



## River flows

### Title

River flows

### Creator

Environmental Reporting, Ministry for the Environment and Statistics New Zealand

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### Description

"River flow refers to the quantity of water passing a point in the river over a certain amount of time. Different rivers have different flow patterns, such as sharp peak flows following rain with low flows in between, or high spring flows from snow melt. These flow characteristics affect how much water is available for irrigation, drinking water, hydro–electric power generation, and recreational activities such as fishing and boating. River flows are also very important for maintaining the health and form of a waterway. This dataset relates to the "Geographic pattern of natural river flows" measure on the Environmental Indicators, Te taiao Aotearoa website. "

### Source

Source: National Institute of Water and Atmospheric Research; regional councils Method: "Measuring river flows provides information on water availability for people and the environment. Multiple measures are used to capture a range of characteristics, such the frequency of peak and low flows, and seasonal patterns. Regional Councils and NIWA have measured flows for five or more years at 485 river sites. These sites enable flows to be modelled on every river in New Zealand. These flow statistics are estimates of the long–term or "all–time" background flows, rather than for particular year or time period. They were derived by using models based on flow measurements at the 485 sites, combined with other information such as the predominant land cover in a catchment and the surrounding land–scape characteristics, such as climate, elevation, and geology. Actual flows will vary due to shorter–term weather patterns and/or climate trends, and the effect of water takes. These predictions do not represent observed flow regimes for river reaches downstream of large engineering schemes and dams, such as those found on some of New Zealand's larger rivers (e.g. the Waikato, Rangitata, Waitaki, Clutha and Waiau rivers). Observed flow data is usually available from Regional Councils for these large rivers with significant upstream controls. Mean flow measures the average flow of the river. Some rivers have larger flows simply because their catchments are larger. To allow rivers in different sized catchments to be compared we also report specific mean flows, which take out the effect of catchment size. Predicted flow in river segments of size order 3 and above. Specific mean flow adjusts for different catchment areas, as large catchments tend to have rivers with larger flows. Seven–day mean annual low flow (MALF) is the lowest flow week in the average year. This indicates flow stress from an annual dry period. Predicted flow in river segments of size order 3 and above. Specific mean flow adjusts for different catchment areas, as large catchments tend to have rivers with larger flows. Seven–day five year low flow (Q5) is the lowest flow week in five years. This indicates flow stress from a more severe five–year drought. Predicted flow in river

segments of size order 3 and above. Specific Q5 flow adjusts for different catchment areas, as large catchments tend to have rivers with larger flows. The accuracy of the data source is of high quality."

Coverage

-47.2829492 166.433614218 -34.4010803484 178.545978737

Identifier

<https://data.mfe.govt.nz/layer/53309-river-flows/>

Language

eng

Subject

New Zealand

Subject

WATER

Subject

WATER-Hydrology

Subject

environment