



◀ National and conservation parks, and major rivers. Rivers that have Water Conservation Orders are named. Very few lowland sections of river are protected and few rivers have protection from the mountains to the sea.

region	km of river	approximate % protected by WCOs
NORTH ISLAND		
Northland	6,341	0
Auckland	3,013	0
Waikato	15,374	0
Bay of Plenty	8,244	0.7
Gisborne	6,448	0.8
Hawke's Bay	11,397	0
Taranaki	6,094	0.4
Manawatu/Wanganui	17,215	0.9
Wellington	6,327	0
North Island total	80,453	0.4
SOUTH ISLAND		
Nelson/Marlborough	15,471	0
Canterbury	27,723	2.5
Westland	19,392	0
Otago	22,914	0.5
Southland	20,394	0
South Island total	105,894	0.8
NEW ZEALAND TOTAL	186,347	0.6

Lengths of major rivers in different regions of New Zealand showing the proportion of the total length currently protected by Water Conservation Orders (WCOs). This does not include the smaller river channels that were indiscernible from 1:250,000 maps. Lengths of multiple channels on braided sections of river are included.

can be saved through conservation measures, a much better alternative to the construction of more dams.

With such an abundance of rivers and lakes, most people would never believe that New Zealand could become short of water. However, increasing demands from agriculture, industry and urban communities mean that some areas of the country like the east coast of the South Island, parts of Otago, the Waimea Plain in Nelson, and the eastern side of the North Island ranges may face long-term water supply problems. Over-allocation of water to orchards in the Moutere catchment near Nelson means that many streams dry up over summer and water quality in the main river is very poor.

New Zealand households use 210 billion litres of water every year, and probably over one third of this could be saved by implementing water conservation measures. The solution to potential water shortages is not to abstract more from rivers or to build more reservoirs, but to use what we have in a more efficient way.

Because of the degradation, small native-forested streams and seepages draining the lowlands or coastal hill country are now difficult to find in most parts of New Zealand. Furthermore, there are no large river systems in the North Island or on the east of the South Island with catchments that are wholly unmodified from their headwaters to the sea. We have to go to north-west Nelson, Westland, Fiordland and Stewart Island to find large river systems in unmodified catchments, and even then their plant and animal communities can contain introduced species. Introduced fishes are not known in the rivers of Stewart Island and they may also be absent from other areas of the country such as parts of north-west Nelson. These areas are, therefore, particularly important for river conservation.

NEW ZEALAND has well over 186,000 kilometres of rivers (see table). So far, only eight rivers, representing less than one percent of the total river length, have been protected by Water Conservation Orders, although several other orders are pending or under appeal. But the importance of natural value has played only a secondary role in river conservation to date. Of the 23 Water Conservation Orders applied for between 1982 and 1991, 18 came from Acclimatisation Societies (now Fish and Game Councils) primarily to protect the introduced sports fisheries. Although protection of trout and salmon habitat can also be beneficial to native species, greater importance needs to be placed on the