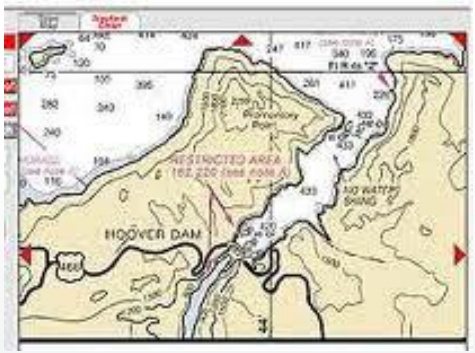
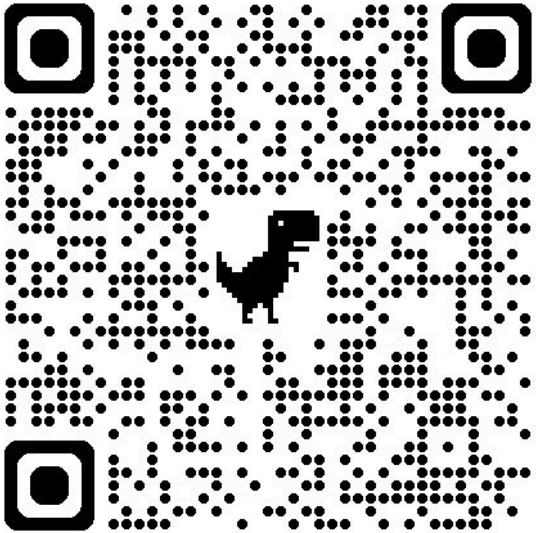
Basic Cruising



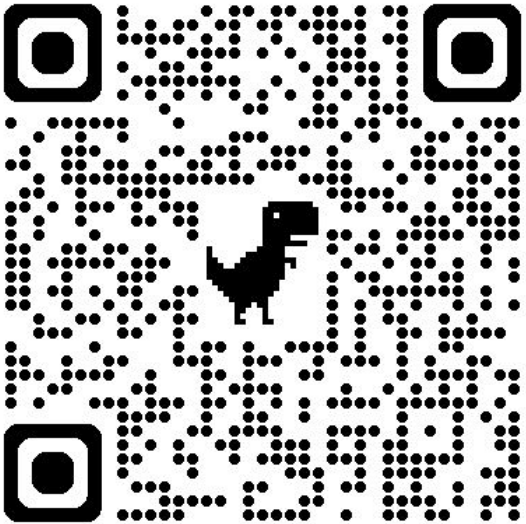
www.tc.gc.ca/boatingsafety

Basic Cruising

Scan to download the
slides



scan to visit
pcsail.ddns.net



Requirement to carry Proof of Competency

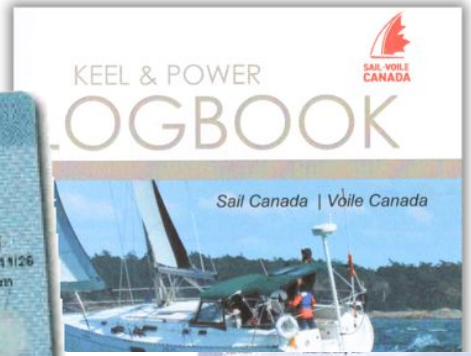
In your **motorized boat**, make sure to bring on board:

- **Proof of competency –**

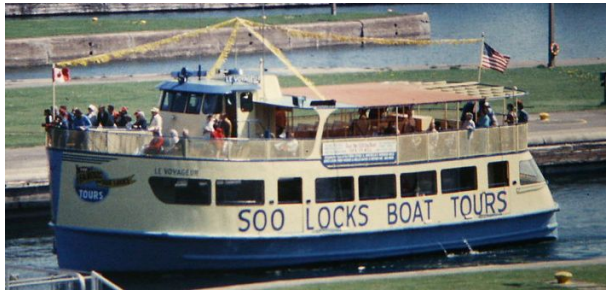
  Basic Cruising or Pleasure Craft Operator Card

  ****Toronto Harbour requires a harbour permit - PVOP****

- **Personal identification**
- **Pleasure craft licence (for 10hp or more)**



Proof of Competency List



A vessel used for anything other than pleasure, recreation is a non-pleasure (commercial) vessel.
https://tc.canada.ca/en/marine-transportation/marine-safety/non-pleasure-vessel-pleasure-craft#daily

PLEASURE CRAFT

not for hire or for profit

SAILING VESSEL

an engine is not used

POWER DRIVEN VESSEL

propelled by machine

RESPONSIBLE BOATING

What is Involved in Responsible Boating?

- **Seaworthiness & Safe Equipment**
- **Capabilities of the Crew**
- **Safe Operation**
- **Knowledge of Weather**
- **Knowledge of Local Hazards**
- **Recording of Sail Plan**
- **Relevant Publications**
- **Navigation**
- **Stop and Offer Assistance**
- **Report Incidents if personal injury occurred or alcohol involved**
- **Avoidance of Pollution**

Link here to web resources about boating education and safety.

RESPONSIBLE BOATING *- Relevant Legislation*

1. Canada Shipping Act 2001 (and regulations)
2. Federal Contraventions Act
3. Vessel Operation Restriction Regulations
4. Charts and Nautical Publications Regulations
5. Collision Regulations (Colregs)
6. Small Vessel Regulations (SVR)
7. Criminal Code of Canada
8. Others such as Environmental Legislation

Vessel Operation Restriction Regulations

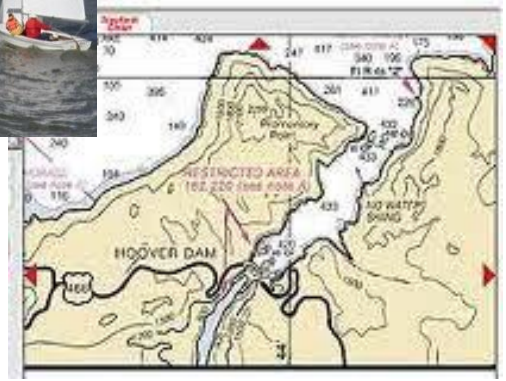
- **Must be familiar with the waterways and any regulations that apply**
- **Limit vessel speeds to 10 km/hr within 30 metres of shore**
- **Limits for persons under 16 years of age with proof of competency:**

Age	Horsepower Restrictions
Under 12 years of age - no direct supervision	May operate a boat with up to 10 hp (7.5kw)
Ages 12 to 16 - no direct supervision	May operate a boat up to 40 hp (30kw)
Under 16 years of age, regardless of supervision	May not operate a Personal Water Craft
16 years of age or older	No horsepower restrictions

LEGAL ISSUES

Collision Regulations

Know and comply with these regulations



Charts and Nautical Publications Regulations

Must carry charts - exempt ONLY if operator is ***very*** familiar with the waters he is navigating

Small Vessel Regulations

- **carry required safety equipment**
- **stipulate that all vessels must be equipped with mufflers within 5 nautical miles of shore**

LEGAL ISSUES

Criminal Code of Canada

required to provide assistance when involved in an accident

Offences:

- **operate vessel which is unseaworthy**
- **operate vessel in a manner dangerous to the public.**
- **no look-out for person being towed.**
- **tow person after dark.**
- **operate vessel while impaired. .08 blood alcohol applies. You can lose your boat and driver license.**
- **send false messages or interfere with marine signals**
- **tie to buoy or navigational aid**

LEGAL ISSUES

Canada Shipping Act

- **must render assistance to a person or vessel in danger without endangering his crew or vessel**
- **failure to comply with the Collision Regulations**

Federal Contraventions Act

- **allows City or Provincial police authorities issue tickets to boaters who contravene these acts, regulations or codes - includes taking points or suspending driving licenses.**

Boating Restrictions Regulations

- **establishes restrictions such as prohibited vessels, speed limits and engine power limits**

  (example: Toronto Harbour regulations)

LEGAL ISSUES

ENFORCEMENT OFFICERS

Designated enforcement officers include RCMP, provincial, local, and harbour police

- **Blue flashing light is an all-round light shown by vessels on official business**

An enforcement officer may inspect a pleasure craft

TAKING YOUR VESSEL INTO US WATERS

Reporting Requirements

Operators of small pleasure vessels arriving in the United States from a foreign port or place are required to report their arrival to CBP immediately.

Requirements may vary depending on the nationality of the crew

Payment of the User Fee is required if you operate a private vessel that is 30 feet or more in length that enters the United States.

Prior to departing for the US from Canadian waters you should check and understand the current requirements for US entry

Returning to Canada –
Reporting requirements for private boaters

This page summarizes important information for private boaters who are navigating Canadian waters or hoping to enter Canada by boat.

RESPONSIBILITIES OF SKIPPER

- ***SAFETY OF THE CREW***
- ***SAFETY OF THE BOAT***

a. Assess the competence of the crew and monitor the safety of the crew

b. Explain to crew effects of sunlight, boat motion, wind and alcohol

c. Communicate plans for the trip and

d. Provide training in safety equipment and necessary boat systems

e. Give clear directions in event of emergency

f. Assess and monitor the seaworthiness of the boat

RESPONSIBILITIES OF CREW

- ***FOLLOW DIRECTIONS OF THE SKIPPER***

a. **Alert the Skipper to any Potential Hazards or Emergency Situations**

b. **Understand what action to take if Skipper becomes incapacitated**

VESSEL COMPLIANCE - LICENSING AND REGISTRATION

PROOF OF LICENSE OR REGISTRATION MUST BE CARRIED ON BOARD WHEN VESSEL IS BEING OPERATED

LICENSING - Service Canada

- identification system - not proof of ownership
- Required if 10HP+, and not registered
- Free - Forms available online, or at
- Markings must be in contrasting colour, block, at least 7.5cm high displayed on both sides of the bow
- Information must be kept up to date and is valid for 10 years. Renewal at 10 years.

REGISTRATION - Transport Canada

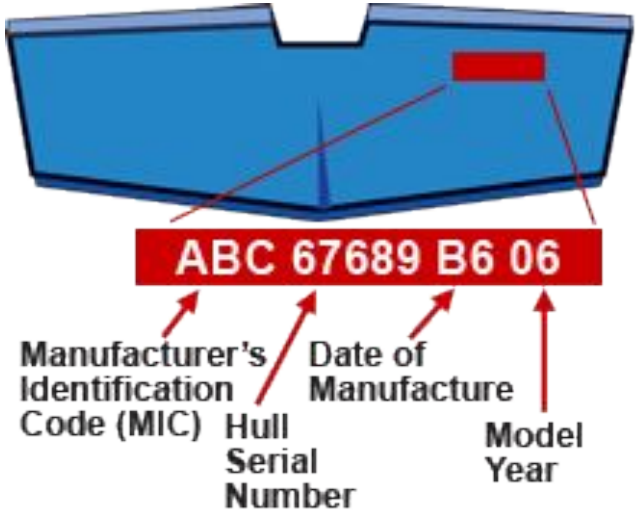
- Is proof of ownership
- Markings must be in contrasting colour, at least 10.3cm high

National Shipping Authority can take control during time of national crisis.

- Requires Survey
- Expensive

HULL IDENTIFICATION NUMBER (HIN)

1. HIN uniquely identifies a vessel manufactured after 1981 and is used by police in identification of stolen vessels
2. HIN must be permanently fixed on the outboard starboard side of the transom and a duplicate fixed in an unexposed location in the interior



COMPLIANCE NOTICE / CAPACITY PLATES

All pleasure boats sold in Canada after 1981, under 24 M in length, and capable of being fitted with engine must display a Compliance Notice.

If under 6 m in length, the plate must be permanently attached and show:

1. **Recommended engine power**
2. **Maximum number of persons onboard**
3. **Total gross load - maximum kilograms (including persons, gear, stores, fuel, etc.)**

(Above is calculated for fair weather based on low, evenly distributed load)

CANADIAN COMPLIANCE NOTICE
AVIS DE CONFORMITÉ CANADIEN

MAXIMUM RECOMMENDED SAFE LIMITS
LIMITES MAXIMALES DE SÉCURITÉ RECOMMANDÉES

XX

XXXX kg
XXXX lbs/lb

XXXX kg
XXXX lbs/lb

XX kW
XX HP

XXXX kg
XXXX lbs/lb

THE MAXIMUM RECOMMENDED SAFE LIMITS MIGHT HAVE TO BE REDUCED IN ADVERSE SEA AND WEATHER CONDITIONS.

LES LIMITES MAXIMALES DE SÉCURITÉ RECOMMANDÉES PEUVENT DEVOIR ÊTRE RÉDUITES DANS LES CONDITIONS DE MER ET DES CONDITIONS MÉTÉRÉOLOGIQUES DIFFICILES.

* *ADDITIONAL INFORMATION*

SAFEBOAT COMPANY INC. (MIC)

CITY, PROVINCE, COUNTRY

MODEL / MODÈLE: RUNABOUT 555X

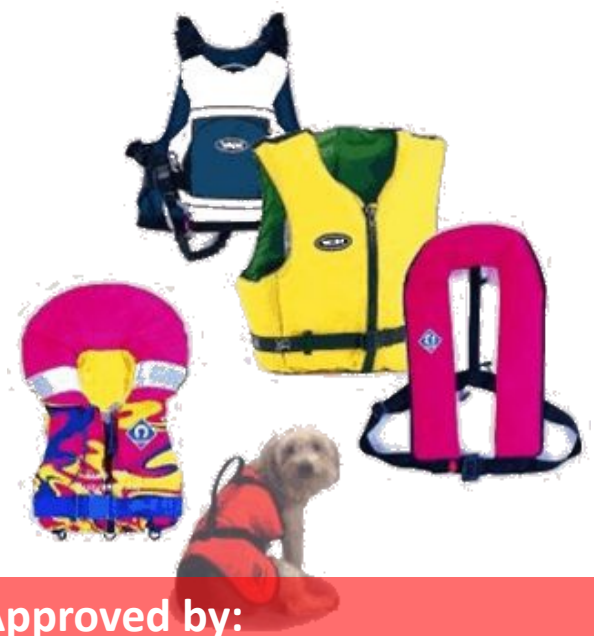
THE MANUFACTURER DECLARES THAT THIS PRODUCT COMPLIES WITH THE CONSTRUCTION REQUIREMENTS OF THE *SMALL VESSEL REGULATIONS* AS THEY READ ON THE DAY ON WHICH THE CONSTRUCTION OF THE VESSEL WAS STARTED OR ON THE DAY ON WHICH THE VESSEL WAS IMPORTED.

LE FABRICANT ATTESTE QUE CE PRODUIT EST CONFORME AUX EXIGENCES DE CONSTRUCTION DU *RÈGLEMENT SUR LES PETITS BATIMENTS* EN VIGUEUR À LA DATE DU DÉBUT DE SA CONSTRUCTION OU DE SON IMPORTATION.

REQUIRED SAFETY EQUIPMENT *(all vessels)*

One APPROVED lifejacket or PFD for each person

- ***Must be appropriately sized***
- ***Test a PFD by entering water until chest deep then bend***
- ***Inflatable PFDs must be worn at all times***
- ***Inflatable PFDs not approved if under 16 years or weighing less than 80 lbs***
- ***Inflatable PFDs not approved for sailboards or personal watercraft, for white-water sports or kayaking***



A lifejacket will turn you to keep your face out of the water, even if you are unconscious. A PFD may not do this.

Approved by:

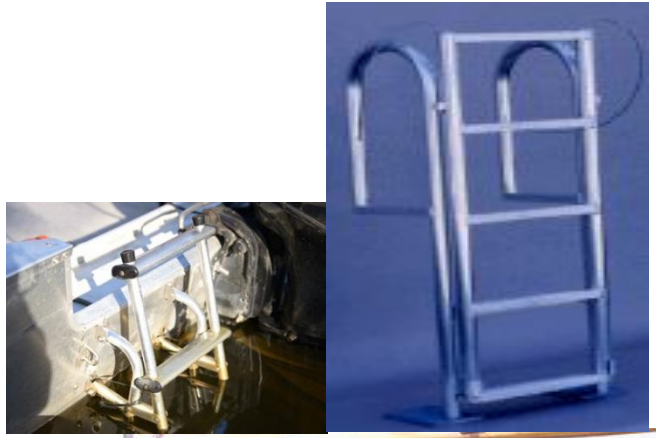
- **Transport Canada or**
- **Canadian Coast Guard or**
- **Fisheries and Oceans Canada**

REQUIRED SAFETY EQUIPMENT

(all vessels)

One <u>REBOARDING DEVICE</u> if Deck is more than 0.5 M above the water (freeboard)

- ***A transom ladder or swim platform ladder meets this requirement.***
- ***On smaller vessels it is more convenient to use a rope ladder***



REQUIRED SAFETY EQUIPMENT *(all vessels)**

BUOYANT HEAVING LINE, at least 15 meters

Remember to keep it neatly coiled

*** Not required for operators of PWC, sailboards and paddle boats as long as operator is wearing a lifejacket or PFD.***

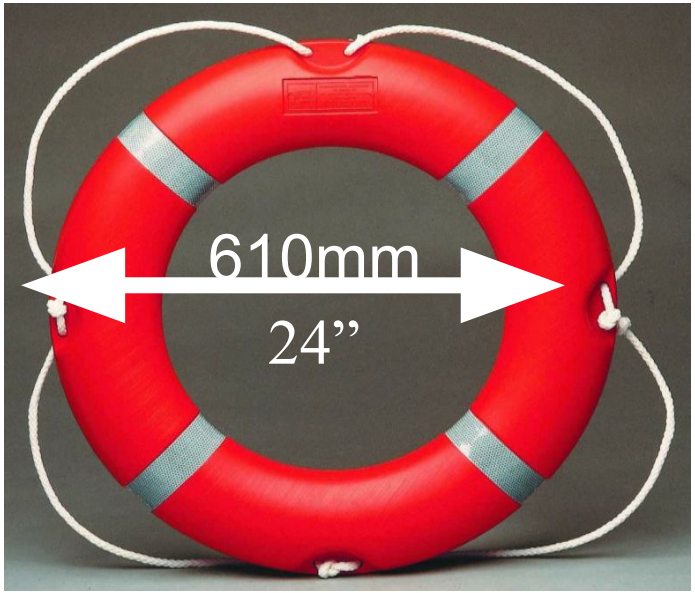
A buoyant heaving line is approved for use as long as it:

- **floats;**
- **is in good condition;**
- **is made of one full length of rope, not many shorter ropes tied together;**
- **is long enough for the boat you will be using; and**
- **is used only as safety equipment so that it is easy to find and use in an emergency.**

REQUIRED SAFETY EQUIPMENT *(vessels over 6 m up to 12 m)**

LIFEBUOY, *610mm (24") diameter* with 15 meters of buoyant line.

- look for a Transport Canada approval stamp or label
- Smaller lifebuoys and horseshoe-type devices are NOT approved.



Not required on 6 – 9 M vessel as long as buoyant heaving line carried

If vessel 12 – 24 M - One (1) lifebuoy equipped with a self-igniting light or attached to a buoyant line at least 15 m (49'3") long

If vessel over 24 M - Two (2) SOLAS *(30" diameter)* lifebuoys, of which: one (1) is attached to a buoyant line at least 30 m (98'5") long; and one (1) is equipped with a self-igniting light

REQUIRED SAFETY EQUIPMENT

(most vessels)

BAILER or MANUAL BILGE PUMP

Vessels over 9M may have manual bilge-pumping arrangements – they are the fastest way to remove water.

If a manual then pump and hose must be long enough to reach the bilge and discharge water over the side of the boat.

A bailer or bilge pump is not required for boats that can not hold enough water to make it capsize – examples are sit-on kayaks and pontoon boats.

- **hold at least 750 ml (3 cups);**
- **have an opening of 9 cm (3.5”) diameter or more; and**
- **be made of plastic or metal.**

*** Not required for operators of PWC, sailboards and paddle boats as long as operator is wearing a lifejacket or PFD**

REQUIRED SAFETY EQUIPMENT

WATERPROOF FLASHLIGHT.

Check batteries before every trip.
It may be your only way to signal
for help.

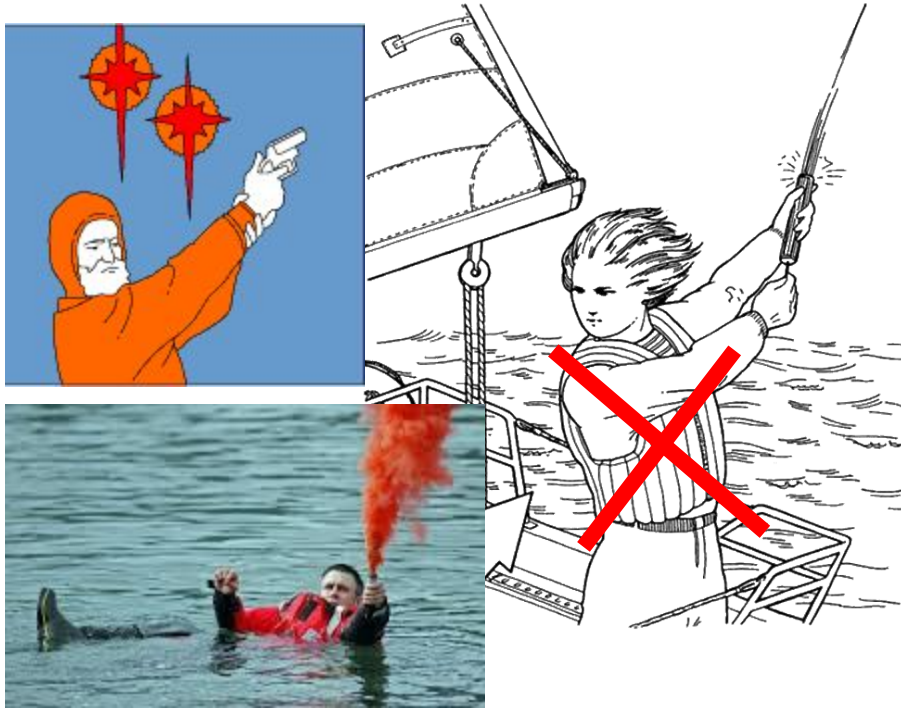
REQUIRED SAFETY EQUIPMENT

- **FLARES**

You may use flares only in an emergency when you believe there is a chance of it being seen.

Always read the manufacturer's instructions before you use flares.

Fire aerial flares at an angle into the wind. In strong wind, lower the angle to 45 degrees, at most.



REQUIRED SAFETY EQUIPMENT

Rocket Parachute Flare – Type A

- ***Parachute flare is single red star***
- ***Flare reaches height of 300 M and burns at least 40 seconds as it descends slowly***

REQUIRED SAFETY EQUIPMENT

Multi-StarFlares – Type B

Reaches height of 100 M and burns for 4 – 5 seconds

- creates two or more red stars;
- reaches a height of 100 m, is easily seen from the ground or air;
- each burns for four or five seconds.

If it is a single star cartridge - must fire a second single star within 15 seconds. This means you need double the number of cartridges

REQUIRED SAFETY EQUIPMENT

Hand Held Flares – Type C

- **red flame torch that you hold in your hand;**
- **provides limited visibility from the ground;**
- **best used to help air searchers locate you; and**
- **burns for at least one minute.**

When lighting the flare, hold it clear of the boat and downwind. Do not look directly at the flare while it is burning.

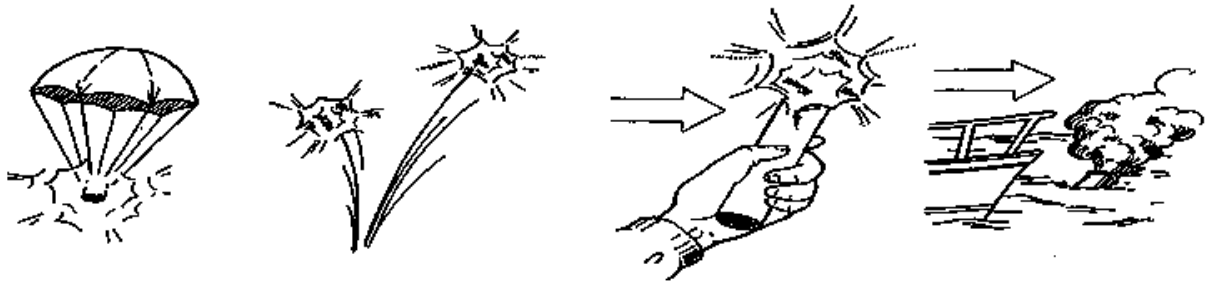
REQUIRED SAFETY EQUIPMENT

Smoke Flares – Type D

- **creates a dense orange smoke for:**
  - ✔ **three minutes (buoyant);**
  - ✔ **Or 50 seconds (hand-held);**
- **is to be used only in daylight.**

Position your smoke signal downwind and follow the directions carefully.

REQUIRED SAFETY EQUIPMENT - FLARES



Type A
Parachute Flares

Type B
Multi Star Flares

Type C
Hand Held Flares

Type D
Smoke Flares

- ***Flares must be stamped with the date of manufacture***
- ***can not be more than 4 years since date of manufacture***
- ***Must have a Transport Canada approval stamp***
- **Store flares in a cool, dry, accessible and <u>unlocked</u> location**

REQUIRED SAFETY EQUIPMENT – FLARES
Varies with the length of the vessel

- *6 m. to 9 m. vessel – **six (6)** flares – A,B or C, not more than two are smoke signals (s205 svr)
- *9 m. to **12** m. vessel – **twelve (12)** flares – A, B, C or D - no more than six to be smoke flares (D)

*** validity: 4 years from date of manufacture stamped on the flare**

if carrying a means of two-way communication, PLB or EPIRB – flare compliment reduced by up to 50% but no more that ½ can be smoke flares (type D)

Pyrotechnic distress signals are not required to be carried on board a pleasure craft that

- **(a)** is operating on a river, canal or lake in which it can at no time be more than one nautical mile from shore; or
- **(b)** has no sleeping arrangements and is engaged in an official competition or in final preparation for an official competition. (s 213 (2) SVR)

REQUIRED SAFETY EQUIPMENT

SOUNDING DEVICE – Required on all vessels

Whistle, Air horn or an electric horn

When used ? ***Reduced visibility or maneuvering***

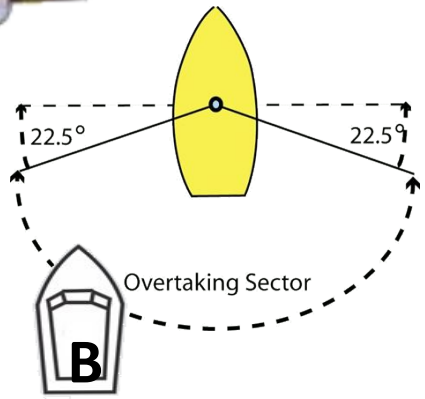
What is the fog signal for a boat under sail?

▬▬ ▬ ▬ ***One long, two short every, 2 minutes or less***

What is the fog signal for a boat under power?

▬▬ ***One long, every 2 minutes or less***

Sound Signals – Great Lakes Modifications		
Vessel Action	**Signal**	**Reply**
One short	altering to starboard	One short
Two short	altering to port	Two short
Three short	Operating in reverse	
Five short (or more)	**Danger / Doubt - "I do not understand your intentions"**	**Disagree**
Continuous (any sound)	**Distress**	



signal with two short

REQUIRED SAFETY EQUIPMENT

SAILING craft up to 20 M

Sunset to Sunrise, or in restricted visibility

LIGHTS (sidelights) **that comply with Collision Regulations.**

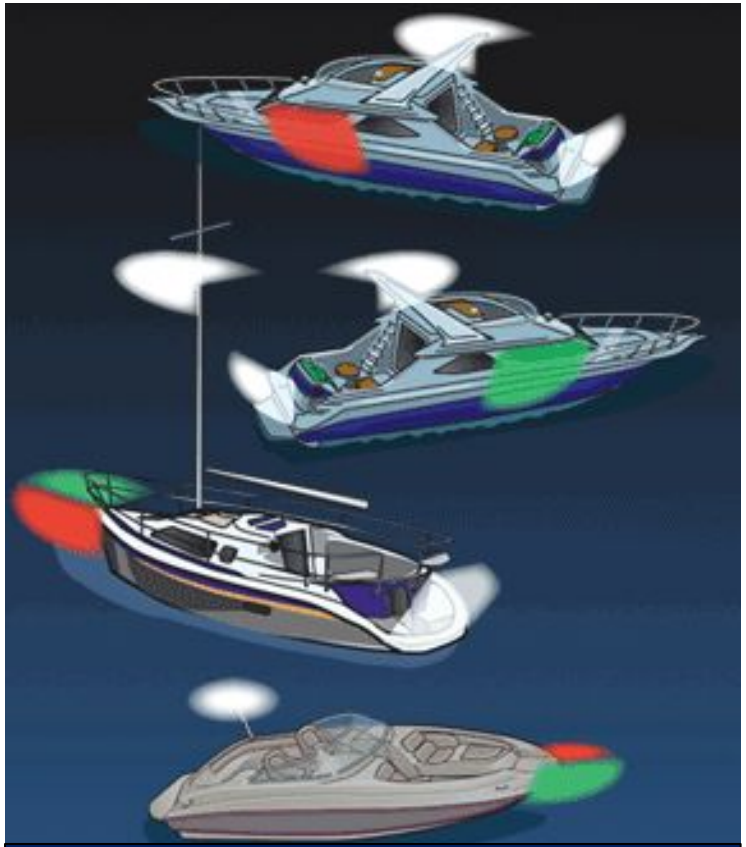
- **Green light** covering an arc from forward to 112.5° of the **starboard side**
- **Red light** covering an arc from forward to 112.5° of the **port side**
- **White light** shining aft covering an arc of 135° aft of the vessel

REQUIRED SAFETY EQUIPMENT

power vessels less than 20 m

Sunset to Sunrise, or in restricted visibility

- **Green light** covering an arc from forward to 112.5° of the **starboard side**
- **Red light** covering an arc from forward to 112.5° of the **port side**
- **White light** shining aft covering an arc of 135°
- **White forward facing light** covering 225° from forward to the **port and starboard sides**. (same total angle as red + green light)



*An **all around white light** at the stern can be substituted for 2 white lights when not over 12 m.*

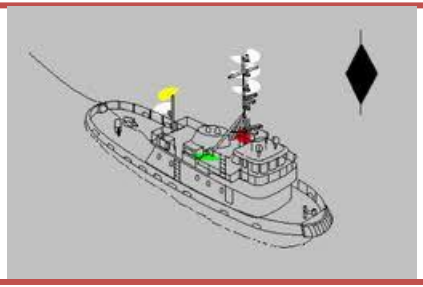
REQUIRED SAFETY EQUIPMENT - LIGHTS

Human powered boats - white flashlight or lantern to use far enough in advance to prevent a collision

Boats at anchor display an all-round white light at night

Towing light is a yellow light on the stern of the towing vessel

caution must be exercised - STAY WELL AWAY

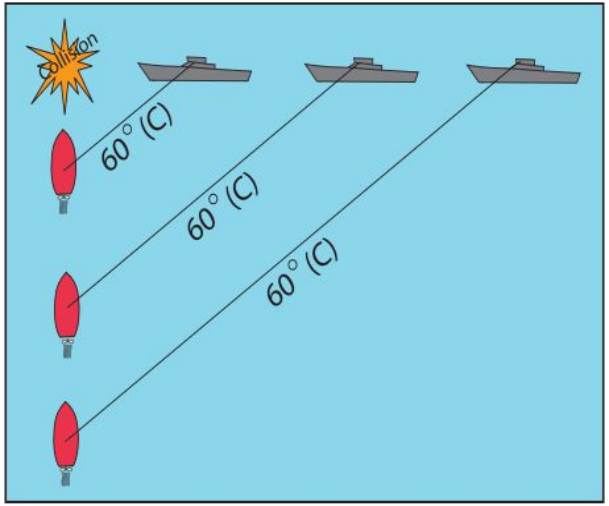


Not required if vessel less than 8 M and operated within sight of navigation marks

REQUIRED SAFETY EQUIPMENT

MAGNETIC COMPASS

- **Accuracy affected by magnetic or electrical influences - cell phones, radios, iron, metal containing iron – stainless steel, tools…**
- **Not affected by aluminum, bronze, or brass, special stainless steel**



Risk of collision exists if the compass bearing to the other vessel remains constant.

Used to find heading (direction).

Can be used to sight a vessel at night, and determine risk of collision.

REQUIRED SAFETY EQUIPMENT

RADAR REFLECTOR

Use and Limitations of Yacht Radar Reflector

- **Hoist reflector as high as possible**
- Radar reflection strongly related to size of vessel or reflector
- Sea state and weather limit effectiveness
- Angle of reflector to radar limits effectiveness
- **“Blanketing” by wet sails limit effectiveness**
- **Dry sail will not affect the effectiveness**

Not required for vessels under 20 M if operated away from radar navigation or boat operates in limited traffic where reflector not essential to safety

REQUIRED SAFETY EQUIPMENT
FIRE EXTINGUISHERS

Human powered, and Sailboards and Kiteboards	Personal Watercraft	Sail or Power up to 6 Mz	Sail or Power **over 6 M and not more than 9 M**	Sail or Power over **9 M and not more than 12 M**	Sail or Power over 12 M
None	One 5B:C but not required if everyone wearing PFD or lifejacket	One 5B:C if equipped with an inboard engine, inboard fuel tank or a fuel-burning appliance	One 5B:C if equipped with a motor, **PLUS** One 5B:C if equipped with a fuel-burning appliance	One 10B:C if equipped with a motor, **PLUS** One 10B:C if equipped with a fuel-burning appliance	One 10B:C at all of following locations: At each access to space where stove is fitted; At entrance to any accommodation space; at entrance to any machinery space

REQUIRED SAFETY EQUIPMENT

FIRE EXTINGUISHERS:

- 10B:C device will put out a larger fire than a 5 B:C device
- All marine fire extinguishers must be certified and labeled by the US Coast Guard or Underwriters Laboratories of Canada (ULC) or Underwriters Laboratories, Inc (UL)
- Check you fire extinguishers often for correct operating pressure and make sure you know how to use them.

About once a month take dry chemical devices out of their bracket and **give them a few hard shakes in an upside down position** to keep the contents loose

Fire extinguishers must be kept in convenient and accessible locations

REQUIRED SAFETY EQUIPMENT

TYPE A:

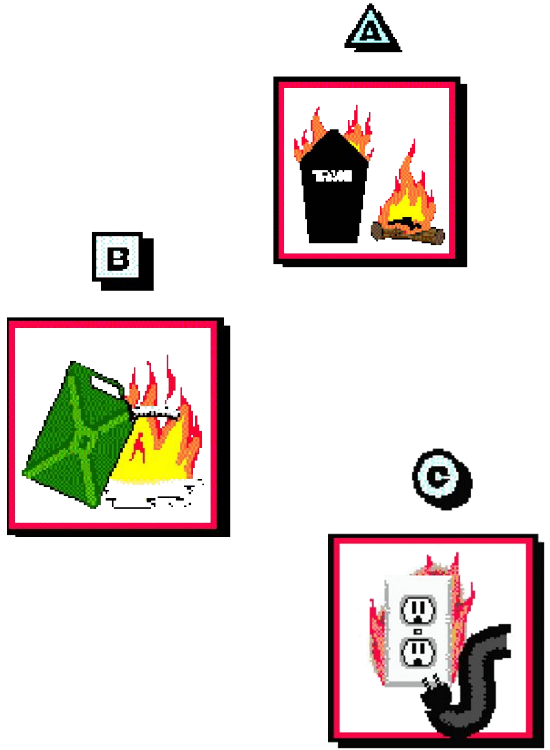
Fights combustible solids like wood, cloth, plastic and paper

TYPE B:

Fights flammable liquids such as gasoline, oil, grease

TYPE C:

Fights electrical fires



Note: Typical rating: 1A5BC 2A10BC – so most effective on B and C fires

POTENTIAL SOURCES OF FIRE ON A BOAT

- Fuel for the engine
- Fuel for the Stove
- **Hydrogen Gas from the Battery**
- **Methane gas from the head holding tank**
- Electrical

Other fire safety needs:

How do you reduce the risk of fire or explosion?

Use carbon monoxide detectors !

REQUIRED SAFETY EQUIPMENT

ANCHOR

Sailboards, Kiteboards and Personal Watercraft	Anchor with 15 M line OR **manual propelling device***
Sail and Powerboats up to 9 M	Anchor with 15 M line OR manual propelling device
Sail and Powerboats over 9 M and up to12 M	Anchor with 30 M line
Sail and Powerboats over 12 M	Anchor with 50 M line

Different anchors are used depending on the sea bottom

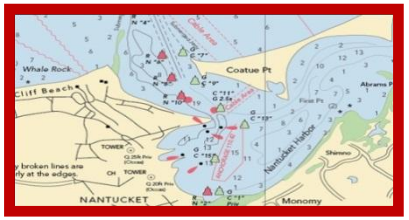
When anchoring overnight it is prudent to have the total length of the anchor line at least 5 times the height of the vessel bow from the sea bottom

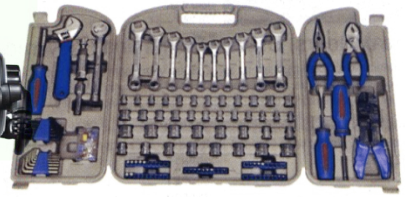
*** Not required if everyone wearing PFD or lifejacket**

Recommended Safety Equipment

- Legal: (normally required) – charts, compass, radar reflector, list of lights and buoys, list of radio aids, chart 1
- Other
  - Safety harness + tether + jack line
  - GPS
  - VHF radio (*reduces required flares)
  - Chart plotter
  - Extra anchor with rode
  - Depth sounder
  - Lead line
  - Emergency tiller
  - Rigging knife
  - First aid kit
  - Tool kit
  - EPIRB – emergency position indicating (*)
  - SART – search and rescue transponder

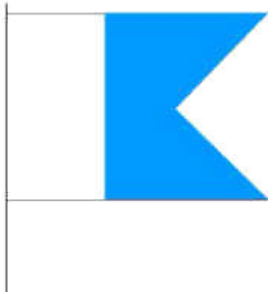
Usually Required





DIVING FLAGS

Diver down
Diving in progress

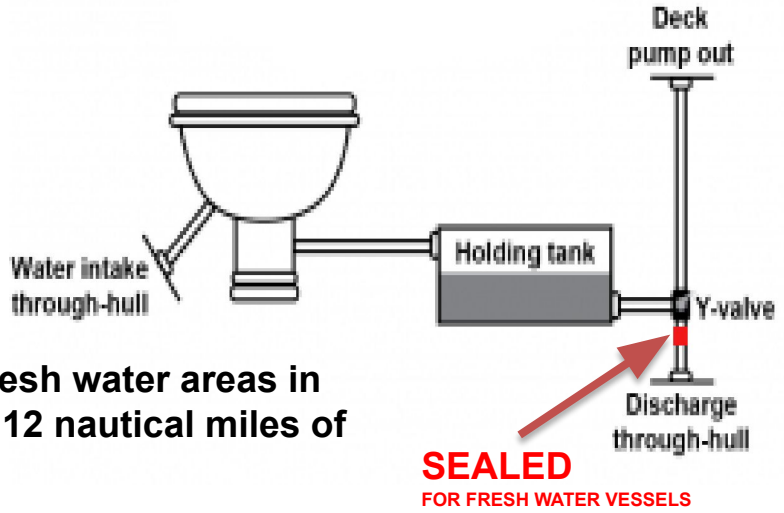


International blue and white code Flag Alpha on vessel

Keep well away from swimmers and divers!

DISCHARGING WASTE

- **Regulations prohibit the discharge of waste, such as oily or toxic wastes, and sewage, from vessels.**



- **Discharge of black water (sewage) is prohibited in fresh water areas in Canada as well as in salt water environments within 12 nautical miles of shore.**

- **Fresh water vessels must be fitted with black water (toilet) holding tanks that can only be discharged into shore based treatment facilities.**

- **Even small spills can be damaging, you must report such discharges immediately to a Pollution Prevention Officer.**

COLLISION REGULATIONS

International Regulations for the Avoidance of Collisions

- **Keep a look out at all times, using all available means**
- **Operate your vessel at a SAFE SPEED as determined by:**
  - Visibility (fog, rain, darkness, snow)
  - Wind, weather, water conditions and currents
  - Maneuverability of your vessel
  - Traffic Density and type of vessels in proximity
  - Proximity of Navigation Hazards

- **As soon as it is determined a risk of collision exist, take *early and substantial action* to avoid collisions –**

Every means available shall be used to determine if risk of collision exists.

COLLISION REGULATIONS

HIGHEST PRIORITY (STAND ON)

- Being overtaken
- Not Under Command
- Restricted in their ability to maneuver (e.g. dredging, laying buoys, work boats)
- Constrained by draft (e.g. freighter entering Toronto Harbour)
- Fishing with nets or trawls that restrict maneuverability
- Sailing (when powered only by sails)
- Power including float planes on the water
- Wing in Ground (uses aerodynamics between wings and water for lift)
- Overtaking

LOWEST PRIORITY (GIVE WAY)

WHEN IN DOUBT GIVE WAY!

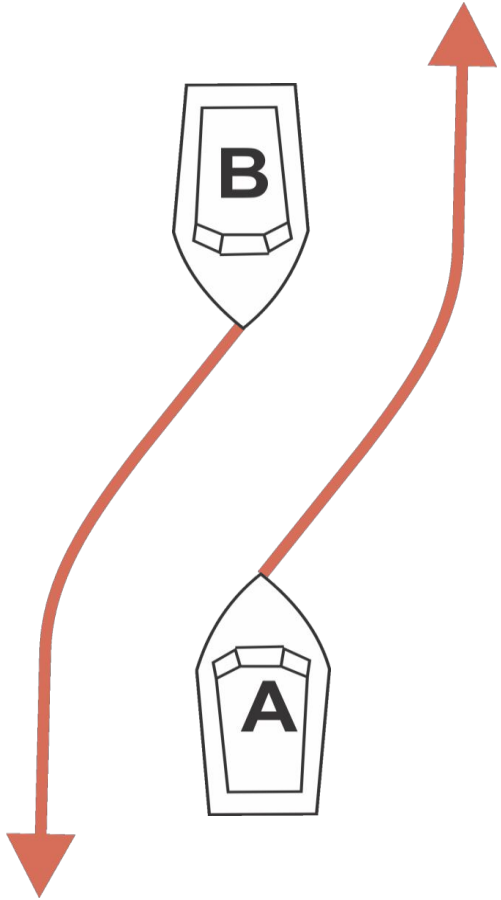
COLLISION AVOIDANCE

TWO VESSELS UNDER POWER

Approaching Head-On

Both vessels go to starboard (right) as far as needed for safety

signal with one short



COLLISION AVOIDANCE

TWO VESSELS UNDER POWER

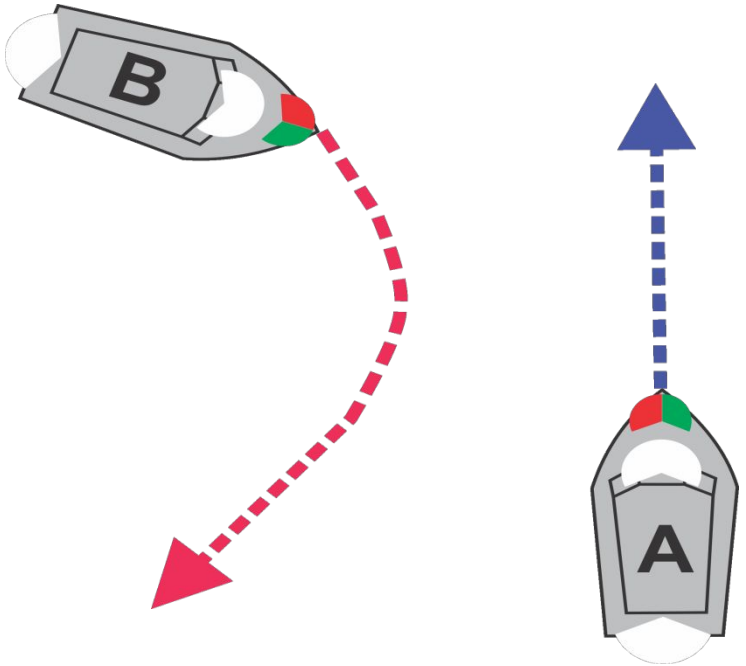
Approaching at an Angle

a. How can you determine if you are on a Collision ?

b. Which is the Stand-On Boat?

c. Which is the Give-Way Boat?

d. What Action should the Give-Way Boat Take?

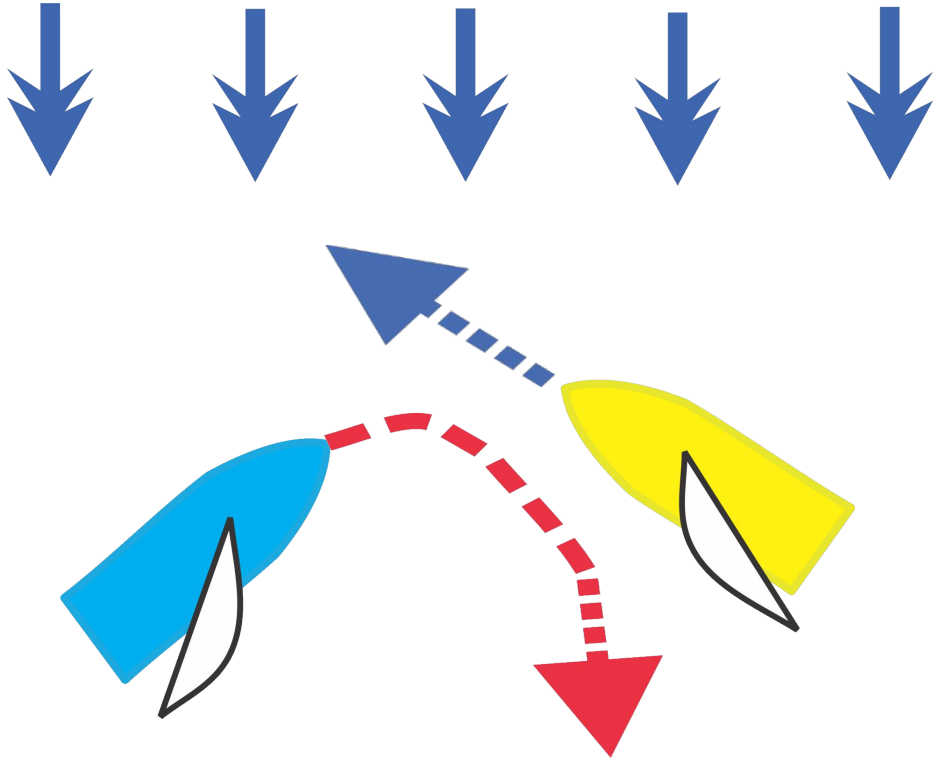


COLLISION AVOIDANCE

TWO BOATS UNDER SAIL

The boats are on **opposite tack**

Port tack gives way to starboard tack

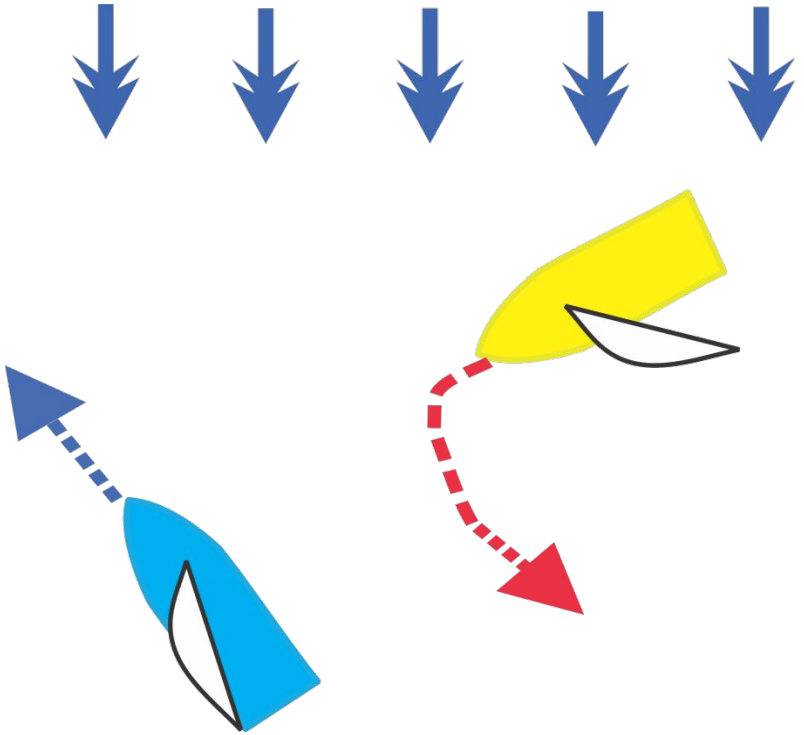


COLLISION AVOIDANCE

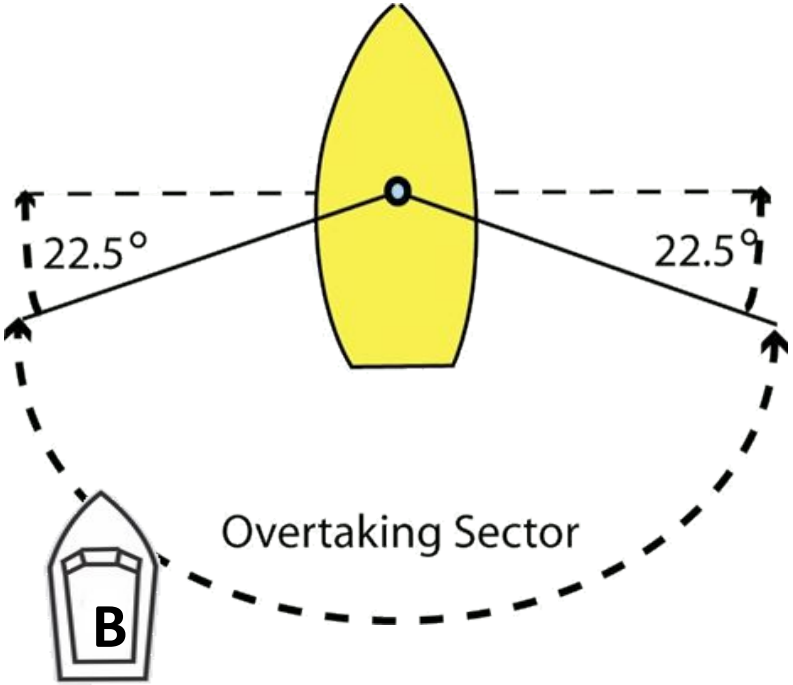
TWO BOATS UNDER SAIL

Boats on same tack

Vessel to windward shall give way to vessel to leeward



COLLISION AVOIDANCE - overtaking



A vessel is overtaking when approaching another at 22.5 degrees aft of the beam.

The overtaking vessel is the give way vessel, and must overtake only if this can be done safely

Vessel Action	Signal	Reply
One short	altering to starboard	One short
Two short	altering to port	Two short

signal with two short

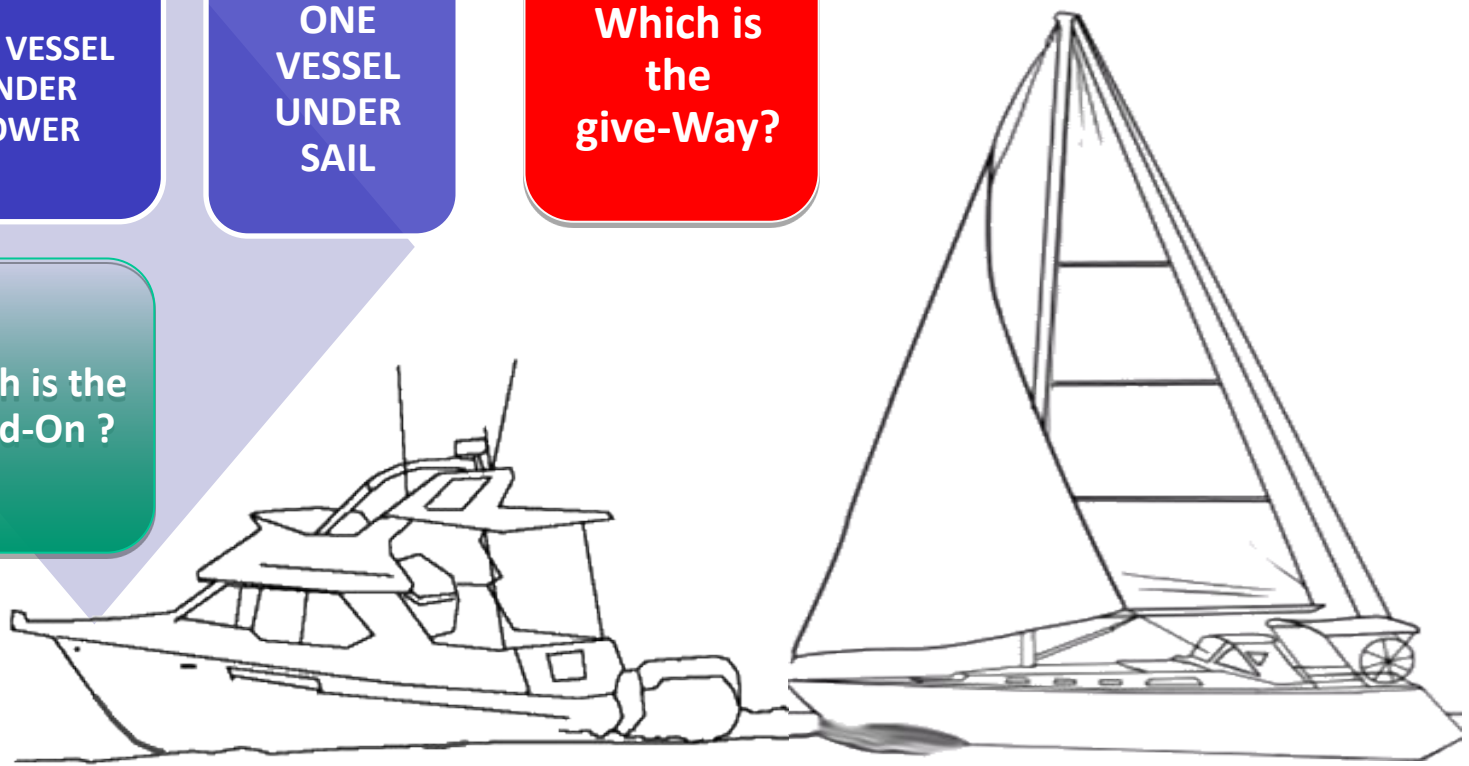
COLLISION AVOIDANCE – power and sail vessels

ONE VESSEL UNDER POWER

ONE VESSEL UNDER SAIL

Which is the give-Way?

Which is the Stand-On ?



FISHING VESSELS - *Lights at night*

Trawling	Fishing
Trawler with nets that have come fast (vessel not under command)	

Stay well clear

Fishing vessels have limited maneuverability when engaged in fishing.

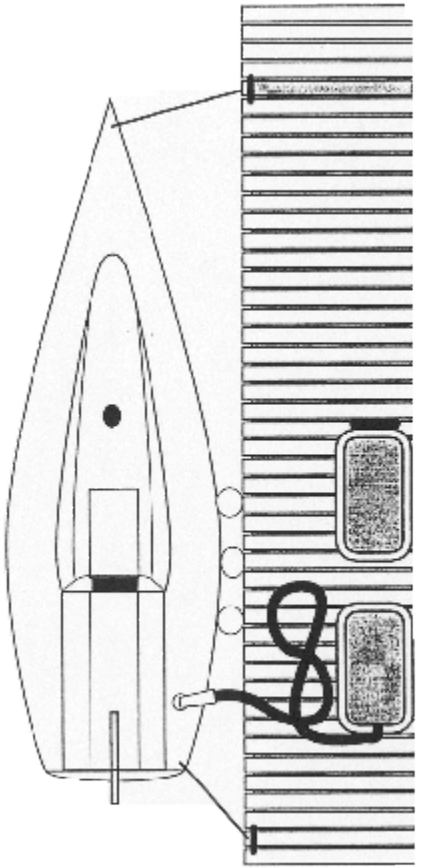
WATER SPORTS SAFETY
- TOWING (WATERSKI, WAKE BOARD, TUBE ETC.,)

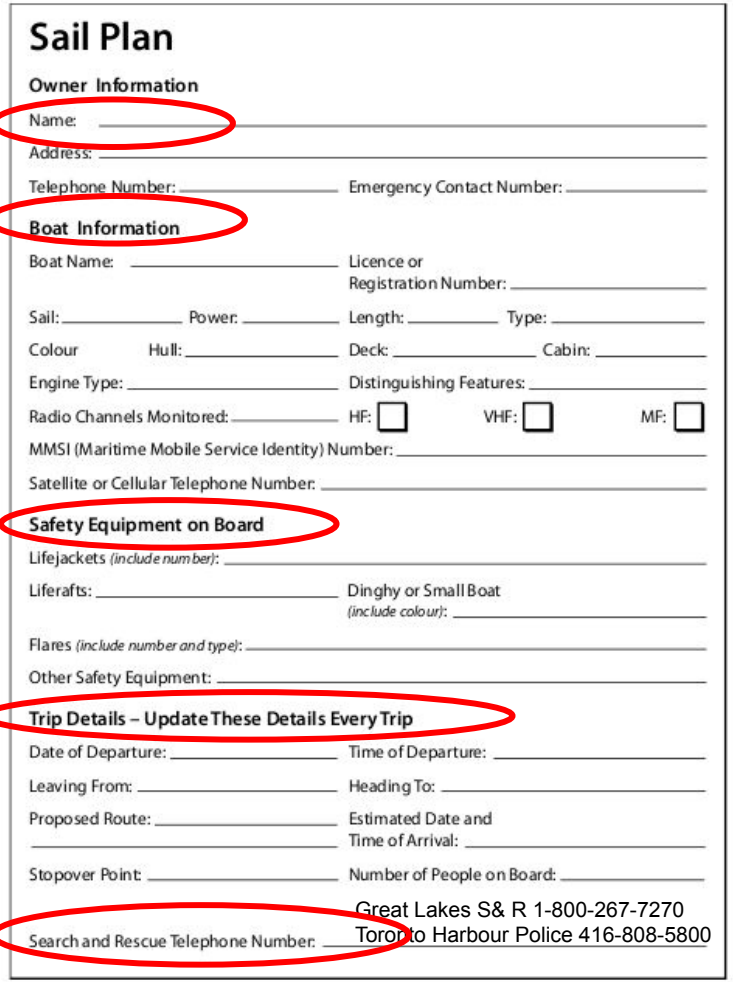
- Must have a **second person** on the boat as observer
- Must be a **seat on towing vessel for each person being towed**

- Towing activities **not allowed from 1 hour after sunset until sunrise**
- Slow near shorelines and busy areas
- Slow in poor visibility
- Avoid swimming areas

REFUELLING PROCEDURES

1. Secure boat to dock
2. Engine off and No smoking
3. Close all hatches
4. Crew ashore
5. Portable fuel tanks removed from boat for filling
6. **Ground fuel nozzle before touching tank opening and hold nozzle firmly against filling pipe**
7. Wipe up spills
8. **Run blower for 4 minutes before starting engine**
9. Check for vapours (odours) before starting engine





Sail Plan

Owner Information

Name: _____

Address: _____

Telephone Number: _____ Emergency Contact Number: _____

Boat Information

Boat Name: _____ Licence or Registration Number: _____

Sail: _____ Power: _____ Length: _____ Type: _____

Colour Hull: _____ Deck: _____ Cabin: _____

Engine Type: _____ Distinguishing Features: _____

Radio Channels Monitored: _____ HF: ☐ VHF: ☐ MF: ☐

MMSI (Maritime Mobile Service Identity) Number: _____

Satellite or Cellular Telephone Number: _____

Safety Equipment on Board

Lifejackets *(include number)*: _____

Liferafts: _____ Dinghy or Small Boat *(include colour)*: _____

Flares *(include number and type)*: _____

Other Safety Equipment: _____

Trip Details – Update These Details Every Trip

Date of Departure: _____ Time of Departure: _____

Leaving From: _____ Heading To: _____

Proposed Route: _____ Estimated Date and Time of Arrival: _____

Stopover Point: _____ Number of People on Board: _____

Search and Rescue Telephone Number: _____

Great Lakes S& R 1-800-267-7270
Toronto Harbour Police 416-808-5800

Sail Plan

1. Why do you have a Sail Plan?
2. How often do you need a Sail Plan?
3. Where do you leave your Sail Plan?
4. What is the Search and Rescue phone number?

PRE-DEPARTURE CHECKLIST

- What is the weather forecast?
- Any local hazards or boating restrictions?
- Do you have maps or charts?
- **All required safety equipment in good working order?**
- Ample reserves of fuel for the trip, or do you plan to refuel?
- Is your VHF radio working properly?
- First Aid kit, basic tools and spare parts?
- Have you completed a Sail Plan and left it with a responsible person?
- Is your drainage plug in place?

Fuel: 1/3 on way out, 1/3 to return, 1/3 safety

Check your boat before every trip

PRE-DEPARTURE LOADING THE BOAT

- **Do not overload boat – check capacity plate restrictions**
- **Position people and gear to evenly distribute weight**
- **Keep load as low as possible**
- **Stow gear in lockers to prevent movement**

Safety Instructions to Crew:

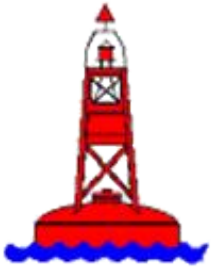
- **Wear PFDs at all times (the most important aid to avoid drowning)**
- **Location of emergency equipment**
- **Stay low in boat at all times+**
- **Warn of effects of motion, waves, sunlight, wind, alcohol**
- **Review emergency procedures**

SPEED & CONTROL WHEN UNDERWAY

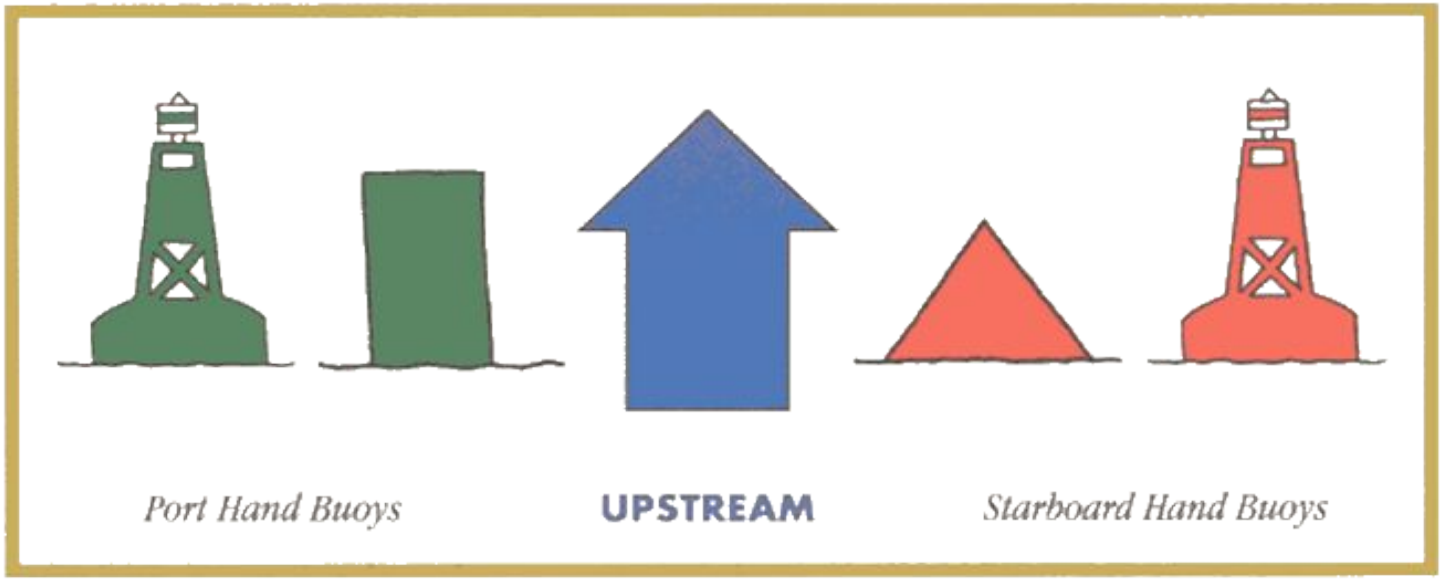
- **Wake and wash must be controlled so as not to affect other users of the waterway e.g. boats at anchor, rowboats, canoes, swimmers, wetlands, docks etc.**
- **Slow down in bad weather to maintain control**
- **High speed increases stopping distance**
- **Motion of boat, sunlight, waves, wind and alcohol will affect ability to operate a boat**

AIDS TO NAVIGATION

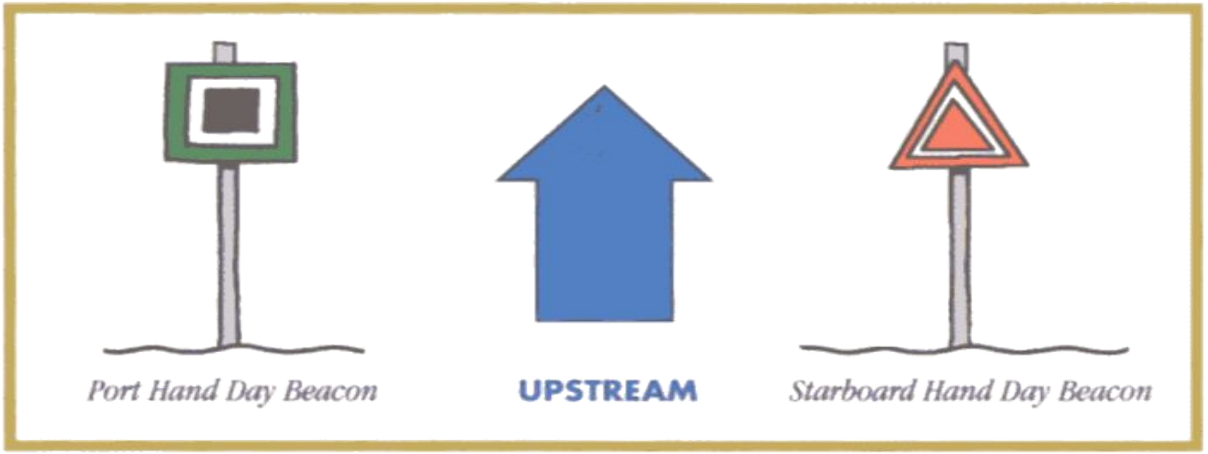
Any natural or man-made object, external to the boat, which aids in determining position, warns of danger or obstruction, and advises best or preferred route or



AIDS TO NAVIGATION



AIDS TO NAVIGATION

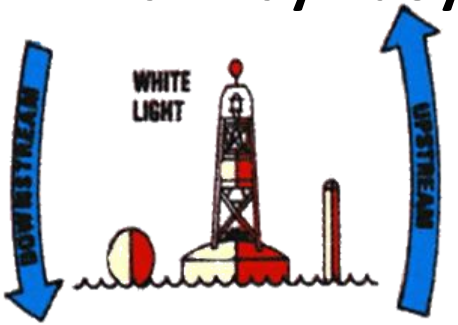


DAY BEACONS

Placed on Land - Not usually Lit

AIDS TO NAVIGATION

Fairway Buoy



Marks channel entrance,
pass to the right

Red and White vertical

Isolated Danger Buoy

Marks a danger, e.g.
underwater rock

Black-red-black

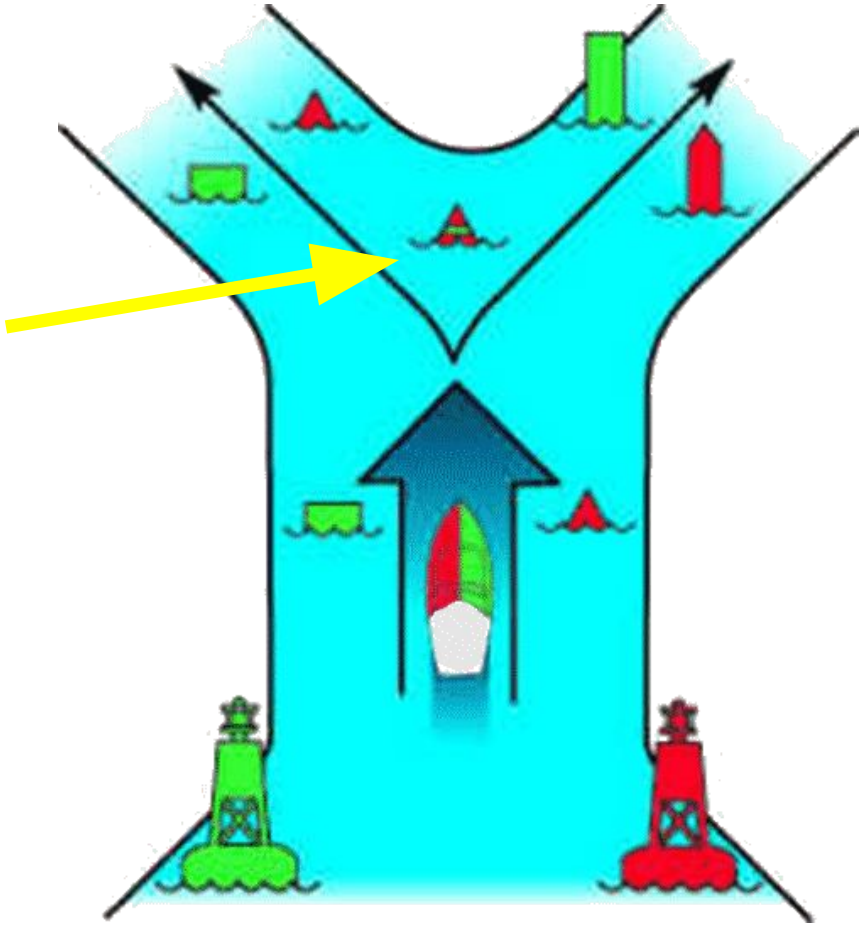
AIDS TO NAVIGATION

Bifurcation buoy (bi-colour)

marks a split in a channel,

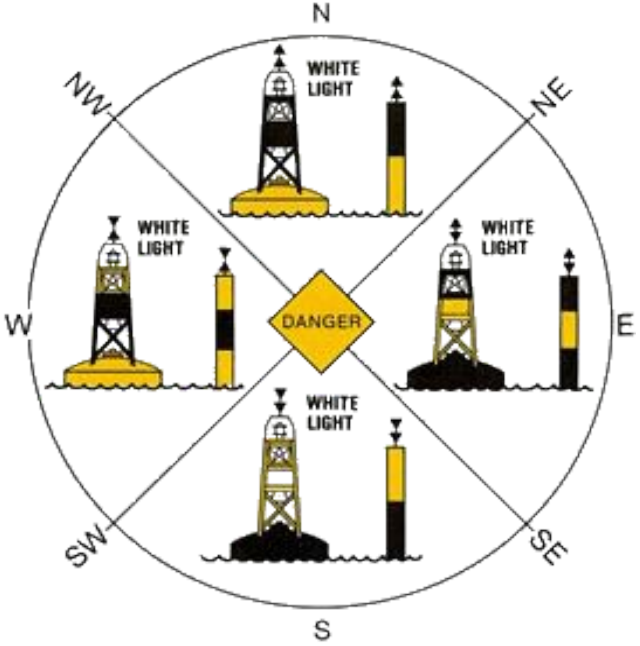
and its top colour indicates

the preferred (primary) route

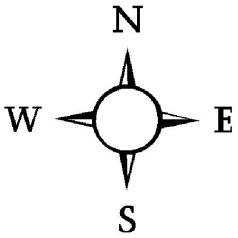


AIDS TO NAVIGATION

AIDS TO NAVIGATION



CARDINAL BUOYS

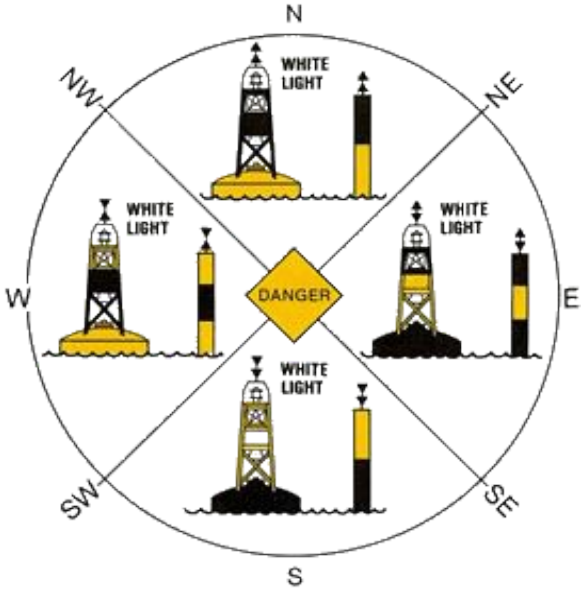


Indicate general Location of Hazard

Safe Water in Direction Indicated

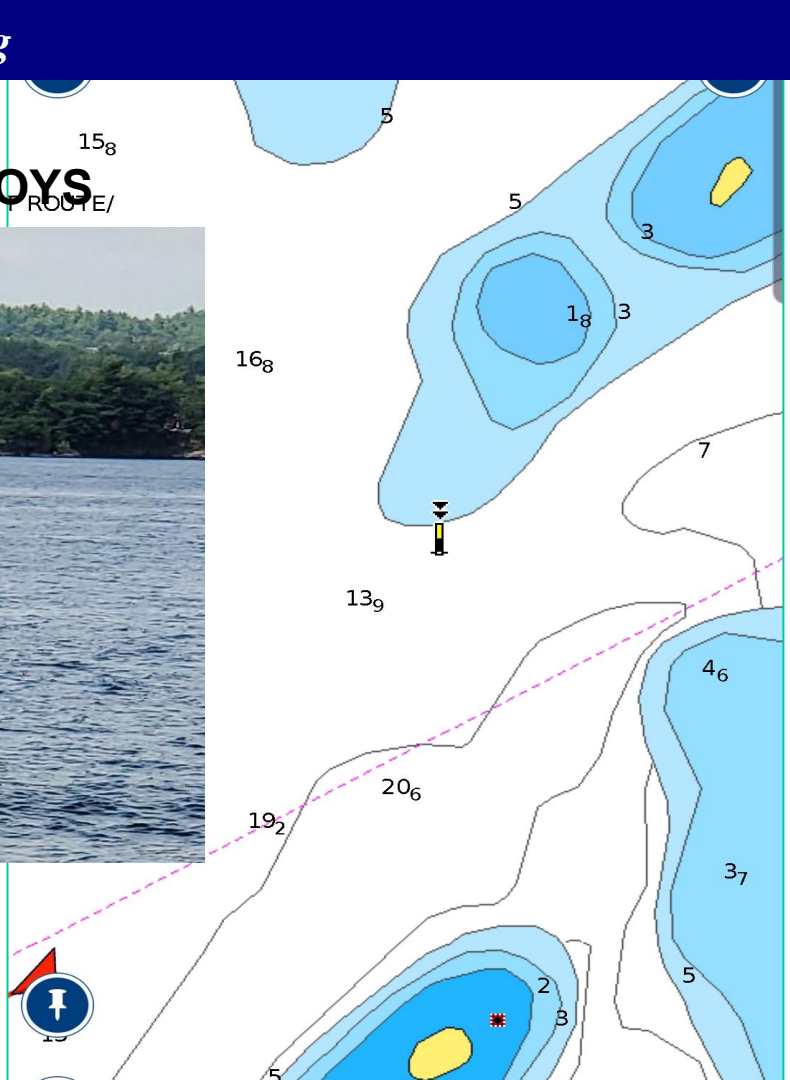
AIDS TO NAVIGATION

CARDINAL BUOYS



Indicate general Location of Hazard

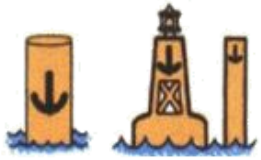
Safe Water in Direction Indicated



AIDS TO NAVIGATION - buoys

Cautionary

Anchorage



Mooring

Information

Hazard

Control buoys

Keep out

Scientific (ODAS)

Diving

Swimming

RESTRICTION SIGNS

No power-driven vessels

No internal combustion or steam engine is permitted

No vessels

No power-driven vessels in the direction of the arrow

Power limit

Standardized speed limit (normally 5, 10, 25, 40, 55)

No skiing north of the sign

No power-driven vessels between the hours and days in red

No skiing

No regatta

Combined sign (no skiing and speed limit)

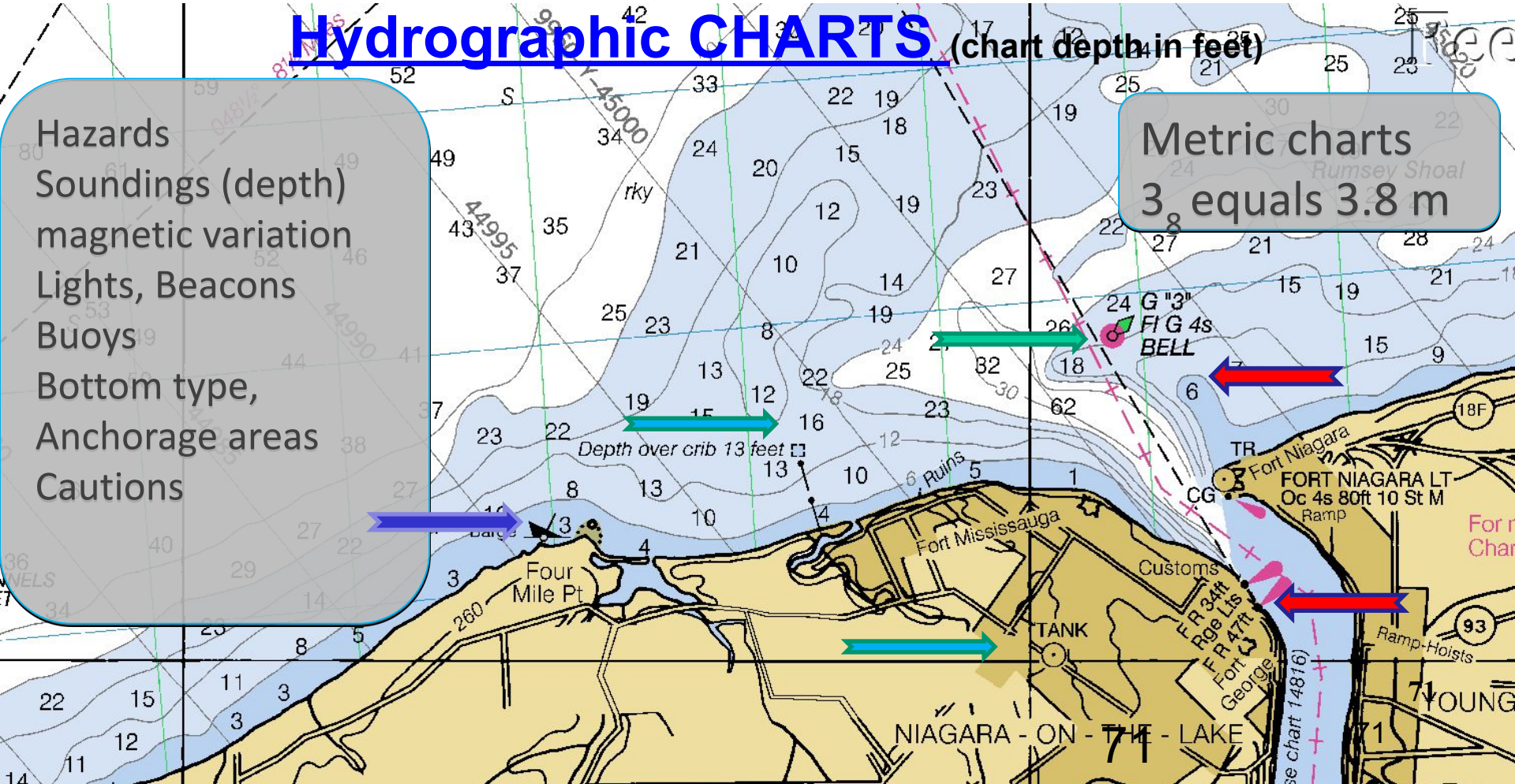
OPERATING IN NARROW CHANNELS

- *Keep on the starboard side as is safe and practicable.*
- *A vessel of less than 20 M or a sail boat must not impede a larger vessel*
- *If you need to cross do so at a right angle to the channel*
- *Operating in groups may help make small vessels more visible*
- *Keep a sharp lookout as large vessels travel quickly and have limited maneuverability*

Hydrographic CHARTS (chart depth in feet)

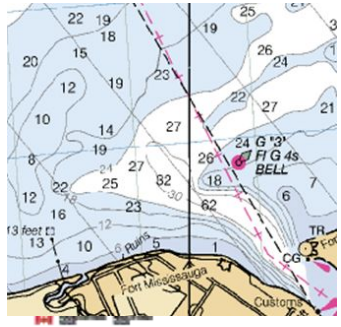
Hazards
Soundings (depth)
magnetic variation
Lights, Beacons
Buoys
Bottom type,
Anchorage areas
Cautions

Metric charts
3_8 equals 3.8 m



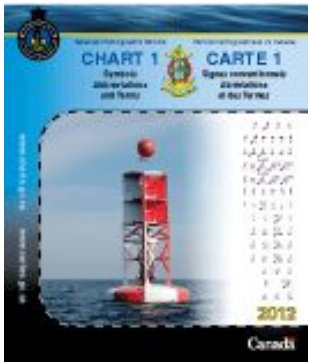
Charts and Publications to be carried at all times include:

- **Largest scale, updated, chart for the area(s) of travel**
- **Chart No. 1 (chart symbol directory)**



13.2		Kelp, weed Varech, herbe marine	

- **List of Lights, Buoys and Fog Signals**
- **Tide and Current Tables**

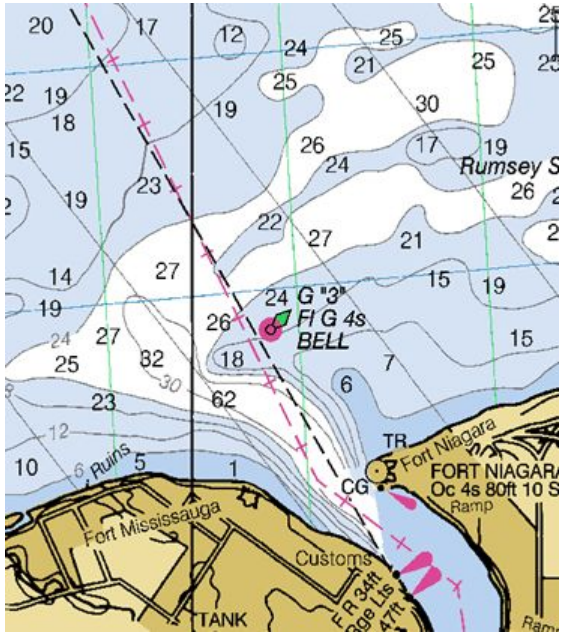


- **"Notices to Mariners" (NOTMAR) - published weekly and are used to update your charts. You can also search for chart corrections.**

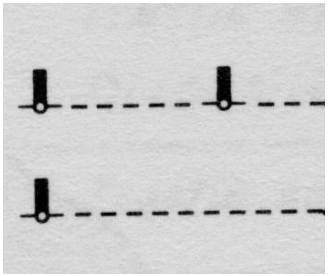
http://www.charts.gc.ca/publications/chart1-carte1/index-eng.asp

http://www.notmar.gc.ca/

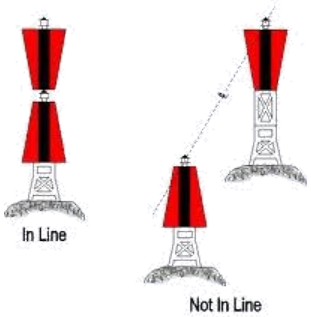
Navigation Ranges



as shown on charts

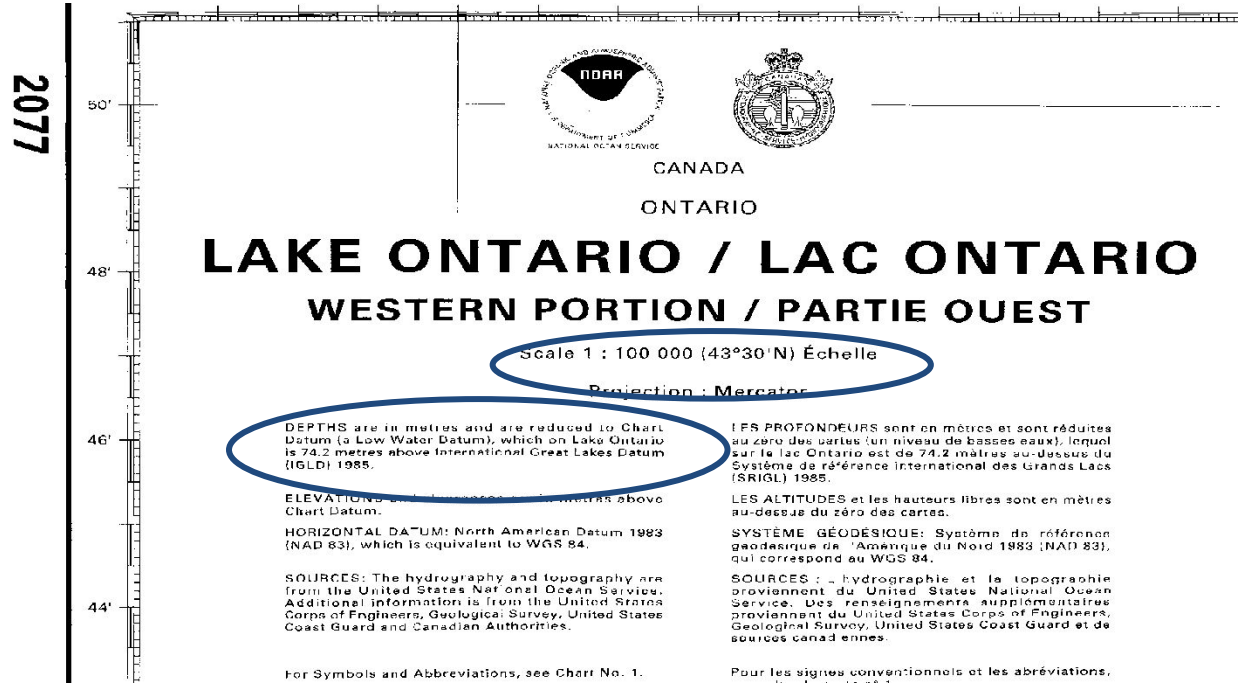


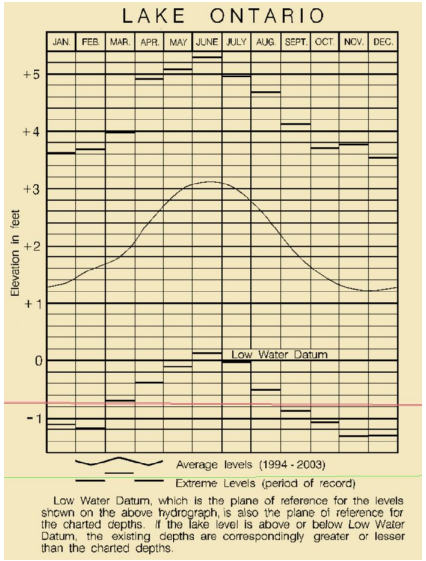
as seen on water



CHARTS – THE TITLE BLOCK

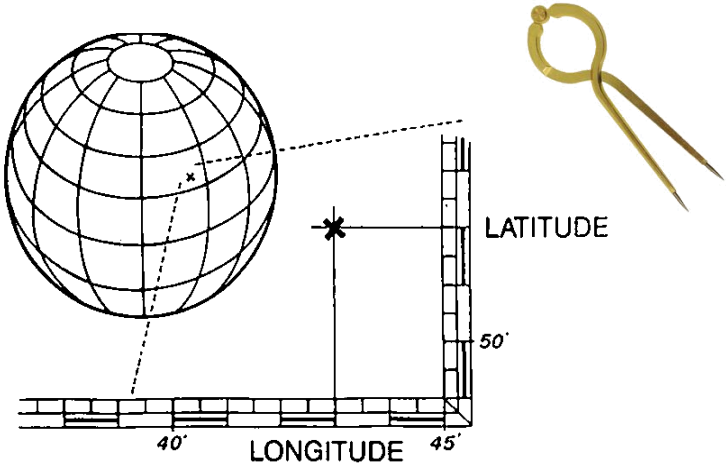
Year Published, Scale, Projection, Units of Measure





CHARTS – Measurement of Distance

Distance is measured on SIDE (latitude scale) close to where you are working



One minute on the latitude scale (1 m) equals one nautical mile

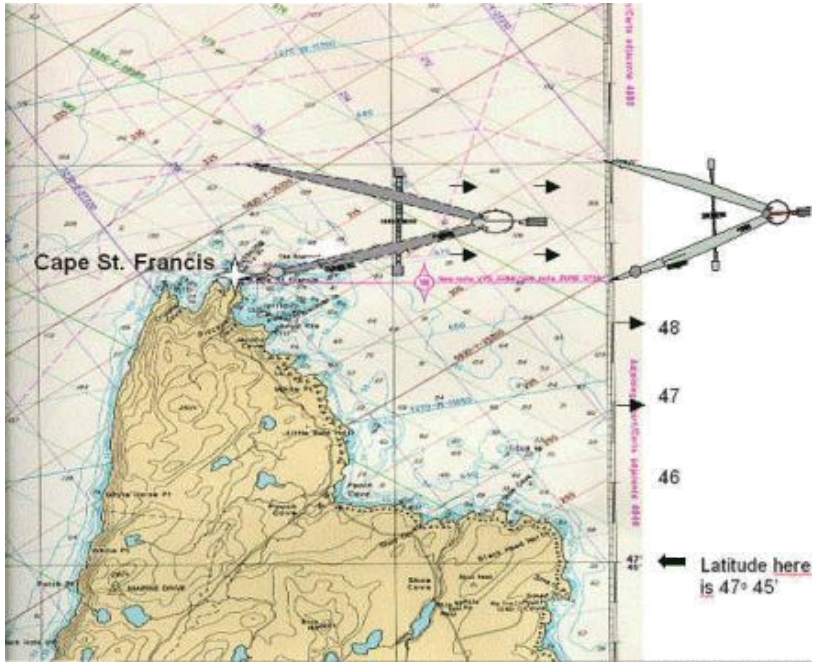
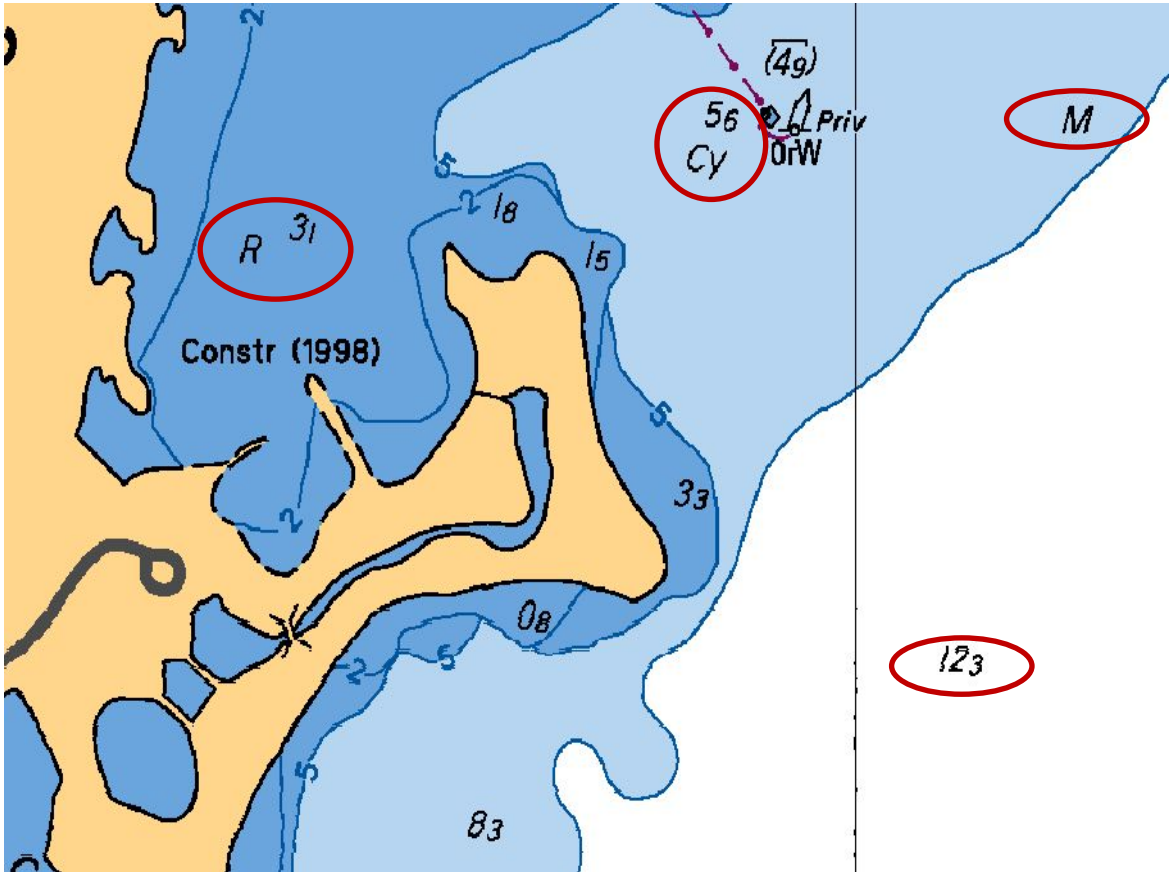


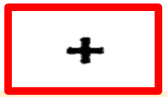
CHART SYMBOLS – TYPES OF BOTTOM

Chalk	Ck
Sand	S
Ooze	Oz
Mud	M
Clay	Cl
Coral	Co
Weed	Wd

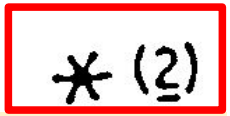
Kelp



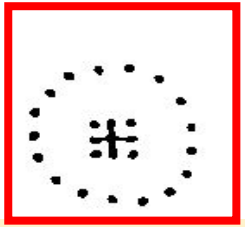
SOME CHART SYMBOLS - ROCKS



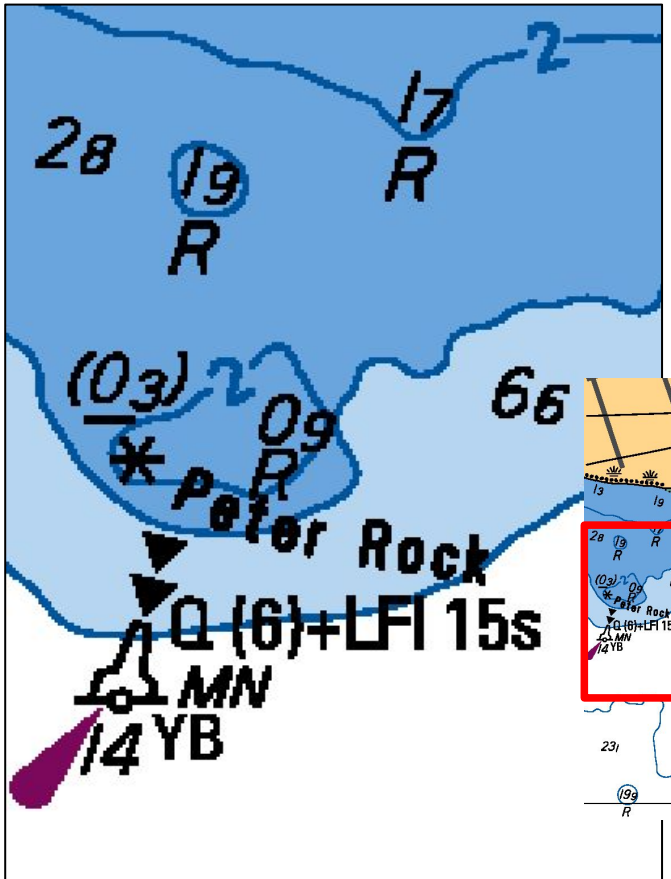
Dangerous Underwater Rock

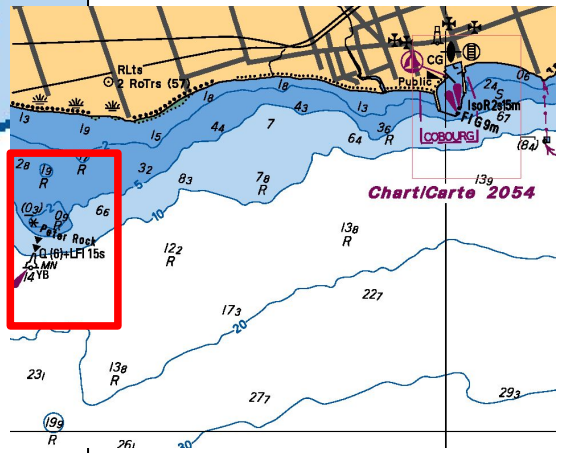


Dangerous Underwater Rock which covers and uncovers with height of tide

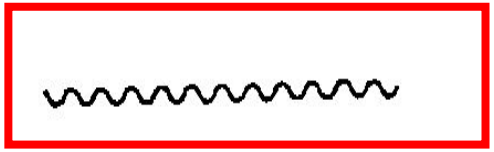


Rock awash at chart datum

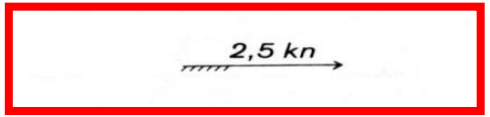




SOME OTHER CHART SYMBOLS

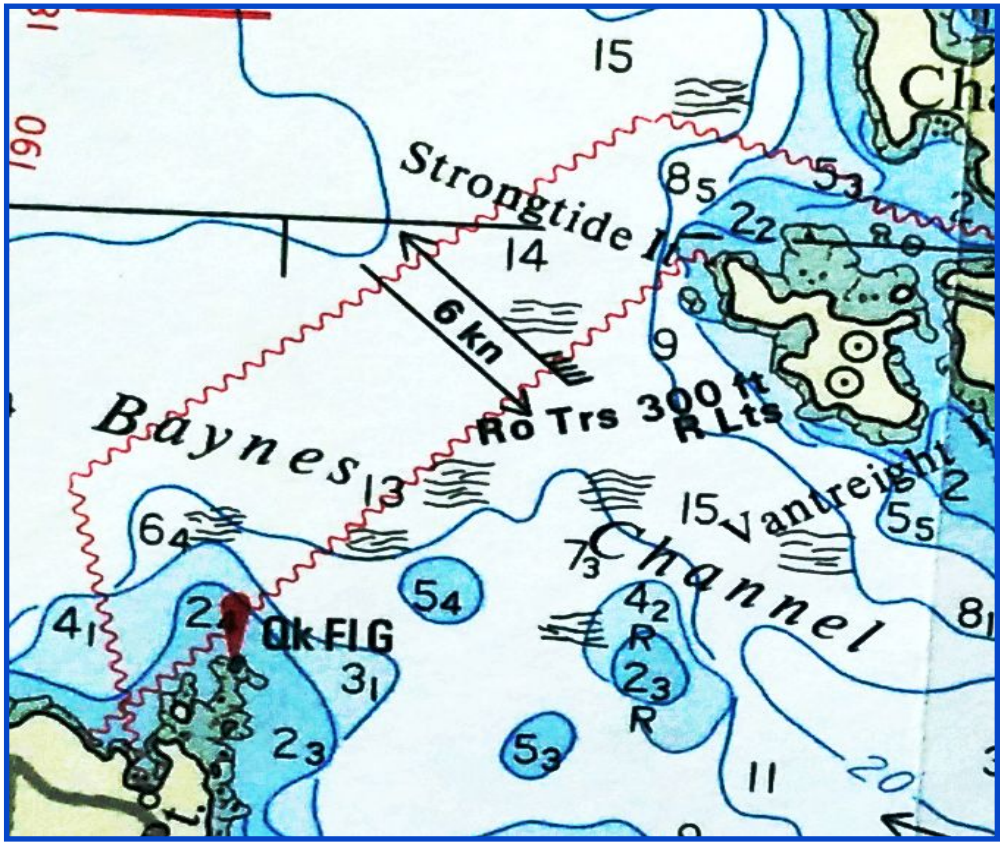


Underwater Cable



Direction & Speed of Flood Current

Underwater wreck with any part of superstructure showing



Sail Parts

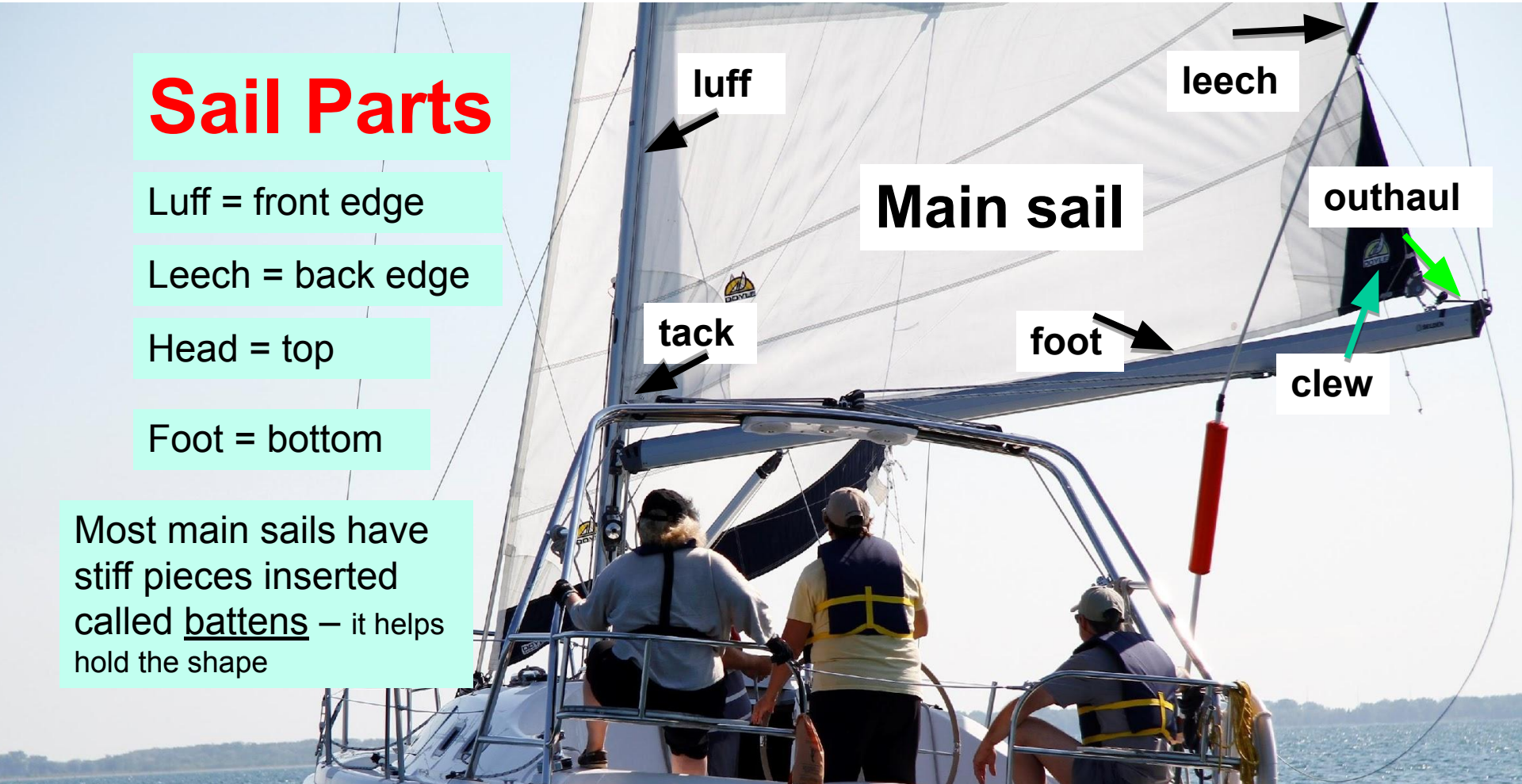
Luff = front edge

Leech = back edge

Head = top

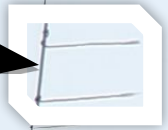
Foot = bottom

Most main sails have stiff pieces inserted called battens – it helps hold the shape



Boat Parts

tangs



telltales

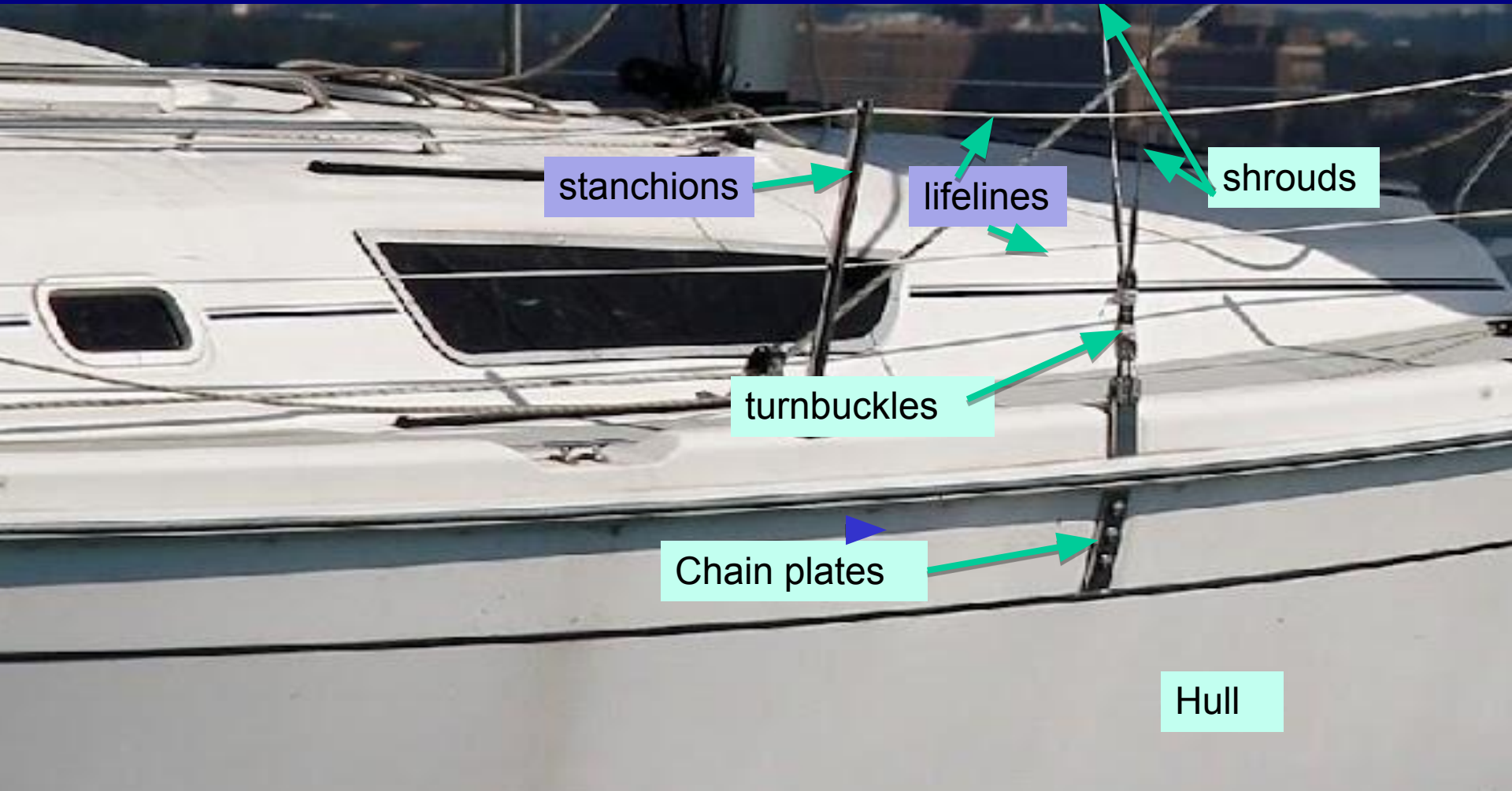
mast

gooseneck

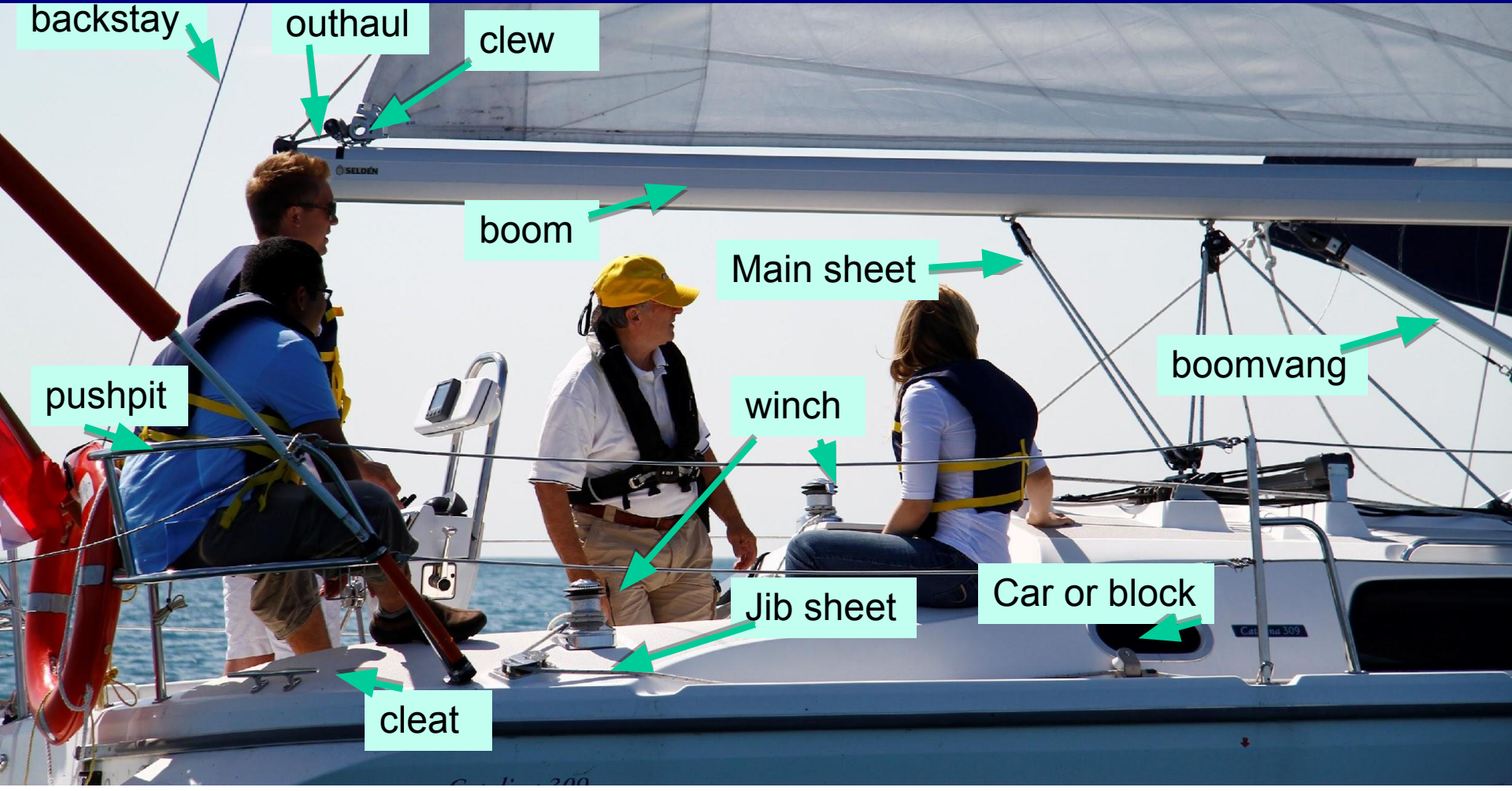
boom

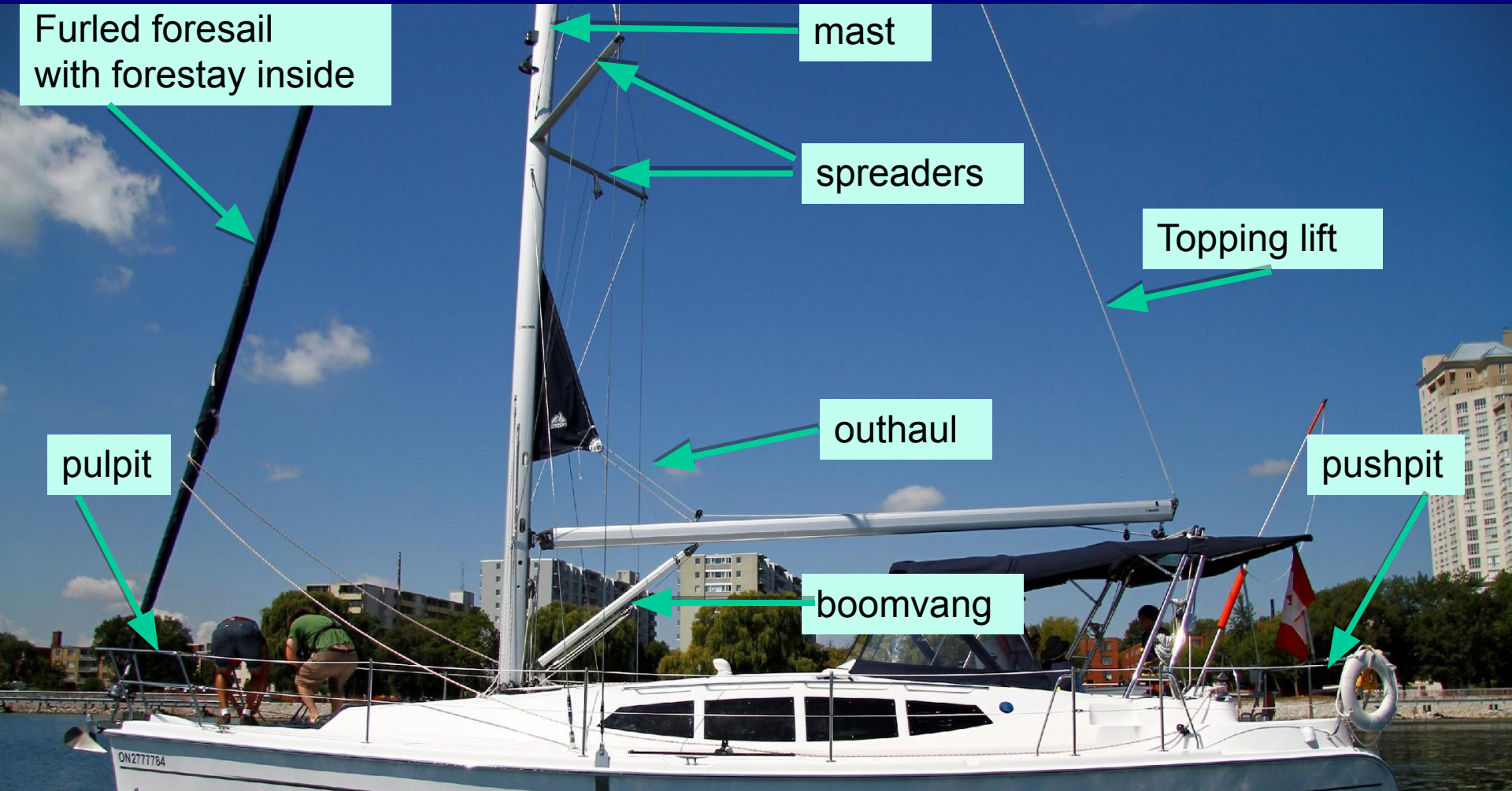
shrouds

boomvang


stanchions
lifelines
shrouds
turnbuckles
Chain plates
Hull

Basic Cruising

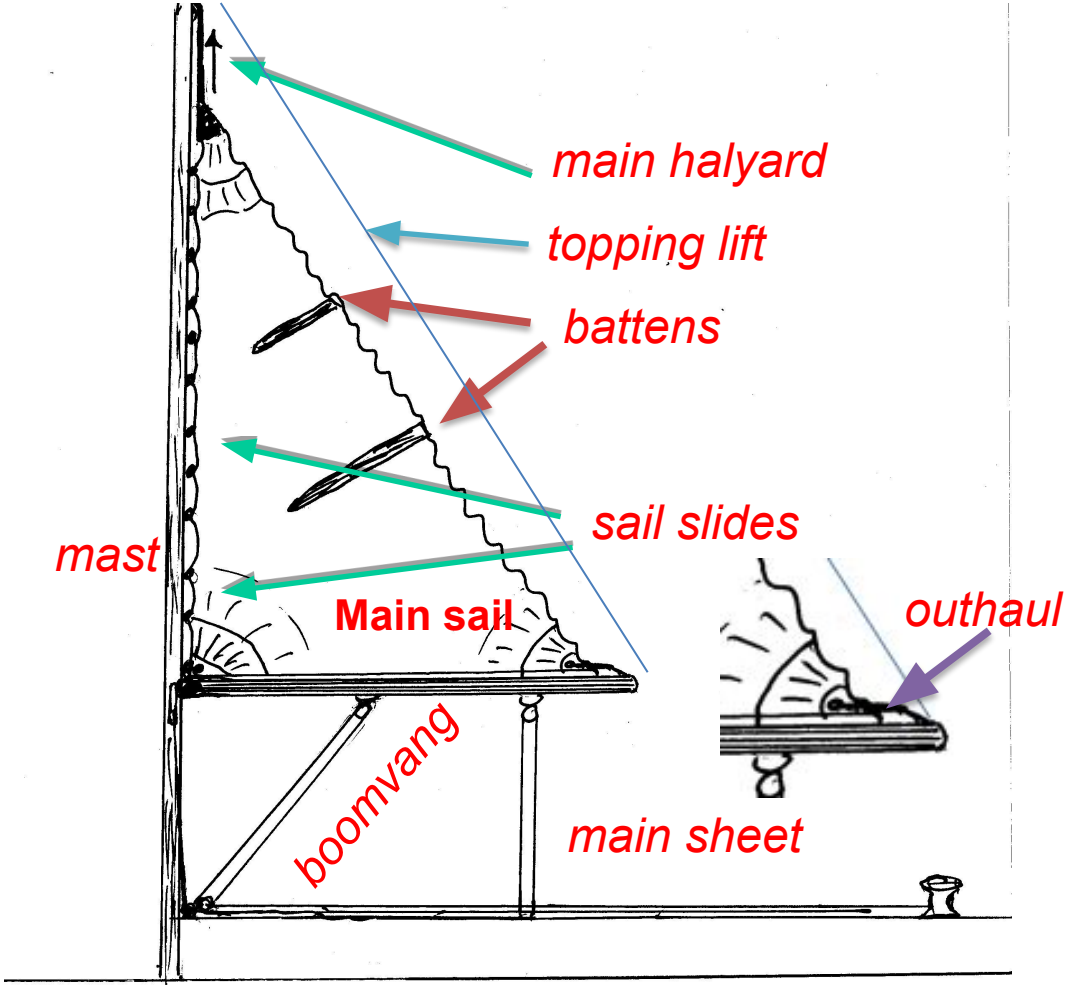



Furled foresail
with forestay inside
mast
spreaders
Topping lift
outhaul
pulpit
pushpit
boomvang
ON2777784

Basic Cruising

Boat Parts

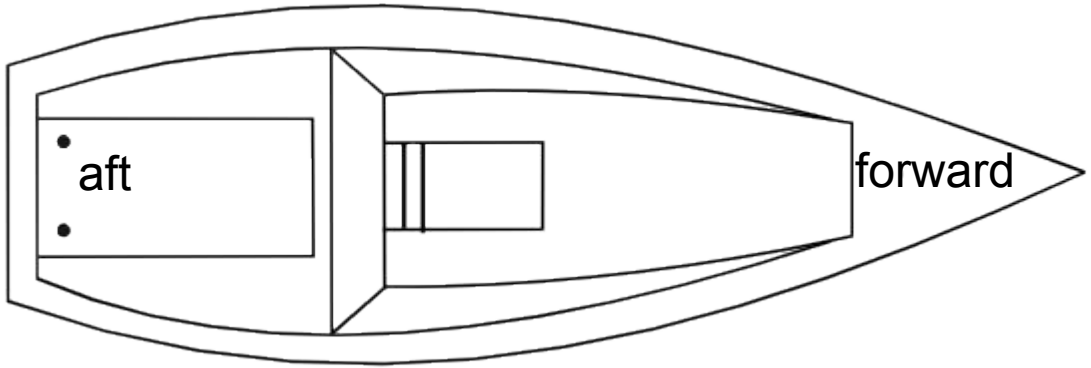
shackle



Positions

Abeam (port)

astern

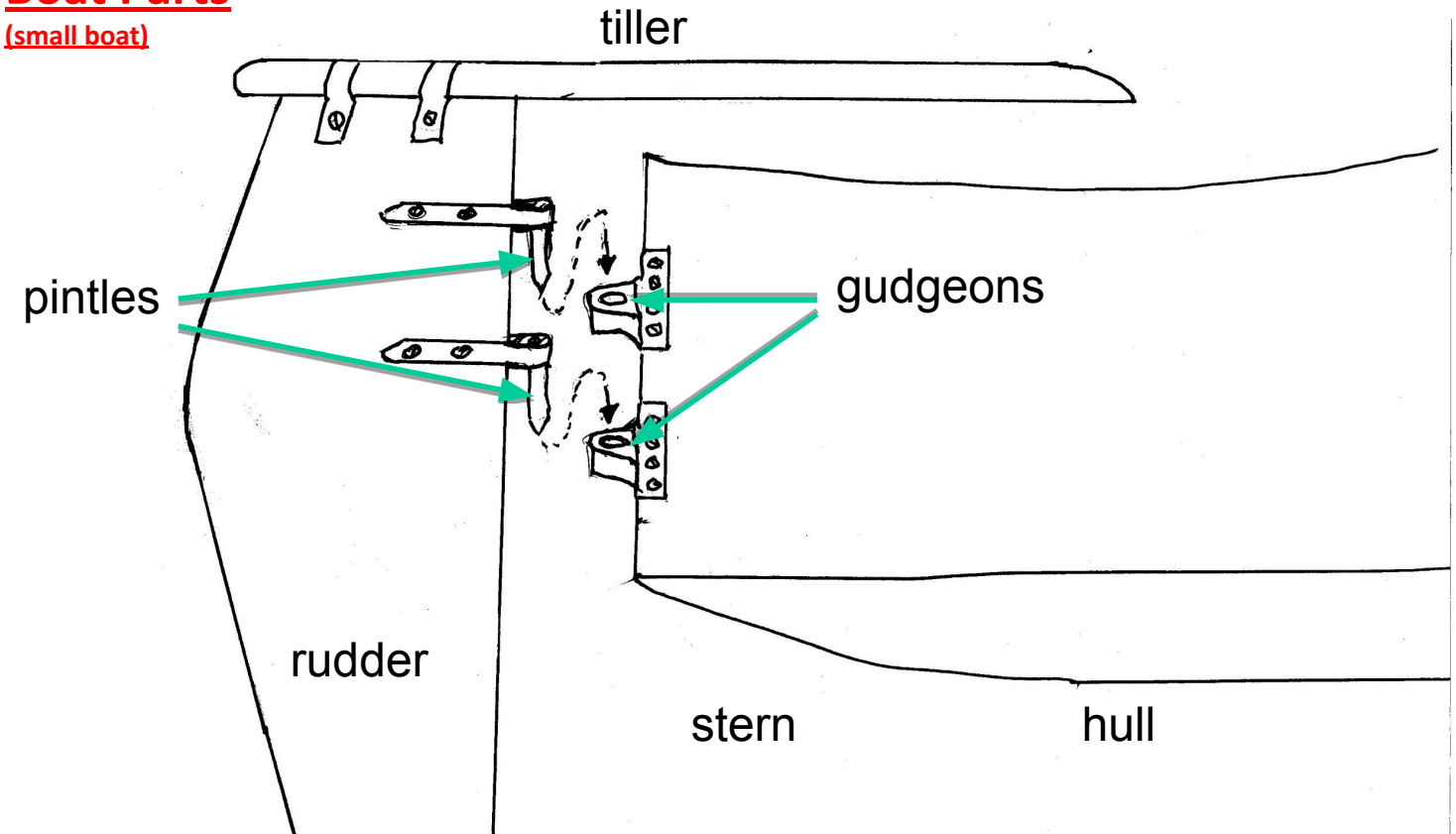


ahead

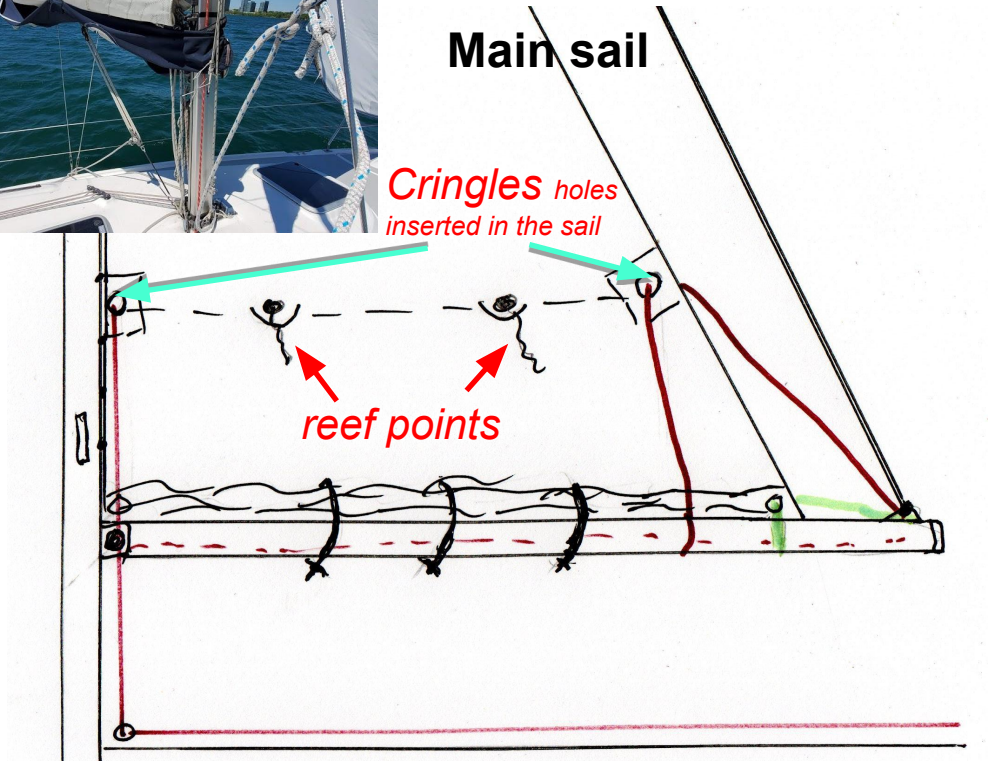
Abeam (starboard)

Boat Parts

(small boat)

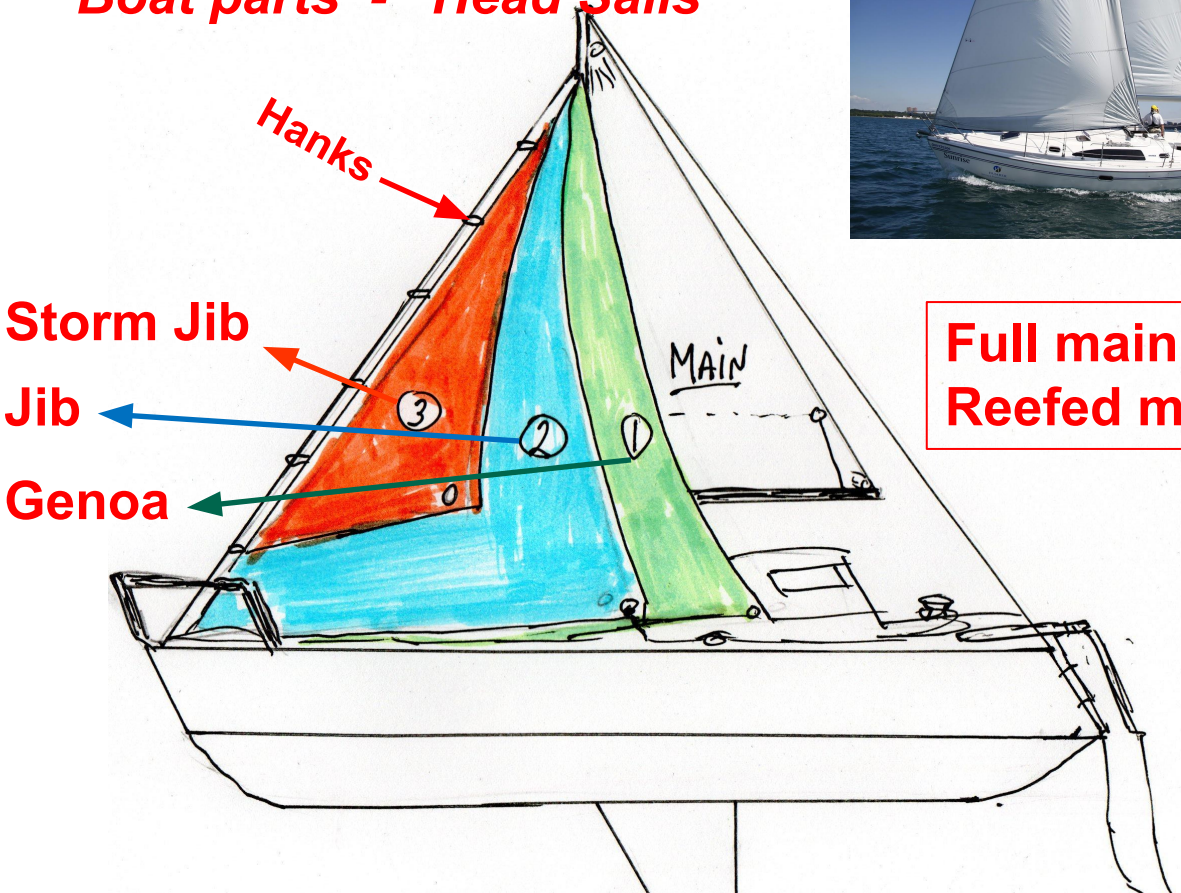


Jiffy or slab reefing



Roller furling or reefing

Boat parts - Head Sails

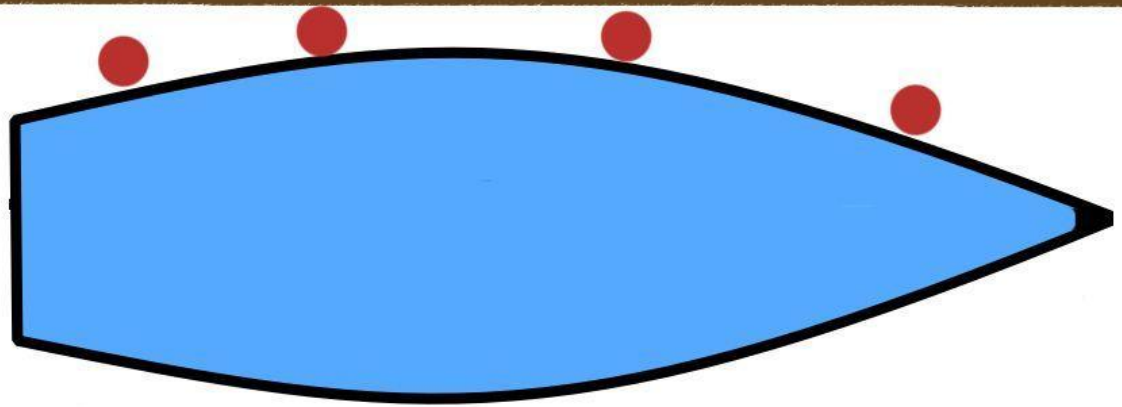


Full main
Reefed main

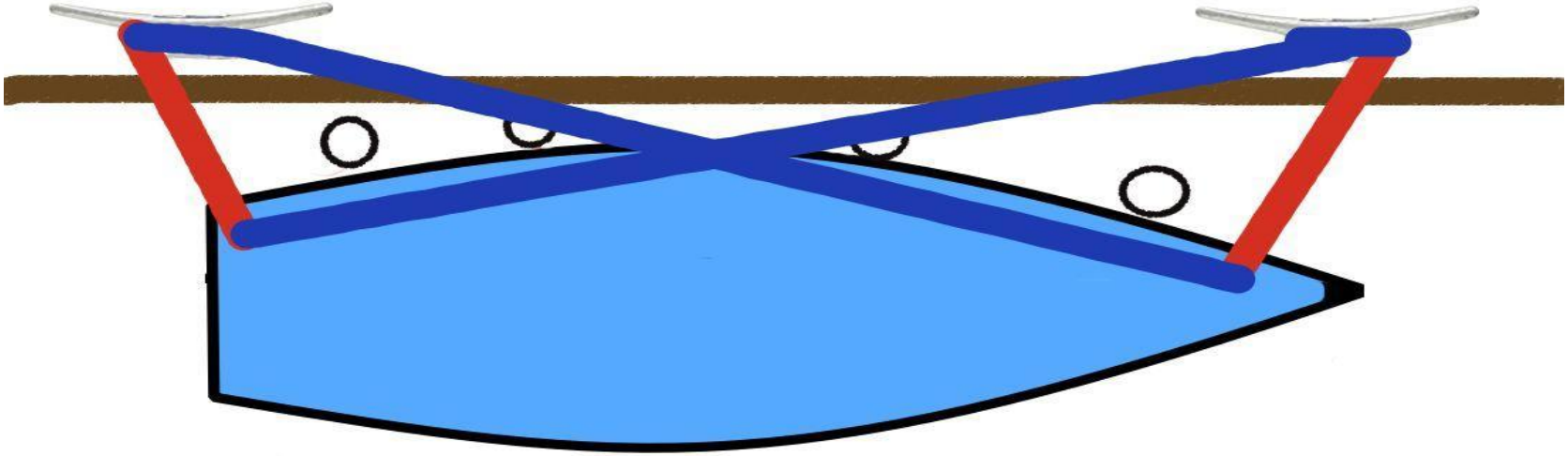
*What **sail combinations** would be selected for the following winds?*

*(name **both** sails)*

- *0-12 Knots*
- *13-18 Knots*
- *19-26 Knots*



- Fenders

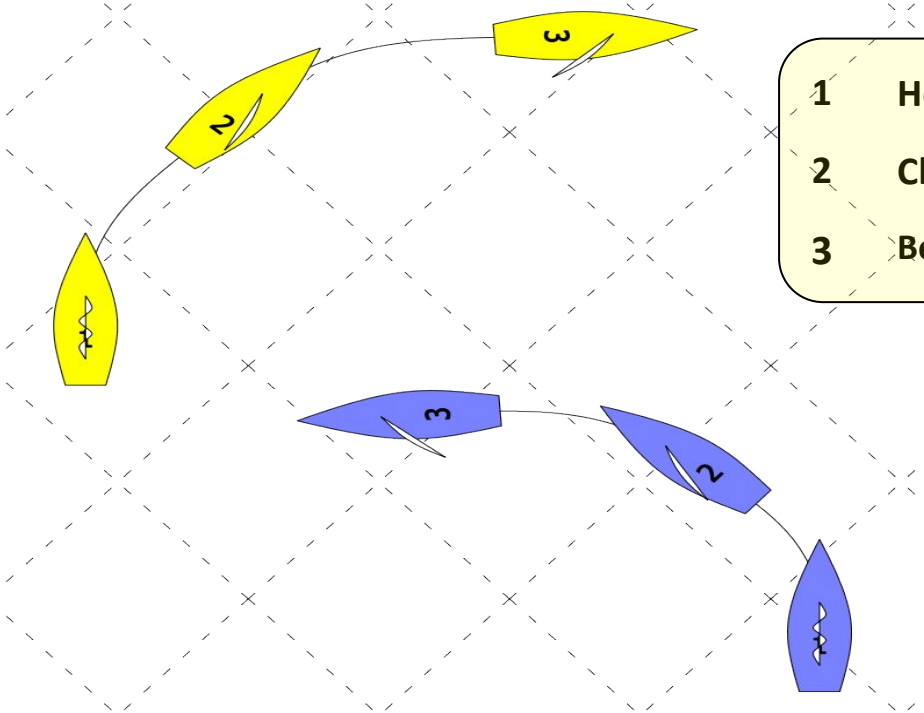


Breast line (bow & stern)

spring lines

CLEATS

Points of Sail



1 Head to wind

2 Close haul – port tack

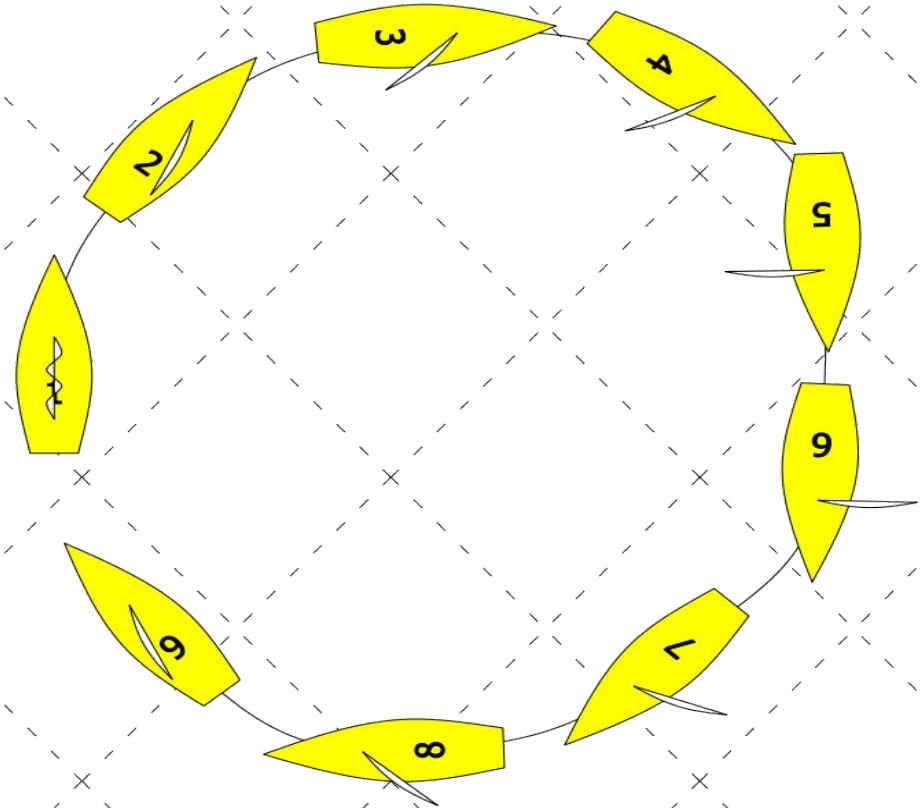
3 Beam reach – port tack

1 Head to wind

2 Close haul – starboard tack

3 Beam reach – starboard tack

Points of Sail



1 Head to wind

2 Close haul – port tack

3 Beam reach – port tack

4 Broad reach – port tack

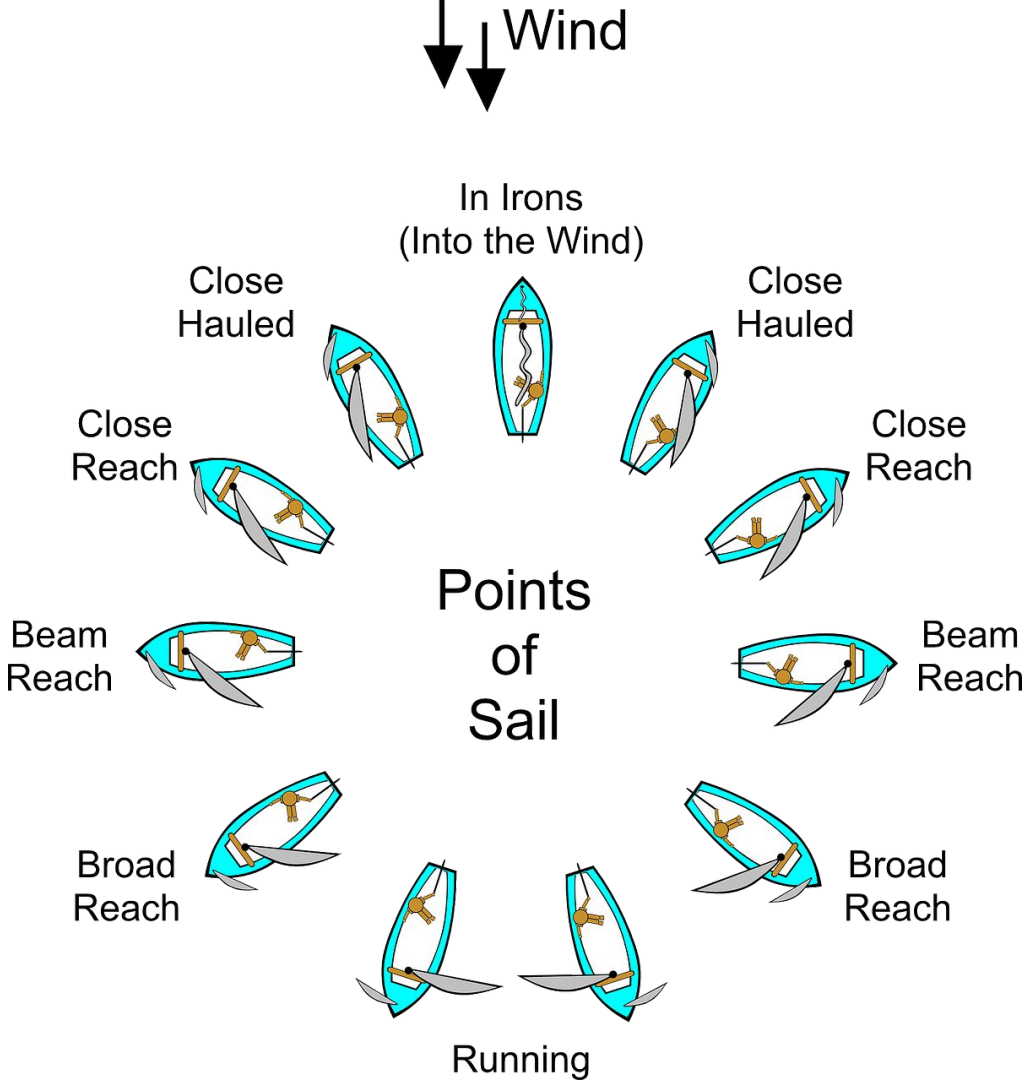
5 Run – port tack

6 Run – starboard tack

7 Broad reach – starboard tack

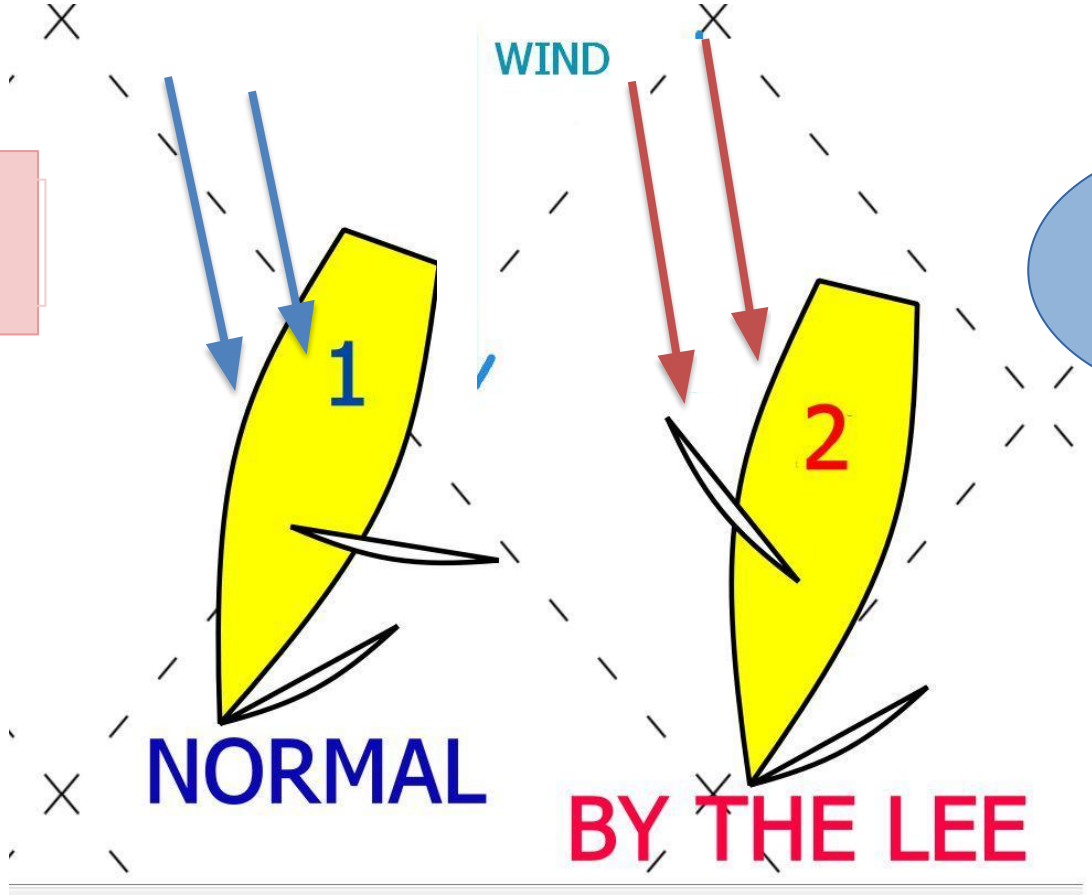
8 Beam reach – starboard tack

9 Close haul – starboard tack


Wind
In Irons
(Into the Wind)
Close
Hauled
Close
Hauled
Close
Reach
Close
Reach
Points
of
Sail
Beam
Reach
Beam
Reach
Broad
Reach
Broad
Reach
Running

Sailing by the Lee

What is the danger?



What is the point of sail?

Terminology – describing the state or action of a vessel

terminology	Description
gybe	The stern crosses the wind when underway
tack	The bow crosses the wind when underway
under way	Not at anchor, not attached to shore, not aground
no-way	Underway, but not moving
in irons	Under sail, head to wind, no steering
broad reach	Wind coming from the stern quarter
close haul	Sailing as close to the wind as can be done efficiently
luffing	When the forward part of the sail is fluttering
heading up	Alter towards the wind
bearing away	Alter away from the wind

WEATHER-

where to get a forecast

Internet – weather office

Commercial radio or television

marine VHF – WX channel

Television

Meteorological Office

Weather Fax

Navtex

Coastguard

Marina Office

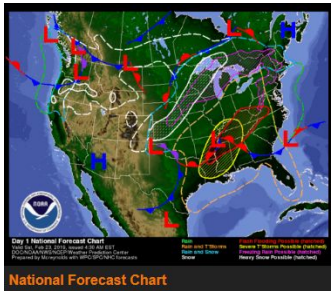
Dock master

Port Authority

Newspaper

Recorded forecast on phone

LOOK – personal observation



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Access city | Weather Topics

Western Lake Ontario

STORM WARNING IN EFFECT

Forecast | Weather Conditions | Ice Conditions | Warnings | Synopsis

Winds

Issued 10:30 AM EST 23 February 2019

Today Tonight and Sunday.

Storm warning in effect.

Wind east 15 knots increasing to east 20 this afternoon then veering to southeast 20 this evening. Wind veering to southwest 25 Sunday morning then increasing to southwest 40 near noon Sunday. Wind increasing to southwest 50 Sunday evening.

Waves

Issued 10:30 AM EST 23 February 2019

Today Tonight and Sunday.

Waves less than one half metre building to one half metre near noon and to one early this evening. Waves building to 2 to 3 Sunday afternoon and to 3 to 4 Sunday evening.

Extended Forecast

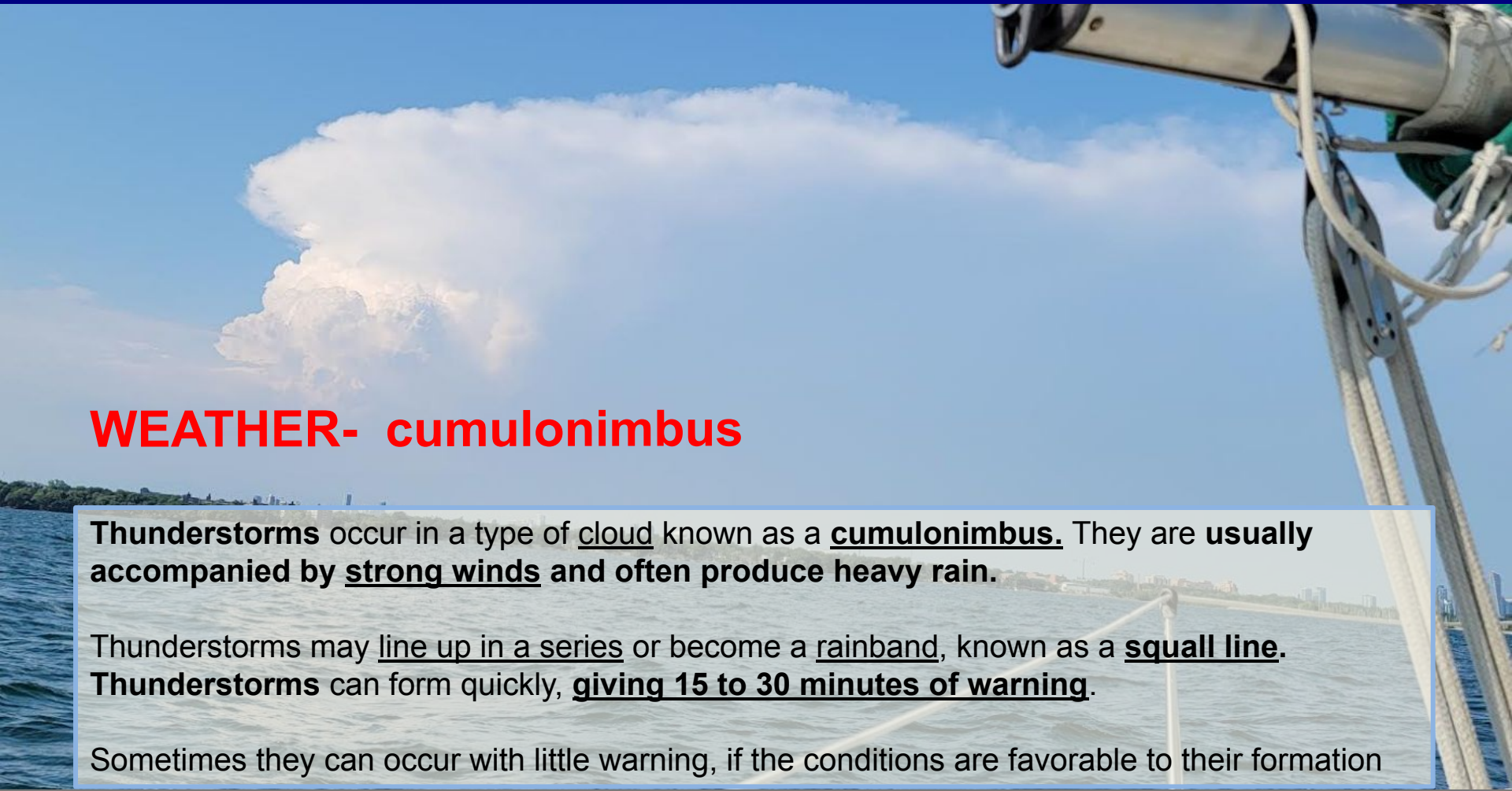
Issued 03:00 AM EST 23 February 2019

Monday

Wind west 50 knots diminishing to west 45 in the morning and to west 35 in the afternoon.

Tuesday

Wind northwest 30 knots diminishing to northwest 20



WEATHER- cumulonimbus

Thunderstorms occur in a type of cloud known as a **cumulonimbus.** They are **usually accompanied by strong winds and often produce heavy rain.**

Thunderstorms may line up in a series or become a rainband, known as a **squall line.** **Thunderstorms** can form quickly, **giving 15 to 30 minutes of warning**.

Sometimes they can occur with little warning, if the conditions are favorable to their formation

WEATHER- forecast

How long do we have to prepare?

a) Heavy rain?
b) Heavy winds?
c) Fog?
d) Thunderstorms?

Western Lake Ontario

STRONG WIND WARNING IN EFFECT

SQUALL WATCH IN EFFECT

Forecast | Weather Conditions | Ice Conditions | Warnings | Synopsis

Winds

Issued 10:30 AM EDT 29 May 2020

Today Tonight and Saturday.

Strong wind warning in effect. Squall watch in effect.
Wind southwest 15 knots with gusts to 35 near thunderstorms today and early this evening. Wind becoming west 15 near midnight then diminishing to west 10 late overnight. Wind increasing to northwest 20 Saturday afternoon.

Extended Forecast

Issued 03:00 AM EDT 29 May 2020

Sunday
Wind light.

WEATHER TERMINOLOGY (PREDICTED WINDS)

Light Winds – less than 15 knots

Moderate Winds – 15 to 19 knots

Strong Wind Warning - winds 20 to 33 knots

Gale Warning - winds 34 to 47 knots

Storm Warning - winds 48 to 63 knots

Hurricane Force Wind Warning – over 64 knots

LIMITED VISIBILITY – warning sound (required)

Sailing vessel – one long, 2 short – every 2 minutes —— – –

Power vessel – one long – every 2 minutes ——

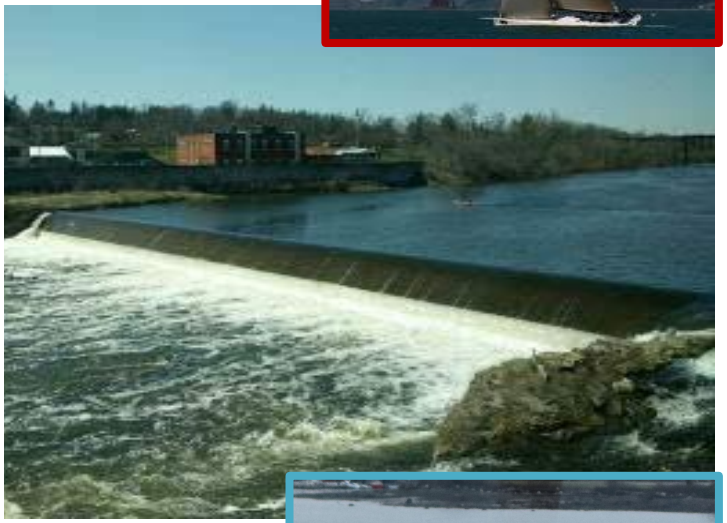
- **Navigation lights on**
- **Make sounds required**
- **Slow speed**
- **Look out using all means including sound, visual, radar, VHF radio**
- **Plot your position**

LIMITED VISIBILITY

Other Precautions

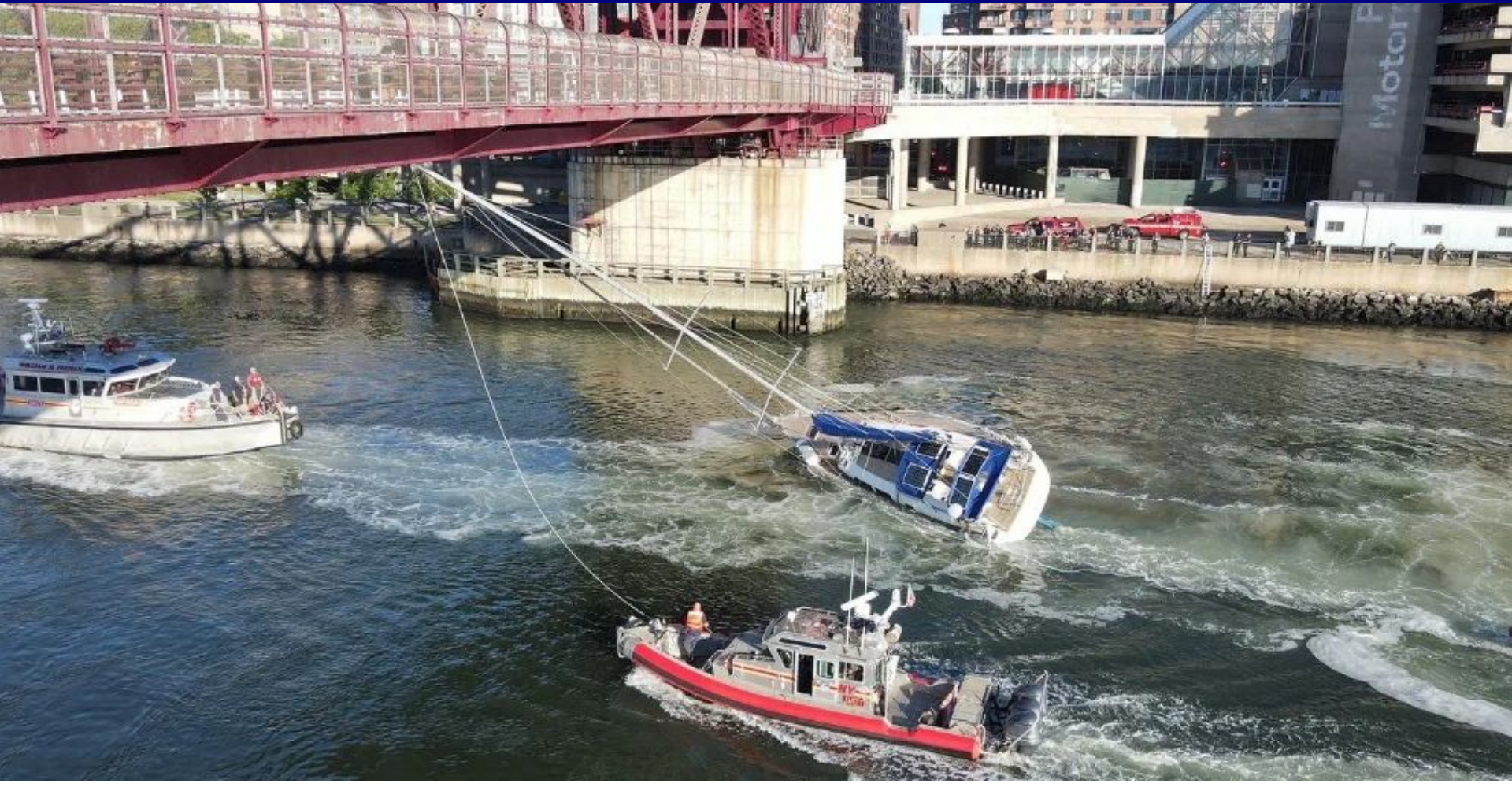
- Monitor Depth Sounder
- Determine position - GPS
- Wear PFDs, Safety Harnesses

LOCAL HAZARDS – in this area



- Bridges
- Power Lines
- Low head dams
- Underwater cables
- Tides and Currents
- Outflow Winds - *Inner Harbour*
- Cliffs - *Scarborough Bluffs*
- Rough water caused by shoaling
- Commercial vessels – ferries, freighters
- Aircraft – landing zone in Toronto Harbour

Basic Cruising



KNOTS

REEF KNOT
Join 2 lines of equal thickness
* temporary

SHEET BEND
Join 2 lines of <u>unequal</u> thickness

ROUND TURN
TWO HALF HITCHES
Line to post or ring

BOWLINE
Non- slip loop
Used for tying jib sheets to sail

CLOVE HITCH
Tie a line to a post

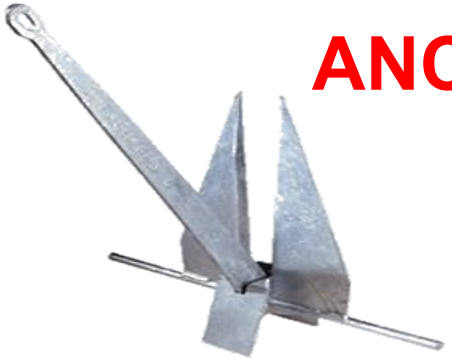
FIGURE 8
Stopper knot – **prevent a line from pulling through**

ANCHORING

Pre Planned Anchoring vs and Emergency Anchoring

Is your anchor rode tied to the boat?

ANCHORS – where they are most useful

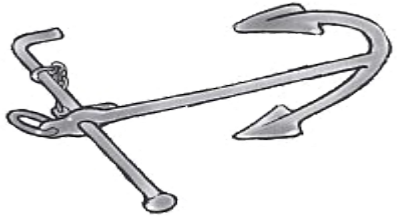


Danforth - good for mud and sand. **Best in soft sea beds**. Easy to stow, light.

CQR (plough) – **best in mud or clay**
Difficult to stow.

Bruce– light weight, digs in well, **good all purpose anchor**, but does not work in weed. Difficult to stow.

Grapnel – good on rock. Useful for kedging. **Useless in sand.**



Fisherman/Navy – good in mud, sand. Can get fouled. **Heavy**.

ANCHORAGES

A Desirable Anchorage

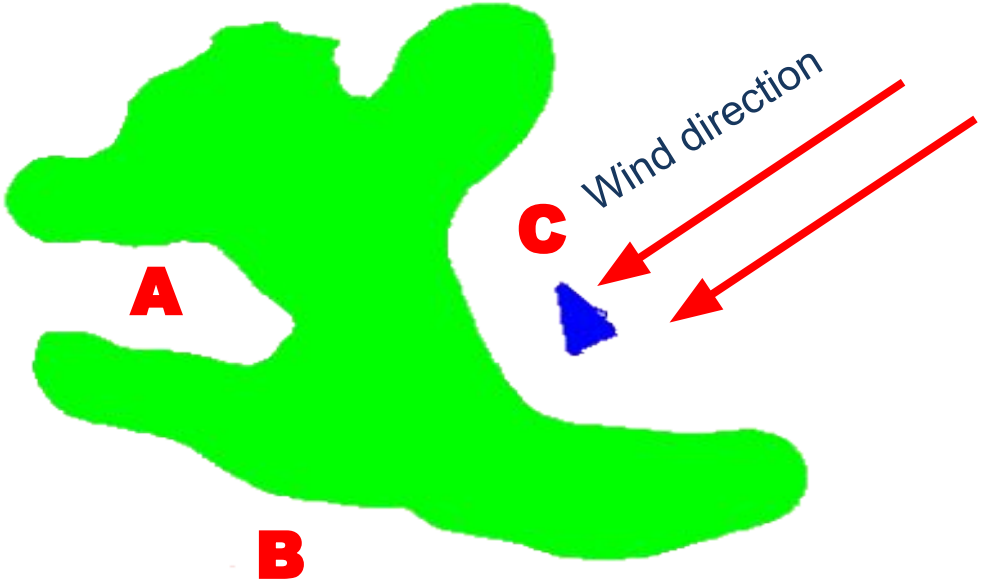
- **Good holding bottom.**
  - **Characteristics of sand, rock, mud, weed, ooze.**
  - **Nature of the Sea Bed** - *How can we find out?*
  - ***What is best sea bed for anchoring****?*
  - ***What is worst?***
- **Suitable depth [*scope*].**
  - **At low tide**
  - **at high tide.**

ANCHORAGE

Features of a Secure <u>Anchorage</u>

Shelter from Weather and Waves

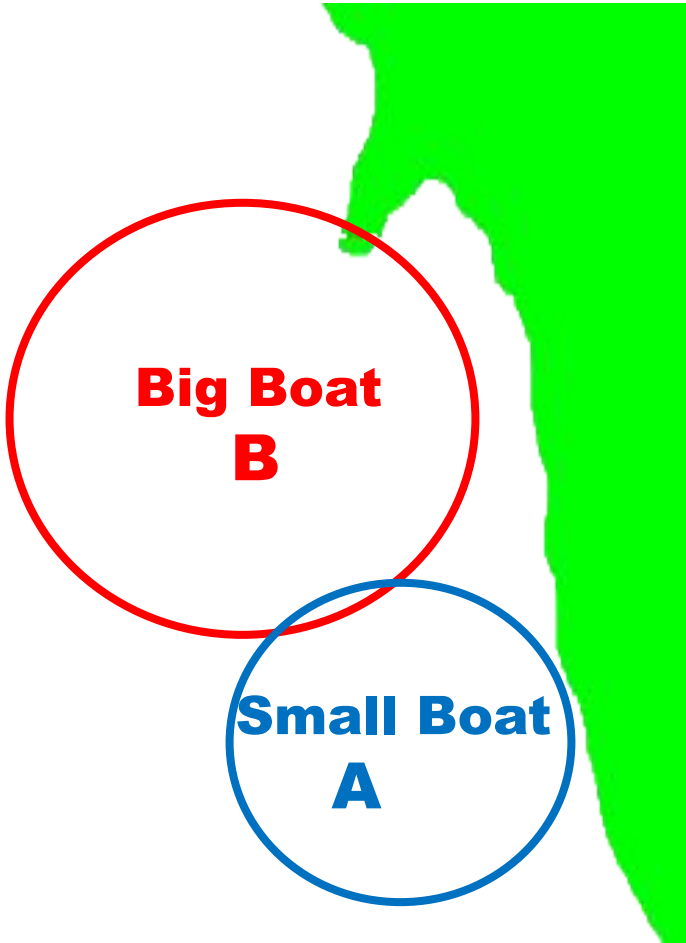
Where is best spot to anchor? For lunch? Overnight?



ANCHORAGE

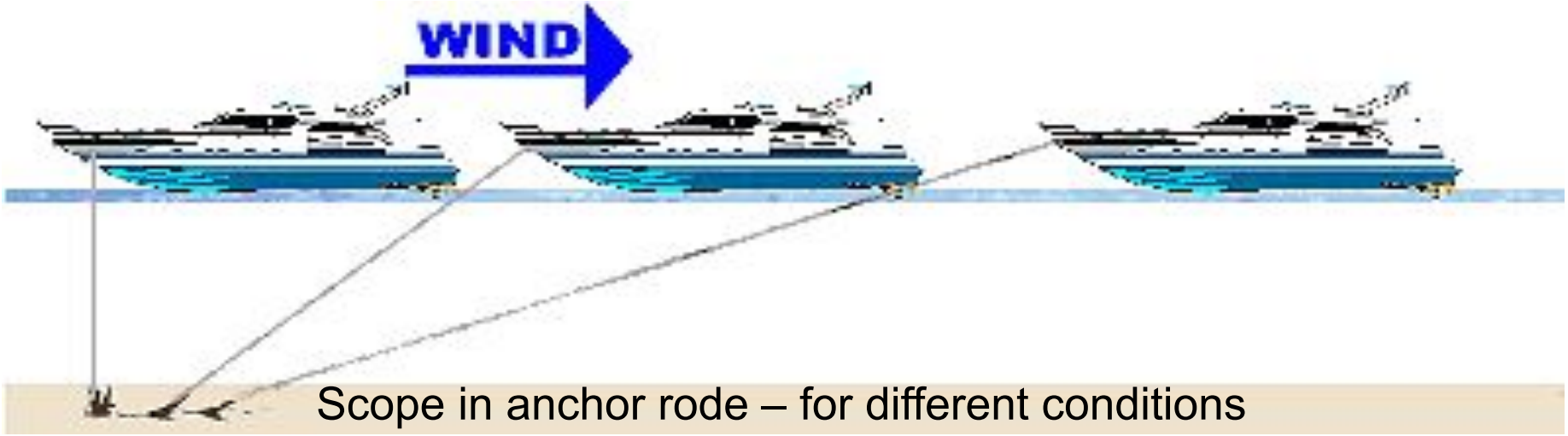
Features of a Secure Anchorage

Swing Room



1. What happens if wind shifts?
2. What happens if there are strong currents?

ANCHORING



Scope in anchor rode – for different conditions

RODE – use <u>water depth</u> plus <u>freeboard</u>, ratio:

Lunch - 3 to 1 **Overnight - 5 to 1**

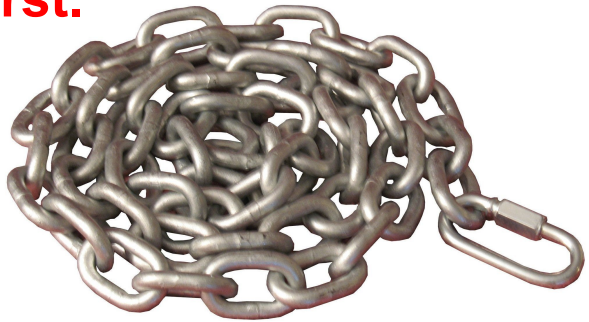
Stormy - 7 to 1

5 times (depth + freeboard)

ANCHORING

Holding Characteristics – How does an anchor work?

Most anchor rodes have a length of chain first.

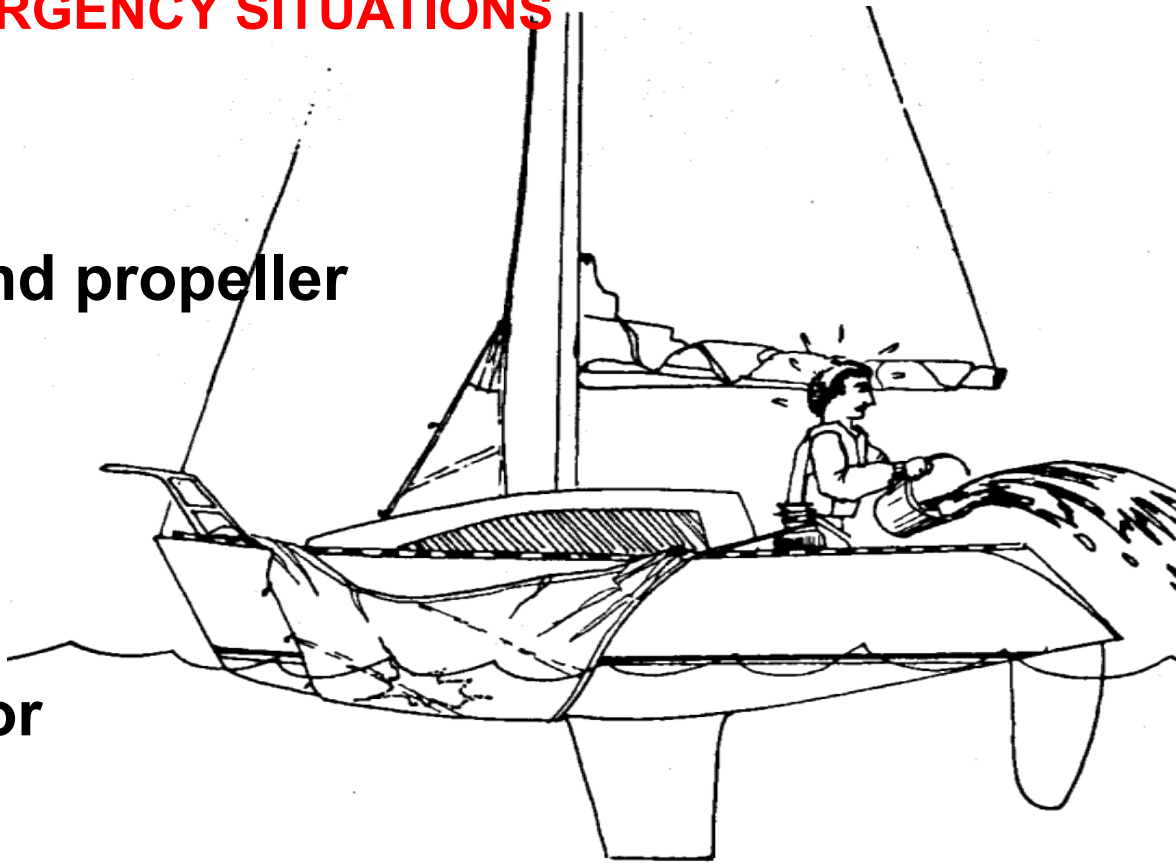


Benefits:

- **Shock absorber**
- **Reduces chafing**
- **Extra Weight to help horizontal pull on the anchor**

EMERGENCY SITUATIONS

1. Engine failure
2. Line wrapped around propeller
3. Steering failure
4. Springing a leak
5. Fire
6. Grounding at anchor



EMERGENCY SITUATIONS

CAPSIZING, SWAMPING, SINKING, GROUNDING

- **Put on PFDs**
- **Stay with the Boat**
- **Account for everyone aboard**
- **Use Distress Signals!**

Water Incidents - Key risk - drowning!

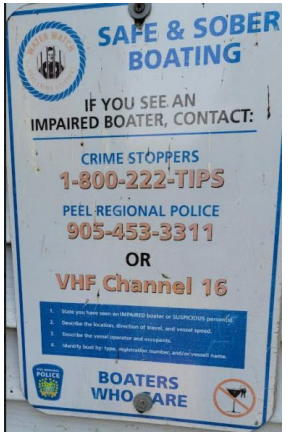
WEAR A PFD

THE BEST WAY TO AVOID DROWNING

Only 15% of persons who drowned were WEARING one

RISK FACTORS in DROWNINGS

1. **Not wearing a PFD**
2. **Consuming alcoholic beverages is the next most common (.08 blood alcohol applies as on the road)**



Other risk factors include

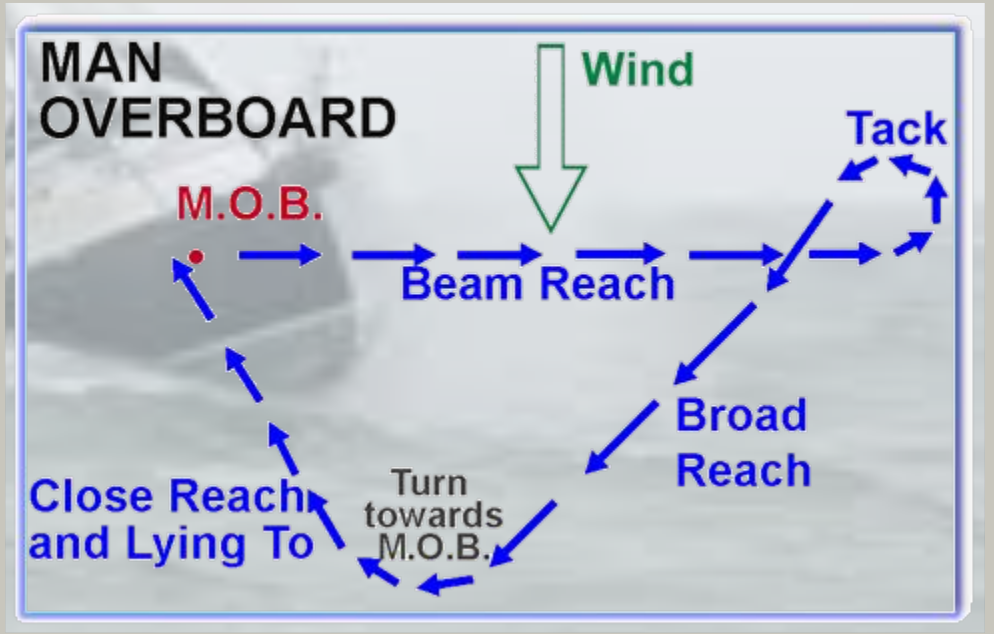
- **cold water, currents and strong winds, rough water.**
- **high risk behaviours like abrupt turns, standing up in small boat.**

EMERGENCY SITUATIONS

CREW OVERBOARD

Slow down

- **Do not bring propeller close to COB**
- **Use heaving lines, life buoy, PFDs – beware of fouling propeller**
- **Assign tasks to crew members, spotter to continuously observe person in the water, others to handle safety equipment**
- **Use boarding ladder, swim platform, lifting sling to retrieve crew from water**



Are there other methods? What about using power (engine)?

PRACTISE, PRACTISE, PRACTISE

STANDARD MARINE DISTRESS SIGNALS

MARINE RADIO

DISTRESS CALL

Use: 2182 kHz (MF) or channel 16, 156.8 MHz (VHF) DSC alert, channel 70 (only for DSC type radios and where the service is offered)

CALLING PROCEDURES

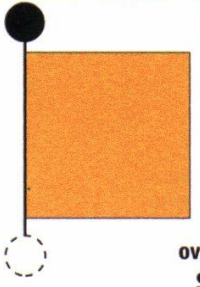
Mayday Mayday Mayday	Immediate danger for persons or ship
Pan Pan Pan Pan Pan Pan	Urgent message about the safety of a person or ship

- Give vessel name and call sign
- State position of vessel
- Describe the emergency

EMERGENCY POSITION INDICATING RADIOBEACONS (EPIRBs)

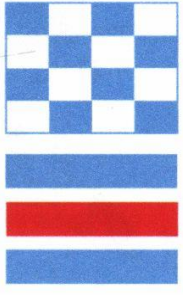
Use alarm signal

CODE FLAGS



N over C

BALL over or under SQUARE



DISTRESS CLOTH

To attract attention: spread on cabin or deck top, or fly from mast.

ARM SIGNAL

Keep raising and lowering outstretched arms.

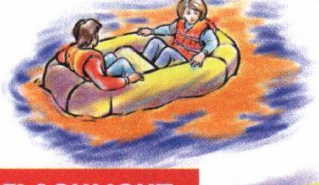
SOUND SIGNALS

Make continuous sound with any fog-signalling apparatus. Fire a signal gun or other explosive signal at one-minute intervals.

FLARES

Type A: Rocket Parachute Flares
Type B: Multi-Star Flares
Type C: Hand-Held Flares
Type D: Smoke Signals (Buoyant or Hand-Held)

DYE MARKER



FLASHLIGHT

Or other light source

VHF RADIO

<u>Not</u> required, but *highly desirable safety equipment*

- **call for assistance**
- **listen to weather reports, weather warnings**
- **contact local marinas, the Coast Guard, and near-by vessels**

- **A Restricted Operators Certificate (Maritime) is required under Canadian law to operate a VHF radio**
- **Pleasure craft do not usually need a Station License**

- ***Scenario* – NO Certificate, but you have a genuine emergency - action?**

VHF RADIO

Messages sent on VHF channel 16:

1. **Call for grave and imminent danger (Mayday-Mayday Mayday)**

   (alternate on *some* providers - cell phone *16 or #16 – not as effective or reliable)

2. **Urgent messages concerning the safety of persons or vessels (Pan-Pan - Pan-Pan – Pan-Pan)**

In both scenarios, immediately give the following information:

- **the name of your boat; description**
- **your position;**
- **the nature of your problem; and**
- **the type of help you need.**

Post these guidelines near your radio.

For routine calls, contact the other vessel on Channel 16, then switch to a working channel – NOT Channel 16

3. **Safety messages containing navigational or meteorological warning (SECURITÉ)**

You may not interfere with a higher priority call

EMERGENCY SITUATIONS – RUNNING AGROUND

"Kedging" means using the anchor to move the boat

Heel the vessel

Other ideas for a small vessel?

EMERGENCY SITUATIONS – RUNNING AGROUND

Other ideas for a small vessel?

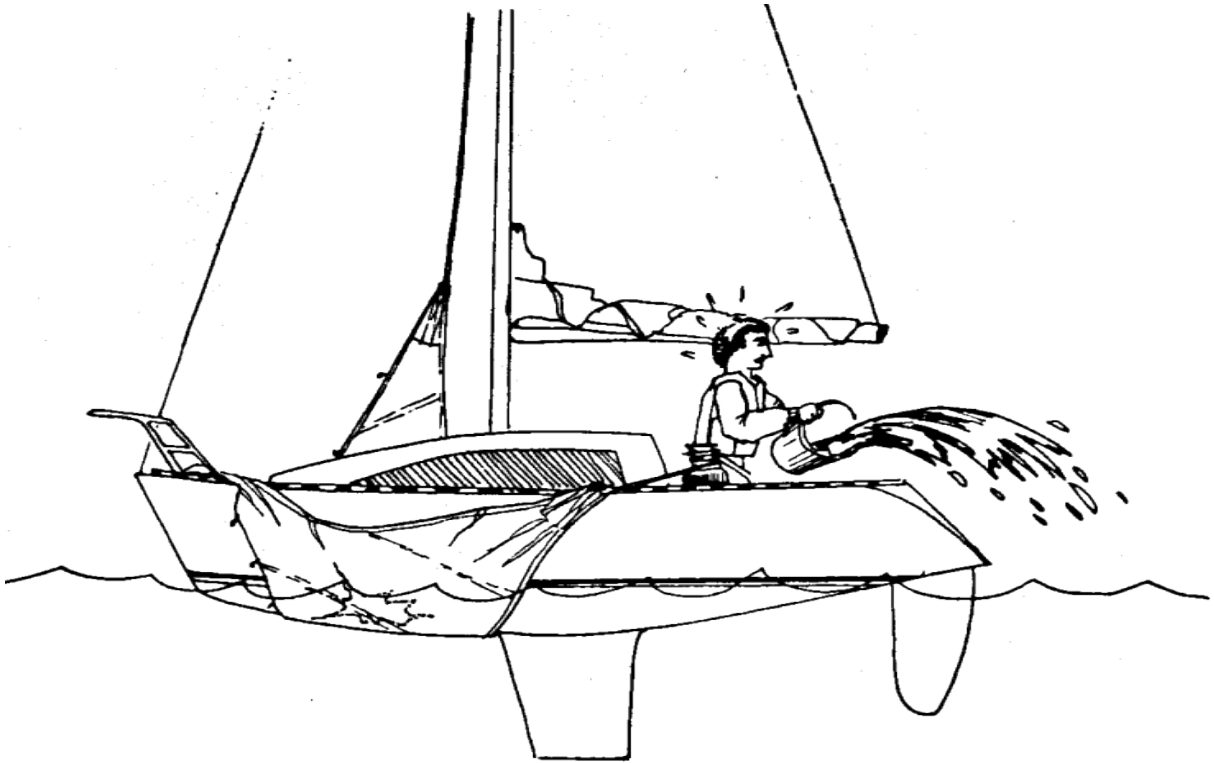
EMERGENCY SITUATIONS – RUDDER FAILURE

Jury rig a rudder

Drag object behind

Shortening the line on one Side will pull the boat to that side.

EMERGENCY SITUATIONS – SPRINGING A LEAK



COLD-WATER SHOCK

tip: HOLD YOUR BREATH when entering the water

Symptoms: elevated heart rate and involuntary rapid breathing, hyperventilating.

- **can experience muscle spasm and elevated blood pressure, choke on water or suffer heart attack or stroke**
- **Cold water can paralyze your muscles instantly**
- **Death from cold shock can occur in 3 – 5 minutes**
- **Wearing a PFD can help you survive until cold shock dissipates**

When the victim is retrieved:

- **Dry the person head to toe, then replace wet clothing with dry**
- **Must get victim out of cold water and into warm environment and monitor symptoms while getting medical attention. (Mayday)**

WHAT IS HYPOTHERMIA?

- **A lowering of the temperature of the body core – the brain, the heart and vital organs located in the groin area.**
- **Wearing a flotation device provides major benefits!**

general timeline for cold water:

1 minute: can no longer grab line – fine motor control lost

10 minutes: muscle control lost – only a PFD will keep the victim afloat

30 minutes: death from hypothermia

HYPOTHERMIA

WHY DOES IT MATTER?

- **Severe hypothermia is life-threatening!**
- **Impacts your judgment**
- **Reduces your effectiveness as skipper or crew!**
- **You stop contributing and become a liability!**

H.E.L.P. position

TREATMENT FOR HYPOTHERMIA

a) Remove to better environment

b) Dry the person head to toe, then replace wet clothing with dry

c) Warm drink – no caffeine or alcohol, but only if patient can hold the cup

d) Keep warm with blankets etc.

If person is not responding to treatment

a) Subject requires immediate medical assistance

b) Call MAYDAY

c) Transport to nearest hospital

CARBON MONOXIDE POISONING

Colourless, odourless poisonous gas generated as a by-product of combustion

Sources on a boat include gas or diesel engines, fuel burning stoves and heaters and barbecues. If inadequate ventilation gases can build to toxic levels

Symptoms include headache, nausea, dizziness and fatigue and are sometimes confused with flu.

- **Other symptoms include shortage of breath, chest pain, impaired judgment, vomiting, seizure and memory and walking problems**
- **Imperative that all potential sources of CO are well ventilated, and CO monitors installed on the vessel**
- **Swimmers should not swim in vicinity of engine exhaust**

Remove the person from the environment and seek prompt medical attention

HEAT EXHAUSTION

- A **medical emergency** that can be fatal if not properly and promptly treated
- Symptoms of heat stroke are **similar to symptoms of heart attack**
- Can deteriorate from heat exhaustion to **heat stroke**

Symptoms include:

dizziness, headache, muscle cramps, high body temperature, absence of sweating, hot red or flushed skin, rapid pulse, difficulty breathing, strange behaviour or hallucinations, coma.

Treatment requires immediate cooling of victim and immediate notification of emergency services.

To prevent heat exhaustion:

- avoid dehydration and avoid vigorous physical activity in hot weather
- Replenish electrolytes

SEASICKNESS

Sensory conflict of information to the brain – typically happens when there is unexpected motion in different directions

Symptoms include:

Nausea, chills, shivering, cold sweats, inattention, confusion and vomiting

Continues seasickness may lead to concern for dehydration

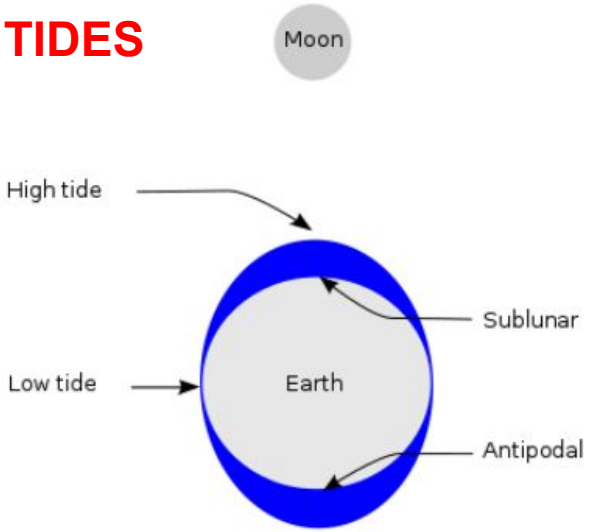
Sufferers may try to get off the vessel miles off shore so may require continual attention!

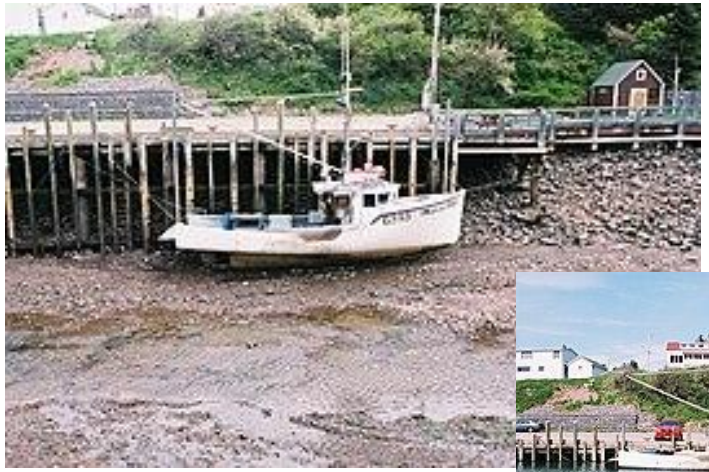
Try to take medication before the onset of seasickness

Provide sufferers with activity that requires them to look at the horizon

Over time symptoms should abate as body adjusts to vessel's motion

TIDES





Tides are the rise and fall of sea levels caused by the combined effects of the gravitational forces exerted by the Moon and the Sun, and the rotation of the Earth.

Tide tables can be used for any given locale to find the predicted times and amplitude (or "tidal range").

HALIFAX AST Z+4

Note: Table in Standard time
+1 hour for Daylight time

2019

TIDE TABLES

July-juillet

Day	Time	Metres	Feet	jour	heure	mètres	pieds
1	0043	**0.2**	0.7	**16**	0151	**0.2**	0.7
	0644	**1.6**	5.2		0742	**1.7**	5.6
MO	1247	**0.5**	1.6	TU	1409	**0.5**	1.6
LU	1842	**1.9**	6.2	MA	1942	**1.8**	5.9
2	0132	**0.1**	0.3	**17**	0232	**0.2**	0.7
	0731	**1.7**	5.6		0825	**1.7**	5.6
TU	1337	**0.4**	1.3	WE	1449	**0.6**	2.0
MA	1930	**1.9**	6.2	ME	2025	**1.8**	5.9
3	0221	**0.0**	0.0	**18**	0310	**0.3**	1.0
	0818	**1.7**	5.6		0906	**1.7**	5.6
WE	1429	**0.4**	1.3	TH	1525	**0.6**	2.0
ME	2020	**2.0**	6.6	JE	2107	**1.8**	5.9
4	0311	**0.0**	0.0	**19**	0345	**0.3**	1.0
	0907	**1.8**	5.9		0945	**1.7**	5.6
TH	1524	**0.4**	1.3	FR	1559	**0.6**	2.0
JE	2110	**2.0**	6.6	VE	2147	**1.8**	5.9
5	0402	**0.0**	0.0	**20**	0417	**0.4**	1.3
	0956	**1.8**	5.9		1022	**1.7**	5.6
FR	1624	**0.4**	1.3	SA	1634	**0.7**	2.3
VE	2200	**1.9**	6.2	SA	2226	**1.7**	5.6
6	0456	**0.0**	0.0	**21**	0449	**0.4**	1.3
	1046	**1.8**	5.9		1059	**1.7**	5.6
SA	1726	**0.4**	1.3	SU	1715	**0.7**	2.3

August-août

Day	Time	Metres	Feet	jour	heure	mètres	pieds
1	0201	**0.0**	0.0	**16**	0244	**0.3**	1.0
	0759	**1.8**	5.9		0842	**1.7**	5.6
TH	1414	**0.3**	1.0	FR	1455	**0.5**	1.6
JE	2005	**2.0**	6.6	VE	2045	**1.8**	5.9
2	0252	**–0.1**	–0.3	**17**	0315	**0.3**	1.0
	0850	**1.9**	6.2		0917	**1.7**	5.6
FR	1511	**0.3**	1.0	SA	1525	**0.5**	1.6
VE	2057	**2.0**	6.6	SA	2123	**1.8**	5.9
3	0342	**–0.1**	–0.3	**18**	0343	**0.3**	1.0
	0939	**1.9**	6.2		0951	**1.7**	5.6
SA	1610	**0.2**	0.7	SU	1557	**0.5**	1.6
SA	2148	**2.0**	6.6	DI	2159	**1.7**	5.6
4	0435	**–0.1**	–0.3	**19**	0411	**0.4**	1.3
	1028	**1.9**	6.2		1024	**1.7**	5.6
SU	1710	**0.3**	1.0	MO	1634	**0.5**	1.6
DI	2238	**1.9**	6.2	LU	2234	**1.7**	5.6
5	0529	**0.0**	0.0	**20**	0442	**0.4**	1.3
	1116	**1.9**	6.2		1058	**1.7**	5.6
MO	1811	**0.3**	1.0	TU	1716	**0.6**	2.0
LU	2329	**1.8**	5.9	MA	2310	**1.6**	5.2
6	0626	**0.1**	0.3	**21**	0519	**0.5**	1.6
	1203	**1.8**	5.9		1132	**1.7**	5.6
TU	1912	**0.3**	1.0	WE	1805	**0.6**	2.0

September-septembre

Day	Time	Metres	Feet	jour	heure	mètres	pieds
1	0319	**–0.1**	–0.3	**16**	0308	**0.3**	1.0
	0916	**2.0**	6.6		0915	**1.7**	5.6
SU	1553	**0.1**	0.3	MO	1527	**0.4**	1.3
DI	2132	**1.9**	6.2	LU	2132	**1.7**	5.6
2	0410	**0.0**	0.0	**17**	0336	**0.4**	1.3
	1003	**2.0**	6.6		0947	**1.7**	5.6
MO	1650	**0.1**	0.3	TU	1603	**0.4**	1.3
LU	2222	**1.9**	6.2	MA	2207	**1.7**	5.6
3	0504	**0.1**	0.3	**18**	0407	**0.4**	1.3
	1049	**1.9**	6.2		1019	**1.7**	5.6
TU	1748	**0.2**	0.7	WE	1643	**0.4**	1.3
MA	2311	**1.7**	5.6	ME	2242	**1.6**	5.2
4	0602	**0.2**	0.7	**19**	0444	**0.5**	1.6
	1135	**1.9**	6.2		1053	**1.7**	5.6
WE	1846	**0.2**	0.7	TH	1729	**0.5**	1.6
ME				JE	2320	**1.6**	5.2
5	0000	**1.6**	5.2	**20**	0531	**0.6**	2.0
	0702	**0.4**	1.3		1129	**1.7**	5.6
TH	1222	**1.7**	5.6	FR	1823	**0.5**	1.6
JE	1945	**0.3**	1.0	VE			
6	0053	**1.5**	4.9	**21**	0001	**1.6**	5.2
	0803	**0.5**	1.6		0631	**0.7**	2.3
FR	1314	**1.6**	5.2	SA	1212	**1.7**	5.6

jour	heure	mètres	pieds
16	0244	**0.3**	1.0
	0842	**1.7**	5.6
FR	1455	**0.5**	1.6
VE	2045	**1.8**	5.9
17	0315	**0.3**	1.0
	0917	**1.7**	5.6
SA	1525	**0.5**	1.6
SA	2123	**1.8**	5.9

Tide tables

Note: Tables are in Standard time +1 hour for Daylight time

August 17

At 0315 Standard time – low tide – 0.3m

At 0917 Standard time – high tide – 1.7m

At 1525 Standard time – low tide – 0.5m

At 2123 Standard time – high tide – 1.8m

SEYMOUR NARROWS PST Z+8 — 2019 — CURRENT TABLES

Turn = zero current

July-juillet

Turns		Maximum		renverse		maximum	
Day	Time	Time	Knots	jour	heure	heure	noeuds
1		0041	+6.4	16		0132	+7.0
	0315	0654	−11.0		0412	0740	−11.4
MO	0954	1313	+13.4	TU	1036	1357	+13.6
LU	1651	1955	−10.3	MA	1733	2036	−11.3
	2259				2346		
2		0126	+6.9	17		0217	+7.1
	0401	0737	−11.6		0459	0824	−11.0
TU	1036	1355	+14.3	WE	1118	1438	+13.3
MA	1733	2038	−11.1	ME	1812	2117	−11.3
	2345						
3		0211	+7.3	18	0028	0259	+7.0
	0447	0820	−11.9		0544	0905	−10.5
WE	1118	1438	+14.8	TH	1158	1517	+12.7
ME	1814	2120	−11.7	JE	1849	2156	−11.1
4	0029	0258	+7.6	19	0109	0341	+6.8
	0536	0905	−11.9		0628	0946	−9.7
TH	1203	1522	+14.8	FR	1237	1554	+11.8
JE	1857	2204	−12.0	VE	1925	2234	−10.6
5	0115	0346	+7.8	20	0148	0423	+6.6
	0628	0953	−11.5		0712	1026	−8.7
FR	1249	1608	+14.2	SA	1317	1632	+10.6
VE	1940	2248	−12.0	SA	1959	2312	−10.0
6	0202	0437	+8.0	21	0228	0505	+6.3
	0724	1043	−10.8		0758	1108	−7.7
SA	1339	1657	+13.1	SU	1357	1711	+9.4

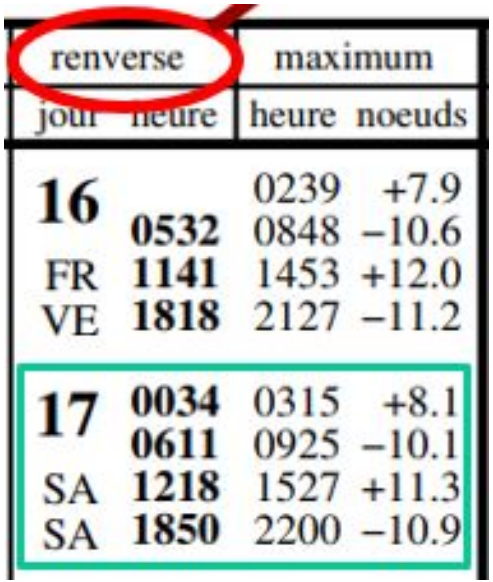
August-août

Turns		Maximum		renverse		maximum	
Day	Time	Time	Knots	jour	heure	heure	noeuds
1		0158	+8.2	16		0239	+7.9
	0440	0809	−12.4		0532	0848	−10.6
TH	1106	1423	+14.9	FR	1141	1453	+12.0
JE	1754	2100	−12.5	VE	1818	2127	−11.2
2	0007	0244	+9.0	17	0034	0315	+8.1
	0531	0854	−12.7		0611	0925	−10.1
FR	1151	1506	+14.8	SA	1218	1527	+11.3
VE	1834	2141	−13.0	SA	1850	2200	−10.9
3	0049	0330	+9.7	18	0107	0351	+8.1
	0622	0941	−12.5		0650	1002	−9.5
SA	1238	1550	+14.2	SU	1255	1601	+10.4
SA	1913	2223	−13.0	DI	1920	2233	−10.3
4	0132	0418	+10.1	19	0141	0427	+8.0
	0716	1029	−11.8		0730	1040	−8.7
SU	1326	1635	+13.0	MO	1333	1636	+9.3
DI	1954	2306	−12.7	LU	1950	2306	−9.7
5	0217	0508	+10.2	20	0216	0506	+7.8
	0812	1120	−10.8		0814	1120	−7.7
MO	1417	1723	+11.4	TU	1414	1714	+8.0
LU	2036	2352	−12.1	MA	2021	2342	−9.0
6	0305	0602	+10.0	21	0254	0550	+7.6
	0913	1216	−9.5		0904	1206	−6.7
TU	1513	1816	+9.6	WE	1502	1757	+6.7

September-septembre

Turns		Maximum		renverse		maximum	
Day	Time	Time	Knots	jour	heure	heure	noeuds
1	0018	0310	+11.9	16	0024	0317	+9.8
	0614	0927	−13.2		0627	0937	−10.1
SU	1226	1529	+13.5	MO	1234	1529	+9.7
DI	1842	2154	−13.7	LU	1837	2153	−10.6
2	0059	0355	+12.2	17	0055	0351	+9.9
	0704	1013	−12.6		0705	1014	−9.5
MO	1313	1612	+12.2	TU	1312	1603	+8.7
LU	1921	2236	−13.1	MA	1905	2224	−10.0
3	0141	0442	+12.0	18	0128	0429	+9.7
	0756	1102	−11.4		0747	1053	−8.7
TU	1403	1658	+10.4	WE	1353	1640	+7.6
MA	2001	2319	−12.1	ME	1936	2259	−9.3
4	0227	0532	+11.4	19	0205	0511	+9.3
	0853	1154	−9.9		0834	1138	−7.7
WE	1457	1748	+8.5	TH	1441	1723	+6.2
ME	2045			JE	2012	2339	−8.5
5		0007	−10.8	20	0248	0601	+8.9
	0317	0628	+10.5		0930	1232	−6.7
TH	0955	1254	−8.4	FR	1540	1816	+4.9
JE	1600	1845	+6.6	VE	2055		
	2134						
6		0102	−9.4	21		0028	−7.7
	0414	0732	+9.7		0340	0701	+8.4
FR	1104	1404	+7.3	SA	1036	1339	+6.1

Turn (renverse)= reversal of direction, near zero current



renverse		maximum	
jour	heure	heure	noeuds
16		0239	+7.9
	0532	0848	−10.6
FR	1141	1453	+12.0
VE	1818	2127	−11.2
17	0034	0315	+8.1
	0611	0925	−10.1
SA	1218	1527	+11.3
SA	1850	2200	−10.9

+ is a flood current - into shore

- is an ebb current - away from shore

Current Tables

Note: Tables are in Standard time +1 hour for Daylight time

August 17

Turns: (reversal of direction, near zero current)

0034 hrs standard time and
0611 hrs standard time
1218 hrs standard time
1850 hrs standard time

Maximums:

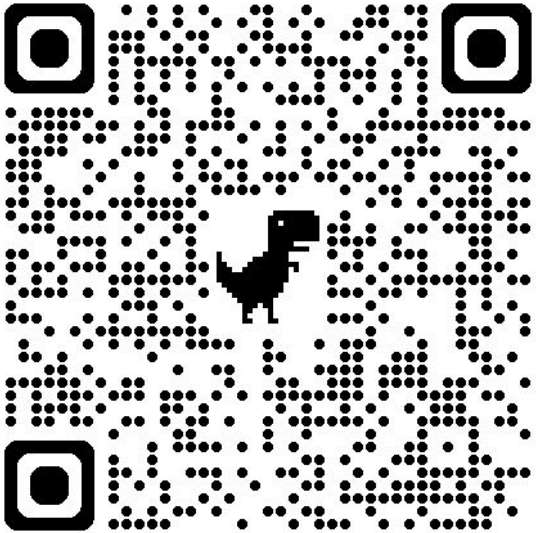
0315 hrs standard, 8.1 knots flood current (+)
0925 hrs standard, 10.1 knots ebb current (-)
01527 hrs standard, 11.3 knots flood current (+)
2200 hrs standard, 10.9 knots ebb current (-)

Keep a lookout!

It's the law

Basic Cruising

Scan to download the
slides



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