advantage boating

Section III: Part B – Safety

Safety Guidelines and Avoiding Hazards

Sail Canada Basic Cruising Standard

Lesson Outline

- Lesson Objectives
- Introduction
- Navigation lights
- Distress signals
- Hazards
- Radar reflector
- Summary
- Quiz

Lesson Objectives

- In this lesson you will learn how to sail safely by understanding and following safety regulations and guidelines.
- You will learn about potential hazards and how to avoid them.
- You will learn critical safety guidelines to help you prepare in advance to avoid catastrophe and injury.

Introduction

- Sailing is a wonderful activity which is safe and enjoyable when regulations and safety guidelines, combined with common sense are followed.
- However, like any activity you need to know the potential risks and understand your responsibilities so that you can minimize your risk and maximize your enjoyment.
- This module provides new sailors with enough information and guidance to sail safely.

Keeping safe!

- In Section II, you reviewed the gear and equipment required to help keep you safe as well as the regulations you must follow.
- Before you start to apply your learning on the water, you need to also be aware of how to avoid hazards.
- This module focuses on how to sail safely!

So let's begin*!*

Avoiding Hazards – Keeping Safe on the Water!

Plan to Avoid Local Hazards

Being prepared means more than having your boat and equipment in good working order. You should also:

- Check marine charts for overhead obstacles, bridges and underwater cables in your boating area.

Avoiding Hazards – Keeping Safe on the Water!

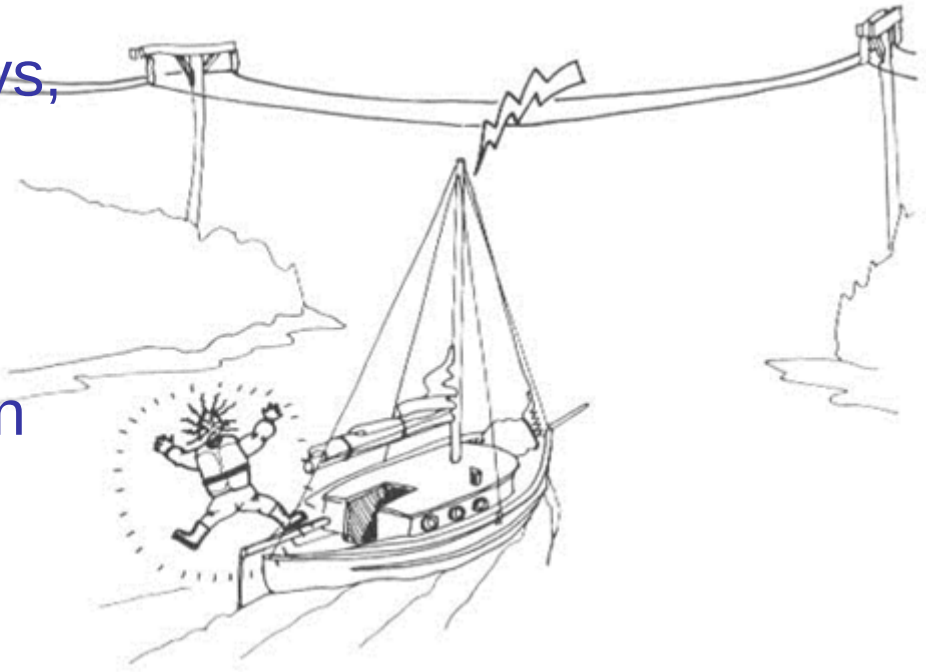
- Read marine charts with publications like Sailing Directions – looking at tide tables and current atlases will also help you learn about water levels, times of low, slack and high tides, and the direction of water flow.
- Stay away from swimming areas – even canoes and kayaks can injure swimmers.

Avoiding Hazards – Keeping Safe on the Water!

- Avoid boating too close to shore.
- Talk to local residents who know the waters if you are in an area that is not covered by marine charts – they may be able to point out low-head dams, rapids and white water, as well as describe local wind conditions, currents and areas of rapid high-wave build-up.

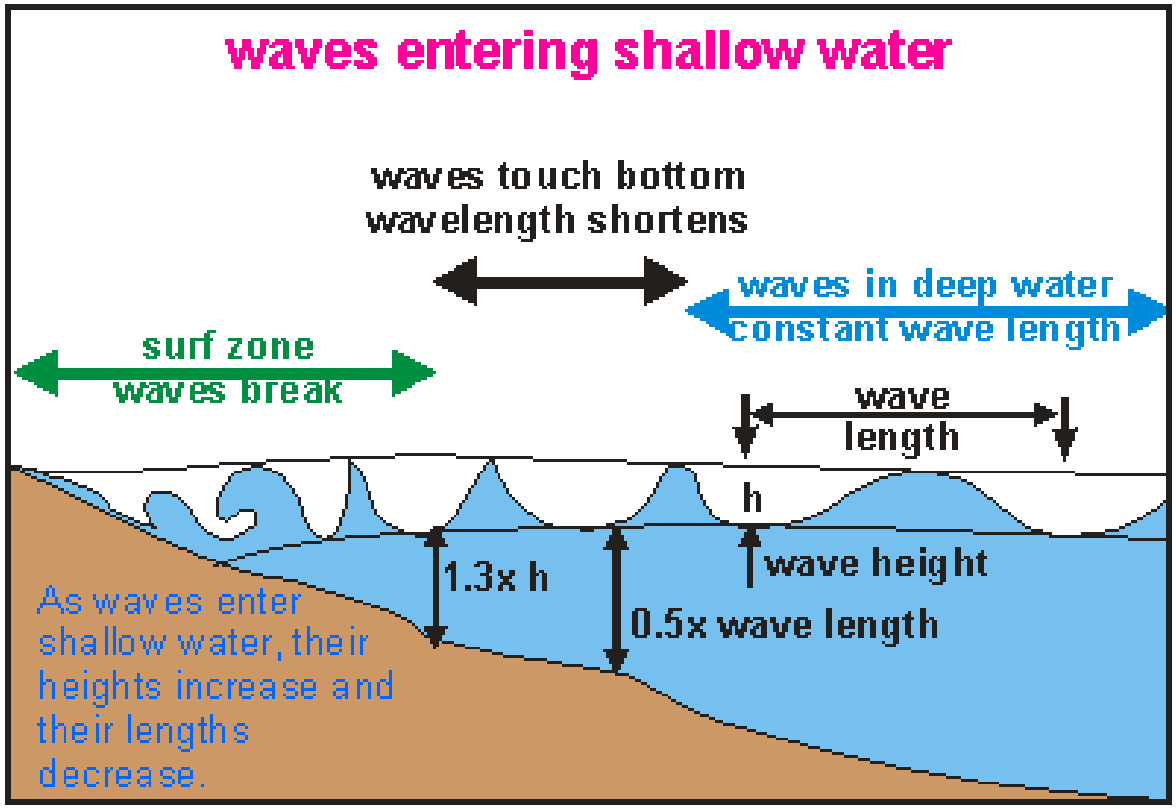
Avoiding Hazards – Keeping Safe on the Water!

- **Watch out for overhead hazards** when operating a vessel near shore, waterways, and harbours.
- Serious injury, death or devastating damage to the vessel can occur if a collision with an overhead hazard occurs.



Other Hazards to Watch out for!

- Large waves caused by shoaling

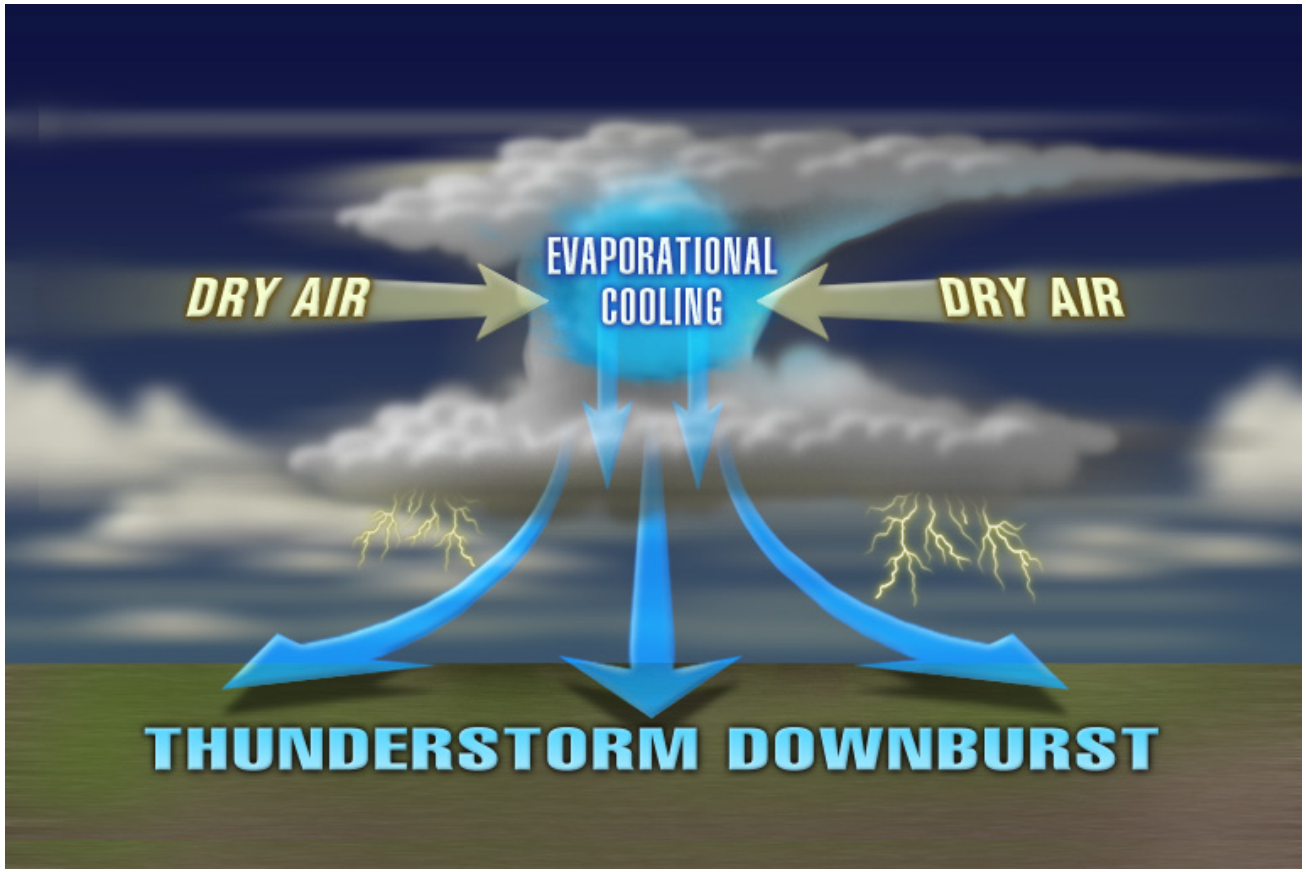


Other Hazards to Watch out for!

- Tides and currents – find out the local hazards.

Other Hazards to Watch out for!

- Sudden winds such as outflow winds.



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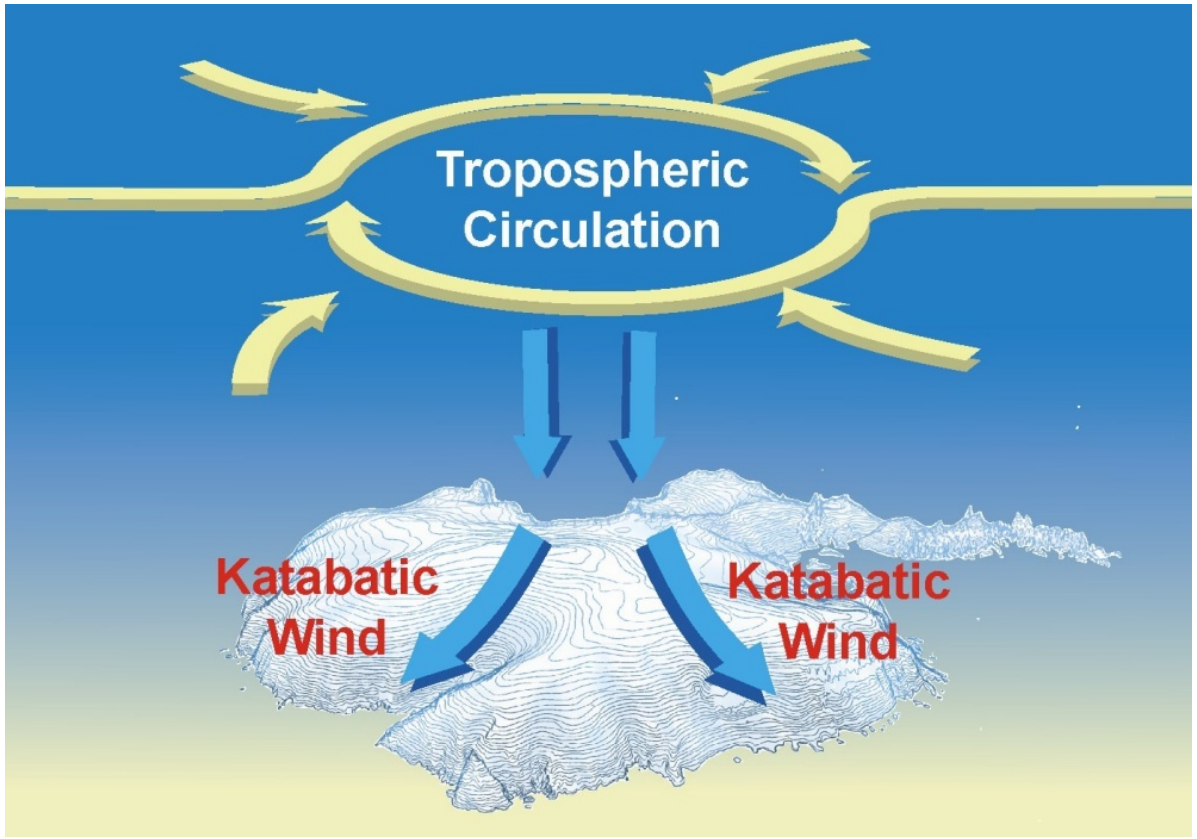


Distress Signals – Using Flares

- All aerial flares should be fired at an angle into the wind. With a high wind velocity, lower the angle to a maximum of 45 degrees.
- Flares should be stored in a cool, dry location and in a watertight container.
- Make sure flares are readily accessible in case of an emergency.

➲ Pyrotechnics (flares) are only valid for four years from the date of manufacture stamped on each flare.

Distress Signals – Disposal of Flares

- To dispose of your outdated flares, seek advice from your nearest fire department, law enforcement agency or Transport Canada Centre.
- Always handle flares with caution and dispose of as per regulations.

Distress Signals – Signalling for Help

- **You need to know the appropriate way to signal for help using distress signals.**
- **Four types of distress signals can be used: Type A, B, C, and D**

➲ **Important! The use of a flare, unless found in a situation of distress, is prohibited. (According to the *Collision Regulations)***

Distress Signals – Signalling for Help

- **Type A: Parachute**
- Single red star, when launched, reaches height of 300 m and with the aid of a parachute, comes down slowly. Easily observed from the surface or air; burns for at least 40 seconds.

Distress Signals – Signalling for Help

- **Type B: Multi-star**
- Two red stars, when launched, reach a height of 100 m and burn for 4 - 5 seconds. Readily observed from the surface or air.
- Some type B flares project only one star at a time. When using this single star type, 2 flares must be fired within 15 seconds of each other — you will need double the number of cartridges to meet the regulations.

Distress Signals – Signalling for Help

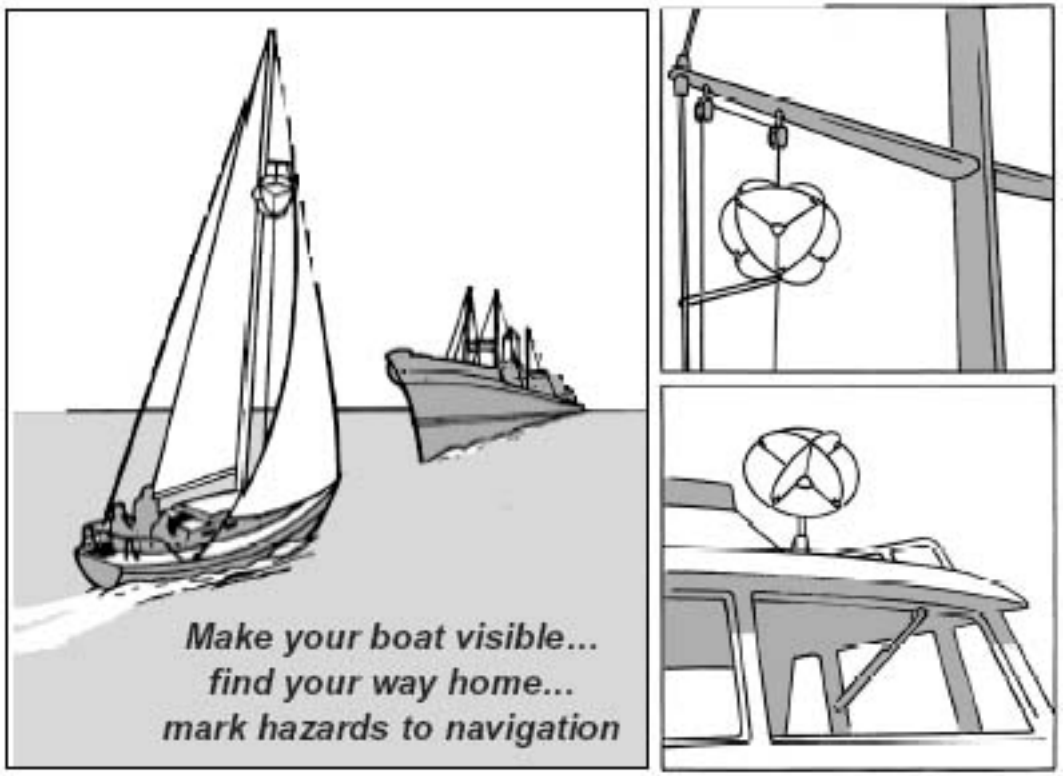
- **Type C: Hand-held**
- Red flame torch held in your hand. Limited surface visibility. Best for pin-pointing location during an air search; burns for at least 1 minute.
- Note: avoid looking directly at flare while burning; hold it well clear of the boat and down wind.

Distress Signals – Signalling for Help

- **Type D: Smoke (buoyant or hand-held)**
- Gives off a dense orange smoke for 3 minutes; used as a day signal only. (Some types are made especially for pleasure craft use that last 1 minute and come in a package of 3).
- Note: position smoke flare down wind.

Other Safety Advice – Keeping your Boat Visible

- Make your boat visible to avoid collisions.
- Use radar reflectors, but don't "blindly" depend on them – take precautions.

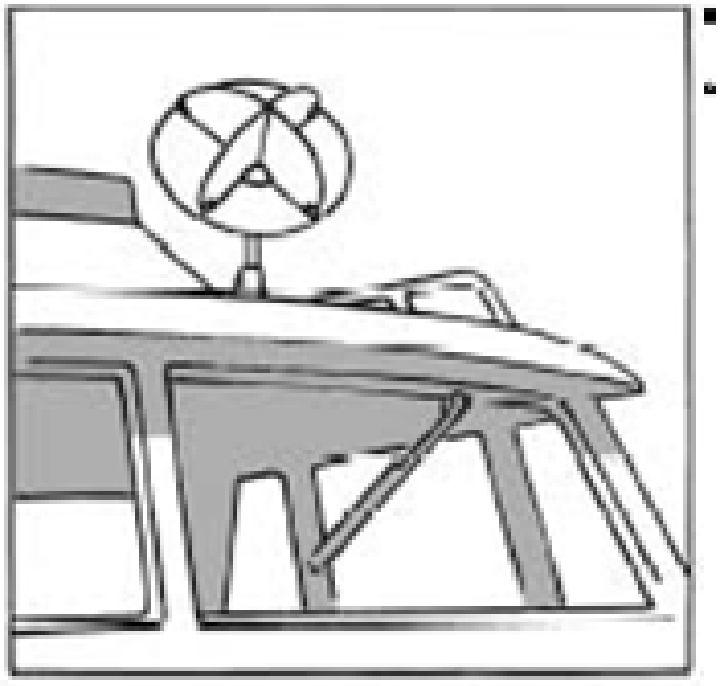


Other Safety Advice – Keeping your Boat Visible

- Precautions with radar reflectors:
  - They can be obscured by a wet sail
  - They must be at least 4 m off the water
  - They should be in the rain catch position
  - Rough seas, heavy weather, poor radar set tuning will provide poor image or no image.

Safety Equipment – Radar Reflectors

- The type of reflector shown below is much more effective than the tubular type. Also note the “rain catch” position.



Safety Equipment – Radar Reflectors

Other caveats:

- Because radar beams are very narrow, in the vertical plane, being close to a large commercial vessel may cause him to ‘look over you’ because his ‘beam’ doesn’t project low enough.

Safety Equipment – Radar Reflectors

Other caveats:

- Don’t assume because a vessel has radar he sees you. He may not be maintaining a proper watch, or the set is off or poorly tuned.
- Just like a GPS and other electronics, radar reflectors are good aids but don’t relieve us of the responsibility of maintaining a diligent watch and taking early and substantive actions.

Navigation Lights – Critical Indicators!

- Navigation lights are critical indicators of boat position and type with respect to other vessels on the water.

- You need to understand the requirements for navigation lights for your vessel, but you also need to be able to interpret the navigation lights on other boats.

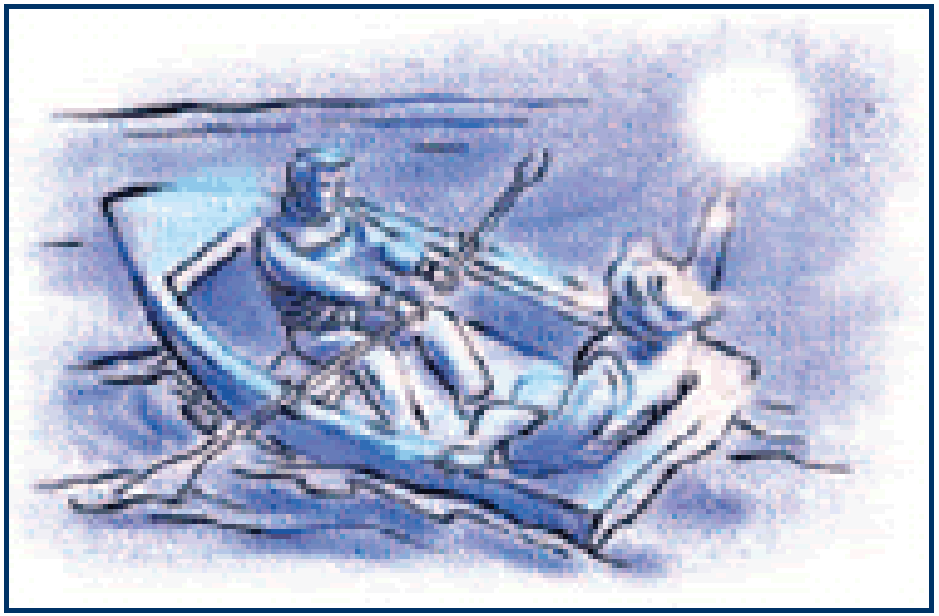
Regulations for Navigational Lights

Navigational lights **must** be exhibited:

- From sunset to sunrise
- During reduced visibility
- When at anchor (at anchor you need to display a 360 degree white light (projects light all round)

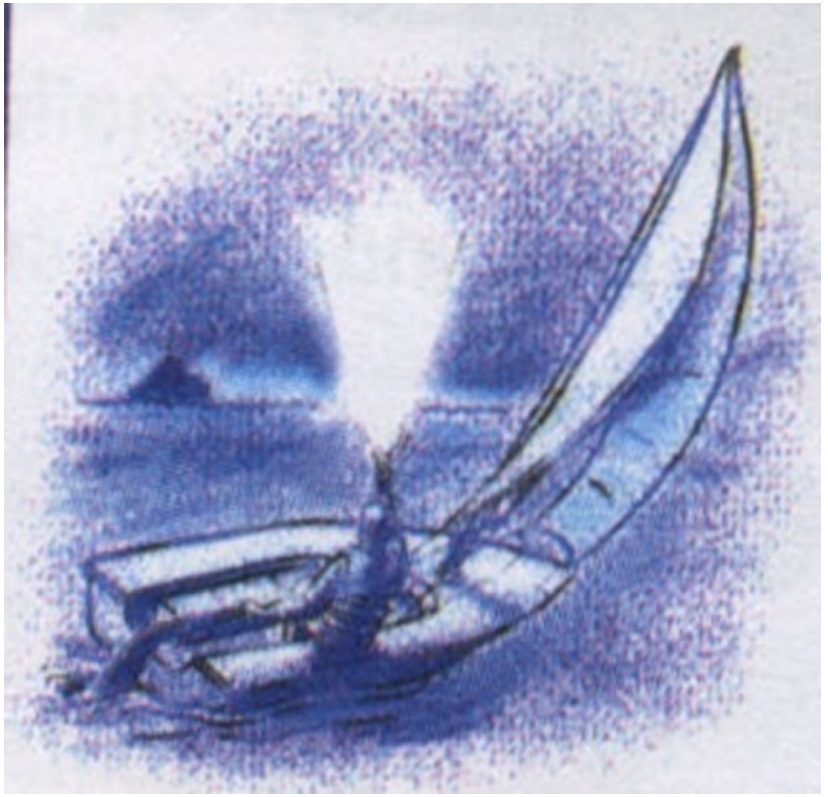
Navigational Lights - Requirements

- **Canoes, Rowboats, Kayaks, Rowing shells less than 6 metres need to have a white light that shines 360 degrees**



Navigational Lights - Requirements

- **Sailboats less than 7 metres need a white light that shines 360 degrees**



Navigational Lights – KEY POINT

- No matter how much sail is raised,

Once the engine is started and transmission engaged the vessel becomes a **POWERBOAT!**

Small Vessel Regulations: Navigation Lights

The navigation lights have many of the same characteristics for power and sail; however, there are some significant differences – let's review them!

Small Vessel Regulations: Navigation Lights

- **Power**
- Red port 112 ½ °
- Green Starboard 112 ½ °
- White stern 135 °
- White masthead 225°

Small Vessel Regulations: Navigation Lights

- **Sail**
- Red port 112 ½ °
- Green Starboard 112 ½ °
- White stern 135 °

Small Vessel Regulations: Navigation Lights

- Sail (masthead 360 ° red over green)
- Red port 112 ½ °
- Green Starboard 112 ½ °
- White stern 135 °

Small Vessel Regulations: Navigation Lights

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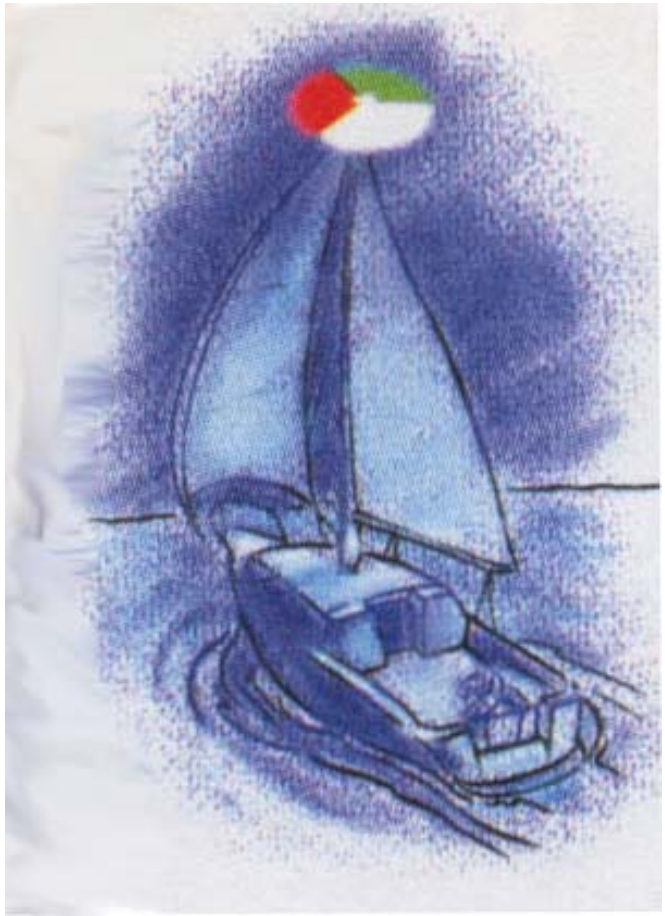

Navigational Lights: Additional Rules

- The tri-colour light on the mast top ***cannot*** be used with running lights on the hull nor can it be used with a masthead light.
- The tri-colour light **must be turned off** when the boat is **under power**.
- However, the all-round red over green can be displayed when under power.

Safety, Safety, Safety!

- Checkout a great online reference for safety-related information call the Safe Boating Guide, published by Transport Canada…

http://www.tc.gc.ca/publications/en/tp511/pdf/hr/tp511e.pdf

Summary

- In this lesson, you learned how to sail safely by understanding and following safety regulations and guidelines.
- You also learned about potential hazards and how to avoid them.
- By knowing critical safety guidelines, you can be prepared and take the necessary precautions to avoid catastrophe and injury.
- Above all, you learned that safety is your responsibility – you need to take rules and regulations seriously.

Next Steps!

- In the next lesson, Section IV, you learn more in-depth rules and regulations that dictate how to operate your vessel safely on the water.

Let’s practice!

- Complete the following quiz to test your knowledge of safety precautions and regulations.

Quiz

- Fill in the blanks: The tri-colour navigational light on a sailboat **must be turned** ___ when the boat is **under power.**
- Under what three circumstances must navigational lights be exhibited?
- Name five hazards you should be on the look out for or take into consideration when sailing.