

|   | <u>Charles County Emergency Services</u> | |
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| | Subject: Landing Zone Operations | SOG # 04-06-2013 |
| | Approved: County Fire Chief, Mark Kaufman | Approved: February 2013 |
| | Approved: County EMS Chief, Brent Huber | Initiated: February 2013 |
| | Approved: Director of Emergency Services, Bill Stephens | Revised: February 2015 |

I. Purposes:

Charles County fire suppression units are dispatched for helicopter landings primarily to: (1) Identify a safe landing area, (2) Maintain security of the aircraft, and (3) Assist the flight crew as requested. This standard operating procedure (SOP) provides procedures for enhancing the safety of personnel and operations when Charles County personnel assist flight crews at helicopter landings.

II. Scope:

This SOG is applicable to all Charles County Fire & EMS units and personnel operating in or around temporary helicopter landing zones (LZ). It is not applicable for aircraft landing at formally designated helicopter landing sites. (Air fields, hospital landing pads, etc.)

III. Responsibility:

If designated, the incident commander is primarily responsible for the implementation of this SOP. Otherwise, the engine officer on scene at the landing zone is responsible for the implementation of this SOP.

IV. Procedures:

1. Prior to Aircraft Arrival

If possible (based on aircraft estimated time of arrival) the following steps should be completed prior to the aircraft's arrival:

- A class "A" engine or tanker (capable of transporting 3 personnel) shall respond or proceed (at the officer in charge's (OIC) discretion) to establish an adequate landing zone (LZ) as noted below. Minimum staffing shall be 3 qualified personnel (See apparatus staffing SOG). If understaffed, the OIC shall request additional resources via Communications.
- All personnel with the exception of the driver shall be dressed out in full structure fire personal protective equipment (PPE) including eye protection during the aircrafts approach and take off.
- A minimum of one firefighter shall have donned an SCBA in addition to PPE.

2. Communications

A. The engine OIC Shall:

- Make contact with the aircraft via radio on the Communications' assigned channel.
- Be the only person to communicate landing zone information to the aircraft. (The transporting EMS unit is allowed to communicate patient information if the engine officer is unable to do so)
- When notified by "Charles County" as to what aircraft is en-route an alternate TAC channel shall be assigned for communications between ground crews, paramedic crew(s), and the aircraft only.
- The approaching aircraft will notify the OIC when they are on "Final Approach". All radio communications shall CEASE.
- If an imminent emergency exists which requires the aircraft to abort landing, the OIC or the aircraft personnel will transmit over the radio "**ABORT, ABORT, ABORT**" (e.g. Vehicles or pedestrians breaching safe zone, power lines, light poles, etc)
- Once the emergency has been averted communications shall be immediately resumed with the aircraft identifying the reason for the abort.
- Once the LZ is deemed safe by both aircraft and ground crews, operations may resume.

NOTE: APCO Region 20, which serve's all of Md. and Northern Va. has approved a 700 MHz channel for the use of communicating with the pilot of an approaching aircraft that is in immediate danger. The proposed channel has yet to be approved by the National APCO office and the Federal Communications Commission (FCC). This approval may take several months. The Maryland State Patrol (MSP) Aviation Division will implement the use of the channel once fully approved and as they place the new aircraft that are currently on order in service. When this channel is fully operational, additional guidance will be provided to responders in its proper use.

3. Optimal Landing Zone (LZ) Set-Up

- A 100 x 100 foot area close to the incident scene and free from obstructions is the best selection
- The landing zone should be a flat surface that is firm, free of overhead obstructions and free of any debris that can blow up into the rotor system. The maximum allowable slope is 10 degrees.
- Obstacles such as wires, poles, signs, etc. can be difficult to see from the aircraft. If wires are present at or near the scene, this information must be relayed to the flight crew prior to landing.
- Advise the flight crew on overhead radio contact if there are any obstructions in the area, obstructions at the edge of the LZ, or any obstructions in-line with the departure or approach path
- If the roadway is too narrow, or numerous trees or other obstacles are present, another area must be selected as an alternate LZ and checked for obstacles and other unsafe conditions. After the on-scene officer-in-charge has evaluated all areas, the best unobstructed landing site must be secured, and the flight crew advised of any unsafe conditions they may encounter during the landing.

NOTE: In determining landing zones, be aware that helicopter take-offs and landings can be done in a vertical manner; however, these landings limit the pilot's visibility of the LZ. Small landing zones may cause the approach to be slower and cause extended periods of rotor wash, in addition to limiting the pilot's options should an engine failure occur.

- The OIC should walk the area on both sides of the LZ and check for hazards.
- During night operations, walk the LZ with a flashlight that is directed up and down to detect wires in and around the LZ.
- 45 Degree Test- The OIC should stand in the middle of the LZ with one arm extended at a 45 degree angle in front of him/her. Any objects at or above this line are obstacles and need to be reported to the incoming aircraft. This test is done for the full 360 degrees
- All traffic must be stopped in both directions of the roadway, even on multi-lane highways or interstates. Do not allow traffic to use the roadway until after the aircraft has departed. Traffic should be stopped at least 200 feet in both directions from the landing zone.
- Do not recommend landing zones that contain loose material such as gravel.
 - The rotor wash will cause stones or gravel to become airborne, striking personnel and/or damaging vehicles.
- Do not use flares or cones to mark the landing zone, as they will become airborne during the landing. (Weighted cones/lights that are designed for aircraft operations are generally acceptable.)
- The pilot is the final authority when selecting an LZ. On some occasions, the pilot may not choose to utilize the ground personnel's suggested LZ and choose an alternate LZ. This decision is usually based on information that is unknown to the ground personnel (e.g., wind, aircraft performance limitations, etc).

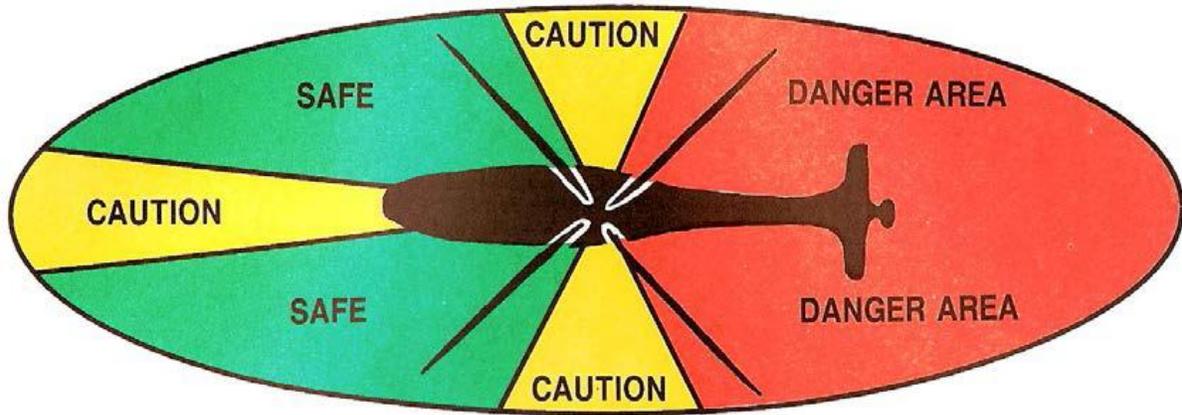


Figure 1: Helicopter Approach Zones