

**BEFORE THE MINISTER FOR THE
ENVIRONMENT SPECIAL TRIBUNAL**

IN THE MATTER of the Resource Mangement Act
1991

AND

IN THE MATTER of an application to amend the
Water Conservation (Kawarau
River) Order 1997 under section
216 of the Act

**EVIDENCE OF DAVE RITCHIE ON BEHALF OF THE NEW ZEALAND
RECREATIONAL CANOEING ASSOCIATION
Dated this 6th day of May 2009**

Introduction

1. My evidence concentrates specifically on the safety aspects of the above proposal and their implications for paddlers utilising this river. In preparing this as an expert witness I attest that I have read the expert witness code of conduct (Section 5; Consolidated Practice Code 2006) and agree to abide by code for the purposes of this matter.

Statement of experience

2. I have been paddling for 22 years, 15 of these as a professional instructor. I hold the highest New Zealand Outdoor Instructors Association kayak instructional award, Level 2 Assessor and work internationally in this industry. I am a founding member of the Tasman Whitewater Search and Rescue Unit. I am also a NZ Rafting Association Senior Guide and River Rescue Programme Presenter.

Background

3. The whitewater of the Nevis river is regarded nationally as one of the most challenging whitewater sections in New Zealand. International paddlers who visit these shores are also well aware of this rivers status as one of the most challenging "must do" trips here.
4. Contrary to how it may appear, whitewater paddling, particularly on more difficult whitewater, is very much a team sport. You are responsible not only for your own actions with regard to safety but for those of the people you are paddling with. A group that embarks on a trip together is by definition their own safety and rescue team. Good paddlers value the safety awareness and rescue skills of those around them above all else.
5. When people chose to paddle technically demanding rivers they must develop their technical skills and self awareness to a high level. They need to be motivated, self disciplined, accountable for their actions, honest , highly trained and above all, be able to function as part of a highly evolved team structure.
6. The process of managing the risks of a challenging whitewater trip is very complex. Many factors interplay to create the problem solving jigsaw that is part of the attraction of the sport. Aside from the obvious challenges of navigating your small craft through technically demanding whitewater there are several other social and environmental factors at play.

Knowing your team.

7. Having the trust of (and the trust in) those around you is critical. Paddlers who meet for the first time at the put in before embarking on a trip carry a significantly higher risk of mishap. This phenomenon is

well documented in New Zealand. In January 2007, Derek Squires was killed on the Waikaia River and in March 2005 Elanor Rutter lost her life on the Crooked River. A common significant causal factor in these deaths was a lack of familiarity with their team members paddling abilities and their river communication skills.

Choosing the right trip.

8. When paddlers embark on an adventure they seek what is known as a "peak experience". This experience is characterised by a sense of timelessness, of flow and rhythm, of being completely spent at its end. It is defined as an experience where the demands of the task at hand are matched exactly by the skills and abilities of the participants. River incident databases are riddled with reports of fatalities where the paddlers either underestimated the difficulty of the river section or perhaps more tellingly, overestimated their own abilities. This overestimation of ability tends to occur more often in lesser experienced paddlers and paddling teams.

Time Pressure

9. A river trip will throw up any number of unforeseen problems during its course. Paddling with a deadline adds a significant new level of risk to an otherwise reasonable undertaking. Paddlers may feel pressured to attempt rapids that they might normally portage (walk around) in order to meet the time pressure imposed on them. They may rush their decision making process, failing to fully analyse rapids and thus remaining unaware of significant hazards downstream. They may choose to run rapids without scouting (visually assessing the rapid from the bank) dramatically increasing the chance of error.

Scheduled Releases

10. Scheduled Releases on the Nevis River would at first glance appear to offer an excellent solution to the issue of the loss of this amenity. A regular release of water, at an optimal paddling flow, allowing paddlers to plan their trip weeks or perhaps months in advance.
11. However, there are several compelling reasons why scheduled releases may well serve to make this river trip more hazardous than it is now. These reasons revolve around the social and environmental factors outlined above.
12. Assume that a schedule for releases exists. It is available on the internet and the flows released optimise the river environment in terms of objective risk. What we now have is a recognised classic "hard whitewater" trip, at optimum flow, on stipulated days, and everybody knows it. Herein lies the problem.
13. Paddling teams will be forced into paddling the river on certain days. Several issues arise here.

Flow Optimisation

14. Releasing an optimal flow for a river with the characteristics of the Nevis is a practical impossibility. The riverbed is unstable, large schist slabs move with erosion and flood events creating new hazards or eliminating old ones. Some hazards are more prevalent at lower flows while others create difficulties at higher flows. It would be impossible to create an optimal flow. The predominant characteristic of the Nevis riverbed is the sieve, subsurface gaps between schist slabs that allow water to pass through but not necessarily things. This entrapment hazard is the most difficult to see and potentially avoid. It is

responsible for a large proportion of river fatalities and tends to be more prevalent at lower flows.

Weather

15. If a team can reasonably expect to spend upwards of 7 hours on the river (and many spend a lot more) then the weather needs to be good. Dealing with a change in the weather or weather that is already marginal, adds complexity and risk to the trip.

Crowding

16. More paddlers is not safer. In fact, it is much less so. Groups move at different speeds down the river, depending on their level of skill. Being held up (or having to) rush is a real issue. It breaks concentration and can force you to rush decisions in order to get past the slower group in front. Likewise, a lesser experienced group may feel compelled to "chase" a more experienced team in order to get better information about the terrain downstream. Both of these situations classically lead to poor decision making.

Random Guy Syndrome

17. Imagine the situation when a paddler without a team (often international paddlers are in this situation, travelling solo and looking to meet other paddlers as they go) decides to attempt the river by hooking onto an already established team because they consider it a safe bet that there will be several teams at put in on a release day. This is the "Random Guy". No one knows him, how good he is (or isn't) and no one can possibly trust him. No one really wants to paddle with him but someone (generally a lesser experienced paddler or team) will undoubtedly feel compelled to accept him on their trip. Team performance is immediately and significantly compromised.

Risk Shift

18. This well known outdoor risk management term refers to the situation when one abdicates the responsibility for calculating risk to a perceived expert. In a situation such as the "random guy" scenario above, risk shift is at play. Generally the solo paddler will abdicate their decisions about whether to paddle certain rapids or sections to the team they have hooked onto, as they are likely to be the perceived experts. This compromises the safety of both the "random guy" and the main group.

The New Zealand Experience

19. Both risk shift and the "random guy" situations happen regularly in NZ on the South Islands West Coast. It is necessary to travel to many West Coast rivers via helicopter. In order to minimise the costs associated with shuttling the only machine available around a variety of rivers on a given day, paddling teams tend to congregate on the same river. This regularly creates the crowding, "random guy" and risk shift situations outlined above. It means that the NZ river running community is more familiar than most with this particular set of conditions and their implications.

Staying on the Bubble

20. It is probable that any release will allow paddlers sufficient time to descend the river safely. That is to say that sufficient water will remain in the riverbed for a sufficient amount of time. However, anything that forces the trip to slow down (a minor injury or accidents that are dealt with in the course of the day) will force that team towards the back of the bubble of water moving down the riverbed. This has two effects.

21. It creates a time pressure, forcing the decision making process into ever tighter timeframes.
22. It can serve to heighten the objective risk of the riverbed. As water levels drop (as the bubble passes by) the sieve like nature of the riverbed (the Nevis river is particularly so) becomes more apparent and poses more of a hazard. These two issues actually compound each other.
23. The end result; time pressured paddlers begin making rushed decisions or take uncalculated risks in more objectively dangerous terrain.

Perception

24. The state of California contains approximately 1200 dams. It is also possibly the premier whitewater paddling destination in the world. Many of the classic runs in California are in fact dam release runs. Detailed flow regimes and release dates are available on the internet. The American Whitewater Accident Database contains hundreds of reports of fatalities and near misses on California's rivers. These are only the reported incidents.
25. My own experience of paddling in this state (I have been paddling regularly in California since 1991) has shown me that people continually underestimate the difficulty of flow controlled river sections.
26. The perception, particularly amongst lesser experienced paddlers, is that somehow a river that has been normalised/optimised/controlled is somehow less hazardous than its previous incarnation as a free flowing entity. This misperception is potentially fatal in that it will lure

paddlers who may not be skilled enough either as individuals or as teams to paddle the river.

27. This single factor is the multiplier that makes all the factors above so much more significant than they appear on their own because it tends to put more paddlers with less experience into situations that are objectively, no less risky.

The New Zealand Experience

28. This factor is already evident in NZ. The Wairoa river in the Bay of Plenty has scheduled recreational releases. The river section itself is a relatively short and steep section containing some classic Class 4 and 5 paddling. The rapids are short and discreet, meaning that there are calmer sections between rapids. This structure makes it easier to recover oneself after a mishap should it happen. The section is also commercially rafted.
29. The effect of the scheduled release is to concentrate the use of the section down into a few highly publicised weekends per year. The staging area at the take out is a melee of cars and people. Informal paddling teams coalesce here and "random guys" are everywhere.
30. The river itself has an almost celebratory atmosphere. It is crowded. Everyone is here and they are all having a great time.
31. As a paddling instructor, instructor trainer and assessor, my job is to analyse and assess a paddler's skill level. I have paddled the Wairoa several times over the years and am always amazed at the ability levels of those around me. Three aspects in particular I find to be distressing.

32. Many of the paddlers present are blissfully unaware of the consequences of an error. They simply do not see what might happen if they make a mistake. Fortunately the bedrock nature of the riverbed (fewer entrapment hazards) sees many errors go unpunished.
33. They perceive that because there are so many people on the river that it is somehow safer. This is a version of risk shift where people make the assumption that "if everyone is doing it, it must be OK".
34. They mistake "getting down in one piece" for descending the river in control. These two ideas are worlds apart. Good paddlers can manoeuvre their boats with millimetre precision on the river. Many paddlers on the Wairoa on any given day are simply "getting down" the river with levels of control that range from fair to marginal.

Subjective Grading System

35. The international river grading system is an internationally recognised grading scale from 1 to 6. It is the only mechanism, short of getting detailed local knowledge, with which a paddler may judge a rivers difficulty. At best it can give paddlers a broad idea of how difficult a river section may be. Its major limitation is that it does not however give any information about the style or character of the river. For example the Nevis and Wairoa rivers carry the same Class 5 grading.
36. The Wairoa contains short, discreet rapids separated by calmer sections in a relatively stable bedrock gorge. The Nevis contains long sections of continuously difficult whitewater in a mobile riverbed, riddled with sieves, increasing the already high objective risk.
37. The Wairoa is short and can be paddled many times in a day by a competent and fit paddler. The Nevis is long and extraordinarily

demanding physically. Even the best paddlers take several hours to complete a descent.

38. The Wairoa is warm, exiting your kayak and swimming into a pool carries little or no consequence. Swimming on the Nevis is potentially lethal. The water is cold and the riverbed a maze of seives and undercut rocks.

Conclusion

39. Scheduled recreational flow releases on the Nevis river create the very real danger that inexperienced paddlers, recognising the same difficulty grading and optimal flow release regime as rivers such as the Wairoa, will make the decision to attempt the Nevis. They will expose themselves and others to many, if not all, of the situations outlined above. The objective risks of paddling this demanding section of whitewater will remain constant. Of the total number of paddlers attempting the river, the proportion of experienced paddlers will decrease. The chances of a potentially fatal mishap will therefore increase.