

NAVIGATION RULES

Learning Objectives:

As a result of this session the participant should:

- Understand the classes of rules and their applicability to all navigable waters.
- Become familiar with the Steering and Sailing Rules.
- Become familiar with the Lights and Shapes Rules.
- Become familiar with the Sound and Light Signals Rules
- Be aware of the technical details for Lights, Shapes, and Sound Signal Appliances.

Resources:

Boating Skills & Seamanship, Eleventh Edition, U.S. Coast guard Auxiliary, Chapter 6
The Squadron Boating Course 2001, The United States Power Squadrons, Section 12
Chapman Piloting Seamanship & Small Boat Handling, 62nd Edition, Hearst Marine Books, Chapter 7
COMDTINST M16672.2D, Navigation Rules, United States Coast Guard, Paradise Cay Publications

Material and Equipment:

Equipment Items
Overhead Projector, as required by instructor

Material Items
Provide one copy for each participant:

Navigation Rules Summary Handout

Instructor Qualification:

U.S. Coast Guard Auxiliary Trainer presence required for USCGAUX Certificate Program
U.S. Power Squadron Instructor, Council Venturing Trainer or equivalent

Time Allocation: 1.5 Hours

Session Plan:

Classroom Session

1. **Module Introduction.**
 - a. Introduce yourself and each member of the module staff.

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- b. Explain the objectives of this module.

- c. Distribute the Navigation Rules Summary Handout to be used as a reference document.

[Note: The International Regulations for Preventing Collisions at Sea, 1972 is referred to as 72 COLREG in the resource documentation and this session plan]

2. Introduction to the Rules.

- a. Describe briefly the five general classes of rules in North America.
 - 1. The International Regulations for Preventing Collisions at Sea, 1972
 - 2. The U.S. Inland Navigation Rules
 - 3. Federal Regulations (Five annexes to the Inland Rules)
 - 4. State and Local Regulations
 - 5. Canadian Federal Rules

- b. Describe briefly that the rules are applicable to all navigable waters.
 - 1. U.S. Inland Rules and the Lines of Demarcation
 - 2. Most land-locked lakes governed by State and Local Regulations
 - 3. Vessels in Canadian waters or fishing zones comply with Canadian Rules

- c. Describe “Rule of Good Seamanship”(Rule 2[a] and “General Prudence Rule”(Rule 2[b]).

3. General Definitions.

- a. Define briefly the following general definitions.
 - . 1. Vessel
 - . 2. Power-driven Vessel
 - . 3. Sailing Vessel
 - . 4. Vessel engaged in fishing
 - . 5. Underway
 - . 6. In sight
 - . 7. Restricted Visibility
 - . 8. Restricted in Ability to Maneuver
 - . 9. Not Under Command
 - . 10. Give-way Vessel
 - . 11. Stand-on Vessel

- b. Explain the difference in the definition of the “Great Lakes” between the U.S. Inland Rules and the Canadian Rules (Canadian Collision Regulations)

4. Conduct of Vessels in Any Condition of Visibility.

- a. Describe briefly the following rules.
 - 1. Rule 5. Look-Out
 - 2. Rule 6. Safe Speed
 - 3. Rule 7. Risk of Collision

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4. Rule 8. Action to Avoid Collision
 5. Rule 9. Narrow Channels
 6. Rule 10. Traffic Separation Schemes
- b. Describe briefly the Coast Guard Vessel Traffic Services (VTS) and its availability on several different U.S. ports.
5. **Conduct of Vessels in Sight of One Another.**
- a. Describe briefly the following rules.
 1. Rule 12. Sailing Vessels
 2. Rule 13. Overtaking
 3. Rule 14. Head-on Situation
 4. Rule 15. Crossing situation
 5. Rule 16. Action by Give-way Vessel
 6. Rule 17. Action by Stand-on Vessel
 7. Rule 18. Responsibilities Between Vessels
6. **Conduct of Vessels in Restricted Visibility.**
- a. Describe briefly the contents of Rule 19. Conduct of Vessels in Restricted Visibility
 1. Applies when out of sight, in or near restricted visibility
 2. Proceed at safe speed
 3. Must have engines ready for immediate maneuvering
 4. Must have regard for circumstances and conditions of restricted visibility
 5. Response to radar contacts
 6. Response to sound signal contacts
7. **Lights and Shapes.**
- a. Explain the Lights and Shapes Rules applies;
 1. To all weather
 2. To having lights on sunset to sunrise
 3. To having no conflicting lights
 4. To having lights on in restricted visibility and optional at other times
 5. To having Shapes up during day time.
 - b. Describe briefly the following definitions.
 1. Masthead
 2. Sidelight
 3. Stern Light
 4. Towing Light
 5. All-round Light
 6. Flashing Light
 7. Special Flashing Light (*Inland Rules only*)
 - c. Describe briefly the following rules.
 1. Rule 22. Visibility of Lights

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2. Rule 23. Power-driven Vessels Underway
 3. Rule 24. Towing and Pushing
 4. Rule 25. Sailing Vessels Underway and Vessels Under Oars
 5. Rule 26. Fishing Vessels
 6. Rule 27. Vessels Not Under Command or Restricted in their Ability to Maneuver
 7. Rule 28. Vessels Constrained by Draft (*Applies only to International waters*)
 8. Rule 29. Pilot Vessels
 9. Rule 30. Anchored Vessels and Vessels Aground
 10. Rule 31. Seaplanes
- 8. Sound and Light Signals.**
- a. Describe briefly the following definitions.
 1. Whistle
 2. Short Blast
 3. Prolonged Blast

 - b. Describe briefly the following rules.
 1. Rule 33. Equipment for sound Signals
 2. Rule 34. Maneuvering and Warning Signals
 3. Rule 35. Sound Signals in Restricted Visibility
 4. Rule 36. Signals to Attract Attention
 5. Rule 37. Distress Signals
- 9. Exemptions. (Rule 38).**
- a. Explain briefly that lights and sound equipment on older vessels may be exempt from compliance of 72 COLREG.
- 10. Annexes.**
- a. Mention that the following Annexes are included as part of the Navigation Rules.
 1. Positioning and Technical Details of Lights and Shapes
 2. Additional Signals for Fishing Vessels Fishing in Close Proximity
 3. Technical Details of Sound Signal Appliances
 4. Distress Signals
 5. Pilot rules (*Inland Rules only*)
- 11. Penalty Provisions.**
- a. Mention that a penalty provisions section is included as part of the Navigation Rules.
 1. Violations of International rules and Regulations
 2. Violations of Inland Rules and Regulations
 3. Penalties for negligent operations
 4. Duty to provide assistance at sea
 5. Injunctions

NAVIGATION RULES SUMMARY HANDOUT

PART A – GENERAL

Rule 1. Application

- (a) To all navigable waters
- (b) Special places (Inland waters, rivers, harbors, etc.)
- (c) Warships and fishing vessels
- (d) Traffic separation schemes
- (e) Special purpose vessels
- (f) Certificate of Alternative Compliance (*Inland only*)

Rule 2. Responsibility

- (a) Of all involved; practice of seamen; special circumstances
- (b) Departure from rules

Rule 3. General Definitions

- (a) “Vessel”
- (b) “Power-driven vessel”
- (c) “Sailing vessel”
- (d) “Fishing vessel”
- (e) “Seaplane”
- (f) “Not under command”
- (g) “Restricted ability to maneuver”
- (h) “Constrained by draft” (*International only*)
- (i) “Underway” = *Inland*(h)
- (j) “Length” and “breadth” = *Inland*(I)
- (k) “Insight another” = *Inland*(j), (l) “Restricted visibility” = *Inland*(k)
- (l) “Western Rivers” (*Inland only*)
- (m) “Great Lakes” (*Inland only*)
- (n) “Secretary”
- (o) “Inland Waters” (*Inland only*)
- (p) “Inland Rules” (*Inland only*)
- (q) “International Regulations” (*Inland only*)

PART B – STEERING AND SAILING RULES

Section I – Conduct of Vessels in Any Condition of Visibility

Rule 4. Application

Rules 5 to 10 apply in all conditions of visibility

Rule 5. Look-Out

Every vessel shall keep a proper look out at all times

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Rule 6. Safe Speed

Applies to all vessels, at all times, checked as follows

- (a) Of all vessels
- (b) Of vessels with radar

Rule 7. Risk of Collision

- (a) Use all means to determine; assume present if doubtful
- (b) Use of radar
- (c) Don't rely on scanty radar information
- (d) Use of compass bearings

Rule 8. Action to Avoid Collision

- 1. Positive, in ample time
- 2. Readily apparent
- 3. Course change alone may be best
- 4. Result in safe distance, checked continuously
- 5. Slow or stop if necessary
- 6. For vessels instructed 'not to impede'
 - (a) take early action to allow sea room
 - (b) actions in risk of collision
 - (c) actions of vessel not to be impeded

Rule 9. Narrow Channels

- (a) Stay right if possible (*plus downbound case in Inland waters*)
- (b) Less than 20 m or sailing vessels shall not impede
- (c) Fishing vessels shall not impede
- (d) Crossing vessels shall not impede
- (e) Overtaking
- (f) Nearing bends or blind spots
- (g) Avoid anchoring in narrow channels

Rule 10. Traffic Separation Schemes

- (a) Allies to IMO traffic separation schemes
- (b) Entry, exit, and use of lanes
- (c) Crossing lanes
- (d) Inshore zones
- (e) Separation zones
- (f) Caution near terminations
- (g) Avoid anchoring in lanes
- (h) Avoid lanes when not using them
- (i) Fishing vessels shall not impede
- (j) Less than 20 m sailing vessels shall not impede
- (k) Restricted vessels tending aids in lanes exempt
- (l) Restricted vessels tending underwater cables exempt

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Section II – Conduct of Vessels in Sight of One Another
See Rule 3 (k) International and 3 (j) Inland for definitions

Rule 11. Application

Rules 12 to 18 apply to vessels in sight of one another

Rule 12. Sailing Vessels

1. Port-starboard; windward-leeward
2. “Windward” defined

Rule 13. Overtaking

- (a) Overtaking vessel always stays clear
- (b) “Overtaking” defines
- (c) Assume to be overtaking, if doubtful
- (d) Cannot change from overtaking to crossing

Rule 14. Head-on Situation

- (a) Each vessel must turn to starboard (*right*)
- (b) Definition of “head-on”
- (c) Assume head-on if doubtful
- (d) Downbound vessels in rivers (*Inland only*)

Rule 15. Crossing Situation

- (a) Power-driven vessels crossing with risk of collision
- (b) Vessels crossing rivers (*Inland only*)

Rule 16. Action by Give-way Vessel

Take early and substantial action

Rule 17. Action by Stand-on Vessel

- a) Hold course and speed, unless forced to maneuver
- b) Cause for maneuver, to avoid collision (in extremis)
- c) Turn right, away from port vessel
- d) Give-way vessel still keeps clear

Rule 18. Responsibilities Between Vessels

Hierarchy or “Pecking order” in right of way when not in conflict with special rules for channels, traffic lanes, or when overtaking

- a) Power-driven vessels,
- b) Sailing vessels
- c) Fishing vessels
- d) Constrained by draft (International only)
- e) Seaplanes (d) Inland

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Section III – Conduct of Vessels in Restricted Visibility
See Rule 3 (l) International and 3 (k) Inland for definitions

Rule 19. Conduct of Vessels in Restricted Visibility

- a) Applies when out of sight, in or near restricted visibility
- b) Proceed at safe speed; must have engines ready
- c) Regard for visibility when complying with Section I Rules
- d) Response to radar contacts
- e) Response to sound signal contacts

PART C – LIGHTS AND SHAPES

Rule 20. Application

- (a) Part C applies to all weather
- (b) Lights on sunset to sunrise: no conflicting lights
- (c) Lights on in restricted visibility; optional at all times
- (d) Shapes up during day time
- (e) Use light and shape specifications in Annex I

Rule 21. Definitions

- (a) “Masthead”
- (b) “Sidelight”
- (c) “Sternlight”
- (d) “Towing light”
- (e) “All-round light”
- (f) “Flashing light”
- (g) “Special flashing light” (*Inland only*)

Rule 22. Visibility of Lights

Using specifications in Annex I

- (a) Vessels 50 m or longer
- (b) Vessels 12 m or longer (but less than 50 m)
- (c) Vessels less than 12 m
- (d) Inconspicuous tows

Rule 23. Power-driven Vessels Underway

- (a) Power-driven vessels underway
- (b) Air cushion vessels
- (c) Vessels less than 12 m ; (less than 7 m and 7 kts, (*International*))
- (d) Vessels on the Great Lakes (*Inland only*)

Rule 24. Towing and Pushing

- (a) Power-driven vessel towing
- (b) Composite units
- (c) Pushing ahead or towing alongside
- (d) Forward and aft (“Range”) lights required

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- (e) Towed object or vessel
- (f) Group of tows
- (g) Inconspicuous tows
- (h) Alternative lighting of tows
- (i) Alternative lighting of pushing ahead or towing vessel (*Inland*)
- (j) Alternative lighting for distress or assistance (j) (*Inland*)

Rule 25. Sailing Vessels Underway and Vessels Under Oars

- (a) Sailing vessels
- (b) Sailing vessels less than 20 m
- (c) Optional sailing vessel lights
- (d) Sailing vessel less than 7 m; vessel under oars
- (e) Under sail and power

Rule 26. Fishing Vessels

- (a) applications to all fishing vessels underway or at anchor
- (b) Trawling
- (c) Fishing other than trawling
- (d) Additional lights for close group of fishing vessels
- (e) Not fishing equals power-driven vessel

Rule 27. Vessels Not Under Command or Restricted in their Ability to Maneuver

- (a) Not under command
- (b) Restricted maneuverability, except mine clearance
- (c) Restricted towing vessels
- (d) Restricted dredges and underwater operations
- (e) Diving operations
- (f) Mine clearance
- (g) Vessels less than 12 m (except dive boats) exempted
- (h) Refers to Distress signals in Annex IV

Rule 28. Vessels Constrained by Draft

Applies only to International waters

Rule 29. Pilot Vessels

- (a) Engaged on pilotage duty
- (b) Not on duty equals power-driven vessel

Rule 30. Anchored Vessels and Vessels Aground

- (a) Vessels at anchor
- (b) Vessels less than 50 m
- (c) Vessels 100 m or longer
- (d) Vessels aground
- (e) Vessels less than 7 m in isolated anchorage
- (f) Vessels less than 12 m when aground
- (g) Less than 20 m in special anchorages exempt (*Inland only*)

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Rule 31. Seaplanes

To be lighted as a power-driven vessel if possible

PART D – SOUND AND LIGHT SIGNALS

Rule 32. Definitions

- (a) “Whistle”
- (b) “Short blast”
- (c) “Prolonged blast”

Rule 33. Equipment for Sound Signals

- (a) Vessels 12 m or longer; vessels 100 m or longer
- (b) Vessels less than 12 m

Rule 34. Maneuvering and Warning Signals

- (a) Power-driven vessels maneuvering in sight
- (b) Supplemental light signals
- (c) Overtaking in narrow channels
- (d) Danger or doubt signal (5 short blasts)
- (e) Vessels nearing bends or blind spots
- (f) Use one whistle only, if more than 100 m apart
- (g) On leaving a dock (Inland only)
- (h) On the use of radiotelephone (*Inland only*)

Rule 35. Sound Signals in Restricted Visibility

Applies in or near restricted visibility, day or night

- (a) Power-driven vessel making way
- (b) Power-driven vessel underway, not making way
- (c) All other vessels underway
- (d) Fishing vessels and restricted vessels at anchor, = *Inland (c)*
- (e) Manned, towed vessels, = *Inland (d)*
- (f) Composite units equals power-driven vessels, = *Inland (e)*
- (g) At anchor, = *Inland (f)*
- (h) Aground, = *Inland (g)*
- (i) Vessels less than 12 m, = *Inland (h)*
- (j) Pilot vessels, = *Inland (i)*
- (k) Special anchorage exemptions (*Inland only*)

Rule 36. Signals to Attract Attention

Should be distinct from others prescribed in the Rules

Rule 37. Distress Signals

Visual and audio signals that can be used to call for help

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PART E – EXEMPTIONS
(International and Inland)

Rule 38. Exemptions

Lights and sound equipment on older vessels

ANNEXES

(International and Inland)

- I Positioning and Technical Details of Lights and Shapes
- II Additional Signals for Fishing Vessels Fishing in Close Proximity
- III Technical Details of Sound Signal Appliances
- IV Distress Signals
- V Pilot Rules *(Inland only)*

INTERPRETATIVE RULES

LINES OF DEMARCATION

(Inland)

PENALTY PROVISIONS

- Violations of International Rules and Regulations
- Violations of Inland Rules and Regulations
- Penalties for negligent operations
- Duty to provide assistance at sea
- Injunctions

ALTERNATIVE COMPLIANCE

International and Inland

WATERS SPECIFIED BY THE SECRETARY

(Related to Rules 9, 14, 15, 24)

VESSEL BRIDGE-TO-BRIDGE

RADIOTELEPHONE REGULATIONS

Table 26.03 (f) on VTS call signs, frequencies, and areas