Helicopter Manager. Direct coordination of fuel by the Helicopter Manager, Pilot and Fuel Truck Fuel Truck Driver insures a successful mission. The Helicopter Manager, in coordination with the Fuel Truck Fuel Truck Driver, will monitor and insure fuel needs are met while at base and on all incidents. The Fuel Truck Driver will keep the Helicopter Manager informed as to fuel level and his/her duty hour limitations. The DNR fuel trucks are not equipped with a "sleeper unit", therefore, no Fuel Truck Driver will use any part of the fuel truck as a sleeper.

Any DNR employee transferring fuel from a fuel source into a truck, transferring fuel from one truck to another truck or pumping fuel into an AC will wear, at a minimum, rubber gloves and proper eye protection. During "hot fueling" operations, DNR employees are required to wear the following PPE:

- Proper eye protection
- Hearing protection
- Nomex pants
- Nomex shirt (long sleeve)
- Rubber gloves
- Closed toe boots or shoes

The DNR routinely uses for fuel sources A-1 Petroleum, Wenatchee Petroleum and occasionally uses Wing Air located at the Touchet Valley Airport. The DNR-SE Region has set up direct billing at these locations, so when purchasing jet fuel at these locations the Fuel Truck Driver will fill out a receipt showing fuel quantity, date and truck identification number.

All fuel purchased at locations other than those previously listed must be purchased using a DNR Visa Card issued by RPD. All receipts from fuel purchases on the DNR Visa will be turned into the crew supervisor or chief Pilot, who will then turn these into the Helicopter Program Coordinator for processing through RPD.

All purchases of fuel made for a fuel truck will be coordinated through the Helicopter Manager, who will then coordinate through the crew supervisor to improve efficiency and to help reduce the cost of fuel to the program. The crew supervisor should try to reduce fuel costs, increase efficiency, and minimize Fuel Truck Driver duty hours and drive time by coordinating delivery of fuel to remote locations utilizing the 3000 gallon tanker.

The DNR-SE Region Fire District Helicopter Manager will insure the Helitack Operations Helicopter Manager develops and maintains training guides for the routine fueling locations listed above. In addition, the helitack Helicopter Manager will be responsible for developing and maintaining a training guide for each fuel support vehicle, and insure each person designated or delegated to fuel is properly trained in each truck they will be assigned to fuel from.

No person other than the CDL Fuel Truck Driver may operate any fuel truck on city, state or county roads other than in an emergency. In the event of an emergency, the non-CDL Fuel Truck Driver may only operate the fuel truck to remove it from any immediate threat to the Fuel Truck Driver, public or the vehicle itself. The only non-CDL operator that may move a fuel support truck will be a qualified Helicopter Manager, mechanic or supervisor, and may only operate the DNR fuel truck in the absence of a CDL Fuel Truck Driver:

- on DNR property,
- to fuel an aircraft,
- to remove fuel from a support truck; or
- to assist in the defueling of an aircraft.

The fuel handler will wear safety glasses, long pants and closed toe shoes or boots when transferring fuel from a fuel storage site, truck to truck, or from a truck to an aircraft. The following procedures will be used to perform fuel transfers:

- Perform a walk around before starting fuel transfer to insure all nozzles and valves are in the proper open or closed position.
- Bond the truck to the aircraft or fuel truck to be refueled.
- Fuel operator will not remove fuel cap until he/she is ready to start fuel.
- Fuel operator will support the nozzle and hose during entire fueling operation.
- Fuel operator will replace fuel cap as soon as he/she stops fuel flow into receiving aircraft or fuel truck.
- After the fueling operation is complete, the Fuel Truck Driver will place fueling equipment, such as hoses, bonding cables and pump settings in proper position.
- Fuel operator will record the aircraft or truck being filled, gallons transferred to or from, remaining fuel balance, whether it was a hot or cold refueling, time, location and date

The fuel handler will support the weight of the nozzle during closed circuit refueling operations by remaining at the nozzle. No support vehicle will move under a helicopter while rotor blades are turning. After fueling operations are complete, the fuel handler will insure all equipment, such as bonding cables, hoses, pump and shut off valves are placed in the proper position.

The DNR's aviation fuel truck Fuel Truck Drivers will possess a Class B Commercial Fuel Truck Driver's License, with Hazmat, Tank and Airbrakes endorsements. As CDL holders, agency fuel truck drivers are governed by 49 CFR Part 40 in regards to alcohol/drug regulations and testing. All agency fuelers will be drug free, and receive training regarding Federal Drug & Alcohol Testing Regulations.

Alcohol - Concentration

No Fuel Truck Driver will report for duty or remain on duty requiring the performance of safety sensitive functions while having an alcohol concentration of 0.04 or greater (Section 382.201).

Alcohol - On-duty Use

No Fuel Truck Driver will use alcohol while performing safety sensitive functions (Section 382.205).

Alcohol - Pre-duty Use

No Fuel Truck Driver will perform safety sensitive functions within four hours after using alcohol.

Alcohol - Use following an accident

No Fuel Truck Driver required to take a post-accident alcohol test under 382.303 will use alcohol for eight hours following the accident, or until he/she undergoes a post-accident alcohol test, whichever occurs first (Section 382.209).

Drug test – Pre-employment

A drug test will be required as part of the pre-employment process required for all CDL licensed Fuel Truck Drivers.

A drug and/or alcohol breath test will be required

- When probable cause exists that an employee may be under the influence of drugs and/or alcohol.
- Following an accident or incident; as soon as possible but not longer than 32 hours after an accident or incident for illegal drugs (49 CFR 391.113 and 382.303)
- A Fuel Truck Driver will provide a urine sample to be tested for the use of controlled substances as soon as possible, but not later than 32 hours after an accident if the Fuel Truck Driver of the commercial vehicle receives a citation for a moving traffic violation arising from the accident.
- A Fuel Truck Driver will provide a breath alcohol test sample as soon as practical following an accident if the Fuel Truck Driver of the commercial vehicle is involved in an accident that resulted in the loss of human life; and/or the Fuel Truck Driver receives a citation under State or local law for a moving traffic violation arising from the accident.
- A Fuel Truck Driver who is seriously injured and cannot be tested at the time of the accident will provide the necessary authorization for obtaining hospital records, reports and other documents that would indicate whether there were any controlled substances in the Fuel Truck Driver's system at the time of the accident.
- Periodically for all CDL Fuel Truck Drivers, unannounced and randomly selected testing.

DNR fuelers will follow the DNR Fuel Truck Fuel Truck Driver's Guidebook, which is in draft form due to be available fall 2009, on:

- Placarded Vehicle Fire Prevention
- Department of Transportation (DOT) Regulations and the Federal Motor Carrier Safety Regulations (FMCSR) for CDL holders
- Breakdown, Accident, Fire or Hazmat-spill Procedures
- Aircraft Fueling Procedures

For more information See section I, *General Operations, Accident and Incident Reporting, Fuel Truck Breakdown and Accident procedures.*

A copy of the draft *DNR Fuel Truck Fuel Truck Drivers Guidebook* can be requested through RP Div or SE Region.

Fuel Contaminants Prevention & Detection. Helicopters will be serviced from facilities having approved filtration systems. Agency fuel truck should be checked daily to insure fuel quality. Sump findings are recorded in a fuel quality logbook. *Refer to IHOG Chapter 13: Fueling Operations, Section VI—Contamination Testing, for information on sump and test procedures.*

For information on fuel sump and test procedures refer to *IHOG, Chapter 13: Fueling Operations Section VI-Contamination testing.*

Fuel Truck Driver Setup Phases. When the Fuel Truck Driver has the fuel truck in position to fuel, the Fuel Truck Driver should contact the Helicopter Manager and Pilot to inform them of the fuel site location. In addition, the Fuel Truck Driver will inform the Pilot of known hazards and any other pertinent information specific to the selected location. The following is a list of standard procedures used to complete the setup process:

- Fuel Truck Driver will set up the pad so that the fuel truck will be at least 25' from the pad, just outside of the helicopter's rotor disk upon landing
- Fuel truck will be parallel to the pad and facing into the wind
- Fuel truck will be positioned so that upon landing the aircraft will be on the Fuel Truck Driver's side of the fuel truck
- Fuel Truck Driver will prepare pump, hoses, bonding cable, wind indicator, etc. for rapid refueling
- Fuel Truck Driver will locate to a 10 o'clock position 75' to 100' out from the intended landing area with a fire extinguisher and crash kit, be prepared to communicate risk using a portable radio and/or hand signals during landing
- Fuel Truck Driver will wait for the Pilot's signal after landing before approaching the truck to begin a fuel transfer or any other operation beneath the rotor disk

Fuel Truck Driver Return to Base Phase. The Fuel Truck Driver will provide dispatch with the following information when returning to base from an incident, if dispatch is available:

- Incident name or location of departure
- Aircraft number the truck is supporting
- Final destination
- ETA to final destination

The Fuel Truck Driver does not have to give dispatch an hourly update during the return trip back to base. If the Fuel Truck Driver cannot make his/her final destination due to a Fuel Truck Driver duty limitation, the Fuel Truck Driver will plan appropriately by stopping prior to or at the time he/she reaches the duty limitation.

The Fuel Truck Driver will not drive beyond the duty limitation and will not use any part of the support truck or any chase vehicle as a sleeper, but may procure motel accommodations in accordance with the State Travel and Per Diem regulations and the *DNR Helicopter Operations Manual, Travel, Time and Activity reports.* The Fuel Truck

Driver will inform the Helicopter Manager, prior to departure, if he/she will encounter reaching a duty limitation during the return.

If the Fuel Truck Driver is delayed during the return and is going to reach a duty limitation prior to reaching his/her destination, the Fuel Truck Driver will contact the Helicopter Manager (or supervisor if the Helicopter Manager cannot be contacted) he/she is to inform the Helicopter Manager of the alternate destination options, ETA to alternate destination and estimated off duty time. If the Fuel Truck Driver cannot reach the Helicopter Manager or supervisor, the Fuel Truck Driver will leave a voice message on the supervisor's cell phone.

The Helicopter Manager will keep the crew supervisor apprised of the Fuel Truck Driver status when the Fuel Truck Driver cannot reach the primary destination base. Upon arrival to the base, the Fuel Truck Driver will complete the following (unless doing so will impact duty limitations):

- Restock fuel truck inventory
- Refuel assigned helicopter, if requested to do so by the Helicopter Manager
- Post inventory needs for next operational shift
- Post further refueling needs for next operational shift. *(For example: Assigned aircraft is not refueled and/or assigned support truck is not refilled because of Fuel Truck Driver hours of duty limitations)*
- Submit his/her work hours and miles for each incident to the Helicopter Manager
- Document any vehicle or equipment discrepancies

Maintenance test flights

- DNR helicopters will be test flown whenever work has been accomplished on the aircraft that may affect flight characteristics, and after engine, rotor blade changes, or rigging adjustments.
- Maintenance test flights may be made any time the Pilot and/or mechanic believe it is necessary to determine aircraft return to service status.
- Maintenance test flights will be limited to checking only those areas of concern, unless the aircraft has undergone extensive major work.
- Can be done by any DNR qualified Pilot who is approved by the fire aviation program Helicopter Manager or fire aviation maintenance supervisor for that type of testing to be accomplished.
- Maintenance test flights will be done in accordance with the *DNR Maintenance Operations manual*.
- Current DNR maintenance test Pilots are:
John Adolphson
Johnie Creamer
Pete Peterson, and
Dave Adams.

Flight Reports The Pilot will record all flight time on the agency approved Flight Report form. The Pilot is responsible for recording all requested information contained in the Flight Report. The supervising helicopter Pilot will insure all Pilots are trained to properly maintain individual flight reports. The fire aviation maintenance supervisor is responsible for filing the original copy in the permanent helicopter files. The helicopter program coordinator is responsible for:

- Availability of the Flight Report forms.
- Insure forms are complete and accurate.

- Input of helicopter hours into a billing report
- Forwarding the original form to the fire aviation maintenance supervisor.
- Making sure the Flight Report form stays up-to-date and makes changes as needed.

Detailing and staging During fire season, the main DNR helicopter staging location is at Bowers Field, adjacent to the Southeast Region headquarters in Ellensburg. This centrally positions the aircraft for rapid initial attack response to all locations within the state and unites the Hueys with the helitack crews supervised by Southeast Region. Southeast Region is responsible for:

- Hiring helitack support personnel.
- Supervision of helitack support personnel.
- Providing space and facilities for helicopter support personnel at the Region headquarters.
- Maintaining assigned helicopter support equipment and fuel trucks during fire season.

On the basis of existing or predicted initial attack needs, helicopters are detailed to other locations around the state. If a helicopter is detailed to the DNR Olympia hanger, Pacific Cascade Region should dispatch the helicopter and crew. When helicopters are staged within another Region, that Region will be considered the host Region until handed off to another region or to an incident commander or his/her representative.

Host Regions are responsible for:

- Tactical decisions concerning use of assigned aircraft during initial attack.
- Communications for flight following to and from incidents.
- Airspace coordination.
- Transportation, if not provided with module, and other logistical support as needed for the crew while on incidents within the region.
- Dispatching of helicopters staged within the region.
- Notifying (at earliest convenience) the helicopter program coordinator when a DNR helicopter is dispatched to an incident.

Pre-locating helicopters to various locations is based on predicted or potential initial attack needs. Data gathering and consideration is made on an on-going, daily basis to help make informed decisions, information includes, but is not limited to:

- Existing weather
- Predicted weather.
- Fuel conditions.
- Existing fire activity.
- Quantity and condition of existing firefighting resources.

When a DNR helicopter is staged or detailed within a Region, all non-initial attack requests and adjacent DNR region requests go through Resource Protection Division's Emergency Operations Helicopter Manager. This includes extended attack or large incident support on DNR protected lands, other Region and other jurisdictional requests for extended attack, and initial attack where no formal reciprocal agreement is in place.

Any DNR Region can request a DNR helicopter through another DNR Region for initial attack. This needs to be coordinated through the RPD Emergency Operations Helicopter Manager.

Day-to-day management of the helicopter program is accomplished through the helicopter program coordinator, who physically represents the fire aviation program Helicopter

Manager at the Ellensburg staging facility or other locations throughout the state. Decision-making includes frequent conversation with representatives of DNR's regional fire operations staffs. The helicopter program coordinator plays a critical role in gathering and assessing information, with decisions regarding pre-locating helicopters made by the RPD emergency operations Helicopter Manager in consultation as necessary with the RPD assistant division Helicopter Manager for fire control and aviation. Final authority for such decisions lies with the Resource Protection Division.

Travel, Time and Activity Report Procedures and Guidelines During fire operations, when helicopters are not located in Olympia, DNR Pilots will report to the Southeast Region compound unless instructed otherwise by the supervising helicopter Pilot or helicopter program coordinator.

Pilots will complete a travel voucher Form (A-20) for travel reimbursement as applicable. Pilots are encouraged to complete the electronic travel voucher form that can be located on the DNR web site. Travel vouchers need to be routed through the helicopter program coordinator, who will then route the travel vouchers to the supervising helicopter Pilot. The travel voucher needs to include the entire travel period, which can include time in two separate months. In addition to all the requested information, travel vouchers will include but not limited to:

- a. Program number
- b. Fire number
- c. Vehicle number (if using state vehicle)
- d. Attach motel receipts to travel voucher

Pilots are encouraged to complete their TARS (Time and Activity Report) on the electronic form. TARS need to be turned in on the 16th and 1st of each month and should be routed through the same process as the travel voucher. In addition to the requested information TARS should include comments describing schedule changes, start and end dates.

III. DNR Helitack Crew Guidelines.

THE FOLLOWING GUIDELINES ARE SUPPLEMENTAL TO THE SOUTHEAST REGION WORK EXPECTATIONS/ GUIDELINES, AND WILL BE USED IN CONJUNCTION WITH THEM.

- Beginning at 09:30 each morning all crew members and Fuel Truck Drivers will arrive in proper attire for planned needs. At 09:45 firefighters will meet at their assigned aircraft, with appropriate gear and participate in a daily briefing with the Helicopter Manager. Fuel Truck Drivers will put their gear on the assigned truck and assure crew red bags and tents are properly stowed. Physical training will be done as a crew. At 11:15 all employees will participate in a daily briefing, which will consist of fire weather, 6 minutes for safety and expected fire behavior.
- After weather and safety briefing, Helicopter Managers and squad bosses will discuss projects for the day and plan any crew training for the day. During Helicopter Manager/squad boss meetings, crewmembers will complete daily duties before starting work projects or training. Daily duties include: long shed clean up, helitack shed clean up, all garbage cans emptied, bathrooms cleaned and chase rig vehicle inspected. Fuel Truck Drivers will complete vehicle pre-trip and fire readiness inspection.
- Pilots will complete a load calculation for their aircraft each day. Helicopter Managers will review load calculation with Pilot. Pilots will keep one copy of load

calculation. Helicopter Managers will keep a copy and post a copy on the aircraft board (w/copy of manifest). Helicopter Managers and Pilots will discuss plans for the day and any special concerns.

- Work hours are 09:30-18:00. Crewmembers' days off are on rotation to provide coverage seven days a week. Crew supervisor can and will make changes to the schedule as needed. Leave requests will be granted on a first come first serve basis. Leave can be denied at any time due to weather and/or staffing levels.
- If you are working you are expected to be available for dispatch ~~dispatchable~~. If you want to limit your chances of dispatch, you may arrange to switch places with another crewmember that is on 2nd, 3rd, or 4th out. This will be done *the evening before*, and must be approved in advance by a supervisor. If you are unable to work, for any reason, you are to notify your supervisor prior to the start of the workday. A leave slip will be completed for all absences, approved or not.
- The use of cell phones during business hours is restricted to fire-related business only. The personal use of cell phones during work hours is prohibited. All cell phones are to be turned off during work hours, except for crew supervisors and Helicopter Managers who use their phones for work related calls. An exception is made for your lunch break only. Likewise, personal calls should not be received at work.
- Smoking is not permitted in state buildings or in the vicinity of helicopters, helicopters pads and/or fuel trucks.
- As a crew member you are required to remain professional at all times and act in accordance with DNR Policy PO01-037, Harassment.

Individual Responsibilities

- Crew members are required to keep updated with the information board postings, with project work documentations, and with the completion of their own training and incident experience records. All documentation will be submitted to your supervisor at pre-determined intervals. Crew members are also responsible for assuring that task books get completed in a timely manner. Employees will submit their task book to the Helicopter Manager and provide them with fire #, dates, and tasks completed
- At the end of the workday it is the crew person's responsibility to take their own gear off of the helicopter and support truck, or to arrange for someone else to do it.
- Crew members may assist department mechanics during maintenance if requested by an agency mechanic to do so.
- Anyone who will be working out of immediate contact will inform their supervisor and monitor a radio at all times.
- Crew members are expected to arrive each morning fit for duty. If a crew member is unfit for duty, then the appropriate disciplinary action will be taken.

Opening and Securing Aircraft

- The Helicopter Manager is responsible for the security of the aircraft.
- Daily opening procedures include: unlocking doors and storing locking devices along side of transmission wells, removing battery lock and connecting main power supply to battery, removing pedal control lock, placing battery control lock and pedal control lock in orange bag located in left rear aircraft storage panel, and removing pitot tube cover and store in battery compartment.
- Main rotor and tail rotor tie downs will remain secure until aircraft is dispatched.
- During daily operations, secure main and tail rotor after each aircraft shutdown.

- At the end of each day, secure main and tail rotors, install pedal control lock, unplug main power supply from battery and install battery lock, place cover over pitot tube and secure outside door locks.
- After returning from fire assignment, crew members will insure aircraft and line gear is fire ready before the end of shift.

Travel and Per Diem

- Crew members will notify their supervisor if they do not have enough money to pay for breakfast, lunch and dinner for 9 days.
- An A-20 Travel Voucher will be completed by each crewmember upon returning from dispatch. Be sure to include dates, times, meals to be reimbursed and rate (available from Helicopter Manager), program code, alpha code and method of transportation.
- Crew members are responsible for maintaining A-20's and turning them into helitack office monthly.

Alcohol and Drugs

- The Washington State Department of Natural Resources has a zero tolerance policy towards the use or possession of alcohol and illegal drugs while on duty. Refer to DNR Policy PO01-033, Alcohol and Drug free work place policy.
- Alcohol is not permitted in any state vehicle or on any state grounds. This includes any lands that the state is using for helicopter operations.

Vehicle Travel

- Prior to leaving compound be sure the vehicle has a MER book and gas card, accident forms, first aid kit, fire extinguisher and gazetteer.
- Confirm that the MER book is current and begin taking miles for assigned project and code.
- Do a complete pre-trip inspection including: engine oil, transmission fluid, coolant, and washer fluid. Check belts, hoses and overall engine condition. Do vehicle walk around checking tires, body condition and lights and signals.
- When operating a vehicle, employees are required to always wear a seatbelt, travel with lights on and monitor the radio at all times.
- Always return the vehicle full of fuel and close out the MER book.

Staging

- While staging all DNR, policies will be held at the same regards as at DNR-SE region.
- State vehicles (chase trucks, fuel trucks, etc.) will not pick up crewmembers from town after the evening dinner/Pilot drop off. Other means of transportation to crew sleeping area must be made.

Appendix 1

IHOG-- Use of

The DNR uses the IHOG as a guide, not as official agency policy. The DNR will abide by IHOG regulations on fires under which jurisdiction is of a governing agency for whom the IHOG is policy, with the exception of the following agency variances:

DNR Variances to the IHOG (from the May 31, 2001 document):

AIR OPERATIONS POSITIONS: Will meet the minimum qualifications listed in PMS 310-1 (Wildland and Prescribed Fire Qualifications System Guide) Dated January 2000. (Chapter 2, II)

STAFFING LEVEL: DNR will provide one Aviation Helicopter Manager for each helicopter. Helicopter Managers will be assigned in the following order, based on qualifications:

- 1) Qualified HMGB's holding ICT4 qualifications will be given top preference particularly with Hueys/helitack crews,
- 2) Qualified HMGB's with ICT4 taskbooks will be given second preference and those without ICT4 taskbooks, third preference,
- 3) If insufficient HMGB's are available then FFT1's with ICT5 qualifications may be used if the individual has completed S-372 (helicopter management training).

The DNR will be excluded from meeting minimum staffing required by IHOG during initial attack. Once into extended operations the appointed Air Operations Helicopter Manager will decide on staffing levels for aviation operations after consultation with the Incident Commander and review of the Delegation of Authority. (Chapter 2-III)

APPROVAL AND CARDING: All Aircraft and Pilots will follow FAA requirements for commercial or military operator, and public use aircraft requirements. (Chapter 5)

LOAD CALCULATIONS: The Pilot in command is responsible for load calculation accuracy and completeness. (Chapter 7-2, B, C)

SURVIVAL AND FIRST-AID EQUIPMENT: All aircraft will be equipped as per FAA regulations. (Chapter 9-IV)

REFUELING OPERATIONS: DNR Federal Excess Helicopters will be fueled in accordance with DNR procedures and guidance from FM 10-67-1 Concepts and Equipment of Petroleum Operations. All flights will be planned so that the helicopter will land with a minimum of 20 minutes of fuel. (Chapter 13)

PILOT FLIGHT HOURS: DNR flight hour maximum is eight hours, but limits DNR Pilots to a maximum of seven flight hours during external load operations.

Appendix 2

Standard Aircraft Safety Briefing

Required for all flights carrying Federal passengers, and all flights flown on Federal fires or projects.

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

HELICOPTER MANAGER BRIEFING to PILOT & 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 to decent to low-level.
- 7) **PIC Concept:** Pilot will not be pressured into performing missions beyond Pilot's capability or that of the aircraft.
- 8) **Hazardous Materials:** Identify any Hazardous Materials that will be transported and notify the Pilot. Take appropriate actions.

PILOT or HELICOPTER MANAGER BRIEFING to PASSENGERS

- 1) **Personal Protective Equipment (PPE):** Appropriate head protection (Refer to IHOG Chart 9-1); Nomex clothing; ear and eye protection; boots; other survival equipment as applicable (PFD, life rafts, etc.) [PPE is required for special use airplane missions and for all helicopter flights. Available and worn by all passengers, Pilot(s), and aircrew members.]
- 2) **Approach and Departure Paths:**
 - When landing in helicopters in uneven terrain, always approach and depart from the down slope (lower) side
 - Approach and depart helicopter in a crouch position
 - Keep in the 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 the helicopters; do not approach airplanes from the front
- 3) **Tools and Equipment:**
 - Secure the 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
- 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 the 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: Explain the rules for smoking—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 back against seat and arms folded across chest
- Forward facing passengers without harnesses: bends 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: bends 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 have stopped or when instructed to do so by the Pilot or helicopter crew

*Asses situation, follow Pilot/Helicopter Manager instructions, render first aid, Pilot and/or Helicopter Manager to remove first aid kit, radio, ELT, and fire extinguisher (unless incapacitated, then any passenger capable should remove)

Appendix 3

HELICOPTER MANAGER/PILOT BRIEFING CHECKLIST

Reference check list

- Load Calc.
- Manifest
- Crew location for the day
- Weather
- Crew seating
- Local Sit report
- Fuel truck and Fuel Truck Driver
- Equipment readiness
- TFR / NOTAM

EMERGENCY RESCUE INFORMATION

Dedicated Medivac And Medical Transport Aircraft					
Aircraft N#	Make / Model	Helicopter Manager	Litter / Rappel / Extraction / Short-Haul Capability	Assigned EMT	Remarks or Other Information

Medical Facility Information										
Facility Name	Facility Capabilities (you, Burn Unit, Cardiac Unit, Etc)	Geographic Location	Latitude	Longitude	VOR	NM	DEG	Est. FT	Contact Freq.	Remarks

Air Ambulance / Life Flight Information				
Helicopter Life Flight Facility Located At	Aircraft Type	Phone Number	Contact Frequency	Remarks

HJA-4A (03/2006) REQUIRED

EMERGENCY MEDIVAC/MEDICAL TRANSPORT REQUEST

Injury Information	
Medivac (Life Threatening) _____	Medical Transport _____
Injury Information	
Number of patients to be transported _____	
Is patient able to walk? _____	
Explanation (Vitals, type and extent of injury, ETC) _____	

Incident Site Information	
Agency _____	
Location of helispot	
Township _____	Range _____ Section _____ 1/4 section _____
Latitude _____ Longitude _____	
VOR _____	Distance _____ Bearing _____
Is Helispot Complete _____ If Not, How long to Completion? _____	
Conditions of helispot	
Wind speed _____	Direction _____ Temperature _____
Elevation (MSL) _____	Visibility _____ Helispot size _____
Terrain factors _____	
Other Aircraft in the area:	
Aircraft # _____	_____
Radio Frequency Information	
Helispot Frequency _____	
Incident Frequencies _____	
Air to Air _____	
Air to Ground _____	
Administrative Unit Frequency _____	
Other Frequency _____	
Ground Contact Information	
Contact Person at the Helispot _____	
Is there a qualified helitask person on site? _____	
Proximity of helispot to injury site? _____	
Contact person with injured party and radio frequency _____	

HJA-4B (03/2006) *OPTIONAL