



## Helispot Conditions

Determine the size, surface conditions, ground hazards and dust abatement precautions at the helispot.

- *Helispots must be constructed as per the Interagency Helicopter Operations Guide IHOG Chapter 8.*
- *The entire helispot and surrounding area must be carefully examined for potential ground hazards and each identified hazard must be mitigated prior to approving the helispot.*
- *Whenever possible, water point helispots should be established in areas with hard packed surfaces that require little to no dust abatement.*
- *Dust abatement efforts should extend well into the approach and departure corridors and be sufficient to maintain safe conditions during takeoff and landing.*

Establish a method for identifying the landing pad and the lighting configuration to be used.

- *Numbered pad-markers that correspond to the helibase diagram should be used whenever possible.*
- *Lighted areas such as athletic fields, parking lots or airfield should be used whenever possible.*
- *Landing areas should be marked, when necessary, with chemical glow sticks by securing four amber colored lights at each corner of the touch down pad and a white light approximately five feet from the pad on the side from which the wind is blowing.*
- *Red high intensity chemical glow sticks are the most visible to night vision goggles.*
- *White, amber and green chemical glow sticks are all sufficiently visible to night vision goggles.*
- *Blue lights are not visible to night vision goggles.*

Establish safe approach and departure paths, identify aerial hazards and identify useful landmarks.

- *Helispot approach and departure paths should be established as per IHOG Chapter 8.*
- *Approach and departure paths must be safely inspected to identify potential aerial hazards.*
- *All potential aerial hazards should be depicted on a Hazard Map and communicated to the flight crews.*
- *Land marks that are visible to the pilots should be identified for use as potential reporting points.*

Establish wind-shift decision points and change of direction procedures.

- *Wind shifts during night operations should be anticipated.*
- *Wind vector limits across the helispot should be established.*
- *Vehicles, hose and personnel may need to be repositioned when wind vector limits are exceeded.*

## Communications

Identify radio frequency(s) and protocol to be used for air-to-ground communication with the water point helispot.

- *Reliable radio communication must be established with the water point helispot.*
- *A separate takeoff and landing frequency for the water point should be considered when increased radio traffic on the air-to-ground frequency is anticipated.*

Identify reporting points to be used in order to manage spacing and sequencing into and out of the water point.

- *Highly visible landmarks that are easy to recognize under night vision goggles should be identified as reporting points.*
- *Reporting points should be selected that provide the water point personnel enough reaction time to communicate effectively with the approaching helicopter.*



### Communications (Continued)

Determine the hand signals to be used by personnel at the water point helispot.

- *Although cooperator helicopter crews use standardized helicopter hand signals, slight variations exist between different agencies.*
- *In general, the hand signals used by the cooperator agency supervising the water point will most likely be used.*
- *Each hand signal to be used at the water point should be predetermined, reviewed and agreed upon by each of the cooperator flight crews.*

### Ground Fill Hose Lay

Determine the configuration of the supply line to be used for helicopter ground fill operations.

- *Although most cooperator helicopter crews use a standardized hose lay for water point operations, slight variations exist between different agencies.*
- *Some agencies may be capable of setting up and operating two water points, side by side, on the same helispot. This is known as a dual fill water point.*
- *Two and a half inch or three inch hose should be used to supply water from the engine to the helicopter in order to provide the appropriate GPM and pressure at the connection.*
- *Anticipate a change in wind direction and the possible need to move the supply line.*

Identify the location of the supply line Shut-Off Valve relative to the aircraft.

- *Although most cooperator helicopter crews use a standardized hose lay for water point operations, slight variations exist between different agencies.*
- *Some agencies locate the shut-off valve under the rotor disk, while other agencies locate the valve outside the rotor disk.*
- *In general, the location of the valve will be determined by the cooperator agency supervising the water point but must be reviewed and agreed upon by the cooperator flight crews.*

Determine the appropriate GPM flow rate for helicopter ground fill operations.

- *Although most cooperator helicopter crews use a standardized flow rate of **360 GPM** for water point operations, slight variations exist between different agencies.*
- *Flow rates higher than 360 GPM could result in damage to some types of tanks.*
- *Flow rate should be calculated to achieve the appropriate GPM at the connection point to the helicopter's fixed tank.*
- *In general, the flow rate will be determined by the cooperator agency supervising the water point but must be reviewed and agreed upon by the cooperator flight crews.*

### Tank Refilling Procedures

Establish approach procedures for helicopters into the water point helispot.

- *Determine a traffic pattern into the water point helispot.*
- *Determine a reporting point for contacting the water point on approach.*
- *Determine a holding procedure for aircraft waiting to approach the water point when it is occupied.*



### **Tank Refilling Procedures (Continued)**

#### **Identify the positioning of each person at the water point during approach, landing, take-off and departure.**

- *Although most cooperator helicopter crews use a standardized procedure for personnel placement during water point operations, slight variations exist between different agencies.*
- *Some agencies locate personnel under the rotor disk during takeoff and landing, while other agencies locate all personnel outside the rotor disk during takeoff and landing.*
- *In general, the location of personnel will be determined by the cooperator agency supervising the water point but must be reviewed and agreed upon by all of the cooperator flight crews.*

#### **Determine a method for the pilot to signal helispot personnel approval to approach the aircraft.**

- *Although most cooperator helicopter crews use standardized signals to approve approaching the aircraft, slight variations exist between different agencies.*
- *Signals used by flight crews during the day may not be visible to water point personnel at night.*
- *Aircraft external lights, such as a step light, search light, or hoist light, may be flashed to signal approval to approach the helicopter.*
- *In general, the signaling method will be determined by the cooperator agency supervising the water point but must be reviewed and agreed upon by all of the cooperator flight crews.*

#### **Determine a method for signaling to helispot personnel the desired amount of water.**

- *Although most cooperator helicopter crews use standardized signals to indicate the desired amount of water, slight variations exist between different agencies.*
- *Signals used by flight crews during the day may not be visible to water point personnel at night.*
- *Radio transmissions may be used to communicate the desired amount of water.*
- *In general, the method used to signal or communicate the desired amount of water will be determined by the cooperator agency supervising the water point but must be reviewed and agreed upon by all of the cooperator flight crews.*

#### **Establish departure procedures for helicopters out of the water point helispot.**

- *Predetermined hand signals may be used to coordinate safe departures from the water point.*
- *Radio communication may be used to coordinate safe departures from the water point.*
- *In general, the procedures used to coordinate safe departures from the water point will be determined by the cooperator agency supervising the water point but must be reviewed and agreed upon by all of the cooperator flight crews.*

#### **Establish emergency procedures for response to incidents or accidents at the water point helispot.**

- *Determine a "Point of Contact" for emergency communication to and from the water point.*
- *Identify the nearest available engine or truck company and make arrangement for immediate response to an accident on or near the water point.*
- *Assign responsibilities, and outline the actions to be taken by each of the assigned personnel in the event of an incident or accident on or near the water point.*