



## 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.

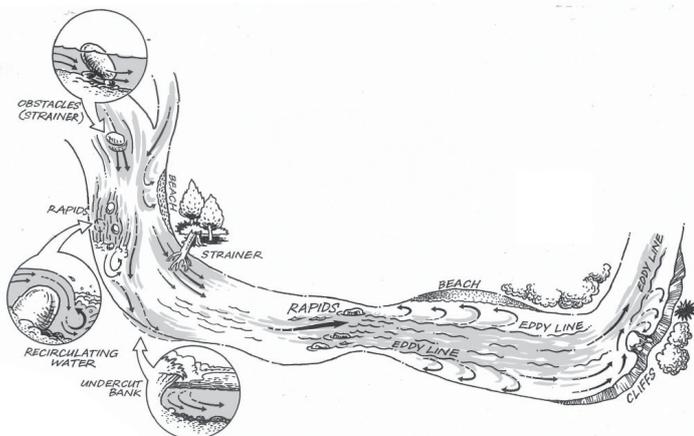
## HOW RIVERS WORK

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.

Beware of recirculating waves which occur downstream of large objects like rocks, as the water in these waves has reduced buoyancy.



## NON-POWERED CRAFT

New Zealand rivers are some of the most popular in the world for kayaking and rafting. Before heading down these rivers seek training or practical instruction, and 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 (hazards that trap objects as water flows through), rapids, weirs and other people such as fishermen, 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.

## SWIMMING AND FISHING

Never assume a river will stay the same - conditions and hazards can change within the course of the 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.

## TRAMPING AND RIVER CROSSING

Some popular tracks have swing bridges or cableways, but trampers often need to cross rivers. 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.**

### 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.**

### RIVER SAFETY COURSE

Practical instruction gives a full appreciation and understanding of rivers and ensures techniques are mastered. Attend a river safety course run by New Zealand Mountain Safety Council. Get local knowledge about the area you are going into and the river you are about to cross.

This document was created in association with Water Safety NZ.  
www.watersafety.org.nz





## 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 straight-forward river 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. Learn how to retreat from the river if the crossing is to be abandoned.



Mutual support methods are the best way to cross a river.

**INDIVIDUAL METHOD** - this is useful for solo hunters and trampers.

Use a pole about two metres long, and strong enough to support your body 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 a good run-out, losing your footing need not be disastrous. If you are swept downstream, be prepared to use your pack as a floatation device, as they are naturally buoyant and provide support. Use your arms and feet to propel and control your direction towards a position of safety.

### AFTER CROSSING

Watch for signs of hypothermia. Change into warm and dry clothing if necessary. 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. **PLAN YOUR TRIP CAREFULLY**, especially if this includes river crossings. Let someone know your plans and when to raise the alarm if you haven't returned.
2. **HAVE A LEADER** with appropriate knowledge and experience.
3. **CHECK WEATHER**, check and continually monitor weather conditions.
4. **UNDERSTAND RIVER DYNAMICS** - speed, depth, colour, catchment area and run-out.
5. **IDENTIFY HAZARDS** - always 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 HOW TO CROSS**, 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 do great harm to our waterways. Always clean equipment after each river visit.

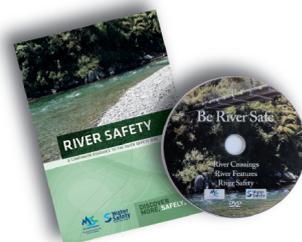


Understand river dynamics before crossing a river.

## FURTHER INFORMATION

To purchase a copy of the NZ Mountain Safety Council MSC "River Safety" DVD and Handbook please visit [www.mountainsafety.org.nz](http://www.mountainsafety.org.nz)

For further safety messages on planning a safe adventure and to complete your outdoor intentions visit [www.adventuresmart.org.nz](http://www.adventuresmart.org.nz)



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