

**Aviation Safety Manager Team  
Task Order 0904-02  
Tasking Summary**

*Aviation Medical Protocol Criteria Plan*

**Introduction**

For fire season 2009, there are no hoist capable helicopters, either privately owned or operated by a government entity, that can be counted on to provide sole support of wildland fire operations in the Pacific Northwest. In the past, and hopefully in the future, the Oregon National Guard unit in Salem, Oregon, was available to relocate and provide exclusive support for wildland fire operations.

However, hoist extraction capability is available through a variety of organizations using the Air Force Rescue Coordination Center, but there are no guaranteed timeframes for rescue. Rescue time is predicated on available resources, and realistically, two hours should be considered the average *launch* time for available resources.

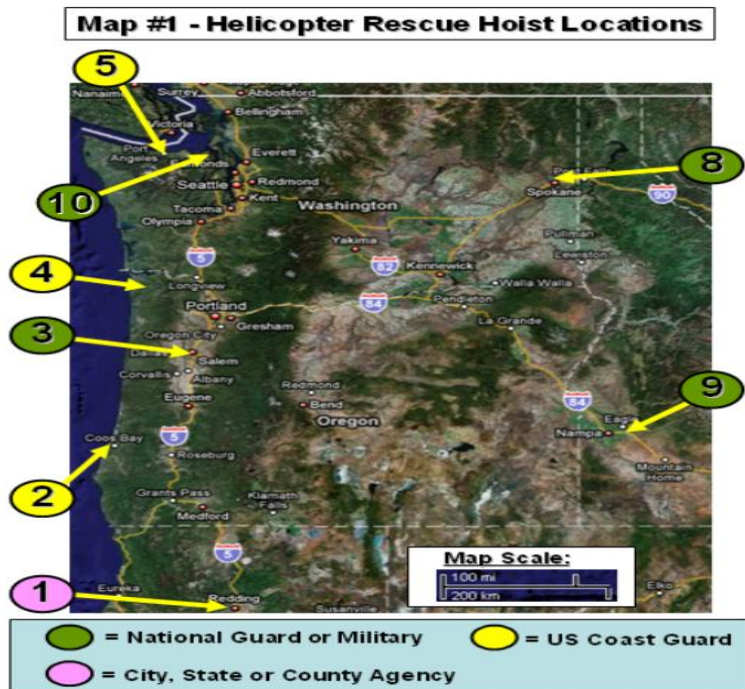
Medivac of an injured fire fighter using hoist capable helicopter should be used only after careful consideration (see attached protocol) by the on scene Incident Commander and/or EMS personnel for evaluation of the added risk to both the patient and EMS personnel of utilizing a medivac hoist operation.

**Helicopter Hoist Ordering Information**

- All ordering should be placed and coordinated via your local dispatch center
- The map and table below show locations and organizations with helicopter medivac hoist capability in the Pacific Northwest.
- If a helicopter hoist medivac extraction is needed, the Air Force Rescue Coordination Center is the broker for this service, and can be contacted via the phone number listed in Table 1.  
***There are no guaranteed time frames for helicopter hoist extractions!***
- The Oregon National Guard has some limited capability to provide hoisting services, and can be ordered via Oregon Department of Forestry thru Op Plan Smokey (see table 1 for phone information).
- The California Highway Patrol may be available in the border area. To check on availability, use the number listed in Table 1.

Table 1 -- Phone numbers for ordering medivac helicopters with hoist capabilities.

Map #	Agency	Order via	Ordering ph. #
1	California Highway Patrol – Redding, CA	California Highway Patrol	530-242-3210
2	Coast Guard – North Bend, OR	Air Force Rescue Coord. Cntr.	800-851-3051
3	Oregon National Guard - Salem, OR	Air Force Rescue Coord. Cntr. ( <i>or via Salem ODF for pre-position on large incidents #503-945-7508</i> )	800-851-3051
4	Coast Guard – Astoria, OR	Air Force Rescue Coord. Cntr.	800-851-3051
5	Coast Guard – Port Angeles, WA	Air Force Rescue Coord. Cntr.	800-851-3051
6	Not available		
7	Not available		
8	US Air Force – Spokane, WA	Air Force Rescue Coord. Cntr.	800-851-3051
9	Idaho National Guard – Boise, ID	Air Force Rescue Coord. Cntr.	800-851-3051
10	US Navy – Whidbey Island, WA	Air Force Rescue Coord. Cntr.	800-851-3051



## Assessing the need for Hoist and Helicopter Medivac

The following section is designed to be used by medically trained people; Medic or Paramedic

A medivac should be used only after careful consideration by the on scene Incident Commander and /or EMS personnel concerning the added risk of utilizing the Medivac or hoist operation to both the patient and EMS personnel, versus the patient's current condition. A standard medivac will require a landing area as described in the IHOG for the appropriate sized aircraft. Hoist operations are highly technical and risky operations therefore it is recommended having properly trained personnel on scene to help perform the loading of the patient. Hoist aircraft will normally lower an attendant, but not always, to insure the patient is properly loaded into the litter.

For vertical patient extractions it is recommended that someone with technical climbing or extrication training evaluate the situation to ensure the patient is properly loaded and secured. An example here would be the National Park Service Short Haul program.

### Immediate life threatening medical presentations including:

1. Major Trauma to head, chest or extremities (Penetrating or crush injuries to chest, abdomen, pelvis, etc.)
2. Shock (BP < 60 sustained)
3. Acute respiratory distress (including unstable anaphylaxis) (Oxygen Saturation < 90, RR > 30)
4. Coma (unresponsive to verbal commands)
5. Acute Cardiac
6. Acute Stroke

### Mandatory Criteria: (To be performed on scene)

#### A. Physiological criteria:

1. A systolic blood pressure of less than 90 mm/Hg.
2. Respiratory distress as evidenced by a respiratory rate of less than 10 or greater than 29 or invasive airway management is required.
3. Altered mental status as evidenced by a Glasgow Coma Scale score of 12 or less.

#### B. Anatomical Criteria:

1. The patient has a flail chest.
2. One or more obvious proximal long bone fractures (humerus, femur).
3. A penetrating injury of the head, neck, torso, or groin associated with transfer of energy.
4. An amputation proximal to the wrist or ankle.
5. Numbness or paralysis in one or more limbs which is associated with a suspected spinal cord injury.

## **When to use Helicopter Service:**

The Trauma System protocol directs use of the helicopter if it has the potential to save 10 minutes.

### **Possible exceptions to this rule which might warrant use of Medivac or Hoist Extraction:**

1. Multiple patient scenes, MPS or MCI.
2. Extended extrication, resulting in extended scene times.
3. Road conditions, such as congestion and obstructed scene.
4. High system demands.
5. Difficulty for ground ambulance access to the scene.
6. Patient has immediate life threatening medical condition.

### **Special considerations:**

1. Inclement weather that may prevent flight, (smoke, fog, etc.).
2. Consider the possibility that the helicopter may not be able to save time.
3. It may be appropriate to activate the helicopter and to cancel if the patient is packaged, the ambulance is ready to transport, and the helicopter is not on scene.
4. The helicopter may have multiple, simultaneous calls for service and may need to triage use.

### **Operational Considerations**

1. Fire Environment; location of fire perimeter and predicted fire behavior to the patient, visibility considerations.
2. Day or night operations. Night operations should only be used for life or death and loss of limb situations.
3. Expertise at patient location for preparing patient for extraction and transportation. (Should have a qualified EMT on scene; if not are medical protocols met)
4. Extraction site is suitable for helicopter operations with hoist (snags, people, slope, debris, etc. For example, you will basically need an area that you could bring a long line into if you were doing sling loads.)
5. Inability to create appropriate landing zone due to terrain, fire behavior, timeframe to do so.
6. A wheeled litter and rescue equipment can be slung into the incident, in order to move the patient to a location in which they can be hoisted or medivaced out.
7. Discreet air-ground frequency dedicated to the extraction operation, if at all possible.
8. Aerial supervision in place (ATGS/HLCO), if at all possible.

## **Other Advanced Life Support indicators**

### **Abdominal Complaints**

- Poor skin signs (pale, sweaty)
- Sustained tachycardia
- Hypotension- systolic BP of less than 90 with clinical signs
- Severe unremitting pain

### **Anaphylaxis**

- Respiratory distress
- Poor skin signs (pale and sweaty)
- Sustained tachycardia
- Hypotension (Systolic BP less than 90)
- Use of Epi Pen without results

### **Burns**

- Any airway involvement including singed facial hair, soot in the nose or mouth, or if the patient is hoarse.
- Second or third degree burns to the face or head.
- Second or third degree burns covering more than 20% of the body
- Any burn that is causing severe pain.

### **Chest Pain**

- Any chest pain that has associated signs and symptoms: pressure, shortness of breath, nausea and vomiting, or sweaty.

***Any chest pain that is not relieved with rest is emergent and to be considered life threatening.***

### **Environmental**

*Cold-* Decreased or altered level of consciousness.  
Body core temp of 95 degrees or less.  
Cessation of shivers in a cold patient.  
Systolic blood pressure of 90 or less

*Heat-* Decreased or altered level of consciousness.  
Hot dry skin in the presence of an elevated temperature  
Nausea and vomiting.  
Sustained tachycardia  
A body core temperature greater than 103 degrees

### **Respiratory**

Decreased level of consciousness  
Extreme anxiety or agitation  
Tripod position  
Unable to speak normally  
Rate greater than 30 or less than 10  
Pale ashen skin  
Audible wheezing  
Any respiratory distress that causes a seizure

**Stroke**

Unconscious or decreased level of consciousness

Severe hypertension. Systolic pressure greater than 200, and a diastolic greater than 110.

Severe headache that causes a seizure, nausea, or vomiting.

**Traumatic Injuries**

Decreased level of consciousness

Excessive uncontrolled bleeding

Pelvic fracture

Bilateral femur fractures

Multiple long bone fracture. Femurs, humerus, ect.

Open fractures to exclude the hands and feet

Uncontrollable unrelenting pain

Any traumatic head injury that causes a seizure

Any soft tissue injury that might compromise the airway

Falls greater than two times the patients body height

Thrown from a vehicle greater than 15 feet.

Amputations above the hands and feet

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# Simple Triage and Rapid Treatment

