



Chapter 4

Operating Your Vessel...Safely





Operating Your Vessel...Safely

- 1 Loading gear and passengers
- 2 Boat Handling
- 3 Courtesy on the water
- 4 Casting off – docking – anchoring
- 5 PWC specific safety





Load Gear & Passengers Properly





Safe Loading

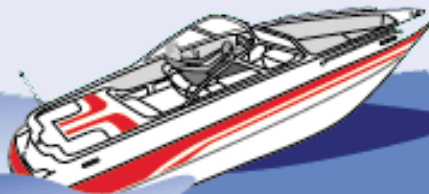
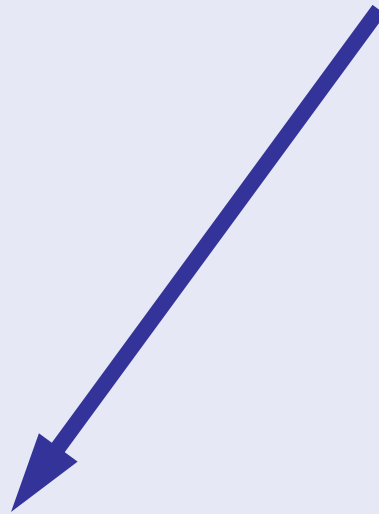
- 1 Keep centered in small boats
- 2 “One hand for you, one hand for the boat”
- 3
- 4 Load gear from the dock
- 5 Trim: engine and gear
- 6 Never overload





How Boats Handle

① Displacement mode



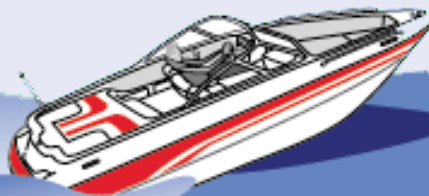
Boat Speed





How Boats Handle

② Plowing Mode



Boat Speed





How Boats Handle

3 Planing Mode



Boat Speed



Power Trim

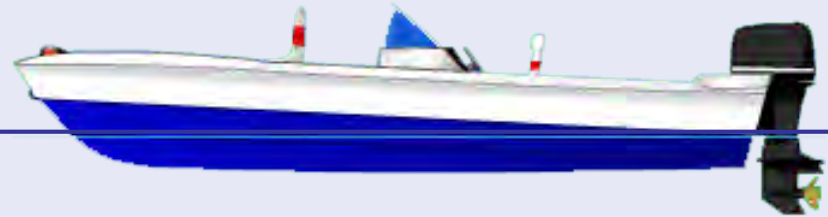


1 Standard on most outboards and I/O

2 In



3 Neutral



4 Out



Maneuvering



1 Turning

- Slow, controlled speed

2 Backing

- Slowly, stern may veer

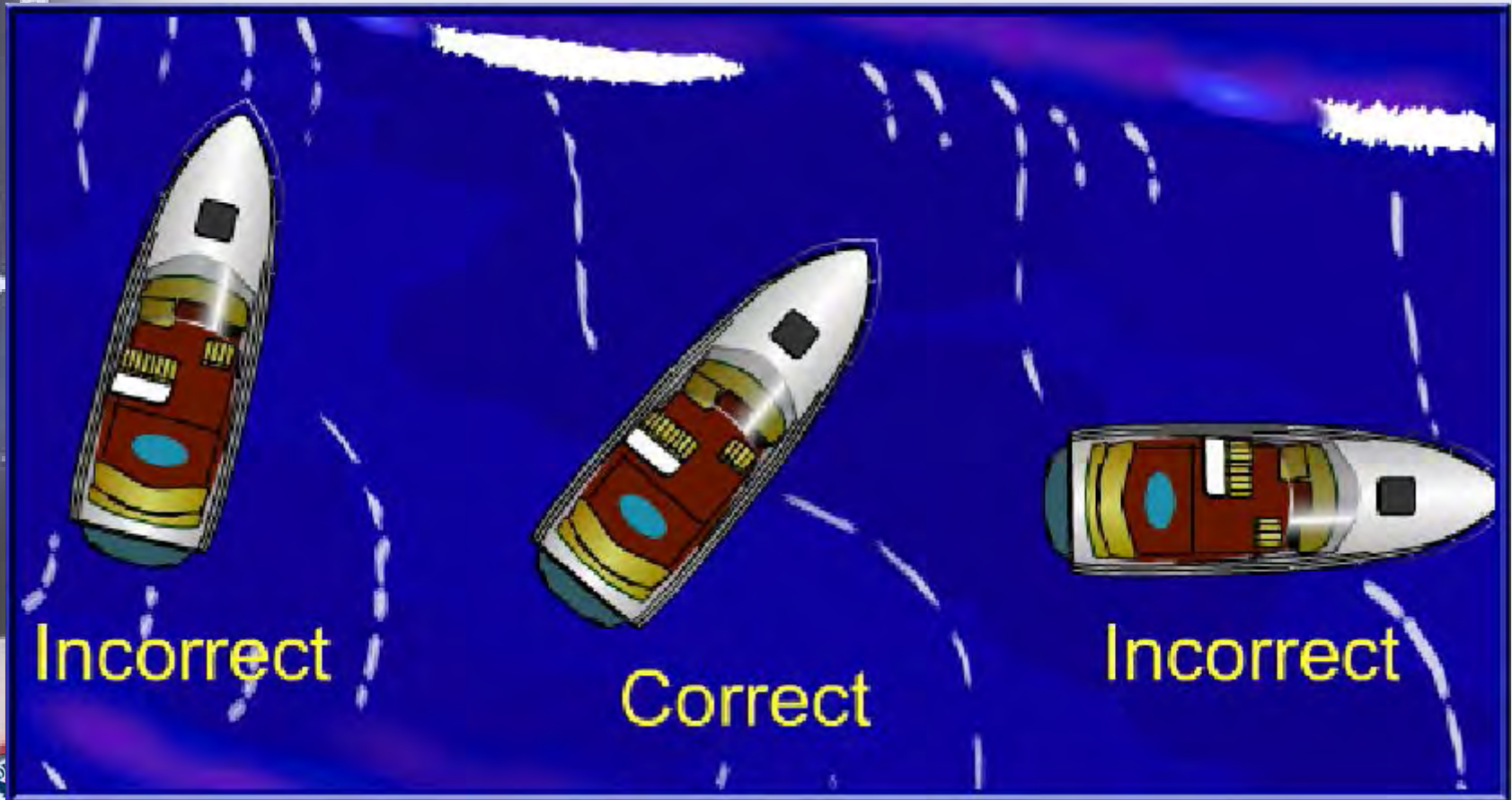
3 Stopping

- Requires distance
- Slowly!
 - Avoid stern wave





Running Into Waves

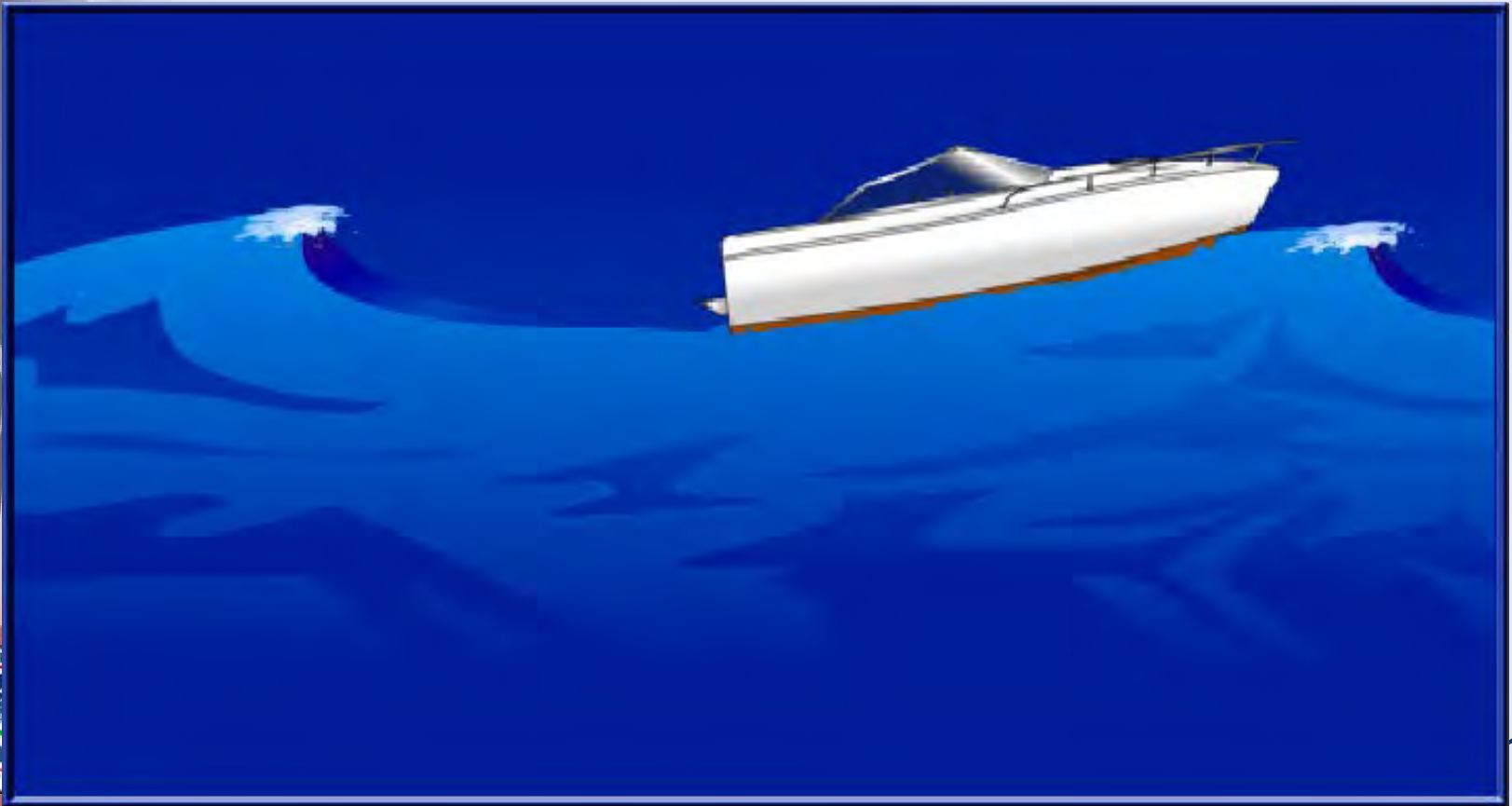




Running Before Waves

① Requires:

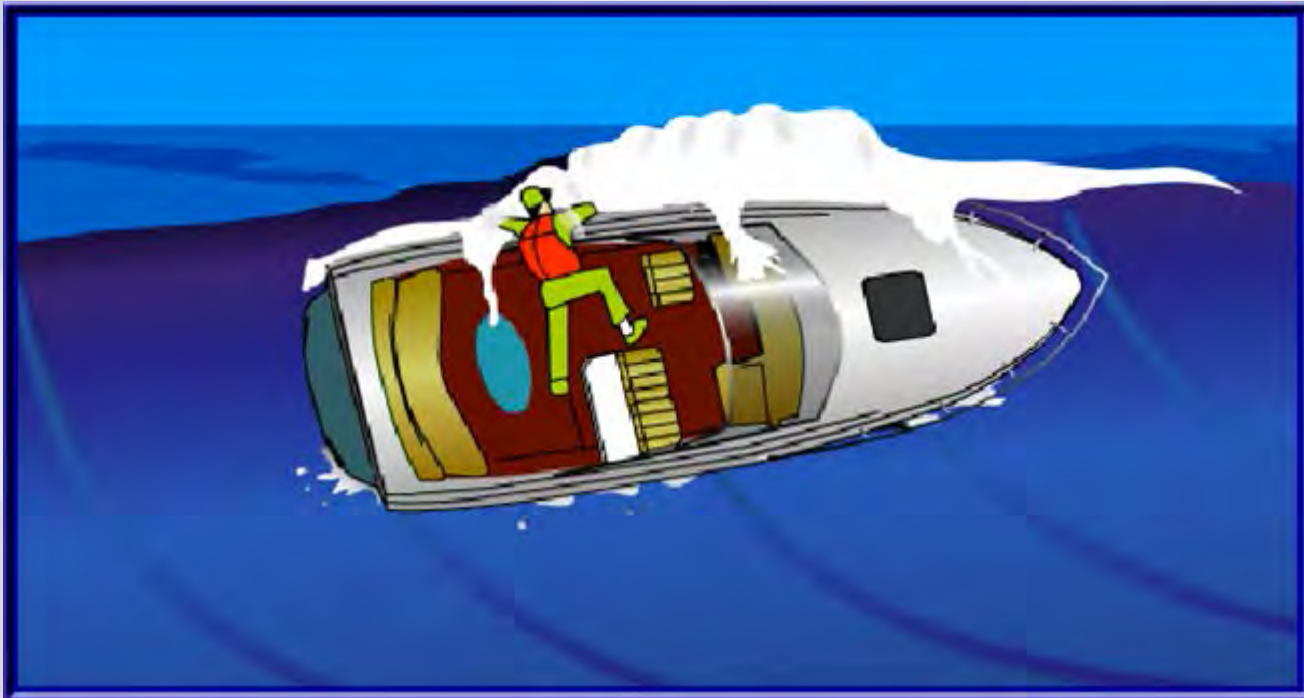
- Throttle modulation steering control





Running Parallel To Waves

- 1 Can cause broaching
- 2 Cross wakes with care
- 3 Warn passengers





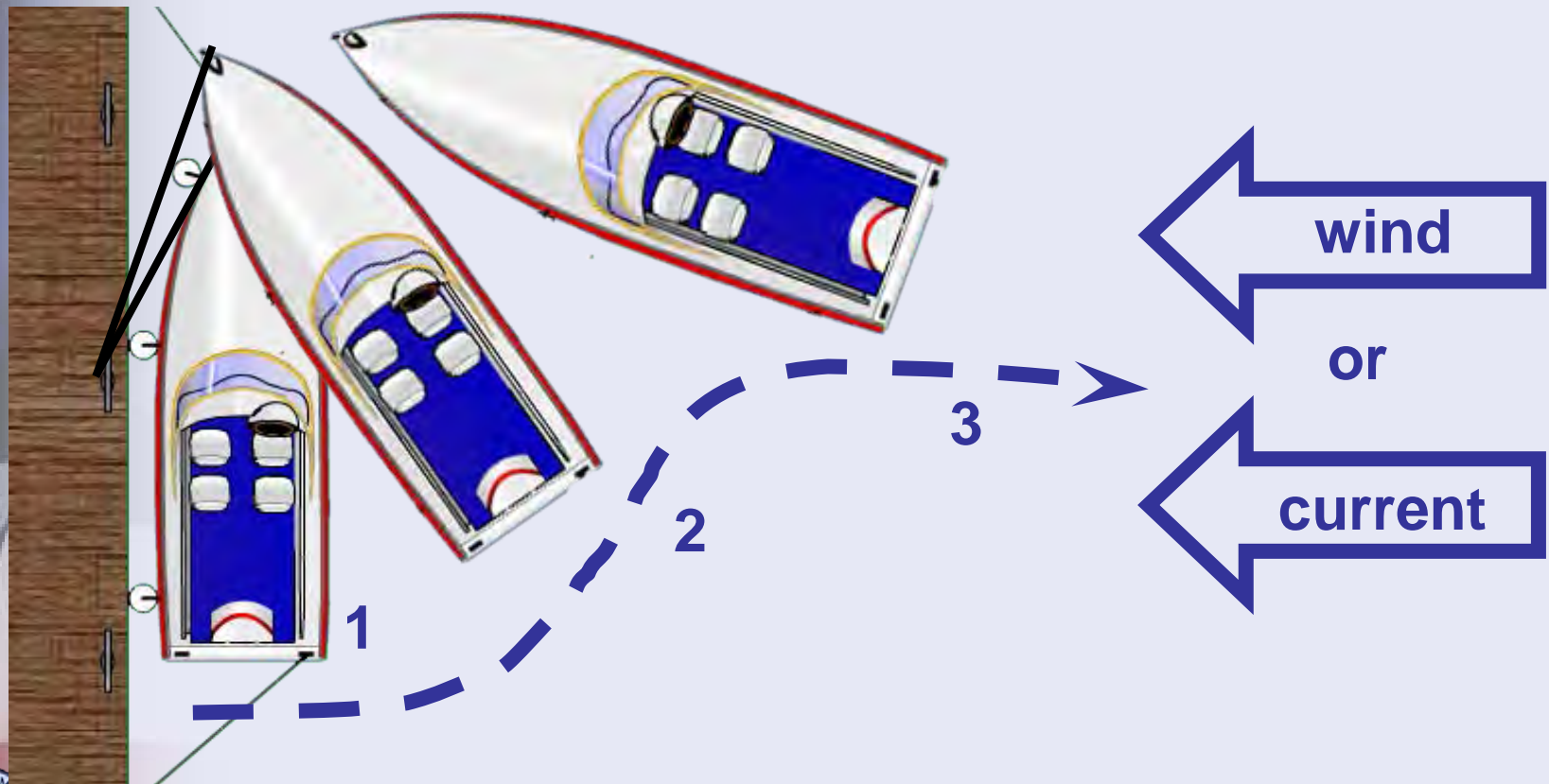
Courtesy on the Water

1 What does courtesy on the water mean?



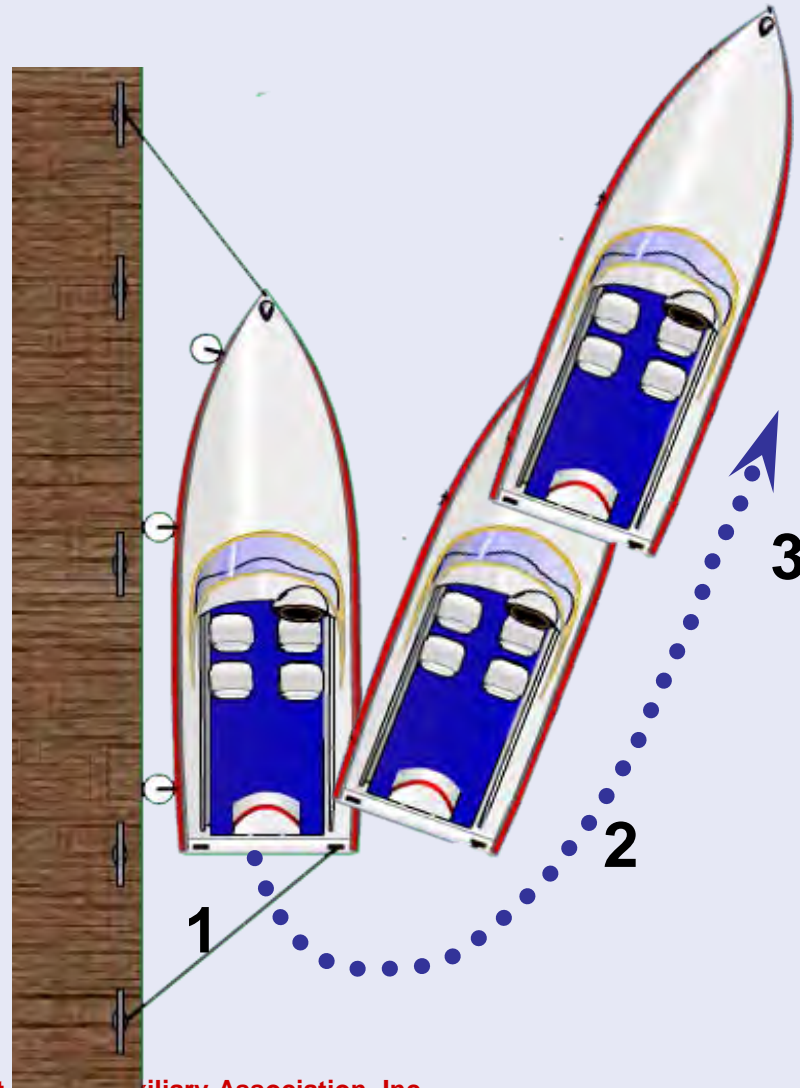
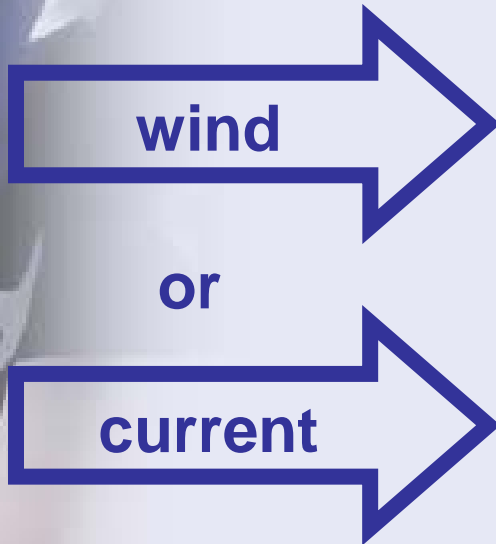


Casting Off Wind On Dock





Casting Off Wind Off Dock





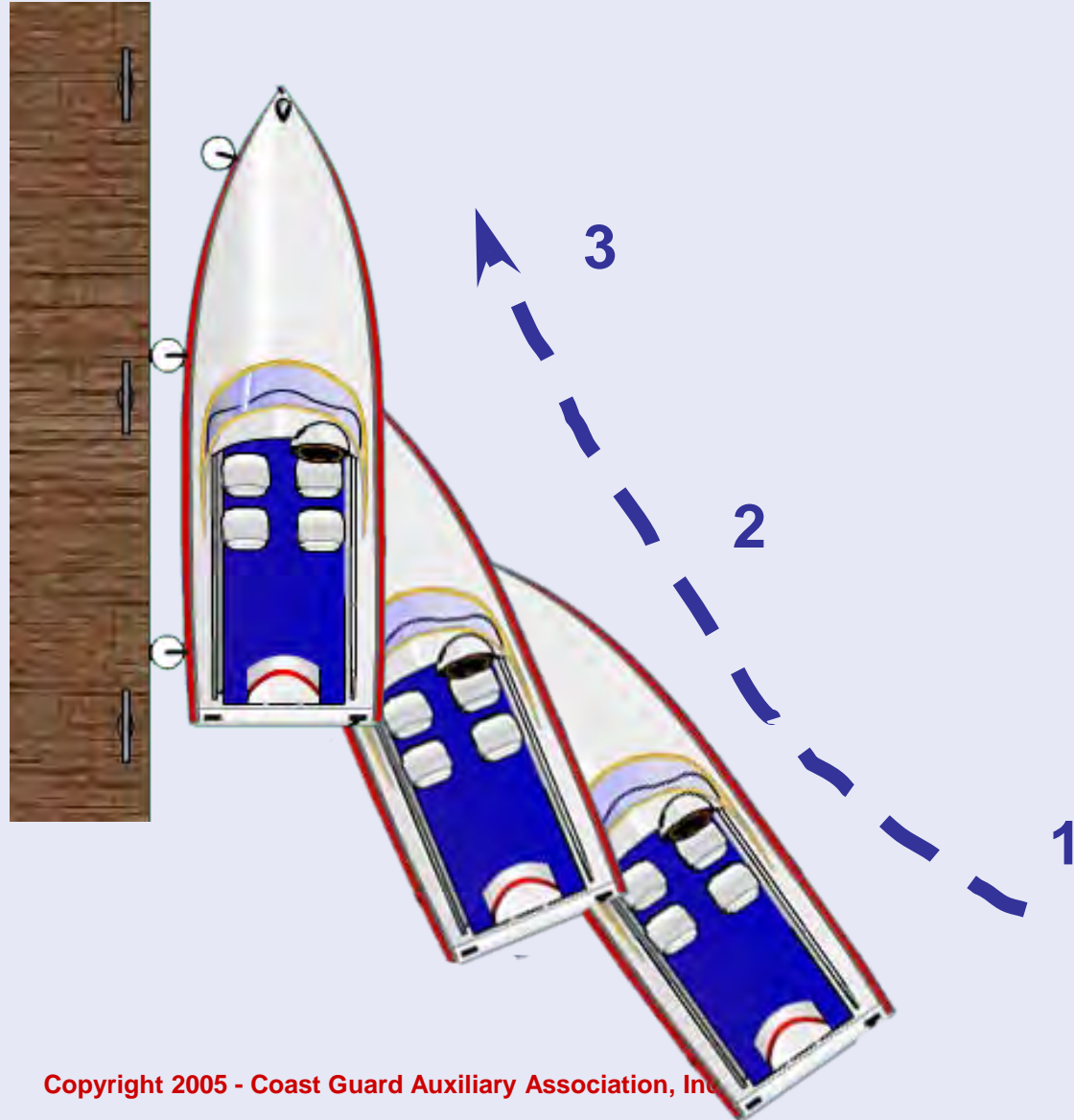
Docking

1 Preparing to dock, you should.....?





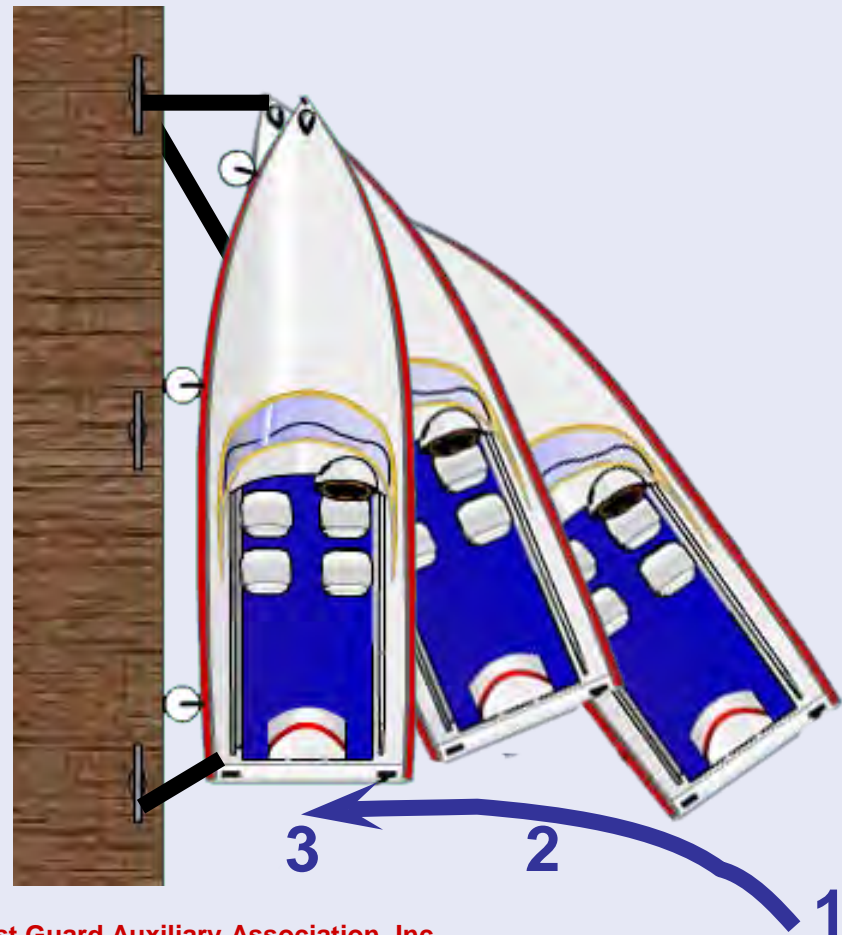
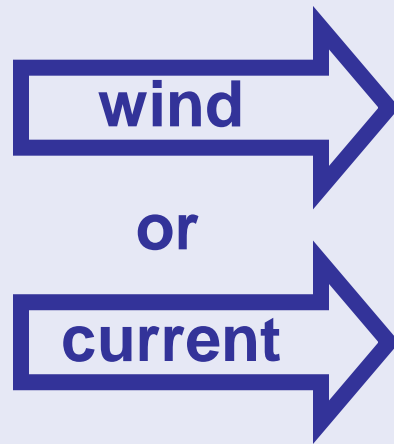
No Wind Or Current





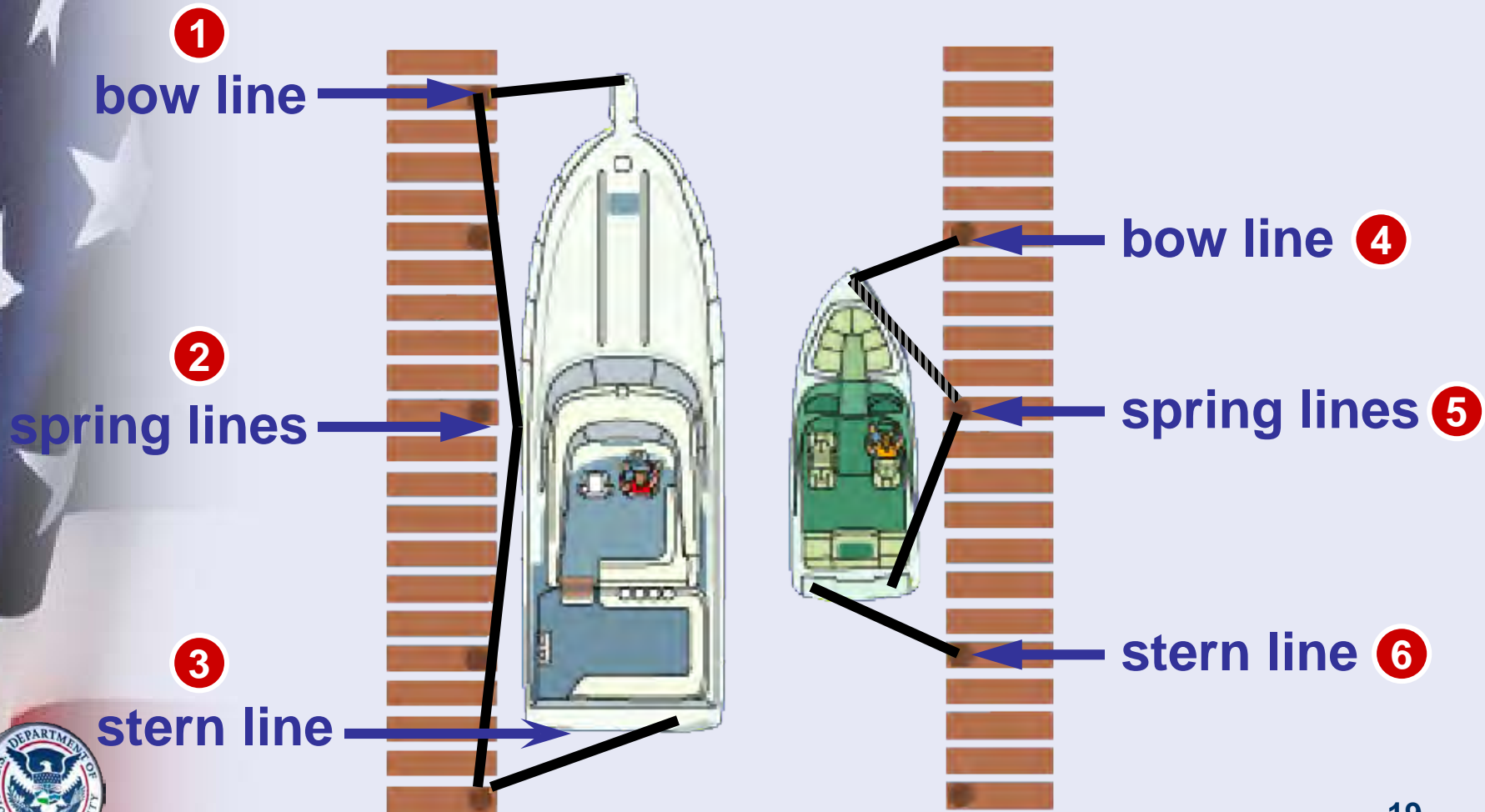
Wind Or Current Off Dock

① Outboard or stern drive





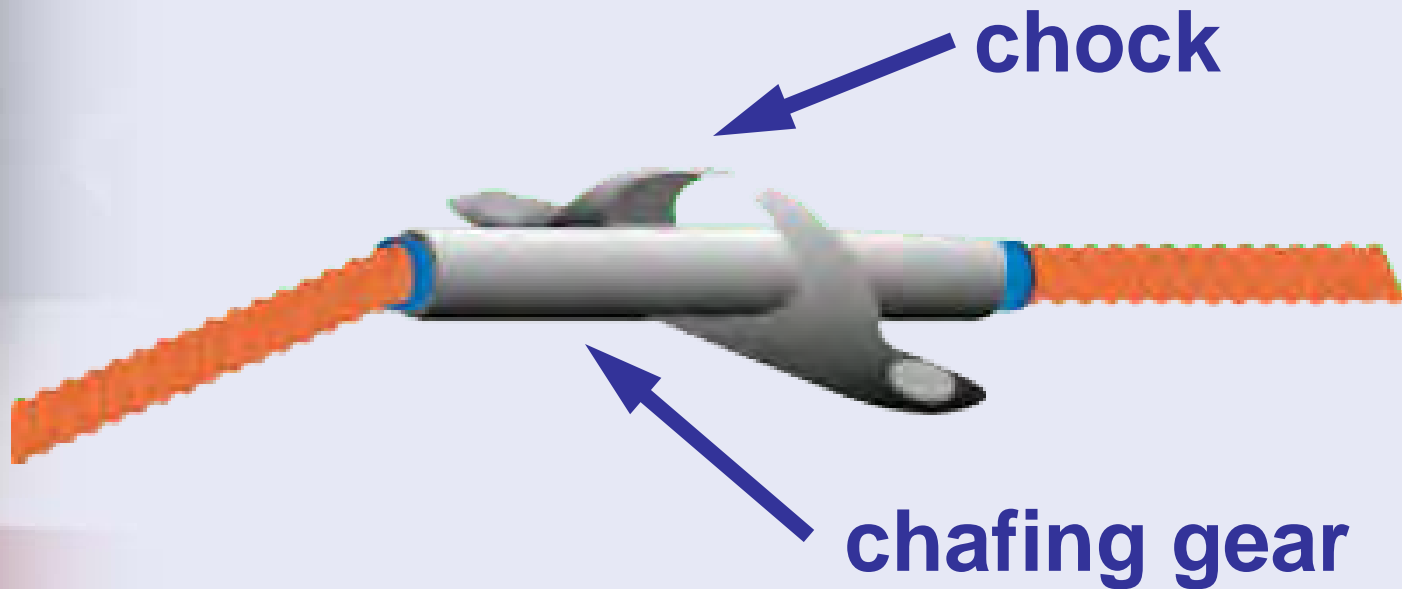
Tying To Floats And Piers





Chafing Gear Prevents Line Wear

- 1 Can be cloth, rubber, leather, or plastic
- 2 Old garden hose works



Anchors

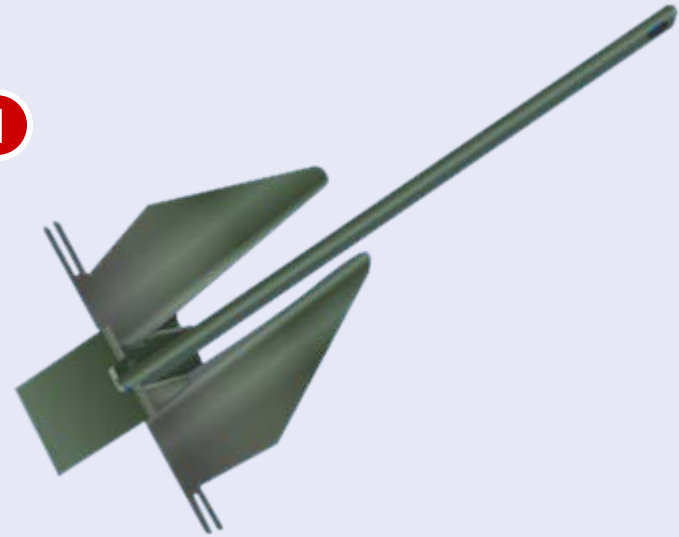
① Which anchor is for you?





Anchor Types

**Lightweight
(Danforth Type)** 1



Single Fluke 2



Plow 3





Anchor Types

1 Grapnel



2 Mushroom





Anchoring Guidelines

- ① Why use chain?
- ② What is scope?





Anchoring Guidelines

- 1 Normal scope 7:1
- 2 Calm seas 5:1
- 3 Heavy weather 10:1





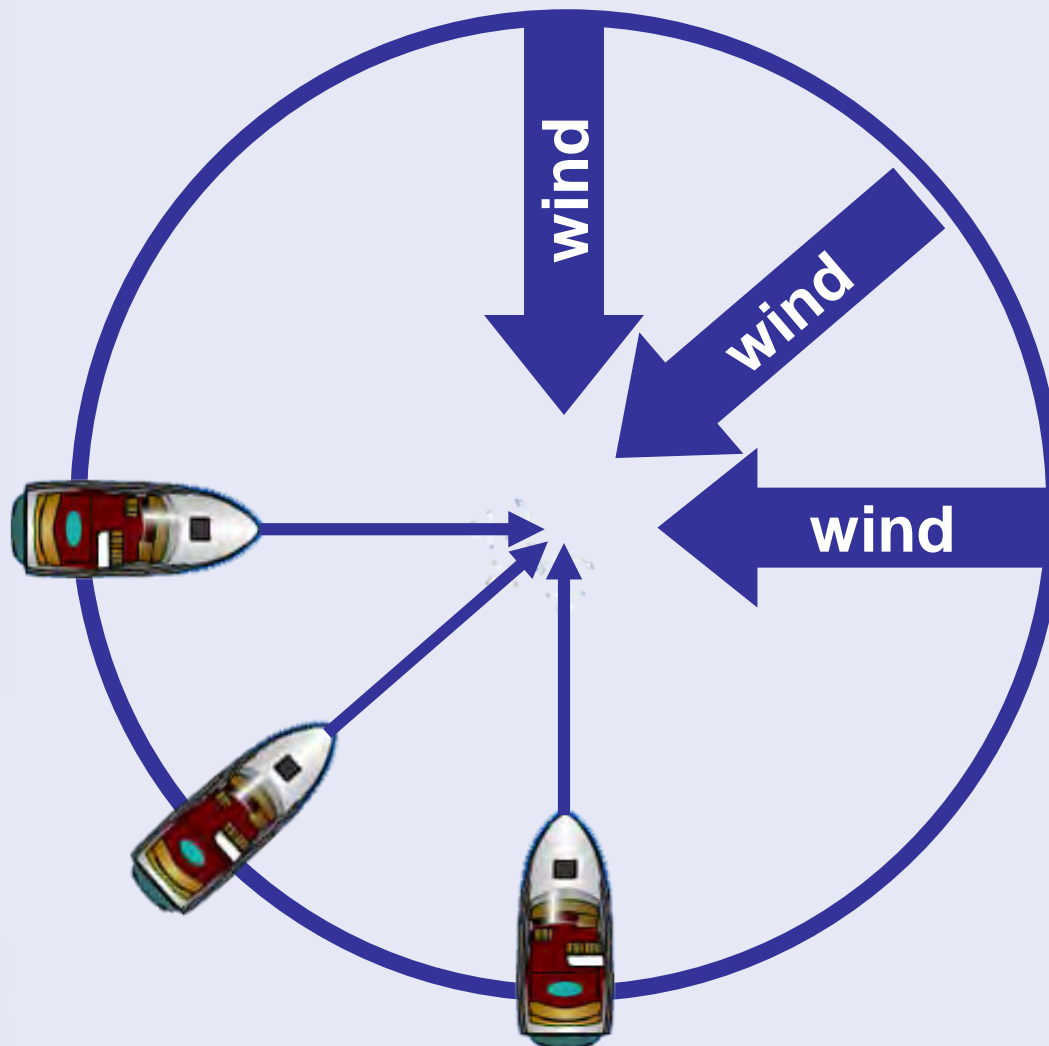
Setting Anchor

1 What are the steps involved?





Allow "Swing" Room





Retrieving Anchor

① What are the steps?





Operating Personal Watercraft

1 How are PWCs different from powered boats?





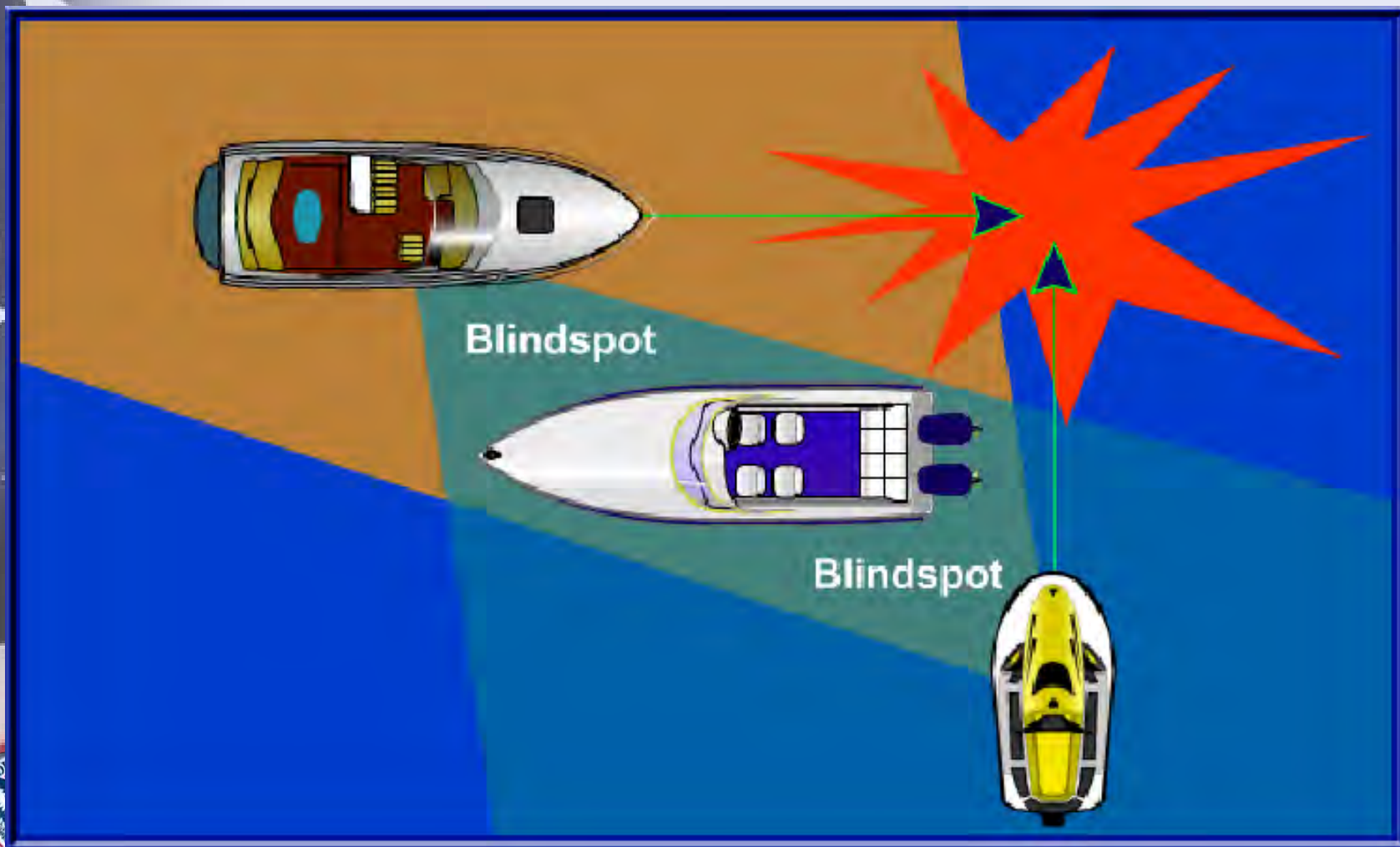
Operating Personal Watercraft

1 What courtesies should PWC operators show?





Do Not Pass Close





Operating Personal Watercraft

1 What are some environmental concerns?





Other PWC Considerations

- 1 Observe state laws
- 2 Always wear your PFD
- 3 Inspect your watercraft frequently
- 4 Keep hands and feet away from pump intake
- 5 Do not exceed capacity ratings
- 6 Know your limits
- 7 Ride according to your ability





Capsized PWC

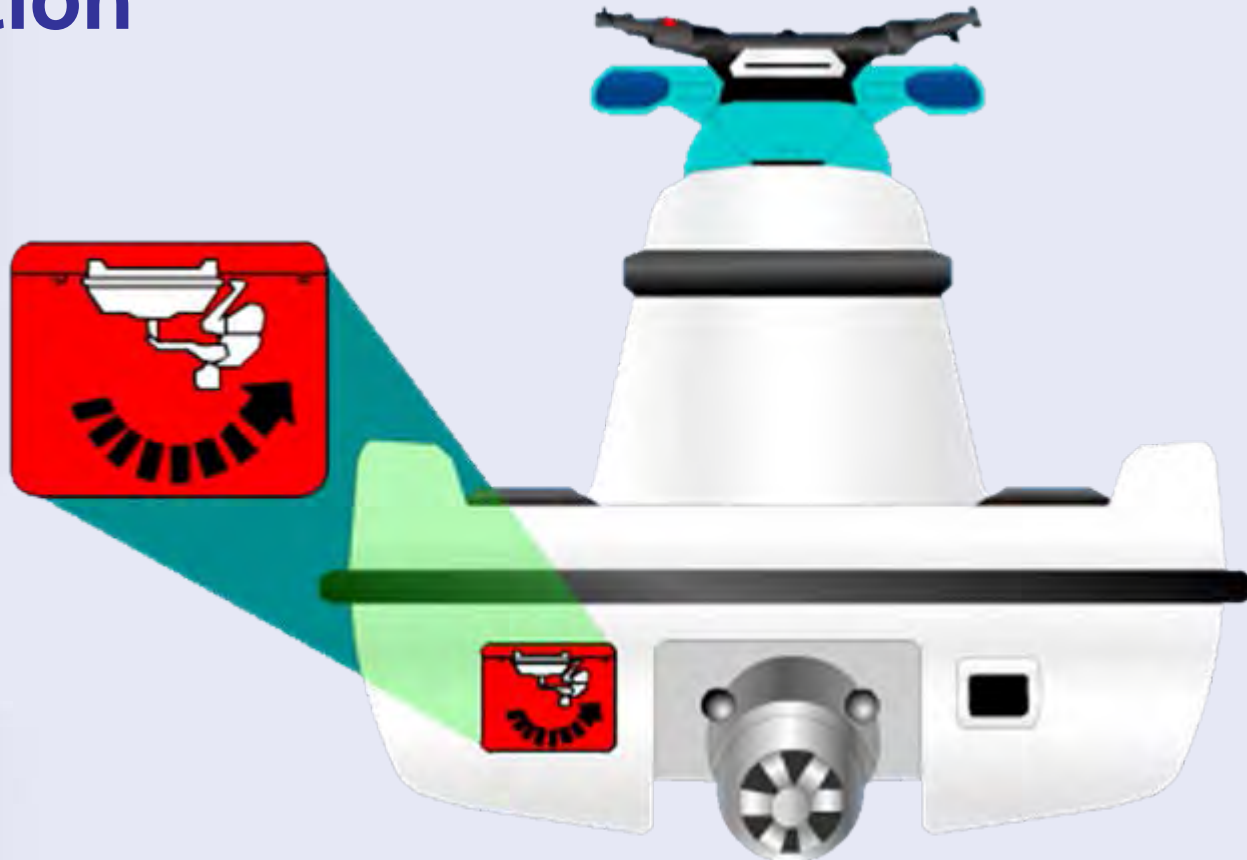
- 1 Know how to right the PWC properly
- 2 Read the owners manual





Capsized PWC

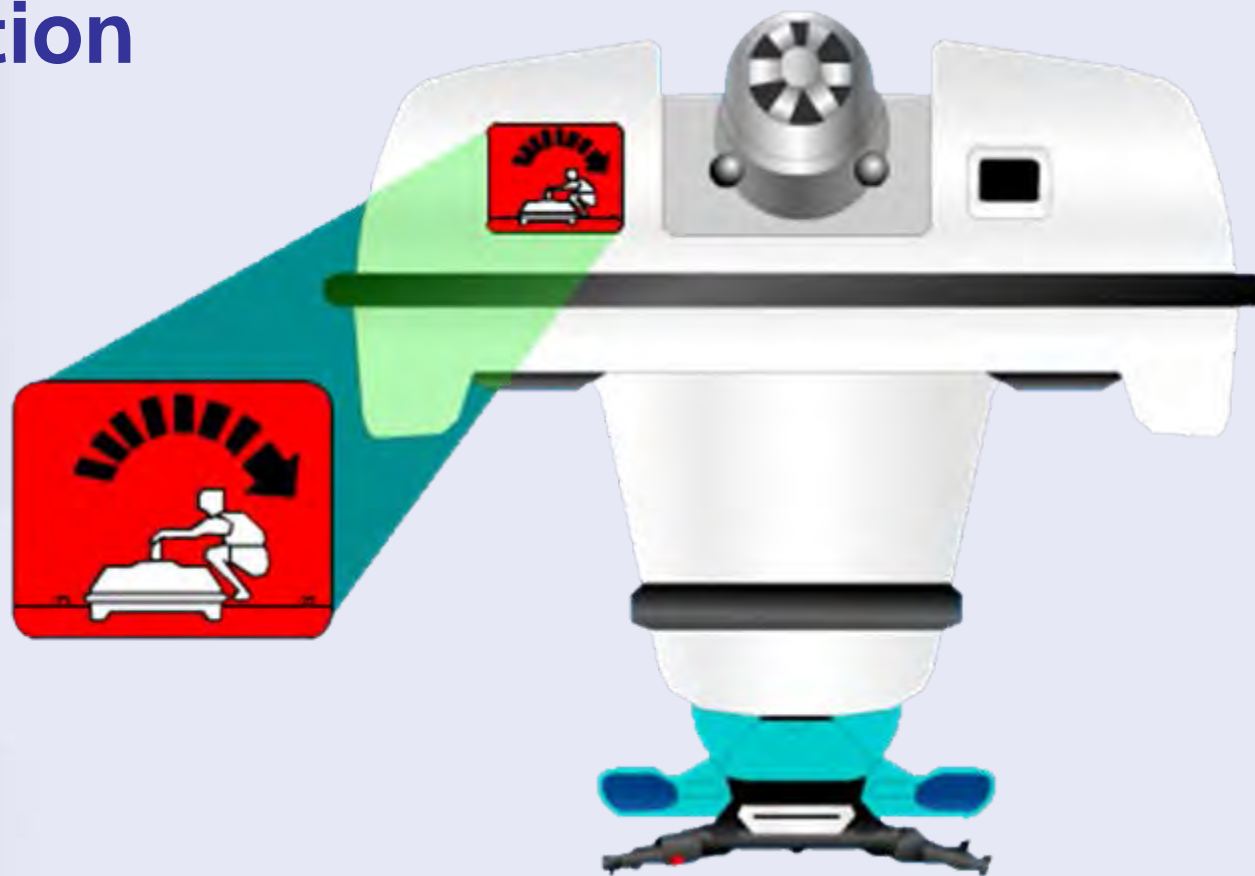
1 Decals on stern show direction of rotation





Capsized PWC

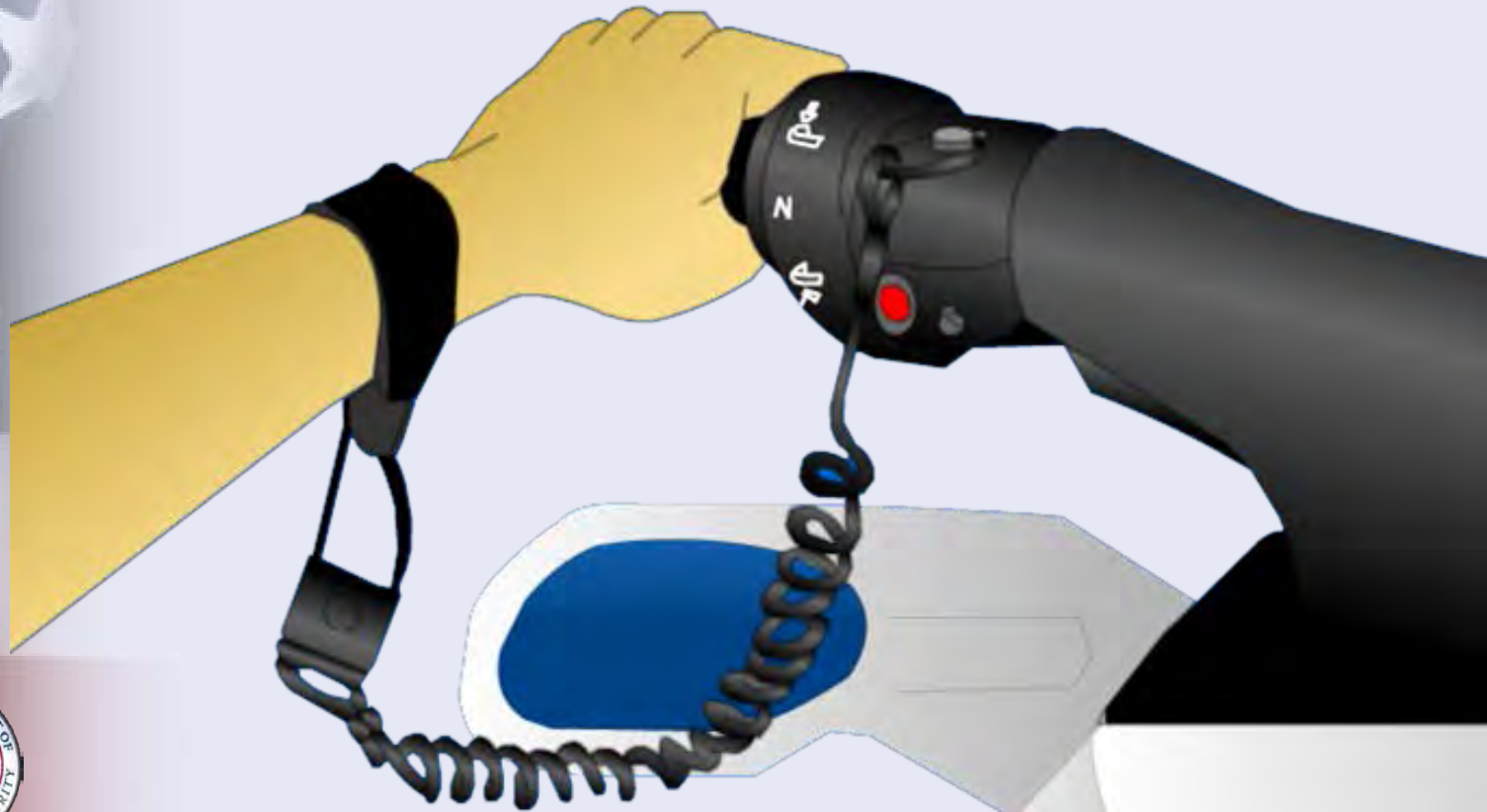
① Decals on stern show direction of rotation





Safety Lanyards

1 Attached to operator or PFD





Chapter 4 Review





Review Exercises

1 Under normal conditions, the recommended scope of an anchor line should be approximately:

a 25:1

b 15:1

c 7:1

d 2:1





Review Exercises

- 2** A spring line is a dock line that:
- a** has an inner core of stretchy elastic material.
 - b** keeps a boat from moving ahead or astern.
 - c** is only used in March, April, and May.
 - d** holds the boat directly to the pier at amidships.





Review Exercises

- 3** The correct anchor for your boat will depend not only on the size and type of your boat but on the:
- a** cost (always purchase the cheapest anchor available).
 - b** size and length of your anchor rode.
 - c** types of seabed and amount of wind and current you expect to encounter.
 - d** location (bow or stern) from which you anchor.





Review Exercises

4 You can ease the shock on both boat and crew when running into waves by slowing down and:

- a** taking the waves at an angle to the bow, not head-on.
- b** turning the boat broadside to the waves for stability.
- c** taking the waves head-on and not at an angle.
- d** instruct all passengers to stand up in the boat.





Review Exercises

5 Never anchor a boat from the stern alone because:

- a when windy, waves may come over the transom and swamp the boat.
- b the bow should always be pointing away from the wind.
- c it is difficult to adjust the rode for proper scope.
- d it is difficult to bring persons over the bow in an emergency.





Review Exercises

- 6** When docking and undocking your boat it is desirable to plan the procedure in advance and:
- a** always operate your boat at cruising speed.
 - b** give instructions in a loud authoritative tone so that crew will know who is in charge.
 - c** approach slowly against the wind or current for more control of your boat.
 - d** teach the crew how to keep the boat away from the pier using their arms and legs.





Review Exercises

7 Which of the following statements is true?

- a** PWCs do not disturb the ecology of the water bottom.
- b** Wake from PWCs will not contribute to shoreline erosion.
- c** Noise from PWCs never disturbs bird life.
- d** As when operating any boat, having consideration for others is most important when operation a PWC.





Review Exercises

- 8** Because of their different operating characteristics, some states consider PWCs to be a special type of boat and have special regulations for them. As a PWC owner or operator you must:
- a** carry a copy of the rules of the special PWC Rules Commission on board.
 - b** know the special Navigation Rules that apply only to PWCs.
 - c** follow the rules established by the National Boating Association
 - d** be aware of and abide by all laws governing the use of personal watercraft in your area.





Review Exercises

- 9** Steering a PWC involves turning a movable nozzle that directs a high pressure stream of water either right or left, turning the boat to one side or the other. It is important to know that a PWC will turn only when the:
- a** engine is turning at least 4000 rpm
 - b** jet pump is operating and pushing a stream of water.
 - c** two rudders are in contact with the water.
 - d** special steering pump is activated.





Review Exercises

- 10** A PWC lanyard cut-off switch when fastened to your wrist will:
- a** keep your signal whistle where it can be found.
 - b** alert you when you are running too fast.
 - c** stop the engine when you fall off.
 - d** remind you to always wear your life preserver.





Review Exercises

11 Because the Coast Guard recognizes personal watercraft as full fledged boats:

- a** operators must adhere to the same rules and regulations as large boats
- b** a PWC must show its navigation lights when used after dark.
- c** PWCs usually have priority of movement in meeting and crossing situations.
- d** PWCs are exempt from all boating rules and regulations.





Review Exercises

12 Constantly watch the wake of your boat, because:

- a** it can disturb the smooth operation of personal watercraft.
- b** your wake must never be more than three inches high
- c** you are responsible for injuries or damage to property caused by the wake of you boat.
- d** you may see beautiful colors created by the oxidation of phosphorus in the water.





End Chapter 4

