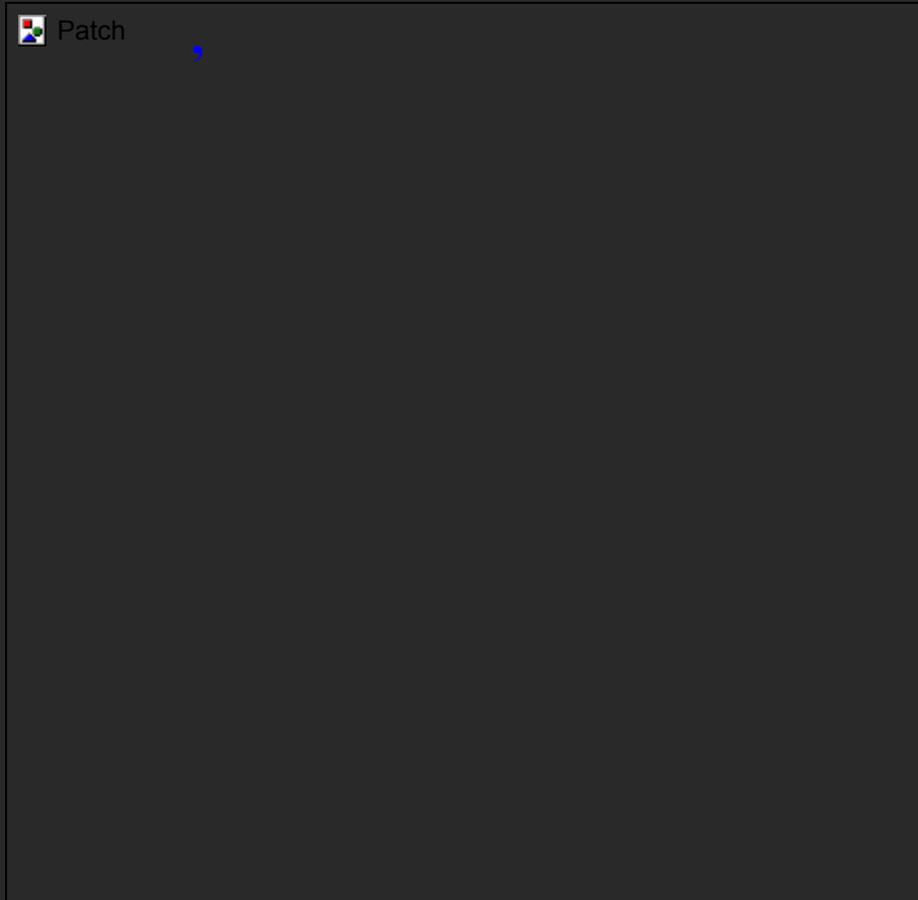


**US Naval Academy
Safety Seminar Brief**

27 March 2004

CDR Bill Boeh '82

U.S. Coast Guard Group-Air Station Atlantic City



Assets

6 HH-65B's



HH-65B "Dolphin" Short Range Recovery Helicopter

Manufacturer:	Eurocopter
Rotor Diameter:	39' 2"
Height:	13'
Overall Length:	44' 5"
Max Gross Weight:	9,200 pounds
Engines:	2 Honeywell LTS-101-750B-2 Gas Turbines 735 shp each

HH-65B "Dolphin" Short Range Recovery Helicopter

Fuel Capacity:	1,900 pounds
Max Endurance:	3.5 hours
Max Speed:	165 knots
Cruising Speed:	120 knots
Max Range:	300 nm
Radius of Action:	150 nm

HH-65B "Dolphin" Short Range Recovery Helicopter

Number of Pilots: 2

Number Flight Crew: 2

1 flight mechanic, 1 rescue swimmer

Total Number of Aircraft: 94

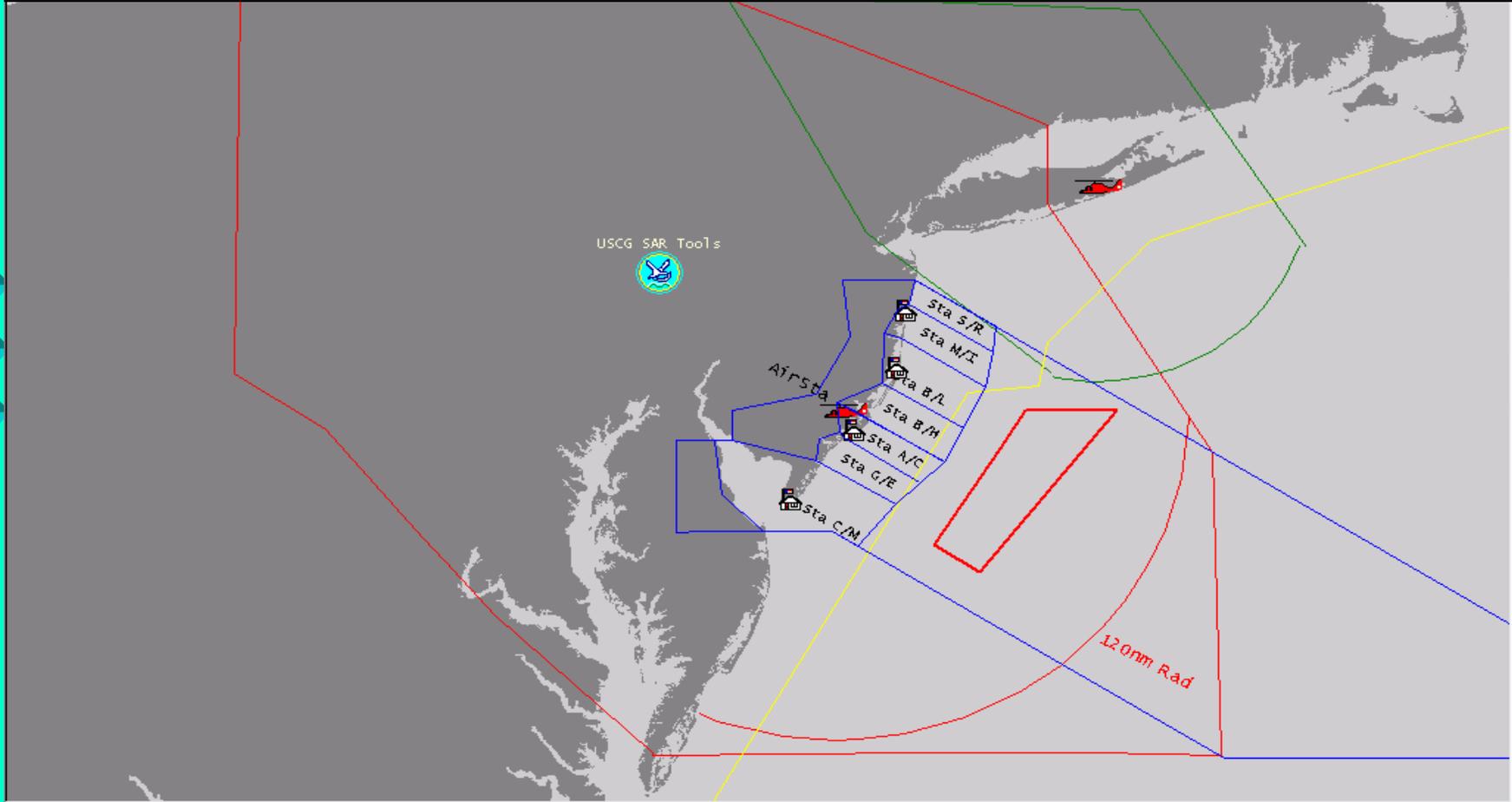
Cargo Sling Capacity: 2,000 lbs

Rescue Hoist Capacity: 600 lbs

Aviation Personnel

- ◆ 32 Pilot Billets
- ◆ 55 Aviation Enlisted
 - 44 qualified Flight Mechanics
 - 11 qualified Rescue Swimmers

Area of Responsibility



39-48.7N 079-25.0W

39-34.8N 075-33.4W 509.96 NM

061557Z MAY 03

Mission Stats:

(FY 03 & FY04 (to 24 March))

- ◆ Nearly 3000 sorties total
- ◆ SAR - 354 Cases
36 Lives saved; 57 assisted
- ◆ HLS – 536 sorties
- ◆ LE – 137 sorties; 2 major busts
(\$230M)

Deployments

- ◆ 290 Programmed Days Deployed Aboard Ship
 - 2nd most HH65 deployment days of any air station in Coast Guard
- ◆ Caribbean/European Deployments
 - 1999 Adriatic Deployment (122 days)
 - 2003 Iraqi Freedom (120 days)
 - 2004 6th Fleet support (60 days)

Sailboat Rescues



Sailboat rescues are HIGH Risk

- ◆ Mast and rigging dictate high hoist altitude
- ◆ Small size prevents pilot from maintaining a visual reference
- ◆ Buoyant, unstable in pitch, roll, and yaw. Corkscrew motion makes a difficult & unpredictable platform for hoisting
- ◆ No training platform for CG

Some unfortunate outcomes.....

- ◆ CG 6026, July 2002, pilot gets vertigo, hoist sheared; RS & survivor left offshore.
- ◆ USAF Pave Hawk, October 1991, unable to evacuate S/V Satori crew; returning to base ran out of fuel, ditched helo with the death of one PJ--boat weathered storm
- ◆ [Satori video](#)

Sailing Vessel “Satori”



Sailing Vessel “Satori”



Is this rescue necessary?

- ◆ Understand the rescue will be high risk before you request assistance
- ◆ BUT--you are professionals--use good judgment--if you need help, ask.
Situations rarely improve with time!

Mitigate risk by:

- ◆ Waiting for daylight
- ◆ Waiting for better weather
- ◆ Waiting for surface asset

Forms of distress

- ◆ Fire
- ◆ Taking on water
- ◆ Injury--MEDEVAC
- ◆ Abandoning ship

Fire on board

- ◆ We can provide a fire suppression kit
- ◆ See “Abandoning Ship”

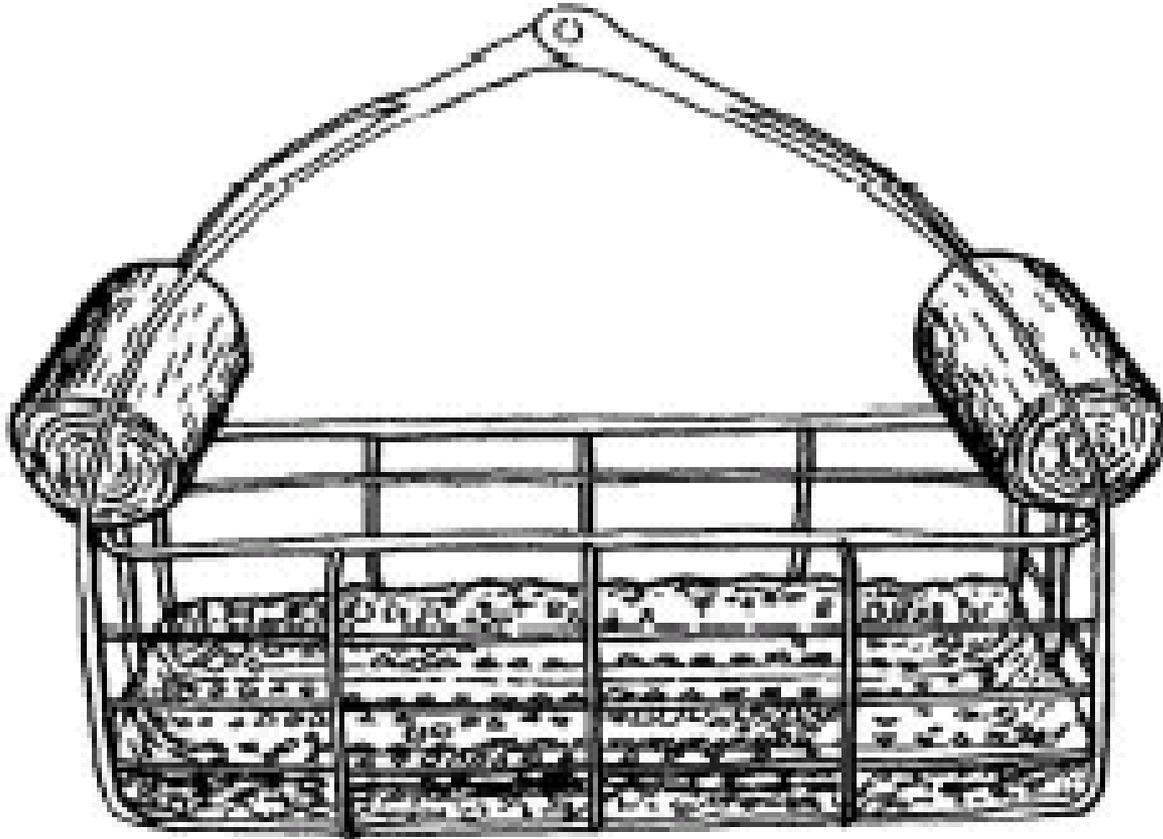
Taking on water

- ◆ Don't wait for extremis! It takes time for us to get to you.
- ◆ We can provide pumps--this is the least risky evolution for us

Medevac

- ◆ We will bring Rescue Swimmer
- ◆ We may use Stokes litter or the rescue basket (if patient is ambulatory)

Rescue Basket



UNFOLDED POSITION

Stokes Litter

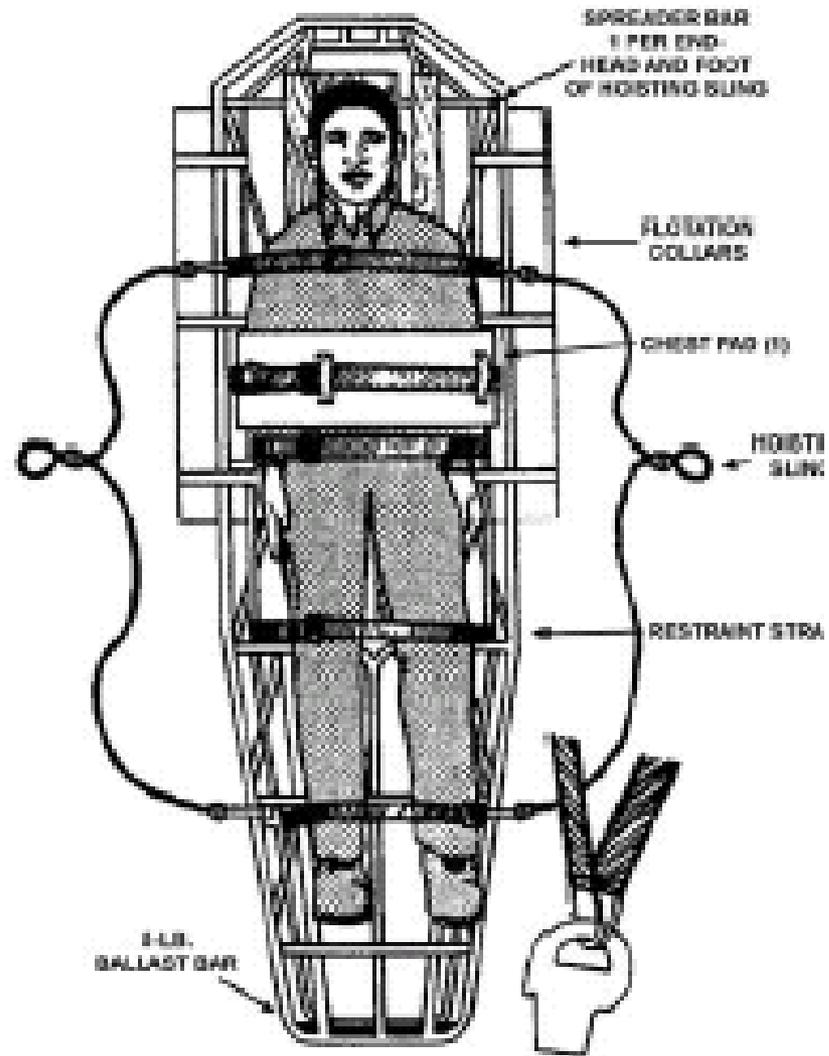


Figure 19-6
Stokes Litter

Vessel Preparation

- ◆ Navigation—
check sea room
- ◆ Don protective gear.
- ◆ Can you drop your sails?

Vessel Prep, cont'd:

- ◆ Stow all loose gear, secure the boom, batten down hatches.
- ◆ Do you have a mast head light?
Can you rig an alternative?

Information exchange

◆ You brief us:

- Situation/weather
- Exact position (GPS)
- Condition of personnel to be MEDEVAC'ed (ambulatory?)
- Hoist area
- Total number of personnel on board

Information exchange

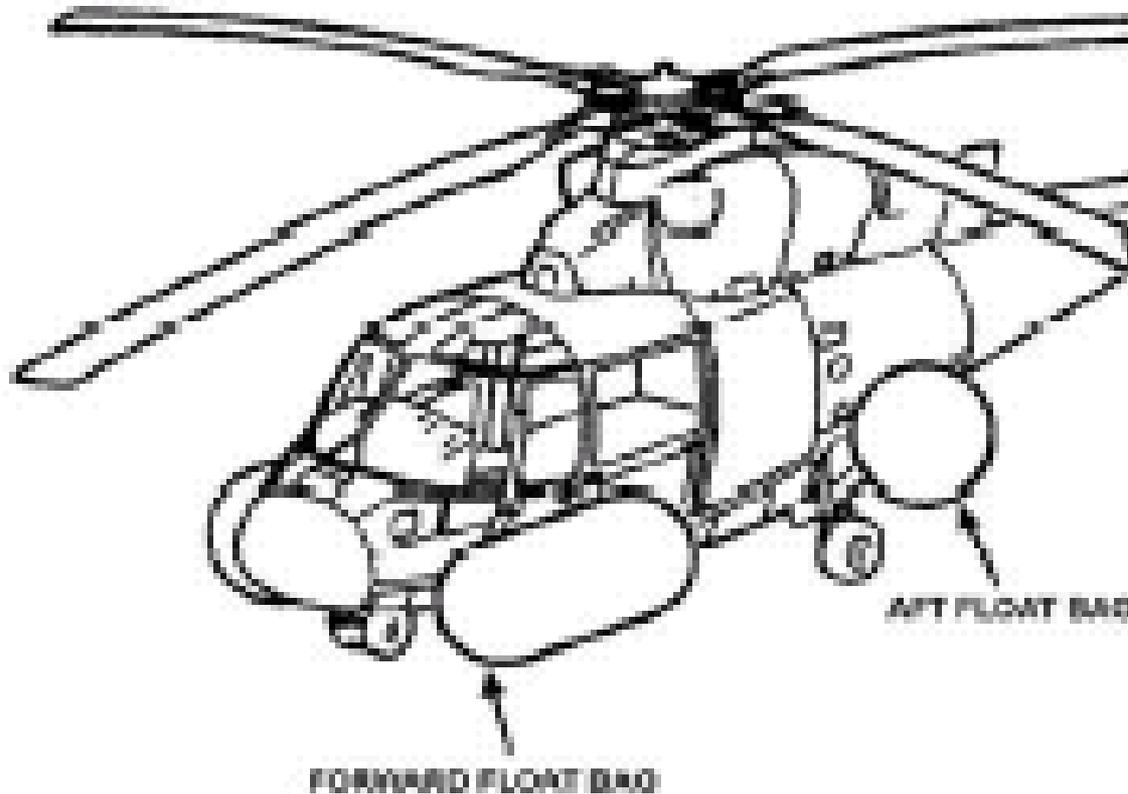
◆ We brief you:

- Heading/speed
- Lower/stow/secure gear
- We provide device
- Discharge static electricity
- Disconnect hoist hook—DO NOT ATTACH HOOK TO VESSEL!
- No pyro, lights, flash pictures please!

Information exchange

- ◆ Hoist brief, cont'd
 - Emergencies (engine, steering, radio failures)
 - Helicopter emergency

Helicopter Flotation



Pump or Fire Suppression Kit Delivery

We will most likely use
an “indirect delivery”

Indirect delivery



Figure 19-12
Indirect Delivery of Pump

Indirect delivery, cont'd



MEDEVAC'S

Provide as much
detail on patient's
condition as possible

Patient Preparation

Don PFD or survival
suit if practical

Why are swimmer deployments hard ?

- Sailboats can look DIW and be moving under bare poles faster than a man can swim
- Sailboats have a high freeboard that makes boarding by the RS difficult
- RS can quickly get violently seasick

Royal Navy rescue swimmer injured in fall

- ◆ Trying to get a rescue swimmer aboard through steel rigging
- ◆ Steel cable on steel cable cuts cable, swimmer falls to the deck, breaks his back
- ◆ [USCG RS Video](#)

Getting the rescue swimmer aboard:

- ◆ How can the sailboat help
- ◆ How to deploy the swimmer
- ◆ Where to deploy the swimmer

Getting the rescue swimmer aboard: open water deployment

- ◆ Deploy to open water--least risky
- ◆ He swims to you or YOU go get him

Open-water deployment:

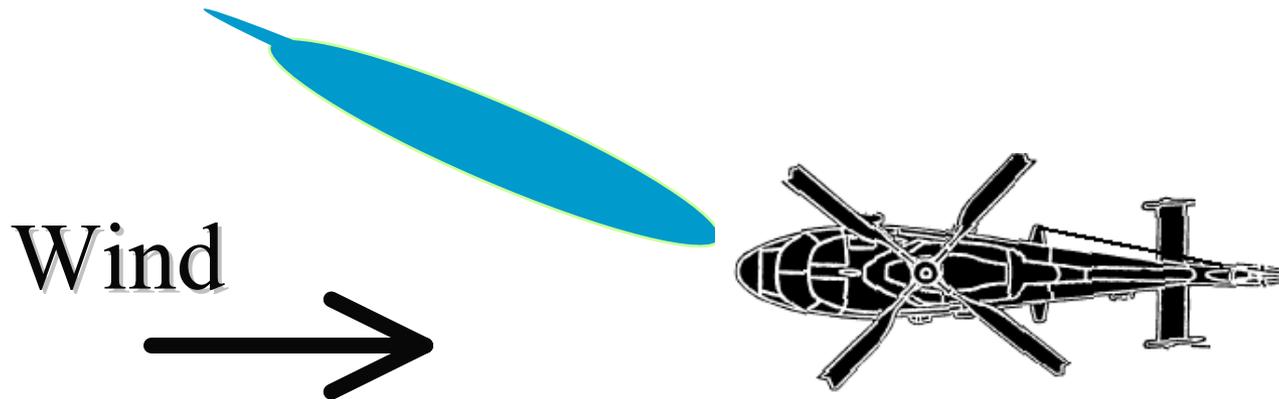
- ◆ Where is the boarding ladder?
- ◆ Tow a line aft
- ◆ Please stop and let him get on!
- ◆ Recover swimmer via “man overboard” drill

Hoisting area for RS or device

- ◆ If bow is the clearest area, set wind off the starboard quarter
- ◆ If the stern, set wind 40 degrees off port bow
- ◆ Dead-in-the-water--depends

Stern Hoisting Area

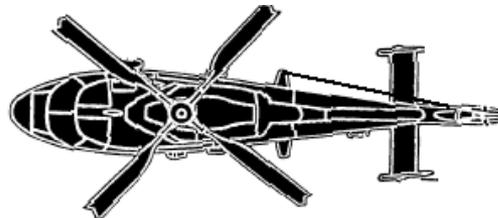
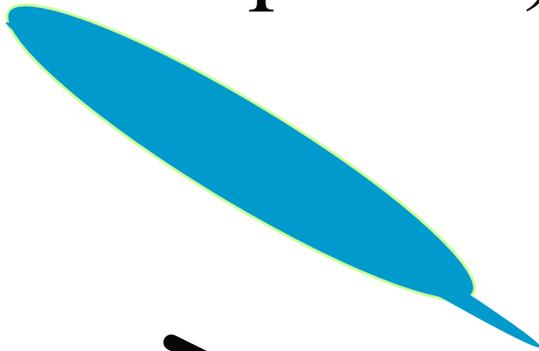
- ◆ The stern is preferred; set a course 35-45 degrees off the wind line (off port bow)



Bow Hoisting Area

- ◆ If the bow is the clearest area, set a course 140 degrees off the wind (off stbd quarter)

Wind



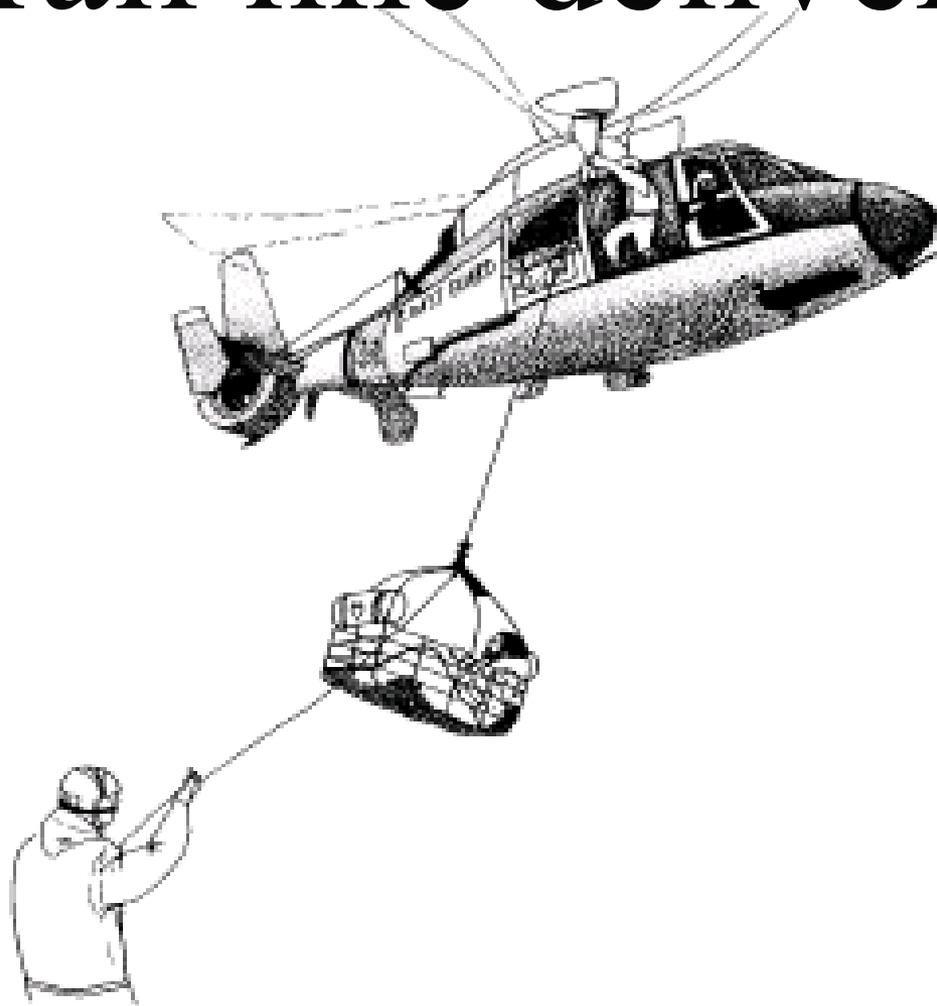
We may execute a “dry hoist”

- ◆ Basically a “practice run” to see if we can get into position to deliver trail line or device.

Trail line delivery

- ◆ What is a trail line? Why use it?
- ◆ How do I tend the trail line?
 - Stabilize the device
 - Manage the trail line
- ◆ **NEVER ATTACH TRAIL LINE TO YOUR VESSEL!!**

Trail line delivery



RS/device delivery

- ◆ How do I tend the trail line?
 - Use two people to manage the trail line
 - Coil neatly to avoid entanglement
- ◆ Ensure device grounds itself
- ◆ Unhook the device if it needs to be moved
- ◆ **NEVER ATTACH HOIST HOOK TO YOUR VESSEL!!**

Loading the patient

◆ Basket:

- Tuck arms in and keep them in!
- Watch the bails on the basket!

◆ Litter: RS will assist if deployed

Device/RS Recovery

- ◆ How do I tend the trail line?
 - Stabilize the device/RS
 - Don't throw the trail line UP at the helo!

Let's go to video...

Actual rescue off
Rockaway Beach, NY.

Abandoning Ship

- ◆ Don't abandon ship just because we are on scene:
- ◆ We can provide an additional raft

How to abandon ship

- ◆ Dress for success: PFD, survival suit, strobe light or flashlight, reflective tape
- ◆ Only go over the side when we tell you
 - Muster all crew in one location
 - Arrange a signal, flash search light at night
- ◆ Survivors go in one at a time

How to abandon ship, cont'd

- ◆ Tow warp lines aft for survivors to cling to, insure helo knows about weak swimmers before they go in
- ◆ Use S/V life raft to abandon ship; if none, FW or helo can provide a raft
- ◆ Do survivors have medication, passport, valuables ready
- ◆ Review basket ingress instructions



Go Navy!

Beat Army!