

RIVER CROSSING METHODS

Mutual support methods – the best ways to cross a river.



Mutual support methods provide a backup for people who lose their footing. There are two styles:

1. Using waist belts or pack straps – this is better, especially in deep water.
2. Using a clothing grasp when packs are not worn – this is OK for straightforward crossings, **only** when the river is knee to mid-thigh deep and there is a weak current.

Do not break up the formation until everyone is safely on the bank. Make sure you communicate with all members of the party.

Individual method – This is useful for solo hunters and trampers.

Use a pole about two metres long, and strong enough to support your weight. Use the pole on your upstream side as the current helps anchor the pole to the bottom.

Never hurry across rivers. It's better to be delayed but alive. Stay in line with the current, and away from boulders.

Recovery

You must be able to rescue yourself. If you cross where there is good run-out, losing your footing need not be disastrous. If you are swept downstream, be prepared to use your pack as a flotation device, as they are naturally buoyant and provide support*.

After crossing

Check everyone for coldness, and change into warm or dry clothing. Hypothermia can start after crossing. Have a snack or warm drink. Check with the others if they are OK to continue with the tramp.



THE 10 RULES OF RIVER SAFETY

1. Have a leader with appropriate knowledge and experience.
2. Inform someone of your trip intentions, route, party size and time of return.
3. Check and continually monitor weather conditions.
4. Understand river dynamics – speed, depth, colour, catchment area and run-out.
5. Identify all potential hazards upstream and downstream, below and above the surface.
6. Never swim or fish alone.
7. Always supervise children around rivers, ALWAYS!
8. Know where, when and how to cross rivers – if in doubt, DO NOT CROSS.
9. Learn recovery techniques.
10. After your trip, dry and clean your equipment to stop the spread of algae such as didymo*.

**Algae such as didymo ("rock snot") do great harm to our waterways. Always clean equipment after each river visit. Even if you can't see anything in the water, there may be invisible cells that can grow into adult plants and spoil the rivers for everyone.*

RESOURCES

MSC MANUALS

- Bushcraft
- Outdoor First Aid
- Outdoor Safety – risk management

MSC PAMPHLETS

- Going Bush?
- Survival
- Hypothermia
- Outdoor Leader
- Snowsports

OTHER USEFUL RESOURCES

- Safety in the Mountains – FMC pocket-sized guide
- MSC Survival Bag (with survival hints) and Packliner
- Intentions Forms – to record trip intentions

MSC VIDEOS/DVDs

- Do You Need To Cross? – river safety
- Found Alive – bush survival
- It Was Just A Tramp In The Bush – bushcraft

WEATHER CONTACTS

- MetFax – phone 0900 77999
- MetPhone 0900 999 (plus your area code)

WSNZ LEARNING PROGRAMMES

- RiverSafe Junior Programme
- RiverSafe Senior Programme
- Year 1 + 2 Kit – Be safe near water
- Year 5 + 6 Kit – Think before you act
- Year 7 + 8 Kit – Make safe decisions

BOOKLETS & FLYERS

- Kayaking is Life
- Safe Sea Kayaking
- Safe Fishing
- Safe Boating
- Wave Watch
- RiverSafe EOTC Supervision – Guidelines

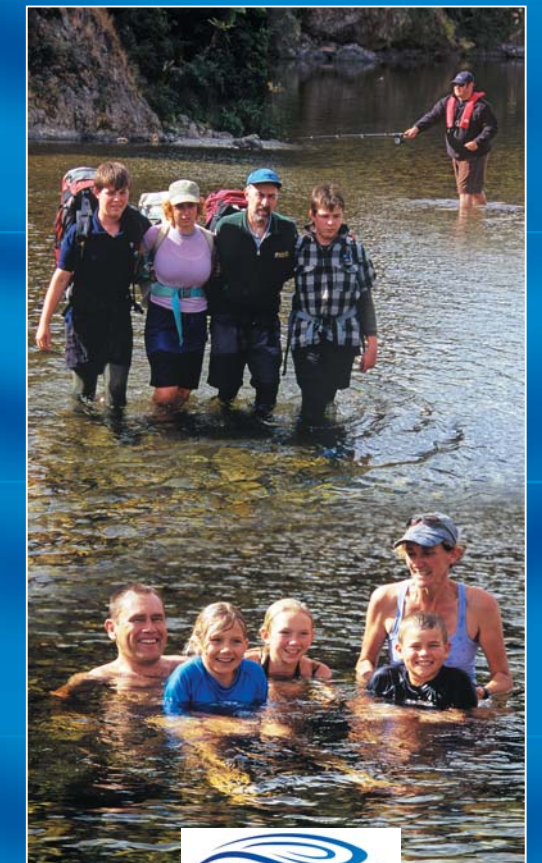
POSTERS

- Respect Rivers
- Keep kids safe

DVDs

- RiverSafe
- Boatsafe
- Hypothermia

River Safety



For resources and further information contact:
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 Printed 04/08 ISBN 978-0-908979-46-2



RIVER SAFETY

Rivers are a living feature of the New Zealand outdoors. Their banks and gorges provide some natural access-ways to our mountainous areas. Rivers also offer great venues for leisure activities and sports such as swimming, kayaking and rafting.

To safely enjoy rivers, it is important to understand and respect their hazardous nature – rivers account for one-third of all New Zealand drownings.



HOW RIVERS WORK

Water in rivers exerts a powerful, constant force against any fixed object. Even calm-looking rivers are very powerful.

As water flows down the river channel, friction along the edges of the river bank and bed slows the flow. The strongest current is found midstream, just below the surface.

Water tries to flow in a straight line, changing direction at points of high resistance (such as a rock). The line of greatest depth and strongest flow will be on the outside of the corners, where the water changes direction. The water on the inside of the bend is slower moving.

New Zealand grades its rivers according to difficulty, loss of height, amount and speed of water, and the number of hazards. (see table on next page)

	Grade One Small regular waves, easy passage but be careful with obstacles
	Grade Two Regular medium sized waves and generally unobstructed passage
	Grade Three Fairly high waves; passage may be difficult to recognise from on the river
	Grade Four High, powerful irregular waves; passage often difficult to recognise
	Grade Five Very difficult rapids; the extreme for commercial operations
	Grade Six Very dangerous, and at the limit of practicality

SWIMMING AND FISHING

Never assume a river will stay the same – conditions and hazards can change even in the one day. Don't risk your life – or the lives of others:

- Don't swim or fish alone.
- Tell someone where you are going, and when you expect to return.
- Don't jump or dive into a river without checking what is below the surface.
- Avoid stretches of water or pools that lead into rapidly moving water, or water that includes structures (such as bridge supports).

If you are fishing, you are more likely to survive in cold water if you wear several layers of light thermal clothing or a wetsuit. Heavy clothing can pull you under and hamper your efforts to move to safety.



Keep alert:

- Watch for changes in the water level, discoloration and weather patterns. If in doubt, get out.
- Take care along the water's edge – watch for slippery rocks, footholds and undercut banks.

If you do get caught in the water, go with the current, roll on your back, feet first, keep your hands by your sides, and only attempt to stand up when you can touch the bottom in shallow water.



NON-POWERED CRAFT

New Zealand rivers are some of the most popular in the world for kayaking and rafting. Before heading down these rivers check the following list.

- Select the right craft for your type of activity and grade of river. Ensure that the equipment to be used is in good condition.
- Wear a personal flotation device.
- Never go on the water alone and ensure that people know where you are going and what course you are planning to run.
- Check the environment for river level, strainers, weirs and other people such as fishers, swimmers and jet boaters.
- Pack your essential gear (such as spare jersey, food, drink, waterproof first aid kit, craft repair kit, shoes, fire starting device) in a waterproof bag.
- Carry communication equipment (such as mountain radio, personal locator beacon (PLB), satellite phone, cell phone) protected in a waterproof bag.
- Always check and clean all equipment to stop the spread of didymo*.



TRAMPING AND RIVER CROSSING

Some popular tracks have swing bridges or cableways, but trampers often need to cross rivers. Three river crossing deaths occur in New Zealand each year, so you need skill and sound judgement. **Take all river crossings seriously. If in doubt, do not cross.**

Practical instruction gives a full appreciation and understanding of rivers and ensures techniques are mastered. Attend a river safety course run by qualified providers to get updated information and techniques. Get local knowledge about the area you are in and the river you are about to cross.

Always ask yourself: *Do we need to cross? Where do we cross? How do we cross? Which method do we use?*

Before crossing

- Decide whether or not you should cross – assess the river's speed, depth, colour, catchment area and run-out; look for alternatives such as a bridge upstream; consider escape routes along your route; or wait for the water levels to drop. Never risk crossing a flooded river. If in doubt, do not cross.
- Avoid crossing rivers with: discoloration, surging water or major rapids; sounds of rolling stones on the riverbed; trees and debris being carried along.
- Plan a route that uses known crossing places. **Again, if in doubt, do not cross.**