DAY SAILING

WITH THE WASHINGTON YACHT CLUB

WYC DINGHY RATINGS

Below is a list of WYC Dinghy Ratings and the privileges associated with them.

RATING	BOATS YOU CAN SAIL	WHERE/WHEN YOU CAN SAIL
Single-Handed Novice	Laser Pico	Union Bay in **up to 7kts** of wind
Single-Handed Intermediate	Laser Pico	Union Bay in **up to 15kts** of wind
Single-Handed Skipper	Laser Pico *With Rig Rating:* Finn	Interconnecting waters East of the Aurora Bridge in any wind subject to Hazardous Weather Restrictions
Double-Handed Novice	FJ, Laser II, Flying Scot	Union Bay in **up to 7kts** of wind
Double-Handed Intermediate	FJ, Laser II, Flying Scot, 470, Catalina 21, Lightning	Union Bay in **up to 15kts** of wind
Double-Handed Skipper	FJ, Laser II, Flying Scot, 470, Catalina 21, Lightning *With Rig Rating:* 505, I14	Interconnecting waters East of the Aurora Bridge in any wind subject to Hazardous Weather Restrictions
Catamaran Novice	Hobie 16	Union Bay in **up to 7kts** of wind
Catamaran Intermediate	Hobie 16, Hobie 21	Union Bay in **up to 15kts** of wind
Catamaran Skipper	Hobie 16, Hobie 21 *With Rig Rating:* Hobie SX-18, SuperCat	Interconnecting waters East of the Aurora Bridge in any wind subject to Hazardous Weather Restrictions

DAY SAILING
WITH THE WASHINGTON YACHT CLUB

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Chapter 1

INTRODUCTION

Welcome to the Washington Yacht Club! The WYC has the largest sailing instruction program in the Pacific Northwest and sponsors a successful racing team. The club has a long tradition of providing a wide variety of safe sailing experiences for all members of the University community. Other than dues and initiation fees, members pay no fees except for a small keelboat rental charge. Club officers, chiefs and instructors are volunteers, and it is up to the members to keep club boats in operating order.

To help provide for the safety of Club members while sailing, we have a series of ratings, allowing members to sail in progressively more difficult (and exciting) boats and conditions as they improve in sailing ability. A rated member may use WYC facilities on a self-service basis, whereas unrated members must sail under supervision. The WYC offers free classes and provides opportunities for supervised individual sailing practice.

In addition to self-service sailing, subject to ratings, and basic sailing classes, the club offers advanced classes, quarterly weekend cruises (Snooze 'n Cruise), parties, formal and informal racing, and other activities that keep the Club running, such as meetings and work parties. Members are welcome at all Club activities. Attendance at work parties is particularly encouraged, not only out of the necessity of repairing boats, but also because part of learning to sail is becoming able to inspect boats for damage and repair damage. If you have any questions or concerns, please contact the HUB office or any of the many Club members holding officer or appointed positions.

This book is a guide to members and includes the Club's sailing textbook. A good understanding of the material through the first Appendix is sufficient to pass the Club's Novice, Skipper and Sailboard written tests. But more importantly, it will provide members with a fundamental theoretical knowledge of sailing which will accelerate learning sailing on the water.

Again, welcome to *your* Club and happy, safe sailing!

Chapter 2:
CLUB FACILITIES, ACTIVITIES, AND ORGANIZATION

The Washington Yacht Club provides a variety of facilities and programs for the sailing enthusiast.

FACILITIES

BUSINESS OFFICE

SB-24 HUB (Telephone: 543-2219 for office) - A good place to find answers to questions is the Washington Yacht Club's HUB office, in the sub-basement. Information, publicity, secretarial and financial records are all a part of the Club activities that are carried on in the HUB office, which is usually open during the noon hours every weekday. Office hours change quarterly and are posted on the office door. A library of sailing books and magazines is kept in the office for browsing and loan to members. The address of the office is :

SAO Box 235 Box 352238
Seattle, WA 98195-2238

WATERFRONT ACTIVITIES CENTER

Sail Locker / Shop (Telephone: 543-9448) - In 1976, the WYC moved from the old Canoe House, where it had been since 1948, to the Waterfront Activities Center (WAC), which is located southeast of Husky Stadium. The sail locker, workshop, lounge, lockers, showers, and sauna are all found at the WAC, which also houses facilities for kayak and rowing clubs. Lockers can be rented by the quarter or for the day by University students, faculty, staff, and alumni members of the WYC.

BOATS

The Club owns many different types of sailboats, totaling about forty boats. Most are self-rescuing, meaning they can be righted and sailed after a capsize. The larger fleets are purchased by the Club, such as Lasers, Flying Juniors and Hobie 16s. Most other boats are acquired as tax-deductible donations. Ratings governing the use of boats are covered in Chapter 3.1. Detailed descriptions of the boats appear in Appendix A.

Lasers

Lasers are 13 foot 9 inch, self-rescuing, cat-rigged (one sail) boats designed to be sailed by one person. The mast is unstayed and must be put in each time the boat is sailed. Special information on rigging Lasers is available in the office or sail locker and in Appendix A.1.1. In light air, Lasers may be sailed by two, but they are crowded when more than one person is aboard. These boats are the basis of the single-handed novice fleet.

Flying Juniors

Flying Juniors are 13 foot 3 inch sloop rigged (two sails), self rescuing boats usually sailed by two sailors. Flying Juniors have basic rigging and are the ba-

sis of the double-handed novice fleet. Flying Juniors are also the boat used for collegiate racing.

Laser IIs

The 14 foot 5 inch sloop-rigged self-rescuing Laser IIs are usually sailed by two sailors. Two of the club's Laser IIs are equipped with spinnaker and trapeze hardware. See Appendix A.2.

470

The 470 is a 470 centimeter long, sloop rigged sailboat. It is designed to be sailed or raced by a crew of two. It is equipped for trapeze and spinnaker sailing. The 470 requires a double handed Intermediate rating.

Sailboards

The club has several sailboards that are kept in the Canoe House. Sailboards have their own ratings system that is independent of the single or double handed ratings. See Appendix A.3.

Finn

A 15 foot, high-performance, one person boat, the Finn requires considerable skill to sail, and is highly responsive to minor changes in trim. Finns are cat-rigged. Due to the skill required to sail them, Finns require a single handed Skipper rating plus a rigging rating.

505s

The 505s are 505 centimeter, high-performance racing sloops. They are sailed by a crew of two people, and are highly responsive, challenging boats. Because of their complex controls and the ease with which they can be damaged, the 505 are restricted to use by members who have a double-handed Skipper rating as well as a rigging rating.

International 14

The International 14 is a very high powered racing dingy. The International 14 is a skiff and will plane on all points of sail. The boat is sailed by two people and has two trapezes as well as a large asymmetrical spinnaker. Due to the complex controls, the large sail area and difficulty the I14 is restricted to use by members with a double-handed Skipper rating as well as a rigging rating.

Hobie 16s

The Hobie 16s are the basis of the clubs catamaran fleet. The Hobie 16 is the most numerous, one design catamaran in the world. Hobie 16s have no dagger/centerboards. Rather, the shape of their hulls takes the place on a dagger/ centerboard. Hobie 16s have two trapezes and are usually sailed by two people, although they can be single-handed or sailed by more. A novice catamaran rating is required to sail a Hobie 16.

Hobie 21

The Hobie 21 is a 21 foot, double trapeze catamaran with a large amount of sail area. The Hobie 21 has centerboards, wings, and a furling jib. The boat is usu-

ally sailed by two or more people. An intermediate catamaran rating is required to sail the Hobie 21.

Hobie SX-18

The Hobie SX-18 is a high performance catamaran equipped with wings, dagger boards and a large asymmetrical spinnaker. The SX-18 has more controls than a Hobie 16 and is more difficult to sail. Because of the high powered nature of the SX-18 as well as the spinnaker it is restricted to use by catamaran skippers who have a rigging rating.

Supercat 20

The Supercat 20 is a large, high powered catamaran. It is equipped with three trapeze wires. Because the Supercat 20 is high powered and difficult to sail it is restricted to use by members with a catamaran skipper rating who also have a rigging rating.

Other Boats

Additional boats of different designs are acquired from time to time, often by donation. These are fit into the ratings structure as needed.

Spinnakers

These are regular equipment for many boats. Novices, Intermediates, and Skippers may use them. Anyone wishing to learn to sail with a spinnaker should ask for assistance.

Boston Whalers

The WYC owns one 16 foot and two 13 foot Boston Whaler powerboats. These rescue barges are used for the lesson program, club cruises, regattas, rating exams, and in emergencies. Ordinarily, they are to be operated only by Chiefs, Instructors and Ratings Examiners. In an emergency, any member can use a Whaler for rescue if rated users are unavailable.

Rental Keelboats

The club owns a Catalina 27, a Caravel 22, and a Ranger 26, which are operated on a self-supporting basis. Rental rates vary with the day and season. Reservations may be made in advance for these boats and cruises of up to two weeks are permitted. Keelboat Skippers may sail in all interconnecting waters east of the Elwha River, and south of Malcolm Island, B.C. The boats are equipped with outboard motors, stoves, heads, and other gear. All are sloop-rigged with various sail combinations possible. All boats are equipped with a keel to provide stability. Keelboat ratings are given by designated Chiefs only. See section 3.1.6 and 3.1.7 for more information.

ACTIVITIES

The Washington Yacht Club provides a number of activities to promote sailing.

RECREATIONAL SAILING

By far the most popular aspect of the Club is the availability of sailboats for use during daylight hours in waters adjacent to the University of Washington's cam-

pus. Members may sail any of the boats for which they have earned a rating. Boats are sailed on a self-service basis subject to restrictions described in Section 3.2.5. There is no additional charge for boat use except keelboats.

LESSONS

Each quarter, free sailing instruction is offered to members. This program is primarily for beginners; advanced lessons are given on the basis of demand. All classes are taught by volunteers. There are 2 types of lessons. Weekly classes consist of one instructor and roughly ten students and meet once a week for about six weeks. Weekend lessons meet over one weekend in intensive, all-day sessions and are best for those with some sailing experience. Additional practice is also available during Ratings Examiner hours, posted in the sail locker and on the HUB office door. Motivated members may learn to sail without signing up for classes by attending Ratings Examiner hours. Class sign-ups are usually held on the second Wednesday of the quarter. Information on this is available at the HUB office.

SNOOZE 'N CROOZE

Each quarter (except Winter), the club has an organized, weekend sailing cruise. Club keelboats, affiliate boats, club dinghies and other boats owned by members sail to Blake Island on Saturday, camp overnight and return on Sunday. Ask the office or check the club website for more information. In past winters, an overnight ski trip, Ski 'n Freeze, has taken the place of Snooze 'n Cruise.

RACING

The University of Washington Intercollegiate Racing Team is sponsored by the Yacht Club. Sailboats for practices and regattas are provided by the Club. The WYC belongs to several racing associations, including Seattle Laser Fleet. Members with appropriate ratings may sail club Lasers in these races. Informal racing among club members is sometimes offered. Interested persons should contact the Rear Commodore, who oversees all club racing, or the office.

INFORMAL RACING

The Club holds informal regattas in which members, regardless of abilities and talents can improve their sailing and learn racing techniques.

WORK PARTIES

The Club maintains and repairs its own boats. Learning to repair boats is also an essential part of learning to sail. Therefore, all members are **required** to work at least two hours per quarter on boat maintenance. Work parties are held almost every week, and a Fleet Captain or the Ratings Examiner is around at various times to supervise those interested in learning boat repair. In addition, the Keelboats are hauled out of the water every Spring for a weekend and all Keelboat users are required to put in some time before making reservations for the summer season.

TELLTALE

The Telltale, the club's newsletter, is posted on the club website several times each year to inform the members of important club developments and activities.

INTERNET RESOURCES

The club maintains a web page at http://students.washington.edu/sailing. The Club maintains email lists. Check the Get Connected web page or call the office for details.

YACHT CLUB ORGANIZATION

The WYC, a nonprofit corporation, is a registered student organization of the University of Washington. The Articles of Incorporation, Constitution (Corporate Bylaws), and the Bylaws govern the Club. Copies of these documents are available in the office. Membership is open to all UW students, faculty, staff, and alumni, upon payment of the initiation fee and quarterlydues. Alumni must join for four quarters at one time. Dues are applied to entire quarters, regardless of when in that quarter the member pays dues. Quarters begin on the first day of March, June, September, and December. The initiation fee is paid once, provided the member pays dues three quarters out of four and does not let two consecutive quarters pass without paying dues. Spouses of members may become associate members by paying the same dues as their spouse. They do not pay an initiation fee. Dues and initiation fees can be mailed in to the office. Details of club organization, responsibilities, dues, ratings, etc. may be found in the Bylaws.

OFFICERS

Officers, elected by the general membership, are:

- Commodore - President of the Club
- Vice Commodore - Organizes lessons and ratings
- Rear Commodore - Organizes racing activities

PAID POSITIONS

Both Purser and Quartermaster are paid small salaries each quarter to insure an orderly handling of the Club's finances.

- Purser - The Purser is responsible for and coordinates Club finances such as dues, bills and budgets. The Purser is expected to make regular reports to the Executive Council and General Membership on such matters.
- Quartermaster - The Quartermaster is responsible for insuring a well-maintained shop. The Quartermaster handles purchasing of supplies, supervises salaried employees, and processes bills.

The Ratings Examiner, Program Director and Head Fleet Captain are paid on an hourly basis.

- Ratings Examiner - This position is occupied by a competent and responsible sailor, who gives on-the-water and written examinations. The Ratings Examiner works about 20 hours a week. When not giving tests, the examiner is expected to work on boats or do other active work at the Waterfront Activities Center. Hours are posted both on the sail locker and HUB office door.
- Program Director - The Club employs a program director to keep regular office hours, maintain records including computer mailing lists and do many other things required to keep the Club going. They must be willing to accept responsibility and be self starters, as they are often required to handle important matters on their own.
- Head Fleet Captain - Oversees upkeep of the Club's fleets and

should quickly become familiar with the use of Club maintenance facilities. Knowledge of fiber glassing is required. The Head Fleet Captain is paid only for fiber glassing. Other upkeep activities, such as helping other fleet captains, are volunteer duties.

CHIEFS

The Yacht Club members who oversee the Club are called Chiefs. They have been elected Chiefs because of their sailing ability, outstanding service to the club, acceptance of responsibility, and general competence. Chiefs have the absolute authority to handle all safety matters as they see fit. They should be sought for sailing tests, information, registering complaints, etc.

The names and phone numbers of all Chiefs are published quarterly in the Telltale. Chiefs are nominated by the Club's executive council and must have both single- and double-handed Skipper ratings and a Whaler rating. Their election is confirmed at a general meeting after a six month probationary period.

COMMITTEE CHAIRS

Committees are appointed by the Commodore to help organize club activities. Standing committees include:

- Faculty Advisors - Advises the Club, particularly in matters that especially concern the University.
- Social - Organizes one or more parties each quarter
- Telltale editor - Puts together the club's newsletter on a timely basis
- Publicity - Publicizes Yacht Club activities on campus, especially lessons
- Historian - Records events for all time and updates pictures of Chiefs in the Sail locker
- Bylaws - Maintains current copies of club Bylaws

DUES-EXEMPT POSITIONS

To help teach sailing classes, and organize boat maintenance, the Club offers many dues-exempt positions:

- Instructors are dues-exempt for quarters in which they teach. They may give Novice and Intermediate ratings and are certified by present or past Vice Commodores and Commodores. Instructors are required to have Skipper and Whaler ratings. Instructors choose the time, type and organization of the classes they offer. Many Instructors go on to outside summer sailing employment or become Yacht Club Chiefs. Teaching also helps improve sailing skills.
- Assistant instructors aid in teaching classes when an instructor is present. They must have Intermediate ratings and are exempt from dues for a maximum of two quarters when helping to teach classes of 12 or more. Assistant Instructors often become Instructors within this time.
- Fleet Captains and their assistants organize and oversee maintenance of the Club's fleets. They are appointed by the Commodore. Fleet Captain positions exist for Sail Repair, Single-handed, Double-handed, DaySailor, 505, Sailboard, Keelboat and Whaler fleets. All these positions are dues-exempt and offer great opportunities to learn boat repair in a well-supplied shop.

GENERAL MEETINGS

The Club holds a General Meeting every two weeks during the academic quarter. Financial issues, club policy, club activities and much more are discussed at these meetings. All club members are encouraged to attend.

EXECUTIVE COUNCIL

The Executive Council consists of all Chiefs, Officers, Committee Chairs, Fleet Captains, and current Student Instructors. The Executive Council makes certain decisions as specified in the club By-Laws.

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Chapter 3:

RATINGS AND BOAT USE PROCEDURES

RATINGS

To encourage safe sailing and lessen damage to the boats, the Club restricts self-service use of its boats to current members who have passed a series of written and on-the-water tests. The fleets of boats have been divided into two groups, those designed to be handled by one person (Lasers, Finns) and those to be handled by two or more people (Flying Juniors, Laser IIs, the 470, and 505s). Only one member in a double-handed boat need have a current double-handed rating. After they pass the Novice Written test, members may sail with the permission of a Chief, Instructor, or Ratings Examiner. The three rating levels are: Novice, Intermediate, and Skipper. Each rating level has separate single-handed and double-handed on-the-water tests.

NOVICE

A Novice rating is obtained by passing the Novice Written Test and demonstrating rigging procedures, basic maneuvers, man overboard drill, docking and a capsize recovery in at least 3 knots of wind. Novice sailors are restricted to sailing on Union Bay in less than 7 knots of wind. A single-handed Novice may sail Lasers. A double-handed Novice may sail Flying Juniors, Laser IIs, or the Flying Scot. A catamaran Novice may sail Hobie 16s. All Novice ratings expire after six months.

INTERMEDIATE

To obtain an Intermediate rating, a member must rig and derig the boat, perform maneuvers with good control under marginal hiking conditions, and perform a wet capsize, i.e., recover from a capsize in which the skipper and crew enter the water. An Intermediate rating allows a member to sail in Union bay in winds up to 15 knots. A single-handed Intermediate may sail Lasers. A double-handed Intermediate may sail Flying Juniors, Laser IIs, the 470, the Flying Scot, and the Catalina 21. A catamaran Intermediate may sail a Hobie 16 or the Hobie 21.

SKIPPER

To obtain a Skipper rating, a member must pass the Novice and Skipper Written Tests, demonstrate a high level of proficiency and control in maneuvers in winds over 15 knots, including man overboard and docking procedures and recovery from a fully-turtled position. With a Skipper rating (Single, Double-Handed or Catamaran), a member may in almost any conditions and in all interconnecting water east of the Aurora Bridge, with restrictions when "Hazardous Weather" signs are posted.

INSTRUCTORS

Instructors must have at least one Skipper rating and a Whaler rating. They are certified by a present or past Vice Commodore. Intermediate sailors may teach under special circumstances. Sailors with Intermediate ratings are encouraged to help teach as Assistant Instructors.

SPECIALITY RATINGS

Special ratings are required for Sailboard, Catamaran, Keelboat, and non-emergency Whaler use.

SAILBOARDS

Sailboards have three rating levels: Novice, Intermediate and Skipper. Novice and Intermediate sailboarders are restricted to Union bay. Sailboard Skippers may sail with wetsuits (or drysuits) and a harness in Lake Washington south of a line between Sandpoint and Kirkland, and north of the Evergreen Point Bridge. Sailboard ratings are given by Chiefs with Sailboard ratings. Ratings are given after completion of Novice and Sailboard Written Test and an on-the-water test. Other rules for Club Sailboard use are described in Appendix A.3.3.

KEELBOAT NOVICE

To become a Keelboat Novice, one must pass the Dinghy Skipper Written Test and take a practical test consisting of familiarization with the operation of the equipment aboard WYC keelboats, maneuvering under both power and sail, rigging, derigging, docking, man overboard recovery, reefing and changing headsails. This test may be taken from any Chief who is a Keelboat Skipper. A keelboat Novice may sail a rental Keelboat in all interconnecting waters east of the Aurora Bridge, during hours covered by a rental payment. The boat must be returned to the WYC at the end of each day (midnight).

KEELBOAT SKIPPER

A Keelboat Skipper may sail a rental Keelboat in all interconnecting waters east of the Elwha River, Washington, and south of Malcolm Island, B.C., during all hours covered by a rental payment. To obtain this rating, one must pass Centerboard Novice and Skipper Written Tests and the rental Keelboat Skipper written test. The latter is an extensive test on navigation, rules of the road, emergency procedures, local knowledge and details about WYC Keelboats. It is given only by designated Chiefs by appointment and requires at least two hours. The practical test for a Keelboat Skipper rating includes basic maneuvers, man overboard recovery, reefing, changing headsails underway, anchoring, piloting, lockage, and demonstration of good judgment. The practical test is available by appointment from designated Chiefs and generally involves an overnight cruise on Puget Sound. The Club has copies of its own Keelboat instruction book available in the club office.

WHALER

The Club's Boston Whaler power boats are for instructional, race committee, and rescue use. Because of the potential for injury from propellers and motorized equipment, Whaler ratings are given by designated Chiefs. In an emergency, unrated members may use Whalers for rescue, provided that they use great caution and that rated users and WAC staff are unavailable.

BOAT USE PROCEDURES

SAIL LOCKER

The Sail Locker is secured by a combination lock. All members should see that

it is kept locked. Each quarter, the combination of the lock is changed. The new combination is sent to members via email and is also available from chiefs. A member must have a rating before receiving the combination. Sails, life jackets, and other gear are kept in the sail locker.

CHECK-OUT PROCEDURES

All boats must be signed out before use. For this purpose, a check-out sheet is used with space for entering the boat class, sail number, number of life jackets (one Coast Guard approved jacket per person), wind conditions, departure time, estimated return time, date, names of the Skipper and Crew, skipper's rating, and the destination. The destination, Skipper and crew names, and estimated time of return can then be determined in an emergency. Inside the sail locker is a clip for the check-out sheet for each boat. The check-out sheet must be filled out before any gear is taken, and signed by the person filling out the form. If a member does not have a rating for the boat, a Chief, Ratings Examiner, or Instructor must give permission to sail. For legal protection, the Affidavit and Release for Guests must be signed by each non-member in the crew and crew members without WYC cards. The signature must be witnessed by a club member and the member must also sign to that affect. When filled out, the sheet is clipped by the appropriate sail bin, together with the WYC membership cards of everyone sailing on that boat. Upon return, the time in must be logged on the form and the form filed.

DAMAGE REPORTING

If a boat is found to be damaged, notify the Fleet Captain by filling out the Repair Form (pink) and clipping it where the check-out sheet for that boat is posted. Since Fleet Captains do not have time to inspect the fleets for damage regularly, cooperation in this reporting will help keep the boats in good sailing condition, as well as warning other sailors of potential problems with a boat. If possible, fix the damage yourself. Filling out damage report forms greatly improves the general state of repair of the boats, conveniently alerts members to problems with specific boats, and improves their safe use.

WORKSHOP

A complete shop area in the Waterfront Activities Center is available for use by the WYC. If the tools are locked, see the Ratings Examiner or any Chief or Fleet Captain for keys. These people can also assist you in finding parts and tools. After using the shop, make sure that the work area is clean.

MISCELLANEOUS RULES

-Every boat must have one Coast Guard approved Type II or Type III life vest aboard for each person who is sailing. Do not sit or kneel on these vests. This shortens their lives considerably, and new vests must be purchased at great expense.

-All non-swimmers must wear Coast Guard approved life vests at all times.

-All persons under 18 years except University of Washington students must wear Coast Guard approved life vests at all times.

-Novices and Intermediates may sail only in Union Bay, with the exception of Keelboat Novices who may sail in normal Centerboard Skipper

sailing waters. Centerboard Skippers may sail on all interconnecting waters east of the Aurora Avenue Bridge. Keelboat Skippers may sail on Puget Sound, the Strait of Juan de Fuca, and the Strait of Georgia as far north as Malcolm Island.

-When the "HAZARDOUS WEATHER" sign is posted, no Novice or Intermediate is permitted to sail, and Skipper sailing is permitted only on Union Bay and the lee side of the Evergreen Point Bridge with a whaler in operation near by. From November to May, wetsuits must be worn or a rescue barge must be operating nearby under "Hazardous Weather" conditions. If "NO NOVICE SAILING" signs are up, no Novices may sail without permission from a Chief or Ratings Examiner. If "SKIPPER ONLY SAILING" signs are posted, this also applies to Intermediates. Keelboats are exempt from these restrictions

-Centerboard boats may be sailed only during daylight hours. Boats must be in sight of the Waterfront Activities Center by sunset. All centerboard boats must be docked by dark.

-Yacht Club members wishing to go along as crew should be accommodated where room is available. Guests who are not members of the Club must sign the AFFIDAVIT AND RELEASE FOR GUESTS before going out.

-Only soft-soled shoes should be worn on a boat. This avoids scuffing the boats.

-Ordinarily, the rescue boats may be used only under the direction of a Chief, Ratings Examiner of Instructor with a Whaler rating, but they may be used by anyone in case of an emergency, where WAC personnel or members with Whaler Ratings are unavailable. The keys are kept on clips in the sail locker above the chief's box.

-The sail locker may be left unlocked only when a member in the vicinity will take responsibility. If you have any doubt that someone will take responsibility, leave the sail locker locked.

-Gas must be kept in the gas shed (the small building just north of the shop). The keys for the gas shed are with the Whaler keys. Paint thinner and other flammables used in the shop are stowed in the flammable storage room in the WAC. All persons using the shop must be familiar with WAC safety regulations and follow them carefully.

Chapter 4:

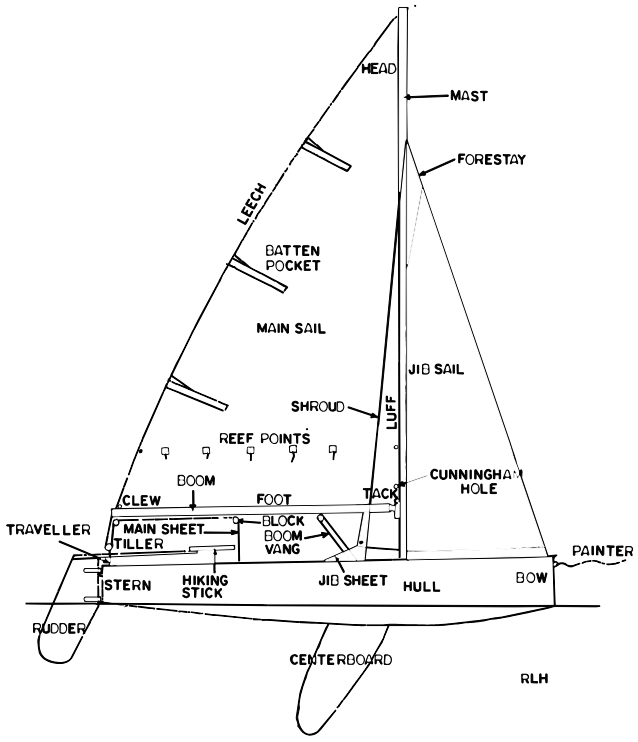
BASIC SAILING

SAILBOAT NOMENCLATURE

Besides the common port and starboard (left and right when facing forward), members should know some colorful, ancient, and very useful terminology.

HULL

The hull is the body of the boat. Its front end is the bow; the back is the stern or transom. The top covering is the deck, and the cockpit is the area in which the Skipper and crew sit. The hull's top edges are gunwales (pronounced "gunnels"), and the fin extending straight down on the bottom of the hull is the centerboard or daggerboard. The centerboard prevents the boat from drifting sideways and increases stability. A centerboard is hinged inside a centerboard trunk and pulled up by a line (all ropes on a boat are called lines) called a centerboard pennant. A daggerboard does not pivot up and down on a pin as does the centerboard, but slides vertically into the daggerboard trunk. At the stern is the rudder, held onto the hull by pintles (pins) and gudgeons. The rudder, which controls the direction of the boat, has a handle called the tiller. In strong winds, when it is necessary to sit on the gunwales and hike out, one needs an extension for the tiller called a hiking stick. Small unballasted sailboats are referred to as dinghies to distinguish them from keelboats that have a ballasted keel.



SPARS AND RIGGING

The long vertical spar holding the sail is the mast, and the horizontal spar holding the sail is the boom. Rigging refers to the lines and wires securing the spars and sails. The standing rigging, usually wire, is found fixed in place. The shrouds keep the mast from falling sideways, and the stays support it fore and aft (front and back). Lasers have no shrouds or stays. Running rigging is not fixed and is usually line rather then wire. Sheets are the lines that let the sail in or out, i.e. control the angle of the sail in relation to the wind. They are usually run through a block (pulley) or a series of blocks. The mainsheet may have a block that slides back and forth on a traveler. The traveler permits the mainsheet block to move to the side of the boat so that the block is directly below the boom. The halyards hoist the sails. The tension in the leading edges of the sail may be controlled by a downhaul or cunningham. A downhaul line pulls on the boom whereas a cunningham line runs through a hole in the sail and pulls down on the sail. The boom vang prevents the boom from rising when off the wind, keeping the sail flat. The painter is a line attached to the bow used to tie the boat to the dock.

SAILS

Sails are flexible airfoils that use wind pressure to provide thrust. (Most sails used by the Club are made of a synthetic material, Dacron(tm), that does not mildew or rot when wet.) Each part of the triangular sail has a name. The leading edge (into the wind) is the luff, the trailing, curved edge is the leech, and the bottom is the foot. The leech is cut in a full curve in order to increase the sail area. (A sailboat's potential power is proportional to its sail area.) This extended area above the triangle is the roach. It is supported by a series of thin, wooden or fiberglass battens fitting into the batten pockets. The lower forward corner of the sail is the tack, the aft corner is the clew, and the top is known as the head. Parallel to the boom may be a row of short pieces of line called reef points, used to tie around the boom to reduce the sail area in heavy weather. Small boats may only have a single sail, a mainsail, in which case they are referred to as cat-rigged. A sloop-rigged boat has a mainsail and a smaller jib sail that has its luff fastened to the forestay. The sheet that controls the mainsail is the mainsheet. The jib sail is controlled by the jib sheets. Only one jib sheet should be tight at any time.

A spinnaker is a large, light, often colorful sail for reaching and running downwind. The tack is held out to windward with one end of a spinnaker pole and fastened to the tack is a guy . The spinnaker's clew is attached to the spinnaker sheet. The guy and sheet pass through blocks into the cockpit.

When the sailboat's direction is changed to a different tack, i.e. by jibing, one end of the spinnaker pole is unfastened from the mast and attached to the free corner (clew) of the spinnaker and the other end of the pole is fastened to the mast. Thus, the former spinnaker sheet is now the guy, and the former guy is now the sheet. Similarly, the names of the corners of the sail are interchanged. The guy is always to windward, with the pole. The spinnaker sheet is always to leeward.

KNOTS

Different knots work better for different purposes. In addition, different types of line have different uses, based on the physical properties of the line. The most common types of line are Dacron(tm), nylon polypropylene, and manila. The first three types are synthetic materials. Dacron(tm) is strong, and stretches

little, being suitable for sheets, halyards, outhauls, boom vangs, and other uses. Nylon is strong, but much more elastic, and is more suitable for anchor lines and docking lines. Polypropylene is moderately strong and inexpensive, but does not hold knots well, and decays in sunlight. Polypropylene's greatest advantage is that it floats, and it is often used on club Whalers to lessen problems with lines being caught in propellers. Manila line is made from hemp. It was common in times gone by, is easily worked into knots, but it is less strong than synthetic lines, and can suffer from rot.

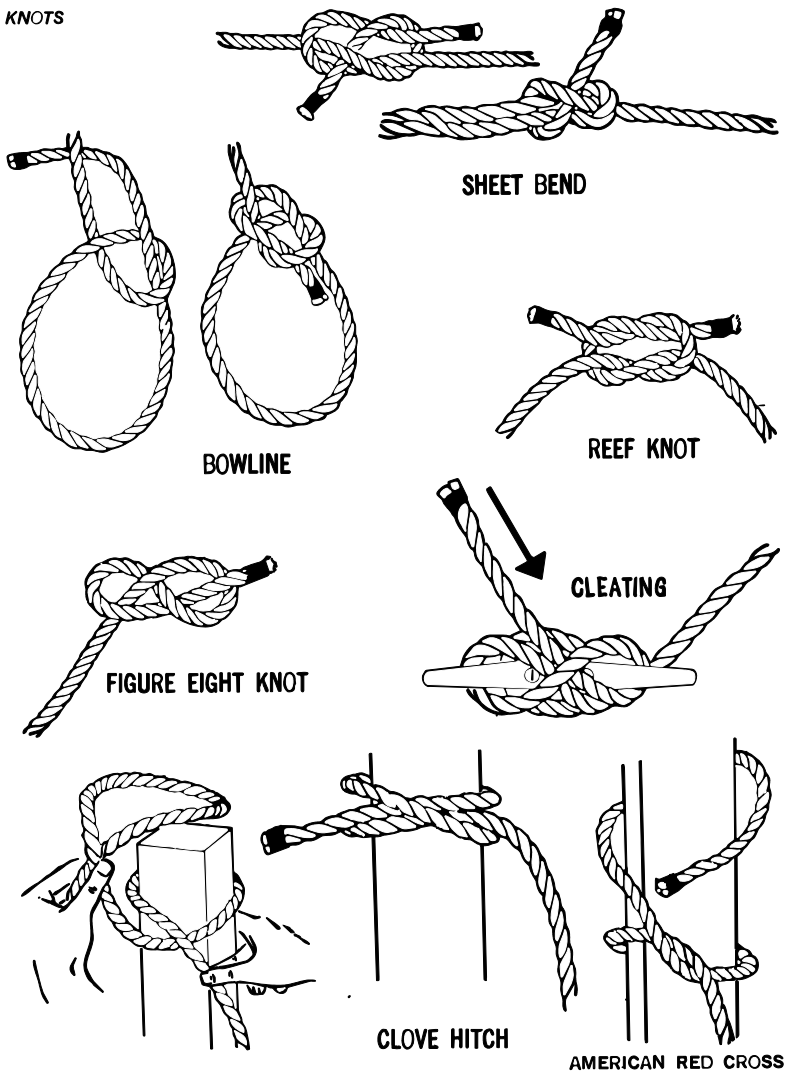


Figure Eight - The figure eight knot is used to keep jib sheets and other lines from pulling out of their leads. Do not use a simple overhand knot for this purpose. It becomes hard to remove. Figure eights are more easily removed.

Clove Hitch - This knot is useful for tying a line around a post, mast, etc. While not required as a part of any standard rigging procedure for Club boats, it is often useful.

Double Half Hitch - A double half hitch is used to fasten a line temporarily but quickly to a post hook or ring.

Bowline - This knot is used for mooring boats and for fastening outhauls, centerboard pennants, etc., to holes and pins. Properly tied, this knot will not slip and can be easily untied.

Sheet Bend - The sheet bend fastens two lines of the same or different sizes together. The larger rope is used in making the simple U bend.

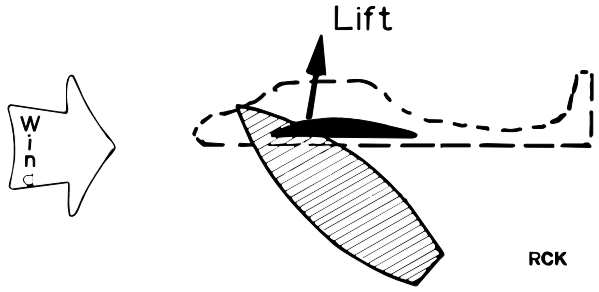
Square Knot - The square knot (reef knot) is used for reefing sails, and for tying together two pieces of line of the same size.

Cleating - Cleats are used for securing lines. To fasten a line on a cleat, make a full turn around the base, then two or three figure eight turns. For extra security, finish with a half hitch. Many special cleat designs secure line without knots by cam or jamming action.

HOW BOATS SAIL

THEORY

Sailing upwind (toward the wind) differs from sailing downwind (away from the wind). A boat sailing downwind is simply blown along from behind. Modern sailboats, however, can also sail upwind. The sail acts like an airplane wing. As an airplane moves forward, the air flowing around the wing creates an upward force, at right angles to the wing. Now, consider a wing mounted vertically on a boat. The lifting force pulls the sail, and the boat, sideways and forward. The centerboard counteracts the side force. Since the boat cannot go sideways and the overall resulting force is forward, the boat goes forward, to windward. To turn the boat, the tiller is pushed in the direction that is opposite to the direction in which it is desired that the bow should go.



SAIL ADJUSTMENT

Proper sail trim is essential for both control and speed. The sail should be let out as far as possible without permitting the leading edge to luff, i.e., without fluttering. Luffing is not to be confused with fluttering of the leech (trailing edge of the sail)

If the sail is pulled in while sailing downwind the effective area of the sail is smaller and less force pushes the boat. When sailing downwind, sails are best set perpendicular to the wind. Sailing upwind, the luff area of the sail should be parallel to the telltales (pieces of yarn tied to the shrouds). If the sail is pulled in too far while sailing upwind, the flow of air becomes disturbed. This lessens the effectiveness of the airfoil and the boat slows.

The jib increases both the sail area and the effectiveness of the mainsail. The space between the jib and the mainsail, called the slot, forces the air to flow faster behind the mainsail. This causes a greater pressure difference on the sail that produces more force or power for sailing. The jib should be trimmed carefully in order not to backwind (luff) the mainsail excessively. The jib, like the main, should be adjusted so that it is just on the verge of luffing. On some jibs, telltales on both sides of the sail about halfway up the luff may be used to judge the air flow around the jib. Best sail trim is when both telltales are flowing back smoothly. If the sail is trimmed in too far, it will stall, and the leeward telltale will not lie smoothly along the sail. If the sail is out too far, the telltale on the windward will not lie smoothly, and the sail will luff.

The mainsail itself can be adjusted with the downhaul, cunningham, outhaul and boom vang. Normally, the downhaul and the outhaul pull out wrinkles in the sail, making a smooth and efficient airfoil. Further tightening flattens the sail, changing it from a low speed airfoil for use in light winds into a high speed airfoil for use in strong winds. The boom vang not only keeps the boom from rising on a reach or run, but also adjusts the curvature of the leech and flattens the mainsail at the same time.

laser racing

SAILING TERMS

Point of Sail refers to the angle defined by the direction a sailboat is going relative to the true wind. A boat is sailing **close hauled** only when all sheets are in tight and the bow is pointed into the wind as far as possible without luffing the sails. The close hauled approach occurs about 45° off the wind direction. Close hauled sailing (the windiest since the apparent wind speed is higher) requires more hiking out to reduce heeling. Sailing too close to the wind is called **pinching**, and is noticeable when the sails luff even though they are tightly sheeted. **Beam** and **broad reaches** are the fastest points of sail. Most Club boats will **plane** on these points if the wind is over 15 knots. Planing occurs when the sailboat is going so fast that the hull lifts and rides on the water, hydroplaning.

A boat's tack is defined by its orientation with respect to the wind. On **starboard tack**, the wind comes over the starboard side of the boat, and for **port tack**, the wind comes over the port side of the boat. If the boat is running or sailing by the lee, the tack is defined by the side of the boat opposite the boom.

The **true wind** is the wind as it would appear to a stationary person. **Apparent wind** is the wind felt in a moving boat. Its direction is indicated by the telltales. The apparent wind seldom comes from the same direction or has the same velocity as the true wind. For example, if the true wind was 10 knots and the boat was running downwind at 7 knots, the apparent wind would be 3 knots. The true wind direction can be found by observing smoke, flags, trees, or the direction the wind pushes the waves. The strength of the wind can be found by the surface condition of the water, e.g., 5 knots - ripples, 10 knots - waves, and 15 knots - some white caps.

The direction from which the wind is coming is **windward**. A boat on a port tack has its port side to windward. The skipper usually sits on the windward side of the boat. **Leeward** is the direction the wind is going. The boom is traditionally thought of as being to leeward. To be in the lee of something means that one is on the leeward side of it.

The wind directions are identified by the point of origin of the wind. For instance, a north wind is a wind blowing from north to south. This method of labeling originated with the ancients who held that the north wind was blown by a deity residing in the North.

When the boat is sailed to windward, a large part of the wind force tries to push the boat sideways, to leeward. Since the centerboard reduces leeway, the result is that the boat tips or **heels**. **Hiking out**, i.e., sitting on the rail leaning out as far as possible, will counteract this force and minimize heeling. Most dinghies sail best with minimal heel.

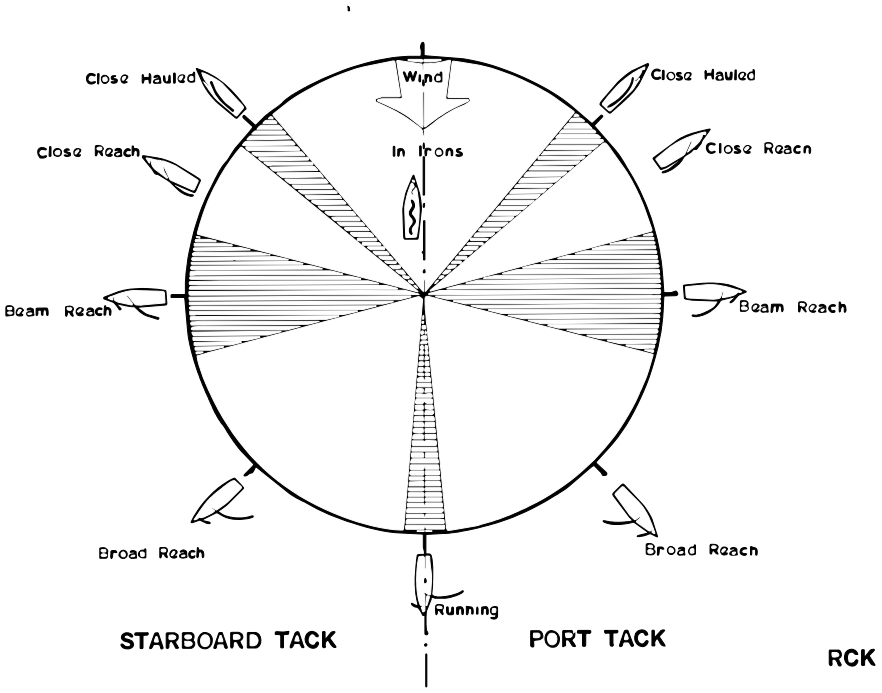
Coming about refers to turning so that the wind passes from one side of the bow to the other side. In the midst of coming about, the wind blows directly on the bow. This maneuver is also called **tacking**. **Beating** is working to windward by alternating close hauled tacks.

Jibing refers to turning so that the stern of the boat is pointed into the wind when the sail crosses the boat.

Sailing by the lee occurs when the wind comes over the same side of the boat as the boom. This can lead to accidental jibes. These are potentially dangerous because of the uncontrolled motion of the boom and can be destructive to the boat and crew.

If the boat is **becalmed** (no wind), the boat may be propelled by **sculling** (moving the rudder back and forth). Boats with kick-up rudders are more easily sculled if the rudders are raised to a horizontal position. If the distance to be covered is great, the boat moves faster if the sails are lowered and the centerboard is raised partially.

To turn the bow of the boat away from the wind is to **bear off**, fall off, or **head down**. To turn the bow of the boat closer to the wind is to **head up** or **come up**.

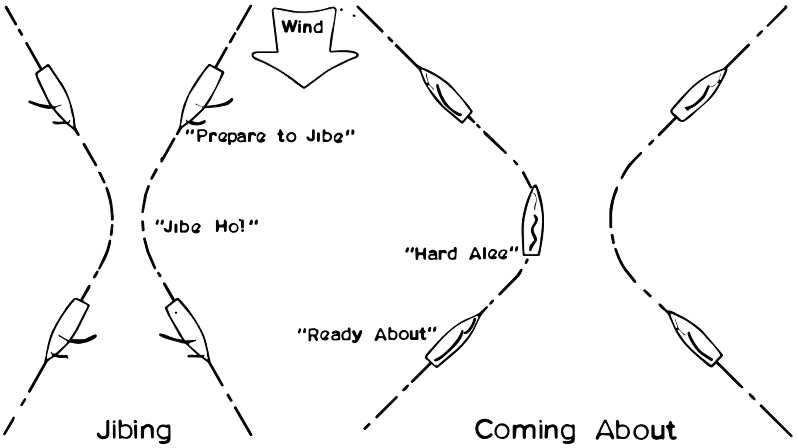


COMING ABOUT AND JIBING

To change tack, one either comes about or jibes. Those two maneuvers are quite different and procedures applicable to one do not work well for the other.

Coming About

Coming about is changing course so that the bow swings through the direction the wind is coming from and to the other tack. One comes about by pushing the tiller to the leeward side of the boat until the sails fill on the new tack. When sailing with a crew, it is good seamanship to let the crew know what is happen-



ing. When ready to come about the skipper yells "READY ABOUT." This alerts the crew to a change in course. On the command, "HELMS A-LEE," the tiller is pushed to leeward (toward the boom). If the boat is sailing on a beam reach or closer to the wind, the momentum will carry the boat around to the opposite tack. As the boat passes through the eye of the wind, the crew and skipper duck under the boom and move to the opposite side of the boat. The crew releases the jib sheet and pulls in the opposite sheet. In heavy wind, the boat should be on a close reach or higher before tacking, otherwise the momentum of the boat will be insufficient to carry it around to the new tack.

In heavy or very light winds, the momentum can fail to carry the boat about. Some solutions are to come about quickly, i.e., increase speed before trying to come about; or to keep the jib set on the old tack until the mainsail fills on the new tack (backing the jib). If the crew sets the jib too soon for the new tack, the wind will hit the jib on the wrong side and stop the boat from turning. This can cause the boat to turn back onto its original tack in spite of anything the skipper does with the helm.

If the boat stops while pointing directly up wind, you are in **irons**. The boat will start backing up, especially in heavy winds. The process of being caught in irons and then backing off onto the new tack is called going through irons. To get out of irons in a cat rigged boat, push the boom into the wind and push the tiller in the same direction in which you want to be headed. The rudder operates backwards when the boat is backing up. When the boat is well off the wind (close or beam reach), let go of the boom, straighten the tiller, trim the main, and sail away. In a sloop rigged boat, let the main sheet out, push the tiller in the direction in which you want to go, and pull the jib to the opposite side to push the bow into the new tack. This is also called **backwinding** the jib.

Jibing

Jibing is changing tacks by moving the stern through the eye of the wind. On the command, "PREPARE TO JIBE," the crew should be alert to avoid the boom. As the skipper or crew pulls the boom in slightly, the tiller is pulled slightly to windward (away from the boom). Before the boom swings across, the skipper should change hands on the tiller and mainsheet and be crouched, ready to move to the other side of the boat. When the skipper moves the helm,

he yells, "JIBE HO!" The boom swings across (crew and skipper duck), the sheets are released, and the crew and skipper change sides. The sheets should allow the boom to go out completely to the shrouds to prevent the boat from rounding up and capsizing. The tiller is straightened immediately after the boom goes across, to prevent further turning. In heavy winds, this process occurs very quickly. Normally, one should change tacks in jibing with little change in course. The simplest way to jibe is to head directly downwind and have your crew grab the boom and pull it across. A deliberate flying jibe is made by bearing off until the boom flies across by itself. These are hazardous in higher winds.

Running directly downwind requires special attention as a wind shift could cause an **accidental jibe**. The crew could be hit by the boom if they do not duck, the boat may capsize, or rigging may be broken by the force of the boom as it swings across.

When jibing, use the boom vang to keep the boom down. If it is not snug, the wind can lift the boom and jibe the top part of the sail and not the bottom (a goosewing jibe). This may damage boats with backstays as the boom rises in jibing. To reduce problems when jibing, do not hold in on the mainsheet, but let the boom run freely out, almost to the shrouds. With the sail all the way out, the heeling force on the sail is eliminated, i.e., the force on the sail is directly forward. Roll will be reduced if the tiller is straightened as the boom starts across. This is called an S-Jibe. If the sail is sheeted in on a run, a gust may cause the boat to heel and to round upwind in spite of the skipper's effort to control the boat. With the force coming over the side of the boat rather than forward, it is possible to capsize.

SPEED CONTROL

Sailing a boat is a little like riding a horse. Once you have mounted the thing, it has a tendency to go. That can be upsetting, if you feel you do not have control of you speed. You especially need to learn how to stop.

You can always stop by turning the boat to head directly into the wind and loosening the sails. For a beginner, even that may seem difficult. Since you are normally sitting on the windward side of the boat to balance the heeling force, your reaction to being overpowered by wind should involve two movements away from you: One hand moves to push the tiller away from you (toward the boom); the other, which holds the mainsheet, moves away from your body to loosen the sail. The first movement heads the boat into the wind and the second lets the wind out of the sails. These two movements become a reflex with experience.

This solves your problem of needing to stop. The trouble with heading into the wind, though, is that soon after you have coasted to a stop, the very force that stopped you will now be acting to move you backwards. Also, the sail slaps directly overhead and you must crouch to avoid the boom. You are in irons. You can avoid these inconveniences by learning to control your speed on a beam reach.

When you are steering a beam reach course, your course is perpendicular to the direction of the wind. If you let the sails all the way out, they will luff. They stream downwind and cause little forward force. The boom is practically at right angles to the boat, so that you can sit upright in the cockpit and view your surroundings at leisure. If you pull in the sails just a little, you will move forward slowly. Pull them in more and you will accelerate. In other words, on a beam

reach you can easily control your speed by adjusting the sheets. You can move slowly or come to a complete stop. This is the first of the more advanced sailing skills that you should master. Among other things, it enables you to approach a landing safely and to return at controlled speed to something that has gone overboard, such as a passenger.

Acquiring this skill takes practice. Steer your boat to a course perpendicular to the wind (actually, that is the hard part). Try to accomplish this by easing the mainsheet altogether. Watch the mainsail and boom. If the mainsail is luffing and the boom is overhead, you are in irons and must turn away from the wind. If the boom is well away from the centerline and the sail is not luffing, you are heading downwind. Push the tiller towards the boom. The sail will soon begin to luff.

The typical beginner's mistake is to hold the tiller off the centerline too long, so that too large a change in course is made. You need to coordinate steering and your observation of the sail. If the boom is way out but the sail is full, change course upwind, but not too much. Center the tiller as the sail begins to luff. If the sail is luffing, but the boom is not all the way out, you must turn downwind, but not too much, just enough to get the boom further out.

As you master these techniques, you will find that you can sail along with precise speed control on a course between a beam reach and a close reach. You will be coordinating minor adjustments of course and of the mainsheet. To slow down, the mainsheet goes all the way out together with a closer heading into the wind - but before stopping altogether, you will steer to a beam reach course with the sail luffing so that it will be easy to get started again.

Another advantage of learning this skill early is that it will make you more sensitive to assessing the direction of the wind. You use the sail as a windvane to find out where the wind is coming from. If you keep an eye on fixed objects once in a while as you practice speed control on a beam reach, you will be able to observe that your beam reach course is not always the same direction with respect to the land. That is because of wind shifts. With practice, you will find yourself adjusting to changes in wind speed and direction without thinking.

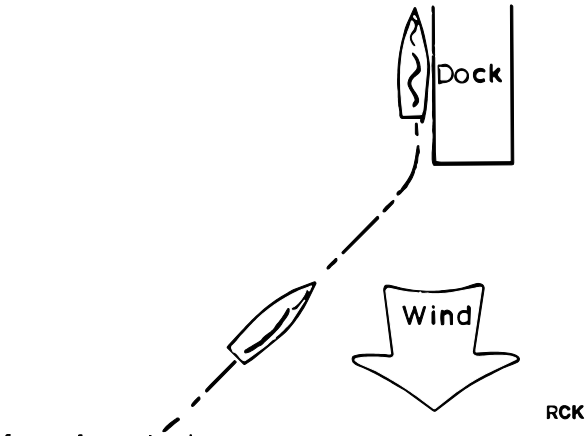
DOCKING

Sailboats of the various fleets are launched differently. However, all boats are rigged ONLY while facing into the wind. Otherwise sails are harder to raise and the boat may embark unexpectedly, without its crew. Appendix A covers the rigging of individual boats. Board a boat in the water by stepping from the dock directly to the cockpit floor and not to the gunwales. Climbing into the boats by going over the bow may capsize the boats at the dock - a most embarrassing maneuver. Raise the sails. Then cast off. The boat can be pulled forward and the bow pushed out toward open water, giving the boat some initial momentum.

Whenever possible, approach a dock from downwind, so that the sails may be completely luffed to slow the boat. Serious damage can occur if the boat is allowed to hit the dock with the full force of the wind in the sails. Also, it is extremely difficult to hang onto a dock when the boat is trying to sail. Approach on a course nearly parallel to the dock so that, if speed is misjudged, the dock will not be rammed. Pointing upwind is essential, since the sails cannot be luffed when the boat is pointing downwind, and it will not be possible to stop. If you approach the dock too quickly, but still from downwind of the dock, pushing the boom windward, which backwinds the mainsail, will help slow the boat. If the dock is on a lee shore, it will be necessary to lower the sails and paddle or scull in. In light or moderate winds, the main can be lowered and only the jib used to

sail to the dock when it is on a lee shore.

If the boat is to be left unattended at the dock for an extended period of time, the sails should be lowered or the boat should be capsized at the dock to prevent the boat from catching wind and repeatedly ramming the dock.



HEAVY WEATHER SAILING

When sailing in heavy winds, there are precautions to minimize the danger of capsizing.

- Hike out; weight distribution can keep the boat upright.
- Sail on a close reach as opposed to close-hauled. This gives better control of the boat and enables one to correct for unexpected changes in conditions.
- Luff up (head up) in heavy gusts. This will reduce the force on the sail.
- If the mainsheet is cleated, be sure it can be uncleated easily. If an unexpected gust hits, uncleat the sheets quickly to luff the sails so the boat will not go over. After a capsize, uncleat all sheets. Beginners should hold the mainsheet rather then cleat it.
- Watch out for cat's paws (dark areas on the water caused by gusts moving across the water).
- Avoid sailing directly downwind. A slight wind change or change in head-

ing can cause an accidental jibe. Boats also tend to roll when running in strong winds, resulting in unexpected forces on the helm, accidental jibbing or possible capsizing.

- Avoid jibing. If the tiller is accidentally released in a jibe in a heavy wind, the boat may violently round up and capsize. It is often better to come about instead.
- In heavy winds, the boat will want to plane, so one should sit well aft when off the wind. Sit forward to keep the bow down when sailing to windward.
- When sailing on Lake Washington, stay to leeward of the Evergreen Point Floating Bridge. The waves reflect off the windward side of the bridge, creating a bad chop.
- Some boats allow the main to be reefed for winds over 20 knots. To reef the main, the sail must be partially lowered. Secure the tack and clew grommets in a line with the reef points to the tack pin and the outhaul fitting. Tie the reef points around the boom using reef knots. Raise the sail and secure the halyard. Tighten the downhaul, outhaul, and boom vang. The downhaul and outhaul should bear all of the stress on the foot of the sail. The interior grommets are not reinforced to withstand such stress. If there is still too much sail area, drop the jib and partially raise the centerboard to reduce weather helm (a tendency of the boat to turn upwind).

SAIL FOLDING

The sails used by the Club are made of Dacron(tm) (except for the nylon spinnakers), which does not rot or mildew. After use, they should be folded and stowed in the appropriate sail bin. Sails folded properly reduce drag caused by wrinkles. After derigging the boat, fold the sails on the docks, grass or sail locker floor, if raining. Do not fold sails on asphalt or concrete, which are abrasive.

Fold the sail "accordion" style parallel to the seams and battens, with about one and a half feet for each fold. Sails with battens sewn into the pockets, should be folded perpendicular to the leach. Finish by loosely folding the sail over on itself in folds the length of the battens, starting at the clew.

Sails with plastic windows must be stowed so the windows are not folded. Start by folding the foot up over the window. Then fold as described above. When completed, roll the folded sail so that the window is not creased.

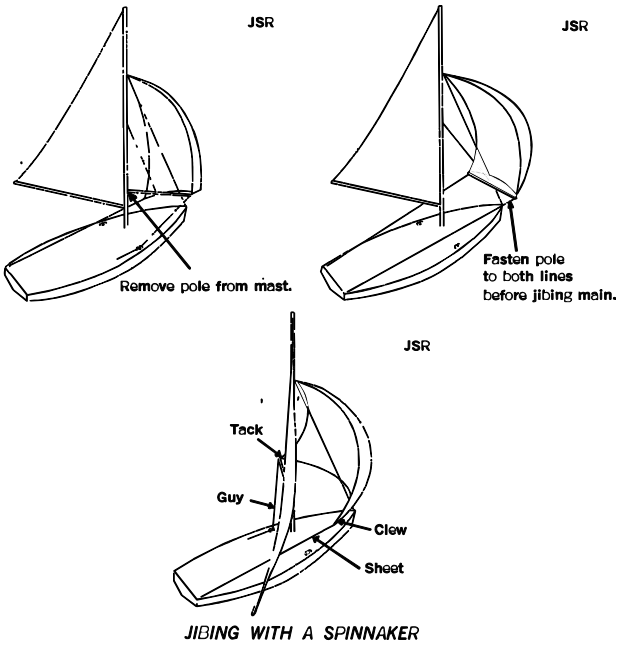
Spinnaker Flying

Spinnaker sailing is both exciting and demanding. When a boat is on a broad reach or running, a spinnaker can be flown. Inspect the spinnaker for twists and note which corners are port and starboard. Port is red like wine; starboard is green. The head is stiffer and has more reinforcement than the two lower corners. The head is secured to the spinnaker halyard; the other corners are fastened to the two lines that will be the guy (windward) and the sheet (leeward). The guy is then attached to the spinnaker pole on the windward side. (The pole should always be to windward of the forestay.) Fasten the other end of the spinnaker pole to the mast and lift it to a horizontal position with the topping lift. The halyard is raised and set; the guy is pulled until the spinnaker pole is roughly parallel with the boom or until it is perpendicular with the apparent wind. The sheet is adjusted until the luff is full without any reverse curve or spillage. Once the spinnaker is flying properly, the helmsman falls off whenever a gust hits. This is just the reverse of sailing without a spinnaker. Sailing with a spinna-

ker can cause a capsize if the boat is brought up to a close reach.

To collapse the spinnaker, the guy is released, making sure it runs completely free so the spinnaker doesn't refill and capsize the boat. The boat is headed slightly more upwind, and the spinnaker is pulled in from behind the main by releasing the halyard as fast as the crew can pull the spinnaker into the boat. (The nylon spinnaker should be hung up ashore to be dried before it is stowed in the appropriate bag.)

Jibing with a spinnaker requires coordination between the skipper and crew. First set a running course, and remove the pole from the mast and secure it to the sheet. With the corners of the spinnaker held out by the pole, jibe the main. The spinnaker pole is released from the new sheet and the mast and fastened to the mast and the new guy. Pull in the guy until the pole parallels the boom, and trim the spinnaker sheet.



JIBING WITH A SPINNAKER

RULES OF THE ROAD

RIGGING

"Rigging", that is, putting the boat together to go sailing, involves similar procedures on large sailboats and small. After you learn to rig club sloops, you will feel right at home when it comes to participating in raising the sails on a 12 meter. Things are bigger, gadgets for fastening halyards to sails may be fancier, and winches may be used for magnifying muscle power, but the principles

are the same.

Rigging the larger club boats that are kept in the water requires only setting sails and other minor tasks such as hanging the rudder and lowering the centerboard. On most club dinghies, the sails are attached and the jib is raised before launching the boat. After launching, the centerboard and rudder are rigged and the mainsail is raised. What follows is a general description of how to rig the main and jib, applicable to boats of all sizes.

MAINSAIL

To rig the main, make sure that its battens are inserted, then stretch the luff along the mast, and the foot along the boom. Generally, the foot of the sail is put in place first. Some sort of hook or screw shackle serves to hold the tack. The other end of the foot, the clew, is attached to an outhaul, by means of which the foot can be stretched. A track or a groove may be used to hold the foot to the boom, unless the sail is loose-footed, in which case the foot is attached only at the tack and clew. Grooves in the boom are used together with bolt ropes sewn into the foot, slides are used if the boom is fitted with a track. Get the clew end of the foot started into the groove or slide and guide the foot into place as you pull the clew out to the end of the boom. The outhaul may be as simple as a line you tie with a bowline, or as complex as a shackle mounted on a traveling car positioned by remote control. Later it will be positioned to develop the appropriate tension in the foot.

Next the main is raised - the halyard is attached to the head and then pulled up as the bolt rope or slides are guided to feed the luff smoothly. In a big boat, a winch is used to develop the large force needed to stretch the luff. In small boats, the halyard can be pulled tight by hand and secured. On many dinghies, halyards are fastened with a special lock on the mast; on others, a simple cleat is used. Two other attachments may be employed for adjusting luff tension. A downhaul is a line or other means for pulling down the entire boom. A cunningham line is passed from a fixed point below through a grommet in the sail so that pulling down on this line stretches the luff. In boats equipped for reefing, grommets are placed in the sail a distance up the luff and leech so that the sail can be shortened by pulling it down a fraction of its length and fastening it to the boom with these new points for downhauling and outhauling.

When the main is up, the boom vang, if not permanently attached, can be attached to the boom. Finally, adjustments are made to obtain the desired sail shape - vang, cunningham, downhaul, and outhaul are tensioned.

JIB

Before raising the jib, the sheets are attached. Usually, the two sheets are tied to the clew with bowlines - you need to be able to tie a good secure bowline that will not shake loose as the sail flutters. Use an extra half hitch tied around the standing part. Keep the bowline loops as short as possible to reduce the likelihood that they will catch on something when the boat is tacked. The sheets are led aft, port and starboard, to turning blocks. A figure eight knot is tied in the ends so that the lines will not pull out of the blocks - otherwise you might see the sail slapping in the breeze whipping the loose sheet back and forth over the ocean after you failed to get hold of it on a new tack.

On smaller boats, you tension the sheet by hand. Cam cleats make it possible to maintain tension in the sheet when you let go of it. You need to study them so that you can see how to set the line in them and, more importantly, how to

free the line quickly. Before trying to make use of the winches and gadgets for cleating the sheets on a bigger boat, ask someone knowledgeable to show you how. Large forces with finger-crushing potential develop, it is easy to get a cross wrap on a winch that will jam the sheet so badly it needs to be cut, and you will want to think about standing somewhere where you will not be a target if the turning block pulls out of the deck.

Raising the jib simply requires fastening down the tack on a fitting near the bow of the boat, attaching the halyard to the head, and pulling it up (make sure that any required battens are installed). As it is raised, whatever means of fastening the luff to the forestay is accommodated. Often spring clips, called hanks, are used - these are clipped on one by one as they come into reach. On racing keelboats, a tape is sewn into the luff, the edge of which slides into a long groove in a foil that runs the length of the forestay, something like a miniature bolt rope. A special feeder slot, located just above the deck is used to assist guiding the luff into the foil. In some dinghies, the sail is not fastened to the forestay. A wire sewn into the jib luff is tensioned by the halyard so that it supports the mast while sailing. The only purpose of the forestay is to support the mast while the boat is on the dolly. Some boats have a downhaul for the jib that fastens to a grommet a short distance up the luff from the tack.

HOW TIGHT?

In this discussion of principles, we have not answered the bewildered novice's question - How tight? The one general principle is that the harder the wind is blowing, the harder you pull. Stretching the foot and luff tight and pulling down hard with the vang all act to flatten the sail, which you want in heavy air. In light air, just take up the slack, the sail should have a full shape.

Setting exactly the right tension to obtain optimum sail shape is a subject in itself, partly a science, largely an art, learned through observation and long experience. Members of the racing team affiliated with the club are glad to share their knowledge - if enough new members are interested, special classes can be arranged. One way to learn more is to sail with a racing crew. Also, excellent books and films are available. The club library includes books on sail trim.

RIGGING NOVICE BOATS

The various club fleets have different rigging features. Even individual boats within a given fleet may have different gadgets for cleating the halyard, different outhaul arrangements, etc. Specific rigging instructions and tips on sailing the more advanced boats are provided in separate pamphlets available in the main office and in the sail locker. Since rigging Lasers and Laser IIs is required for acquiring the basic ratings, details of the procedures follow in Appendix A.

RULES OF THE ROAD

The general principle of right of way is - The boat that is most maneuverable should give way. Coast Guard rules formalize this principle and govern situations where this principle cannot be applied. A stand-on vessel has right of way, and is required to maintain a steady course and speed. A give-way vessel is required to avoid the stand-on vessel. The give-way vessel should change course in time to give the stand-on vessel no doubt as to its intention. When it becomes obvious that the give-way vessel will not or cannot avoid a collision, the stand-on vessel is required take action to avoid collision.

1) When two sailboats are approaching one another, one shall keep out of the way of the other as follows (from "RULES OF THE ROAD", CG-169, United States Coast Guard, Article 17):

a) A sailboat on port tack shall keep out of the way of a boat sailing on starboard tack.

b) When both boats have the wind on the same side, the vessel which is to windward shall keep out of the way of the vessel to leeward.

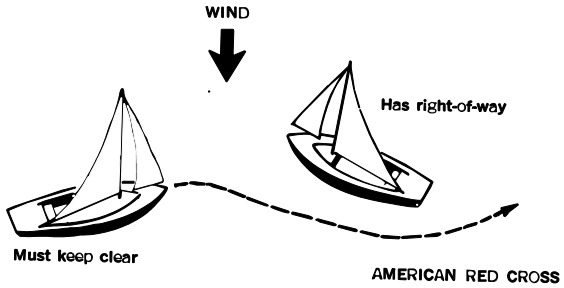
c) If a vessel with the wind on the port side sees a vessel to windward and cannot determine with certainty whether the other vessel has the wind on the port or starboard side, she shall keep out of the way of the other.

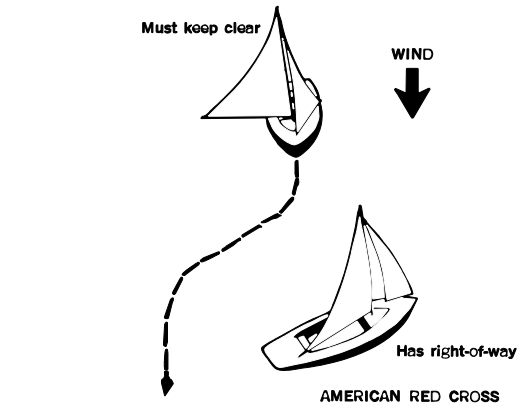
2) A powerboat shall keep out of the way of a sailboat. A sailboat may not hamper the safe passage of a powerboat that can navigate only inside a narrow channel, such as tugboats, barges and large vessels in the dredged channel of Union Bay.

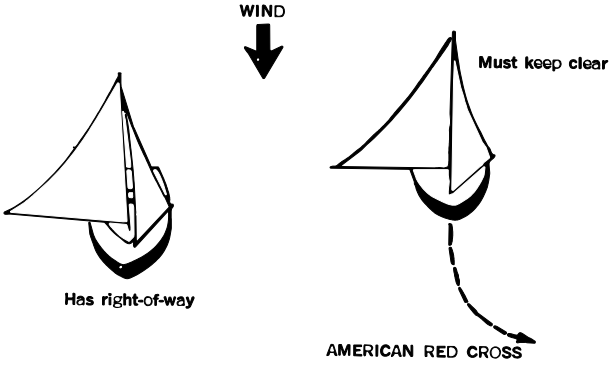
3) Any boat overtaking another shall keep out of its way until finally past.

4) Sailboats shall keep out of the way of boats engaged in fishing.

5) When taxiing on the water, seaplanes are considered to be powerboats (Civil Air regulations 14 CFR 60.22-60.23). Taking off or landing, airplanes are expected to give way to sailboats. It would be prudent, however, to remember that sailboats often have greater maneuverability than do seaplanes. Also, once a seaplane has begun to take off or to land, boats should not get in its path.




Must keep clear
WIND
Has right-of-way
AMERICAN RED CROSS


WIND
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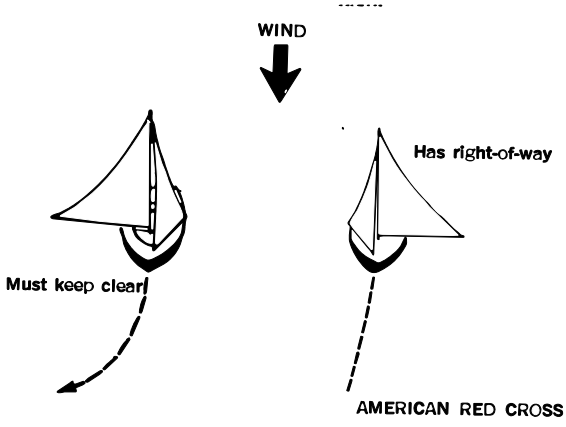

WIND
Has right-of-way
Must keep clear
AMERICAN RED CROSS

Chapter 5:

SAFETY

EMERGENCIES AND HAZARDS

Lee Shore

A shore toward which the wind blows (lee shore) is a dangerous place for a sailboat. To sail upwind (to weather) may be nearly impossible due to shallow water, waves, or obstructions. The floating bridge represents a particularly hazardous lee shore in high winds because of extreme wave action. Near shallow lee shores, the centerboard cannot be lowered, so the boat cannot be sailed to windward. To get away from a lee shore, it may be necessary to drop sails and paddle upwind - in shallow water, raise the centerboard and rudder. In light winds, the daggerboard can be used as a paddle. This also holds true for getting stuck in lily pads.

Capsize

The first thing to do in a capsize is to make sure the crew is safe! Stay with the boat! All Club boats have enough floatation to keep them from sinking. Try never to let go of the boat or some part of the boat as sometimes a capsized boat can drift downwind faster than you can swim. It is easier to spot a capsized boat than a person in rough water.

Most Club boats are self-rescuing. If the boat capsizes, uncleat the sheets and quickly move onto the centerboard. Position your weight on the centerboard to bring the boat upright. As the boat rights, climb into the cockpit and sail away.
If you are unable to get on the centerboard quickly by climbing over the high side as it capsizes, you should drop into the water and swim/crawl around to the centerboard. Remaining on the boat but not on the centerboard will drive the mast into the mud. Light or small people may desire additional capsize instructions from a Chief, instructor or the Ratings Examiner.

If the mast becomes stuck in the mud, move to the end of the centerboard. Allow time for the mast to ooze its way out of the mud. Do not bounce on the board as this may break the centerboard or mast. If the boat fails to right, signal for assistance and stay with the boat.

If the boat turns turtle (completely upside-down), stand on the gunwale while holding the centerboard to prevent it from falling into the boat. Climb onto the centerboard as the boat rights.

If you have fallen in the water while righting the boat, swim to the stern of the boat and use the rudder to steer the boat into the wind. Climbing in over the stern is easiest as the boat is lowest there.

In extremely heavy winds (more than 35 knots), righting the boat is sometimes easier if the mainsail is dropped. Do this by unfastening the halyard and pulling the mainsail to the boom while still capsized. Then right the boat. Then, if possible, head the boat into the wind and raise the main again.

Remember that low water temperature greatly reduces a person's endurance. When water and air temperatures are low, one may have strength enough for

only one attempt at righting the boat. If exhausted, do not keep trying to right the boat, but rest on top of the capsized hull. In any case, Stay with the boat! It will keep you at least partly out of the water. It is easier to see and rescue a victim on a capsized hull than to find one freezing in the water.

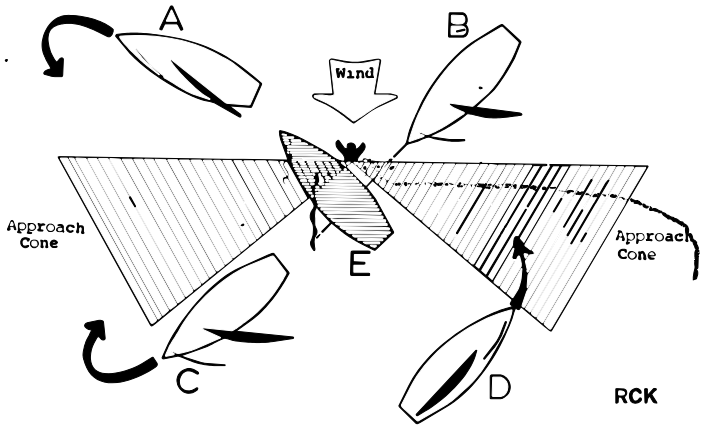
5.1.3 Man Overboard

If a crew member falls into the water, yell "MAN OVERBOARD!" This alerts the crew to expect quick maneuvering and alerts the victim that you are aware of his predicament and will be coming to his aid. Throw a life jacket to the person in the water. To avoid loosing the victim in heavy waves, appoint another crew member to keep an eye on the victim at all times. (All crew should already be wearing life jackets if sailing in heavy winds.)

Return to the victim as quickly as possible. Stop the boat beside him, with him on your windward side. This way, his weight will counteract the force of the wind on the sails as he climbs or is hauled on board.

A good general procedure when a person goes overboard is to turn immediately to a beam reach whatever you previous course. Continue on that course for a short distance, about eight boat lengths. If a jibe can be easily accomplished, then do so but bear in mind that often a jibe was the original cause of the man overboard. In some cases, a tack with a brief broad reach may be advisable. Both options should position you with an ideal path to the victim, between a close reach and beam reach. This will allow you to control your speed on your approach to the victim by luffing or sheeting in slightly. About a boat length before the victim, depending on wind conditions, luff to allow yourself time to coast to a stop on the victim's leeward side. Avoid heading up as you may have enough momentum to continue around the victim and be blown over top of him.

Even though real man overboard emergences happen infrequently, man overboard drills are useful for improving docking and general boat handling, as well as preparing for quick response is someone falls overboard.



Life-Saving Notes

Do not panic. Conserve Strength. You have no excuse for finding yourself in the water without a life jacket on and without a boat to hold onto. However, if you find yourself in such a condition, leave clothes on to help maintain body heat and aid floatation. Air trapped in clothes usually collects up around the back of the neck and in trousers. Air can be kept in these areas by keeping one's arms under the water and the clothing fastened at the neck. Bending the legs while floating will help keep the air around the knees. Shirt and pants can be refilled by splashing air into them; air will follow the hand if it is splashed down into the water and scooped under the article of clothing.

Studies in Puget Sound show that in typical winter weather, an average sized person in the water without a wetsuit, but with normal winter clothing, has coherent thought and enough strength to assist in rescue for 10 to 20 minutes, depending on how well warmth is conserved. Active swimming is NOT recommended, unless shore is very, very near. (Most people in the water greatly underestimate the distance to shore.) Leaving clothing on, and protecting area of maximum heat loss improves survival time. In midwinter, Lake Washington will be colder than the Sound. Since hypothermia (being too cold) affects judgment, anyone in or on the water who shows symptoms of hypothermia (such as uncontrollable shivering) should be taken ashore as soon as possible. Even those on boats showing early signs of hypothermia should go ashore. (The saunas at the WAC are excellent places to heat cold people.) Wetsuits are recommended in cold weather and are required for sailboarders except during the summer.

Adequate floatation should be worn, particularly when single handing. In heavy weather, life jackets are required to be worn. The Club has Type III (vest) Coast Guard Approved life vests. Type III vests should fit properly, and should be fastened snug. Ski belts do not meet either Coast Guard or WYC requirements. Persons under 18 years old (except University of Washington students) and all non-swimmers must wear life vests at all times while in WYC boats.

Whalers

Perhaps our greatest hazard in WYC activities is associated with powerboats for rescues. The dangers are obvious. People appreciate that running into things at high speeds is to be avoided and that sudden course changes can result in loss of passengers or excessive rolling. Lurking under the water is an easily overlooked danger: the propeller. Turn off the outboard motor whenever the boat is in the vicinity of people in the water. If you have occasion to take someone on board over the transom, first turn off the motor.

It is easy to forget the hazard of the prop in the excitement of rescuing an overturned boat. Maneuvering requires the use of the motor. But you must remain alert to possible approach of the stern toward someone in the water and be prepared to shut off the ignition switch instantly. Putting the transmission in neutral is not sufficient safety guarantee. The propeller can continue to turn or a fouled line could move the shift level in gear.

If you are being rescued from the water, be alert to this danger. If you notice that the motor is running, and the stern seems to be coming your way, avoid the propeller and remind the operator to shut off the engine.

Rigging Failure

While rigging failure is unlikely, it is best to be prepared for even the worst failure. If the mainsheet parts, refit with the longer half. This usually occurs when sailing closed hauled, the time of greatest stress on the mainsheet. At such a time, there will be lots of remaining mainsheet in the cockpit. If the halyard parts and the main drops, either try to reach a dock, or, if the water is warm and the boat is self-rescuing, capsize the boat, and tie the broken ends together. For non-self-rescuing boats, return to shore to make repairs. If the windward shroud parts and the mast does not break, luff the sails immediately and come about. This takes the stress off the mast. With the broken shroud on the leeward side, you can retie the halyard to the shroud's chainplate as a jury rigged shroud. Since the halyard is not as strong as the shroud, luff the sail on the appropriate tack to reduce tension on the makeshift shroud.

5.1.7 Rudder Damage

You can sail a boat without a rudder. Pull in on the jib to fall off or pull on the main and luff the jib to make the boat head up. Use a paddle as a rudder. Raise the centerboard to make the boat fall off or lower it to make the boat head up. Heeling the boat to leeward will make the boat head up and heeling to windward will make it fall off. Move the crew forward to turn upwind or aft to turn away from the wind. These measures work because of changes in the sail's center of effort relative to the hull's center of lateral resistance.

5.1.8 Hull Puncture

If the hull should be punctured, the leak can be stopped or slowed in many ways. Some suggestions are:

- Stuff the hole to stop or slow the leak using clothing or an extra life preserver.
- Wrap the jib around the outside of the hull.
- Heel the boat to bring the hole above the water line.

a typical capsize recovery in progress

APPENDIX—A:

RIGGING

Earlier in this book basic sailing and rigging were discussed. Specific rigging and sailing procedures for some of the WYC's boats will be discussed here. Procedures for boats not discussed here may be obtained from the WYC office in the HUB.

LASER

Rigging

1)Take the plugs out, lift bow to hip height to drain, then put the boat down and replace the plugs.
2)Put the boat in the water. Tie to dock, and let the boat swing to head to wind.
3)Grab a mast and put it in the mast step of the boat.
4)Attach the cunningham to the mast above the gooseneck and tighten.
5)Capsize boat on dock.
6)Slide the sail onto the mast.
7)Attach the rudder and insert the daggerboard.
8)Tie the clew (back lower part of sail) to the boom with the tie downs (square knot).
9)The outhaul goes from the cleat on the boom, through the eye at the end of the boom, through the clew of the sail, then tie to the eye on the boom with a bowline knot.
10)Slip the boom onto the gooseneck.
11)Pull in the mainsheet all the way, then attach the boom vang and tighten.
12)Right the boat.
13)Untie the cunningham from the gooseneck, lead the line through the hole in the sail, and tie to the mast below the gooseneck. Tighten.
14)Go sailing. Have fun.

SAILING

The traveller is near the stern, so care must be taken while jibing; otherwise, the mainsheet may become caught around the corner of the transom as the boom swings across. This problem can be avoided if the slack is taken out of the mainsheet as the sail jibes, by giving a quick pull on the mainsheet. As the wind becomes stronger, it becomes necessary to make the sail less powerful, to reduce the likelihood of capsizing. Flattening the sail by tightening the out-haul and cunningham will help. Also, when close-hauled in high winds sheet the main in tight, so that traveller block and stern boom block touch. This is called two-blocking. This bends the mast, making the sail flatter and less powerful. The boom vang should be set tight while two-blocked, to have enough leech tension off the wind.

LASER II

1)Get the sails (*in different colored sail bags in the sail crib, second from the top*). Take the sail bag to the boat, remove the sails from the bag, put the sails into the boat (*don't let the sails drag the pavement, please*) and put the bag back in the sail locker.
2)Pull the boat out of its slot, but not too far into traffic.
3)Make sure the hull plug(s) on the transom and auto bailer are open, lift the bow up to drain, and then close them all.
4)Unroll the sails and take out the jib. Attach the jib tack to the bow of the boat. Attach the jib halyard to the head of the sail.
5) Pull the jib up. Whether a) or b), the jib halyard should take all the tightness from the forestay;
    a)the jib halyard has a thimble at the line-wire splice that hooks very tightly over raised ridges at the base of the mast or
    b)the jib halyard wire pulls through a slotted lip at the base of the mast.
6)The jib sheets run inside the shrouds and through the turning blocks on the side of the boat. Tie a figure eight knot at the end of the jib sheets.
7)Loosen the boom-vang up a lot. At this time you have the option of either raising the main sail before you put it into the water a) or after b)
    a)Do not raise it more than two feet while on the pavement. (*However funny it is to see a would-be sailor getting bonked on the head with a mast, it's very distressing to see an expensive boat (~$6,000) rocking on the pavement or sliding on its side!*)
        1)Unroll the mainsail until you reach the head and tie the halyard to the head with a bowline knot.
        2)The clew of the sail has one grommet in it, and the tack has two. Pin the tack of the sail at the mast end of the boom through the lower grommet.
        3)The outhaul goes from the forward cleat on the side of the boom, through the plastic eye strap at the after end of the boom, through the clew grommet, then is tied with a bowline at the same plastic eye strap. Do not pull tight, yet.
        4)Pull up the main, guiding the rope into the track. (*Remember, only a couple of feet.*) Cleat the halyard to the horn cleat at the base of the mast until after the boat is in the water. (*The halyard does not go through the cleat next to the boom, that's for the cunningham.*) Put the boat in the water and tie it off head-to-wind. Hoist the main all the way up to within an inch or two of the masthead and tie off at the horn cleat at the base of the mast.
        5)The cunningham is lead from the cleat at the side of the mast, through the top grommet above the tack grommet in the sail, then tied around the mast below the gooseneck. Tighten just until the wrinkles disappear from the luff of the sail.
        6)Guide the gooseneck into the boom and attach boom-vang onto the boom.
        7)Put tension on the boom-vang. In general (*sort of*)

the more wind the more vang.

8)Tighten the outhaul until a wrinkle just begins to appear in the foot of the sail.

b)It's the same as a), but you put the boat in the water first and you can raise the main fully once you're ready.

8)Attach the rudder and tiller. Check the rudder, tie-down line to make sure it's secure and tight at the horn cleat on the tiller.

9)Slide the dagger board into the dagger board well and clip the bungee cord around the base of the mast.

10)Go sailing. Have fun.

HINT: When using the auto bailer, ensure you press down on the back of it to open it. Otherwise you will break it. It's cheaply made and made to break at $35 each!

HINT II: Those extra lines are probably for flying a spinnaker or trapping out. If you don't know how, ask someone first, please. It's loads of fun!

SAILBOARDS

Rigging

Sailboards are easily rigged. If the sail is not already on the mast locate the tack of the sail and slide the mast into the luff tube. Make sure the mast runs inside the boom straps. Slip the universal joint into the bottom of the mast. Attach the cunningham to keep the universal joint in place. Then attach the boom by taking the inhaul and wrapping it around the mast at your nose level from the deck. Next, slip the aft end of the booms over the top of the mast until it is parallel to the mast. Feed the two boom lines through the front of the boom and tie a square knot with the booms tight to the mast. Then rotate the booms until they are perpendicular to the mast. Attach and tighten the outhaul. Place the sailboard into the water and put in the centerboard. When storing the sail, loosen the cunningham to prolong the sail's life.

Sailing

To leave the dock, throw the rig from the dock, and paddle the board to the sail. Stand up with knees flexed and grab the uphaul line, pulling the sail to the downwind side of the board. There, put the universal joint into the desired hole. (For the Conell, twist the ring finger-tight to fix the universal joint in the hole.) Stand with your feet on either side of the mast, facing the sail, and hoist the sail with the uphaul line so that the sail may luff. Keeping both hands on the uphaul, tip the sail fore or aft to bring the board perpendicular to the wind. With what will be your aft hand grab the uphaul next to the booms. With your other hand grasp the boom close to the mast. Now, release the uphaul, keeping the sail luffing. Tilt the sail forward and to windward, grabbing the boom with your other hand, and pulling in the sail until the sail is full. When sailing in heavier wind you will have to learn to fall backwards into the wind, thus filling the sail quickly without being blown over. Tilt the sail forward to head off the wind. Tilt the sail aft to head up. You may need to move your feet aft to keep the bow from submerging. When sailing downwind, face the bow with your feet on either side of the board and tilt the sail opposite the direction that you wish to turn. Sailing in heavier wind requires that you move aft on the board. Tack by tilting the sail aft while sheeting in to keep the sail full. Step in front of the mast as the bow passes through the eye of the wind. When on the other side of the board, tilt the sail forward and pull it in until the sail fills. To jibe, sail downwind and tilt the sail

sail with your free hand. Then bring your other hand across. To stop rapidly, just drop the sail in the water.

Sailboard Rules

- A wetsuit must be worn September 15 to June 15 or when warranted by weather and temperature conditions.
- Life jackets must always be worn.
- Novices and Intermediates are restricted to Union Bay.
- Skippers may sail north of the Evergreen Point Bridge to a line between Sand Point and Kirkland. A wetsuit and harness must be worn in these waters.
- If your rating is removed, you cannot retake rating tests for 10 weeks.
- Wind speed limits for sailboards are the same as for dinghy ratings.
- Club wetsuits may only be worn on sailboards and must be washed inside and out in the shower. They should be wrung out of excess water and hung to dry in the sailboard locker. Other use of these wetsuits will shorten their lives, at great expense. Contact the Club office for possible information on inexpensive wetsuits.

KEELBOATS

A separate book for operation of club Keelboats is available in the HUB office at a nominal fee. Rental rates vary with a complete list available in the office or the sail locker.

rigging a laser

APPENDIX—B:

BASIC RACING RULES

Racing Rules apply to boats that are involved in the same race. If a racing boat is involved with another boat that is not racing, the standard applicable rules of the road apply to both the racing boat and the other boat.

The racing rules are designed to avoid collision. When two boats converge, one boat is required to keep clear of the other. If the boat that has right of way is forced to avoid a boat without right of way, or if there is a collision, the boat without right of way is penalized. Usually, there are two ways in which boats can be penalized. Voluntary penalties are withdrawal from the race or, if the 720 rule is in effect, the boat can perform two complete turns on the same leg on which the infraction occurred. If voluntary penalties are not taken, the competitors or the race organizers may lodge a protest, which will be decided by a protest committee.

Basic racing rules are outlined below. Actual rules are slightly more complex, but what is covered here applies in most situations. For a more detailed treatment, the official rules may be obtained by writing the United States Yacht Racing Union (USYRU) or by reading books such as Understanding the Racing Rules by Dave Perry. The USYRU address is: USYRU, PO Box 209, Newport, RI 02840.

DEFINITIONS

Port and Starboard Tack

A boat is on port tack when its mainsail is on its starboard side. Conversely, a boat is on Starboard tack when her main is on her port side.

Windward and Leeward

The leeward side of a boat is the side on which the mainsail is carried. The opposite side is the windward side. If the boat is head to wind, the leeward side is the side the mainsail was on before the boat came head to wind. Leeward generally denotes the boat that is further downwind. If two boats are overlapped on the same tack, the leeward boat is on the leeward side of the other boats.

Overlapped

Two boats are overlapped if one boat is across an imaginary line projected abeam from the furthest point aft on the other boat.

Clear Astern and Clear Ahead

A boat is clear ahead if it is ahead of another boat and not overlapped. The other boat is then clear astern.

Tacking

A boat is tacking from the moment she passes head to wind until she has born off onto close-hauled course.

Jibing

A boat is jibing from the moment her boom crosses her centerline until it fills on the new leeward side.

Bearing Away

A boat is bearing away when altering its course away from the wind.

Luffing

A boat is luffing when it alters course toward the wind.

Proper Course

A proper course is any course a boat might sail after the starting signal, which would lead the boat to finish as quickly as possible in the absence of any other boats.

RULES

It is important to realize that the rules that apply in open water are fundamentally different from those which apply near marks or obstructions.

BASIC OPEN WATER RULES

A boat on starboard tack has right of way over a boat on port tack
A boat to leeward has right of way over a boat to windward.
A boat which is tacking or jibing must keep clear of boats which are not.
A boat that is clear astern keeps clear of a boat that is clear ahead.
The Luffing rule - When a boat that is clear astern attempts to pass a boat to windward, the leeward boat may luff head to wind as quickly as she desires to protect its wind. The leeward boat may, in this case, cause a collision as long as serious damage does not occur.

BASIC RULES NEAR MARKS

At the windward mark with boats on the opposite tack, apply the rules as if the mark were not there.
At the windward mark with boats on the same tack, a boat which is outside must give a boat overlapping it on the inside room to round the mark.
At an offwind mark, a boat that is outside must give a boat that is overlapping inside room to round the mark. The windward/leeward rule or the port/starboard rule does not apply at mark roundings.
At a starting mark which is to be passed on the leeward side, an overlapping windward boat is not entitled to room.
Marks of a finishing line are treated as other marks of the course.