

ESCAMBIA COUNTY FIRE-RESCUE

Standard Operating Guidelines

4100.045

Helicopter Safety

Implemented: 11/16/10

Revised: 11/13/17



Patrick T Grace, Fire Chief

Page 1 of 4

PURPOSE:

The request of an air medical crew to the scene is made to provide an expedited form of transportation due to the location or nature of the call. There are several actions that are needed to accomplish a smooth and safe operation while providing the best care possible.

OBJECTIVE:

To provide personnel with guidelines regarding the safe landing, loading, and take-off of an air medical helicopter requested for emergency transport.

SCOPE:

All Personnel

PREPARATION

When a call is dispatched which requires the response of an air medical crew, the fire units should be notified to provide a safe landing zone. Dispatch should notify the responding units with an estimated time of arrival of the air medical crew. While en route to the scene the fire units need to be observing the area for a suitable landing zone.

APPARATUS

The preferred response regarding fire apparatus should be an engine or truck company with foam capabilities and a minimum of 500 gallons of water. When the landing zone has been selected, the apparatus should be positioned in a way that makes it possible to reach the helicopter with hose lines while still maintaining a safe distance. The apparatus can also be used to block traffic and create a shield in case of flying debris or rotor wash. It is not necessary to initially deploy hose lines from the apparatus since it may be necessary to reposition the apparatus in case of an incident involving the helicopter.

PPE

In order to provide a safe work environment during helicopter operations it is vital to don the proper firefighting protective clothing to include SCBA, eye and ear protection. In the event of an accident involving the helicopter the protective clothing will protect and ready the suppression and rescue crew.

COMMUNICATIONS

From the time of dispatch to the time the air medical crew departs from the scene it is necessary to have clear and concise communications. This can be direct verbal communications by radio or direct visual communications by hand and/or marked landing zone. Radio frequencies should be switched to an alternate channel as soon as possible. This allows direct communications between the landing zone officer and the responding air medical crew without interfering with other radio traffic.



Patrick T Grace, Fire Chief

LANDING ZONE OFFICER

The most qualified and experienced firefighter or officer should be in charge of coordinating the landing zone. The LZ officer will be the only person in contact with the air medical crew during approach, landing, and take off unless an issue arises which requires the helicopter to abort the landing or take off. If a safety issue is spotted by anyone at the landing zone that could interfere with the landing or take off, they should immediately notify the helicopter by using the term **ABORT, ABORT, ABORT**. The pilot will acknowledge the abort and will immediately abort the landing or take off. The LZ officer will stay with the helicopter at all times to secure the LZ.

LOCATION

A landing zone close to the actual address is preferred, however if a safer landing zone or pre-designated landing zone is available within a reasonable distance that landing zone should be utilized. The patient will then be transported by ambulance to the waiting helicopter.

LANDING ZONE REQUIREMENTS (S.L.O.W.)

SIZE

The suggested size for a landing zone is a minimum of 100 ft. X 100 ft. This size allows the helicopter enough room to maneuver in case of weather conditions. All patients and unnecessary personnel should be kept outside of this area to protect them from blowing debris and dirt. The surface of the LZ should be kept as smooth as possible with no more than a six degree slope.

LANDING AREA

The landing area can be identified by several means. Traffic cones to mark the corners of the LZ lying on their side with narrow ends pointing to the middle of the LZ are great indicators which can be seen from a good distance. At night, flashlights can be used inside these cones to illuminate the LZ area which will create an "X" when seen from the approaching helicopter. Battery operated LED flares are also a useful tool at night to mark the LZ. Regular flares can cause a fire danger and are easily blown away by rotor wash. Any bystander or first responder who can not be in the HOT zone should be well outside this marked area.

OBSTACLES

Any object within or around the LZ is considered a possible obstacle. These obstacles include but are not limited to antennas, power lines, phone lines, vehicles, bystanders, livestock, signs and tall buildings. To identify possible obstacles the LZ officer will do a 360 degree walk around. The LZ officer while giving the LZ instructions should relay all obstacles within a ¼ mile to the air medical crew. Debris and other foreign objects should be



removed prior to the arrival of the helicopter to prevent them from injuring bystanders, property or damaging the helicopter.

Obstacles such as power lines and antennas should be indicated at night by aiming flashlights or headlights at them in a way that will not interfere with the pilot's vision. At no point should any kind of light be aimed at the approaching / departing helicopter.

If it is a possibility for brown outs to occur it is recommended to wet the landing zone. This measure is to prevent the pilot from losing visual surface reference and to prevent bystanders or personnel from injury.

WINDS

When possible give the air medical crew an indication of the wind direction.

APPROACH / LANDING

When the air medical crew is on approach the LZ officer and other fire department personnel will make sure that nobody is within the LZ area. The LZ officer should coordinate with the air medical crew for approval of the landing zone prior to short final. No other radio traffic should be used after the air medical crew has indicated it is on **short final**. The air medical crew will let dispatch know when they are safely on the ground unless told otherwise.

For the safety of the fire crew and other first responders it is recommended to use the fire apparatus as a shield for flying debris, dirt and other objects while still maintaining a visual of the helicopter.

After the helicopter has landed it is only safe to approach the helicopter from the **front** if it is safe to do so as indicated by the pilot. At no point in time should anyone who does not belong in the LZ approach the helicopter. As soon as the helicopter has declared a safe landing a firefighter should be positioned at the outside LZ perimeter guarding the tail rotor since this is the most accident-prone area within the LZ.

HOT / COLD LOADS

During hot loads the helicopter will not shut down its engines and the air medical crew will take a quick report from the on scene medical crew and transfer the patient onto the helicopter stretcher. During hot loads the LZ should be treated as if the helicopter is in the landing phase.

During cold loads the helicopter will shut down its engines while the air medical crew attends to the patient along with the medical crew already on scene. At this point the pilot can elect to have the fire crew approach the aircraft if deemed safe. The hot zone is still in effect and will be in effect until the helicopter has departed.

ESCAMBIA COUNTY FIRE-RESCUE

Standard Operating Guidelines

Patrick T Grace, Fire Chief

4100.045

Helicopter Safety

Implemented: 11/16/10

Revised: 11/13/17

Page 4 of 4



Due to limited view of the pilot no fire crew or medical personnel should approach the helicopter to assist with the stretcher unless specifically asked by the air medical crew to do so. There should be no unnecessary personnel in the LZ area at any time.

TAKE OFF

When the helicopter is ready to take off the fire units will make sure the LZ area is clear of debris and obstacles and will be prepared to call an **ABORT, ABORT, ABORT** if necessary.

After the helicopter departs, the LZ needs to remain clear and secure for a minimum of 3 minutes or until the aircraft is out of sight of the LZ officer. In the event of an emergency or difficulties, the helicopter may have to return to the secure area. The air medical crew will notify dispatch of their departure and where they are taking the patient.

HARD LANDING / INCIDENTS

In case of a hard landing or a more significant incident the LZ officer will upgrade the nature of the call to his discretion. Dispatch should be notified so that the appropriate steps and notifications can be made.