Facilitator's Guide for Sailing Safety Workshop

Course Diagram for Instructor Reference

Given a 22-foot fixed keel sailboat with a 5-foot draft in the Columbia River between the I-5 bridge and the I-205 bridge, members will correctly point to areas on the chart or correctly describe where Island Sailing determines is a "no-go" area under various weather conditions and be able to demonstrate safe docking procedures.

- Identify on the chart where the "no-go" areas are on the river (1)
- Explain how to plot a course away from shallow waters and off-limit areas, while considering the current wind patterns (2)
- In a pre-departure meeting, describe steps to avoid collisions in while docking and maneuvering (3)
- In a pre-departure meeting describe steps to avoid collisions with barges on the Columbia River (4)
- In a pre-departure meeting, describe steps to be safe during high wind and current (5)
- Completed module, and ready to skipper a 22-foot boat on the Columbia River

- Identify location of rocks, sandbars, and off-limit areas (1.1)
- Name safest route options, from a list in different scenarios (2.1)
- Describe steps to safely maneuver boat out of slip (3.1)
- Show you can point out the barge traffic line on the chart (4.1)
- Explain the proper steps to reef the sails (5.1)

- Identify reasons areas on map are marked in red as "no-go." (1.2)
- Show safest path on chart, in reference to destination and crew input (2.2)
- Describe steps to safely maneuver boat back into slip (3.2)
- Identify the speed of river barges on the Columbia River (4.2)
- Explain how to avoid incoming logs during high current (5.2)

- Identify buoys, markers and signs specific to river area as will be seen from the boat (1.3)
- Demonstrate ability to find weather information, and apply to course planning (2.3)
- Describe strategy for docking into and away from the wind (3.3)
- Describe safe distance for boats to be from barges (4.3)
- Explain how to maneuver boat back into slip during high winds (5.3)

- Basic knowledge of sailing terms and concepts
- Familiarity with operating a small vessel
- Ability to read and understand simple navigational charts
- Previous handling a boat in calm conditions
- ASA 101 Certification and new Club Member

Course Agenda

Preparation for Course (10 minutes)

Set up the classroom

- **Before Workshop:**
  - Review Presenter notes. Set up computer.
  - Connect the computer to the multimedia projector and set up a screen or whiteboard.
  - Print off: charts of Columbia River to draw on and to practice, Workshop Evaluation Sheets, final test.

Introduction and Objectives (5 minutes)

Welcome and Overview *(slide 1)*

- **Goal**: Provide a short welcome and introduce the workshop objectives.

- **Script**:
  - o "Welcome sailors! Today we will be reviewing key sailing safety skills you learned in the ASA (American Sailing Association) 101 class, including identifying no-go areas, plotting safe courses, docking and maneuvering, avoiding collisions with barges, and safety during high wind and current conditions."
  - o "By the end of this workshop will be able to describe these actions during a pre-departure safety meeting and identify critical areas on the chart."

Instructor Introduction

- **Goal**: Establish credibility and build rapport.
- **Script**:
  - o "My name is [Your Name], and I have been a sailing instructor or member service team member for [X] years. I'm excited to share my knowledge and help you enhance your sailing safety skills."

Participant Introduction

- **Goal**: Foster a sense of community and encourage participation.
- **Script**:
  - o "Let's go around and introduce ourselves. Please share your name, your sailing experience, and what your favorite thing about sailing is."

Entry Skills Review (5 minutes)

Content Presentation *(slide 2)*

- **Goal**: Briefly go over what skills and knowledge participants should be expected to have
- **Script**:
  - o "In your ASA 101 class, you learned all these items and were expert at them, right? (say jokingly). So, you know basic knowledge of sailing terms (port/starboard, bow/stern, windward/leeward, points of sail) …. correct?" Here is a link to all those skills: https://asa.com/certifications/asa-101-basic-keelboat-sailing/
  - o "Let's have a small vessel operations review which includes using the tiller and engine at same time to turn, small motor operation, and how to put away the boat."
  - o "You should also know how to read charts in a basic way."

Workshop Agenda (5 minutes)

Content Presentation *(slide 3) "My goal is to expand on your knowledge and reinforce what you know."*

- Understanding No-Go Areas
- Visual Symbols on Chart

- Common Markers and Symbols
- Keel Depth of Boat
- Weather
- Trip Planning with Pre-Departure Meeting
- Docking and Maneuvering
- Avoiding Barges and Logs
- Review on How to Reef sails
- Peer Assessment

Attention Grabbing Intro/Outro

Content Presentation *(Slides 4-5)*

- **Goal**: Provide attention grabbing graphic to get people loosened up
- **Script**: A short poem to be read pointing at the pictures like a comic strip:

"Oh, gee oh whiz these folks didn't read the chart and you know it wasn't funny…"

" Because you crashed the boat and now you owe the club a little money…"

"And now you ain't got no boat no more…"

"They even made a sad movie with a musical score."

(Cut to next slide) "Don't be that guy under the Burnside Bridge!"

"And it's gonna be alright alright alright!"

"This is a review type course, so don't want to be scarin' ya'!"

"So, let's get educated and remember the "no-go" areas…."

Understanding No-Go Areas (10 minutes)

Content Presentation *(Slides 6-13)*

- **Goal**: Provide practical examples to illustrate the concept.
- **Script**:
  - (slide 6) "Here is a chart of the Columbia River. Notice these red areas? These are no-go zones. Let us highlight a few and discuss why they are marked as such. You can see the shallow areas on the other side of the wing dam on the islands, and past the channel marker towards the I-5 bridge are off limits."

  - (slide 7) "Take a look at the symbols found in the NOAA Chart #1 and look at your chart and tell me what symbols you think can be found in our sailing waters.

  - (slide 8) "Discuss these visual cues." More info found here from the US Army Corps of Engineers: https://www.nwp.usace.army.mil/missions/navigation/pile-dikes/

- o (slide 9) "Now check for understanding. Can you point out the no-go areas without guidance and describe *why* they are no go?"

- o (slide 10) "on the Capri there is a keel with a draft of 5 feet!"

- o (slide 11) "Here are the answers to the questions on the screen.
  Answer 1: Due to the shallow depth of and depth of keel we will head north in the primary channel.
  Answer 2: Conduct a safety meeting, check wind and current, review chart and set a goal.
  Answer 3: Navionics chart plotter, DeepZoom.com"

- o (slide 12) "Note these two scenarios and the importance of making good decisions on the water."

- o (slide 13) "Let's review what was covered."

Weather (10 minutes)

Content Presentation *(slides 14-15)*

- **Goal**: Introduction to Weather Resources
- **Script**:
  - o "I know on your free time you just *love* clicking through links on our website (wink, wink), but at the very bottom on our footer is a wealth of information on weather, let's go through them, shall we?"

Docking and Maneuvering (10 minutes)

Content Presentation *(slides 16-18)*

- **Goal**: Explain safe docking techniques and strategies.
- **Script**:
  - o (slide 16) "Docking and maneuvering your boat safely is critical. We will discuss techniques to avoid hitting other boats, or even the dock. Let us refer to minute 24:50 of Island Sailing's Docking and Maneuvering video under the section Basics of Pivoting the Boat and Watch for 5 minutes https://www.youtube.com/watch?v=ikNE1hPEotM

- (slide 17) "Next let us produce a good analogy for how boats move, have you ever played the old school video game Asteroids? This is critical for understanding how the boat moves."

- (slide 17) "We have a northwesterly wind pattern, take a look at this picture and tell me which side off the dock will be most difficult to dock the boat on."

- (slide 18) "First off, let us review key differences in how Island Sailing boats are docked using fixed dock lines and not lines from the boats."

- (slide 18) "Let us discuss the favorable approach to the dock and how to account for wind while docking and review the steps for docking under these conditions (review all steps).

Avoiding Collisions with Barges (10 minutes)

Content Presentation *(slides 19-20)*

- **Goal**: Provide guidelines and techniques for avoiding barge collisions.
- **Script**:
  - (slide 19) "Collisions with barges can be very dangerous. We will go over how to identify barge traffic lines and the steps to avoid them.
  - *Answer 1*: The dotted line.
  - *Answer 2*: 500 feet
  - *Answer 3*: 5 kts upriver, 10 kts downriver
  - "Describe 3 scenarios using the chart with barges coming toward the boat and discuss where student thinks best course is." https://www.navcen.uscg.gov/navigation-rules-amalgamated for the COLGEG rules.
  - (slide 20) "Let's review the sounds barges make and basic COLREG right of ways for sailboats to adhere to."

Safety During High Wind and Current (10 minutes)

Content Presentation *(slide 21)*

- **Goal**: Teach safety protocols for high wind and currents, specifically on steps on how to reef the mainsail and what items to look out for during high current.
- **Script**:
  - "Sailing in high wind and current conditions requires special precautions. Let's go over the safety protocols you need to follow."

  - "Answer these questions."

  - "Let's go over all of the steps in how to reef the mainsail."

- o "During high current have a crew member *keep a lookout* for debris and mainly logs."

Peer Evaluation and Final Assessment (20 minutes)

Content Presentation *(slides 22-23)*

- **Goal**: Recap key points from each module.
- **Script**:
    - o "To recap, we covered identifying no-go areas, plotting safe courses, docking and maneuvering, avoiding collisions with barges, and safety during high wind and current conditions. Does anyone have any questions?"

    - o "Great, now we need to practice giving a pre-departure safety meeting based on what we learned today. Break off into pairs or give me an example on how you would brief the crew on the dock before departing when you are the skipper."

Content Presentation *(slides 22-23)*

- **Goal**: Complete Final Test

Feedback Collection

- **Goal**: Gather participant feedback for improvement.
- **Script**:
    - o "Before you leave, please fill out the feedback forms. Your input will help me improve future workshops."
    - o (Hand out feedback forms)

Paper Chart for Practice
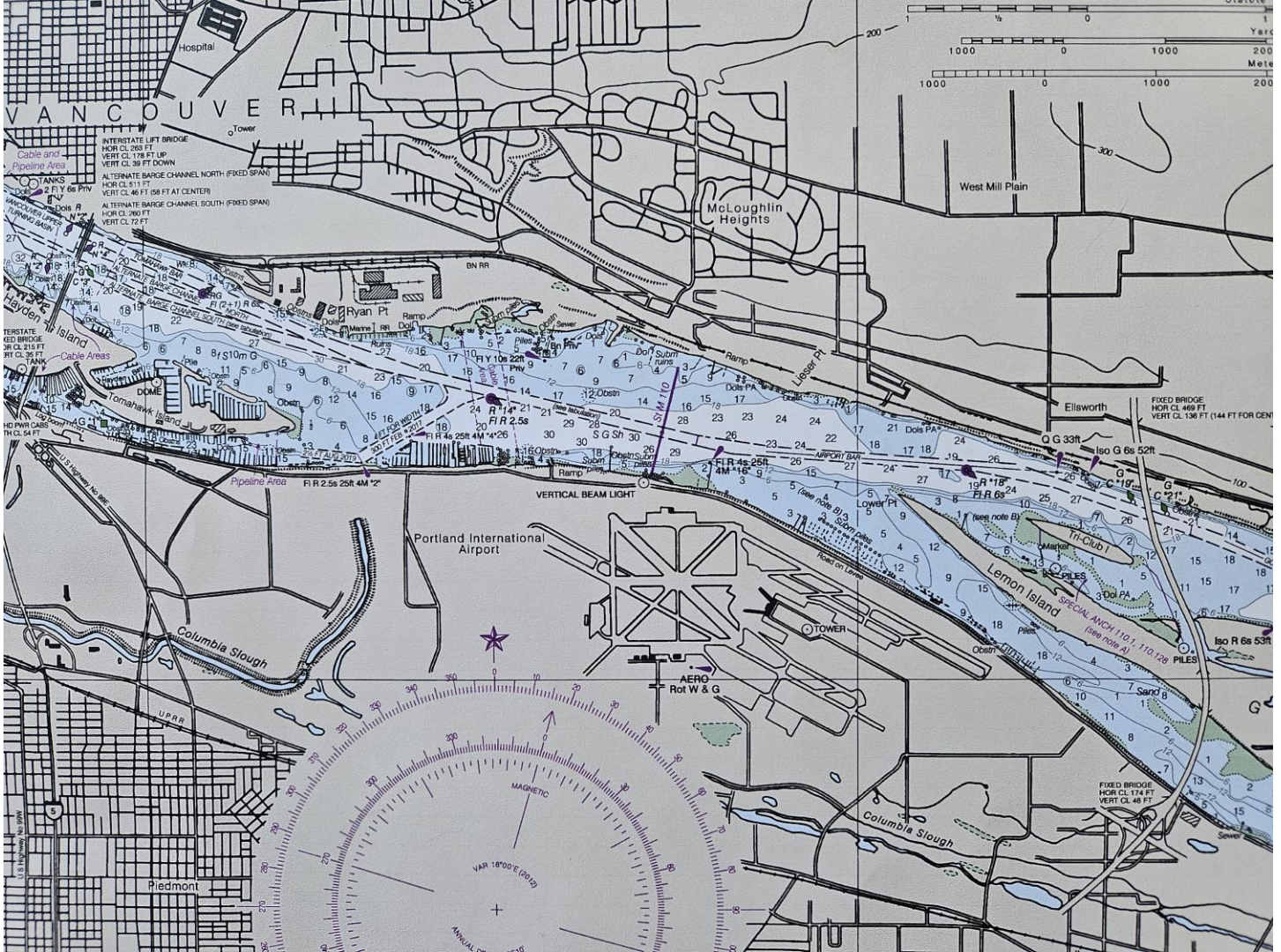
Pilot Test Group Evaluation

Thank you for participating in the pilot test group, please answer the following questions:

1. How is the material relevant to the club members' goals?

_____
_____
_____

2. How would you change the materials presented to cover the skills in a manner more readily understood?

_____
_____
_____

3. What is the most logical way to cluster this information?

_____
_____
_____

4. How could the content be presented better?

_____
_____
_____

5. To what degree will participants be satisfied with what they have learned?

_____
_____
_____

6. Was the content mostly relevant or mostly redundant to what participants already knew?

_____
_____
_____

7. Will the materials be able to be managed efficiently by the instructors using the equipment on hand?

_____
_____
_____

Workshop Evaluation

Survey Questions:

1. Did the workshop achieve its stated objectives? Please explain your reasoning.

   _____

   _____

   _____

2. How clear was the content presented during the workshop?

   _____

   _____

   _____

3. Were the assessment activities timed appropriately throughout the workshop?

   _____

   _____

   _____

4. What aspects of the workshop did you find most beneficial?

   _____

   _____

   _____

5. What areas do you think could be improved?

   _____

   _____

   _____

6. How confident do you feel in your ability to identify no-go areas on a nautical chart after the workshop?

   _____

   _____

   _____

7. How well do you understand the process of plotting a safe course considering wind patterns and no-go areas?

_____

_____

_____

8. How prepared do you feel to execute docking maneuvers and avoid collisions with barges?

_____

_____

_____

9. How equipped are you to handle safety protocols during high wind and current conditions?

_____

_____

_____

10. Do you have any other comments?

_____

_____

_____

Sailing Safety Workshop Assessment

Test Type: Scenario-Based Practical Final Assessment

1. **Scenario 1**: You are the captain of a Capri-22 sailboat preparing for a day trip on the Columbia River. Your route will take you through the busiest section of the river where several no-go areas are marked on the nautical chart due to shallow waters, rocks, and strong currents. As you review the chart, your task is to identify these no-go areas and explain their significance to your crew to ensure a safe passage.

   Task: Given the detailed section of the Columbia River chart, identify 4 marked no-go areas. For each identified no-go area, explain the reason it is marked as such, considering factors like shallow waters, rocks, and strong currents.
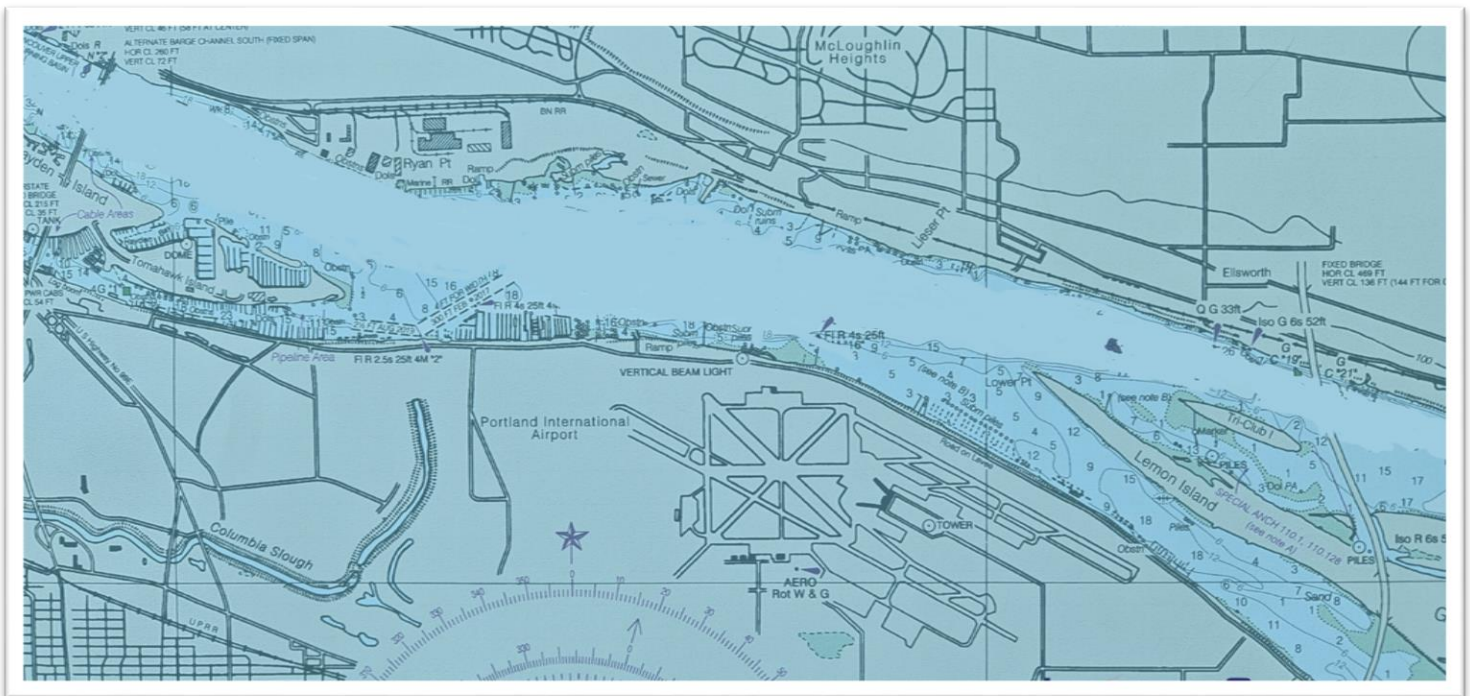
No-Go Area Reason:

   1. _____
   2. _____
   3. _____
   4. _____

2. **Scenario 2**: You are sailing near Hayden Island and are headed south towards the channel to get to the Island Cafe. The chart indicates several no-go areas due to shallow depths. The wind is coming from the northwest at 10 knots.

Route Options:

☐ Sail directly through the shallow area to save time.
☐ Navigate to the east, following the deeper channel.
☐ Turn to the west and sail close to the shore to avoid the shallow area.

3. **Scenario 3**: You are approaching a bend in the river beyond the limits of the prescribed sailing area east of the I-205 Bridge. How will you determine no-go areas?

   Route Options:

   ☐ Sail through the area with wing dams protecting an island from erosion knowing there are no sandbars there.
   ☐ Stay as close to the center channel as possible, avoiding rocks and sticking to your float plan.
   ☐ Turn around as soon as possible.

4. **Scenario 4**: Review the provided section of the Columbia River nautical chart and consider the crew's input recommending going to McGuire Island. Plot the safest path to the destination, ensuring avoidance of shallow waters and hazards. Show on the chart your chosen path.
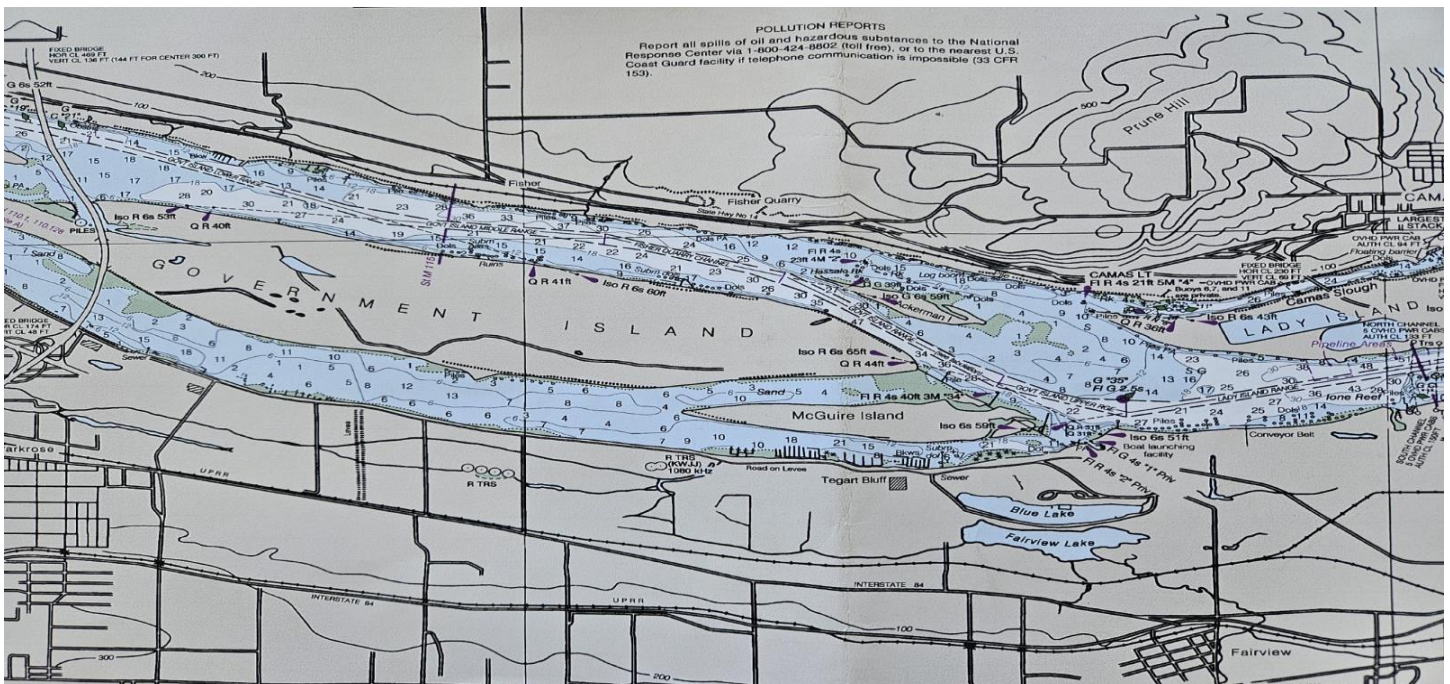
5. **Scenario 5**: You are planning a day trip on the Columbia River and need to adjust your course based on current weather conditions. Use your phone and use the following weather sources to gather necessary information and plan your route:

   Windy App- What is the Wind and Gust Speed for the Sailing area tomorrow?

_____

Data from the PDX weather station triangulated with data from the Pearson Airfield in Vancouver, WA
What is the Wind and Gust Speed for the Sailing area right now?

_____

Tropical Tidbits- What zone of pressure will we be in 5 days from now?

_____

6. **Scenario 6**: Given the YouTube video clip of the lead instructor giving a demonstration about what actions to consider while docking and maneuvering. Give a summary in your own words of how he is describing the maneuver.

_____

_____

_____

7. **Scenario 7**: You are the captain of a Capri 22 sailboat preparing to leave the dock. To ensure a safe departure, you need to establish a steerageway and exit the slip without incident. Describe 3 steps you will take as you are pulling out of the slip.
   1. _____
   2. _____
   3. _____

8. **Scenario 8**: You are the captain of a Capri 22 sailboat returning to dock. Describe 4 steps required to safely dock the boat back into the slip. Include the specific maneuvers you will use to counteract wind and current.
   1. _____
   2. _____
   3. _____
   4. _____

9. **Scenario 9**: You are the captain of a Capri 22 sailboat returning to dock. To ensure safe docking, you need to consider the current wind and current conditions and if you are docking on the windward or leeward side of the boat. What line do we place on the boat from the dock first when landing the boat?

   ☐ Stern Spring Line.
   ☐ Stern Line.

☐ Bow Spring Line

10. **Scenario 10**: During a pre-departure safety briefing, you are responsible for ensuring the crew understands the steps to avoid collisions with barges on the Columbia River. Describe the specific maneuvers and precautions that should be taken when a barge is spotted, and you are in the shipping channel. Include the roles of the crew and how communication should be managed.

_____

_____

_____

11. **Question**: Using the provided nautical chart of the Columbia River, demonstrate your ability to identify and trace the barge traffic lines. Draw the line of barge traffic as detailed on the chart.
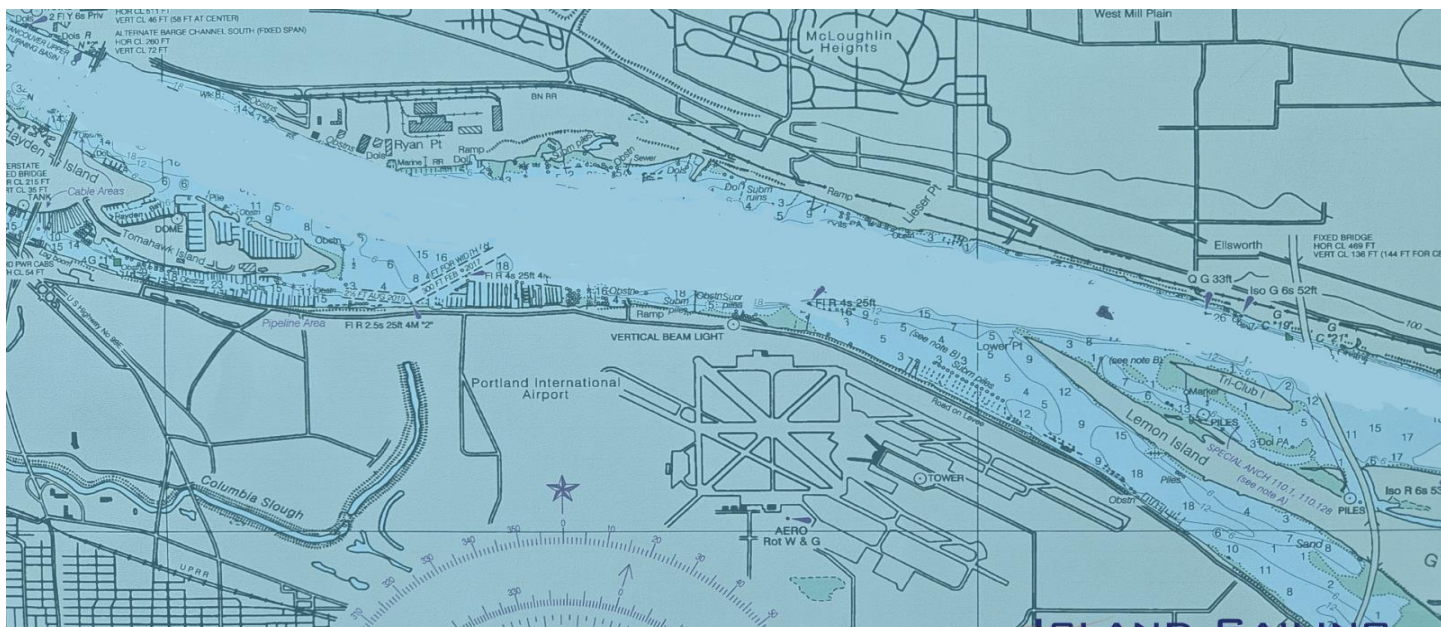
12. **Instructions**: Select the correct average speeds of upriver and downriver barges on the Columbia River from the multiple-choice options provided.

A. **What is the average speed of river barges traveling upriver on the Columbia River?**

☐ 3 knots
☐ 5 knots
☐ 7 knots
☐ 9 knots

B. **What is the average speed of river barges traveling downriver on the Columbia River?**

☐ 6 knots

☐ 8 knots

☐ 10 knots

☐ 12 knots

C. **What is the safe distance for boats to maintain from oncoming barges on the Columbia River?**

☐ 50 feet

☐ 100 feet

☐ 200 feet

☐ 500 feet

13. **Instructions**: During a pre-departure safety meeting, name 2 things sailors do for dealing with high wind and high current conditions.

_____

_____

14. **Question**: During a pre-departure meeting on the boat, describe 4 steps in the process of reefing the sails

1. _____

2. _____

3. _____

4. _____

15. **Instructions**: During a pre-departure safety meeting, describe what to do to avoid incoming logs during high current conditions.

1. Always keep a _____

Thank you and remember to take a **Job Aid** with you!

Job Aid
Sailing Club

01. Identifying No-Go Areas on the Chart

Review Nautical Chart
- Look for symbols indicating shallow waters, rocks, sandbars, and other obstacles.
- No-go areas are typically marked in red.

02. Plotting a Safe Course

Analyze Wind Patterns
- Use reliable sources for wind information.
- Adjust your course based on wind direction and strength.
Plot Course
- Identify starting point and destination.
- Plot a course avoiding no-go areas.
- Plan for alternative routes.

03. Avoiding Collisions with Barges

Identify Barge Traffic Lines
- Use the provided chart to find barge traffic lines.
- Maintain awareness of barge movements.
Collision Avoidance Maneuvers
- Adjust speed and course to avoid barges.
- Maintain a safe distance (at least 500 feet).

04. Docking and Maneuvering

Prepare for Docking
- Check all safety equipment.
- Brief the crew on roles and communication signals.
Docking Maneuvers
- Approach the slip at a shallow angle.
- Use spring lines to control the boat.
- Adjust throttle and rudder to maintain control.

05. Safety During High Wind and Current

Monitor Weather Conditions
- Use reliable weather sources.
- Adjust plans based on updated weather information.
Safety Protocols
- Reef sails early.
- Assign roles and establish communication signals.
- Use safety lines and harnesses.