# CANDLEWOOD YACHT CLUB

## Steward Training Manual

### Introduction

Your most important responsibility is ensuring the safety of the competitors. If someone is in the water or injured, you must act quickly. If a boat capsizes and the crew cannot right it themselves, you will need to assist in righting the boat. You may need to tow boats back to the dock. These situations are rare, and you might not encounter them at all during the entire season. Most of the time, you will be assisting the Race Committee (RC) in running the races. This primarily involves taking wind readings and setting marks (buoys) around which the boats race.

You will work closely with the RC. It consists of volunteer club members who change each week. Skippers are required to help on the Race Committee once each year. The Principal Race Officer (PRO) is responsible for overseeing the Race Committee for that day.

We use two boats to run the races. The RC Boat (also known as the Signal Boat) is a SanPan pontoon boat. You will operate the Chase Boat (also called the Mark Boat, Safety Boat, or Patrol Boat.) It is a Mako.

We have two fleets of member-owned boats. The Flying Scot is a 19’ one-design centerboard boat. The cruising fleet consists of boats of various designs that compete using a handicap system known as PHRF. The cruising boats are larger and have heavy keels, which make them more stable. It is very unlikely that they would capsize in the conditions we race in. Even if they capsize, they right themselves without assistance. However, someone could fall overboard. The Flying Scot is lighter and has a movable board instead of a keel. It may capsize with a strong wind gust or a sudden wind shift. This is more likely to happen when going downwind with a spinnaker.

The club owns a fleet of Sunfish and a fleet of Optis for the junior sailing program. They are not used for the regular Sunday races, but there are two Sunfish races. See the race schedule.

## Safety

Sailing is a safe sport, but the risk of injury is inherent in sailboat racing. Your presence on the water significantly reduces the likelihood of a problematic situation becoming dangerous. The Notice of Race (NoR) includes a disclaimer of liability:

“RRS 3, ‘Decision to Race,’ states: ‘The responsibility for a boat’s decision to participate in a race or to continue to race is hers alone.’ By participating in this event, each competitor agrees and acknowledges that sailing is a potentially dangerous activity with inherent risks. These risks include strong winds and rough seas, sudden changes in weather, failure of equipment, boat handling errors, poor seamanship by other boats, loss of balance on an unstable platform, and fatigue resulting in increased risk of injury.

“Competitors participate entirely at their own risk. The organizing authority will not accept any liability for material damage, personal injury, or death sustained in conjunction with or before, during, or after the race.”

This disclaimer of liability says that we are not legally responsible for the safety of competitors. However, your most important job is to assist any person or vessel that requires help. Call the CT DEEP Emergency Dispatch number, 860-424-3333, if you need emergency assistance in case of serious injury or if multiple boats capsize.

You should always be on the lookout to see if anyone needs help. You should also monitor VHF channel 68 for any calls for assistance. Since the Flying Scots may capsize, you should remain close to that fleet without getting in the way. A good position is a few hundred feet behind the last boat. The fleet will spread out a lot between the marks, so keep watch in all directions. Avoid creating a wake when near the competitors, except in emergencies. A wake can slow down the racing boats, and they will really not appreciate this!

One key to managing risks on the water is knowing who is on the water and where they are. The Race Committee maintains a list of boats checked in for the day's races. We need to make sure we account for everyone on the water.

It may be difficult to hear others over the sound of the motor, especially in windy conditions. You should be familiar with the hand signals used for communication.

If there is any problem, first assess the situation to determine the condition of those involved. Make sure your actions do not make the situation worse. It is important to coordinate with the PRO. The race committee and competitors communicate on the water using VHF channel 68. You should monitor this channel.

If someone falls overboard or is injured, they may need assistance, particularly if there is a risk of hypothermia. Competitors should be capable of swimming and may be able to get back aboard their boat without assistance. Most competitors prefer to avoid outside assistance if possible, as this could disqualify them from the race.

**Signs of hypothermia are:**

- Shivering: Uncontrollable shivering is the first and most obvious sign of hypothermia.
- Confusion: A person with hypothermia may be confused or have memory loss.
- Slowed breathing or heart rate: Breathing may become dangerously slow or shallow, or the person may stop breathing.
- Pale and cold skin: Skin and lips may turn blue or gray.
- Slurred speech: A person with hypothermia may have difficulty speaking clearly.

**Instinctive Drowning Response:**

- Body is upright with arms extended, pushing down on the water
- Unable to call for help
- Unable to shout or wave arms
- Cannot reach out to grab flotation or a boat hook.

**If a person is in the water:**

- One crew member should always keep sight of the person in the water and point at them.
- Get there quickly.
- Approach at minimum control speed, pointing into the wind.

- Approach with the bow first to keep the propeller from striking anyone.
- Determine if they need help or if they can handle the situation.
    - Ask them if they need help.
    - If someone is suffering from hypothermia or is drowning, they may not be able to ask for help.
    - If they say they are OK, stand by until they are safely aboard their boat.
- If they need help:
    - If you do not have lifeguard training, do not go into the water to assist someone!
    - Throw a Type IV flotation device so it is within reach.
    - If someone is panicking, help them by speaking calmly and reassuring them.
    - Come close aboard so they are next to the Chase Boat.
    - You may need a boat hook to pull them next to the boat.
    - Pass a looped line around them to attach them to the boat.
    - Once you have made contact, turn off the engine.
- Once they are attached to the Chase Boat, you must bring them aboard.
    - If there are any problems doing this, call the CT DEEP Emergency Dispatch number, 860-424-3333.
    - The Chase Boat has a boarding ladder, which may allow someone to get aboard more easily.
    - If they can't do this, you may need to pull them out of the water over the side of the boat. This isn't easy and requires strength. You will need two people.
    - Lift the person facing the boat.
    - There are different techniques you can use: holding them under their arm, pulling on their life jacket, or the leg and arm roll.

If someone aboard a boat is injured and can safely be moved, you may be able to transfer them into the Chase Boat and bring them ashore. This requires you to be able to maneuver safely alongside a boat. If it's not safe to move them, you may need to tow the boat to the dock. Call the CT DEEP Emergency Dispatch number, 860-424-3333.

We will not go out on the water if there is lightning nearby. If a thunderstorm or a strong storm approaches when we are already on the water, the PRO will abandon the race (see procedure below). In very strong winds, smaller boats may be unable to safely sail back to the dock without risking capsizing. You may need to tow boats that do not have a working motor back to the dock. Most Flying Scots do not have a motor and rely on paddles, which are slow. They cannot paddle into a strong wind. You will remain on the lake until all sailboats are out of danger. In extreme weather, you may need to transfer crews to your boat and abandon the sailboat.

## Towing

You may need to tow boats back to the dock in the event of severe weather, if the wind dies down, or if a boat becomes disabled. You should know how to tow multiple boats safely. You should be able to throw a rope accurately. If a Flying Scot that doesn't have a motor lowers its sails, it probably indicates they want a tow.

**Preparing the sailboat**

- Make sure the bow line is securely tied to the bow fixture
- Lower the jib.
- Lower the main halfway to keep the bow pointed into the wind until the tow is attached.
- Raise the centerboard halfway to improve tracking.
- Throw the bow line to the Chase Boat.
- Fully lower the main sail.
- Shift crew weight aft to raise the bow.
- Steer to keep the boat tracking properly.

**Picking up a tow**

It is best to receive a towline from the boat being towed, as this allows the towboat to quickly release the line if necessary. Have the boathook ready in case you miss catching the line. If the sailboat does not have a line ready, toss the towline from the Chase Boat. The tow bridle should be tied to both stern cleats,

with the bight in the center. Make sure it does not foul the prop. Attach the towline to the center bight of the bridle using a bowline knot. Once the towline is attached, start slowly until the slack is out of the towline. Make sure the towline does not foul the prop. Then, gradually accelerate until the boat is riding comfortably. Going too fast can damage the sailboat. One person should monitor the tow and inform the operator of any problem.

Once near the dock, slow down gradually to prevent the sailboat from riding up and hitting the Chase Boat. Cast off the towline and ensure the bridle does not foul the prop.

**Towing a string of boats**

You can tow multiple boats in line, one behind the other. Measured changes in towing speed are crucial. If the towboat suddenly decreases speed, the boats under tow may collide. If the speed is increased too rapidly, people on the boats may be caught off balance, and the sudden loading onto the boats could cause damage. When picking up boats onto a tow, the speed is critical. Operating too slowly might result in boats losing steering control or colliding with one another. Going too fast could complicate tying a new boat onto the tow. Maintain a minimum control speed to keep some tension on the towline until the last boat in the chain signals that they are ready.

The sailboats should tie the towline from the following boat to the bight of their bow line at their bow fixture. This reduces the stress on your boat from sudden jerks. You will need to tie your stern line to the bow line of the following boat to have enough length.

## Capsize recovery

If a Flying Scot capsizes, you may need to help right it. An experienced crew can right the boat without outside assistance, but not everyone is capable of doing so. It doesn't happen often, so relatively inexperienced crew may not know the proper technique. It also takes some athletic ability and agility. They may be

exhausted, injured, or suffering from hypothermia. You should be prepared to assist if needed. The boat has internal flotation, so even if it capsizes, it should not sink, although that is still possible if the flotation fails.

If a boat capsizes, get there quickly. First, make sure that all crew members are safe and accounted for. Someone can be trapped under the sail, which is extremely dangerous, or someone may have a head injury. Check that everyone is wearing a life vest.

If everyone is safe, ask if they need help righting the boat. If you assist, they will be disqualified from the race, so they will want to try to right the boat themselves if they can. They will be disqualified even if you simply tell them the correct technique, as this is considered outside assistance.

When you are near or assisting a capsized boat, keep the motor of the Chase Boat away from the capsized boat. There may be lines in the water that could foul the prop. If they were flying a spinnaker, it may be several feet away from the boat. If the spinnaker fouls your prop, you will tear it to shreds. A new spinnaker for a Flying Scot costs $1300, so keep the bow of the Chase Boat towards the boat and watch out for anything in the water. It is best to approach the boat from its stern.

There are two types of capsizes. The most common scenario is when the boat turns 90 degrees on its side, so the mast lies just below the water's surface. If the boat is not righted promptly, it may turn another 90 degrees so the mast is pointed straight down. This is called turtling because the bottom of the boat sticking out of the water resembles a turtle shell. If this happens, it is much more difficult to right without assistance.

Working from the Chase Boat is easier and safer. However, you should know how to do it from the water.

**Technique from the Chase Boat:**

- First, make sure that everyone is OK.
- Approach the capsized boat from the bow at a minimum safe speed.
- With a boat hook, grab the top of the mast or the top of the forestay.
- Make sure that the bow is pointed into the wind.
- Slowly raise the top of the mast out of the water.

- The water will hold the sail under, but steady pressure will start bringing it up.
- Maneuver the Chase Boat to the top of the mast and point it down the mast.
- Walk the mast up hand over hand above your head until you reach the shroud, and then walk the shroud up.
- Once the boat starts coming up by itself, back out of the way.

**Technique from in the water:**

- First, make sure everyone is OK.
- One crew member quickly swims to the head of the mast and holds it up to prevent turtling. They should be wearing a life vest.
- Then the other crew ensures the sheets are un-cleated and the spinnaker is doused.
- Then they step on the shroud in the water, the back of the seat, and the base of the mast, swing a leg over the side, and step down onto the centerboard.
- This stabilizes the boat so it won't turtle.
- The person holding the mast can then swim back to the cockpit and climb onto the seat.
- The person on the board holds on to the gunnel or a line and leans back.
- This will bring the boat back upright.

**If the boat has turtled:**

- Make sure the bow of the sailboat is pointing into the wind.
- Tie a line to one shroud (which will be underwater) and throw it over to the opposite side of the boat.
- Grab the line with a boat hook and secure it.
- Keep the Chase Boat a few feet away from the capsized boat so it doesn't crash into the Chase Boat when it comes up.
- Make sure you are lined up to pull directly from the side of the boat, i.e., $90^{O}$ from the boat's direction.
- Back away from the boat ***slowly***.
- It may take several minutes to bring the boat up.

- You will need to adjust course to stay properly lined up to the side of the boat.
- If the mast is stuck in the mud on the bottom where the water is shallow, determine which side of the boat is higher, and pull **very** gently from that side. If you try doing it the other way, the mast will break.

Watch these videos:

Capsize Recovery: https://youtu.be/eSd1fgLszy4

Turtle Recovery: https://youtu.be/lmbGX9BwwQ8

The turtle recovery video makes it look easier than it is for most people. It also shows how to tow a boat when it is filled with water to help drain the water.

After a capsized boat is righted, gear may be floating nearby in the water. You should assist in recovering it so it doesn't sink or drift away. If a boat has turtled, it will be filled with water after it is righted. You will need to tow it slowly to help drain the water from the boat.

More than one boat may capsize if a strong, sudden wind gust hits the fleet. Before assisting in righting boats, the priority is to make sure that everyone in all boats is safe. You or the Race Committee should call the CT DEEP Emergency Dispatch number, 860-424-3333.

## Race operations

The primary responsibility is setting, moving, and retrieving marks as directed by the Principal Race Officer (PRO)

You should be able to:

- Steer a compass course and estimate the distance traveled.
- Determine wind direction and speed with a compass, wind stick, and anemometer.
- Record wind regularly and report readings to the RC.
- Hold position and anchor near a mark when you need to signal to competitors.
- Display flags and sound horns as directed.
- Record finishes at a shortened course.
- Communicate with competitors if a race is abandoned.

**Beginning of the day**
Check in with the Race Committee. The PRO is the person in charge.

- Exchange cell phone numbers with the PRO in case the radios fail.
- Confirm that we will be going out before continuing with the preparations.
- Inflate the marks using the shop vac.
- Do a radio check. You should have two working radios in case one fails.

Prepare the boat.

- Remove the cover and store it under the bench seat.
- Make sure gas tanks are filled and the fuel line is connected correctly.
- Make sure all required gear is aboard and properly stowed.
- Make sure the anchors are securely attached to the marks. We have lost anchors that were not properly secured. See how to tie a bowline knot.
- Tilt engine down into the water.
- Start engine.
- Leave dock
- Start taking wind readings

## Wind readings

Understanding wind conditions is essential for sailing. We need enough wind to move the boat, but not so much that it becomes overpowered. We need a sustained 5 knots to race. (Knots measure speed on boats, like mph, but on a *slightly* different scale.)

The direction of the wind is also important. We cannot sail directly into the wind. That is how you stop a sailboat. To go upwind, boats must “tack.” This means sailing about 45$^{o}$ off the wind in one direction and then, after a while, “tacking,” turning 90$^{o}$ through the wind so that you are sailing 45$^{o}$ off the wind in the other direction. Ideally, the first mark (the windward mark) should be directly upwind of the start at the RC Boat. This allows boats to spend roughly the same amount of time on each tack, making the race more competitive and interesting for participants. When and where you tack can make a huge difference in winning a race.

You can get a good idea of the wind's speed and direction just by looking at the water. If there is no wind, the water looks like a mirror. In a light breeze, about 5 knots, small ripples called "cat's paws" begin to form on the surface. Since the wind pushes these ripples, and they are perpendicular to the direction of the wind. The water appears light in color. When the wind gets to about 8 knots, these ripples grow larger, causing the water to appear darker. In a moderate breeze, about 12 knots, the waves start breaking, and whitecaps appear. When the wind exceeds 17 knots, the whitecaps become larger and more consistent. This begins to be too strong for the Flying Scots to race. The cruising boats can sail in stronger wind since they are heavier and can reef their sails.

The wind is constantly changing in both direction and strength. This is particularly true on a relatively small body of water like Candlewood Lake. Since we are never far from shore, the surrounding hills and trees can affect the wind patterns on the water. You should take wind readings in the middle of the lake to reduce these effects. You must take a series of readings to determine the average wind speed and direction. The wind may oscillate (swinging back and forth within a consistent range) or have a persistent shift (continuing to change in a particular direction). We need to know the sustained, or average, wind speed and the speed of the gusts. Wind shifts frequently accompany gusts.

To take wind readings, motor out to the middle of the lake and make sure the boat is completely stopped, facing into the wind. If the boat is moving, it will throw off your wind readings. To verify that you are not moving, look at the water next to the boat for signs of movement. If you don't see something in the water that you can use as a reference, place a sponge in the water and keep position relative to that. Don't forget to retrieve the sponge when you are done.

Move to the front of the boat and face into the wind. Hold the stick with magnetic tape high and use the hand-bearing compass to take the bearing. Do not hold the radio near the compass! It will throw off the compass. To take the wind speed, hold up the anemometer facing into the wind and read the display. Record the time, wind direction, and speed on the wind form. Take wind readings every 5 to 10 minutes. If you see darker water approaching, that indicates a gust, and you should record it.

Report your readings to the PRO when they are ready to copy. Provide both the sustained wind speed and gusts. To determine the sustained wind speed, you don't need to calculate the exact average; use the middle of the readings, excluding gusts. Determine if the wind direction is oscillating or if there is a persistent shift. If the wind is oscillating, report the average wind direction. If there is a persistent shift, report the current wind direction and the direction from 15 minutes earlier.

For example: "The wind is 8 knots with 12 knot gusts, oscillating with an average direction of 215°."

The PRO may ask you to take wind readings at various points around the lake. Continue to take readings throughout the races to look for any significant changes.

## Setting marks

The PRO will determine where the start should be and anchor the RC Boat. Once the PRO determines the course direction, they will ask you to set the starting mark. The starting pin is a small round red mark. The PRO will tell you where to set it. It should be about 150 to 200 feet from the committee boat and bear 90$^{o}$ from the wind direction. The precise location is important because the starting line should be square to the wind direction. You should start downwind of the RC, about 150 to 200 feet to the side, and slowly motor directly into the wind. Holding the anchor, place the mark into the water away from the boat's side, ensuring that the anchor rode does not foul the propeller. Let the mark out to the end of the anchor rode and let it drag behind the boat. This is called streaming the mark. Listen on the radio for the PRO to tell you to drop the anchor ("Drop, Drop, Drop"). When you drop the anchor, the mark should stay in place.

Next, the PRO will ask you to set the windward mark. It is one of the large orange inflatable tetrahedrons. It is set directly into the wind. The PRO will tell you how far it should be. Because of the distance, you should get up to speed on a plane to keep the race on schedule. When you do this, avoid going near the sailboats because your wake will rock the boats and slow them down. The PRO will tell you what compass course to steer and how far to go. When you are close to the correct position, the PRO will ask you to adjust your course to the proper location. When you are at the correct distance, the PRO will tell you to turn to port or starboard to adjust the bearing from the RC Boat. Steer 90$^{o}$ from the wind direction. When the PRO is satisfied, he will ask you to drop the mark. Make sure that the anchor rode does not foul the propeller.

The PRO will then ask you to set the next mark. Depending on the course, it can be the jibe mark or the downwind mark. For the "O" or "T" courses, the jibe mark (sometimes called the offset mark) creates a triangular course. It should be positioned to make a right triangle with a 45$^{o}$ turn at the windward mark, a 90$^{o}$ turn at the jibe mark, and a 45$^{o}$ turn at the leeward mark. The jibe mark should be roughly the same distance from the windward and the leeward marks.

The last mark is the downwind mark. For the "W" and "O" courses, it is directly downwind from the RC Boat and roughly the same distance away as the windward mark. However, if the PRO selects the "L" or "T" courses, the leeward mark is a

couple hundred feet directly upwind of the committee boat. The “L” or “T” courses also have a separate finish pin, another small red ball. See course diagrams in the Sailing Instructions.

Once the marks have been set, return to the starting line at the committee boat. The PRO may ask you to adjust the position of the starting pin.

**Buoy Zone app**

Setting marks precisely can be difficult, even for experienced individuals. US Sailing recommends using the free Buoy Zone app, available for both iPhones and Android devices. It uses the phone’s GPS to tell you exactly where to set the marks. You simply position your boat next to the RC Boat, enter the course, bearing, and distance into the app, and it will display a map showing where the marks should be set. When you're close to the pin on the map, zoom in to accurately position where you should drop the mark.

At the beginning of the season, you need to create course templates in the app for each course type described in the Sailing Instructions. We will cover this in the training sessions.

## During races

You should stay near the Flying Scot fleet without getting in the way and keep watch to see if anyone needs assistance.

**Resetting marks**

If the wind shifts significantly or dies down, the PRO may ask you to move the marks for the next race to keep the course square to the wind or allow boats to finish in a reasonable amount of time. A mark can be picked up after the last boat has rounded that mark, even before everyone has finished. Since the cruising fleet has boats with different speeds, they can spread out. You need to determine the last boat that has not rounded the mark. Communicate with the PRO, who will direct you when and what to do.

The course can be changed during a race, although this is uncommon. You must quickly get to the prior mark before any competitor rounds it. You should raise the "C Flag" and signal with repetitive horns as boats approach. You must be there with the C flag up before anyone rounds the mark.

If the wind has died down or a storm front is approaching, the PRO may decide to abandon the race or shorten the course.

**Abandoning the race**

To abandon the race, the RC will raise the "N" signal flag (see the Sailing Instructions or the flag chart) and sound the horn three times. The RC will hail the fleet on VHF channel 68. Since someone's radio might not be working or they did not hear the hail, the Chase Boat should raise the "N" flag and alert any boats not already heading in. Head toward these boats and make sure they are aware that the race has been abandoned. If the wind has died, boats without a motor (most of the Flying Scots) may need to be towed in. If the wind has picked up significantly, keep a lookout for boats that may capsize or be unable to sail safely in these conditions.

**Taking finishes at a shortened course**

Instead of abandoning a race, the PRO can decide to shorten it. This can be done at any mark if no boat has already rounded. If the RC Boat can reach the mark in time, before any boat gets to it, they will anchor there to record the finishes. The Chase Boat may be able to reach the mark much faster, so you should be prepared

to do this. You should position the boat to the side of the mark so that boats approaching the mark will be between the Chase Boat and the mark. Since boats leave the marks to port (their left side), the Chase Boat should be to the right of the boats as they approach the mark. Anchor about 50 feet from the mark, raise the “S Flag,” and sound the horn twice as the boats approach. You should then record the sail number of each boat that finishes, the finish order, and the time they cross the line. Time should be recorded to the second. They may not be easy to do accurately when boats are finishing close to each other. It helps to write down the sail numbers as the boats approach, so you only need to record the finish order and time next to each sail number as they finish.

**End of the day**

We usually have two races. After the last race, pick up the marks. Deflate the tetrahedrons in the boat so that you have more room in the boat. The plugs should be secured to the marks, but they can come loose, so don’t lose them. If the wind has died, boats without motors (most of the Flying Scots) may have difficulty returning to the dock. Ask them if they want a tow.

When returning to the dock, check if the gas tank is low. If it is, fill it at the gas dock next door at Chatterton Marina. Once back at the dock, raise the motor out of the water, unload the equipment from the boat, and put the cover back on. Return the equipment to the sail locker and stow it properly. Make sure the radios are plugged in to recharge.

## Racing Rules of Sailing

You should already be familiar with the U.S. Coast Guard Inland Navigation Rules, i.e., a motorboat must give way to a sailboat under sail, etc. It also contains rules for when two sailboats meet. The basic rules are that a port tack boat must give way to a starboard tack boat, a windward boat must give way to a leeward boat, and an overtaking boat must give way to the boat ahead.

These rules apply to sailboats when they are **not** racing. When they are racing, a different set of rules applies, "The Racing Rules of Sailing" (RRS). These rules are set by World Sailing, the international body governing sailing, with prescriptions from US Sailing.

The basic rules, i.e., port/starboard, windward/leeward, and overtaking, are the same as the regular rules of the road, but there are important differences. These differences are needed since racing boats will get much closer together than they ever would if they were just going for a sail. One significant difference is when and how quickly a stand-on vessel can change course. Understanding the rules is important to competitors trying to win a race.

You should be aware of the basics to understand the behavior of the competitors. The competitors rely on each other to follow the rules, but fouls happen. If someone breaks a rule, they can exonerate themselves by doing a penalty turn, which consists of two complete turns (a 720°). So, if you see a boat going around in circles, that is normal. This is like a 15-yard penalty in football. Collisions are relatively rare. Sometimes, the competitors do not agree that a foul occurred. In these cases, a protest hearing is held ashore after the race. Although the basic rules are only a few pages long, many books have been written about interpreting them in different situations.

The RRS includes the correct way to run a race. This includes the responsibilities of the RC on the Committee Boat and on the Chase Boat. An important rule is that competitors may not receive outside assistance except to help a crew member who is ill, injured, or in danger. If someone asks you a question while racing, tell them that they could be disqualified if you answer. The only time you should talk to the competitors *while they are racing* is if they may be in danger.

# Training Class

**Before class:**

Read this document

Read the Notice of Race and the Sailing Instructions

Download Buoy Zone app to your phone

Watch these videos:

- US Powerboat/US Sailing course skills: https://www.youtube.com/watch?v=6z_3NpWOz-Y&list=PL1haIlzm5I7ZVE51ose9JHTwoz5_aPyEk
- Capsize Recovery: https://www.youtube.com/watch?v=eSd1fgLszy4
- Turtle Recovery and towing: https://www.youtube.com/watch?v=lmbGX9BwwQ8
- Rope handling:
    - Bowline https://www.youtube.com/watch?v=Q9NqGd7464U
    - Clove Hitch https://www.youtube.com/watch?v=e9Vez9K1ETM
    - Cleat Hitch https://www.youtube.com/watch?v=RNr0VceduTg
    - Coiling a line https://www.youtube.com/watch?v=K-TV9cnzI3E
    - Throwing a line https://www.youtube.com/watch?v=56TIo5G2Ka0

**First session**

**Classroom:**

Review:

- Training Manual
- Videos
- The Notice of Race and the Sailing Instructions
- Racing Rules of Sailing

Boat terminology

Knots

What a race looks like (video)

Safety

Buoy Zone app

**Ashore:**

- Using a VHF radio, including verifying the battery is charged and radio check.
- Throw a Type IV throwable flotation device so that it is within reach of someone in the water without hitting them.
- Coil and throw a rope and hit a target.
- Coil and stow a rope.
- Inflate the marks, and make sure the anchor and rode are properly secured.
- Determine wind direction and speed with a compass, wind stick, and anemometer.
- Know what equipment is required aboard the boat and where it is stored.

**Second session**

**Afloat:**

Prepare the boat (remove the cover, make sure all equipment is aboard and gas tanks are filled, and start the engine)

Boat Handling based on the US Powerboat course:
https://www.youtube.com/playlist?list=PLIT4lYj3Q677e_Z5cEnUoKTmhGSZw2gYd

- Dock and undock the boat.
- Use of the kill switch
- Minimum safe speed
- Maneuver the boat through a slalom course, forwards and backward.
- From planning speed, approach a mark, turn to face into the wind, slow to minimum safe speed, stop just short (3 ft) of the mark with the bow facing the mark, and hold position without rocking the mark.

- Bring the boat close aboard the mark (1 ft to the side of the boat) and hold position.
- Come alongside another boat and hold the boats together.
- Anchor the boat and raise the anchor.
- Location of rocks south of Orchard Point

Race Operations

- Positioning boat for dropping marks
- Dropping marks
- Retrieving marks
- Displaying appropriate flags
- Horn, load hailer
- Finishing boats at a shortened course

**Third session**

- Help someone out of the water into the boat
- Towing
- Assisting a capsized Flying Scot

## Personal Equipment List

| | |
|---|---|
| Food (lunch and snacks) and beverages | Sun protection - A hat with a visor, sunglasses (with a lanyard), high-SPF sunscreen!! |
| Life jacket | Temperature-appropriate clothing, including foul-weather gear |

## Chase Boat Equipment Checklist

| | |
|---|---|
| CT DEEP Emergency Dispatch number,<br><br>860-424-3333 | Leatherman tool |
| air horns | loud hailer |
| air canisters, extra | marks: three large yellow tetrahedrons, two small round red marks, with anchors |
| anchor, chain & line | personal flotation devices ("PFDs") for everyone on board |
| anemometer | phone number for the Race Committee |
| binoculars | PVC poles for flags |
| boarding ladder | PVC holders for poles |
| boat hook | Sailing Instructions |
| cell phone | type IV throwable flotation devices (two) |
| clipboard, paper, rubber bands & pens | VHF handheld radio and spare radio |
| compass | watch (or phone) for timing finishes |
| First Aid Kit | water in case someone is dehydrated |
| flags: C, N, M, and S | whiteboard and markers |
| fuel & engine oil | whistle on a lanyard |
| hand-bearing compass | wind stick with telltale |
| heaving/towing line | zip ties for attaching flags to pole |

US Sailing & US Powerboating Sources:

- Racing Rules of Sailing
- Safe Powerboat Handling course
- Safety, Rescue & Support Boat Handling
- Basic Race Management Seminar
- Race Management Handbook
- Race Committee Support Boat Equipment Checklist