# E-N-G Aviation Safety Manual

Safety Management Guidelines for Electronic News Gathering (E-N-G) Operators



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## FOREWORD

The Helicopter Association International (HAI) ENG (Electronic News Gathering) Committee developed this manual of recommended procedures and guidelines in consultation with industry experts and representatives from the FAA, NTSB and HAI. The guidelines and procedures recommended are based on years of practical experience and in many cases, are excerpts from FAA and HAI safety publications.

You still must refer to the Federal Aviation Regulations (FAR's) to ensure your operation complies with appropriate regulations. Please tailor this manual to suit your particular operation. However, the guidelines themselves are based on important safety considerations and it is strongly recommended that you not lower any of these standards.

These guidelines should be shared with *all* appropriate personnel at your station to include the station managers, pilots, safety personnel, maintenance technicians, reporters and photographers.

These guidelines do not alter the pilot's authority. FAR's state that each pilot in command of an aircraft is directly responsible for, and has the final authority as to, the operation of that aircraft.

For FAR Part 135 operations, your Part 135 manual continues to govern your operation. Information in this ENG manual should only be used as a reference to assist in writing your own FAR Part 135 manual and to develop your own ENG safety guidelines.

HAI strongly recommends that FAR Part 91 ENG operations comply with all safety guidelines and recommendations in this manual at all times.

For additional safety guidelines, consult the Helicopter Association International (HAI) "Safety Manual - A Safety Management Guide for Helicopter Operators", available from HAI, 1635 Prince Street, Alexandria, Virginia 22314-2818, phone (703) 683-4646, <u>www.rotor.com</u>.

Additional copies of this manual may be downloaded at not cost at <u>www.neha.rotor.com</u>. For suggestions to improve this manual, contact the HAI ENG Committee at <u>HAIENG@rotor.com</u>.

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## "Safety is not an end goal, but a continuing journey."

This manual is provided as a guide to assist operators in developing their own safety materials. It does not imply, nor is it intended to imply, that following the procedures and recommendations will eliminate all accidents. HAI and their staff and members do not assume any responsibility for loss or damage of any nature, or kind, to any person resulting from their reliance upon statements or information contained in this manual. HAI does, however, endeavor to contribute the combined wealth of sound operational experience, knowledge, and successful philosophies which have been developed over the years and expressed in this and other HAI publications, to advance the civil helicopter industry.

## 1. DEFINITIONS

- ADM Aeronautical Decision Making (ADM) is a systematic approach to the mental process used by aircraft pilots to consistently determine the best course of action in response to a given set of circumstances.
- **Assignment** The person at a broadcast station who assigns crews in the field to cover particular news events.
- **A-T-C** Air Traffic Control. FAA facilities such as control towers, approach control and Air Route Traffic Control "Centers".
- **autorotation** A maneuver used to safely land a helicopter after power failure. The pilot keeps the main rotor blades spinning by using the flow of air through the blades during the glide of the helicopter. Enough lift is provided to land safely.
- **ceiling** The height above the earth's surface of the lowest layer of clouds or obscuring phenomena that are reported.
- **crewmember** A person who has been trained to assist in the safe operation of the aircraft and that training has been documented. This person may have additional duties such as reporting or operating ENG gear.
- **CRM** Crew resource management (CRM) is a management system which makes optimum use of all available resources equipment, procedures and people to promote safety and enhance the efficiency of flight operations.
- crosscountryA "cross-country" flight is a flight of more than 25 miles from the aircraft's home base.These flights require more pre-planning, and higher visibility standards than local flights.
- **designated** Persons designated by station management and/or the helicopter operator or vendor to be a point of contact and/or responsible for certain safety-related activity. For example, the station may designate the assignment editor to conduct aircraft tracking activities. The station and/or operator should clearly designate personnel for all key safety activities.
- **E-N-G** Electronic news gathering. Using electronic recording and transmitting devices such as video cameras, recorders and broadcast transmitters to disseminate news to the public.
- **ETA** "Estimated time of arrival" at a destination.
- **FAR Part 91** Federal Aviation Regulations for operation of aircraft for not-for-hire "Business or Pleasure". The pilot experience, maintenance, documentation and training standards are specified in the regulations and are generally lower than for operations conducted under Part 135 "Commercial" regulations.
- **FAR Part 135** Federal Aviation Regulations for operation of aircraft for commercial purposes. The pilot experience, maintenance, documentation and training standards are higher than for operations conducted under Part 91 "Business and Pleasure" regulations.
- **fly** A program devised by HAI which identifies piloting techniques that can minimize sound and other impacts on the public. (See HAI "Fly Neighborly" publications.)

**F-O-Q-A** Flight operations quality assurance (FOQA) programs involve the collection and analysis of data recorded during flight to improve the safety of flight operations, air traffic control procedures, and airport and aircraft design and maintenance.

**height-** An area of low speed and velocity, from which the average pilot may not be able to velocity curve recover and land safely in the event of an engine or transmission failure.

- IHST The "International Helicopter Safety Team". Team of civil organizations and government agencies dedicated to reducing the helicopter accident rate by 80% by 2016. (See more at: <u>www.ihst.org</u>)
- live When a broadcast news report is carried over the air without tape delay. A "live-shot" is an individual 'live' report from the field.
- **local** A "local" flight is a flight within 25 miles of the aircraft's home base.
- **photographer** Also called "cameraman", "photojournalist" or "videographer". The crewmember or occupant who operates ENG equipment such as gyro-stabilized cameras, video switchers, transmitters and other gear for the purposes of news-gathering. This person may, or may not be trained to also serve as a reporter.
- **pilot** An aircraft pilot who does not serve as a reporter.
- **pilot-reporter** An aircraft pilot who is also a journalist and narrates broadcast reports, and/or responds to questions from talent at a broadcast station, while simultaneously operating the aircraft controls. Reports are done either 'live', or sometimes taped for later playback.
- **positivew** When receipt of a message transmitted by radio is confirmed by a person who receives**it** and the receiver acknowledges both reception and understanding of the message by**icationicationication**
- repairAn aircraft maintenance facility that has achieved an elevated professional level of<br/>maintenance proficiency and which is certified by and inspected on a regular basis by<br/>the FAA.(FAA -the FAA.
- **reporter** A journalist who rides on the aircraft and narrates news reports broadcast to a station, but who does not operate flight controls. May also serve as photographer and/or crewmember.
- RiskA useful tool to identify the level of risk and the levels of management approval requiredAssessmentA useful tool to identify the level of risk and the levels of management approval requiredAssessmentFor any Risk Management Plan. An example of a risk assessment form andMatrixprocedures for ENG flights are included in Section 10 of this manual.
- S-M-S A Safety Management System (SMS) is a coordinated, comprehensive set of processes designed to direct and control resources to optimally manage safety. Examples and tools are accessible at: <u>www.ihst.org/SMStoolkit</u>
- SAR Search and Rescue.

approved)

- scanner A radio receiver used to monitor radio calls made by fire, EMS and law enforcement.
- situational awareness(SA)The perception of environmental elements within a volume of time and space, the comprehension of their meaning, and the projection of their status in the near future.
- **station** A television or radio station.

sterile cockpit	The practice of restricting conversation in the aircraft, when taking off, landing and operating in the immediate vicinity of other aircraft, to only those subjects directly related to safe operation of the aircraft and completing the mission. Idle chatter and unnecessary two-way radio conversations are prohibited.
talent	Broadcast industry term for a person who appears on air as a reporter, anchor or pilot- reporter. A "talent camera" is a camera used to capture the image of the talent. In an aircraft, this is often a "lipstick-camera" (the size of a lipstick) placed in the cockpit.
talent light	A bright light source installed in the aircraft to illuminate a reporter when ambient light is inadequate to provide a clear video image. Note: Talent lights should NOT be installed in the cockpit. FAA AC-27-1B (para. 27.773) prohibits obstructions in the pilot's primary field of view. Talent lights obscure views, impair vision and reduce the pilot's ability to detect traffic and hazards.
target fixation	A process by which the brain is focused so intently on an observed object that awareness of other obstacles or hazards can diminish.
TFR	A "Temporary Flight Restrictions" area or TFR, is designated for a limited period of time over incidents that require restriction of air traffic for safety and efficient relief operations. FAR 91.137(a)(2) actually allows news media aircraft to travel inside most TFR's established over events such as wildfires and natural disaster scenes, but prior to entry, pilots or stations should contact the agency in charge of the airspace to obtain air-to-air coordination frequencies and safety information. Entry of news media aircraft is not permitted in either hazardous material TFR's or Presidential TFR's.
traffic	Other aircraft flying in close proximity to an ENG aircraft.
trained observer	A person who is either a licensed pilot, or who has been trained in traffic scanning and cockpit procedures, who rides in the co-pilot's seat of an ENG aircraft to assist the pilot in the detection and avoidance of other aircraft and hazards.
two-way	An ENG radio transceiver used for communicating with the broadcast station or emergency services agencies, not ATC.
visibility	The ability, as determined by atmospheric conditions and expressed in miles or feet, to see and identify prominent unlighted objects by day and prominent and lighted objects by night.

## 2. RECOMMENDED REQUIREMENTS AND LIMITATIONS

## A. ENG PILOT QUALIFICATIONS

ENG flight involves complex operations and therefore requires pilots with high experience levels and advanced training.

1. The minimum pilot-in-command (PIC) flight qualifications for an ENG <u>pilot</u> with NO reporting responsibilities are:

a. One-thousand (1,000) hours helicopter PIC.

b. Current commercial pilot's license with rating appropriate to the aircraft to be flown. An instrument rating is also recommended.

c. <u>Either</u> twenty-five (25) hours of flying the equipment to be flown in the typical ATC/terrain environment for which the pilot is going to be hired, <u>or</u> completion of a training program specifically designed for those unique conditions. Training will be recorded in the pilots' training record.

d. Checkout in make and model aircraft to be flown, including ground and flight training, and non-standard training (emergency procedures). It's also recommended the pilot have completed initial training from a factory program or equivalent for the make and model aircraft to be flown.

e. Previous ENG pilot experience and training to include one (1) of the following:

1. At least 25 hours of previous experience as an ENG pilot, or...

2. At least 3 hours of flight training observing an ENG pilot operating the aircraft make and model with the specific ENG equipment to be flown.

2. The minimum pilot-in-command (PIC) flight qualifications for an ENG pilot-reporter are:

a. One thousand five hundred (1,500) hours helicopter PIC.

b. Current commercial pilot's license with rating appropriate to the aircraft to be flown and an instrument rating.

c. <u>Either</u> Fifty (50) hours flying the equipment to be flown in the typical ATC/terrain environment for which the pilot is going to be hired, <u>or</u> completion of a training program specifically designed for those unique conditions. Training will be recorded in the pilot's training record.

d. Checkout in make and model aircraft to be flown, including ground and flight training, and non-standard training (emergency procedures). It's also recommended the pilot have completed initial training from a factory program or equivalent for the make and model aircraft to be flown.

e. Previous ENG pilot experience and training to include one (1) of the following:

1. At least 350 hours or 1 year of previous experience as an ENG pilot, or...

2. In-flight training of 100 hours observing an ENG pilot-reporter operating the aircraft make and model with ENG equipment to be flown.

f. Broadcast specific training by the broadcast station to include training on reporting from the helicopter. Training should include generating reports of less than 45 seconds.

g. Training that includes compliance with the pilot-reporting limitations specified in Section 3-B "ENG Procedures", and identifies circumstances when the pilot should not be reporting (i.e. when there are multiple aircraft in close proximity to the pilot-reporter's aircraft).

### **B. ENG PILOT VERIFICATION**

Verification should be made by the station or employer, of applicant pilot's certificate, flight time, and current appropriate medical certificate. Inquiry should be made to obtain applicant's accident history, certificate action, and safety performance.

### C. DUTY LIMITATIONS

When conducting operations under FAR Part 135, duty time limitations are specified in the regulations. For part 91 operations it is recommended the maximum schedule for a pilot should be 14 hours of duty time in a 24-hour period, with a minimum of 10 hours of consecutive rest in a 24-hour period. It is recommended the pilot be kept free of pager and telephone duty during this 10 hour rest period. The pilot should not be on flight duty more than 6 consecutive days in a row without a 24-hour rest period. The maximum allowable flight time in a 24-hour period is 8 hours. The pilot must determine that he/she is fully rested prior to accepting any duty for flight (*refer to "Fatigue", Section 7-B*). Pilots and vendors should ensure news directors and station managers are familiar with duty limitations.

### **D. TRAINING**

ENG flight operations require absolute adherence to safety guidelines, utmost attention to detail, full compliance with Federal Aviation Regulations and observation of company standards. Training must emphasize that pilots comply with these regulations, standards and guidelines and report all violations to management.

Pilots and pilot-reporters should, at a minimum, receive at least annual recurrent pilot training through either a factory-approved pilot refresher course, or equivalent refresher program. Refresher training should include all subjects and exercises recommended by the aircraft manufacturer, the FAA and HAI. All training shall be documented and that documentation maintained in the pilot's records.

Pilot annual refresher training should include, but not necessarily be limited to:

- 1. Inadvertent Instrument Meteorological Conditions (IMC) avoidance and recovery to include:
  - a. Recognition & avoidance of IMC conditions.
  - b. Basic attitude flight training under the hood for:
    - 1. Recovery from unusual attitudes.
      - 2. Demonstration of 180 degree turns with a descent and a climb.
- 2. Night flying
- 3. Performance planning to include:
  - a. Loss of effective anti-torque thrust.
  - b. Basic helicopter aerodynamics to include:
    - 1. Settling with power
    - 2. Dynamic rollover
    - 3. Low speed flight
- 4. Autorotations (including, if possible, full touchdown autorotations)
- 4. Recognition and avoidance of the height/velocity curve.
- 5. Human factors:
  - a. Aeronautical Decision Making (ADM)
  - b. Risk Management training
- 6. Aircraft systems and maintenance
- 7. Crew Resource Management (CRM)

- 8. Safety Management System (SMS) See examples/tools at: www.ihst.org/SMStoolkit
- 9. Conducting maintenance checks
- 10. ENG flight environment (close to other aircraft, loss of contact procedures, etc)

#### **E. SCENE WORK**

Since ENG aircraft often operate in close proximity to other ENG, police, EMS, and general aviation aircraft over scenes, you must coordinate with each agency whose aircraft you may encounter.

At least annual meetings should be held with these agencies to discuss local procedures over a scene. Include local ATC to discuss any airspace issues. Designation of local procedures should include:

- 1. Specification of vertical and horizontal separation between aircraft
- 2. Frequencies and appropriate call outs
- 3. Circumstances for hovering versus orbiting
- 4. Special procedures for moving scenes

General procedures, guidelines and cautions regarding scene work include, but are not limited to:

#### 1. Scene arrival:

At all scenes, anticipate other aircraft flying in your vicinity. As you approach a scene, make an initial radio call no less than 2 miles out announcing your approach, direction, altitude and distance in miles. Radio calls shall be made on the helicopter air to air frequency 123.025 unless local published procedures specify otherwise.

You shall not enter the scene unless both positive communication has been attempted and visual contact with any other aircraft over the scene has been established. Visual contact and communication shall be maintained at all times. You should establish visual contact with all aircraft and they should have visual contact with you.

If EMS or other emergency aircraft are on the ground at a scene, advise their pilots how many ENG aircraft are over them and where.

Vertical and horizontal separation between all aircraft in a scene shall be determined by local protocol established by local coordination meetings. To allow for any evasive maneuvering or emergency action, it's recommended all aircraft utilize a minimum separation distance from other aircraft of:

- Minimum recommended horizontal separation of 500 feet (1000 feet preferred)
- Minimum recommended vertical separation of 200 feet (400 feet preferred)

#### 2. Moving Scene:

**Special procedures are required for participating in a moving scene.** Careful attention is required because scenes change from moment to moment and often rapidly. Procedures should be determined in advance during regular meetings of local helicopter crews. Considerations include, but are not limited to:

a. It is crucial that law enforcement air units are allowed sufficient air space to maneuver. If more than one public service aircraft is over a moving news event, media pilots may need to make radio contact with the secondary aircraft.

b. Media pilots should also be alert for hand-offs from one air unit to another when moving news events cross jurisdictional boundaries, or emergency management of a stationary event is handed off to another agency.

c. During news events that are moving, the need for wide separation of public service and media aircraft is crucial. Multiple agencies may be involved. Media aircraft MUST use sound judgment to remain clear of the public service aircraft and anticipate maintaining communication with public service aircraft.

d. At the conclusion of a moving news event, media aircraft should pull up and away as the law enforcement crew may become involved in directing surface activity that is moving in different directions, and/or establishing a containment area.

#### 2. Loss of contact procedure:

If visual and positive communication with other scene aircraft are lost, and aircraft are orbiting, and if conditions permit, you should make a 90 degree turn exiting the orbit until visual contact and/or positive communication is re-established. If visual contact and positive communication with other scene aircraft is lost, and the aircraft are hovering, then the aircraft will make a level 360 degree turn and exit the scene until visual contact and positive communication is re-established. If the scene is moving, each aircraft will maintain visual contact with all other aircraft and will leave the scene if visual contact is lost. When leaving the scene, announce your departure heading and altitude. Once visual contact is re-acquired, you can return to the scene.

### 3. Exiting Scene:

Pilots shall announce intention to depart prior to leaving a scene. When leaving the scene, announce your departure heading and altitude. Ensure you have visual contact with all aircraft at the scene. When departing while orbiting, execute a 90 degree turn out of the orbit that avoids the flight path of other aircraft, continuing on this heading for ½ mile for separation. If hovering, perform a 360 degree clearing turn prior to departing and depart in the direction that will not put you in the flight path of the other aircraft. Stay on heading for ½ mile for separation.

#### 4. Special Cautions:

- a. **Target Fixation -** Scene work can increase the possibility of target fixation. All pilots should establish and maintain cockpit routines that reduce the likelihood of target fixation.
- b. Pilot Reporting When multiple ENG and other aircraft converge on a news event, pilotreporting increases the complexity of cockpit activities and should only be done in compliance with the limitations specified in Section 3-B.

#### F. WEATHER MINIMUM REQUIREMENTS

Due to the special nature of ENG flight and the routine operation of aircraft in close proximity to other aircraft, the following weather minimums are highly recommended for ENG operations:

Day			Night					
Local	600' Ceiling	2 Miles Visibility	800' Ceiling	2 Miles Visibility				
Cross Country	800' Ceiling	3 Miles Visibility	1000' Ceiling	3 Miles Visibility				

Weather minimums are for non-mountainous areas. Operations in mountainous areas should use higher minimums. Pilots new to a station should use higher minimums until familiar with the area and its hazards. Since we often hover over populated areas, in the event of an engine failure, extra altitude may be necessary to complete a safe landing. Lower minimums than those prescribed above are not

recommended. The minimums prescribed above may not be considered adequate for beginning a flight, they should be considered minimums for ending a flight.

If weather below minimums is encountered, landing at the nearest suitable landing area or airport should be considered. Many accidents have occurred when the pilot continues to fly in weather below minimums just to get the aircraft back to base.

Pilots and operators should use all available resources for accurate determination of safe weather for rotorcraft. A valuable source is the HEMS weather site: *http://weather.aero/hems/* 

#### G. AIRCRAFT SAFETY EQUIPMENT FOR ENG FLIGHT

Due to the special nature of ENG flight and the routine operation of aircraft in close proximity to other aircraft, and sometimes in weather conditions less than VFR, the following safety equipment is recommended:

- 1. High intensity anti-collision white strobe lights visible from all directions
- 2. Pulse light (collision avoidance) system for the aircraft landing lights
- 3. Dual VHF aircraft communications radios
- Traffic Advisory System (TAS) (Note: Until ADS-B systems become available, the best TAS systems are capable of interrogating other aircraft transponders, regardless of whether the aircraft are in an ATC radar environment, and are also able to provide accurate target bearing information during high rate turns.)
- 5. High visibility main and tail rotor blades
- Appropriate instrumentation to recover from Inadvertent Meteorological Conditions (IMC). The installed equipment should meet or exceed FAR Part 135.159 night VFR instrumentation standards.
- 7. Weather avoidance system (such as satellite weather mapping)
- 8. Altitude hold monitoring/alerting equipment
- 9. Cockpit/flight data recording systems
- 10. Satellite tracking system to track the flight path of the helicopter

## 3. PILOT DUTIES AND RESPONSIBILITIES

## The pilot's primary responsibility is to fly the aircraft safely. ALL other duties will be secondary while flying.

As Pilot In Command (PIC), the pilot has the ultimate responsibility for the aircraft and safety of the occupants of the aircraft while in flight. This responsibility cannot be delegated to anyone else. The pilot will attempt to fly the aircraft wherever requested by the station, while abiding by all Federal Aviation Regulations, laws, pilot's limitations and common sense.

All pilots should participate at least annually in local safety meetings with other crews, to include local EMS operations, police operations, and airplane traffic operations, and ATC representatives in the local area. More frequent meetings are encouraged. Training and safety coordination and cooperation with other professional aviation organizations such as AAMS, ALEA and TOPS is highly recommended. Pilots shall work in a fully cooperative and professional manner with all other crews and ATC and disregard all competitive considerations.

## A. NORMAL PROCEDURES

At all times, the pilot will always use safe and professional procedures:

- 1. RISK MANAGEMENT The pilot will use recognized aviation risk management and assessment techniques to determine whether a flight can be conducted safely. An example of a risk assessment procedure and appropriate form are included in Section 10.
- 2. EMERGENCY PLANNING The pilot will fly the aircraft at a safe altitude so in the event of an emergency, an autorotation or other safe landing can be conducted.
- 3. HOVERS Except as needed for landing and takeoff, the pilot will avoid operations inside the shaded area of the height/velocity curve.
- NOISE Operate at an altitude that reduces noise as much as possible to persons on the ground. Always fly neighborly, especially late at night or in early morning. For more information on HAI's "Fly Neighborly Program" visit <u>www.rotor.com</u>.
- COMMUNICATIONS The pilot shall use the local helicopter advisory frequency of 123.025, or other locally designated frequency to coordinate movement with, and avoidance of, other rotorcraft traffic. The pilot should share all position information immediately when requested by other aircrews, or ATC, without regard to competitive considerations.
- 6. INTERCOM Pilot and crew should observe sterile cockpit procedures during critical flight phases such as take off, landing and operating in immediate vicinity of other aircraft.
- 7. MISSION TYPES The pilot should not place crew and aircraft at risk by accepting missions for which they are not trained or equipped.
- FLIGHT PERSONNEL SAFETY BRIEFING The pilot will ensure that per the appropriate FAA regulations, each occupant is properly briefed on safety procedures, including, but not necessarily limited to:
  - a. Assistance in traffic and hazard avoidance
  - b. Location and use of seatbelts and shoulder harnesses
  - c. Emergency exits
  - d. Securing luggage and cargo
  - e. Smoking restrictions

f. Movement in the cabin in flight

- g. Approaching and departing the aircraft safely
- h. Emergency landings
- i. Location of fire extinguishers and first aid kit
- j. Location and use of life vests if conducting flight over water
- 10. LANDING ZONES (LZ's) The pilot should obtain permission from a property owner before landing at an LZ and comply with all local laws. There are more hazards associated with landing at LZ's than landing at airports/heliports. The pilot should do a "high reconnaissance" of the landing area, followed by a "low reconnaissance" to determine suitability of the LZ. Ground personnel should secure the landing zone in advance and make sure no one can approach the rear of the aircraft. Radios should be used to communicate to the pilot that the LZ is secure and safe. Pilots should adhere to the recommendations published in Chapter 10, Section 2-3, "Landing Zone Safety", of the FAA's Aeronautical Information Manual (AIM), available at www.faa.gov.

#### **B. ENG PROCEDURES**

The ENG working environment in the cockpit has potential to overburden the pilot or pilot-reporter. Pilot ENG duties in-flight should be minimized:

1. Operation of ENG Equipment – Operation of microwave transmitters, video switchers, audio mixers, scanners, two-ways and other ENG specific gear should be handled by the photographer or other flight personnel as much as possible.

- 2. Special Guidelines for Pilot-Reporters:
  - A. <u>Safety</u>, not news, is the primary consideration. Pilot-reporters shall decline station requests for live reports when ATC obligations and safe aircraft operation preclude safely narrating a report personally. Station Managers should have a written policy in place not to question a pilot's authority to determine when it is safe to narrate a report.
  - B. Pilot-reporters should not be compensated based on the number of reports they produce during a flight.
  - C. Talent cameras in the cockpit can be a distraction. Talent cameras should not be pointed directly at pilots, and pilot-reporters should not use a talent camera in-flight while operating the flight controls *unless* they are accompanied by a co-pilot or trained observer in the co-pilot's seat.
  - D. Talent lights should not be installed in the cockpit.
  - E. Pilot-reporters should attempt to only narrate reports of 45 seconds or less in duration.
  - F. When it does not interfere with aircraft communications, photographers and/or reporters should provide pilots with details about what is happening below. This allows the pilot-reporter to be visually focused on traffic avoidance and safe operation of the aircraft.

## **C. SPECIAL FLIGHT SITUATIONS**

Certain flight circumstances require special consideration. These include wildfire scenes, law enforcement tactical operations, disaster scenes and other major incidents. Stations should work with other agency and civil helicopter operators in their area to obtain Letters of Agreement (LOA's) with agencies to standardize procedures. Annual safety meetings are strongly recommended.

**1. TFR's** - While FAR 91.137(a)(2) and (a)(3) allow news media aircraft to travel inside most TFR's established over events such as wildfires and natural disaster scenes, it is prudent to contact the agency in charge of the airspace to obtain air-to-air coordination frequencies and any additional information that may be of assistance in operating safely.

FAR 91.137 also specifies media aircraft file a flight plan with the "appropriate FSS or ATC facility" specified in the TFR NOTAM.

For wildfires scenes under the jurisdiction of the USFS and other wildfire agencies, specific "Fire Traffic Area" procedures exist and are published on an FTA procedures card. A copy of this card is found in Appendix A, page A-4 of these guidelines. You can view more detailed FTA information at: <u>www.fs.fed.us/r6/fire/aviation/airspace/web/coord</u>

The USFS and other wildfire agencies request media aircraft to contact the controlling aircraft at least 12 nm from the incident. Upon TFR entrance, media aircraft should remain above the highest incident aircraft or at an altitude and position assigned by the controlling aircraft.

Pilots should NOT assume that because no TFR was in effect at the time of their departure, that one will not be in effect upon arrival at the scene. Assume there WILL be a TFR, and seek coordination before entering the airspace.

If the pilot arrives before emergency aircraft arrive, keep vigilant for the arrival of emergency aircraft and regularly transmit your position on both the incident assigned (victor) frequency and 123.025, or other designated common helicopter frequency for the area.

**2. SENSITIVE EMERGENCY SCENES** – While a TFR may not be established over these scenes, ENG aircraft pilots should maintain a distance that prevents aircraft noise and rotor wash from interfering with the ability of emergency personnel to conduct operations safely.

## 4. MAINTENANCE

The mechanic and pilot shall have the ultimate authority to determine whether an aircraft is safe to fly. Either the mechanic or pilot may ground the aircraft at any time due to a safety or maintenance issue.

All station personnel should understand that ENG helicopters are subject to mandatory periodic inspections and maintenance required by both the manufacturer of the aircraft and the FAA. These may take the aircraft out of service at inopportune times. No persons should exert pressure on maintenance personnel to conduct maintenance in a manner other than that specified and acceptable by the manufacturer and the FAA.

## A. Maintenance program requirements

For station owned and/or operated aircraft subject to FAR Part 91, the maintenance program should comply with the manufacturer's recommended maintenance program and/or an FAA approved maintenance program. It is recommended that an FAA certified mechanic who has attended the aircraft manufacturer's maintenance course, or a FAA certified repair station should accomplish all maintenance performed on the aircraft. It is recommended that major inspections be accomplished at a manufacturer's service center or FAA certified repair station. All parts put on the aircraft will be the manufacturer's approved parts or FAA/PMA approved parts. The helicopter's maintenance program will be monitored and accurate records kept, including the aircraft logbook, engine logbook and aircraft component historical records.

Maintenance facility personnel shall maintain a flight operations quality assurance program (FOQA) for *Required Inspection Items* (RII), tools and manuals. An RII is an item of maintenance that, if not performed properly or if improper parts or materials are used, could result in a failure, malfunction, or defect, endangering the safe operation of the aircraft. An RII must be inspected by a trained, qualified, and authorized inspector.

Each pilot and mechanic will have access to a current copy of all applicable regulations. A person shall be designated to ensure the helicopter flight manual and other maintenance manuals are kept current.

If a vendor is providing the aircraft, station management should have the vendor provide documentation verifying all maintenance has been accomplished according to their FAR Part 135 Certificate and/or the manufacturer's recommended maintenance program.

It is highly recommended that all maintenance personnel participate in a program of recurrent training.

## B. Installation and maintenance of ENG-specific equipment

All ENG equipment shall be installed, removed and maintained by, or under the direct supervision of, an FAA certified mechanic in accordance with FAA regulations.

No maintenance personnel shall install equipment in an aircraft that compromises the pilot's field of vision or ability to conduct flight safely. *FAA AC-27-1B (para. 27.773) prohibits obstructions in the pilot's primary field of view.* For example, talent lights should not be installed in the cockpit. Talent lights obscure views and reduce the pilot's ability to detect traffic and hazards. Talent lights also decrease the pilot's visual acuity, can create visual "ghost" artifacts and destroy night adaptation.

## **C.** Discrepancies

Discrepancies and/or reports of inoperative equipment shall be tracked and repaired and a record of these actions maintained in accordance with FAA regulations.

## 5. FLIGHT PERSONNEL TRAINING AND RESPONSIBILITIES

**Collisions with other aircraft, terrain or obstacles are a serious threat in all phases of flight.** Prior to each take off and landing from any site, and during the flight between locations, all occupants should keep a vigilant watch for other air traffic, wires, towers or any other objects that may interfere with the safe operation of the aircraft. All occupants should advise the pilot of any situation they think might preclude a safe takeoff or landing. They should <u>never assume</u> the pilot sees these objects and should not hesitate to point them out, even if the pilot appears busy with something else. Delay should be avoided.

All ENG flight personnel must complete safety training with the chief pilot or a designated pilot annually, and the chief pilot or their designee shall maintain a record of training. The chief pilot or their designee shall advise news managers when flight personnel are due for recurrent annual safety training.

All flight personnel should be trained to listen to air traffic control frequencies, so they can help monitor the location of other aircraft. Occupants may also be asked to listen to the scanner or other radios to reduce the workload on the pilot. Flight personnel must be trained to operate the intercom system and, if seated in front, they must be trained not to interfere with flight controls.

All occupants will observe "sterile cockpit" procedures (see Section 1 – Definitions) during critical phases of flight such as taking off, landing and operating in the immediate vicinity of other aircraft.

If station policy permits, news managers and production staff with helicopter operations responsibilities are encouraged to occasionally ride on "fly-alongs" when seat space is available, to observe and better understand the cockpit environment during ENG operations.

## A. PHOTOGRAPHER

The photographer assists the pilot in looking for other aircraft and hazards and points those out to the pilot. While on the ground, the photographer watches for people approaching the aircraft and notifies the pilot. The photographer may need to exit the helicopter while blades are in motion, to assist in providing ground safety. The photographer must be proficient at operating all ENG equipment on board and should make use of a photographer checklist to ensure all necessary tasks are properly executed. The photographer should be proficient at operating the intercom system. The photographer should keep all equipment brought on board secured in flight. They should let the pilot know what equipment has been brought on board and if they put anything in a baggage compartment.

## **B. REPORTER**

The reporter will keep watch for other aircraft and point out other aircraft and hazards to the **pilot.** The reporter should brief the pilot on the elements of the story prior to liftoff or prior to arrival at the destination. This information is not only needed to use the helicopter to its maximum potential, but also may contain information important to the safety of the crew.

## C. TRAINED OBSERVER

The observer is either a licensed pilot, not necessarily rated in the ENG aircraft, or an individual trained in detection and avoidance of traffic and hazards. *The observer's primary duty is to keep watch for other aircraft and point out other aircraft and hazards to the pilot.* When not in conflict with traffic scanning, the trained observer may also assist in gathering news information for a pilot-reporter, to allow the pilot-reporter to concentrate on flying duties.

If not a licensed pilot, to be qualified as an observer, the person must receive training on scanning techniques, ENG flight operations and radio/intercom protocols. Such training shall include both ground and flight training and must be documented, and those records maintained for inspection.

## 6. STATION MANAGEMENT RESPONSIBILITIES

Station management shall designate a person at their station to;

- 1. Be responsible for monitoring the helicopter program and act as a single point of contact for the helicopter program
- 2. Ensure that helicopter safety guidelines applicable to station staff, contractors and employees are observed.

No manager, station staff, contractor or representative will impose any requirements of the pilot or aircraft that exceeds aircraft or company policy limitations or places the aircraft or its occupants in a dangerous situation.

All managers should be familiar with the flight crew duty limitations in Section 2-C of this manual.

**Safety Statement -** Station management shall maintain a written safety policy statement signed by the Chief Executive Officer (CEO) or authorized designee. A policy statement is the CEO's way of establishing the importance of safety. The CEO policy statement must be clear and show the safety program has top level support. An example of a policy statement in aviation safety is:

"Accident prevention is a top priority in this company. It is every employee's duty to integrate safety into all operations so that this company's goals are achieved safely."

Duties and responsibilities of station management include:

**A. STATION MANAGER** - The station manager will work in conjunction with any vendor to ensure that the program is operated safely. The manager will also verify that there is a safety manual in place.

**B. NEWS DIRECTOR** - The News Director should be diligent in verifying helicopter operations are completed in a safe and efficient manner.

The News Director should be especially cognizant of the flight and duty time of the pilot and other flight personnel so that they do not develop acute or chronic fatigue (see Section 7-B.)

**C. ASSIGNMENT EDITOR** - When a flight is requested, the assignment editor or designated personnel should use a company-designated **"Flight Following System"**, including FAA Flight Plan Form 7233-1 or a similar company form. If the aircraft is overdue or involved in an accident, emergency crews need accurate information. If the aircraft is confirmed overdue or in an accident, the assignment editor should follow a specified procedure for overdue aircraft, similar to the example in Appendix A, page A-1.

## AT NO TIME WILL <u>ANYONE</u> IMPOSE UNDUE PRESSURE ON A PILOT TO FLY WHEN CONDITIONS ARE DEEMED UNSAFE BY THE PILOT. Undue pressure on pilots to fly in unsafe conditions can cause accidents.

## 7. GENERAL POLICIES AND SAFETY GUIDELINES

## A. IMPAIRMENTS

No flight personnel or occupants are allowed on the aircraft while under the influence of alcohol or drugs. No pilot, flight personnel or occupant can fly if they have consumed alcohol with in the last 8 hours. An interval of 12 hours is recommended. No one may fly on the aircraft within 24 hours of donating blood or plasma, or within 24 hours of scuba diving.

## **B. FATIGUE**

Fatigue is insidious and can be deadly. No pilot should operate an aircraft and no crew member shall accept flight duty, when in their opinion, they are fatigued beyond safe limits. It is recognized that fatigue is a variable that will differ from individual to individual. One person will not become as fatigued as another under similar circumstances.

It is the responsibility of the pilot or crewmember to inform their supervisor if they feel physically or mentally fatigued. It is the responsibility of supervisory personnel not to pressure the pilot or other persons on board, who reported them self unfit, to fly. The supervisor should be sensitive to the status of crew members and take action to ensure that adequate rest is provided. News crewmembers must learn to identify their own symptoms of fatigue and be diligently alert to these symptoms. Please ensure that you have adequate rest prior to accepting an assignment for flight. (*Refer to duty limitations in Section 2-C*).

## C. SHOULDER HARNESSES

Shoulder harnesses provide far greater safety than just lap belts and should be provided for all occupants.

## D. PERSONAL PROTECTIVE EQUIPMENT (PPE)

Accident statistics indicate that helmets prevent head trauma and save lives in many accidents. The FAA and NTSB recommend that helmets be considered for all crewmembers in ENG aircraft.

## E. AIRCRAFT SECURITY

It is incumbent upon the manager and pilots of each news helicopter operation to provide the utmost security for the helicopter. When at all possible, the helicopter should be hangared overnight. When the helicopter remains outside, security and/or surveillance should be provided if at all possible. It is everyone's responsibility to make sure the helicopter remains secure at all times.

#### F. MISSION TYPES

The pilot should not place crew and aircraft at risk by accepting missions for which they are not trained or equipped.

## 8. ENG FLIGHT REQUEST & FLIGHT MANAGEMENT PROCEDURES

The station shall specifically designate the authorized personnel, hereinafter referred to as "designated personnel", who can request flights.

#### However. only the pilot has ultimate authority to accept any flight.

**A. Requesting ENG Flight -** To allow proper flight planning, the designated personnel should alert the pilot as soon as possible when it is determined a flight may be needed.

The pilot should determine whether the flight can be conducted in compliance with weather minimums and crew duty limitations in Section 2-F and in accordance with risk assessment procedures outlined in Section 10 of this manual, and inform the designated personnel.

The designated personnel should always have an idea of where the aircraft is during flight. It is recommended radio checks be conducted at least every 15 minutes to determine operations are proceeding normally. The aircraft should be tracked using a company designated **flight following system**, in case the aircraft is in an accident or has an unscheduled landing. This may include use of Flight Plan Form 7233-1 or a similar company form, and/or may include a satellite tracking service. (See **suggested example** in Appendix A: HELICOPTER TRACKING / OVERDUE PROCEDURES)

For cross-country flights, the pilot will provide an "estimated time of arrival" (ETA) at destination to the designated personnel prior to takeoff or shortly thereafter. Upon arrival, the pilot will inform the designated personnel. Before return, the pilot will advise the designated personnel of departure time, ETA, planned route of flight, people on board and amount of fuel on board in hours and minutes. The flight tracking system should be updated by the pilot and designated personnel on each leg of the flight.

If an aircraft fails to return, or report arrival at a particular location at the designated time, or is involved in an accident, the designated personnel shall execute the company's missing aircraft or accident procedures. These procedures should be outlined in the station's Safety Management System (SMS). (See **suggested example** in Appendix A: HELICOPTER TRACKING / OVERDUE PROCEDURES)

#### AT NO TIME WILL <u>ANYONE</u> IMPOSE UNDUE PRESSURE ON A PILOT TO FLY WHEN CONDITIONS ARE DEEMED UNSAFE BY THE PILOT.

## 9. EMERGENCIES

The station and operator of the ENG aircraft should determine and distribute standard emergency procedures for operation of the aircraft and utilization by all crew members and the broadcast station staff.

The pilot should review all emergency procedures with all crew members and staff on a regular basis.

An example of appropriate emergency procedures is included in Appendix A, page A-2 of this manual.

## 10. RISK MANAGEMENT PLAN

**A. RISK MANAGEMENT** – The pilot should have access to a comprehensive aviation risk management program that provides training and authority to all pilots so that they are able to, and have the authority to, make more analytical decisions about whether conditions are safe enough to launch on a mission. Conditions and risks are quantified by completing a **risk assessment form** such as the one on the next page. Upon completion of the risk assessment form, pilots should take the actions specified for the indicated level of risk.

Risk is defined by the FAA as the probability and severity of accident or loss from exposure to various hazards, including injury to people and loss of resources. All operations involve risk, and require decisions that include risk assessment and risk management.

Risk should be identified and managed using a disciplined with the aim of reducing risk to personnel and resources to the lowest practical level.

(See the "IHST SMS Toolkit" at <u>www.ihst.org/SMStoolkit</u>, and Chapter 15 of the "FAA System Safety Handbook", <u>www.faa.gov/library/manuals/aviation/risk management/ss handbook</u>)

## SAMPLE RISK ASSESSMENT FORM

Risk Level	1	2	3	4	5
Pilot Experience	-		<b>C</b>	•	•
1000 - 1500 hours			3		
1501 - 2500 hours		2	-		
Greater than 2500	1				
Duty Limitations					
14 hour duty day			3		
10 - 14 hour duty day		2			
8 - 10 hour duty day	1				
Weather (VFR)	•				
Day greater than 1000 – 3	1				
Day less than 1000 – 3		2			
Night greater than 1000 - 3			3		
Night less than 1000 - 3				4	
SVFR – Day				4	
SVFR – Night					5
Pilot Reporting					
1500 - 2500 hours					5
Greater than 2500 hours				4	
Mission Profile					
Day Single ship ENG	1				
Day Multiple ship ENG			3		
Night Single ship ENG				4	
Night Multiple ship ENG					5
Day Moving Scene			3		
Night Moving Scene				4	
Cross country / Non local					
Day Local area less than 25 miles	1				
Day greater than 25 miles			3		
Night Local area less than 25 miles				4	
Night greater than 25 miles					5
Aircraft Safety Equipment					
Strobes, Pulse light, TAS, High visibility blades	1				
Less than all equipment listed above			3		
Alternate Airport/LZ Landing					
Landing at other airport / other approved LZ	1				
Day landing at off-airport LZ			3		
Night landing at off-airport LZ					5
Total Risk Chart and action required	Risk	Score	Action		
Normal Operations	Low	0-9			
Use Caution	Elevated	10-19			
			Supervisor		
Extreme Caution	Moderate	20-24	notification		
		05 00	Supervisor		
Severe	High	25-29	notification		

<u>RISK VALUES</u>: LOW = 1, ELEVATED = 2, MODERATE = 3, MODERATELY HIGH = 4, HIGH = 5

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# APPENDIX A

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## HELICOPTER TRACKING/OVERDUE PROCEDURES (EXAMPLE ONLY - CUSTOMIZE FOR USE)

When the aircraft is dispatched <u>out of the local area</u>, designated personnel will always use the **Flight Following System** including:

1. Fill out, or have the pilot fill out, the **Flight Plan Form 7233-1.** (See this Appendix A, page 4.) It's suggested all permanent information be pre-entered...so all that the designated personnel or pilot must do is fill in variables for the day. The information is needed by the FAA and SAR.

2. Use the Form 7233-1 information to fill out the **Flight Following Wall Chart.** This allows all newsroom staff to see when the helicopter is due home and to assist the desk in monitoring status...and if it appears the aircraft may be overdue.

3. Conduct radio checks every 15 minutes to determine that operations are proceeding normally.

4. Monitor the flight with the satellite track	ing service website: www
Log On username:	Password:

5. Update the posted flight plan information when there are changes. In case the aircraft is overdue or involved in an accident, emergency crews need this information to be accurate.

NOTE: The most reliable method of flight tracking is filing a VFR flight plan with the FAA.

## If the aircraft is confirmed overdue or involved in an accident, the designated personnel should follow the OVERDUE AIRCRAFT / ACCIDENT PROCEDURES:

1. Attempt to reach the pilot or persons on the flight via cell phone, pager, home phone, airport phone. Also check to see if the aircraft ground track is visible at the satellite tracking website.

2. If unsuccessful in trying to contact the crew, contact the airport or place of final destination to determine if the aircraft and crew arrived safely. If the crew was supposed to go to a hotel or meet persons at the destination, check with those.

3. If aircraft or persons can not be found, notify the FAA flight service station (FSS) at \_\_\_\_\_

A. Inform the FSS that you have a helicopter on a company flight plan that is overdue. Offer to read the information from the FAA form 7233-1 filled out for this flight. If you did not fill out a form, give them the generic information on the FAA Form 7233-1.

B. If it is available, advise them that they can view the flight path on the tracking website. Give them the password and username and any other information they request.

C. In the event of an overdue helicopter and crew, notify the designated personnel immediately. Numbers are located \_\_\_\_\_\_. They will in turn notify corporate offices and assist in locating the aircraft and crew.

4. In the event of an accident, make sure the appropriate emergency services agencies have been notified and dispatched, including the **FAA Flight Service Station**, \_\_\_\_\_.

5. In the event of an accident involving the aircraft, passengers or personal and property, notify the designated personnel immediately. The designated personnel will take all actions required by the FAA and NTSB 830.

6. The local FAA FSS can supply the numbers of the appropriate NTSB office and/or the closest Flight Standards District Office (FSDO). Both of these agencies will be notified.

## EMERGENCY PROCEDURES (EXAMPLE ONLY - CUSTOMIZE FOR USE)

**EMERGENCY -** In the event of an emergency, the pilot will be very busy. This is not the time to ask questions. During an emergency, ensure the seatbelt it tightly secured around your waist, and if able, bend over and wrap your arms underneath your knees. If able, the pilot will advise when you can safely exit. Emergency operations should be reviewed on a regular basis with your pilot.

The location of the fire extinguisher is \_\_\_\_\_

Once you are safely on the ground, exit the aircraft and move to a safe location.

**FIRST AID / SURVIVAL KIT -** Located in \_\_\_\_\_\_. In an accident, retrieve it if at all possible. If personnel are injured...remember to immediately first stop any bleeding and then, if required, and you are trained in the procedure, rescue breathing. A rescue breathing mask is provided in the first aid/survival kit.

**SURVIVAL ACTIONS -** In the event of an emergency landing in a remote area, it could be hours or days before you are rescued. Try to use your cell phone to summon help. You may have to walk a short distance to higher terrain to make it work. If you seek higher terrain for a call or safer shelter, try to stay within sight of the aircraft.

It is usually best if you stay with the aircraft...unless you are within sight of a place that may provide help (a home, city, major road). It may be necessary to use the survival kit stored in the baggage area. The first aid/survival kit includes: (EXAMPLE ONLY: Please customize for your conditions/terrain)

1. First Aid Kit - Bandages, tape, medicine, scissors, first aid manual.

2. Waterproof matches - Can start a signal or warming fire. Be cautious with fire in dry areas.

2. Flare dispenser and spare flares - Use cautiously. Aim to fall in clear area. Can start a wildfire.

3. Thermal shield **blankets** - Use to keep warm, block wind, erect reflective signal for rescue.

4. Food and Water - A small supply of food and water.

5. Battery-powered Strobe Light - Can be used to signal rescuers in the air or on the ground.

If installed, ensure the **Emergency Locator Transmitter (ELT)** is activated. Normally the transmitter self-activates. However, it is best to also manually activate it. A switch to activate the ELT is located

\_\_\_\_\_\_. Turn it to "ON". If in doubt, the ELT can also be activated at its mounting location at the rear of the baggage compartment. Turn the switch there to "ON". Make sure no debris blocks the antenna on top of the rear fuselage. Activate and deploy the survival kit strobe light on or near the helicopter where it can be seen by search aircraft from a distance. Elevate if possible.

TIME STARTED SPECIALIST INITIALS		6. DEPARTURE TIME 7. CRUISING	ACTUAL (Z)				15.	ABOARD		CIVIL AIRCRAFT PILOTS. FAR Part 91 requires you file an IFR flight plan to operate under instrument flight rules in controlled airspace. Failure to file could result in a civil penalty not to exceed \$1,000 for each violation (Section 901 of the Federal Aviation Act of 1958, as amended). Filing of a VFR flight plan is recommended as a good operating practice. See also Part 99 for requirements concerning DVFR flight plans.	
		6. DEPA	PROPOSED (Z)				INE NUMBER & AIRCRAFT H		(OPTIONAL)	n IFR flight plan to ope ty not to exceed \$1,000 flight plan is recommend	
	C STOPOVER	E 5. DEPARTURE POINT	AIRSPEEU KTS		11. REMARKS		14. PILOT'S NAME, ADDRESS & TELEPHONE NUMBER & AIRCRAFT HOME BASE		17. DESTINATION CONTACT/TELEPHONE (OPTIONAL)	FAR Part 91 requires you file a to file could result in a civil pena 8, as amended). Filing of a VFR s concerning DVFR flight plans.	
(FAA USE ONLY)		3. AIRCRAFT TYPE / 4. TRUE			10. EST. TIME ENROUTE 11.	HOURS MINUTES	TERNATE AIRPORT(S) 14. F		17.0	CIVIL AIRCRAFT PILOTS. controlled airspace. Failure Federal Aviation Act of 1956 also Part 99 for requirement	
U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION	FLIGHT PLAN	1. TYPE 2. AIRCRAFT 3	VFR IDENTIFICATION IFR DVFR	8. KOUTE OF FLIGHT	9. DESTINATION (Name of airport	and city)	12. FUEL ON BOARD 13. ALTER	HOURS MINUTES		16. COLOR OF AIRCRAFT	FAA Form 7732.1 (8 87)

