

Waterway Health Report Card 2017

Ōtūkaikino River catchment

(Waimakariri River South Branch)

Christchurch city has more than 200 kilometres of waterways within five main river catchments – Ōtākaro/Avon, Ōtūkaikino, Pūharakekenui/Styx, Ōpāwaho/Heathcote and Huritini/Halswell. We assess the health of each catchment, testing water and sediment quality and monitoring habitat, algae, plants, insects and fish.



Source McLeans Island	Report score B	Elevation 3-34 metres above sea level	Land use Rural (parks, reserves and agriculture) and urban (residential)
Mouth Waimakariri River	Length 13 kilometres		



Assessing waterway health

We measure the health of each waterway using a Water Quality Index (WQI), a Sediment Quality Index (SQI) and the Quantitative Macroinvertebrate Community Index (QMCI).

See more at ccc.govt.nz/environment/water/waterways/waterway-monitoring

Water Quality Index (WQI) Score

We use a WQI specific to Christchurch waterways. Each monitoring site is scored against guideline levels for copper, zinc, pH, suspended solids, dissolved oxygen, temperature, ammonia, nitrogen, phosphorous, biochemical oxygen demand and *Escherichia coli*. The median across the catchment is graded:

- A = 90 – 100 (very good)
- B = 80 – 89.9 (good)
- C = 70 – 79.9 (fair)
- D = 40 – 69.99 (poor)
- E = < 39.9 (very poor)

Ōtūkaikino catchment WQI score: **B**

Sediment Quality Index (SQI) Score

We use a SQI specific to instream sediment of Christchurch waterways. This index is scored against guideline levels for copper, lead, zinc and polycyclic aromatic hydrocarbons. The median across the catchment is graded:

- A = 90 – 100 (very good)
- B = 80 – 89.9 (good)
- C = 70 – 79.9 (fair)
- D = 40 – 69.99 (poor)
- E = < 39.9 (very poor)

Ōtūkaikino catchment SQI score: **A**



Tuna /Eels



Giant Bulli

Credit: Aquatic Ecology Limited

Quantitative Macroinvertebrate Community Index (QMCI) Score

The QMCI assesses the macroinvertebrate species (organisms with no spine) present and their tolerance to pollution, to determine a waterway's likely water quality. The index values are converted to scores for grading the catchment:

- A = > 5.99 (excellent; clean water)
- B = 5.00 – 5.99 (good; likely mild pollution)
- C = 4.00 – 4.99 (fair; likely moderate pollution)
- D = < 4.00 (poor; likely severe pollution)

Ōtūkaikino catchment QMCI score: **B**

The Ōtūkaikino catchment overall score is **B**

Contact us

- Dr Belinda Margetts, Waterways Ecologist
- 03 941 8999
- Belinda.Margetts@ccc.govt.nz