Total loss after watchkeeper sleeps

Beware of the bar

PREPARE FOR SUCCESSFUL CROSSING
Over-reliance on GPS
- Rescue crew relying on GPS struck rock.

Total loss after watchkeeper sleeps
- A fishing vessel drove onto a beach while the crew were asleep.

Follow-up inspection raises serious concerns
- Vessel detained for deficiencies.

Skipper strangles when clothing catches
- Clothing catching on drive shaft results in skipper's death.
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Weakened spring line kills

A linesman died after recoil from a failed line.

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Boatie runs over child

Failure to keep lookout results in water-skier’s death.
Welcome to the September issue of Lookout! with lessons to be learnt from maritime accidents and incidents.

This issue features a guest editorial on port state control (PSC) from Simon Graves, a senior technical advisor at Maritime New Zealand. The editorial looks at inspections of foreign and New Zealand flagged ships, and how we help maintain the standard of ships coming to and using our ports. The two recent ferry tragedies in the Pacific region highlight the importance of ensuring vessels are up to standard, and the potentially tragic outcomes when this is not the case.

This focus on PSC is continued in the Lookout! story on the death of a linesman last year, who was killed when a mooring line on a bulk carrier parted and recoiled. When this vessel revisited New Zealand 1 year after the fatality, it was targeted for a PSC inspection and subsequently detained while 29 deficiencies were addressed.

There is a story about a commercial vessel that became grounded on a beach while the watchkeeper slept, and a feature on the hazards of bar crossings and advice on how to cross safely.

Several stories in this issue serve as a reminder of the importance of always keeping a proper lookout, and the serious or tragic consequences of not doing so.

Please take the time to read through the stories and the lessons to be learnt from these accidents and incidents.

If you’re interested in more information about PSC, bar crossings, safety updates or more detailed accident reports, visit our website at www.maritimenz.govt.nz

Catherine Taylor
Director of Maritime New Zealand
Foreign ships coming to New Zealand are routinely inspected by Maritime New Zealand (MNZ) maritime safety inspectors (MSIs) to ensure they meet the same international standards as a New Zealand flagged ship undertaking a similar voyage. These inspections, called port state control (PSC) inspections, help maintain the standard of ships coming to our ports.

Tokyo MOU
In 1993 New Zealand was a founding member of the Asia Pacific Memorandum of Understanding on Port State Control, known as the Tokyo MOU, which is one of a number of regional memoranda with a common goal of eradicating substandard shipping. While the maintenance of standards on international ships is the prime responsibility of the flag state, PSC plays a vital part in supporting the flag state in ensuring the vessels are built, equipped, maintained, managed and operated to the required standard.
Information on inspections is shared between Tokyo MOU member states, and ships are targeted for inspection based on a number of factors – such as previous inspection history, ship type, age and flag – with each ship being given a target factor. This target factor sets the frequency of inspection within a region – the higher the target factor, the more often a vessel will get inspected. Based on intelligence received, ships can be, and often are, inspected by MNZ, regardless of the target factor.

This regional MOU benefits all nations, as deficiencies identified on vessels in one country can be passed on through a centralised database in Russia, to other countries. Ships can then be targeted for follow-up inspections to ensure that minor deficiencies, not immediately affecting the safe operation of the vessel or impacting on the environment, can be checked on in subsequent ports. Intelligence on suspected substandard vessels can also be easily passed between administrations. For instance, MNZ received a report that a ship recently sailed from Wellington in an overloaded condition – it was too late for MNZ to deal with at that time, but the vessel has since been inspected and action taken to ensure the vessel was up to standard.

Inspections
MSIs undertake PSC inspections at the major ports of New Zealand. All the MSIs are practical seafarers, having served at sea in senior positions – either as a captain or chief engineer. This experience provides them with both technical knowledge and understanding of the operation of large commercial ships, to enable them to recognise non-compliance and also to oversee the corrective action put in place by the ships.

Ship safety inspections are a pivotal part of the work that MSIs do. They check for anything that could endanger the lives of a ship’s crew, or that could put the marine environment at risk. It’s a highly autonomous and technical role that involves a large degree of responsibility, mostly undertaken alone, and sometimes in the face of commercial pressure to get the ship moving. It is testament to the quality of the staff performing the inspections that New Zealand is seen as a leading nation within countries party to the Tokyo MOU.

A routine inspection will cover all aspects of the vessel’s certification, construction, equipment and operation to some extent, with a focus on compliance with the various safety and environmental protection conventions that New Zealand is party to. The inspection generally takes 4-5 hours to complete, but is tailored to suit the individual ship and the inspection’s findings. It may be prolonged if the MSI identifies deficiencies, though the inspector always has to be mindful that the MOU conventions do not permit undue delay of the vessel.

Detentions
The ultimate sanction against a vessel is detention. This is the application of the Director of MNZ’s powers under the Maritime Transport Act – where a ship may be held in port until the MSI is satisfied the ship is in a fit state to continue her voyage. Detentions are applied when necessary – where deficiencies that are considered hazardous to safety, health or the environment are identified. In 2008, MSIs detained 8 vessels, but there has been a marked increase in 2009 – with 10 vessels detained in the first 6 months of the year. Whether this is an anomaly or an indication of a reduction in the standard of vessels coming to New Zealand is yet to be determined.

Reasons for detentions range from certification of the vessel or crew being invalid or missing to significant safety deficiencies – such as those found on a vessel in Lyttelton recently, where the lifeboat davits were found to be significantly corroded and had started to deform under the weight of the lifeboat.

No more flags of convenience
PSC inspections are a vital component of the international regulatory regime, which applies pressure on substandard ship owners to bring their vessels up to scratch, or pay the price in lost earnings. It also protects seafarers by identifying deficiencies before accidents happen. Vessels receive the same level of scrutiny regardless of the flag they fly, closing the loophole where “flags of convenience” were used to operate ships at a lower standard than would be applied elsewhere.

In 2008 MSIs from MNZ completed 561 initial inspections. In the course of these inspections 324 ships were found to have deficiencies, with 1,136 deficiencies found in total – or an average of 2 deficiencies per initial inspection. There were also 360 follow-up inspections to check identified deficiencies had been corrected.

The key message to substandard operators is that we and our friends are watching. If you don’t meet standards, don’t come to our ports.

Simon Graves
Senior Technical Advisor
Maritime New Zealand

For more about PSC, read the annual publication Port State Control in New Zealand: Annual report 2008.
The impact caused serious injuries to all five volunteer rescue personnel onboard. The skipper lost his right eye and sustained severe facial injuries. Another crewmember lost all of his teeth. The rescue vessel had been responding to a yacht in distress. The rescue crew set off in winds reaching 38 knots, and 2–3 metre seas. All but one of the crew had completed all of the Coastguard qualifications, and there were two qualified skippers on board.

Despite this experience and training, as the voyage progressed, the crew relied increasingly on GPS (Global Positioning System) data for navigation. The vessel was capable of displaying integrated data from radar and GPS, but in the conditions the radar data had deteriorated. The skipper continued to try to decipher the combined readout, while the navigator relied solely on the GPS.

When the vessel made radio contact with the stricken yacht, the skipper slowed to about 5 knots. The yacht’s crew reported that they could see the rescue vessel’s lights dead ahead. Looking ahead, the rescue vessel’s crew saw a light, and the skipper increased speed to about 16 knots, thinking he was heading toward the yacht.

As the vessel lurched forward, its spotlight illuminated a rock about 6.5 metres distant. With no time to react, the vessel struck the rock with a violent impact.

Despite serious injuries, one of the crew was able to navigate the vessel off the rock and drop the anchor. Two of the crew were able to provide first aid to the others, and the alarm was raised. All five were later winched off the vessel by helicopter.

**LOOKOUT! POINTS**

1. An over-reliance on GPS for navigation is a frequent cause of maritime accidents, and is an unacceptable standard of navigation. The crew were aware they were operating on a dangerous coastline, on a lee shore in poor conditions, and at night, yet they were still prepared to continue the voyage relying solely on GPS. While a useful tool when used wisely, GPS can only be an aid to navigation, especially when operating close to the coast. In this case, the GPS unit had stopped receiving data some time before the collision.

2. The crew had mistaken a shore-based light for that of the yacht they were tasked to assist. A navigator who had systematically calculated distance and time to run from each previous waypoint would not have made this error.

3. Similarly, the skipper was aware that the radar data was unreliable at best. He could have stopped the vessel until an accurate position could be fixed, or called off the mission completely, rather than threaten the safety of his crew.
The crew of three had fished through the previous night and most of that day when a hydraulic winch control failure forced them to head back to port for repairs. With about 2 hours of the return journey left to run, the skipper gave orders for the two crewmembers to take an hour’s watch each, and to wake him when the vessel was about half an hour outside the bar.

The first watchkeeper stood watch without incident, and decided to extend his watch to allow the second crewmember a little more rest. When the vessel was about 40 minutes from the waypoint where the skipper was to be woken, the watchkeeper went below and told the second crewmember that it was his turn to take over the watch. The second crewmember agreed, and the first watchkeeper headed to his bunk in the forecastle and went to sleep.

However, the second crewmember did not get up, and the vessel grounded on the beach about an hour later. Unable to free her from the beach under her own power, the skipper and both crew stepped onto the beach and walked up the beach to safety.

The vessel broke up on the beach and was considered a total loss.

A long-line fishing vessel drove itself onto a beach and was smashed to pieces after its watchkeeper headed below to sleep.

1. This is an example of very poor watchkeeping practice. The first watchkeeper should not have considered himself relieved of his watch until his replacement was awake, alert and standing in the wheelhouse. Fatigue is a real threat faced by the fishing industry, and crew can appear to respond to wake-up calls without being fully awake. A replacement watchkeeper must not only be present, but in a fit state to do the job before you can relinquish your watch.

2. The vessel was not fitted with stand-alone watchkeeping alarms. Such a device is a useful back-up to support proper watchkeeping procedures, and would probably have saved this vessel.

For more information and resources on fatigue visit our website: www.maritimenz.govt.nz and search for “fatigue.”
Beware of the bar

The hazards of bar crossings are well known to fishermen and boaters, but even the most experienced can be caught out.

Each year thousands of people make successful bar crossings, many in difficult weather, but river entrances and bar harbours around New Zealand continue to claim lives in both the commercial and recreational sectors. In the past 10 years there have been 12 bar crossing fatalities – 9 in the recreational sector and 3 in the commercial sector.

Bars form at the entrances to rivers and estuaries because of the drift of sand along the coast, and each bar is unique. Crossing the bar is often the only way boats can get access to, or reach shelter from, open waters. Even on a good day, conditions can change quickly without warning, and conditions on the bar can be different from those offshore and change over time. Local knowledge, experience, planning, and the right kind of boat are critical factors when attempting bar crossings. It is the skipper’s responsibility to determine whether or not to cross a bar. Skippers should gain local knowledge with an experienced operator before attempting a crossing. They should ensure they have fully assessed the conditions, and that the boat is seaworthy and sufficiently robust to take serious impact from waves.

Be prepared

People who are totally prepared and do everything right stand a much better chance of a successful bar crossing – “It’s surprising how often luck seems to come to those who prepare themselves properly for it”. (Crossing the Bar & It Happens… A Safety Training DVD – see below.)

Check the weather, tide and bar conditions before considering a bar crossing. If in doubt, don’t cross and sit tight until it is safe to do so.

A crew safety briefing, including the man overboard procedure, the donning of lifejackets, and checks of emergency communications, should be done well in advance of the crossing attempt – so that every person on board is prepared and knows what to do in the event of an emergency. Wearing lifejackets is a legal requirement on all recreational craft.

Before crossing, check that everyone on board is awake and wearing a lifejacket. Post a lookout astern, secure hatches, open freeing ports and properly stow the anchor and other equipment. Ensure that weight, including passenger load, is kept low down and check that your engine and steering are performing correctly.

Watch the bar for a while and assess the break and best route to take before crossing. The best time to cross a bar is at high water. If possible, avoid crossing when the tide is going out.

Going out should be done slowly and cautiously, picking up the rhythm of the waves, seeing the opening and following it. Once you are on your way, don’t turn back. Keep the bow of your boat directly into the waves. Throttle back at the top of the waves, then get ready for the next one. Be ready to either slow down or accelerate as conditions dictate.

Coming in involves preparing your boat and crew the same way as for going out. Keep the weight low and aft (towards the rear) in the boat, to help avoid digging in the bow and broaching (slewing round sideways). It is much more difficult to read the waves from out at sea than from ashore.

Remember if you are going with the river, current or swell flow, then your rudder may not be as effective as going against the flow.

Make contact (before and after crossing)

Contact Coastguard, the harbourmaster or maritime radio just before each crossing, and ensure that emergency communications are on hand throughout. Take your time approaching the bar – use moderate speed. Report your successful crossing to Coastguard, the harbourmaster or maritime radio.

Local knowledge saves lives

Local knowledge is invaluable when crossing a bar, but this can only be gained through experience, and through experienced skippers and crew sharing information and educating others. There are a lot of things to consider when crossing a bar – some are particular to each bar, others to bar crossings in general.

Knowledge of the landmarks, transit beacons, height and times of tides, buoys and beacons, bar conditions, weather, wind and swell directions, and tips and anecdotes from other skippers will help you to determine the safest way to cross a particular bar. Conditions on some bars are more prone to change than others, with rock-based bars less changeable than sand-based bars.
If things go wrong
The key message is “If in doubt – don’t cross”. Once you have decided to cross and passed the commitment point, if things go wrong, it’s likely to all happen quickly – with no time to organise or reflect. Your preparation and planning will stand you in good stead. Making sure that you’ve reported your intent to cross, are wearing lifejackets, and have reliable waterproof communications on you will mean that you can raise help if you need to.

More information
- Visit the Maritime New Zealand website: www.maritimenz.govt.nz
- Order and watch Crossing the Bar & It Happens… A Safety Training DVD
  Targeted at both existing and intended skippers, this DVD discusses the ins and outs of bar crossing.
  For a free copy email: sito@seafood.co.nz or phone 04 385 4005.
- Attend a “bar day” training course run by Coastguard – contact your local branch for more information.
- Talk to local boaties and fishermen.

BEFORE YOU CROSS A BAR
THERE ARE 10 IMPORTANT SAFETY TIPS YOU SHOULD FOLLOW
1. Check the weather, tide and bar conditions
2. Contact coastguard or maritime radio immediately prior to crossing
3. Ensure adequate stability
4. Batten down
5. Lifejackets must be worn and all crew must be awake
6. Approach at moderate speed
7. Post a lookout to monitor sea conditions astern
8. Communicate your successful crossing to coastguard or maritime radio
9. If in doubt – don’t cross
10. Avoid ebb tide

These safety tips are available as a handy sticker from Maritime New Zealand. If you’d like a free sticker, email publications@maritimenz.govt.nz.
Weakened spring line kills

A bulk carrier’s aft spring line was in visibly poor condition and had only one-quarter of its full strength when it parted, killing a linesman.

The port company linesman had been assisting the bulk carrier’s crew, who had loaded the vessel with coal, and were preparing to leave the harbour. The vessel was moored “port side to” with its usual mooring arrangement of four head lines, two forward spring lines, four stern lines, and two aft spring lines.

After confirming the passage plan with the master, the pilot ordered the port’s tugs to make fast to the vessel, and ordered the vessel’s mooring lines to be singled up to only one fore and one aft line in preparation for departure.

The second officer was both overseeing and taking part in the aft mooring line operation. He ordered a deck cadet to back off the aft spring line, which was operated by a warping drum fixed to a main drum. The main drum operated the second spring line. As the line slackened, the second officer called to the port company linesman to cast it off from the shore bollard. The linesman did so, and after checking that the first spring line was clear, the second officer headed back to the winch, leaving the linesman standing near the shore bollard.

The second officer instructed the deckhand to start winching in the released spring line. Just as the deckhand engaged the winch, the aft crew heard a loud bang – the remaining aft spring line had failed. The inboard end of the line whipped back, knocking down the deckhand, but he was able to get back on his feet, seemingly uninjured.

The second officer quickly looked over the port side to see what had happened below. He saw the linesman lying on a concrete section of the wharf near the bollard. A witness at the accident scene said the linesman had been knocked off his feet by the broken line as it recoiled, and had been thrown over a steel rail and onto the concrete section of the wharf.

On hearing the loud bang, the pilot and master also looked out over the port bridge wing. Seeing the linesman lying there, they notified the harbour authorities and requested an ambulance. The linesman was pronounced dead soon after the ambulance arrived.

1. Analysis of the rope showed extreme abrasion, which was visibly apparent along its length. On inspection, it would have been obvious to a qualified seaman that the rope was not fit for purpose. An independent expert concluded that at the point of failure the strength of the rope was 11.7 tonnes, yet the rope was designed with a minimum breaking force of 48.9 tonnes. The rope had also been smeared with grease, which is known to break down synthetic fibres, and was dirty and contaminated with the red oxide paint used as a primer on the vessel.

2. On inspection, it would have been obvious that the mooring rope should have been retired from service. The ship’s records included certificates for 6 ropes, although there were 12 on board, and these extra 6 were not identified on the certificates. The chief officer said the ropes were inspected monthly and these inspections were recorded. No records were found.

A proper mooring rope maintenance programme should include (as a minimum) thorough assessment of condition by a competent and trained person, and comprehensive records of planned inspections for each rope, including manufacturer’s certificate, date of manufacture, the date the rope came into service, general conditions, exposure to sunlight and/or contaminants, and any unusual loads the rope has been subjected to.
Rope accidents

In at least five other serious accidents over the past 10 years, poor mooring rope inspection, maintenance or operation has led to serious injury or death.

1999
A mooring rope parted during berthing and the failed line recoiled, injuring four people who were on a nearby rowing boat.

2004
The chief bosun of a roll-on roll-off cargo vessel was injured after being hit by a failed mooring rope.

2006
Two vessels were moored alongside and a crewmember was walking along the deck of one of the vessels, when a mooring line snapped and struck him in the head. He later died of his injuries.

2006
A crewmember died of his injuries after crew heard what sounded like a mooring rope flying through the air. The master had just ordered the vessel astern to relieve pressure on the spring line, but sadly it was too late.

2007
A ship’s officer died in hospital after being struck by a stern line that parted after its winch was operated in the wrong direction.

Rope inspection should form part of the vessel’s safety management system and the owner should establish objective criteria for replacement.

3. The linesman was standing in a position vulnerable to recoil from the line if it parted. Training in the dangers of this hazard should be commonplace for anyone handling ropes. A rope can recoil almost as far as its length, in roughly a 10 degree cone around the point at which it is held.

4. Mooring procedure on the vessel was poor. The second officer was actively engaged in the winching of the first released spring line at the time of the accident. Despite being the designated controller of the operation, he was not free to supervise the safety aspects of the process.

It was later found that the crew had operated the winch without using the purpose-built safety pin that prevented the clutch engaging. If engaged, the clutch would drive the main rope drum on which the second aft spring line was attached, putting strain on the line.

5. It is possible that the clutch may have been either partly engaged before the winch was operated, or it slipped into gear as the winch was started. It may have been this resulting tension on the second aft spring line that caused the substandard rope to fail.

For more information on mooring line hazards, view safety bulletin issue 8, Mooring line hazards: bights and snap-backs, by visiting our website, www.maritimenz.govt.nz and searching for “mooring line hazards”.

View the full report online at: www.maritimenz.govt.nz
Follow-up inspection raises serious concerns

One year after the bulk carrier’s linesman was killed by a failed mooring line, the vessel was targeted by Maritime New Zealand (MNZ) for a port state control inspection. Serious concerns were raised, and the vessel was detained while 29 deficiencies were addressed.

Even before the MNZ inspection team boarded the vessel, they noted a discharge that looked like oil coming from the aft mooring deck. The crew claimed they had discharged food waste over the aft end of the vessel, and that the residue was cooking oil. However, an inspection showed evidence that the same residue had been lifted out of the steering flat in the engine room, and through a hatch onto the aft deck for disposal. The evidence was passed on to the vessel’s flag state for investigation into what appears to have been a breach of MARPOL convention.

The inspectors also noted that the vessel’s life rafts and lifeboats had been lashed into place – they couldn’t have floated free if the ship had sunk. The crew were required to immediately remove the lashings and ensure the equipment was ready for use. Two of the brackets holding the lifeboats in place were also found to be significantly corroded and were starting to deform.

Other serious issues were identified. On the aft mooring deck, a grating surrounding one of the winch operating stations had corroded and been repaired with tape before being painted over. The operating hand wheel for a fire damper also broke off when it was operated – in a fire, the damper would have been useless.

Perhaps most concerning, just 12 months after a person had been killed by a mooring rope failure, 3 of the vessel’s mooring ropes were found to be deficient and not fit for use.

After finding these deficiencies the inspection was stopped, and the vessel was detained for 6 days while maintenance was carried out. To put the vessel’s 29 deficiencies into perspective, the average number of deficiencies found during such inspections last year was a little over two. The vessel was released after reinspection, and was able to complete her cargo loading and depart soon after.

1. MARPOL (short for marine pollution) is the International Convention for the Prevention of Pollution from Ships.

1. All vessels coming to New Zealand ports face the prospect of inspection by MNZ.

2. Substandard vessels not compliant with international conventions face detention until corrective action is taken. This can result in significant delays and adverse reports to the flag state authorities. It can also result in commercial losses.

3. It is the responsibility of the vessel’s operator to identify and correct any faults found – in this case, a functioning inspection regime on board would have identified and allowed correction of the faults before MNZ inspected the vessel.
The skipper and two crew had spent the day fishing in a harbour area. In the evening, the skipper received a forecast for winds of up to 35 knots overnight, and he elected to move the vessel, intending to shelter behind a nearby island.

In the darkness, the skipper and crew lost situational awareness and hit rocks on the coast of the island, causing significant damage to the hull. Realising the vessel was taking on water, the skipper pulled up the floor boards above the drive shaft and reached under the main drive shaft to identify where it was coming in.

He had not taken the main engine out of gear first, and the universal joint on the revolving drive shaft caught on his clothing. As it continued to revolve, the clothing was wound tighter and tighter, until it was tight around his neck and the skipper’s head and shoulders were pinned close to the shaft. In the confined space, his head was also held under water and attempts by his two crew could not break him free. He subsequently strangled to death.

1. Moving machinery is a serious hazard to mariners. It is often placed in confined spaces, and the danger of working on machinery is increased by the movement of a vessel at sea. Wherever possible, machinery should be turned off when crew are working close to it.

2. A drive shaft is so powerful that it is almost impossible to pull free once loose clothing has become trapped. Serious injury or death are common outcomes of this kind of accident. Extreme care should be taken around machinery, and loose clothing and long hair should be secured. Rings, watches and anything else that could catch on moving machinery should be removed before work starts.
A raft passenger was spilled into a hydraulic and recirculated in the water for 2 or 3 minutes before losing consciousness.

The passenger was released by the hydraulic only after he fell unconscious and stopped struggling. He had been on a commercial raft with six others, and had been trained in rafting safety commands before the trip started.

The hydraulic was at the top of the rapid, about 25 metres from the river bank. As the raft neared the feature, the guide intentionally angled the raft to approach side-on, to provide more excitement for the passengers.

As the raft rode into the hydraulic, its right pontoon was slowed suddenly by the upward flow of water. The jolt tumbled the passengers from the upstream side of the raft to the downstream side. The sudden shift in weight caused a downstream flip, spilling the passengers into the water.

A second raft, which was below the rapid, collected two of the swimming passengers. The guide of the flipped raft managed to re-right it, and recover four more passengers in a quiet eddy about 150 metres downstream of the hydraulic.

The guides quickly realised one passenger was missing, and spotted him floating toward them. He looked unconscious.

One guide waited in the eddy to see which way the current would take the passenger, and then set off to intercept him. He managed to snatch the unconscious passenger out of the water, and one of the other passengers on board performed rescue breathing.

This was successful, and the passenger started breathing again, while still in the raft.

He was moved to the recovery position and rafted to the nearest exit track.

Meanwhile, the second raft guide had signalled the emergency to the safety driver onshore, who had radioed the rafting base for help. The rescued passenger was picked up from the river bank by helicopter, and then driven by road ambulance to the nearest medical facility. He was later airlifted to hospital, where he made a full recovery.

A hydraulic is formed when water in a river falls off a ledge, rock, log, or other object, picking up speed and rolling back on itself when it hits the water below, creating what paddlers call a "hole". These are easily identified on a river by the white, foamy water that can be found just below a large ledge or rock.

1. The rafting crew followed good rescue, recovery and evacuation procedures. A downstream raft had been positioned to retrieve any lost passengers, and the flipped raft was correctly re-righted and moved to a safe place with the remaining passengers.

The guide remained calm and did not set off after the floating, unconscious passenger until he had assessed which way the current would take him. The second raft guide, who could have radioed the driver, instead opted for the quicker option of using the company’s emergency signal of crossing two paddles to alert the safety driver, who was watching from a distant road-side vantage point. The driver was then able to call the rafting base by radio.

2. Rafting guides must use their experience and knowledge of river flows to determine whether the conditions are appropriate for river “play” such as approaching a hydraulic side-on. This kind of manoeuvre provides passengers with an additional thrill from a perceived risk, but the reality should be calculated as “safe”.

In this case, the hydraulic was at the top of a section of rapid, which meant any spilled passenger would be likely to have to swim the rest of the rapid. It was also positioned 22–25 metres from the nearest bank, so that an exceptionally good line toss or a strong swim would be required to reach any struggling passenger.

While the company had positioned a second raft downstream of the rapid, this accident highlights the need to pre-plan a “what if” scenario, and to have safety measures in place. If the unconscious passenger had not been rescued so quickly and effectively, he would almost certainly have drowned.

3. Once safety plans are established, the river must be re-assessed with an open mind at the start of each run. River features can be ever-changing, due to water levels and rock or tree movement.

4. Even with the most thorough safety measures in place, the unexpected can still happen and plans should be made for every forseeable eventuality. It is vital that all rafting passengers are trained in rafting commands and actions to take in an emergency, such as self-rescue, and rapid swimming techniques.
A nine-year-old who was water-skiing with her family was killed when a recreational boat ran over her.

The boat's skipper was using a popular lake in the height of summer. He was travelling at about 27 knots when he ran over the child, who was waiting to be collected by her parents in their ski-boat after falling from her water-skis.

She was taken to shore immediately after the accident, but died soon after of extensive injuries to her upper legs caused by the boat's hull and propeller.

The skipper was convicted of operating a boat in a manner that caused unnecessary danger to another person. He was ordered to pay a $3,000 fine and reparation of $20,000.

TRAVELLING MORE SLOWLY PROVIDES GREATER TIME TO CHECK FOR DANGERS OR TAKE ACTION, AND REDUCES INJURY OR DAMAGE IF AN ACCIDENT OCCURS.

1. This boatie was very experienced. He was operating alone in the height of summer on a popular lake. Water-skiers frequently follow a pattern of being upright on skis for a time, before falling into the water. The boatie had seen the child water-skiing, but had not kept a watch on her progress as he sped through the area.

If he had kept an effective lookout he would have seen the child fall, and could have assumed that she must have been in the vicinity, floating in the water.

The child, wearing a bright yellow lifejacket, was waiting with her skis pointed upward, and would have been easy to spot for anyone who was keeping an eye on her whereabouts.

2. In court, the boatie said the collision had all happened so fast. Even though he was operating more than 200 metres from shore, it would have been prudent for him to reduce his speed significantly, until he was fully aware of where other lake users were.

3. Everyone on the water is required to travel at a safe speed at all times. This includes taking into account the amount of traffic, the visibility and glare from the water, and any other factors that could affect safety.

Travelling more slowly provides greater time to check for dangers or take action, and reduces injury or damage if an accident occurs. With limited exceptions, the law is that all boats must not exceed 5 knots within 200 metres of the shore or within 50 metres of another boat.
1. The vessel’s first emergency beacon, although operating on the 406 MHz frequency, was not of the GPS type that immediately provides co-ordinates of the vessel’s location. It took more than an hour for a second satellite pass that gave the Rescue Coordination Centre New Zealand a usable position. It was about 2 hours before rescuers reached the men. Having the means to provide an accurate position as soon as possible can be the difference between life and death in cold waters. An emergency beacon that relays position co-ordinates, and a hand-held, waterproof type VHF radio are invaluable. A mast mounted radio aerial is useless in the event of a capsize or if the mast breaks.

2. Although the vessel was overall well-equipped with safety gear, stowing the liferaft under a table meant it could not

Time runs out

A sailing yacht was en route to a major port for repairs when its weakened keel tore away, causing the yacht to capsize.

After the keel failed, the yacht lay on its side with the mast and mainsail in the water. The two crew had time to send a mayday message on their VHF radio, activate their EPIRB, and don lifejackets before the yacht completely capsized. It was at least an hour before sunrise, and they were 11 nautical miles from the safety of the harbour they were headed to.

Unable to clamber onto the hull, and wearing what is believed to have been an incorrectly fitted lifejacket, the vessel’s skipper drowned before help could arrive.

The vessel’s crewmember had tried to assist the skipper, but became exhausted. He was kept afloat by his correctly donned lifejacket, and was later able to scramble onto the slippery hull to await rescue.

The 12.5 metre three-quarter rig racing yacht had been built to a one-off design, and had been fitted with a new “Z-keel” in 2000. In 2006, the vessel had struck a whale. The rudder had
been lost and the keel bulb damaged. Later checks showed a crack in the fairing, where the keel attached to the keel plate.

Some weeks before the accident the vessel was slipped in a travel lift, which allowed the keel to hang freely. The keel was showing sideways movement and vibrating. After discussions with the boat’s designer, the crew decided to tighten the keel bolts and to voyage to a major port for repairs.

Most of the journey passed without incident. The vessel handled moderate seas, a short squall, and a period of motor sailing in calm conditions. As the vessel neared its destination, the crewmember was below navigating, while the skipper was at the helm.

In the early hours of the morning of the capsize, the crewmember felt the vessel suddenly slow down to about 4 knots. He joined the skipper on deck, and checked overboard with a torch, but neither man could see anything unusual. The vessel held her track for a further 100 metres, and then rolled onto her port side with her mainsail lying on the surface of the sea.

The men donned type 401 coastal lifejackets, manually activated the vessel’s emergency beacon and attempted a mayday call on a hand-held VHF radio from within the cabin. Unfortunately they were not able to pass on any position information owing to very poor reception. Neither man could get his cellphone to work, but they managed to fire distress flares. The vessel’s liferaft had been stowed below under a table, to keep it out of the way. Once the vessel rolled, the men could not reach it.

As the mast filled with water and lost buoyancy, the yacht rolled upside down. The skipper managed to get out of the cabin, but the crewmember struggled for some time before managing to get clear.

Once in the water, both men tried to climb on the vessel’s hull, but could not. The skipper’s lifejacket repeatedly slipped over his head, and efforts from the crewmember to tighten the straps could not secure it. The skipper eventually succumbed to cold and exhaustion and drowned. The other man was later spotted by air, and rescued by a Coastguard vessel.

View the full report online at: www.maritimenz.govt.nz

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**LOOKOUT! POINTS**

- **3. The vessel had plenty of lifejackets, but it appears that in his rush and darkness, the skipper had not correctly donned his. If his arms were not properly positioned through the straps, the lifejacket would have been likely to repeatedly slip over his head.**

- **4. Deciding to set sail in a vessel with a known keel defect had tragic consequences. The men could have trucked the vessel by road, or removed the mast and motored the vessel to the repair yard with additional ballast to improve its stability, should the keel be lost.**

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MNZ puts out a range of safety information updates (including safety bulletins and marine guidance notices) targeted at the needs of different audiences in the maritime industry.

In the future, we aim to send out advice about MNZ safety updates primarily by email.

If you would like to be added to our mailing list, please email your details to: publications@maritimenz.govt.nz

All our safety notices can be downloaded from our website: www.maritimenz.govt.nz

Guidance notice (update)
June 2008 Issue 8: Use of electronic charts, ECDIS and ENC in New Zealand

This guidance is for:
• New Zealand shipping companies
• International SOLAS vessels visiting New Zealand
• Classification societies in New Zealand
• MNZ safety inspectors, auditors and accident investigators.

Purpose of this notice
This notice details the technical requirements relating to Maritime Rule Part 25, the different types of chart display systems, and the need to maintain and use paper charts. The notice was first issued in June 2008, and the information on the availability of ENC (electronic navigation charts) from Land Information New Zealand has been updated.

For the full guidance notice, visit our website: www.maritimenz.govt.nz.

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Hamilton jet steering nozzle pivot check
December 2007 Issue 15

MARITIME FATALITIES 2009
From 1 January to 30 June 2009

15

From 1 January to 30 June 2009, there were 15 fatalities – 3 in the commercial sector and 12 in the recreational sector.