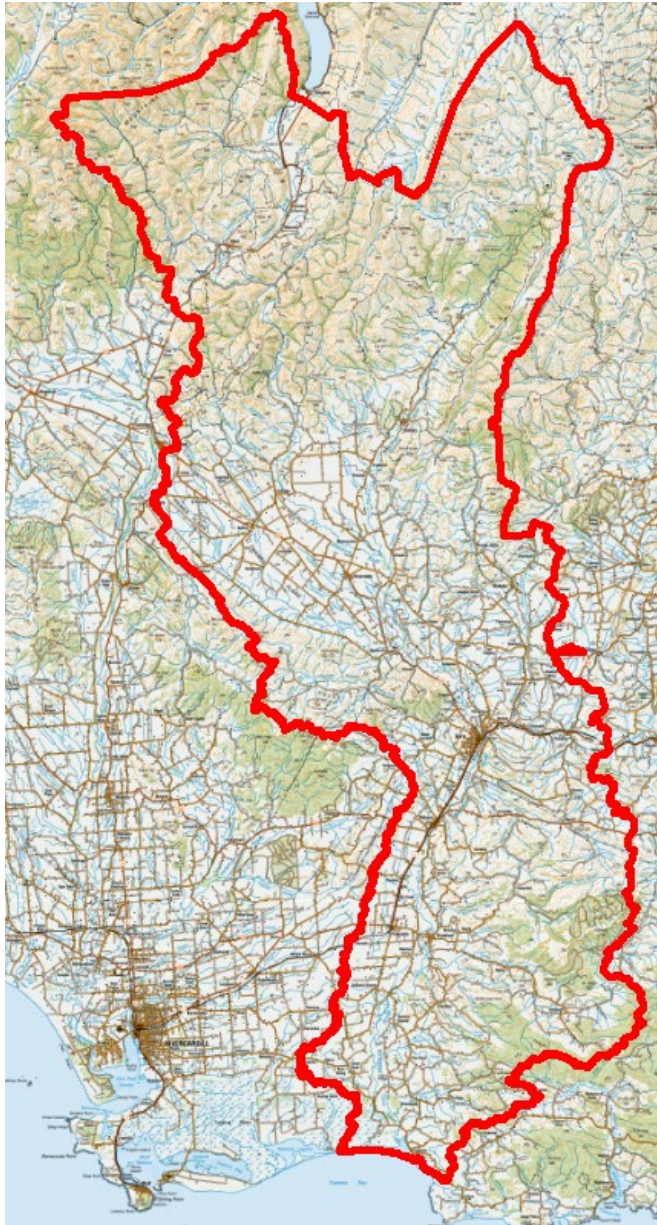




Catchment context, challenges and values for Mataura

Version 1.1 November 2024

Mataura



Ki uta ki tai (from mountains to sea)

The Mataura catchment originates in the Eyre Mountains to the north, extending south eastward across lowland plains by the Garvie and Umbrella mountains. From here, the catchment follows the Mataura River and its tributaries towards the south coast of the South Island, reaching Toetoes Harbour and Toetoes Bay.

The Mataura River is a Ngāi Tahu Statutory Acknowledgement Area, which recognises the relationship of Ngāi Tahu with specific sites and areas, providing for this to be reflected in their management. The Mataura catchment is also subject to a National Water Conservation Order which was put in place to preserve the stability and quality of the Mataura River and its tributaries and ensure its outstanding biological and recreation features were protected. The Conservation Order came into effect in 1997 and set minimum water quality standards and allocation thresholds.

In 2006, a 10-kilometre stretch of the Mataura River was approved as the first freshwater Mātaitai reserve in New

Zealand. Mātaitai reserves recognise and provide for customary and recreational fishing through local management.

Historical clearance and altered drainage of land for farming and settlements has made the area more prone to erosion, with greater and faster water runoff and river flood flows, reduced area of wetlands and riparian habitat, and increased loss of contaminants to waterbodies (e.g. sediment, nutrients and microorganisms).

Estuaries like the Toetoes Harbour are complex ecological systems comprising a diverse range of habitats such as shallow open water, sea grass beds, tidal pools, sandy beaches, salt marshes,

intertidal sand and mud flats, coastal wetlands and riparian and landward vegetation. In the Toetoes (Fortrose) Estuary, detailed ecosystem health monitoring is available for all these indicators across several sites.¹ In summary, it shows that the Toetoes Harbour is in fair condition with variability across sites and measures within the estuary. Measures of eutrophication are “good” to “fair” with measures of mud and sediment accumulation in “good” to “poor” condition. Areas of poorer health are located near the Titiroa mouth and the far eastern portions of the estuary.

The catchment covers a significant trade and mahinga kai route for Ngāi Tahu from the coast up to Whakatipu Waimāori (Lake Wakatipu) and the interior. Kaikā (small permanent settlements), seasonal settlements, including nohoanga, and wāhi tapu/tūpuna are located throughout the catchment. There are also many known and recorded archaeological sites, with more thought to have been destroyed or lost.

Te Au-nui-pihapiha-kanakana, commonly known by its shortened name Te Au-Nui is the traditional name for the Maitai Falls. Te Au-nui was renowned for its abundance of kanakana, and the long established kaika, Tūtūrau is located south of Te Au-nui. Tūtūrau was the site of one of the last inter-tribal battles in the South Island in 1836. The kaika also linked a series of te ara tawhito (traditional routes), both land and water-based, that crossed Southland and into the neighbouring districts. Toward the coast, Toetoes Bay and the Toetoes Harbour were also areas of occupation and mahinga kai, with coastal routes to Ruapuke, Rakiura, and kaika along the Foveaux and eastern coastlines. Fortrose was a site of early interaction between Ngāi Tahu and Pākehā, and a whaling station was established there.

Gore was established in 1862 following the discovery of gold at Gabriel’s Gully (east of Gore). Originally, Gore was known as the “Long Ford” (or Longford), and its site was one of the few places people could cross the Maitai River safely by horse and cart. Today, Croydon Bush and Dolamore Park scenic reserves support significant tracts of indigenous vegetation and are popular among domestic and international visitors. The Maitai River catchment is one of the 10 largest catchments in New Zealand and has long been recognised as one of New Zealand’s top rivers for recreational fishing, particularly for brown trout.

Groundwater is managed within the Upper Maitai, Cattle Flat, Wendonside, Wendon, Riversdale, Waipounamu, Longridge, Waimea Plains, Croydon, Knapdale, Lower Maitai and Edendale Groundwater Zones.

Approximately 17,000 people live in the Maitai catchment. Outside Gore and Maitai, the majority of people live rurally, working in the agricultural sector. The relatively high proportion of people living rurally is reflective of Southland and highlights the strong urban and rural connection.

Of the approximately 562,000 hectares of land in the Maitai catchment, about 83% (468,600 ha) is used for farming. Approximately 63,000 ha is Department of Conservation estate, and 1,300 ha is Māori Freehold land.

¹ <https://www.lawa.org.nz/explore-data/southland-region/estuaries/fortrose-estuary/>



Te Mana o Te Wai

- | | |
|----------|---|
| Mauri 1: | Maintaining the quality of water from the headwaters to the coast |
| Mauri 2: | Protecting and restoring springs and the quality of spring fed waters to the coast |
| Mauri 3: | Protecting, restoring and re-establishing wetlands |
| Mauri 4: | Protecting groundwater quality |
| Mauri 5: | Protecting estuaries from contamination, while protecting and restoring estuary margins |

Hauora

A state of hauora or healthy resilience in the Mataura catchment will be supported when:

- sources of *E. coli* from human activity are prevented from reaching waterbodies as much as possible
- erodible lands and waterbody margins are stabilised
- sediment is prevented from reaching waterbodies as much as possible
- the flow of water is slowed by reintroducing sinuosity, pools and wetland margins to straightened and channelised waterbodies
- wetlands are protected and re-established or restored
- nitrogen and phosphorus have been reduced to levels that restore water quality to within the natural range for waterbodies
- natural habitat and biodiversity are abundant in riparian margins and instream

Mataura catchment – key freshwater issues

(not in order of priority)

- Municipal wastewater and stormwater discharges.
- Industrial wastewater and stormwater discharges.
- Sedimentation and eutrophication within Fortrose/Toetoes Estuary.
- Sedimentation and eutrophication of many lowland streams/rivers.
- High levels of groundwater nitrogen contamination in the Waimea, Wendonside, Knapdale, and Edendale areas, exceeding drinking water standards in multiple locations.
- Concentrations of nitrate nitrogen exceed national toxicity bottom lines at some stream/river locations.
- Multiple high risk closed landfills and contaminated sites.
- Animal and human faecal contamination of some lowland surface waters and main stem river sites.
- Potentially toxic cyanobacteria blooms present in streams and main stem rivers during summer months at multiple locations.

Assessment of degradation

An assessment of which catchments are degraded has been undertaken for the Southland Region as part of regional plan development. The mapping tool will have generated whether your boundary is within a degraded catchment or not and attached the map in the appendices. The below assessment of degradation is relevant to your location:

Your land may sit within a degraded catchment

Actions must be included in the Farm Plan to demonstrate a reduction in contaminants contributing to this degradation. This definition of 'degraded' was set using a lower bar than what would be considered necessary to help achieve a state of hauora. The coming Plan Change Tuatahi will likely raise this bar to the level of hauora. To future-proof your operation you should incorporate actions that strive for a state of hauora. By default, doing this will also ensure the requirements of the Southland Water and Land Plan are met. Whilst the catchment context information provided here may give some guidance on what contaminants to focus on at a catchment scale, it is critical to utilise farm specific information when assessing contaminant loss risk and appropriate on farm mitigation actions.

Schedule X Maps

Schedule X is a new method that shows where water quality is degraded within a catchment. Using the catchment context online tool, schedule X maps (which show the status of degradation) for the following parameters are available for your farm boundary.

- Total phosphorus

- Total nitrogen
- Suspended sediment
- E-coli

The water quality in all areas needs to be maintained or improved. Not degraded catchments need farm plan actions that **minimise** contaminant losses to the smallest amount reasonably practicable. Degraded catchments need farm plan actions that **reduce** contaminant losses so as to cause a reduction in adverse effects on water quality.

Mataura contaminants

Supporting hauora outcomes

Modelling suggests that large reductions in nitrogen and *E. coli* and moderate reductions in phosphorus and sediment are required to support a state of hauora-healthy resilience in the Mataura catchment.

There are uncertainties associated with the exact percentage reductions required.² What is clear is that the gap between current water state and hauora is large and that we need to take significant action to address this. Property actions should focus on mitigating the specific contaminant loss risks that exist on your land. Given we know these substantial catchment reductions are required, significant on farm actions are needed to head in the right direction towards achieving the desired outcomes for our freshwater.

Catchment focus

- Reduce nitrogen, phosphorus, sediment and *E. coli* loss as much as possible.
- Building resilience into the system to move towards hauora – could include actions such as planting, realignment of fences and roads, creating oxbows and pest management.

Property specific information

Each farm has its unique characteristics, such as soil type, topography, climate, land use, and management practices. Using farm-specific information allows for a tailored approach to environmental management.

To address the issue of contaminant loss, it is crucial to begin by assessing farm-specific information on potential loss pathways and associated risks. In the absence of more detailed farm-specific information, there are resources that can assist focusing mitigation efforts on your property. Considering your property's location and physiographic information, we consider that these contaminants and loss pathways must be given particular attention when choosing mitigation actions.

² Specific load reduction estimates can be found in: Snelder et al. (2021a) [Snelder et al. (2021b) [and Neverman et al. (2021) [[LandCare Report \(es.govt.nz\)](#)]].

Soil

A soil breakdown and map are included for your property as a part of this report.

Climate

Southland is situated in the latitudes of the prevailing westerly winds and is the most southern and western part of New Zealand. The climate of the Maitara catchment spans the coastal, intermediate and inland climate zones. The coastal zone is subject to cold, salt-laden winds from the south and west. The intermediate zone has a generally temperate climate with few severe frosts. It is subject to both southwest and northwest winds. The inland zone lies in the northern half of the catchment and experiences severe frosts and hot, dry north-westerly winds.

Spring is the windiest and winter is generally calmer. For many but not all areas, the lowest monthly rainfall occurs in winter. Annual rainfall ranges from around 1000 – 1200mm in the south to 1200 - 1500mm in higher elevation areas throughout the catchment such the Eyre Mountains, Garvie Mountains, Umbrella Mountains and the Hokonui Hills.³ Coastal areas do not typically experience dry spells, however in inland areas they are more common. The Waimea Plains to the northwest of Gore are among the driest areas of Southland, receiving approximately 700-800mm rainfall annually. The mid and upper Maitara have some of the highest number of soil moisture deficit days in Southland ranging from approximately 20-40 days and up to 50+ days in places north of Piano Flat, although this is relatively low compared to the rest of New Zealand⁴. In low elevation coastal areas, both air and soil temperature are typically lower in the summer and higher in the winter compared to low elevation inland areas. The average daily temperature range is greater in inland areas.

Freshwater data

Water quality results can be explored on the Land, Air and Water Aotearoa [website](#). You can also look at [Southland's Water Story](#)⁵ for more information.

Sites of community significance

There are two main settlements in the Maitara catchment: Gore and Maitara. Approximately 17,000 people live rurally and within the settlements.

³ Environment Southland climate data

⁴ See: NIWA report - The Climate and Weather of Southland, G.R. Macara, 2nd edition
<https://niwa.co.nz/static/Southland%20ClimateWEB.pdf>

⁵ <https://waterstory.es.govt.nz/>

Significant species or ecosystems

Taonga species

Please refer to the list of taonga species outlined in Schedule M of the Southland Water and Land Plan and the Ngāi Tahu Claims Settlement Act 1998, which includes plants and birds. In this area, some of the commonly found water taonga species include:

- Native Kōkopu
- Wai Kōura - freshwater crayfish
- Tuna – longfin eel
- Kanakana – lamprey
- Īnanga – whitebait
- Wai kākahi - freshwater mussels
- Tuaki - cockles
- Pipi
- Pātiki - flounder

Cultural matters of importance to tangata whenua

Ngāi Tahu ki Murihiku has an enduring connection and use of this area. Historical and contemporary relationships coupled with changes to the waters, land and ecosystem have helped define current cultural matters of importance.

The Maitai River and its branches are treasured by Ngāi Tahu ki Murihiku as is the estuary and has provided reliable mahinga kai resources for many generations. Protecting and restoring the health of the river and estuary is a priority for Ngāi Tahu ki Murihiku.

Mahinga kai has been the Ngāi Tahu way of life on the Maitai River for generations. Tūpuna (ancestors), used knowledge of whakapapa and traditional trails to find places to gather kai and other taonga, and developed ways to use available resources. The relationship between the people and the river was critical, as they depended on it to survive. Tūpuna also had tikanga (practices and protocols) around the sustainable utilisation of resources within the river to ensure that depletion did not occur. All these values remain important to Ngāi Tahu today.

Today, the Maitai River and estuary are regarded as culturally degraded. The decline in water quantity and quality and accumulated effects have diminished the mauri of the river and estuary, culminating in diminished cultural uses, particularly mahinga kai, and cultural identity. Many of the cultural redress provisions in the Ngāi Tahu Claims Settlement Act 1998, are associated with water use, availability, and access. Water should be in a state for Ngāi Tahu to undertake mahinga kai.

Ngāi Tahu ki Murihiku identified a range of priorities in 2020 relevant to freshwater management in the Maitai Catchment. Overall, Ngāi Tahu ki Murihiku seek to protect and enhance the mauri (life force) of freshwater resources so that future generations have the same or better access to healthy waterbodies, and that waterbodies are managed within a ki uta ki tai framework. This primary goal is supported by the fundamental concept of Te Mana o te Wai in the National Policy Statement for Freshwater Management and in the Southland Water and Land Plan.

Glossary

Ki uta ki tai (from mountains to sea)

Ki uta ki tai is a concept that refers to the interconnectedness of the natural world, including the relationships of water and land, from the coast up to the hills and mountains.

Environment Southland, in partnership with Te Ao Mārama, seeks to manage water and land resources in a way that reinforces the Ngāi Tahu philosophy ki uta ki tai (from mountains to sea). This integrated approach refers to the belief that all things are connected in the natural world and need to be managed that way. It is part of the foundation of regional planning in Southland, recognising the need to manage catchments as an integrated whole. This approach recognises the commitment of Environment Southland, in partnership with Te Ao Mārama, to manage the connections between people, water and land, including the impacts we have on the health of all types of waterbodies, including estuaries and coastal lagoons.

Te Mana o Te Wai

Te Mana o Te Wai is the fundamental concept that underpins all freshwater management.

Te Mana o te Wai recognises the fundamental importance of water in that protecting the health of freshwater protects the health and wellbeing of the wider environment. It is an approach that protects the mauri (life force) of the water.

Protecting mauri as a priority is already a foundation of regional planning in Southland.

Hauora

Hauora means a state of health that could be described as fit and well. It reflects a level of healthy resilience we all want for our waterways. In other words, a waterway can take a knock and bounce back and still be used without compromising people's health.

Users of water and land need to provide for hauora. By doing that, we acknowledge and protect the mauri of water. This is a foundation of regional planning in Southland.

Environment Southland and Te Ao Mārama have identified a range of attributes that in combination provide for hauora, the health and wellbeing of waterbodies.

A change to the regional plan that is being developed, Plan Change Tuatahi, will guide what is needed to support healthy waterbodies in the catchments of Waiau, Aparima, Ōreti, Mataura and Waituna.

Mahinga kai

Mahinga kai refers to the customary gathering of food and natural materials, and the places where those resources are gathered by tangata whenua.

For Ngāi Tahu, mahinga kai is about places, ways of doing things, and resources that sustain the people. It includes the work that is done (and the fuel that is used) in the gathering of all natural resources (plants, animals, water, sea life, pounamu) to sustain wellbeing. This includes the ability to clothe, feed and provide shelter.

Mahinga kai is a value that must be provided for when managing waterbodies.

Values

When we do a good job of managing freshwater then we honour a range of values that matter to the communities of Southland.

When managing freshwater we must provide for certain kinds of values; including ecosystem health (water quality, water quantity, habitat, aquatic life and ecological processes), threatened species, mahinga kai, Māori freshwater values and human contact. These are compulsory values.

There are a range of values that have already been identified by Southlanders, and additional values that must be considered as well. Many of these values informed the current regional plan, and further values are being considered as part of Plan Change Tuatahi.

Document control

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Disclaimer: This catchment context contains key information to be included in farm environmental management plans. It should not be solely relied upon. The information contained is subject to change and updates.

