

Hāpua, Lagoons and Estuaries

Hāpua, lagoons and estuaries are examples of coastal aquatic environments where the mix of coastal, surface water and groundwater systems produces an often dynamic environment from freshwater through to brackish and saline conditions. These areas provide an important habitat for a diverse array of native plant and animal species including mahinga kai species such as tuangi (cockles), pipi which is endemic to New Zealand, harakeke (flax), and tuna (eel). They also provide important nursery and spawning grounds for marine and freshwater fish species such as īnanga (whitebait), tuna (eel), pātiki (flounder) and margin habitats for the kowaro (Canterbury mudfish). Examples in Canterbury include hāpua river mouth lagoons such as the Rakaia and Ashburton river mouths, Waituna type lagoons or coastal lakes such as Te Waihora/Lake Ellesmere and Wainono Lagoon, tidal estuaries such as the Avon-Heathcote/Ihutai or freshwater river mouths such as the Clarence River.

Te Waihora is one of New Zealand’s most important wetlands and is internationally significant for its abundance and diversity of wildlife. Te Waihora is a tribal taonga, central to Ngāi Tahu culture, and is valued for its recreation and cultural worth, and unique ecological value. There are many active organisations and agencies involved in work to protect, restore and enhance the lake. Whakaora Te Waihora is a joint programme of work between Environment Canterbury, Te Rūnanga o Ngāi Tahu, and the Ministry for the Environment to restore Te Waihora/Lake Ellesmere. The Te Waihora Joint Management Plan — Mahere Tukutahi o Te Waihora — is a joint land management plan between the Crown and Iwi for integrated management of the Selwyn Waihora catchment.

Targets

From 2010:

Implement actions to prevent further loss of ecosystem health in river mouths and coastal lagoons.

By 2015:

Target 1: Accelerate the current riparian restoration and management programme for Te Waihora/Lake Ellesmere and tributary streams.

By 2020:

Target 2: A significant protection and restoration programme is in place on the most ecologically significant river mouth or coastal lagoon in each management zone.

By 2040:

Examples of thriving coastal lagoons and lowland or spring-fed ecosystems in each water management zone.

Progress to 2020	T2		T1		
	Not started	Started	Progress	Good progress	Achieving
<p>Target 1: Whakaora Te Waihora is a joint programme of work to restore the mauri and ecology of Te Waihora/Lake Ellesmere. Phase One (2012-2017) has been funded by the Government, Environment Canterbury, and Te Rūnanga o Ngāi Tahu, and the programme is governed by the Te Waihora Co-Governance Group (members include Te Rūnanga o Ngāi Tahu, Environment Canterbury, Selwyn District Council, and Christchurch City Council). The programme’s goals are to:</p> <ul style="list-style-type: none"> Accelerate the restoration of ecosystem health; Start the process of restoring and enhancing specific cultural sites and mahinga kai; Protect and restore lowland tributary and lake margin wetland habitats; Improve land catchment management practices; and, Establish a robust monitoring and investigations programme. 				<p>Key phase one achievements include:</p> <ul style="list-style-type: none"> Planted over 200,000 plants across 81 sites. Re-establishing Te Repo Orariki (Taumutu Wetlands) in partnership with Te Taumutu Rūnanga. Conducted willow control at priority sites. Due to combined efforts in recent years, willows have largely been controlled on the eastern shore of the lake. Progressing the pioneering trial establishment of macrophyte beds, where macrophytes are being planted behind wave-barriers. An assessment of fisheries management. Supporting Lincoln University on the development and implementation of an integrated monitoring plan. Re-battered 31.7km of waterways to reduce sediment. See the programme’s website www.tewaihora.org, including stories on further achievements. <p>Target 2: See fig 6. A significant project is underway in each of the water management zones.</p>	

Fig 6: Significant Projects on River Mouths or Coastal Lagoons

Significant Projects by Zone

- 1. Waikōau/Lyell Creek:** In 2012 the Kāikoura Zone Committee made cleaning up the Waikōau/Lyell Creek a priority. 'Love the Lyell' made significant progress in 2015/16 through esplanade development along Lyell Creek/Waikōau through riparian planting and walkway development.
- 2. Waipara River Hāpua Action Strategy:** An action plan was developed following a recommendation of the Zone Committee's working group. An opening protocol, centred around flooding and fish passage, has been agreed and a consent progressed for opening the Waipara River mouth.
- 3. Tūtaepatu Lagoon:** Project began in 2010 and has included the removal of weeds and control of predators allowing room for native species such as kahikatea, mudfish, morepork and bittern to thrive throughout the lagoon area. Over 30,000 native trees have been planted.
- 4. Whaka Īnaka Causing Whitebait:** The project improved Īnaka/ whitebait spawning in Christchurch rivers. Over 200 straw bales were set out along spawning stretches of the waterways at the start of the 2016 spawning season. Ongoing work by the Avon-Heathcote Estuary Ihutai Trust includes a range of projects to restore and enhance the estuary.
- 5. Te Roto o Wairewa/Lake Forsyth Catchment:** The Banks Peninsula Zone Committee has made significant progress with several partners: Work includes Plan Change 6 to the LWRP, consent to continue to use the canal, opening to the sea and work to clear willows blocking the Ōkana River.
- 6. Whakaora Te Waihora:** (See main text for progress.)
- 7. Ashburton River/Hakatere:** Environment Canterbury, the Department of Conservation and the Ashburton Branch of Forest & Bird have raised awareness of the value of the large black-billed gull colony near the SH1 bridge, and reduced the impacts of woody weeds and mammalian predators on a particularly high-value reach of the river.

- 8. Waitarakao Washdyke Lagoon:** An action plan has been developed which includes a water quality monitoring programme, enhancement of Īnanga spawning habitat, feasibility of developing wetlands and development of a walking and biking track.
- 9. Wainono Restoration Project:** This regionally significant coastal wetland provides habitat to white heron, royal spoonbill, wrybill, pied stilt, grey teal, eels and Īnanga (whitebait). The Hook Catchment and Wainono Water Users groups have had significant involvement in the restoration. Projects have included weed control, willow clearance, fish barriers and work alongside farmers in the catchment to minimise sediment and nutrient losses.

