

# *View from the Other End of the Towline & Hoist Cable*



Safety at Sea  
Seminar  
Annapolis, MD

30 March 2019

Captain Kip Louttit  
U.S. Coast Guard  
Retired &  
USCG Auxiliary



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# Agenda



CG Overview

Preparation...avoid trouble

Self-rescue

Outside Rescue

- Surface, Air & Medical

Equipment... Position & PFDs

Summary



*J-40 Kaholo Delivery  
Los Angeles to Seattle  
April 2018*



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Saving Lives and Guarding the Coast Since 1790  
The U.S. Coast Guard—Proud History. Powerful Future  
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# On an average day, the CG...

Conducts 45 search and rescue cases

Saves 10 lives and over \$1.2M in property

Seizes 874 pounds of cocaine and 214 pounds of marijuana

Conducts 57 waterborne patrols of critical maritime infrastructure

Interdicts 17 illegal migrants

Conducts 14 fisheries conservation boardings

Services 82 buoys and fixed aids to navigation

Facilitates movement of \$8.7 billion worth of goods and commodities through the nation's maritime transportation system

*Multi-missioned, Maritime, Military*



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# CG Mindset

Unlimited Electrical Power.

Many radios, all running all the time.

Enclosed boats, ships & aircraft w/ heat & air conditioning.

Very few CG members sail.

Sailboats are so confusing...going every which-way.

Pleasure boats *all* cut too close.

Any vessel without the right lights *or doesn't answer the radio* right away must be doing something illegal.

Go sailing? Why would anyone want to do that?  
It's hot, cold, wet, slow, and uncomfortable.



45' Response Boat Medium



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# Drug Threat...Self-Propelled Semi-Submersibles (SPSS)



## •SPSS...

- No or low radar return & no lights
- Fiberglass sailboat with carbon-fiber mast & running light obscured by the genoa or bow wave...
  - No or low radar return and no lights!
- Therefore...Keep the lights and radio **on!**



9 tons of cocaine worth  
\$240m



U.S. DEPARTMENT OF  
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Seizure, Pacific Ocean, March 2019 by 3 CG Cutters

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# CG tries to balance Safety, Security & Law Enforcement with your Sailing Pleasure



Keep clear of vessels being escorted  
Listen on Channel 16 for instructions and stand-off distance  
Cooperate if CG wants to board  
All CG boarding officers armed, just like police officers



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# Safety at Sea...Overarching Themes

1. Best option is to avoid trouble
2. Next best option is self-rescue
3. Final option is outside assistance
  - Recognize you are in trouble
  - Call early
  - Don't wait until the water is over the floorboards and the batteries die

## *Cascading Casualties*



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Remember “P” !!!

## “Preparation Equals Performance”

- Admiral James Loy, Commandant of the USCG thru 9/11

### The 7 Ps:

- Proper Prior Planning Prevents Piss Poor Performance

*And if you remember nothing else...*

- #1: Position *Position* POSITION!!!
- #2: PFDs *PFDs* PFDs!!!



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# M/V *Selkirk Settler*

## November 2006, Lake Superior



A nasty day with boarding seas...



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# Same laker a few minutes later...



Consider...

1. Even the best lookouts won't be able to see well.
2. Even the best radars don't work well in heavy rain & seas.
3. Can your hatches, ports & vents keep solid water out?

***“Preparation Equals Performance”** & safe passage*



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# Next best option is self-rescue

Blown out sail or broken running rigging

Broken standing rigging, mast, boom, or spinnaker pole

Loss of engine, navigation, or communications system

Person overboard

- Wearing Life Jacket (PFD) or not
- Kite up or not, day / night, good / bad weather, # POB

Loss of Steering          Tiller ... Wheel ... Rudder (gone vs. damaged)

Fire...    Small/Large ... Controllable / Uncontrollable

Flooding          Minor Leak ... Uncontrollable ... Can't find source

Medical Minor, Major, First aid or Life Threatening, Sickness, Sea Sickness

Grounding          Soft...Hard...Inconvenient...Life Threatening



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# Case Study: Self-Rescue Annapolis/Bermuda Race 2008



Preventer

*Air Mail*

Great race  
for 400 miles



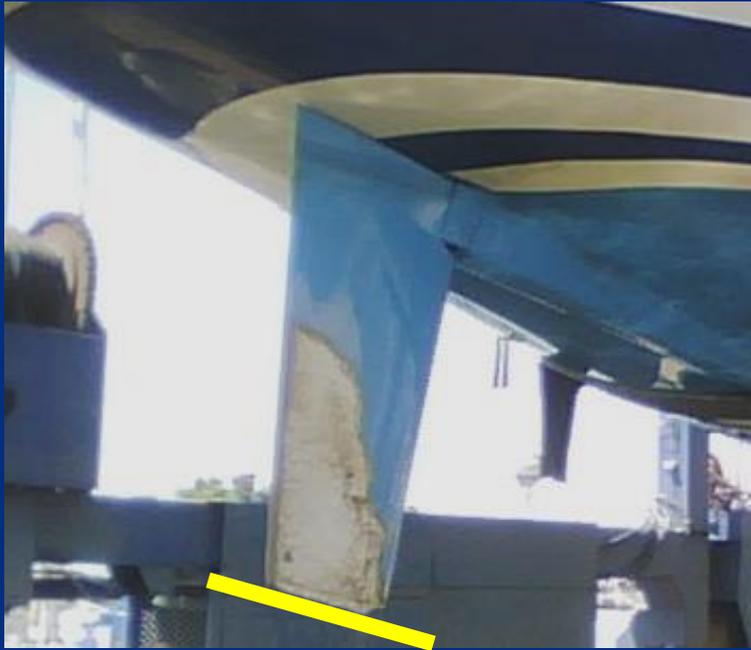
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# Then we lost control



Wild ride for a few minutes while we shortened sail

Found a course we had control...  
North toward Montauk

Looked over-the-side...bottom 3 ft. of  
rudder gone and sides delaminating

**Called CG Atlantic Area Command  
Center, Portsmouth, VA by Sat. Phone**

**CG put us on a 4 hr. then 12 hr.  
check-in schedule...position, course,  
speed, weather, ops normal**

Sailed home under #4 jib & reefed main

“Preparation Equals Performance”

Self-rescue worked



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For all of you who are going to call the  
Coast Guard by with satellite or cell phones,  
here is the ##...

757-398-6700

USCG Atlantic Area  
Command Center,  
Portsmouth, VA



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# Last option is outside assistance

Leave a float plan with someone ashore

Call early if you are having trouble or need assistance!

- CG can put you on a communications schedule



HC-130 Hercules

## Search and Rescue Checklist

- 1. POSITION *POSITION* POSITION
- 2. Number of people on board
- 3. Nature of Distress
- 4. Description of Vessel (name, length, type, make, color)
- 5. Put life jackets on (PFDs)
- Rest of checklist...
  - Question: Why do we ask all of the questions?
  - Answer: Because we can do detective work and do a better rescue, particularly if we lose communications.



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# The big 6 that get you in trouble...

1. Cold

2. Wet

3. Tired

4. Hungry

5. Scared

6. Seasick



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# Case Study: Outside Assistance Cascading Casualties & Big 6

June 1991

Pearson 34

2 Couples from Philadelphia ... 3 sailors ... 1 non-sailor

2 Week vacation

Plan: Cape May to Block Island in 1 leg; multiple stop return

Weather: Departed Cape May into Nor' Easter

24 Hours Later... "Mayday Mayday Mayday... We've blown out our sails, the engine won't start, and we're sinking!"



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# The Cascade...

¾ crew sick...only one not sick was the non-sailor

No one made rounds below and checked bilge

No one ate or slept

Reefed Main...Improperly

- Reef points tighter than clew...ripped out the reef points

Tried to start engine...wouldn't start

Looked at engine and found water in bilge...we're sinking!

“Mayday Mayday Mayday”



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# Initial CG actions

CGC HARRIET LANE (270' w/ 100 crew)



Sent over a machinery technician and electrician

Found a cockpit drain hose had come off, which let cockpit water pour on the engine; reinstalled/reclamped the hose

A little magic with spray electrical drier and engine start spray...

Engine started...

“OK skipper, no more flooding, we fixed the hose, we pumped the bilge, the engine is running, we furled your sail, your electronics work...she’s all yours...”

*“PLEASE, TAKE US TO SHORE...”*



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# Final CG actions & Impact of *Big 6*...

CG Options...(1) Tow her or (2) we crew her

We chose #2...I was XO (LCDR) & went over with an Ensign

Sent all 4 to bed with water/crackers

Put *Jimmy Buffet* on stereo

Double reefed main (above rip) & unrolled the jib part-way

7 knots on a reach toward Long Island

**6-8 hrs. later the crew came alive...**

We were relieved by CG small boat from Shinnecock

**Guard against cold, wet, tired, hungry, scared & sick**



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# Outside Assistance

## 1. Surface:

- Bays and Ocean to 20 miles...small boats
- 20-100 miles offshore...small cutters
- >100 miles offshore...large CG cutters, Navy & AMVER

## 2. Air:

### ▪ **Helicopters:**

- Short Range H-65s out to 100 mi (orange color)
- Medium Range H-60s out to 200+ mi (white color) & Navy/Other DOD
- *Lily-pad* ops from CG/Navy flight decks & Bermuda

### ▪ **Fixed wing Airplanes:**

- Medium range HC-144 Casa & C-27J Spartan Turboprops
- Long range 4 engine HC-130s Hercules & Navy/Other DOD
- Air-dropped rafts, radios, pumps, food, water, Paramedics, etc.

## 3. Medical advice over radio or phone (Medico)... CG Flight Surgeons



CG Cutter, plane & helo



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# Being Towed Sequence:

Put on Life Jackets

May circle to evaluate tow point(s)/seaworthiness

May send CG cutter members to help w/ hookup

Heaving line or Line Throwing Gun

Perhaps a light *messenger* line before towline

Single pennant, double bridle, or snap shackle to trailer eye

Perhaps a fender float

Towline

Install Chafing Gear

Tow watch...VHF-FM “ops normal”

Stay in cockpit & keep life jackets on



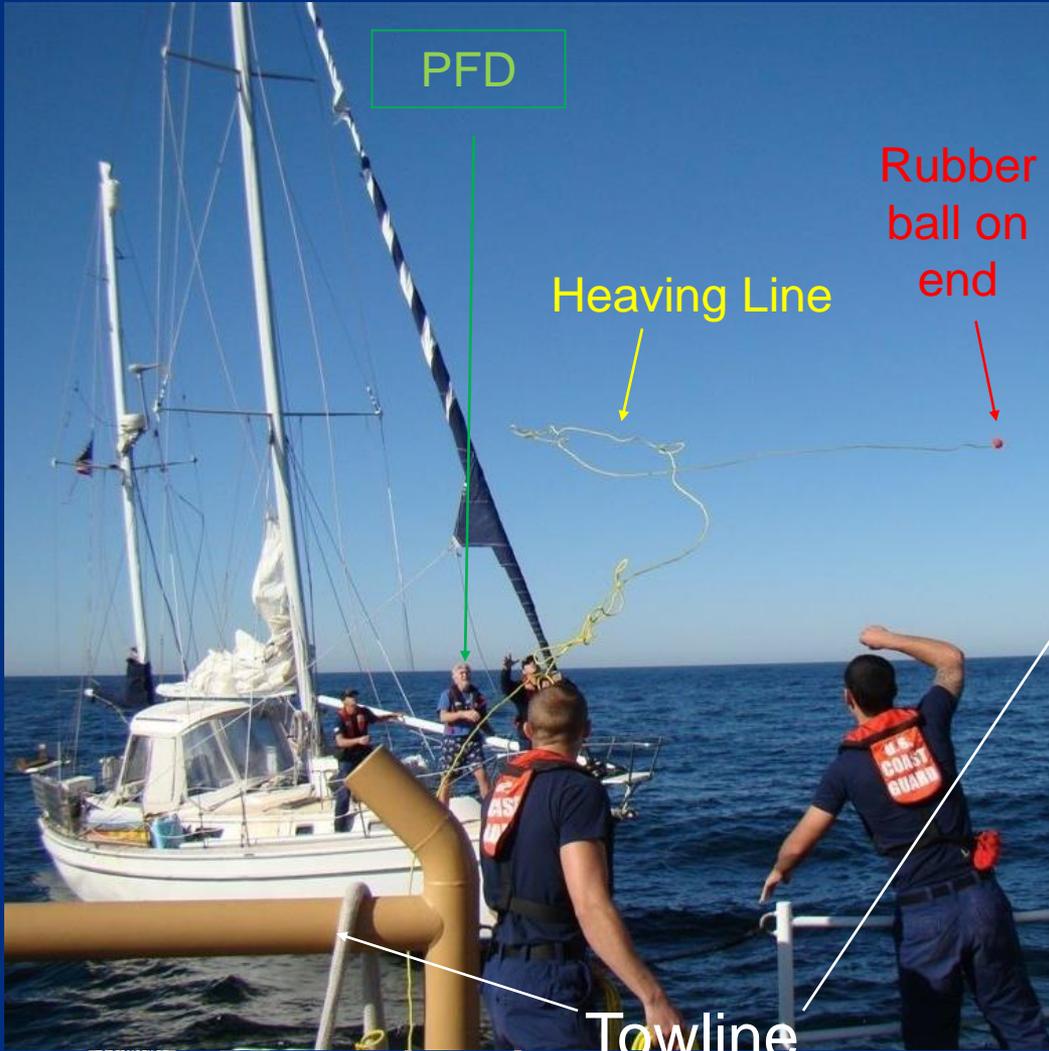
S/V Saorsa  
in tow to Bermuda  
CGC HARRIET LANE,  
Oct 1991 following  
“The Perfect Storm”



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# 2 disabled S/Vs... enroute Hawaii and in Caribbean



In tow with  
Double Bridle

Orange fender float

Passing the  
Towline by  
Heaving Line

Towline



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# Fishing Vessel *Lady of Grace*, Nov 1997 Gulf Stream North Wall, 75 mi South of Cape Cod



Passing towline line from CGC SPENCER, rolling up to 55 degrees in 20' seas.

We are nervous in this position...limited maneuverability with line in the water.

We fear putting the line in our props or around your keel/rudder/prop.

**Therefore...pull hard, hook up fast, and wear your PFDs!**



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# Sailing Vessel *Reina Del Sol* 200 miles South of Halifax, Canada, Nov 2008

Lost Rudder

Called USCG Atlantic Area Command Center, Portsmouth, VA

CG diverted a U.S. Navy DDG-51 class Destroyer, who stood by

CGC SPENCER embarked both crewmembers and took s/v in tow

Canadian CG Vessel relieved SPENCER, who took both crewmembers aboard and towed s/v to Halifax



*You may be  
assisted by  
multiple assets.*

*Be flexible &  
patient.*



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# AMVER: Automated Mutual Assistance Vessel Rescue System



Worldwide Volunteer Network of Merchant Ships

Computer tracking system in Martinsburg, WV

May stand-by or take you off

You go where they go!

Good Samaritans

South Korean flagged M/V *Auto Baner* rescued Mr. Leo Sherman after his sailboat capsized 180 miles South of Madagascar 22 Jan 2009

CG presenting M/V *Auto Baner's* master with *Thank-you* flag



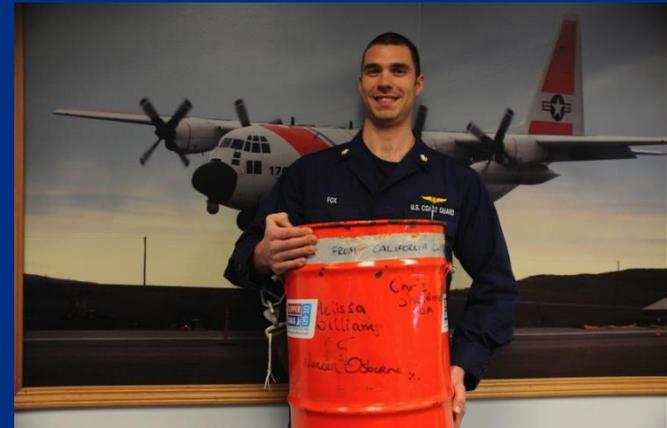
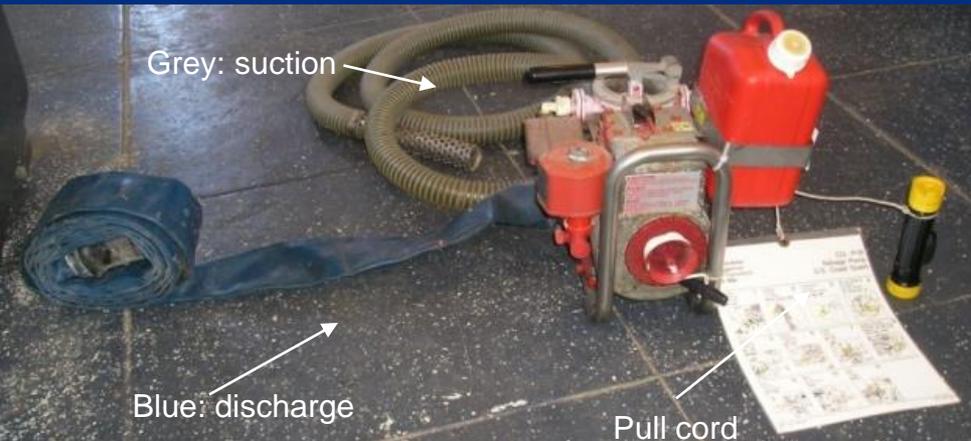
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# Air Drops

Rafts, radios, pumps, food, water, Paramedics with medical gear, etc.

120 GPM *Drop Pump*  
in  
waterproof, floating canister



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# Helo Rescue

## 100+ knots of wind from the rotor wash

Be ready when we get to you

Clear your deck of clutter if possible

- Makes it easier for helo
- Coolers, cushions, flags, flag-halyards, dodgers, etc.
- Increases the chance you won't have to go into the water



H-60 Jayhawk

If you can make way under power, wind 30 degrees off your port bow (330 relative) works best for the helo

Helos see your mast & antennas as spears...**you need to be ready to go into the water and be hoisted from the water**

*Listen to the helo, and listen to the swimmer...*

*...because you won't be able to hear once the helo is overhead!*



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# Helo Rescue Options



1. Basket
2. Litter
3. Direct Deploy Double Lift



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# A Rescue Swimmer may deploy to help you



Note rotor wash & spray.

Get in and sit...  
CG will do the rest.



Keep your arms in



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# Your view:



1. Rope trail line may be lowered first
2. Trail line won't shock you
3. Use trail line to pull device to you



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# Hoisting Safety



1. Don't touch the rescue device until it touches & grounds on your boat or you will get a mild shock from static electricity caused by helo's rotor.

2. Once grounded, holding the hoist cable to keep it from fouling is good.

3. Don't foul or tie off the trail line or hoist cable. *The helo will cut it & that could be the end of the rescue.*

4. Don't unhook anything.

5. Keep trail line neat.



*Hand signals are good;  
Thumbs-Up, OK, etc.*



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# Classic Hoisting Configuration: Wind off your port bow Helo head to wind.



Trail Line



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# Inside an airborne HH-65 with MEDEVAC Patients



CG Helo offloading MEDEVAC patient to LA County Fire Dept



2 Pilots up front

Hoist Operator & Rescue Swimmer in back...EMT Trained

Occasionally flight surgeon or paramedic

2 Stokes Litter Patients ... Dive accident & internal bleeding



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## CG Cutter or Boat Medevac

Depending on the nature of your injuries, weather & availability of rescue assets, you may be taken off by surface vessel

Medical Evacuation of  
51 year old male  
by  
large cutter & its small boat

270' CGC ESCANABA  
18 August 2009



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# Rescue-21 Coverage

U.S. Coasts, Great Lakes, Virgin Islands, Hawaii, Guam, Northern Marianas done

Western Rivers & Alaska done but not completely covered



NOTE: Coverage rings are depicted for illustration purposes only  
NOTE: Inset maps are not to scale with the US mainland.



# Case Study: Mr. John Young in water

Great Lakes

31 hours in water

Wearing blue & grey

CG flew over him at night on night vision goggles but he had *no illumination.*

You must be *seen* to be rescued.



*Mr. John Young, one of two survivors, was in the water for a remarkable 31 hours before being rescued. With him is Rescue Swimmer, AST3 Shaun Legas from Coast Guard Air Station Traverse City, who helped recover Mr. Young, U.S. Coast Guard Photo*



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PFDs &  
Harnesses  
*WEAR THEM!!*



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J-4- Kaholo, Los Angeles to Seattle April 2018

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# Closing words from CG rescue personnel

Their words to you:

“I can't tell you how many times we've interviewed people we've rescued who said once lost power, 1 of 2 things happened:

- “(1) Batteries were shot on their hand-hand radio/GPS
- “(2) They didn't have backups or hand-helds.”

“The vital importance of maintaining a 406 EPIRB & VHF-FM DSC Radio. Stress that *maintaining* it is incumbent on the owner to make sure they're properly registered!”

“Don't ever tie or hook anything from the helo to your boat.”

Any hat enhances chance of being seen and survival from both heat or cold.



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# Closing...Rescue Crew Comments (con' t)

“Watch the weather.”

“Medical Evacuation patients should bring ID, credit cards, and medication if able.” *(Gallon Zip Lock bag inside your shirt)*

“Tell them to take their hats off, buckle their life jackets, and zip up their survival suits before we get there.”

“It’ s not enough to have signaling devices on board. If they aren't on your person and attached in some way, you don’ t really have them.”

“A head is a lousy search target.”

**“Lifejackets, EPIRBs, PLBs and good float plans...all of those add up to finding you”**



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# Race or Cruise Safely & Well See you on the water!



Valiant 40 "Flight" owned by Tom & Debbie Carrico  
Florida to Annapolis Delivery June 2016  
& doing it again June 2019!!!



## Position & PFDs

greatly increase the  
chance of a  
successful rescue



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# BACKUPs



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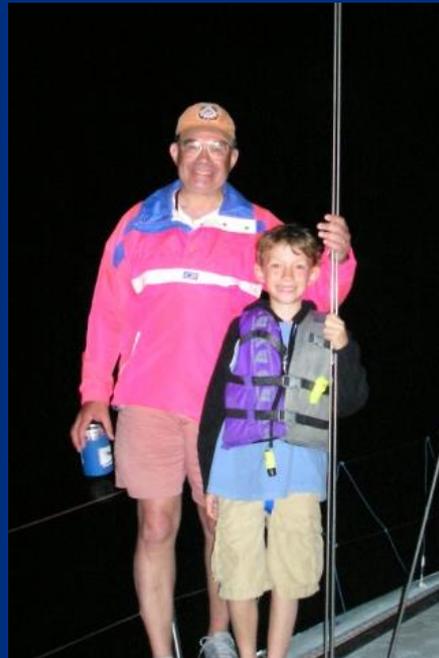
# Presenter Info:

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My wife Wendy, me, dad Jim, and children Benjamin and Caroline



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# Me...mix of Sailing & Coast Guard

1967 parents bought 1<sup>st</sup> boat

- Cruised Annapolis to Cape Cod

1975-1979 USCG Academy Cadet

- 44' Luders Yawls & 42' 2 Tonner *Nike*'
  - 1978 Newport to Bermuda race...  
Watch Captain & won Destroyer Trophy

1979-2009 USCG: 10 years at sea, 6 ships, 3 commands

- Atlantic: Canada & Bermuda to Caribbean & Transatlantic
- Pacific: Panama & Hawaii to Midway & Alaska
- Cutters of 82', 110', 270' & 378 feet
  - Crews of 10-160 people with helo on 270s & 378s

Major races:

- Vineyard & Block Is. Races
- 3 Annapolis to Newport
- 4 Annapolis to Bermuda: 2002 3<sup>rd</sup> in class
- Down the Bay Annapolis to Hampton Race 2012 1<sup>st</sup> in Fleet!
- Great South Bay Long Island Labor Day Series 2010, 2011 & 2012 1<sup>st</sup> in class
- San Diego to Ensenada
- Multiple Gov Cup, Solomons, Hampton races, etc.
- 2006 1<sup>st</sup> in class & won Navigator's trophy

Major Deliveries:

- Florida to Annapolis twice
- Los Angeles to Seattle



My 270' ship at NYC Fleet Week



2006 Annapolis/Bermuda  
2 Newport to Bermuda

Takeaway: I'm one of the few  
CG members who sails



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# Thoughts from the SAR Controller

- Have a plan. Think of the what you will do in different scenarios. Share your voyage plan in the form of a float plan with a friend or family member.
- Have multiple forms of communications to send out a distress, i.e. VHF Radio, VHF-DSC, EPIRB, MF/HF Radio, or SAT phone. Don't depend on just one, especially a Cell phone.
- Ensure your equipment is maintained, registered properly and you know how to use it.
- Wear your Personal Floatation Device (PFD) whenever you are on the water. If you go into the water unexpectedly you could be hurt or unconscious and your PFD could save your life.



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# Final Thoughts

## CG Sectors Hampton Roads, Woods Hole, & Delaware Bay

If you want this helo to appear overhead or cutter to come over the horizon...

- Have the right gear
- Know how to use it
- CG can't DF on SAT/Cell phones
  - Limited ability to triangulate on Cell
- Ensure it's registered
  - MMSI for DSC radios
  - Registration ## for EPIRBs/PLBs
- Ensure it's working properly
- Operate it properly
- Speak slowly and clearly



H-65 Helo & New 154 ft. patrol boat



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# Resources

Float Plans online:

<http://www.floatplancentral.org/download/USCGFloatPlan.pdf>

VHF-DSC Registrations:

<http://www.boatus.com/mmsi>

<http://www.seatow.com/mmsi>

<http://www.usps.org/php/mmsi>

\*\*[http://wireless.fcc.gov/services/index.htm?job=licensing&id=ship\\_stations](http://wireless.fcc.gov/services/index.htm?job=licensing&id=ship_stations)

\*\*Must get your MMSI from the FCC for it to be recognized overseas

EPIRB Registrations:

<http://www.beaconregistration.noaa.gov/>

USCG Boating Safety Website:

<http://www.uscgboating.org/>



Free Vessel Safety Examination:

<http://wow.uscgaux.info/content.php?unit=V-DEPT&category=i-want-a-usc>

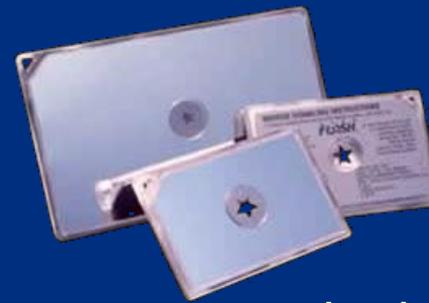


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# Signaling...

Mirrors work GREAT in sunny weather!



Flashlight, waved frantically & pointed at the rescuer, can be better than a steadily beating strobe light.

Whistles can be heard much further than yelling.

Flares must be perfectly timed.



CG aircraft now have Forward Looking Infra Red (FLIR),

- Anything that makes heat can be seen by FLIR (you/engine/stove), night or day.

CG Night Vision Goggles

- Can see virtually any light
- Cigarette at 2-3 mi



**Beware sparks  
& slag**



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# Chem Lights & Retro Tape

## Chem Lights:

- *Myth:* Night vision goggles can't see green chem lites
- *Truth:* CG NVGs can see any light of any color
- No maintenance & long-lasting
- Emergency light if power loss (e.g.: compass light)

## Retro tape:

- No maintenance & long lasting
- It's always there
- Works amazingly well



Thunderstorm returning from Bermuda, 2008



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# Can you see me?



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# How about now?

The  
SEE/RESCUE®  
Streamer  
25' & 40' long

Orange smoke  
flare would be  
similar but  
doesn't last as  
long

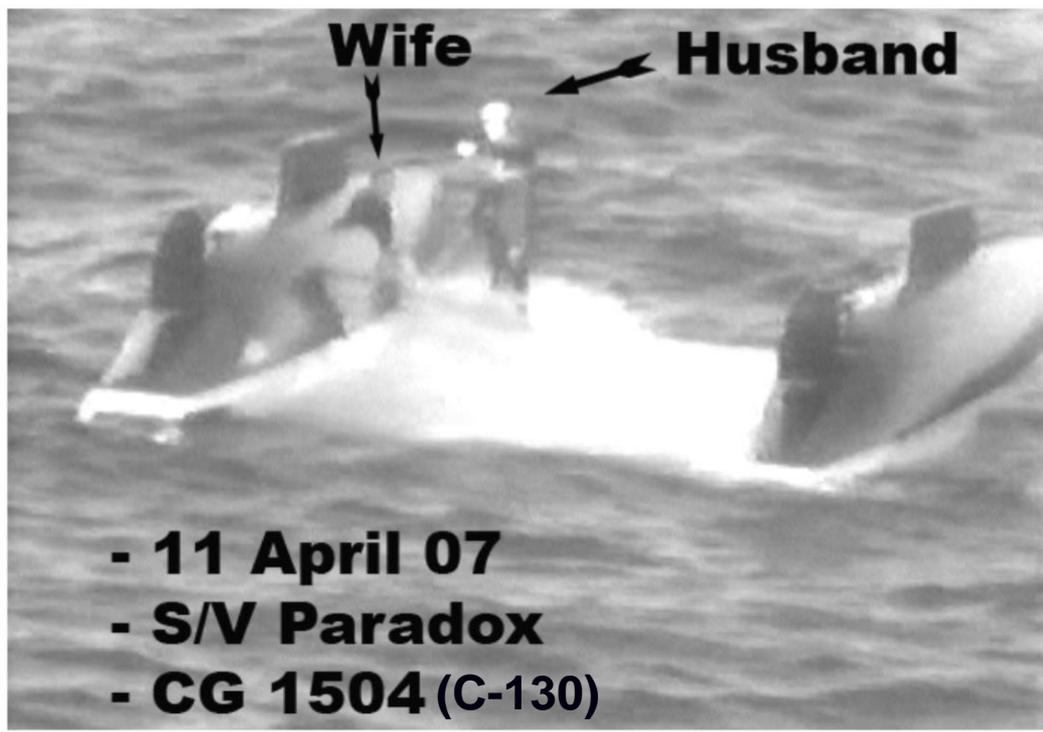


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# 406 MHz EPIRBs & PLBs Transmit signal to satellites, which alerts rescue forces, worldwide



H-60 helo hovering over *Paradox*  
Classic Tactic...fixed wing up high & helo down low

FLIR pictures

150nm Southwest of St. Pete, FL

C-130 at 10,000 ft... DF locked on at 15 miles

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# Personal input from VADM Rob Parker, Commander, USCG Atlantic Area

- ◆ It's counter-intuitive, but despite economic conditions today, more people seem to be getting into boating. CG worried that people will prioritize scarce resources to things other than safety equipment.
- ◆ Digital Selective Calling and EPIRB registration: Forgetting to register or not putting the right data into the right fields. Effect is that the CG's automatic systems may not display a call or work correctly if they don't have proper registry data.  
Recommendation: Add confirmation of registration data to pre-sail checklists.
- ◆ Loss of life from 75' Jack-Up rig sinking in Gulf of Mexico. They did everything right and had everything loaded in the life raft. But the life raft broke loose before anyone boarded. 6 survived but 4 died, in part due to separation from EPIRB/flares.  
Recommendation: Keep some safety equipment with you at all times.
- ◆ Boating Under the Influence remains a problem.
- ◆ Distracted driving accidents in fast craft are on the rise  
(Think texting while driving, and sailboats will be on the receiving end of these accidents).



# In a post-9/11 USA, what you can do...

## Participate in *America's Waterway Watch*

- Report anything suspicious
- You know what is normal & not normal in your area
- Call CG National Response Center, Washington, DC
- **1-800-424-8802 or 1-877-24WATCH**
- **[www.AmericasWaterwayWatch.org](http://www.AmericasWaterwayWatch.org)**

Dial 911 for Immediate Danger to Life or Property

Or call the CG by radio.



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