

SAFETY AT SEA

NMFS/SEFSC

NEED TO KNOW

COURSE GOAL:

PROVIDE INDIVIDUALS WHO WORK ON THE SEA AN OPPORTUNITY TO INCREASE THEIR KNOWLEDGE AND SKILLS IN PERSONAL SURVIVAL AND LIFE SAVING EQUIPMENT

PERSONAL SURVIVAL SKILLS

SAFETY EQUIPMENT

VESSEL

ISSUED

PERSONAL

EMERGENCY PROCEDURES

PRACTICE PRACTICE PRACTICE

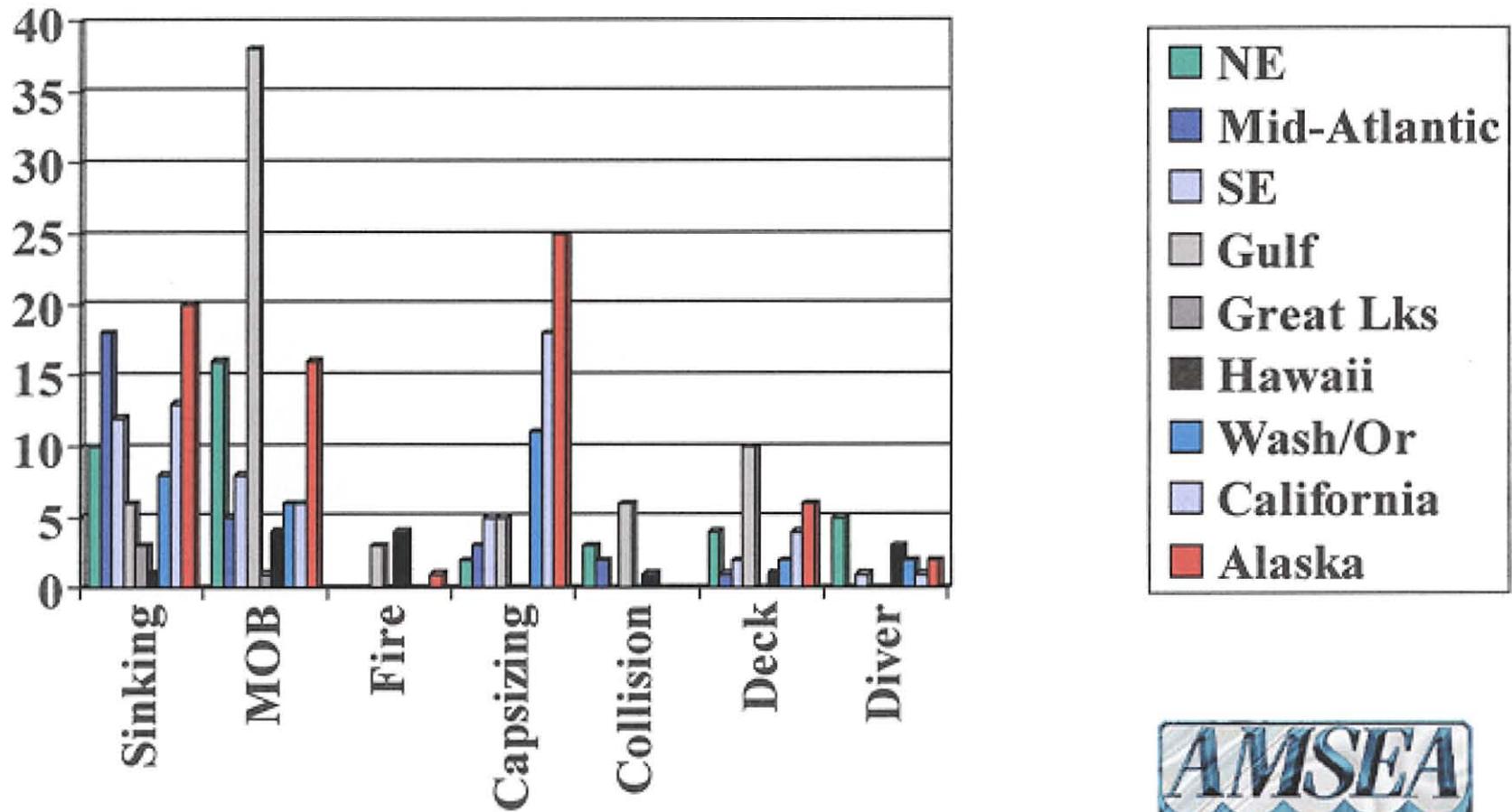
STUDENTS ARE ENCOURAGED TO
PARTICIPATE IN CLASSROOM
DISCUSSION AND SHARE PERSONAL
EXPERIENCE.

COURSE EVALUATION WILL INCLUDE
SKILLS CHECK-OFF
15 QUESTION TEST (20/25=80%)

TYPES OF ACCIDENTS

- CAPSIZING
- GROUNDING
- FIRE
- COLLISIONS
- FOUNDERING/SINKING
- MAN OVERBOARD (MOB)
- PERSONAL INJURY

F/V Fatalities* by Cause 1995-1999



* Does not include deaths from natural causes, overdoses, suicides or unknown



FISHING VESSEL SAFETY

REQUIREMENTS

VIDEO (15 MIN)

VESSEL SAFETY ORIENTATION

- PRE-TRIP SAFETY CHECKLIST*
- VESSEL LAYOUT
- EGRESS
- DECK HAZARDS

Commercial Fishing Vessel Safety EXAMINATION

- Documented
- Undocumented

LOCATION

- Inside Boundry Line
- Beyond Boundry Line

- < 3 NM
- < 12 NM
- < 20 NM
- < 50 NM
- < 100 NM
- > 100 NM



THIS VESSEL MEETS
ALL USCG COMMERCIAL
FISHING INDUSTRY
VESSEL REGULATIONS

NOTE: Decal valid 2 years from the date of issue.

NO.

112551

CG-5587A (Rev. 6/02)

U.S. Department of Transportation

ISSUED

2003

2004

2005

2006

2007

<input checked="" type="checkbox"/> JAN	JUL
FEB	AUG
MAR	SEP
APR	OCT
MAY	NOV
JUN	DEC

Current safety decal?



Manual
mode

TEST
mode

Automatic
mode

BATTERY in DATE?

OR

TEST EPIRB

FREE FLOAT MOUNT?

Ring Buoy



Quick Access?

Line attached?

Light attached?

Life raft mount

Service Date

Hydrostatic release Date



Life raft capacity *

OBSERVER

STATION BILL EXAMPLE

SURVIVAL SKILLS

VIDEO (20 MIN)

SEVEN STEPS

- RECOGNITION
- INVENTORY
- SHELTER
- SIGNALS
- WATER
- FOOD
- PLAY

PERSONAL SURVIVAL
KITS

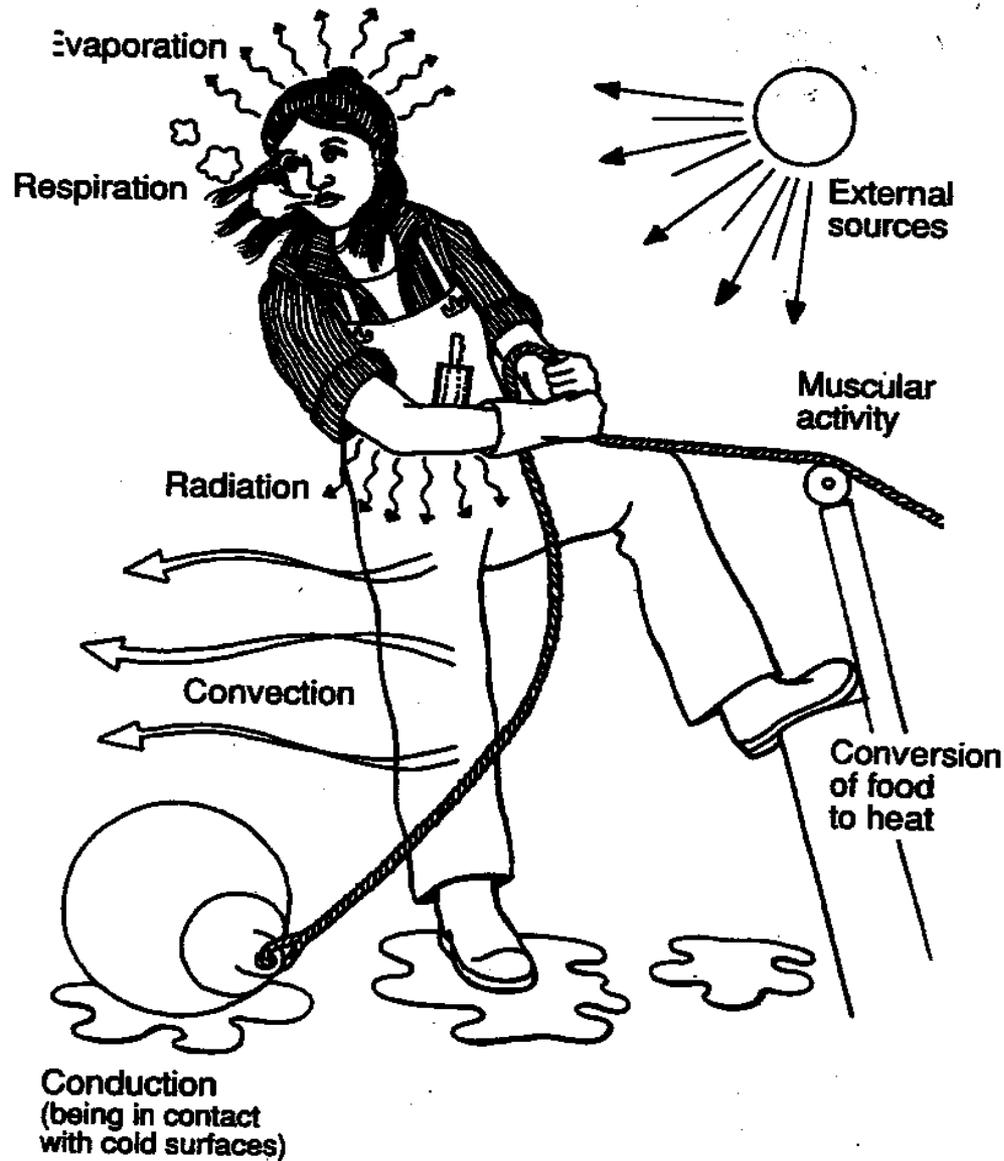
PERSONAL SURVIVAL
GEAR

HYPOTHERMIA

VIDEO (15 MIN)

HEAT LOSS

HEAT GAIN



Layer clothing to adjust for wind, rain, cold, or heat changes

Stay hydrated

Eat regularly

Get adequate sleep

Wear head protection

Wear foot protection

Wear hand protection

Use proper lifting technique

FIRE

VIDEO (20 MIN)

P

INDIVIDUAL PRACTICE*

SAFETY EQUIPMENT

&

EMERGENCY PROCEDURES

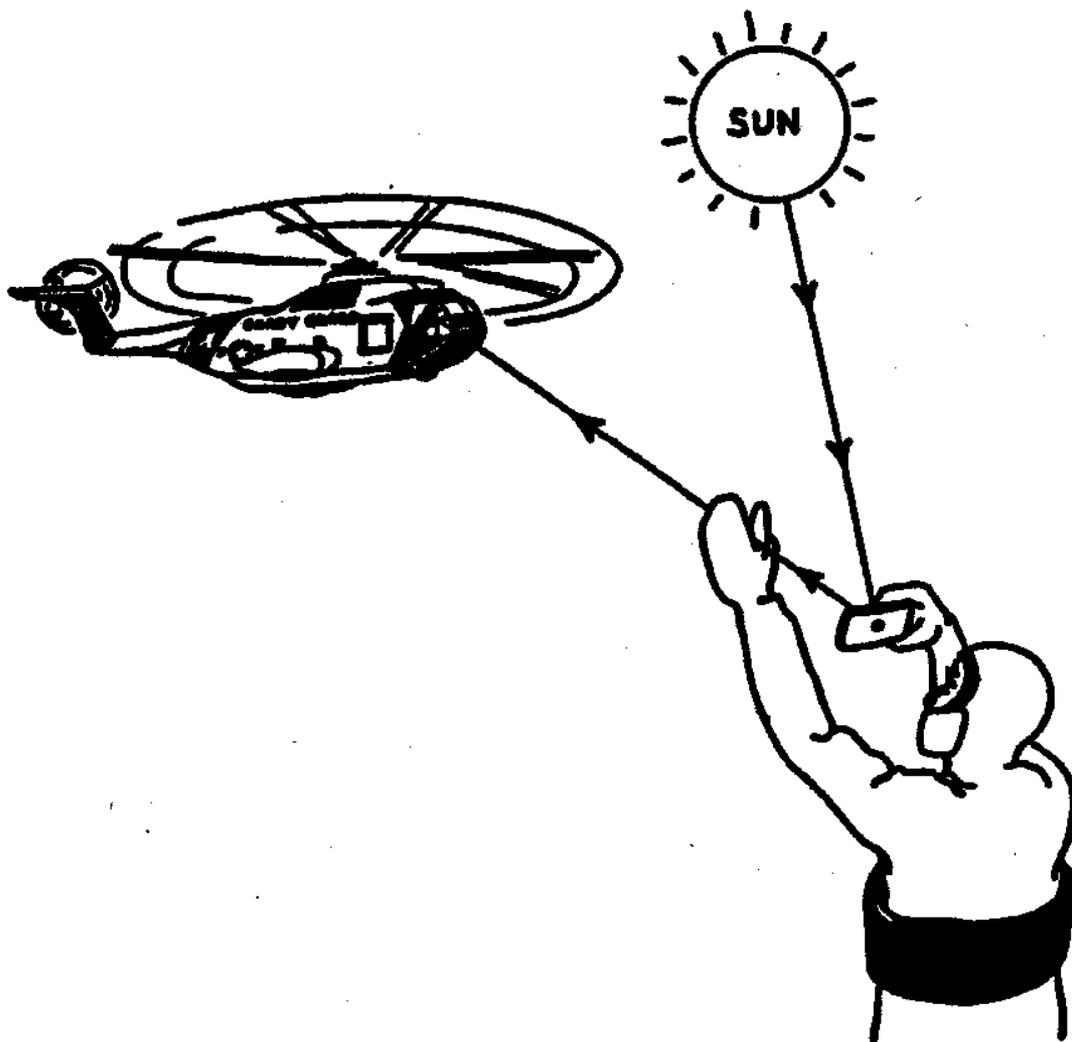
VIDEO (30 MIN)

SIGNALS

- Radio
- EPIRB
- Strobes
- Pyrotechnics
- Mirror
- Anything that makes you

BIGGER, BRIGHTER or DIFFERENT

	MiniB2 EPIRB	406 MHz	406 MHz GPS
SAT Coverage	30%	100%	100%
Accuracy	12 nm	2 nm	0.05 nm
Avg. Notification	6 hrs	1 hr	5 min
Activation	Manual	Manual & Auto modes	



Aiming a signal mirror.

Visible up to
50 nm on a
clear day

Day/Night

Active/Passive

EMERGENCY RADIO DISTRESS CALLS

VIDEO (20 min)

DISTRESS BROADCAST

1. Make sure communications equipment is on.
2. Select 156.8 MHz (VHF channel 16), 2182 kHz, 4125 khz or other distress frequency used in your area of operation.
3. Press microphone button and speaking *slowly, clearly, and calmly*

Say: "MAYDAY-MAYDAY-MAYDAY"

Say: "THIS IS FV _____ , _____ ,
Vessel Name Vessel Name
_____, OVER."
Vessel Name

Say: "MAYDAY-THIS IS FV _____."
Vessel Name

Say where you are: "MY POSITION IS _____."
Include Latitude/Longitude, nearby landmarks, distance from known points, LORAN readings, fathometer readings.

State THE NATURE OF THE DISTRESS. Such as: "I am taking on water." or "I have an injured crewmember on board."

State YOUR ESTIMATE OF THE SEAWORTHINESS OF YOUR VESSEL. Such as: "I estimate that we can stay afloat for 2 hours."

State the number of persons on board and the nature of any injuries.
"I HAVE ___ PERSONS ON BOARD."

Describe the vessel: " _____ FEET LONG; _____ ;
Length Type of Vessel or Hull Type

_____ HULL; _____ TRIM; _____ MASTS;
Color Color Number

Any Other Distinguishing Features, Survival & Emergency Equipment

Say: "I WILL BE LISTENING ON CHANNEL 16/2182/4125" or whatever frequency you will be able to monitor.

End the message with: "THIS IS _____"
Vessel Name

If situation permits, stand by the radio to await further communications with the Coast Guard or another vessel.

If no answer & situation permits, repeat and try another channel.

MAYDAY MAYDAY MAYDAY

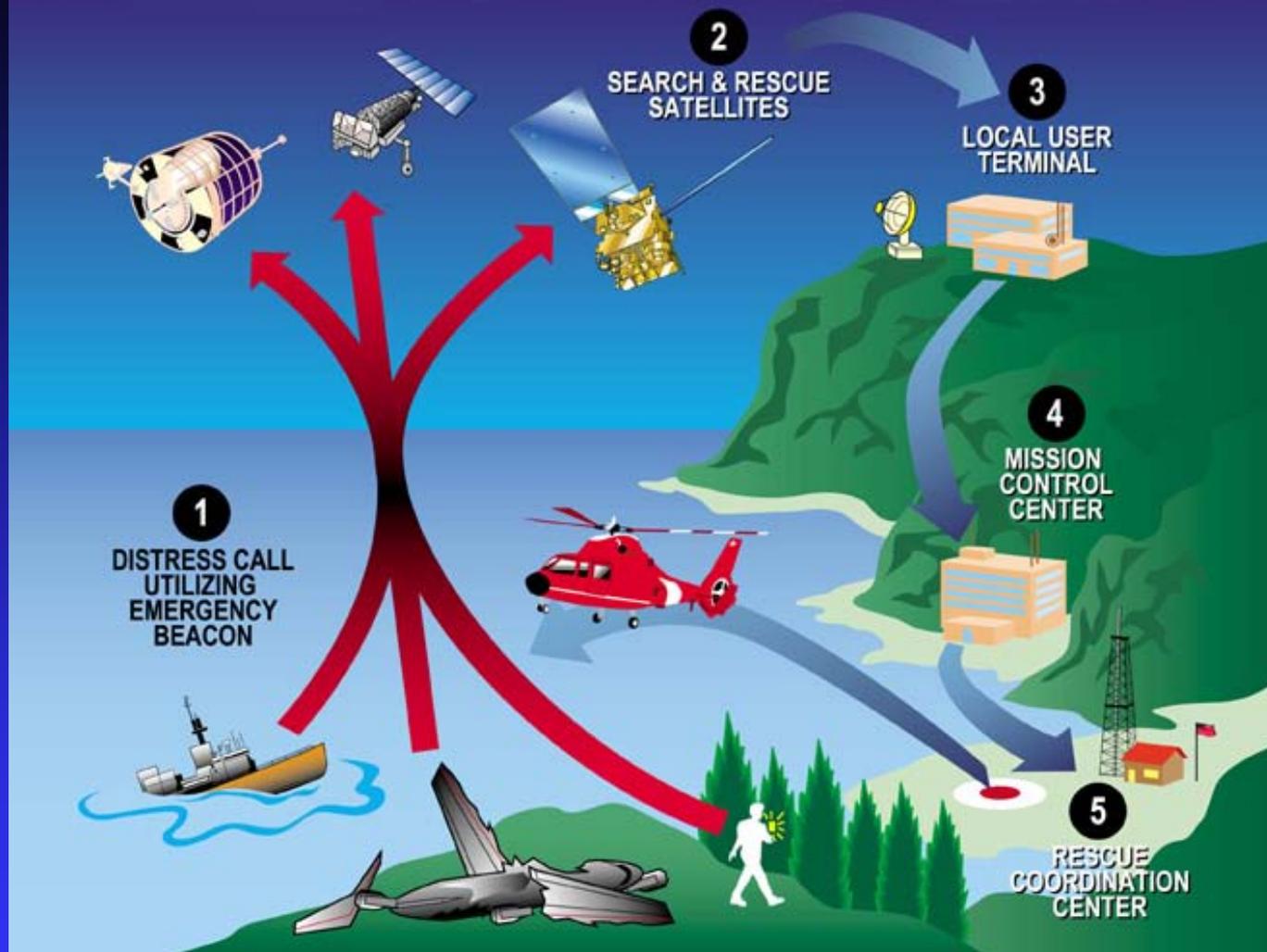
VESSEL NAME

POSITION

PROBLEM

PERSONS

COSPAS-SARSAT System Overview



Rescue Totals

Worldwide = 13,629

United States = 43,335

USCG Training

- SEARCH AND RESCUE (SAR)
- Radio Distress Call Practice
- Dewatering pump set-up and operation
- Pyrotechnics Practice



1. Remove from can



2. Connect gas can with quick connect hose



3. Connect intake and discharge hoses



4. Prime pump using handle



5. Choke engine



6. Start engine using flywheel pulley

7. Readjust choke

Hand flare

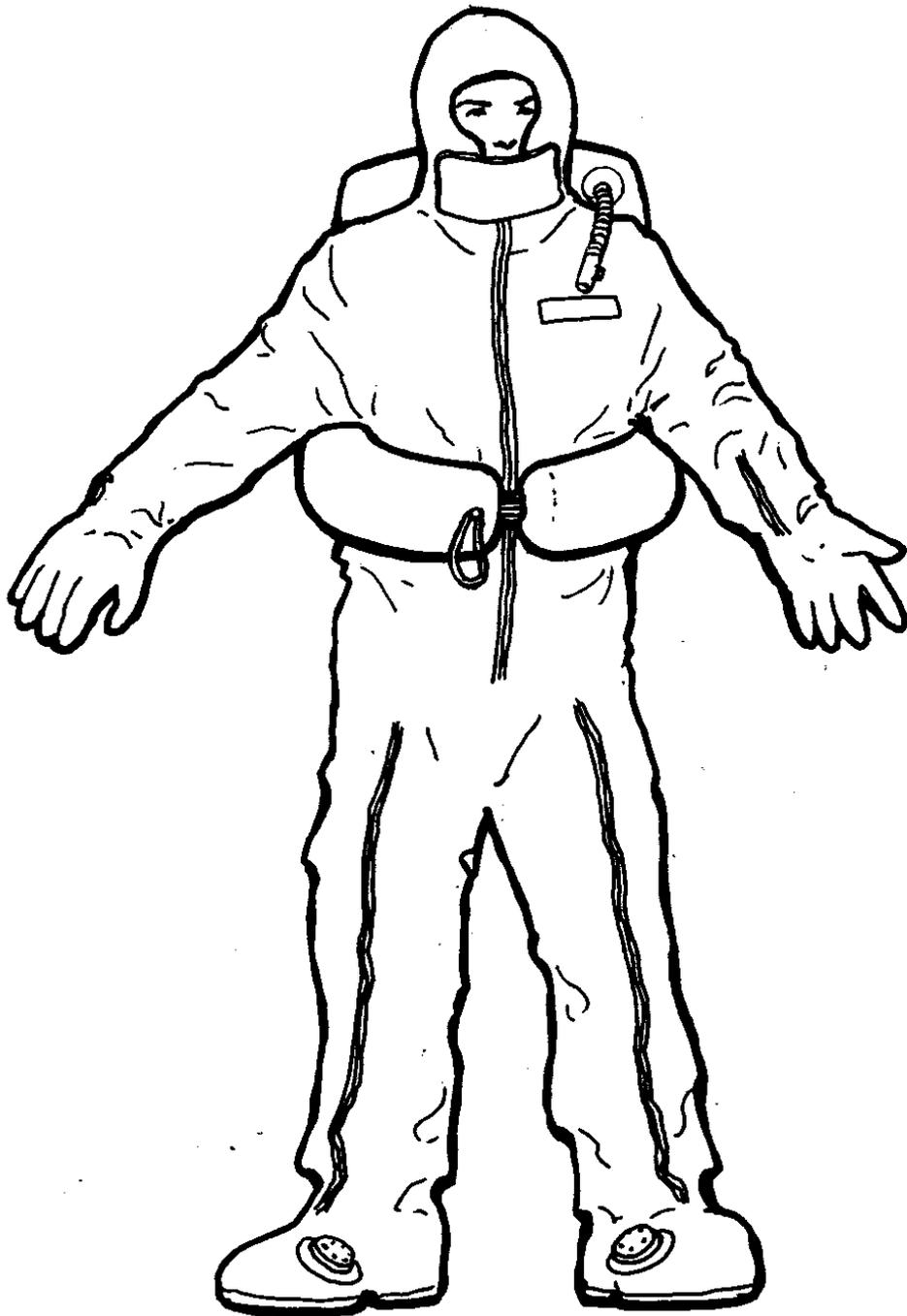
Parachute flare

Meteor flare

Smoke flare

Component II

THE SWAMPERS



IMMERSION SUIT

With attached

MiniB2 EPIRB

Strobe

Whistle

Mirror

INFLATABLE LIFE RAFTS

VIDEO (17:00)

Equipment Required on USCG Approved Life Rafts

Equipment	Coastal Pack	Solas B Pack	Solas A Pack
Quoit and Heaving Line	1	1	1
Knife (Buoyant Safety)	1	1	1
Bailer	1	1	1
Sponge	1	2	2
Sea Anchor	1	2	2
Paddles	2	2	2
Whistle	1	1	1
Flashlight with spare batteries and bulb	1	1	1
Signal Mirror	1	1	1
Survival Instructions	1	1	1
Immediate Action Instructions	1	1	1
Repair Outfit (1 set sealing clamps or plugs)	1	1	1
Pump or Bellows	1	1	1
Tin Openers	0	0	3
First Aid Kit in Waterproof Case	0	1	1
Rocket Parachute Flares	0	2	4
Hand Held Flares	0	3	6
Buoyant Smoke Signals	0	1	2
Copy of Life Saving Signals	0	1	1
Fishing Tackle	0	0	1
Food Ration	0	0	2,378 calories/person
Water	0	0	1.5 liters/person
Rustproof, Graduated Drinking Vessel	0	0	1
Anti-Seasickness Pills	0	6/person	6/person
Seasickness Bag	0	1/person	1/person
Thermal Protective Aid	0	Enough for 10% of persons or 2, whichever is greater	Enough for 10% of persons or 2, whichever is greater

COASTAL

Raft gear

Survival gear

SOLAS B

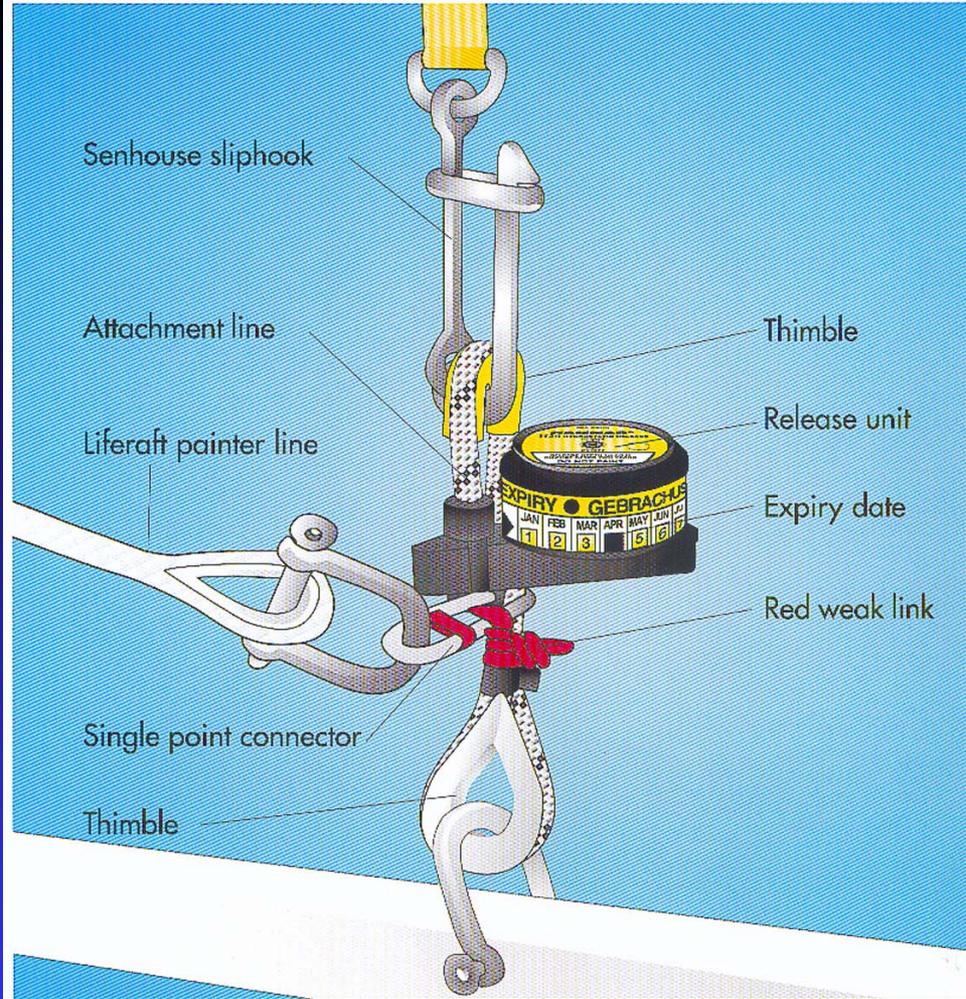
Pyrotechnics

First aid kit

SOLAS A

Water

Food



Proper hydrostatic release set-up



Application

MOB

- THROW MARKER
- SOUND ALARM
- POST LOOKOUT
- MANEUVER BOAT
- RECOVERY
- TREAT

MEDICAL EMERGENCY
TREATMENT

&

PROCEDURES

VIDEO (20 MIN)

PRIMARY RESPONSE

- IS THE ACCIDENT SCENE SAFE?
- ABC

SECONDARY SURVEY

- HEAD TO TOE EXAM TO ASSESS EXTENT OF INJURIES
- RECORD VITAL SIGNS
- CALL FOR HELP (handout)

Safety At Sea Review

Personal Survival

Clothing

Personal Survival Kit

Seven Steps

Safety Equipment

Safety Orientation

Know where equipment is

Know how to use it

Emergency Procedures

Know where to go

Act early

Communication role

Practice

WATER SESSION

ALL GROUPS

DEMO LIFE RAFT LAUNCH

LIFE RAFT ORIENTATION

DEMO WATER ACTIVATED PFD

GROUP A

PFD STATION

GROUP B

IMMERSION SUIT/LIFERAFT

*WATER & GATORADE WILL BE PROVIDED



Life raft
bonding

PFD Practice



Water entry

Life raft righting



HELP

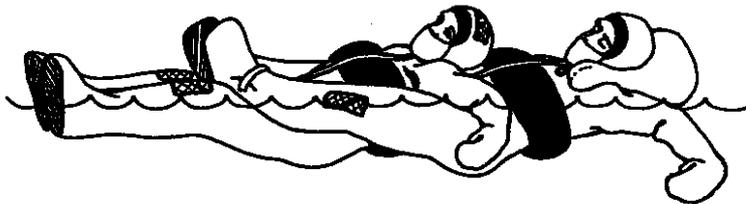
(Heat Escape Lessening Position)



Huddle Position



Chain Swim



solo person
wearing a PFD

multiple persons
wearing PFD

multiple persons
wearing immersion suits

LIFE RAFT STATION

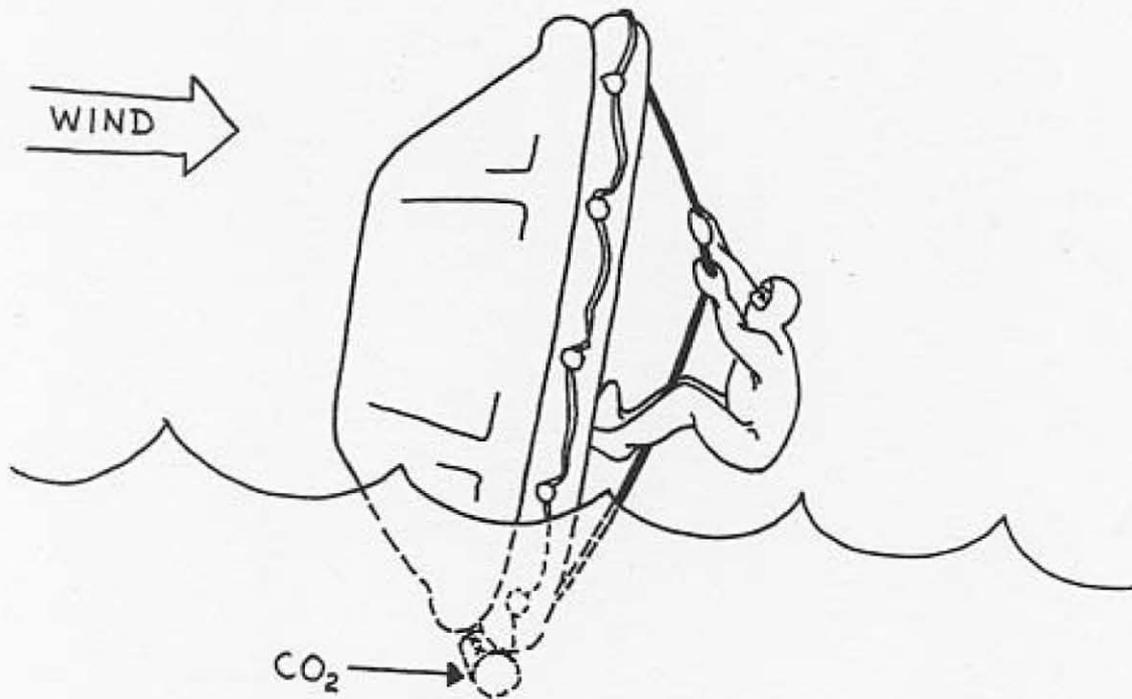
ENTER LIFE RAFT*

PRACTICE 7 STEPS

RIGHTING LIFE RAFT*

DON IMMERSION SUIT IN
WATER *OPTIONAL

How to Right A Liferaft



1. Climb over CO₂ cylinder and grasp strap.
2. Climb strap and arch backwards, pulling raft back.
3. Land on your back and follow strap to boarding ramp.