HELICOPTER
WATER RESCUE AWARENESS
Objectives

- Identify the various agencies and types of rescue systems used
- Understand the CAL FIRE Air Rescue Program
- Recognize communication procedures for working with helicopters
- Identify the hazards associated when working with helicopters
Types of Rescue Systems

• Static Short Haul ~ CHP, Sheriff, Other Local Agencies
  - Rescuer is outside the aircraft, on the ground, connected to a long line attached to the belly of the helicopter. The helicopter lifts until the rope is taught and the rescuer is lifted and flying at a safe altitude to the target.
Types of Rescue Systems (cont.)

- **Dynamic Short Haul**
  - CAL FIRE, Other Local Agencies
  - Rescuer starts inside the aircraft. Aircraft flies to the target and the rescuer is lowered from the aircraft to the victim.
Types of Rescue Systems (cont.)

- **Hoist ~ CAL FIRE (C301), CHP, USCG, Sheriff, Other Local Agencies**
  - Aircraft arrives over target and uses a hoist system, consisting of a cable/winch attachment to the aircraft, to raise and lower victim/rescuer.
CAL FIRE Air Rescue Program

• Program implemented in 1998 to rescue our own personnel

• The rescue program consists of dynamic deployment of a rescuer over land or water
  – Rescuer is lowered out of the aircraft.
    • Land Based ~ Cliffs/Trees/Canyons/Etc.
    • Water Based ~ Static Water/Swift Water/Ocean/Surf
Rescuer and Victim

Example of a Dynamic Short Haul.
Rescuer is lowered out of the aircraft to the victim.
Heli-casting

Heli-Casting inserts a “swimmer” into the water to capture a victim and ready them for rescue.
How can you help?

- Know the risks and dangers associated when working with a helicopter
- Know basic helicopter safety
- Maintain situational awareness
- Maintain landing zone/helispot security
Communications

- Calcord ~ common tactical communications
- Command and tactical frequencies will be assigned and used
- Clock System Orientation
  - This orientation is based on the idea that you are placing a clock system around the helicopter as you look down on it from above. Right side is 3 O’clock, left side is 9 O’clock
Clock System
Landing Zone (LZ)/Helispot Considerations

• Communication ~ Establish positive contact
• Wind Speed and Direction
• Hazards ~ Power lines, cables and other aircraft
• FOD ~ Foreign (flying) Object Debris
• 110’ minimum diameter circle
• Clear of personnel ~ Control the public!
Rotor Wash

FOD will be a problem due to cyclical air movement
Hazards

- Do not approach a helicopter unless
  - The pilot signals you
  - A helicopter crew member escorts you in
- Never approach a helicopter while you’re walking downhill towards it
  - Approaching a helicopter from uphill can kill you
- Do not approach from the rear
- Noisy/Dusty/Downdrafts
  - Use eye, ear, hand and head protection
- All passengers shall receive a pre-flight safety briefing
Slope

Do Not Approach from Uphill!
Summary

• Helicopters are a great tool for rescuing victims
• There are inherent hazards in working with helicopters
• Minimize the risk factors/hazards
• Know your role
• Maintain a high level of Situational Awareness
• Know your local resource capabilities
• Helicopters are the highest risk option for rescue but sometimes the best option
• **Use caution – maintain control of the resources**