



## WHAT'S THE DEAL WITH FISH PASSAGE?

Fish passage means the ability for fish to swim up and down our streams.

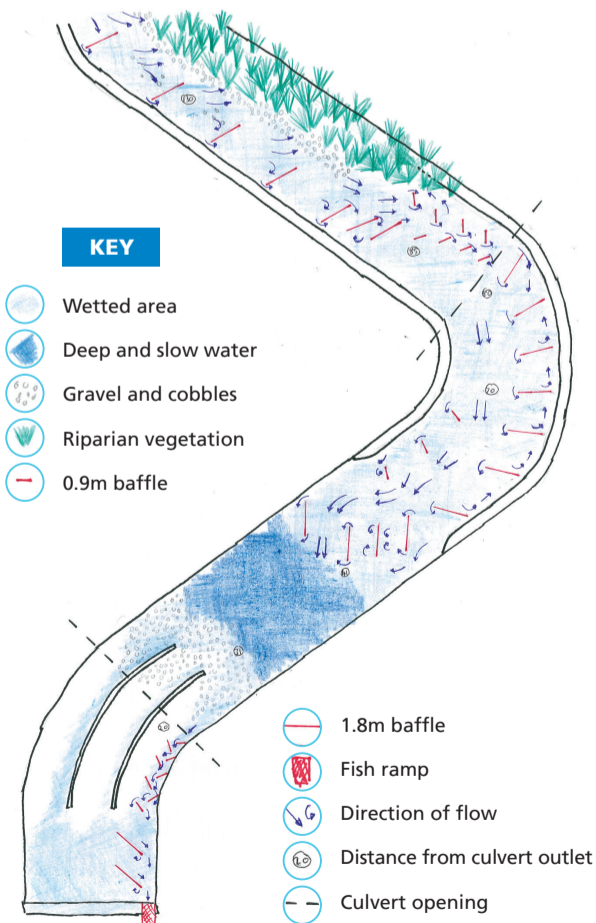
Many of our iconic species, such as whitebait and eels, need to move between the sea and rivers to complete their lifecycles and to avoid pollution events. If they can't migrate successfully, they may be lost from a stream completely.

In a natural stream bed, fish use the natural contours of the stream bed to help them swim against the flow. They rest behind a rock, make a dash through a faster section, and use the wetted edges of the stream to help their passage. Some of our native fish even climb out of the river onto vegetation to spawn.

By changing our stream beds, we're creating blockages to fish passage, which can include:

- Raised ('perched') culverts or drains
- Waterfalls with a drop greater than 10cm
- Rapids with steep gradients over 20 degrees
- Fast flowing water with no obvious resting places for fish
- Grates, gates or mesh that might block fish
- Warmer water temperatures stressful to fish and other aquatic life
- Loss of stream habitat for fish prey, including aquatic bugs.

For the species that are good climbers, like elvers, koaro and banded kokopu, mussel spat rope is a good fix for short (<2m) drops. Inanga, torrentfish and bullies need a ramp to provide access, and cross current baffles for resting places and to break up fast currents. The drawing below shows the work done in the Brook stream at Nile Street to improve fish passage and habitat.



## FISH FINDING SPOTLIGHT EVENT

Nelson artist and educator, Vicki Smith, is working with Council, Cawthron, the Nelson Provincial Museum, Schools and the wider Wakapuaka community to produce a riparian field guide.

As part of this work, we will be supporting a Fish Finding spotlighting event on 24 October, from 6–9pm, at Cable Bay Adventure Park. We'll have our freshwater experts on hand to help people get a hands on experience of

our local fish populations and their habitat. Register at [tinyurl.com/FieldNoteFish](http://tinyurl.com/FieldNoteFish) to get a voucher for free pizza on the night. There will also be food available to purchase or you can bring your own.

## RAINWATER HARVESTING

With warm dry weather approaching, Council is encouraging people to harvest and store rainwater. So how is having a rainwater barrel in your garden going to help our native fish?

By storing rainwater for domestic use you are reducing the water take from our rivers during droughts. Storing rainwater helps to:

- Protect against low flows in our rivers and streams during dry weather, so that fish are not affected by warm, shallow water and creeks going dry.
- Reduce the stormwater running into our rivers and streams. This can help reduce erosion and run-off pollution during heavy rain.

Council has published a guide to rainwater harvesting which you can download from our website at [nelson.govt.nz/water-conservation](http://nelson.govt.nz/water-conservation), or pick up a copy from Council's Customer Service Centre.

[nelson.govt.nz/water-conservation](http://nelson.govt.nz/water-conservation)



## FISH SURVEYS

Council's water scientists have been carrying out fish surveys in some of our local streams usually in the mid-reaches.

The results give an idea of which streams have the biggest numbers and varieties of native fish species. Sections of streams close to our estuaries tend to have the highest fish diversity.

Location	Species	Number
Jenkins Stream	Long-finned eel	19
	UID* eel	35
	Upland Bully	12
Maire Stream	Short-finned eel	2
	Banded kokopu	23
	Long-finned eel	2
Orphanage Stream	Koura	2
	UID* eel	27
	Red-finned bully	10
	UID* bully	15
	Long-finned eel	10
Brook Stream	Short-finned eel	5
	Long-finned eel	31
	Short-finned eel	2
	UID* eel	35
	Upland Bully	12
Oldham Stream	Brown Trout	2
	Inanga	12
	Koura	7
	Short-finned eel	1
Oldham Stream	UID* eel	7
	Koura	17

\*Unidentified

## HOW MUCH WATER DO YOU USE?

As part of our Healthy Streams freshwater improvement programme, we're asking people to take part in a short survey to help us understand how domestic water is being used in our community.

By taking part, you'll go in the draw to win either a Marley Twist rainwater diverter for collecting rainwater from your roof, or an outdoor tap timer, which helps prevent you leaving the garden sprinkler on overnight!

You can take the survey online at [nelson.govt.nz/water-survey](http://nelson.govt.nz/water-survey) or pick up a copy from Council's libraries or Customer Service Centre.

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