

Lowland Streams and Lakes

Lowland streams and rivers have lower ecosystem health and habitat quality than those in the high country as they are impacted by multiple stressors. These include low flows, habitat degradation and declines in water quality due to diffuse discharges of agricultural and urban contaminants. Land use is of greater intensity in the flatter low country. Contaminants accumulate in groundwater, which re-emerges in lowland streams. Spring-fed streams tend to meander through farms and urban areas, and are susceptible to both localised and diffuse contaminant sources. Actions are underway at numerous sites, catchment-wide, to effect change in land use management that will support all waterways.

Targets

From 2010:

Identify and prioritise protection for lowland streams ecosystems in each zone.

By 2015:

Protect and enhance the ecological health of the best examples of lowland streams ecosystems in each zone. Improve ecosystem condition in at least another 10% of lowland streams in each zone.

By 2020:

Improve condition and water quality in at least 60% of lowland streams and 60% of lowland lakes in each zone.

By 2040:

100% of lowland areas and spring-fed streams with at least good aquatic ecosystem health, or showing an upward trend.

Progress to 2020

Not started

Started

Progress

Good progress

Achieving

- Zone Committees are identifying priority areas according to ecological and cultural rankings.
- By 2017, Immediate Steps has allocated \$900,000 to 60 sites across Canterbury.
- Aquatic Ecosystem Health (AEH) (page 20), habitat and Water Quality Index (WQI) (page 21), is being monitored by Environment Canterbury throughout the region. Sites are selected to represent different river types that encompass various sources of flow, elevations and land uses.
- Lowland streams and rivers have low AEH scores. Around 36% of lower hill-fed streams and 67% of spring-fed streams on the plains are indicative of poor condition. 32% of sites have shown a general decline, while 17% have shown an improvement.
- The WQI, indicates that around 15% of lowland streams are in poor or very poor condition. 38% of lowland sites have shown a general improvement in WQI grades, while 4% of sites indicate a general grade decline.
- There are currently eight monitoring sites in urban streams. In 2016, three sites had very poor AEH grades, and one poor AEH grade. Two sites had a good WQI grade, while one site is fair and the other poor.
- Freshwater outcomes for Canterbury Lowland lakes have been set in the Land and Water Plan. Each lake has a set Trophic Level Index (TLI) based on its characteristics. Five lowland lakes are monitored for water quality in Canterbury; none meet the TLI targets. Efforts are being made by landowners to reduce the amount of phosphorus and nitrogen entering the lakes. This includes significant work with landowners surrounding Te Waihora and Wainono Lagoon. Mudfish, eels, weeds and willows have been the recent focus of the team working at Wainono Lagoon on Te Rūnanga o Waihao's Te Mana O Te Wai Project. The work on improving water quality around and in Te Waihora is summarised on page 16.
- Five lowland lakes are monitored for water quality in Canterbury. Four out of five lakes are currently considered Hypertrophic, with one considered Eutrophic using the Trophic Level Index (TLI).
- Environment Canterbury provides data on the state of Canterbury's waterways to the national database – Land, Air, Water Aotearoa (LAWA). For more information on local to national state and trends of water resources, visit www.lawa.org.nz.