

“A PB duty is on the one hand, a great way to spend a couple of hours bonding with your crew and drinking in the best that nature has to offer.....

On the other hand it can quickly turn into a confusing fast moving battle with everything at stake.

The nature of an emergency is such that you can't prepare to cope with one scenario, you have to be able to cope with a variety of scenarios, possibly all coming at once.

SO YOU NEED TO BE AS PREPARED AS YOU POSSIBLY CAN. But you only have four or five sessions a year to perfect your duty. So we need to be as prepared and rehearsed as we can and take pride in that preparation.”

The Preparation and Completion Procedure for PB Duty

Arrive at least 1 hour prior to the Briefing

Grab the laminated BEFORE DUTY CHECK LIST and ensure you complete each bullet point.

CONSULT WITH YOUR RACE OFFICER OF THE DAY in a duty briefing (usually in the Tower);

Race: What is the proposed race of the day,

- You will need to know the nature of the race, the start sequence, whether the fleets start together or separately.
- If it's a pursuit race you will need to be close to the fleet at the finish to help the RO judge the order of the finishers.
- A long distance race may require the red rib to deal with larger waves in the channel.
- Do we need the deep water anchor?
- Do we need to take on board refreshments?
- What range of fuel will be needed?

Weather: Is the wind forecast to increase or decrease through the duty, what gusts can you expect? Are any squalls forecast? Which direction will the wind be blowing at the start and for the duration of the duty.

The weather will determine the following:

- Which patrol boat to take?
- Your approach to the launch and retrieval of the boat.
- What clothing to wear? Crew should be ready to enter the water if required.
- Hot or cold drink?
- Sun screen, sun glasses, sun hat?

Tide: Be aware of the expected duration of the tide.

- Make a note of the time that you have enough water to launch and calculate the duration to high tide, this will help you assess the latest time you can safely return to shore and get on the trailer
- You should also know whether you are putting to sea in a Spring tide or Neap tide so you can assess tidal flow effect on your boat (if you have sight of a mark, pole or buoy, you can also check tidal flow).

Course: Discuss the course that the RO has set and let them brief you on their intention for each leg of the course.

- How many marks do you need to take out and what size; the bigger the course, generally, the bigger the marks.
- Does the RO want a windward mark or a few degrees off, do they want you to avoid setting a dead downwind leg?

Competitors: Assess the competency of the Helms and Crew.

- Help the RO by assessing the weather, the number of boats sailing and the competency of the sailors to determine whether one PB is sufficient
- Identify who are likely to be the weaker sailors
- Do you have any novice crew taking part?
- Are you aware of any sailors with any particular health problems?
- Are there any minors sailing, what boat will they be on, how competent are they, will they be comfortable in an emergency situation / in the water?
- Which boat is most vulnerable to capsize, swamping or least well prepared or maintained?

So now it's time to prepare the Patrol Boats (Follow the laminated Duty Check list kept on the wall in the boathouse)

Unlock the boats and dismantle to doors, take out the boat you have chosen for the duty and back it up to fort knox. Replace the club doors as these need to be secure whilst everyone is occupied with the racing.

Check the Boat and trailer

- Air in the tyres?
- Is the hull intact?
- Is there sufficient air in the air chambers?
- Are the engine mount thumb screws tight, is the engine also tied on?
- Is the propeller (relatively) undamaged?
- Is the bung present?

Fuel

The fuel in the tanks of the outboards will always be pre-mixed with two stroke oil (it is a policy of the club, that tanks will always have oil added when refuelling to avoid mistakes). So the duty team should never add oil to any fuel from Fort Knox.

All of the outboard fuel tanks can be used on any boat / outboard. The connections and fuel / oil mixes are the all identical.

If there is insufficient fuel in any of the tanks, you can decant fuel from one tank to another. Never take fuel from another fuel **can** (other than another outboard tank) without consulting a member of the committee.

Keep fuel line ends free from the standing water in the bilges of the boat to avoid water getting into the fuel.

Run the engine up

- If using the red PB; do a visual check of the remote cables (Steering, throttle & gears) as they connect to the engine to ensure they are attached correctly.
- Once the fuel tank is in the boat and tied down, connect the fuel hose and open the filler cap breather.
- Place the flush muffs over the water intake which is positioned just in front of the propeller. Turn on the hose.
- Repeatedly squeeze the in-line fuel pump bulb until it goes hard.
- Check the engine is out of gear.
- Check the throttle is set to tick over.
- Check that the engine immobiliser is set to on.
- Give the engine a few quick long pulls to start. If it fails to start, check all the fuel line connections and that the bulb is still hard. If the engine still fails to start, it may have been

flooded in which case you either leave it for 5 minutes or, if you can't wait, continue to pull the starter chord with the choke OFF and the throttle open. If you do this: you must be ready to shut the throttle down when the engine starts.

- Once the engine has started from cold, it's important to run it for 3 – 4 minutes to ensure it warms right through and draws fresh petrol into the carburettor, this will make starting when afloat easier.
- Check that the tell-tale has water coming out of it.
- Take a little time to familiarise yourself with how the tilt and lock mechanism works on your engine, they differ. When at sea, as helm, you should be aware of whether or not the engine is locked down.

Equipment in the boat. Ensure the following are already in the boat:

1. A bow anchor
2. A second anchor (you may want to swap this for the deep water anchor depending on the nature of the race course)
3. A painter (the rope tied to the bow)
4. A RED medical emergency flag to be hoisted if you want the Tower to call for an ambulance.
5. A tow line
6. A small buoy or fender. To be tied to the mast of a capsized dinghy. This can be a temporary aid to stop the boat inverting whilst preparing to right the boat or can be left on the mast of an abandoned boat as a visual guide to those coming across the boat that the crew have been safely removed (if crew-safe tags are not available).
7. A Paddle
8. A Bailer
9. A Heaving Line. This is only used to reach another boat or person prior to attaching a more suitable line.
10. At this point you will also need to load on any racing marks required for the day.

You will also need to collect the following from the Tower:

1. An emergency knife for each crew member to be worn on the body at all times afloat
2. VHF radio for each member of crew. Check that they are charged and on the correct station. As a general rule only one radio turned on at a time to avoid reception feedback. (The proper use of VHF radio at SSC is covered by separate training notes)
3. Mobile phone (check that it is charged and that you know how it works, how to unlock key-lock and how to find the pre-set numbers).
4. The black plastic screw top box containing;
 - a. Crew-safe tags and cable ties These are fixed to the boat in the event that you take the crew off and abandon the boat, it informs those finding the boat that the crew are safe and that the boat belongs to a member of SSC (or at least SSC have knowledge of the incident).
 - b. Space blanket.
 - c. Spare kill chord.
 - d. Wire cutters (in sealed bag to avoid corrosion)
 - e. Multi tool (in sealed bag to avoid corrosion)

Stand By PB

As a minimum and only in settled conditions: the stand-by PB should have the fuel installed, the engine run and be left at Fort Knox ready for a quick launch. A chair or cone placed a few yards in front of the boat to dissuade cars from blocking it in.

Each duty will present different pressures on the PB team and the greater the pressures, the greater the need to more fully prepare the stand-by PB. Your initial assessment of the weather, the size of the fleet, the wind force and direction, those sailing and the size of the course will help you assess the likelihood of having to put the stand-by PB into action. If strong winds or a large fleet dictate, the SBPB should be left on the beach and a 'quick response' crew nominated to take it to sea at short notice if required. Before you concentrate on the PB, make sure the ramp barrier is open and the cones are put out to keep cars from parking close to the ramp.

Then off to the Galley to prepare your hot or cold drink and snacks.

Launching and retrieval of the Patrol Boat.

Did you put the bung in? Did you know that the drain hole in the back of the boats should have a rubber one way valve in the exit hole, if this is in place, you should be able to leave the bung out, allowing water out when you are steaming, but not in. This only works if the black rubber valve is installed.

Launching should be fairly easy, we rarely launch in conditions so bad that we have to consider swamping, but it can happen. To avoid swamping launch with the stern pointing into the surf and in as shallow water as possible, once off the trailer, bring the bows swiftly round to face the surf. Walk the boat into water deep enough to safely motor away from the shore.

We may need to launch a second PB in an emergency. If this is done with a strong onshore wind and at a higher state of tide, the swell may well be enough to swamp the boat, in this case, you may have to launch the boat bow first, but this will make handling the trailer in deep water difficult so will require additional help. You could also consider easing the boat off the trailer on the waters-edge and launching bow first without the trailer, this would also require at least four people to launch safely.

Stand at the bow or alongside the boat, but NEVER AT THE STERN of the boat whilst the other crew drops the leg in the water and starts the engine again. Go through the same pre-start checks as before, but do not use the choke this time, only if it fails to start after a number of pulls should you attempt to use the choke.

As soon as the engine is running and you are sure you are in deep enough water fit your end of the kill chord to your arm or leg (as you prefer) the person in the water should angle the boat straight out to sea and climb aboard. The next few yards are tricky; the propeller is typically likely to ground on the seabed until the boat is three quarters of the way out to the club pole. Every time the prop hits the ground it will be damaged and could completely fail during your duty. In calm conditions the

crew can help keep the prop shallow by keeping their weight forward, the revs should be kept low, just high enough to keep the boat moving over the ground. In choppy seas, it's important to walk the RIB in the deepest water manageable (before starting the engine) as the prop is more likely to ground violently in the troughs of the waves.

Coming ashore

Remember to take note of what depth of water you may have when coming back ashore and drop the revs right back as you approach the shallows. Prepare the crew to ease themselves over the side gently once you have stopped the engine. Crew are safest going over the side of the RIB as the freeboard is lowest at this point, you are also less likely to be run down by a boat that is probably still moving forward.

Stopping for Tea

Bringing the boat ashore during tea break needs a little thought: It's not good practice to haul the boat up the beach unless there are no alternatives. Preferably, tie the painter of the boat to one of the deepest breakwater posts, this doesn't work if the wind is onshore, so once you have tied the boat, check to see that it will lie happily away from the breakwater and the shore. If you have no alternative to beach the boat, ask for a few hands to help you pull the boat above the surf, but make sure those tugging the boat spread the 'pull' across all points of the boat, we should try to avoid placing too much strain on any one rubber handle of life line.

Back on the trailer

Getting the boat back on the trailer can be tricky, especially with an onshore swell. It's very important that you muster plenty of help from the sailors on the beach, don't be shy about bellowing for help. You will need the same help to take the boat over the wall.

END OF DUTY CHECK LIST

Once back at the clubhouse it's time to get out the END OF DUTY CHECK LIST and follow the 'packing up' bullet points.

The boat should be backed up to the Fort Knox and the engine flushed through with fresh water once again. Keep the engine running for 3-4 minutes to ensure the salt water is completely flushed out. Only once the engine has been stopped, can the fuel line be disconnected and the tank put back in the store. Briefly rinse the salt from the rest of the boat. Raise the engine and then raise the front of the trailer to allow the water to drain fully from the boat. Putting the boat back inside fully drained helps keep dampness out of the building. Use the CHECK LIST to ensure that you put everything back where it belongs, rinse off the radio's (not the phone!) and put both back on charge in the tower.

At the end of the duty, please sign the PB duty register to confirm you have completed your duty and to report any missing or faulty equipment.

When all the boats have finished using the ramp, the barrier will need to be locked, cones put away and possibly the field gate locked

On The Water.

Once afloat, your first duty is to set the marks as directed by the RO team, use the pennant to gauge the wind direction to ensure the legs of the course are as the RO desires. Make sure the mooring lines to the mark are un-tangled and the anchors are locked in the open position. Generally, the marks are towed behind the rib, in this case; clip the mark lines onto the shackle on either side of safety rope on the side of the RIB, the handling of the boat with these in tow will be hampered and in an emergency you might decide to abandon the marks temporarily to so they do not hamper your close quarters manoeuvring. As you set each mark, check with the RO that he is happy with the position set before moving onto the next leg of the course.

When the marks of the course are set, you can turn your attention to the start sequence for the first race, once the start sequence is underway, it's best to avoid contacting the Tower as they will need their full concentration until all the boats are over the start line. Position your boat outside the outer distance mark of the start line, so that you can monitor the start line as the boats approach to check that no-one jumps the start. It's often good to follow the fleet to the first mark to check how cleanly the boats round all bunched together.

When the racing settles down, I always work out which direction the PB will drift and motor to the opposite side of the course, keeping inside the racing line, I cut the engine and let the boat drift through the centre of the course. Some people are happier to leave the engine running throughout the duty, if you do this, do not leave it on tick-over for long periods to avoid it oiling up.

During the entire duty afloat, you must ensure you are not distracted from keeping a lookout 360 degrees to check that all boats are safe, count the boats regularly to ensure you can account for them all. Don't rely on a call from the Tower to respond, the lack of a report may be down to radio failure. Keep a lookout for squalls or changes in weather conditions (usually coming from the direction of the Sportsman). You will have a better view in this direction than the Tower.

When do your responsibilities on the water end?

It's tempting to come ashore early to get to the front of the tea line, but you must be mindful of who you have left out there. It is more likely that those you have left out there struggling to finish the course are the ones most likely to need your assistance. If you do decide to come ashore, be ready to re-launch at a moment's notice to render assistance.

Free sailing: There are times that a couple of boats will start to sail away from the race course after the second race, they are most likely off for a free-sail. If this is the case, they accept that they DO NOT have the benefit of PB cover for the free-sail, they will understand that the PB has marks to collect and needs water to get back onto the trailer whilst they are still sailing.

There are occasions when the PB attends non SSC related incidents that occur in our waters. It is right that we attend these immediately if we suspect that life is at risk, but we have to be mindful of leaving the SSC fleet without PB cover, there's not much wrong with popping off 50 yards to pick up a ball that's quickly being blown out to sea, especially if it avoids a youngster getting into trouble trying to swim to it, you can turn it into a MOB exercise, but a quick discussion with the tower on

how the risks are mitigated before you shoot off will help keep the situation safe and maintain the lookout all the time.

Ultimately, the Race Officer of the Day has the authority to direct the actions of the PB helm and Crew, so be ready to defer to their instructions as they may well have a better over-view of the situation from the comfort of the Tower.

Handling the Seasalter patrol boats

Stay safe

Sailing is normally very safe indeed. However, there are some risks, just as there are some risks to crossing the road, which most of us do.

Training ourselves to use the patrol boats correctly is part of minimising risks.

At Seasalter, we have rigid inflatable boats, each driven by an outboard motor. These have excellent handling characteristics on the water, are reasonably light and fast. Having buoyancy chambers which are flexible, they are much less likely to do damage to people and other boats than boats made entirely from hard material such as plywood and fibreglass.

A rotating propeller, even driven by a small engine, is dangerous to people.

The danger zone is the transom of the RIB. When launching and recovering, helpers have to kept clear of the transom.

When visitors are present, such as on "Push the boat out" and similar days, we must be particularly vigilant.

The Seasalter patrol boats are sufficiently powerful to reach a problem area quickly and to tow waterlogged craft. They have a lively motion.

Always go at a safe speed for the prevailing conditions, and ensure everyone in the boat holds on tight at all times even in slight seas. A few of those will be bigger than average.

"One hand for yourself and another for the ship".

We often hear about "rogue" waves. In all seas, a few waves are much larger than the others. We must cope with "rogue" waves because those are the ones which we will meet, again and again.

When proceeding at speed, only small movements of the tiller are necessary to alter course. Avoid rapid turns which will can aggravate the lively motion of the patrol boat, and increase the risk of losing a person overboard.

Falling overboard is dangerous. It also means that until the crew member has been recovered the Patrol boat cannot be used as required.

At times a safe speed will be slower than the boat can actually move, given the power of the outboard.

Always use the kill cord.

Parts of people are vulnerable and will be hurt if trapped between a RIB and something hard. The RIBs are better than fully rigid craft, but even so, people must stay entirely inside the boats. That includes hands!!

Be particularly careful when operating in large waves.

The Seasalter Patrol boats are far less powerful than the RIB involved in the 2014 Padstow tragedy. That craft had a 300 hp engine. Nonetheless, our Patrol Boats must still be operated carefully and cautiously, for reasons given above.

Keep a very good lookout at all times. That is a requirement of the International Collision Regulations. It is not an option. It is difficult to spot swimmers and others such as windsurfers, but it has to be done.

The Patrol boats are manned by two club members. One is the helm (PBH) and the other the crew (PBC). As many PBCs as practicable should be able to handle the Patrol boat as PBH, if that becomes necessary during a duty.

In good conditions, when the Patrol boat is not busy, it is helpful for the PBH and PBC to swap over. That gives the PBC some experience which would not otherwise be obtained.

Boat handling generally

There are two main ways to control conventional boats:

- By rudder
- By water jet

We always have to remember that boats are not fitted with brakes, like cars, and so manoeuvring plans have to take account of that.

We are a sailing club so members are familiar with boats controlled by rudders.

A rudder acting in a flow of water will turn a boat.

The faster the water flow, the more control is given by a rudder.

Sailing boats generally have to be moving ahead in order for the rudder to have an effect. (A boat moored in a current would be one exception, which will be ignored).

Sailing boats move ahead most of the time, when the rudder acts normally.

Occasionally we may try to tack a sailing boat, but fail and go into irons. When that happens, the rudder initially becomes ineffective (unless the tiller is used rapidly backwards and forwards like a paddle, which we will ignore). Leaving the tiller hard

over as it was during the attempted tack, will do no good - because water flow past the rudder blade is zero.

If the sailing boat stays in irons, she will start to move astern. By putting the tiller/rudder over to the other side, the boat may, with any luck, complete the tack.

So, moving astern, the effect of a rudder is the opposite of moving ahead.

Rudders generally remain reasonably effective as speed reduces. As noted, the reduction in water flow causes control to reduce, but the rudder still works. It can be given a final "waggle" at the last moment, which often helps.

At Seasalter we have Rigid Inflatable Boats (RIBS) powered by outboard motors. These are water jets.

Water jets control the motion and direction of a boat at the same time. When water is thrust astern the boat will move ahead. The direction in which the water is thrust can be changed and that, in turn, controls the heading of the boat.

As the boat moves, in the opposite direction to the water jet, it complies with Newton's Third Law, which is compulsory.

When going ahead at slow speed or faster, steering an outboard powered boat is much the same as using a rudder.

When going astern in an outboard powered boat, the engine (the tiller, motor and propeller) is pointed in the intended direction of travel and power is applied. The boat will follow the propeller.

It is possible when going astern to think "*what would I do if I were going ahead?*", then do the opposite. It's easier for most of us to point the propeller in the required direction, and just go!

Power boats with rudders are affected by transverse thrust, which is noticeable when manoeuvring at low speed. This means that the stern of the boat will move sideways due to the effect of the propeller.

As an example, if an inboard powered boat with a right hand propeller goes astern, the stern will move to the port side while the boat moves astern. (Think of the propeller as a wheel acting on a road. It moves anti clockwise (looking ahead), so the stern moves to port.

Transverse thrust has an effect when an outboard motor is put astern. However, other effects are much greater so transverse thrust, thankfully, can generally be ignored with outboards.

It is very important, when handling a boat with an outboard, particularly when slowing down for an approach, to remember that there is no rudder and the only means of controlling direction is by creating a water jet. It will not be convenient to speed up during an approach. Going astern is an option although that may be less easy than if a rudder were being used. Wagging the outboard, as if it were a rudder, will be ineffective.

The skeg and leg of the outboard will have a very slight rudder like effect, but that is nowhere near as effective as the real thing.

When an outboard powered boat is stopped, or moving slowly, it may be manoeuvred very effectively by running the engine slowly.

Generally, manoeuvring the stern of a boat is straightforward whether a rudder or outboard is used. The bow is attached to the stern, so it moves as well although not from side to side.

When a single tug is used to assist a large ship, it will make fast forward, not aft.

SO, WHEN MANOEUVERING THE PATROL BOAT

When going ahead at speed, only small movements of the tiller are required.

As speed is reduced, more helm has to be used.

Reduce speed in stages by reducing power. That keeps control.

Stopping the engine reduces control of direction.

When going astern, point the tiller in the direction of intended travel.

Launching and recovering

In offshore winds, these operations are relatively straightforward.

Start the engine as soon as there is sufficient depth of water, but run it at only at slow speed in shallow water.

Much care is needed to safely launch and recover a Patrol boat in an onshore wind. Helpers will be needed.

The main risk when coming ashore in an onshore wind, or even when launching, is broaching, i.e. becoming beam on to the seas. Clearly, the outboard has to be raised as the beach is approached.

The PBH should be able to see enough helpers on the beach before coming in. If they are not there, the Race Officer can be contacted by VHF to find some!

The bow of the boat should be kept heading into the waves as much as possible. Generally this will be at all times except perhaps when getting the boat on and off the trolley.

Manoeuvring in tides and winds

We are exceptionally fortunate to sail in tidal conditions at Seasalter. We are also fortunate that the tides for us are not as strong for us as some other places, like the Menai Straits, the Bristol Channel and the River Mersey.

Tides are as complicated or as straightforward as you wish them to be! (The Admiralty Manual of Navigation, volume 1, chapter on tides, is the best cure for insomnia ever written, although technically, it cannot be faulted.)

Tidal curves are easier to follow than tables. That applies particularly in the Solent area.

The tide at Seasalter floods westwards towards Fowley Island and ebbs eastwards in the direction of Whitstable. The maximum rate in mid Thames off Whitstable is about 1.5 knots and it's probably much the same off Seasalter. The tide changes direction over high water. That period of maybe 20 minutes or so is described as slack water. During that period the current will be fairly slow or negligible and uncertain in direction.

Spring tides have high high waters and low low waters. (6m and 1m).

Neap tides have lower high waters and higher low waters (unfortunately the low water periods are not of much interest to us at Seasalter).

Currents are much stronger during spring tides than neaps.

Tides affect the manoeuvring of all boats and are generally a major factor during low speed operations involving something which is fixed to the sea bed, for whatever reason. (A moored buoy or the groynes).

It is useful, when passing a buoy, to check what the tide is doing.

A current may be used as a brake. In fact, using the current to hold/stop the boat, is fundamental to slow speed manoeuvring. Ignoring the current is always a mistake.

In effect, a tidal current carries boats and everything else on and in it at **roughly** the same speed. The whole mass of water moves. Unfortunately, although that is generally correct, not everything moves in a current at exactly the same speed.

When approaching a moored buoy, a boat will be directly affected by the tide. Manoeuvring has to take account of the movement of the water mass.

Laying marks is generally done at the start of a duty. The anchor, warp, weight and buoy should be arranged so that nothing becomes tangled, especially making sure that the PBC does not go overboard with the anchor.

The RIB is turned into the current, slowed, and the anchor is let go.

When, for example, the patrol boat approaches a capsized boat, the tide affects both craft in an almost similar manner. It must do that, because both boats are floating in the same water mass and everything is being moved in the same direction. Unfortunately small items such as daggerboards, people and ropes will probably move at a slightly different speed.

The tide is less important when a patrol boat is approaching a drifting boat than at some other times, because both are floating in water which is moving in the same direction.

A Mirror capsized at Seasalter a few years ago. The dagger board was not tied on, as it should have been, and it drifted away. That conflicted with the theory that the Mirror and the daggerboard were in the same moving water mass and should have stayed together!!

In fact, both the Mirror dinghy and the daggerboard were affected by virtually the same current and but in ways which were sufficiently different to cause a problem. Also, the wind would have had more effect on the Mirror than the daggerboard. Sod's Law applies to these things. It is necessary to watch very carefully, and to try to be aware of the effects of tide, wind and everything else all the time.

Consider a Patrol boat and capsized dinghy drifting in company and staying close together. If the mast of the dinghy then sticks in the mud, it will act as an anchor. The patrol boat will still be acted on by the tide and the PBH must take account of that in manoeuvring.

Boats are affected by wind as well as current.

Many consider that a gale force wind will have roughly (very roughly) the same effect as a one knot current. That will not always be correct, but it's a starting point.

A race was held recently in gale force winds from the south west. While the tide was flooding, we noticed that the boat was hardly moving relative to the shore. The effects of the opposing strong wind, and the current, about two hours before high water on a big tide, were about equal. Changing the heading of the RIB would have reduced the wind effect, but not that of the tide. As slack water approached, the wind would have become the dominant effect.

Not many races are held in gale force winds so when laying or picking up a buoy, this is done slowly, heading into the current. The wind will have some effect, but that of the current is likely to be greater except, of course, towards slack water.

Assisting a capsized or disabled boat

The following points may assist.

Generally, the Patrol boat will be positioned where the boats are likely to have difficulty. The gybe mark is generally the favourite area.

In strong winds, it may be beneficial to position the patrol boat upwind, as it will be quicker and easier to reach a boat requiring assistance.

Trapezes can give extra problems.

If a capsized boat inverts, that generally makes the situation worse. Normally, that cannot happen at Seasalter, unless a mast breaks.

Approach the disabled craft as quickly as safety permits.

Slow down on approaching. Watch out for ropes which may get caught in the propeller. It may be best to put the engine out of gear as soon as possible.

Count heads. If anyone is missing, do what seems best and immediately inform Tower by VHF. It is much better to over react than not.

If someone is missing, they have drifted away. If that has happened, it will probably be known and the person can be recovered.

A sailor may be beneath the hull or sails of a capsized boat. Grabbing the mast will probably be the quickest way to right the boat and find the missing person.

If the crew are all present, it is often best to lay off the disabled craft and assess the situation. Have a word with the crew and check if they have any particular suggestions. They will know their own boat.

Check if the mainsheet of the disabled boat has been un-cleated. This is easily forgotten during the drama of an incident. It would hamper righting the boat. Try to see if any ropes are streaming away from the disabled craft. These will greatly threaten the Patrol boat. Watch out for any vital equipment which may be drifting away and retrieve this if possible.

Equipment of the Patrol boat includes a very sharp knife. Use this if a rope is caught around the propeller.

If the crew are not coping, try to work out what will assist.

In order to help, approach the disabled craft under power but put the engine out of gear as soon as possible. Check all the time for loose ropes which might become caught on the propeller. Generally, boats can be righted by grabbing the mast and pulling.

Be aware of the danger of hypothermia and its effect on people and their judgement. Expect hypothermia to be a problem, particularly early in the season.

Often, the wind is simply too strong for the boat to be righted, or the mast is stuck in the mud, or there is another problem. Do not let this situation persist, because people become very tired very quickly in cold water.

An additional weight on the centreboard will help to right dinghies. It can also break the centreboard, so care is needed.

Resolving the problem quickly is the priority. Other boats will still be sailing, and the Patrol boat needs to resolve an active problem in order to be available for any others.

If necessary, get the crew into the Patrol boat, and either tow or anchor the disabled boat. Leave the boat if necessary.

Keep Tower informed by VHF.

Towing

In fair weather a boat may be towed alongside the Patrol boat.

As conditions become worse, a disabled craft should be towed astern of the Patrol boat. The Patrol boat approaches the disabled craft from astern, on an almost parallel course, passes the line when close and moves slightly ahead as this is secured. If there is a suitable fairlead on the bow of the disabled craft, use it. If not, it will be necessary to use a spare line to ensure that the towing line stays close to the bow of the disabled craft.

Normally, a tow line will be about equal to one boat length, but it may be lengthened if there is a problem.

Recommended exercises at Seasalter

Most of us spend comparatively few hours on the water in a Patrol boat.

If we do 4 duties each season at say 2.5 hours each time, that is not very much time to practise. Many people spend far, far longer driving a car, and the road doesn't move!!!

We should make the best possible use of our time afloat in the Patrol boat, particularly when weather conditions are such that we are unlikely to be busy assisting disabled boats.

Whatever the weather we have to continually watch the boats afloat for which we have responsibility. However, this can be done effectively while performing simple but valuable training operations. The person not handling the boat should be designated as lookout while the other improves their boat handling skills.

Tower should be informed when a training exercise is proposed to be carried out. This should be in fair weather when the Patrol Boat is unlikely to be busy with capsized boats.

The following exercises will help to develop skills.

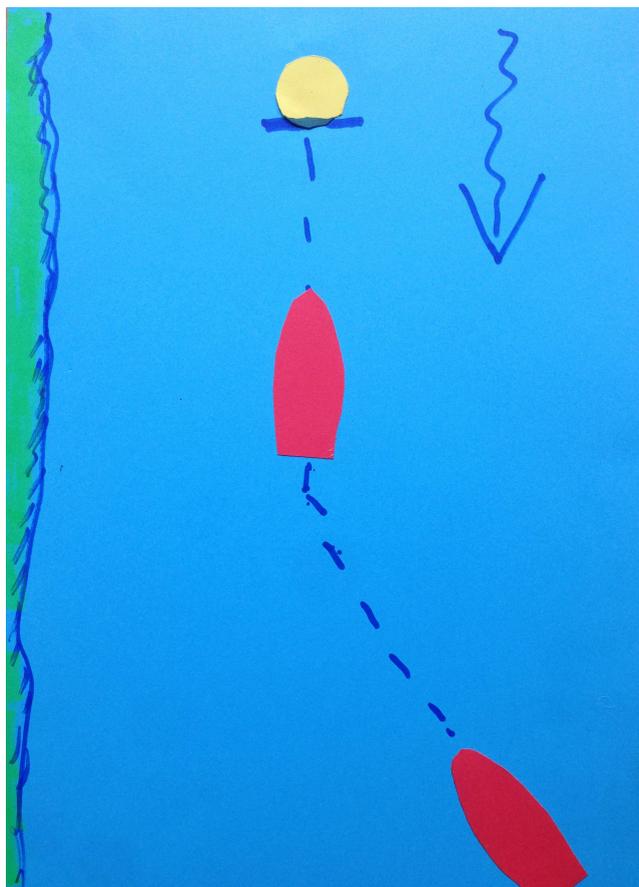
Exercise one

Position the Patrol boat about 50 metres down tide of one of the Seasalter buoys, and 20 metres or so off to one side of the direct down tide line.

Approach the buoy, and stop the Patrol boat about one metre off it.

This should be done by moving onto the direct down tide line fairly promptly, and then approaching the buoy, making corrections to the course as necessary. This is easier than approaching the buoy directly and therefore more likely to be done well.

The sketch below, not to scale, outlines the exercise.



This is a very easy exercise. The main purpose is to show that if the buoy is put directly up tide as soon as possible, that makes the final approach easier.

If the object approached is a capsized boat, streaming ropes, this might not be the best plan. Every situation is different, but the exercises should make us familiar with some fairly standard techniques).

This exercise may be repeated, starting from the same place, but proceeding astern towards the buoy.

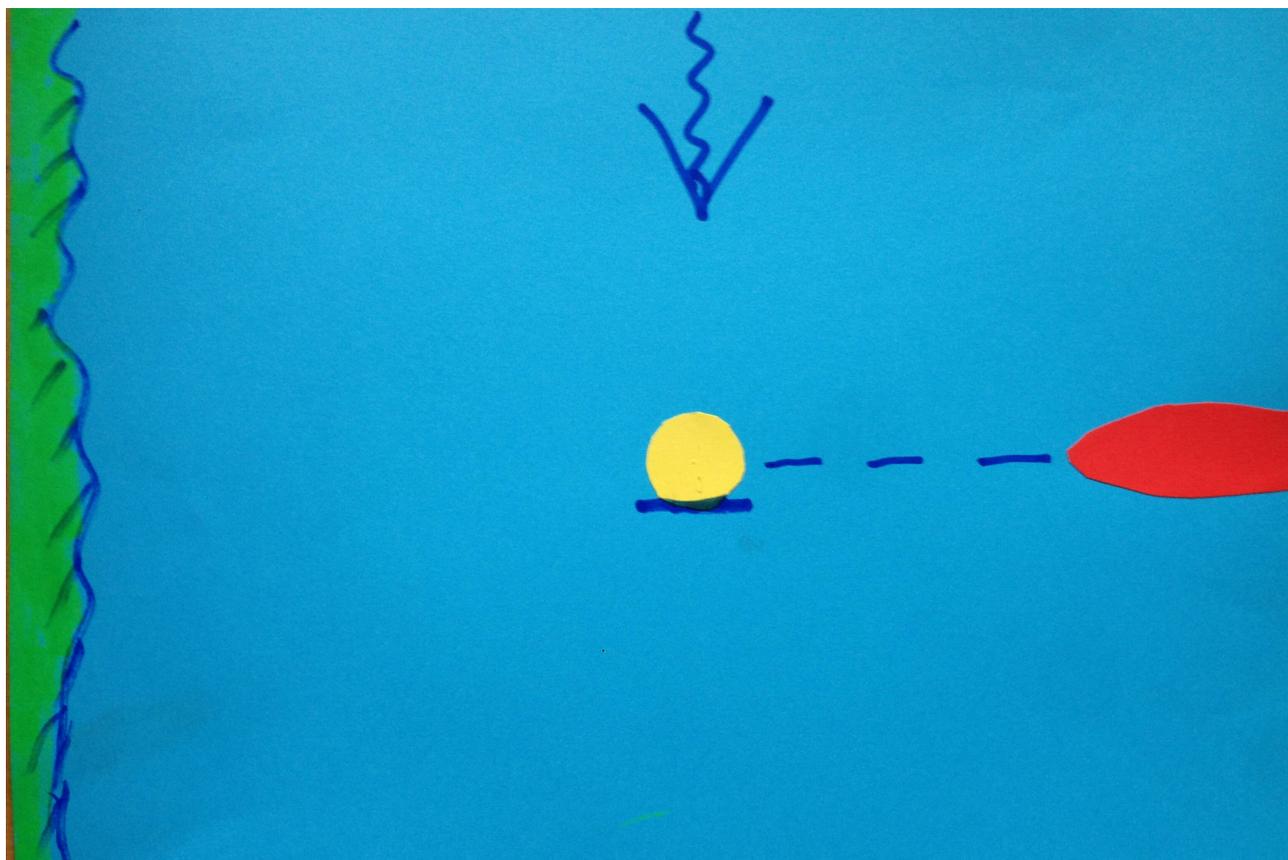
Speed should be adjusted so that no more than a few splashes of water are taken over the transom.

Exercise two

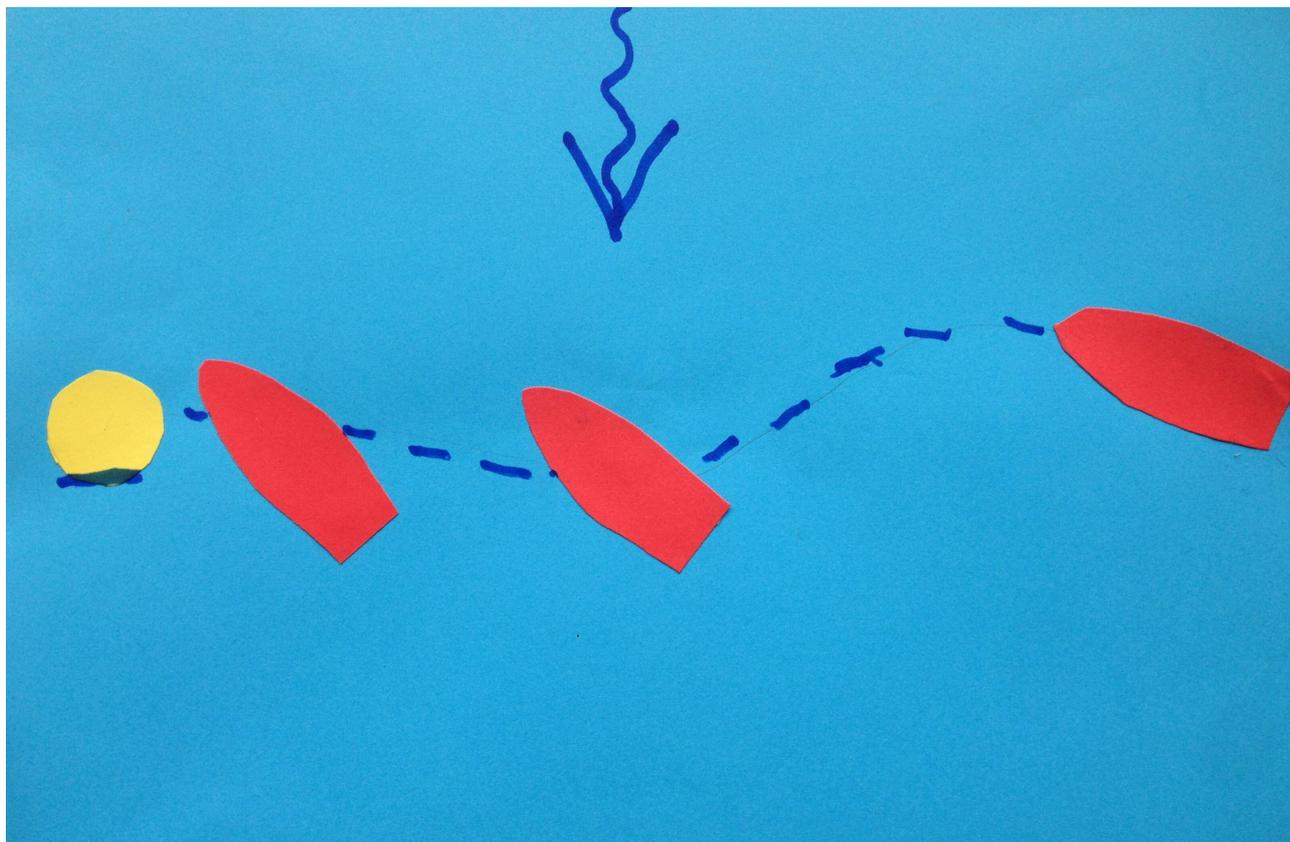
Position the Patrol boat about 50 yards inshore or offshore of a Seasalter buoy, and neither up tide nor down tide of it.

Approach the buoy directly and stop one metre off.

This has to be done by making allowance for current and wind.



Ideally, a perfect course will be set and followed and the track of the Patrol boat will be a straight line for the entire 50 metres. In real life, it might not be quite so easy, and the exercise will actually involve a series of corrections. That will be both normal and excellent training.



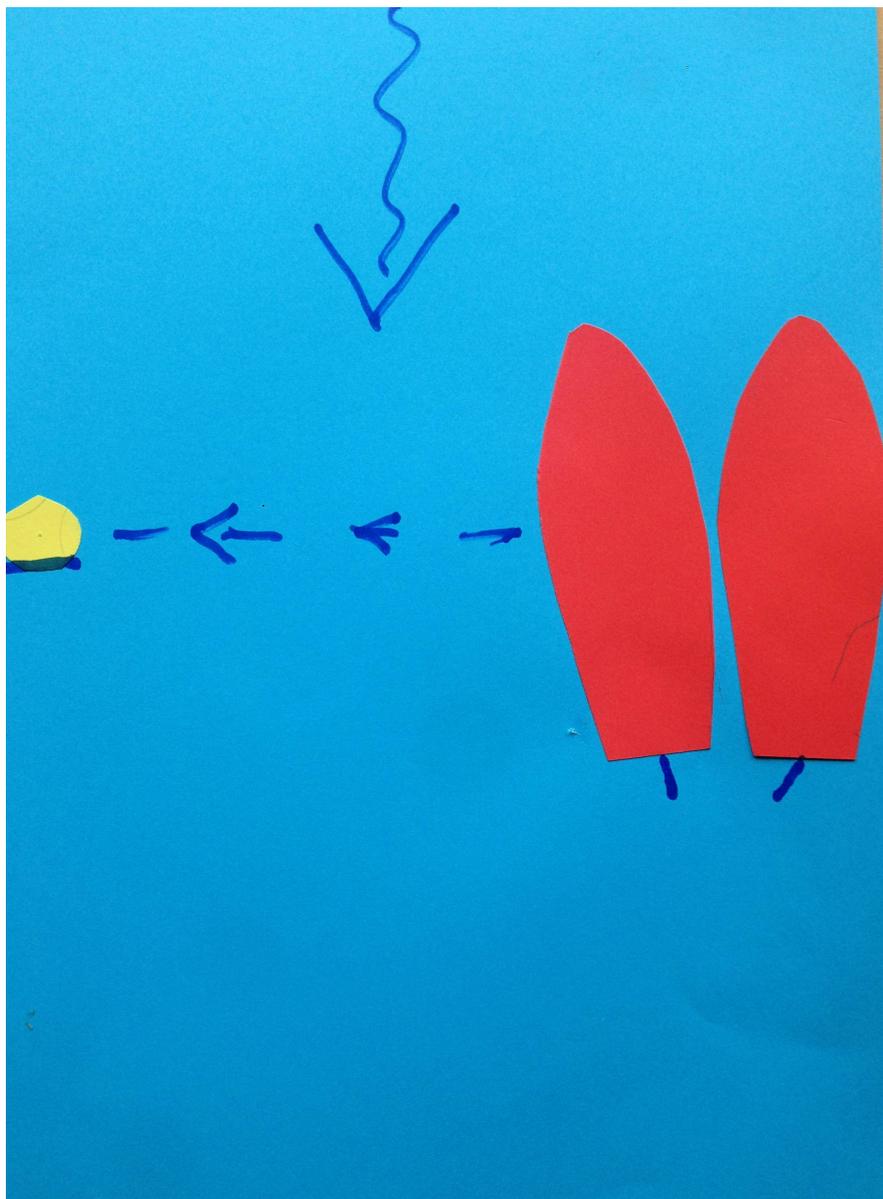
This may be repeated, going astern.

The ferry glide

This allows a boat to move sideways, but can only be done in a current.

Head the boat into the current, reduce speed, then alter course one way or another. Slow until the boat is making no speed over the ground.

The boat will move sideways, in the direction in which the bow is heading.



OVERALL, WHEN MANOEUVERING A PATROL BOAT:

HAVE A PLAN AND AN ALTERNATIVE, MONITOR WHAT'S HAPPENING, CHANGE THE PLAN AS NECESSARY, STAY CALM AND DON'T BE SURPRISED WHEN CHANGES ARE NECESSARY.

USE OF VHFS

This only deals with some aspects of the use of VHF's.

Small craft and marinas in UK use channels M1 and M2. For some reason, M1 is also described as 37A and M2 is described as P4!!!

We use channel P4 at Seasalter.

We are fortunate at Seasalter that we seem to be practically the only user of channel P4. However, this is not private and, occasionally, atmospheric conditions are such that VHF signals travel much further than normal. Big Brother (or the Coastguard) might be listening.

Using correct procedures for calling and responding makes communication more efficient.

When we have only two VHF's in operation, the chance of misunderstandings is low. That allows us to practise correct procedures.

When we have more VHF's in operation, such as during the TT event, using correct VHF procedures will help us more.

When calling, the identity of the station being called is given first, and repeated, followed by:

"THIS IS"

Followed by the identity of the station calling.

For example, when the Patrol boat is calling Tower:

"Seasalter Tower, Seasalter Tower, THIS IS Seasalter One, Seasalter One, Over"

Tower responds:

"Seasalter One, Seasalter One THIS IS Seasalter Tower, Seasalter Tower, Over"

The conversation goes ahead. When a response is required, the transmitting person says "Over".

When the conversation is to be concluded, the last message finishes with "Out". ("Listening out" is also OK).

Messages should be reasonably brief. Don't interrupt other users.

COLLISION REGULATIONS

A collision at sea can spoil your entire day.

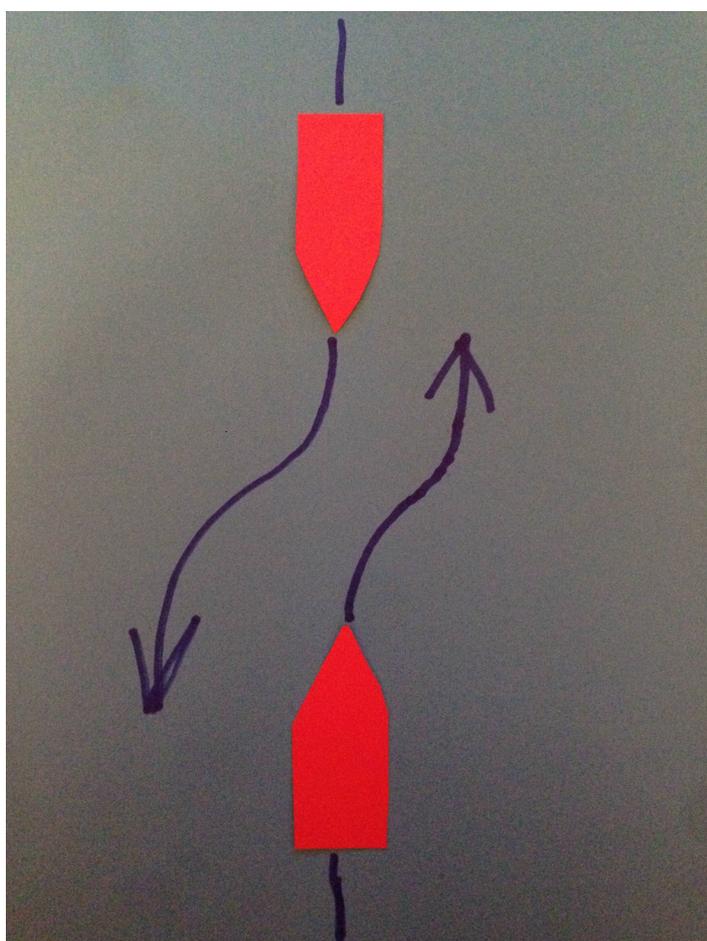
The collision regulations apply to us at Seasalter. The Swale is connected to the high seas and is navigable by seagoing vessels.

The collision regulations are quite lengthy and very detailed. The following are just a few points we need to know about.

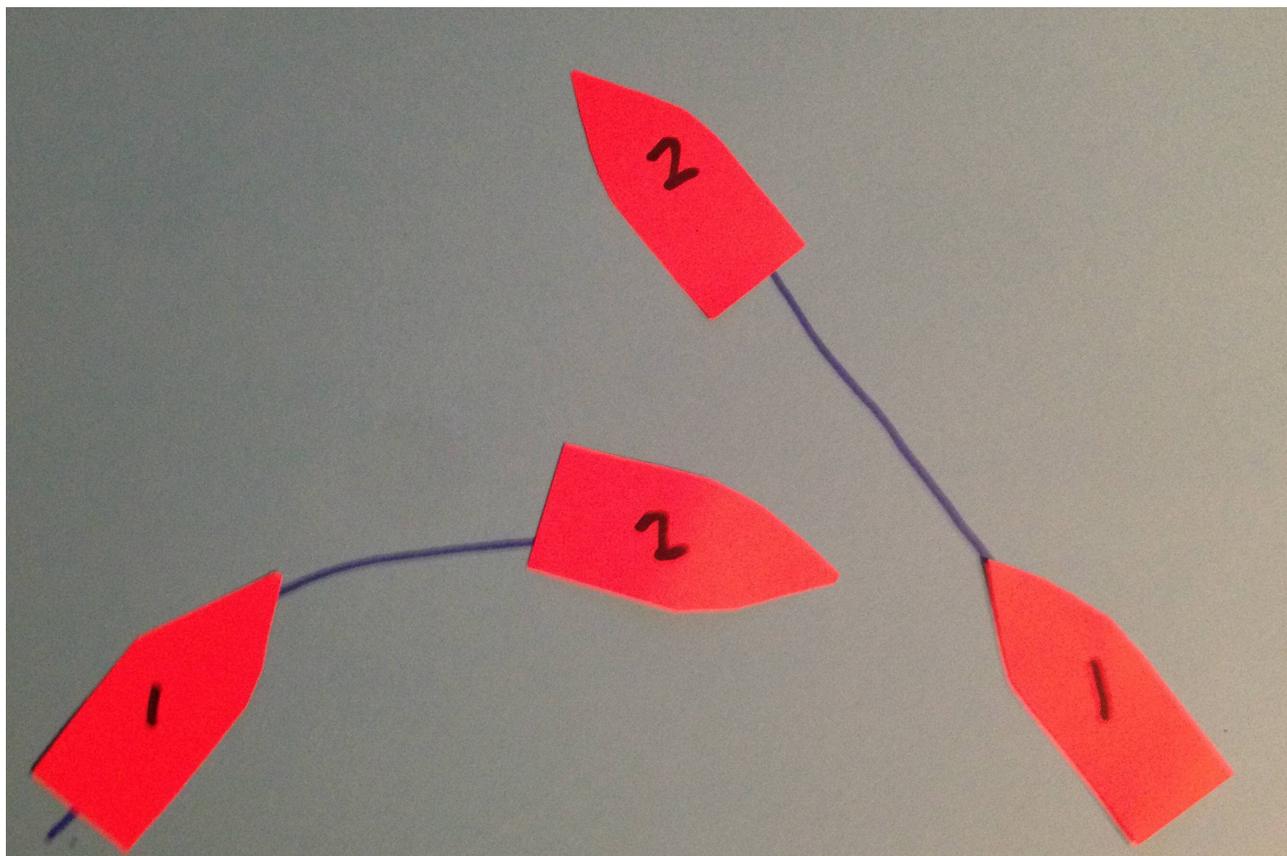
As mentioned before, keeping a good look out is essential.

Power gives way to sail, except, of course, when the power driven vessel can only operate within a narrow channel.

When two power driven vessels are approaching end on, each shall alter course to starboard and pass down the port side of the other.



When two power driven vessels are crossing so as to involve risk of collision, the vessel with the other on her own starboard side shall keep out of the way of the other. Normally the give way vessel alters course to starboard and goes under the stern of the other vessel.



Overtaking vessel keeps clear until finally past and clear.

Alterations of course should be large enough to be noticeable.

If you are the stand on vessel, and the other vessel is not giving way, you should give way in time to avoid a collision.

In practice, fishing boats tend not to keep out of the way of anyone, regardless of circumstances (they generally have right of way, but they should behave responsibly. Many don't).

Beware of speedboats and jetskis.