Title	Predicted average Macroinvertebrate Community Index (MCI) score, 2007–2011
Abstract	Macroinvertebrates are small animals without backbones that live on and under submerged logs, rocks, and aquatic plants in the stream bed during some period of their life cycle. They play a central role in stream ecosystems by feeding on periphyton (algae or slime), macrophytes (aquatic plants), dead leaves and wood, or on each other. High Macroinvertebrate Community Index (MCI) scores generally indicate better stream health. Macroinvertebrates are good continuous indicators of the health of their stream environment. This is because they are relatively sedentary and long–lived (a year or more) which means they live with any stresses or changes that occur in their location (eg, pollution, habitat removal, floods and droughts). They complement discrete measures like chemical monitoring, which only reflects the condition at the exact time and place of sampling. Such monitoring might miss effects of a short–lived pollutant or an unanticipated type of disturbance. This dataset relates to the "River water quality: benthic macroinvertebrates" measure on the Environmental Indicators, Te taiao Aotearoa website.
Reference date	10/21/2015
Language	New Zealand English
Topic category	Environment
Geographic location	New Zealand
Temporal extent	2009–13
Legal restrictions	Creative Commons Attribution 3.0 New Zealand
Identifier	https://data.mfe.govt.nz/x/Q8YpE
Reference date type	Date of publication
Subject	watercourse, water quality
Source	Cawthron Institute
Publisher	New Zealand's Environmental Reporting Series: The Ministry for the Environment and Statistics New Zealand
Resource point of contact	Analyst – Environmental Reporting, Ministry for the Environment
Environmental reporting topic	Presence or abundance of freshwater plants and animals
Environmental reporting category	Case study
Methodology	Macroinvertebrates are measured by disturbing or sweeping a small

(collection & analyses)	representative area of river bank and bed with a net, and sieving out the macroinvertebrates. They are then identified and counted under a microscope. Estimates of median MCI scores across New Zealand is based on annual measurements from 436 river sites monitored by the 16 regional councils and 77 sites along 35 major rivers measured monthly by the National Institute of Water and Atmospheric Research (NIWA). The MCI involves scoring the diversity of taxa observed at a site based on their tolerance to pollution. Those taxa which are characteristic of more unpolluted conditions score more highly than those that dominate in polluted streams, and contribute to a higher MCI score. In this way, higher MCI scores generally indicate better river condition. The following MCI scores are a guide for interpreting the river health classes: - Excellent (MCI score greater than 119) - Good (MCI score equal to or greater than 100 to 119) - Fair (MCI score equal to or greater than 80 to 99) - Poor (MCI score less than 80) MCI scores alone do not account fully for natural variation in stream types. Even under natural conditions, some stream types do not attain scores high enough to achieve an 'excellent' quality rating due to natural factors such as climate or lack of suitable riverbed substrate. This is inferred from the predominant land cover in a catchment and the surrounding landscape characteristics, such as, climate, elevation, and geology. The accuracy of the data source is of medium quality.