

Class A Final Draft Accident Report

# Wairarapa OPC

# Fatality

Waiohine River on 4 March 2004

KEEPING YOUR SEA SAFE FOR LIFE



**Maritime Safety**

MARITIME SAFETY AUTHORITY OF NEW ZEALAND  
*Kia Maanu Kia Ora*

## **KEY EVENTS**

- 1.1** On 4 March 2004, at 0800 hours, New Zealand Daylight Time (NZDT), a group comprising of a tutor and 17 students from the Travel, Careers and Training Course boarded the train from Wellington to Masterton. The group were on their way to the Wairarapa for a two day outdoor education experience.
- 1.2** At about 0900 hours, the Owner/Operator of Wairarapa Outdoor Pursuits (WOP) rang the Greater Wellington Regional Council hydroline to obtain the stage level of the Waiohine River. The stage level was reported to have been 500 mm, this was within operating limits.
- 1.2** At 1000 hours, the group arrived at Masterton and were picked up by the two WOP guides (the trip leader and raft guide). They were staying at the Aorangi Christian Camp, however it was not ready to receive them so they were taken straight to the WOP base.
- 1.3** At the base the students were given a brief outline of the planned activities for the two days. They were told what gear they would need and what clothes to wear.
- 1.4** At about 1030 hours, the students and tutor left the base in two vans for the Waiohine River. They stopped in Carterton to buy lunch and then carried on to the river. The vans were forced to stop for about 30 minutes on the way to the put in, while a tree was removed from the road.
- 1.5** The group arrived at the abseil site about 1230 hours. The guides gave the group the option to abseil or raft first. The consensus was to raft first.
- 1.6** The group continued on to the rafting put in, where the guides asked them to decide whether to have lunch before or after rafting, it was decided to have lunch after rafting.
- 1.6** The students were then kitted up with wetsuits, lifejackets, helmets and paddles. The guides showed them how to wear the lifejackets and then checked their fit. One student declined to raft as she was not confident around water and was an epileptic. She stayed with the Tutor; they later drove to the abseil site and waited for the group.
- 1.7** Once everyone was kitted up the Trip leader gave a detailed safety brief and demonstrated the methods and procedures they would need to know.
- 1.8** The students were then told to split into three raft crews. And were given instruction on carrying the rafts down to the river.

- 1.9** At approximately 1330 hours, the group was assembled on the riverbank. The Trip leader assessed the strength of the three raft crews and made some minor changes to even them. It was decided (based on their apparent strength and confidence) that the six male students would self-guide a raft. The Trip leader briefed this crew and practised the paddle strokes with them before going to his raft.
- 1.10** The group started on their way. They practised the strokes as they went. After about 30 minutes the students chose to water fight and swim in a quiet pool in the river.
- 1.11** Once they were on their way again the Trip leader decided to offer the group the opportunity to float the last rapid before the abseil site. He signalled to the rafts to pull over to the bank on river right.
- 1.12** The Trip leader then asked the students if they wanted to float through the rapid in the white water position. He demonstrated the position. The Raft guide supervised the students' entry into the water. The Trip leader took a raft down to the pool below the rapid to act as a "sweep" (to pick up any students that might float past the pool at the bottom of the rapid).
- 1.13** The trip leader had picked up about two students from the water when he noticed some unusual behaviour upstream. The Raft guide and a couple of the students had dived into the rapid and attempted to grab something under the water. They were swept through the rapid and downstream to the Trip leader. The Raft guide told the trip leader that they had "lost someone".
- 1.14** The Trip leader took his raft to the bank, where he was told that one of the students was pinned against something under the water. He dived into the water and attempted to swim past and try and dislodge her. He made contact with her, but was swept past by the rapidly moving water.
- 1.15** The Trip leader then attempted the swim again, this time with a rescue line clipped to the back of his lifejacket. The students lowered him onto the position of the pinned student. The force of the water was considerable. He was buffeted around and had trouble breathing, however he managed to grab a piece of her clothing. The clothing ripped as he tried to dislodge her from the obstruction. The Trip leader then exited the rapid, as he could not maintain his position or signal the group. By this time about 30 minutes had elapsed since the student had entered the rapid and became pinned against the underwater obstruction.
- 1.16** The Raft guide expressed some concern about one of the students who had floated further down the river. It was decided that the Raft guide and three of the students would go and get her and then carry on to the abseil point to inform the tutor and notify the authorities of the accident.

- 1.17** The Trip leader set up a form of Telfer lower. He attempted to attach one end of the rope to the opposite bank. He had difficulty finding anchor points for the line and was dislodged into the river. He took the opportunity to gain a better view of how the student was pinned against the obstruction. He gained a good view and saw that she was “wrapped” in a head downstream position over an object that he assumed to be the protruding end of a log. Her body appeared to be wrapped around the object about the abdomen area. Her body was positioned at an angle approaching the horizontal, with the upper body to the left and raised, her face down stream, about 500mm below the surface of the water. He made contact with her again but his grip was lost and he was washed past.
- 1.18** The Trip leader then swam across the river and managed to secure the rope through a natural jam in the river bank. Taking the free end of the line to the raft they drew the line across the river. The Trip leader then clipped another line to it and clipped one end of the raft to the rope with a karabiner to act as a form of running belay.
- 1.19** The students were instructed to hold the free end of the line in an upstream position. They were given instruction on hand signals and then they lowered the raft and Trip leader to a point immediately above the students position. He was able to gain a secure hold of her lifejacket, he instructed the group to pull on the line and haul the raft back upstream, however he was being pulled out of the raft by the force of the river and so had to let go.
- 1.20** They made a second attempt with a volunteer from the group holding the back of the Trip leaders life jacket and relaying instructions to the group ashore. He got another good hold and the group were instructed to heave on the line. The Trip Leader found that he had insufficient strength in his hands to dislodge her and lost grip. They returned to shore.
- 1.21** At that point the Trip Leader was concerned about the needs of the group and was considering calling off the body recovery. He discussed it with the group and it was decided that they should continue to try and retrieve the student. They inflated the raft to make it as rigid as possible to reduce the drag in the water.
- 1.22** They lowered the raft into position and the Trip leader with the assistance of the volunteer was able to get a rope through an armhole in the student’s lifejacket. The group were instructed to heave in and the Trip leader pulled on the rope in an attempt to change the angle of pull. This was unsuccessful. The Trip leader and volunteer exited the raft and assisted the group in hauling the raft upstream, the student’s body then came free. She was placed in the raft.
- 1.23** The group made their way downstream to the abseil site where they met up with the Raft guide and Tutor. It was decided that the group would stay there and that the guides would raft the deceased student to the take out.

*This draft relates to the investigation of an accident, incident or mishap that has resulted in prosecution. It has not been distributed to interested parties for comment as the information it contains has been superseded by the findings of a Court.*

**1.24** The students later made their way down to the takeout where they took the time to say goodbye to the deceased student before heading back to the camp.

**1.25** The Police arrived shortly after.

## **KEY CONDITIONS**

### **2.1 Company Details**

**2.1.1** *Wairarapa Outdoors Pursuits (WOP)* is a commercial outdoor education company based in Masterton, Wairarapa. Rafting consists of about 10-15% of the company's activities throughout the year. The company had a Safe Operating Plan (SOP) issued on 14 May 2000 for five rafts to operate on the following rivers:

Waiohine	Grade 2
Waingawa	Grade 2
Ruamahunga	Grade 1

**2.1.2** The SOP was last verified by an Authorised Person in 2003.

### **2.2 Raft and Equipment**

**2.2.1** The rafts were 3.3 and 3.8 metre Incept rafts, approved for use in the SOP. During the trip, the rafts carried 18 students and two guides.

**2.2.2** *WOP* provided the following protective clothing to all participants:

- long leg and bib wetsuit
- spray jacket
- helmet
- lifejacket

**2.2.3** The wetsuits were offered to the students. Not all students chose to wear wetsuits. The deceased chose to wear a wetsuit.

**2.2.4** There were two types of buoyancy aids available for the students, Hutchwilco White-water jackets sizes adult small and large, and four Hutchwilco Aqua vest jackets size extra large. The Aqua vests were provided for those who could not fit the white-water jackets. The deceased wore an Aqua vest.

**2.2.5** Maritime Rule Part 80 states that the lifejackets must be *“Type 408 Specialist Lifejackets complying with New Zealand Standard (NZS) 5823:1989 as may be amended by Standards New Zealand from time to time, or be of an equivalent standard acceptable to the Director”*.

**2.2.6** The Aqua vest was a Type 402 life jacket for use in sheltered waters. The vest did not comply with the Maritime Rule. There was no evidence of an exemption certificate.

**2.2.7** The guides carried all required gear including throw lines, flip lines, karabiners (karabiners are D shaped locking devices), prussic, knives and whistles.

**2.2.8** The guides did not carry any methods of communication, as cell phone reception on the river is poor.

### **2.3 Raft Guides and Clients**

**2.3.1** The **WOP** Trip Leader had been employed by **WOP** for about 18 months as an outdoor instructor. He did not hold a National Raft Guide Award. In addition to rafting, he instructed kayaking, caving, abseiling, high ropes, tramping and other activities. The Trip Leader had attended and helped instruct a number of First Aid Courses in the past, however did not hold a valid certificate at the time of the accident. The Trip Leader had been involved in outdoor education for about 20 years. He had worked at the Wairarapa Outdoor Recreation Trust (WORT) as instructor part time and full time since 1985. The Trip Leader also taught outdoor education at a local college.

**2.3.2** The Owner/Operator has known the Trip Leader for over 30 years. They have worked together for a large part of the last 15 years, the majority of their work being rafting and abseiling. The Owner/Operator stated that he had complete confidence in the Trip Leader's outdoor ability and judgement.

**2.3.3** The Raft guide was employed by WOP as casual outdoor instructor. She had been working part time for WOP for 18 months. She did not hold a National Raft Guide Award. The Raft guide started rafting in 1999 when she undertook a year long polytechnic course in outdoor recreation and education. Rafting and kayaking were part of the curriculum. The Owner/Operator estimated that she had rafted the Waiohine about 20-30 times.

**2.3.4** Neither guide kept a log of their rafting trips/hours.

**2.3.5** The Owner of WOP started Wairarapa Outdoor Pursuits in 1989 when WORT folded. He employs full time and part-time staff as outdoor instructors. The Owner holds a Senior Raft Guide Award Grade 3.

**2.3.3** The Students were from the Travel, Careers and Training Course in Wellington city. The group started the course on 23 February and so had only been together for a week and a half. There were 19 students and a tutor. The group travelled to Masterton to undertake a two day adventure tourism/team building course as part of their curriculum.

**2.3.4** The deceased, aged 18 years, was a student of the Travel, Careers and Training Course. She was of Polynesian ethnicity and large build.

## **2.4 The Waiohine River**

**2.4.1** The Waiohine River is located 30 minutes from Carterton. The grade of the rafted section where the accident occurred was Grade two. The river is described in the Safe Operating Plan as follows:

*“Rafted section is a reasonably straight forward reach from Walls Whare to Devils Creek. Grade range is grade 1 and 2. The river in this section is generally within a moderate to steep gorge, but not so steep as to prevent climbing out in an emergency. The section is suitable for group rafting.”*

**2.4.2** The on water time for the Waiohine trip is 1½ hours at low water and 1-1¼ hours during an average flow. The trips are extended by stops for bank jumping and “general water play”, which includes water fights, swimming and free floating down rapids.

**2.4.3** The International River Grading System rates rivers on a scale of 1 to 6:

**Grade 1** Rapids are small regular waves. The passage is clear and easy to recognise and negotiate. Care may be needed with obstacles like fallen trees and bridge piers.

**Grade 2** Rapids have regular medium sized waves (less than 1 metre), low ledges or drops, easy eddies and gradual bends. The passage is easy to recognise, and is generally unobstructed although there may be rocks in the main current, overhanging branches or log jams.

**2.4.4** About 3/4 of the way down the river is the WOP cliff abseil site.

## **2.5 Safe Operating River Levels**

**2.5.1** Greater Wellington Regional Council provide a hydro line phone, which has a recorded message with the most recent river level from the telemetered river gauge. The Waiohine River runs at a normal flow of 0.4 – 0.5 metres (400-500mm) on the gauge.

**2.5.2** The cut off for commercial trips is 0.9 metres (900 mm).

**2.5.3** A flow and stage (height) report from the Greater Wellington Regional Council (GWRC) Hydrologist stated:

*“The Waiohine River has been in recession (flow dropping) since a moderate flood on Saturday 28 February.”*

*“The number of large floods in February have scoured the river bed and modified the rating curve which defines the relationship between stage and flow. It is probable that the flows may be larger than indicated on the graphs in the order of 5-10 cumecs.”*

**2.5.4** On 29 February the Waiohine River flooded to a stage level of approximately 2850mm (2.85 metres) over 12 hours. It subsequently receded within 12 hours.

**2.5.5** The day before the accident the river had been at 552 mm. This was the first trip since the moderate flood of 29 February.

**2.5.6** On the day of the accident the river was recorded by WOP as 500mm at 0900 hours. The report from the GWRC Hydrologist stated that the river level were was follows:

Date / Time		Stage Level	Flow Rate – Cumecs m <sup>3</sup> /s
29 Feb	0001	2850 mm	360
3 Mar	0800	550 mm	19
4 Mar	0800	400	15
	1200	380	13
	1600	360	13

**2.5.7** The river was described by the Police Constable that attended the scene as:

*“Running slightly higher than normal, was slightly off colour but you could see into it. It appeared to me that it was nearly down to its normal level after a flood and had a slight colouration into it from being in flood. The colouration could be described as very, very weak tea. The stones, however, could be clearly seen on the bottom of the river.”*

## **2.6 Safety Brief and Incident Details**

**2.6.1** Passenger screening for students was carried out by requesting information from the teachers/tutors about any medical or other conditions that WOP should be aware of. A brief screening was also carried out prior to the trip commencing.

**2.6.2** At the time of the briefing, it was ascertained whether the clients could swim, and if there was any medical problems. One student declined to take part as she was not confident. It was the evidence of one student that they were not asked about their swimming ability.

- 2.6.2** At the car park the students were given a 20 minute safety briefing by the Trip Leader. He instructed the clients on commands they would use, and how to hold the paddles. They were told how to float downstream in the "white water position" if they become detached from the raft and how to use a "throw bag". The Trip leader physically demonstrated parts of the brief.
- 2.6.3** The students were instructed on how to don their buoyancy aids. There was conflicting witness statements regarding the checking of lifejackets. It was the evidence of the Trip leader that he physically checked the jackets (with the assistance of the tutor) prior to the students boarding the rafts. It was the evidence of the Raft guide that a visual check was carried out.
- 2.6.3** Maritime Rule Part 80 2.4 (c) states that, "*Lifejackets must be checked for fit by the guide prior to passengers boarding the raft.*"

In addition the rule states that:

- 2.4 (d) "*The guide must ensure that passengers' lifejackets are -*  
(i) *worn at all times; and*  
(ii) *are kept properly adjusted during the course of the trip.*"

- 2.6.5** The guides failed to physically check the students helmets prior to commencing rafting Maritime Rule Part 80 2.4 (f) states, "*Helmets must be checked by the guide for fit prior to passengers boarding the raft*".

## **2.7 Communication, Evacuation/Rescue**

- 2.7.1** There was no on river communication as the signal on the river is poor. These areas were pre-identified in the SOP.
- 2.7.2** The SOP makes reference to a cell phone being carried in the instructor's vehicle, but cell phone reception is not available until about 3 kms down the Waiohine Gorge Road. A landline is available for emergencies at Browns Farm.

### ***Part 80 - (x) Communications***

*(aa) details of the communication systems being used, including those between on-river guides and off -river support personnel for both operational and emergency support purposes;*

*(bb) at least one form of immediate communication between on - river and off - river personnel must be available at all times while the trip is in progress (e.g. VHP radio, cell phone). Back -up arrangements should be identified in the event that this fails. These arrangements could include actions to deal with the non-arrival of a rafting group at a pre-arranged time and place.*

## **2.8 The Free Float**

- 2.8.1** Free floating was an activity used by WOP to pad out the trip and add an element of excitement. The instructors had been carrying out this activity for a number of years.
- 2.8.2** The raft guide stated that they had used the rapid during their Polytechnic training as it was a straight rapid with a good flow and had a large pool at the bottom.
- 2.8.3** The decision to free float was made by the trip leader and depended on the river conditions and the group abilities.
- 2.8.4** The Trip Leader gave a briefing before the free float commenced. He instructed the students on how to float down in the white water position (also physically demonstrating) and he informed them that they could chose to go through the centre of the rapid or down the side, river right which was a more gentle ride.
- 2.8.5** The guides checked out the rapid from the riverbank. The Trip leader checked again as he rafted through, to position himself below the rapid.
- 2.8.6** The SOP states, “The on water time for the Waiohine trip is 1½ hours at low water and 1-1 ¼ hours during an average flow. The trips are extended by stops for bank jumping and “general water play”. The free float came under “water play” in the SOP, however no specific Hazard Identification had been carried out for this activity.

## **2.9 The Obstruction**

- 2.9.1** The deceased was “wrapped” in a head downstream position over an object that the Trip leader assumed to be the protruding end of a log. Her body appeared to be wrapped around the object about the abdomen area. Her body was positioned at an angle approaching the horizontal, with the upper body to the left and raised, her face down stream, about 500mm below the surface of the water.
- 2.9.2** Two rafting trips had been run down the Waiohine River the previous day, one by WOP and one by the Greytown Adventure center. Neither trip reported sighting a log in the rapid where the accident happened.
- 2.9.3** The Raft guide had been down the river the previous day with an adult group and a different Trip leader. The trip record noted that the river was dirty. This would have hampered the group’s ability to visually sight any underwater obstructions.

- 2.9.4** The day before the accident the group went rock jumping from a spot further up river where it had been common practice to allow the students to jump into the river from a large rock. The guides noticed that the river had changed. A large piece of the rock had fallen into the river. Where the rock had fallen it had changed the character of the channels, creating a swifter flow. They had not had any problems that day but subsequently decided not to use the rock the day of the accident.
- 2.9.5** The rapid had not been free floated since the flood of 29 February.
- 2.9.6** Trip leader took his raft through the rapid before the students floated through it. He did not see the obstruction as he past through the rapid.
- 2.9.7** The obstruction, now known to be a large log could not be seen from the riverbank.
- 2.9.8** The day after the accident, photographs were taken by air using a polarized lens these photos clearly show the log in the rapid.
- 2.10 Code of Practice for the Safety of Commercial Rafting - SOP Compliance**
- 2.10.1** The SOP spelt out the requirements to have qualified guides, however this was not adhered to in practice.
- 2.10.2** The SOP included a reference to “water play”, however the free floating was not specified. WOP had not carried out, or documented any hazard identification or safe operating procedures for this exercise.
- 2.10.3** The SOP contained a section on in-house training. New instructors were buddied up with trip leaders and given an induction, however no further in house training has been carried out by WOP.
- 2.10.4** The staff members had not read the SOP.
- 2.10.5** The SOP referred to documents that did not exist, ie. Staff Handbook, Equipment registers.
- 2.10.6** The river safe operating levels in the SOP were out of date and wrong.

**(viii) Changes to Operating Situation**

*Details of how the rafting operation deals with the changing nature of its operating situation.*

- *For example, following floods, increased river traffic, change in river.*

**2.10.7** The SOP had not been updated since 1999. WOP failed to adhere to the SOP guidelines on implementation and review.

**(xii) Implementation and Review**

*(aa) details of the process used by the owner to identify the operational hazards which could lead to harm to persons. These hazards are to be addressed and detailed in the safe operational plan;*

*(bb) details of how the owner intends to review operational hazards and how effectively they are dealt with under the safe operational plan;*

*(cc) details of how the owner intends to involve employees in the process of identification, control and review of operational hazards;*

*(dd) details of how employees are made aware of new hazards before they are exposed to those hazards. For example, day-to-day changes in river conditions;*

*(ee) details of the monitoring system that the owner uses to ensure that the approved safe operational plan is adhered to in day to day operations;*

*(ff) the approved safe operational plan is to be reviewed by the owner on a regular basis and following any accident, incident or mishap. A written record must be made of each such review, which must include a summary of any conclusions drawn, and any actions taken, as a result of the review;*

*(gg) details of how the owner intends to inform and commit employees to meet their health and safety responsibilities under Part II of the Maritime Transport Act 1994 and this Code, including, but not limited to, co-operation with the employer to comply with the legislation, following instructions given by the employer relating to health and safety, using the appropriate clothing and equipment as instructed by the employer, not misusing or damaging equipment, and reporting accidents and hazards to employers.*

**2.10.8 Group Guiding Rules**

*1.1 (d) In the case of group-guided rafting, the following additional operating procedures are to apply:*

*(i) group-guided rafting is only to be conducted on rapids of Grade 1 and 2 (see Annex 1) except that Grade 3 rapids may be rafted where a safe operational plan:*

*(aa) identifies the suitability of the river for group rafting; and*

*(bb) provides the minimum of one rafting guide or senior rafting guide for every 5 passengers; and*

*(ii) for rapids whose passage is difficult to recognise from the water, or where the passage is obstructed, or where manoeuvring to negotiate the rapid is required,—*

*(aa) the rapid must be observed from the bank prior to running and be thoroughly analysed. A route through the rapid must be shown to all passengers prior to running the rapid; and*

*(bb) additional safety precautions must be implemented by the guide(s) prior to running, including positioning a person on the river bank below the rapids who is equipped with the means to recover a person from the river; and*

*(iii) there must be a minimum of one guide for every three rafts and/or eleven passengers; and*

*(iv) visual contact must be maintained between all rafts and rafting guides; and*

*(v) guides must be positioned so as to be able to take immediate action to address any safety problems as and when they arise during the course of the trip.*

## **2.10.9 Guide Qualifications**

The Owner/Operator knew that the guides were not qualified as required by Maritime Rule Part 80. He stated that only competent people were assigned to the rafting trips.

### **Maritime Rule Part 80**

#### **3.1 Requirement to Carry Guides**

*(a) All rafts carrying passengers must have on board (or be supervised by, for group-guided rafting)*

- on rafting trips involving river rapids of Grades 1 and 2 (as defined in Annex 1) an aspirant rafting guide, subject to 3.1(b)(i), or a rafting guide, or a senior rafting guide;*

3.1 (b) All rafting trips must be under the control of -

*(1) On rivers with rapids of Grades 1 and 2 (as defined in Annex 1) either -*

- *a senior rafting guide; or*
- *a rafting guide who has completed a minimum of 50 commercial rafting trips totalling not less than 100 hours of elapsed time on the water;*
  
- A rafting guide must be the holder of a New Zealand National Raft Guide Award issued either through an accredited training provider or an Industry Training Organisation registered assessor.
  
- A senior rafting guide must be the holder of a New Zealand National Senior Raft Guide Award (Grade 3) or a New Zealand National Senior Raft Guide Award (Grade 5) issued either through an accredited training provider or an Industry Training Organisation registered assessor.

## **2.11 Authorised Person**

**2.11.1** "Authorised Person" means any person who holds a valid Certificate of Recognition issued under section 41 of the Maritime Transport Act 1994, as an authorised person for the purposes of Part 80.

**2.11.2** The Authorised Person failed to identify the non-compliances found during this investigation. In particular the fact that the SOP was lacking appropriate hazard identification and had not been reviewed or updated since 1999.

Maritime Rule Part 80 states:

### Periodic Audits

*(a) The owner of any rafting operation to which Section 2 of Part 80 applies must arrange for an audit of the rafting operation to be carried out by an authorised person annually. Such audit is to determine the maintenance of the safe operational plan and continuing compliance with that plan and the requirements of Appendix 2.*

*(b) On conclusion of the annual audit the authorised person must immediately advise the owner, in writing, of any non-compliance likely to compromise the safety of the rafting operation. The owner must take immediate steps to rectify the non-compliance to the satisfaction of the authorised person.*

## **CONTRIBUTING FACTORS**

*N.B. These are not listed in order of importance.*

- 3.1** The floods previous to the accident had scoured the riverbed. These floods either exposed a large log that had been there previously covered, or moved a large log down the river and lodged it in the middle of the rapid.
- 3.2** The Trip leader had visually checked the rapid from the bank but had not walked the whole length of the rapid. He saw nothing that would have made him think there was an obstruction under the waster in the rapids chute. The log was under a standing wave in the centre of the chute obscuring it.
- 3.3** The decision to free float down the river in order to pad out the trip and add an element of excitement.
- 3.4** The float had been down about 20-30 without incident, therefore the Trip leader may have been complacent about the risks involved in this activity.
- 3.5** The river had not been properly scouted after the flood of the 28 February.
- 3.6** The day before the accident the trip record noted that the river was dirty. This would have hampered the guide's ability to visually sight any underwater obstructions.

## CAUSE

### **Human Factor**

<input type="checkbox"/> Failure to comply with regulations	<input type="checkbox"/> Drugs and Alcohol	<input type="checkbox"/> Overloading
<input type="checkbox"/> Failure to obtain ships position or course	<input type="checkbox"/> Fatigue	<input type="checkbox"/> Misconduct/Negligence
<input type="checkbox"/> Improper watchkeeping or lookout	<input type="checkbox"/> Physiological	<input type="checkbox"/> Error of Judgement
<input type="checkbox"/> Lack of knowledge	<input type="checkbox"/> Ship Handling	<input type="checkbox"/> Other . . .

### **Environmental Factor**

<input type="checkbox"/> Adverse weather	<input type="checkbox"/> Debris	<input type="checkbox"/> Ice	<input type="checkbox"/> Navigation Hazard
<input checked="" type="checkbox"/> Adverse current	<input checked="" type="checkbox"/> Submerged Object	<input type="checkbox"/> Lightning	<input type="checkbox"/> Other . . .

### **Technical Factor**

<input type="checkbox"/> Structural failure	<input type="checkbox"/> Wear and tear	<input type="checkbox"/> Steering failure
<input type="checkbox"/> Mechanical failure	<input type="checkbox"/> Improper welding	<input type="checkbox"/> Inadequate firefighting/lifesaving
<input type="checkbox"/> Electrical failure	<input type="checkbox"/> Inadequate maintenance	<input type="checkbox"/> Insufficient fuel
<input type="checkbox"/> Corrosion	<input type="checkbox"/> Inadequate Stability	<input type="checkbox"/> Other

**4.1** While free floating down a rapid the student became pinned under and against a submerged obstruction and subsequently drowned.

## **OPINIONS & RECOMMENDATIONS**

### **Opinions**

- 5.1** The river was at an average flow rate and stage level.
- 5.2** During the investigation it was found that the company failed to comply and operate in accordance with their Safe Operating Plan, however this was not causative of the accident. Impositions of conditions were placed on their certificate of compliance until, such time as the director is satisfied that:
- The Safe Operating Plan had been formally reviewed by an authorised person for consistency with the commercial rafting operations undertaken.
  - And until the commercial rafting operations undertaken by Wairarapa Outdoor Pursuits will be performed in accordance with the reviewed Safe Operating Plan.
- 5.3** It was the evidence of the witnesses that the obstruction could not be seen from the water or riverbank.
- 5.4** It is the opinion of the Investigator that the incident was dealt with in a manner appropriate to the circumstances.

### **Recommendations**

- 5.5** It is recommended that the Director of the Maritime Safety Authority prosecute the owner of the Wairarapa Outdoor Pursuits under section 65 of the Maritime Transport Act for failure to identify the hazards associated with the rafting operation and the water play activities.
- 5.6** Wairarapa Outdoor Pursuits failed to comply with Maritime Rule Part 80 2.4.b, as the deceased was wearing a Type 402 Sheltered waters lifejacket at the time of the accident. This jacket was not approved for use.
- 5.7** It is recommended that the Aqua vests be replaced with Type 408 lifejackets size XL.

## **OUTCOME**

- 6.1** The Maritime Safety Authority prosecuted the former Director of Wairarapa Outdoor Pursuits Ltd under section 50(1) of the Health & Safety in Employment Act (HSEA). On 13 December 2004, the defendant pleaded guilty and was convicted. He was fined a total of \$21 130 and ordered to pay \$15 000 reparation to the deceased's next of kin.