

BIRG Air Operations

In the 1990's, Rescue 3 International trained that helicopters were generally considered "highest risk". There were few formal air rescue programs in existence and most of the technical air rescues being performed were by ad hoc pilots and crews who had little or no formal training.

In 1998, BCSO and BIRG formalized their air rescue program requiring trained and qualified pilots, crew, rescuers, and continued training in all aspects of air rescue. CDF also has a certified air rescue program which mandates qualified and trained personnel.

Due to these programs and continued training, the use of helicopters in Butte County is no longer necessarily considered "highest risk". Risks regarding the use of BCSO and CAL FIRE helicopters must be weighed in conjunction with general location of the incident, location and condition of patient(s), difficulty and length of time for getting to the patient or equipment into or out of the area, weather, ground conditions, and dangers and length of time rescuers would be exposed to these risks when considering the use of a helicopter.

Use of helicopters outside the use of BCSO or CAL FIRE may be considered higher risk, based on our lack of familiarity with them, and should be carefully weighed against condition of patient and risk to rescuers.

The Butte County Interagency Rescue Group recognizes helicopters and other air resources as viable tools for use in a variety of applications.

Air Operations		
Minimum Guidelines		
Position	Requirement	Desired
Awareness	General Helicopter Safety Course (working around helicopter and Helispots/Landing Zones. Helicopter need not be present for this training).	Helicopter present for actual tour and information
Operational	1) Awareness Level Training 2) In-County Training Program Including: Cold Loads Hot Loads Internal Loading of Helicopter Use of Intercom and Seatbelts Take Off and Landing Procedures Emergency Procedures Helispot Manager or Equivalent Or Helicopter Crew Member Cert (HECM)	
Technician¹	1) Operational Level Training 2) Butte County Sheriff's Office Modular Technician Course. (Attachment "A") Or CAL FIRE's Short Haul Rescue Program	
Specialist¹	1) Technician Level Training 2) Butte County Sheriff's Office Modular Technician Course (Attachment "B") Or CAL FIRE's Rescue Supervisor Program ** May have to complete additional training as required by agency supplying aircraft	

Skills Maintenance and Frequency of Training

Awareness – At least every three years

Operational – At least once per year

Technician – At least three full flight operations per year (One tower training per year may be substituted).

Specialist – At least four full flight operations per year (One tower training per year may be substituted, 2 of the 4 operations shall be flown in crew chief position).

See Attachment “I” ; Air Operations Annual Training Checklist.

Requirements to Work in or Around the Aircraft

Personnel must have permission from their parent agency to work in and around aircraft. This may be on a ship-by-ship or pilot-by-pilot basis, depending upon agency policy.

The training levels equate to the need to work in or around the aircraft.

Awareness -- Able to work supervised around aircraft

Operational -- Personnel may be transported or work as Helispot Manager.

Technician -- For those that are going to be involved with technical air operations.

Specialist – For those involved in technical air operations as a Crew Chief.

All personnel must maintain currency in training based upon their level of participation in or around aircraft.

All personnel must wear appropriate Personal Protective Equipment (PPE) based upon agency, ship requirements, and types of incident.

Helispots / Helibases / Landing Zones

This will vary by agency policy, ship, pilot or conditions. Helispots should be selected and managed in accordance with guidelines presented in the Helispot Manager course.
(Attachment “C” for Hand Signals used as reference card)

Rigging for Rescue Operations

Due to the serious nature of technical rescue operations using aircraft, only pilots and air operations personnel at a “Technician” level or higher shall be involved in its rigging. All aircraft rigging shall be safety checked by the pilot or qualified Specialist.

Butte County Sheriffs Helicopter H1 Rigging;

Attachment “D”

Attachment “E”

Attachment “F”

Technical Operations

1. Helicopter “10 & 10s” (Attachment “H”)

Requirements for General Reconnaissance

Air operations personnel at an “Operations” level or higher may fly in the ship for the purpose of “general” (i.e. non-technical rescue requirements) reconnaissance.

Requirements for Rescue Reconnaissance

Due to the serious nature of technical rescue operations using aircraft, only air operations personnel at a “Technician” level or higher may be involved in technical rescue reconnaissance. Personnel shall be at the “Technician” level or higher in whatever rescue specialties are involved (i.e. over-the-edge, swift

water, etc.). When possible, the person should be the team leader or actual rescuer that will be involved in the technical rescue.

Crew Chief / No Crew Chief

The ultimate decision to use or not to use a crew chief shall be determined by agency pilot, mission or ship requirements. However, it is encouraged that Crew Chiefs should be used in the aircraft when it does not hamper operational viability. Otherwise, the Crew Chief should be in the immediate area to the technical rescue on ground to provide safety and support.

When Crew Chiefs are used, the Crew Chief shall have direct communications with the ground personnel using radio or hand signals.

Development of Plan at Scene

If the incident is away from the IC or staging, the aircraft shall pick up an observer (Technician level or above) to perform reconnaissance of the incident. Pilot and Technician should make a determination as follows and report back to IC/Ops:

1. The rescue is an easy, safe, pickup type rescue and the helicopter can do it right away
2. The rescue should be done by the helicopter but more detailed primary plans or backup plans need to be made or equipment needs to be picked up or configured.
3. The rescue is not helicopter viable, at which point the helicopter may be used to transport equipment or rescuers into or out of the area, act as a spotting platform or be released.
4. The rescue is not helicopter viable and the helicopter should not be used.

The final decision to affect a rescue using a helicopter should be a joint decision between the Incident Commander(s), Air Operations qualified rescue personnel, Safety Officer and the pilot. The pilot will make the final determination if the plan is viable for helicopter use. Use of the helicopter for technical rescue operations will only be considered and carried out by personnel who meet the Technician or Specialist qualifications and have maintained these qualifications as specified within these Guidelines.

Go, No Go Guidelines (Attachment "G" Briefing Card)

It is important that all involved personnel have the ability to assist in the "Go, No-Go" decision. This decision is dependent upon a variety of variables. One recommended checklist follows:

Twelve Standard Aviation Questions That Could Save Your Life:

1. Is this flight necessary? Risk vs. Gain?
2. Who is in charge?
3. Are all hazards identified and have you made them known?
4. Should you stop the operation or flight due to:

Communications
Weather / Light Conditions
Turbulence
Personnel
Conflicting Priorities
Aircraft Capabilities

5. Is there a better way to do it?
6. Are you driven by an overwhelming sense of urgency?
7. Can you justify your actions?
8. Are there other aircraft in the area?
9. Do you have an escape route?
10. Are any rules being broken?
11. Are communications getting tense?
12. Are you deviating from the assigned operation or flight?

WHEN IN DOUBT – DON'T!

Pre-Flight/Operation Briefing: (Attachment "G" Briefing Card)

Consistent with safe aircraft operations, passengers unfamiliar with the specific aircraft that they are flying in shall be provided with a basic aircraft safety briefing prior to flight. No technical flight operations shall be undertaken without participating personnel being briefed on the specific flight operations. This briefing may be agency and aircraft specific. A sample briefing is shown below.

Crew/Passenger Pre-Flight Required Briefing

General Information

1. Pilot Location
2. Aircraft Type
3. First Aid and Extinguisher Location
4. Ditching (Over-water only)
5. Operation
 - a) Harnesses (All times)
 - b) Doors (If installed)
 - c) Comm. (If used)

General Safety

Do not Approach/Exit until instructed
Enter/Exit Hazards (Up-hill, Side Slope, Tail Rotor, Helo Movement)
Loose Articles (Hats, Straps, Bandanas, Headsets, Etc.)
Listen for instructions prior to taking any actions
If you see/hear danger SPEAK UP!! (Aircraft, Obstructions, Mechanical)
Be aware of flight controls (Pedals, Cyclic, Collective, Switches)

Emergencies

DO NOT PANIC

- Hands and feet inside of aircraft
- Jettison equipment only if instructed to by the crew
- DO NOT remove harness/attempt to exit until rotors have stopped
- Take the first aid and fire extinguisher with you when you exit

Types of Operations

DO NOT perform any operations unless briefed in advance and the crew is experienced in that type of operation

- Transport/Recon
- Toe-In/Hover Step
- Short Haul/External Load
- Dynamic/Static Water
- Technical Night Operations

Over Water Operations

All personnel participating in extended over water operations shall have appropriate training in escape procedures in the event of a water emergency.

Attachments

- A. Initial HRT Operational Training Check-Off**
- B. Initial Crew Chief Operational Training Check-Off**
- C. Helo Hand Signals**
- D. Stokes Rigging**
- E. Rope System Attachment and Hook Checks**
- F. Rescuer / Victim Attachments**
- G. Briefing Cards**
- H. 10 & 10 Procedures**
- I. Air Operations Annual Training Check List**