Stability factor in mini jet boat crash

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Stability factor in mini jet boat crash

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www.maritimenz.govt.nz/hswa
for guidance on the new requirements and how they are being integrated with MOSS.

www.worksafe.govt.nz
for general information on the new Health and Safety at Work Act.

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Stability factor in mini jet boat crash

Greater publicity is needed on potential difficulties with the design and operation of mini jet boats, the Coroner has found after the death of a Southland driver.

Mini jet boats, with a hull length of 3.6 metres or less, have a narrower beam than regular jet boats and are therefore less stable. When the driver is the sole occupant the lack of balance can produce a considerable lean, which is exacerbated when the boat is in turbulent water.

In this case the driver was a heavily-built man who, at 125 kilograms, weighed about 50 percent more than the average male, which further affected stability. He was accompanied only by his dog when he set out on a Southland river, having driven the mini jet boat only about three times previously. The boat struck a rock at high speed. His body was found upstream of the jet boat – which was located in the middle of the river upside down on a shallow rock bar.

Damage to the hull indicated that the first impact was on the bottom plate, which caused the jet boat to go ‘nose down’. The port side then appeared to have crashed into a large rock, with the speed and momentum causing the boat to flip end-over-end, ejecting the driver into the water.

Sun-strike was ruled as likely to have affected the driver’s ability to assess the river, due to the winter sun being low in the sky in the direction he was headed.

Another possibility canvassed was that the throttle jammed due to debris, including a small section of carpet, found in a compartment under the seats that also housed the throttle mechanism. The driver had reportedly expressed reservations about the foot throttle...
operators must be cautious when familiarising themselves with the particular handling and stability characteristics of the boat they are in. Different boats handle differently.

- Operators of mini jet boats need to be aware of potential handling difficulties and limitations.
- Mini jet boats are not simply scaled-down conventional boats. The use of a jetski motor and propulsion unit means the weight of the jet units is lower than a regular jet boat, which alters the centre of gravity and handling.
- Placing extra weight on the top of the engine cover, such as spare fuel or an animal carcass, further affects the centre of gravity; as does a lone driver’s weight on the port side of these short, narrow craft.
- There is some consensus that to mitigate the risk of increased roll-over, and end-over-end tip-overs, mini jet boats need to be made wider and with a lower centre of gravity.
- It is vital to thoroughly check any vessel before taking it out on the water. In this case debris was found in a compartment that housed the throttle mechanism.
- The Coroner heard that investigators found it surprising to see that this compartment had not been sealed off, to prevent ingress of items such as a beer bottle top, cable ties, insulation tape and the small section of carpet. However, it is the responsibility of the skipper to check the vessel for all hazards that may pose a risk to safety.
- Winter sun riding low in the sky can be one of factors that affects visibility. Drivers need to adjust their speed accordingly.
- Jet Boating NZ has commissioned a report to look into the complete design, construction and recommended guidelines for use of mini jet boats. This is expected to be made public mid-year.
Ten hours drifting in 40 knots before master used EPIRB

The owner of a South Island fishing vessel has been warned by Maritime NZ after the master took 10 hours to activate an EPIRB when the vessel’s intermediate shaft bearing seized, causing the boat to drift off-shore without power in 40 knot (75 km/h) winds late last year.

The 15-metre boat was subsequently detained, while Maritime NZ made enquiries into the incident and the owner participated in an educational seminar about maritime safety rules and requirements under MOSS (the Maritime Operator Safety System that replaced SSM).

The master said the vessel was about 24 kilometres off-shore when a bearing seized and the intermediate shaft broke. Attempts to make radio contact with a shore-based station and other vessels in the area were unsuccessful due to radio malfunction.

After drifting to almost 90 kilometres off-shore, the master finally decided to activate the EPIRB (emergency position-indicating radio beacon) at about 6am on the morning after the late-night incident. A helicopter was directed to the scene by the Rescue Coordination Centre of New Zealand (RCCNZ), and arrangements made for another vessel to rendezvous and tow the stricken boat back to safe harbour.

Maritime NZ enquiries revealed the owner and master did not understand how to implement and maintain the vessel’s MOSS procedures. The master and crewman operating the vessel had not been inducted as required in the vessel’s Maritime Transport Operator Plan (MTOP). They did not follow the documented safety procedures and carry out a radio check on the day of the incident.

The master did not follow the emergency procedures for loss of propulsion, and did not understand his responsibility under the MTOP. Meanwhile, the owner had not ensured all crew were inducted and also failed to follow other procedures outlined for the owner in the MTOP.

Maritime NZ required the owner to participate in a seminar educating mariners in what is required under MOSS. Both he and the master were then able to demonstrate their new knowledge during a MOSS audit, conducted by Maritime NZ.

The vessel was allowed to return to operation after the MOSS audit and a satisfactory surveyor’s report had been completed for the whole boat.

LOOKOUT POINTS

- By leaving the vessel to drift for hours the master was putting his life and crewman’s life at risk, as well as those aboard any other vessel with which they might have collided during the night.
- The delay in setting off his EPIRB also meant the vessel was further off-shore when he finally alerted emergency services – making the rescue more difficult.
- Regular operation checks of the VHF maritime radio, especially prior to leaving shore, means a crew is less likely to discover they do not have radio communication when they need it at sea.
- An EPIRB, or any other locator beacon such as a PLB (personal locator beacon), is a vital piece of equipment to alert emergency services to vessels, planes, helicopters or people in need of rescue or medical aid.
- In life-threatening situations, owners and users should not hesitate to activate their beacons. This is the only way that RCCNZ is alerted to organise other assistance.
- Beacons must be registered and up-to-date contact details provided. Registration is a legal requirement. It is free at: beacons.org.nz.
- If a beacon is registered, RCCNZ can access the registration database when it is activated. The database contains contact details for the owner and emergency contacts that are likely to know further details – for example, the number of people on board a vessel or in a tramping party, and their intended movements.
- It is vital that owners, masters, and all crew understand the safety procedures outlined in the safety management plan or MTOP for their vessel or operation, and to follow them in an emergency situation.
Detached hose complicates rendezvous with ambulance

A recreational fisherman, who broke his leg during a trip out on his friend’s launch, had his rescue complicated when the engine room began flooding.

The man and four friends, in their 40s, were on a fishing trip north of the South Island. While walking backward to free a snagged fishing line, he slipped down a step to the boarding platform and broke his leg.

Fellow crew members helped him to the cabin and the skipper phoned 111 to request an ambulance meet them at the nearest settlement.

However, while steaming back between two islands, one of the two main engines on the 14.6 metre launch cut out. The group then found almost half a metre of water in the engine room. The skipper requested the crew put on lifejackets, launch the dinghy, and help the injured man into it.

He then put out a mayday call and re-entered the engine room to discover a hose had become detached between the sea suction valve and the port engine seawater pump. Seawater is used to cool the fresh water that cools the engine. By shutting off suction from the sea the crew was able to stop the water ingress, and then they started pumping the water out.

Meanwhile, a rescue helicopter arrived on the scene and winched the injured man from the dinghy, before flying him to hospital.

A local commercial vessel also responded to the mayday call, and offered assistance. When the crew could not restart the engines, because of the seawater damage to the electronics systems, the other vessel towed the launch back to safe harbour.

This incident highlights how important engine room maintenance is to safe boating. The skipper’s attempts to return his friend to shore and medical treatment were put in jeopardy by a hose simply becoming detached from equipment used to pump seawater to assist in engine cooling.

The security and condition of seawater pipes, pumps, and hoses must be checked regularly. Hoses are normally connected with two hose clips securing each end. In theory these should not have come off. After this incident, the skipper organised an engineer to replace all clips in the engine room with a more robust design.

The situation was aggravated by the fact the bilge alarm did not sound – which would have alerted the skipper to water in the engine room. The alarm could have been affected by water damage to the electrics, or the float switch may have been set too high.

A pre-trip checklist should include checking the security of the fittings around seawater pipes, and the position and operation of bilge alarms.

If the stern door had been closed, the injured man may not have fallen backwards down the step. However, it is common practice to open access to the boarding platform while at sea during the operation of this type and size vessel.
A long night of drinking, followed by cocktails with breakfast, were a lethal mixture for an experienced yachtsman swept overboard without a lifejacket off the coast of the South Island.

Aged in his 50s, the man continued drinking beers after he and a female sailing companion returned to his yacht from the meal ashore, the Coroner’s Court heard. The sea was reasonably calm when they motored off for their next destination later that morning, though they decided not put up the main sail due to the weather. Soon the woman saw the man falling asleep in the cockpit, and suggested several times he go below for a rest – which he eventually did.

As the 11-metre vessel neared a cape, the woman saw the swell was building to around three metres, and advised her sailing partner to come back on deck. The woman was wearing wet weather gear, a lifejacket, and was harnessed to the boat. The man emerged from the cabin wearing wet weather gear but no lifejacket.

He was not tied on when a large wave hit the yacht, while the woman was steering, and he was washed into the sea. She threw him a life ring and managed to reverse the yacht close to where he was keeping himself afloat by lying on his back. He ignored suggestions to remove some outer gear and his full-length sailing boots.

After throwing several ropes to the man, so he could make himself a sling, the pair tried to pull, and then winch, him aboard. When the ropes kept slipping, and they did not have enough strength, the woman said she was going to call for help – but her companion appealed to her not to do so.

Knowing he was tied on, the woman returned to the cockpit to slowly motor through a pass to avoid being dashed on rocks. Once clear they again disagreed about whether to call for help. The woman said if they did not manage to get him back on deck in five minutes she was putting out a radio call regardless.

When further efforts failed to get him on board – and with the vessel drifting away from land – the woman finally put out a mayday call on Channel 16 about 2.30pm. She then tried to help again, but realised that the man was getting cold and was starting to fade. His hearing was affected and his eyes were glazing over.

The sea was still heavy, and the woman had to be careful not to fall in herself as she went between the radio and checking on her stranded companion. About 40 minutes after she put out the appeal for help, a rescue
Alcohol impairs judgment. This experienced yachtsman consumed alcohol throughout the evening, and then had three cocktails over breakfast, before continuing to drink beers as he and his sailing companion set off on their journey.

Once he was swept into the water the alcohol probably affected his judgment about the danger he was in; and the danger to which he subjected his crew member as she tried to help him aboard – while having to single-handedly manage the vessel.

If he had been less inebriated the man may have been more effective in helping himself re-board; and/or more likely to agree they needed help as soon they were unable to manage the task.

This tragedy is also a telling lesson for anyone sailing with someone who has impaired judgment. The woman should have over-ridden the boat owner’s objections to seeking help.

Had the man been wearing a lifejacket, preferably with a crotch strap, he would have been able to support himself more easily in the water. Once the paramedic arrived he may still have been responsive and able to assist in putting on the rescue harness.

Instead, the paramedic had to protect the man’s head from smashing into the boat, while trying to put on the harness when he was unresponsive and in a tangle of ropes and bulky wet weather gear.

In heavy seas it is vital for yachts to wear their lifejackets; and they should harness themselves to their vessels, especially when short-handed.

Boaters in distress, or in potentially life-threatening situations, should call for help early, before situations escalate out of control and become increasingly perilous.

The Coroner also recommended the rescue helicopter service consider using a rescue harness with a crotch strap for winching.

helicopter hovered overhead. By now the man had been in the water for well over an hour.

A rescue paramedic was dropped into the sea and found the man exhausted and unable to speak. The rescue was hampered by the tangle of ropes, and the man’s water-logged wet weather gear and boots. Winching eventually began, with the paramedic trying to open the man’s airway while they were being pulled up. At this stage it appeared he was no longer breathing.

The man’s harness had ended up being in reverse, due to problems in the water, so there were further difficulties getting him into the door of the helicopter – even with the help of a crewman on board.

The pilot lowered the helicopter and the man slipped from the harness back into the water from about 3–5 metres in height. There were no signs of life as he re-entered the water. The paramedic immediately followed him, and was able to put the harness on more easily, clear of debris and without his jacket on. The man was winched aboard and taken to Wellington Hospital, but could not be revived. A post mortem examination revealed a blood alcohol level of 182 milligrams of alcohol per 100 milliliters of blood – more than three times the current legal limit for driving a motor vehicle.
Faulty automatic pilot results in grounding

Repairs to the automatic pilot did not save a fisherman and his crew from grounding their trawler on a spit off a South Island coastline.

The skipper had conducted sea trials with the over-hauled automatic pilot, which had a new head unit, rudder sender unit, heading sensor, and remote control. Satisfied with the performance of the repaired system, the skipper and his crew headed out trawling off the West Coast.

They had been fishing for a few days when one night, after the trawl net had been hauled, the skipper decided to go to bed around midnight. Two crew were left in charge of stowing the remaining catch and navigating the vessel.

The 23-metre trawler was steaming at about three knots, broadly west-north-west, heading slightly away from land, with a spit to port. The weather was clear and calm with only light winds, and the tide was flowing in from the starboard side.

In the two hours between the skipper going to bed and the grounding, the leading hand left the deck to go to the wheelhouse three times – the last was 40–50 minutes before the incident. On the last of his three visits the vessel was still going about three knots and tracking away from land, which was about three nautical miles away.

When the vessel grounded, both crew members ran to the wheelhouse, waking the skipper on the way. The pilot alarm was sounding and an error message was displayed. Powering the engine full astern was not enough to dislodge the hull. The skipper contacted authorities and the owner, and awaited a tow off the beach at high tide about 12 hours later.

It was established that the automatic pilot altered course by 90 degrees to port, after displaying an error message. The skipper and crew were already aware that the automatic pilot still routinely displayed error messages, even after the repairs.

They had been turning the system off and on to correct the issue. Crew had also experienced the automatic pilot altering course if they were slow in turning the unit off, but the skipper had not been made aware of this.

LOOKOUT! POINTS

- This incident clearly demonstrates the importance of keeping a proper look out at all times.
- All relevant factors must be considered when assessing what constitutes a proper lookout including: the weather and visibility, traffic density, proximity of any dangers to navigation, and the reliability of any important equipment or machinery used.
- All essential equipment should be serviced by people with the right skills and experience. Alarms should always be taken seriously, and false alarms fixed properly.
- Steps should be taken to ensure all crew are aware of any problems, or other information, that could affect the safety of the ship.
Whitebaitser drowns after dinghy capsizes

A whitebaitser clad in heavy clothes and gumboots, but no lifejacket, drowned when his newly acquired dinghy capsized on a South Island river.

Although a seasoned fisherman, the 65-year-old was not used to gathering whitebait from a boat. He told his wife he had decided to start using a dinghy, instead of whitebaiting from the shoreline, to enable him to net a bigger catch. He used a rope and pulley system to place nets in the river, secured by weights, and later retrieved them by boat.

However, the three-metre dinghy the fisherman had purchased was an older, unstable model that was also in poor repair. The Coroner found the cause of death to be drowning after the dinghy overturned while the man was standing in the boat to adjust a whitebait net in the river.

The man had left home around 5am and was seen by a fellow whitebaiter sitting safely in his dinghy around midday – on the opposite side of the river to the fisherman’s hut and whitebaiting stand. He was not wearing a lifejacket.

When the witness motored back past the location not long afterward, he saw the dinghy had sunk with only the bow above the waterline. There was no sign of the fisherman. The passing man called the police and then travelled about 500 metres downstream to get the assistance of fellow regulars who whitebaited on that stretch of the river.

Police arrived and began searching. The body was found on the riverbed, near the submerged ropes and weights for the net, just five metres from shore.

The Coroner found that if the man had been wearing a lifejacket he would have been more likely to get to shore after falling in the water. By wearing gumboots – which would have immediately filled with water – and heavy clothing, including trousers and white PVC over-trousers, he also reduced his chances of saving himself.

LOOKOUT POINTS

- Lifejackets save lives. This seasoned fisherman was only metres from shore when his boat overturned, but with his heavy clothing and gumboots would have struggled to stay afloat without a lifejacket. Had he been wearing his life jacket he would have had a far greater chance of reaching shore and saving himself.
- A dinghy is not generally designed to be used by someone standing up. Extra care is needed if a vessel’s centre of gravity is changed by lifting a weight while standing.
- Boaties should wear clothing that is both light and warm in case they end up in the water.
- They should also don a well-fitted lifejacket, and fasten it properly, before going out on the water.

Checking the stability and seaworthiness of vessels is paramount for safe boating and safe fishing on the water. This dinghy was an older, unstable model – in poor repair. A more stable vessel, in better condition, may not have capsized so readily.
Workers overcome by poison gas discharge

Employees and contractors working on board a vessel were overcome by chlorine gas fumes originating from the engine room during cleaning.

The toxic discharge occurred when chemicals used to clean out the main engine room heat exchanger reacted with each other to produce chlorine gas.

The 45-metre fishing trawler was alongside the wharf while routine “turn-around” activities were underway to prepare it to return to sea. One of the activities involved the second engineer cleaning or “descaling” the main engine heat exchanger.

A heat exchanger transfers heat from the vessel engine’s coolant to raw water pumped from the sea. Because marine growth and salt can build up and reduce the efficiency of the cooling process, heat exchangers need to be periodically cleaned.

Chemical cleaning is a common method, carried out at about two-month intervals for the type of heat exchanger on this vessel. Cleaning involves connecting a domestic wheeble bin to the heat exchanger and pumping cleaning chemicals from the bin through the cooling system.

During the evening, the second engineer added 8–10 litres of descaling liquid (hydrochloric acid) to the bin, along with 40–60 litres of fresh water. He then started the pump to circulate the solution through the heat exchanger. The following morning, he stopped the pump and dumped the solution into the engine room bilges, from where it was removed by suction to a truck on the wharf for disposal.

The second engineer then flushed the hoses, pump and wheeble bin with hot fresh water, and ran the main engine cooling pump to flush salt water through the system for several minutes. He added 8–10 litres of sodium hypochlorite to 40–60 litres of fresh water in the wheeble bin, stopped the salt water flush, and pumped the new chemical solution into the heat exchanger.

About two minutes later, he noticed a strange smell and tried to dilute the chemical by adding water to the wheeble bin solution. However, the smell grew stronger and he realised that it was gas and he was becoming affected by it. He stopped the pump, but – thinking the event was isolated and under control – didn’t set off an emergency alarm on the bridge. When he moved from the engine room into the locker room some time later, he found two contractors being treated by ambulance staff.

Four crew and two contractors were treated with oxygen in hospital and discharged later the same day. The Fire Service HAZMAT team supervised ventilation of the vessel, and continued monitoring the atmosphere until it was safe to clear the vessel for re-entry the next day.

LOOKOUT! POINTS

- Several people were treated for gas inhalation, and it is fortunate that more were not affected. This incident shows that raising a general alarm is vital to the safety and welfare of everyone on the boat.
- Chlorine gas and salt water are created when hydrochloric acid (the “descaler”) and sodium hypochlorite (factory sanitiser) are mixed. The reaction and gas discharge was likely caused by residual traces of the original chemical mixing with the second introduced chemical.
- The normal process for cleaning the heat exchangers is to flush the system with hydrochloric acid solution, followed by a salt water flush. However, the chief engineer, instructed the second engineer to use the sodium hypochlorite after the salt water flush to help in the cleaning process. This was a departure from the usual method and, though the engineer had conducted some small-scale tests using undiluted sodium hypochlorite during the previous voyage, neither he nor the second engineer fully understood the risks involved.
- This event was completely avoidable. It happened because key staff had insufficient knowledge about how to use and mix chemicals. However, both engineers had completed on-board safe operating procedures for chemical usage, which advised them to read the material safety data sheets before using chemicals, and not to mix acids and alkalines.
- Had the engineers followed the company’s documented health and safety processes and risk management processes, the risk of contamination from mixing chemicals would have been identified. Referring to the material safety data sheets and risk assessment tools would also have provided them with the confidence and controls to vary the normal process. But they did not consult them.
- There was no documented safe operating practice in place for cleaning any of the 10 heat exchangers on board the vessel, as the company considered it a routine undertaking that didn’t pose any hazard. The company has introduced a range of corrective actions aimed at reducing the likelihood of the event happening again. These include developing a safe operating practice, involving the single descaling liquid as previously used.
- The company also now requires engineers to raise the alarm to the bridge during any hazardous event, even if they believe it is isolated.
Capsized kayaker swims across harbour

Years of swimming experience helped a capsized kayaker endure hours in Wellington harbour last December, while holding on to his lifejacket and kicking and ‘crab-crawling’ with the current across the harbour entrance.

The father of two acknowledges he is lucky to be alive after his first-ever paddle in a friend’s kayak off the South Coast went scaredly wrong.

He was planning to fish off the kayak, and although he had spotted the white caps off-shore, he did not register the potential danger that the off-shore wind created. It was as the man paddled to outer rocks that he realised he had gone too far beyond calm waters.

The southerly swell caught the kayak when he was beam-on to the waves and he capsized about 10 metres from the rocks. The sea was too lumpy to get back on-board so the man tried to swim back to the rocks tugging the kayak. But the wind was blowing him further off-shore and he was unable to raise the alarm.

The swimmer's efforts helped him to make progress. After about 90 minutes he could hear the surf and was in sight of land. However, his energy was almost depleted, and he estimated he had only another 15 minutes of endurance remaining. When he was rescued his body temperature was down to 29 degrees.

Though the man's friends had taken some time to become aware they should raise the alarm, Wellington Maritime Police, Wellington Coastguard and Wellington Airport emergency services were by then all out searching to no avail over on the western side of the harbour entrance and South Coast.

The swimmer was running very low on energy when the Westpac Rescue helicopter spotted him near Pencarrow Lighthouse.

The man says the thought of his two children kept him going. He used the last of his energy to strike out for the helicopter winch line, as the down-draft from the chopper was pushing him below the swells. A rescue swimmer was lowered into the water to assist before the pair were winched aboard.

The experience has not put the man off kayaking in the future, but it has made him a lot more aware of the dangers of the sea, and the need for safety precautions – checking the sea conditions, taking communications such as a cellphone in a waterproof bag or VHF radio, and wearing a properly fitted lifejacket.

LOOKOUT POINTS

- Never take off your lifejacket to shed bulky clothing, or for any other reason, when in an emergency situation away from shore.
- Off-shore winds and currents can be very dangerous in any part of the country.
- Recreational boaties must plan ahead. They need to understand the environment they are heading into, know the limits of their abilities, and not take unnecessary risks.
- If you are an inexperienced kayaker, only go out in light weather conditions, and stay close to shore and within sight of companions.
- Take care also to stay within the lee of headlands or rocky outcrops.
- Always carry two forms of communication that work when wet. For example a cellphone in a waterproof bag, a two-way radio or VHF radio, and/or flares.
- While a capsized kayaker would be more visible for a rescue if he remained with the vessel, the kayak can also be more susceptible to wind and currents dragging the user off-shore.
- When in an emergency situation in the water, stay calm, use whatever buoyancy aids are available, and huddle for warmth. Generally it is advised that you stay where you are – so it is easier for rescuers to calculate where to search for you.
Crotch strap may have prevented jet ski tragedy

A life jacket with a crotch strap might have helped save the life of a jet skier, after he was tossed from his machine while crossing a river bar in the South Island last year.

The rider was not wearing a wet suit and his life jacket rode up over his head, so it did not provide enough buoyancy to keep the man upright in breaking surf.

The men did not follow the recommended procedure for crossing river bars. Instead of studying the conditions and assessing a safe way across, they each headed off in different directions. The first rider crossed successfully. But when the two brothers approached the bar together, the victim indicated he was going to head left and cross on a different angle.

Soon afterwards his brother saw him in the water and rode over to try and assist. The man's life jacket had ridden up high and was not supporting him. The man said he was "really cold" and needed help. At this stage he sounded concerned but not panicked.

His brother tried to pull the man on to his machine, but each time waves forced them apart. The jet skier then took out a rope, but had to untangle it before throwing one end to the man in the water. He managed to grab it, but the rope then drifted under the jet ski and the engine had to be turned off.

When the brother next saw the stranded man, he was face down in the water. The rider jumped off his jet ski and managed to pull the victim close to shore. A member of the public in a four-wheel drive helped get the man clear of the surf and then went to raise the alarm. A few minutes later another member of the public arrived and started CPR.

A post-mortem examination concluded the victim died from the combined effects of a moderate head injury, exertion in severe conditions, and an underlying heart condition.

These attempts were unsuccessful and a post-mortem examination concluded the victim died from the combined effects of a moderate head injury, exertion in severe conditions, and an underlying heart condition.

The lack of a crotch strap – to prevent the life jacket from riding up – severely affected the victim’s ability to survive in the water. A wet suit would also have prevented the man from succumbing so quickly to the effects of cold water immersion.

LOOKOUT POINTS

- Life jackets with crotch straps are recommended for any adventure sport activity.
- This man was wearing a 403 life jacket, also known as a buoyancy vest. These jackets do not have a collar fitted and have a lower buoyancy rating than other life jackets.
- Maritime NZ advises that the highest rated life jacket, a Type 401, be used for adventure sport activities, or any situations other than very calm water. Even when tightly secured, Type 402 and Type 403 life jackets have a tendency to ride up if there is wave action.
- While crotch straps are currently only mandatory for all child-sized life jackets and in some yacht racing situations, this incident is an example of how a crotch strap could have improved the man’s chances of survival.
- A wet suit is also recommended for adventure sport activities such as jetskiing, to help with maintaining buoyancy and body temperature.
- This man quickly succumbed to the effects of cold water immersion. An underlying heart condition put him at particular risk in cold water.
- Bar crossings are notoriously dangerous for larger vessels, let alone small personal watercraft like jetskis or kayaks. Anybody intending to cross a bar is advised to research local conditions and refer to recommendations for bar crossings on the Maritime NZ website maritimenz.govt.nz/Recreational-Boating/Skipper-responsibilities/Bar-crossing.asp
- To view bar crossing videos with tips go to: youtube.com/user/boatsafetyinnz/waikatoregion.govt.nz/barcrossing/