Kaituna River and Ōngātoro/ Maketu Estuary Strategy

From Okere Falls to Ōngātoro/Maketu Estuary

Environment Bay of Plenty Regional Council

Destination Rotorua

Rotorua District Council

Western Bay of Plenty District Council

Tauranga City

Acknowledgements

This document has been put together by Environment Bay of Plenty, Western Bay of Plenty District Council, Tauranga City Council and Rotorua District Council – working with representatives from the Kaituna/Maketu community – including iwi, hapū, individuals, community groups and organisations.

Special thanks go to:

Members of the Working Party, Focus Groups, and tangata whenua for their enthusiasm, commitment and hard work, including:

- Maketu Estuary Focus Group
- Wetlands and Aquatic Habitat Focus Group
- Urban and Industry Development Focus Group
- Recreation Focus Group.

The wide range of people who put time and energy into participating in public meetings and discussions, providing written feedback and attending the hearings – all of which improved the content of the Strategy.

Thanks also to the current and past members of the Kaituna Maketu Joint Council Committee for their guidance and debate. Particular thanks go to Hearings Panel whose recommendations have been incorporated into the Kaituna Maketu Joint Council Committee Public Feedback Report and this Strategy. A summary of the responses to public feedback follows:

- **Kaituna River to Ōngātoro/Maketu Estuary re-diversion** – The Hearing Panel made recommendations based on public feedback and its site visit. The Hearing Panel recommended:
  - Environment Bay of Plenty commit to progressing the re-diversion of the Kaituna River to the Ōngātoro/Maketu Estuary.
  - That the preferred option is the full re-diversion of the river back to the estuary with the capability of flood relief through Te Tumu Cut.
  - In accordance with strong community support, that re-diversion should be advanced as soon as possible by working with mana whenua and landowners on a range of complex issues.
  - Funding to be pursued with vigour from all agencies and central government.
- **Improving water quality –** Some feedback raised concerns about insufficient information on current and future land use and their impacts on water quality in the draft Strategy. This concern has been acknowledged and additional content has been added.
- **Restore and develop wetland** – The importance of wetlands functions emphasised in the feedback has been acknowledged. The Lower Kaituna Wildlife Management Reserve is now highlighted in the Strategy. An initiative to explore and estimate how much wetland restoration and extension can be realistically achieved by 2018 has been included in the Implementation Plan. In the future, agencies will work with landowners and mana whenua property rights to find locations wetland enhancement.
- **Recreation and conservation space** – The consideration of a sub-regional/regional park has been identified as a long-term action to be considered in the development of the next Long-Term Council Community Plans. Other sources of funding, such as donations and bequests, have been promoted by the Committee as a way to help provide a sub-regional/regional park. Jet boat speed limits on the Kaituna River are being considered under the Regional Navigation and Safety Bylaw review. Opportunities exist for relevant agencies and mana whenua to work together and manage recreational activities in the area.
- **Strategy implementation and management** – The public feedback had a focus on actions, and emphasised the importance of monitoring the effectiveness of the Strategy. In response to this, section 1.3 of the Strategy outlines how the Strategy will be delivered; and an implementation plan and annual reporting template have been added to the Strategy. It also has been acknowledged that it will take the whole community working together to deliver the vision of the Strategy. Iwi and the community are encouraged to use the strategy as a catalyst for continuing improvement, to express an interest in contributing to, and to be involved in, the annual reporting process. It is also anticipated that iwi will want to discuss co-management options with agencies.

Status of the Strategy

This Strategy is a non-statutory document. This means that is does not contain rules and cannot require changes to other statutory documents. It provides guidance for the management of the Kaituna River and Ōngātoro/Maketu Estuary environment. It may or may not result in changes to planning documents. Some of the actions may require resource consent. Any such decision will be made at the discretion of individual agencies and will follow statutory procedures.

Whakatauki

"Ka waiho atu te tokotoko o Ngatoro i reira hei tiaki i a raua Pi"

Leave Ngatoirangi's (Ngatoro) sacred rod there as a guard for those headwaters.

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"Ōngātoro" is the tangata whenua name for the Maketu Estuary.

The name comes from "Ngatoroirangi" who was the esteemed tohunga/navigator of the Te Arawa waka.

The Vision: Where we want to be in 10 Years

The vision for the Kaituna River and Ōngātoro/Maketu Estuary Strategy is to ensure that as a wider community our policies and plans, our activities and actions:

"Celebrate and honour Kaituna River and Ōngātoro/Maketu Estuary life as taonga"

"Whakanuia, whakamawawatia te mauri o te Kaituna me Ōngātoro hei taonga"

The Kaituna River, wetlands and Ōngātoro/Maketu Estuary are taonga – valued by the community for their clean water, healthy ecosystems, recreational and cultural values. The vision for the Kaituna River and Ōngātoro/Maketu Estuary is to ensure that by 2018 there is an improvement in the sustainable management of valuable river and estuary resources through our policies, plans, activities and actions. This will ensure that the river and estuary remain home to indigenous flora and fauna, including native plants, kōura, eels, fish, trout, inanga and waterfowl, and be able to provide a bountiful source of kaimoana.

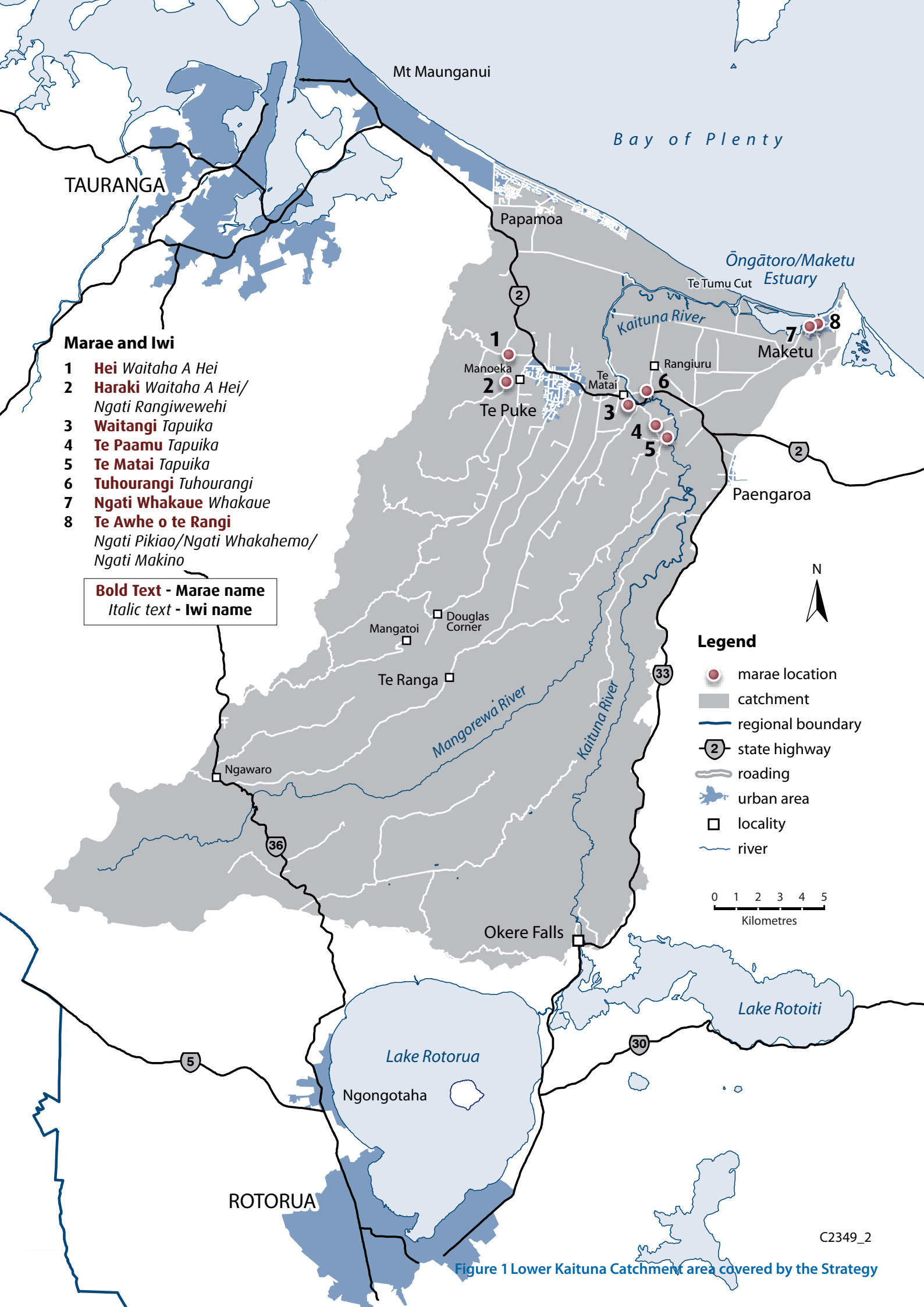


Figure 1 Lower Kaituna Catchment area covered by the Strategy

Chapter 1: About this Strategy

1.1 Overview

This Strategy encompasses the Kaituna River, and surrounding environment, as it flows from the Okere Falls at Lake Rotoiti and out to sea at its mouth at Te Tumu (Figure 1 shows the catchment area covered by this Strategy). The Strategy also includes the Ōngātoro/Maketu Estuary, which has strong physical and cultural associations with the Kaituna River.

The Strategy sets out why people value this environment, their concerns for it (the issues) and a vision for its future. It then identifies a set of key outcomes that the community wishes to see achieved, and suggests some high-level actions that can be undertaken to help realise these outcomes. An integrated approach to the management of the catchment will be required to fully implement this Strategy.

The Kaituna River and Ōngātoro/Maketu Estuary Strategy provides a framework for local authorities, government agencies, tangata whenua, local communities, industry organisations, and non-government organisations to co-ordinate and prioritise the actions that will achieve the vision and outcomes of the Strategy by 2018.

The Strategy is based on the work of the community as represented by the Strategy Working Party and Focus Groups.

1.2 What the Strategy Aims to Achieve

The aim of the Kaituna River and Ōngātoro/Maketu Estuary Strategy is to achieve the vision for the river and estuary by 2018, including sustainable management of the river and estuary resources to ensure the community values of clean water, a healthy ecosystem, recreational and cultural values are maintained, and to provide a bountiful source of kaimoana.

In practical terms, achieving the vision and outcomes of the Strategy means different things to different people within the community. For some, achieving the vision will mean that:

- The waters of the river and estuary are clean enough to swim in
- There is enough water in the river and estuary to support:
  - the mauri of the river and estuary
  - good water quality
  - wetland restoration
  - a range of recreational and non-recreational uses
- Wetlands are restored in the Lower Kaituna Catchment
- There are thriving populations of indigenous flora and fauna, native plants, kōura, eels, fish, whitebait, trout and waterfowl
- Tangata whenua are easily able to get kaimoana, and other kai for themselves and their manuhiri.

1.3 Delivering the Strategy

1.3.1 Implementation

The Strategy's Implementation Plan outlines a programme of actions to achieve the Strategy's vision and outcomes.

It is anticipated that the Strategy will be used by the Kaituna River and Ōngātoro/Maketu Estuary community into the future as a catalyst for continuing to work towards the vision to "celebrate and honour river and estuary life as taonga". This can occur through requests to local authority Annual Plans and Ten Year Plans, and through input into the processes and systems that govern how development occurs. Other projects might be delivered in partnership with research institutes as research topics.

It is also anticipated that Strategy partners will use the Strategy to:

- Review how work-streams that relate to the Kaituna River and Ōngātoro/Maketu Estuary are being delivered
- Ask whether processes can be improved
- Look for different or better ways to manage resources for the Kaituna River and Ōngātoro/Maketu Estuary
- Prioritise resources and efforts.

It is expected that councils will receive submissions on Kaituna River and Ōngātoro/Maketu Estuary actions through their respective Ten Year Plan processes, and can give effect to funding certainty through these processes.

We acknowledge that it will take the whole community taking action to deliver the Strategy's vision.

The Implementation Plan is outlined in Chapter 8.

1.4 Monitoring and Reporting

Monitoring progress against the Strategy is by annual reporting of the Strategy's Implementation Plan co-ordinated by Environment Bay of Plenty. An annual reporting template is provided in Appendix 1. It allows Strategy partners to provide an annual progress update on the Strategy. Iwi, the community and other agencies are welcome to contribute to the Strategy's annual reporting process.

Active monitoring of the effect of the Strategy actions will ensure that areas needing more attention or improvement can be identified. An assessment will be made as to whether a set of easily understood indicators needs to be developed for the community to measure progress. This will be in addition to Environment Bay of Plenty's biological and water quality monitoring. Where appropriate, these indicators will be aligned with indicators developed for reporting on other Strategy documents, such as councils' Ten Year Plans and State of the Environment reports. Indicators could include surveys on:

- Pipi in the Ōngātoro/Maketu Estuary
- The abundance of kaimoana collected
- Indigenous bird/fish populations in the river, estuary and wetlands
- The area of wetlands established each year.

Chapter 2: About the Kaituna River and Ōngātoro/Maketu Estuary

2.1 He Tangata – the People

The Kaituna River Catchment and Ōngātoro/Maketu Estuary are highly valued by the people who live and work alongside them, and by those who visit. They are an essential part of a community that is connected by the water that flows from Okere Falls to the Ōngātoro/Maketu Estuary and out to sea at Te Tumu.

This environment is the ancestral home of Tapuika, Ngati Whakaue ki Maketu, Ngati Pikiao, Waitaha, Ngati Makino and Ngati Whakahemo, while other iwi also have ancestral connections. Iwi refer to this area as the traditional "food bowl" of the Te Arawa people. It is also highly valued for:

- The beauty of its natural habitats that range from wetlands and swamps to the mud of the estuary and the sands of the dunes
- Its historical and cultural landscape
- The eels, whitebait, shellfish, fish, vegetation and wildlife it sustains
- The economic prosperity it brings through its farms and industries.

Above all, this environment is valued for the river and estuary lifestyle it provides to tangata whenua and the wider community who want to sustain and celebrate river and estuary life.

"To think of the Kaituna River is to think of eels. The name itself comes from the prolific supply of eels it carries…"

2.2 He Mānatunatu – the Issues

Much of the river and estuary lifestyle that the community wishes to celebrate is dependent on water, its quality and quantity – the lifeblood of the river and estuary – but there has been a general decline in water quality in both the Kaituna River and Ōngātoro/Maketu Estuary.

There are also community concerns about the pressures that the Kaituna River and Ōngātoro/Maketu environment faces from:

- **Flood protection works** that reclaim water bodies and drain wetlands, affecting water levels, flooding and the shape of the river and estuary – they can also damage shellfish and habitats for aquatic and bird life.
- **Development** around streams, the river and estuary can lead to loss of habitats, reduced buffers between the land and water, and an increase in nutrients and contaminants entering the water. It can also lead to loss of cultural landscapes and significant cultural sites, creating instability for Māori, anthropogenic effects and impacting on the ability of tangata whenua to exercise kaitiakitanga.
- **Silt** washing into the Kaituna River and silt and sand incursion into the estuary can change the way water circulates, trap pollutants and affect shellfish beds.
- **Stock grazing** can affect salt marsh and river/stream edges, nesting grounds for birds and spawning habitats for fish.
- **Nutrients and contaminants** washing into the stream, rivers and estuary from farms and septic tanks. Industry and development can lead to poor water quality affecting fish, shellfish, vegetation and river and estuary life.

A reduced flow of water to the estuary from the river remains a concern to the local community as a relatively small volume of water passes through Ford's Cut.

2.3 He Taiao – the Place

2.3.1 Kaituna River

The Kaituna River is located in the central Bay of Plenty. It is approximately 50km long and water takes about a day to travel from Okere Falls to the coast at Te Tumu. The entire Kaituna Catchment covers 1,250 square kilometres (125,000ha), while the catchment downstream of Okere Falls is about 60,000ha.

Historically, the full flow of the Kaituna River passed through the Papahikahawai Channel into the Ōngātoro/Maketu Estuary, which was used as a port. Since the 1950s there have been significant changes to the flow regime of the estuary that have affected the saltmarsh, sedimentation rates and erosion of the spit.

Today, the Kaituna River flows straight out to sea at Te Tumu – while a small part of the river's flow is diverted into the Ōngātoro/Maketu Estuary via Ford's Cut.

In its upper reaches the Kaituna River drops some 260m in elevation and is fast flowing. In this part, the river, joined by springs, passes through a deep, narrow gorge and includes a number of waterfalls before it slows down, meandering through the alluvial terraces of its mid-reaches.

The lower Kaituna basin soil consists of peat and sand deposits. By the time the river reaches the sea, about half its water has come from lakes Rotorua and Rotoiti with the other half coming from lower catchment springs and tributaries, such as the Mangorewa River and Waiari Stream. The tidal zone of the river (where fresh water is diluted with sea water) reaches 4km upstream from Te Tumu.

"From the estuary we would get pipi, koterotero (sea-anenome), tuangi (cockles), flounder and titiko. At the mouth of the estuary would be our rock where we got mussels, we could also get pāua, pūpū, scallops, kukuroa (horse mussels) and fish." - J. Tapsell

2.3.2 Tributaries

The Mangorewa River is a major tributary, especially during wet weather, when it contributes greatly to flood flows. Other significant Kaituna River tributaries include the Waiari, Pakipaki, Ohineangaanga, Raparapahoe, Parawhenuamea, Atuaroa and Kopuaroa Streams, which originate in the hills upstream of Te Puke.

2.3.3 Land Use

The upper portions of the lower catchment are dominated by pastoral and plantation forestry land uses (see Figure 2). Some of the streams and rivers feeding into the Kaituna River are still surrounded by native forest and there has been some conversion of plantation forestry to dairy farms. Horticulture is common in the mid-section – kiwifruit in particular. The lower part of the catchment contains productive river flats which have been drained, predominantly for dairy farming. The lowest section of the catchment includes part of the future urban growth area at Papamoa East.

The name "Ōngātoro" is derived from the phrase "Te Awanui o Ngatororirangi" (the large waterway or river of Ngatoroirangi). In Tapuika Iwi's history, Ōngātoro is derived from "Te Kerekeretanga o Ngatoroirangi". Ngatoroirangi was the esteemed tohunga (priest and navigator) of the Te Arawa waka, the final resting place of which was the Maketu estuary. Naming the estuary after the tohunga signifies the importance of estuary to its peoples.*

** For further information see the various Iwi histories commissioned as part of the strategy development.*

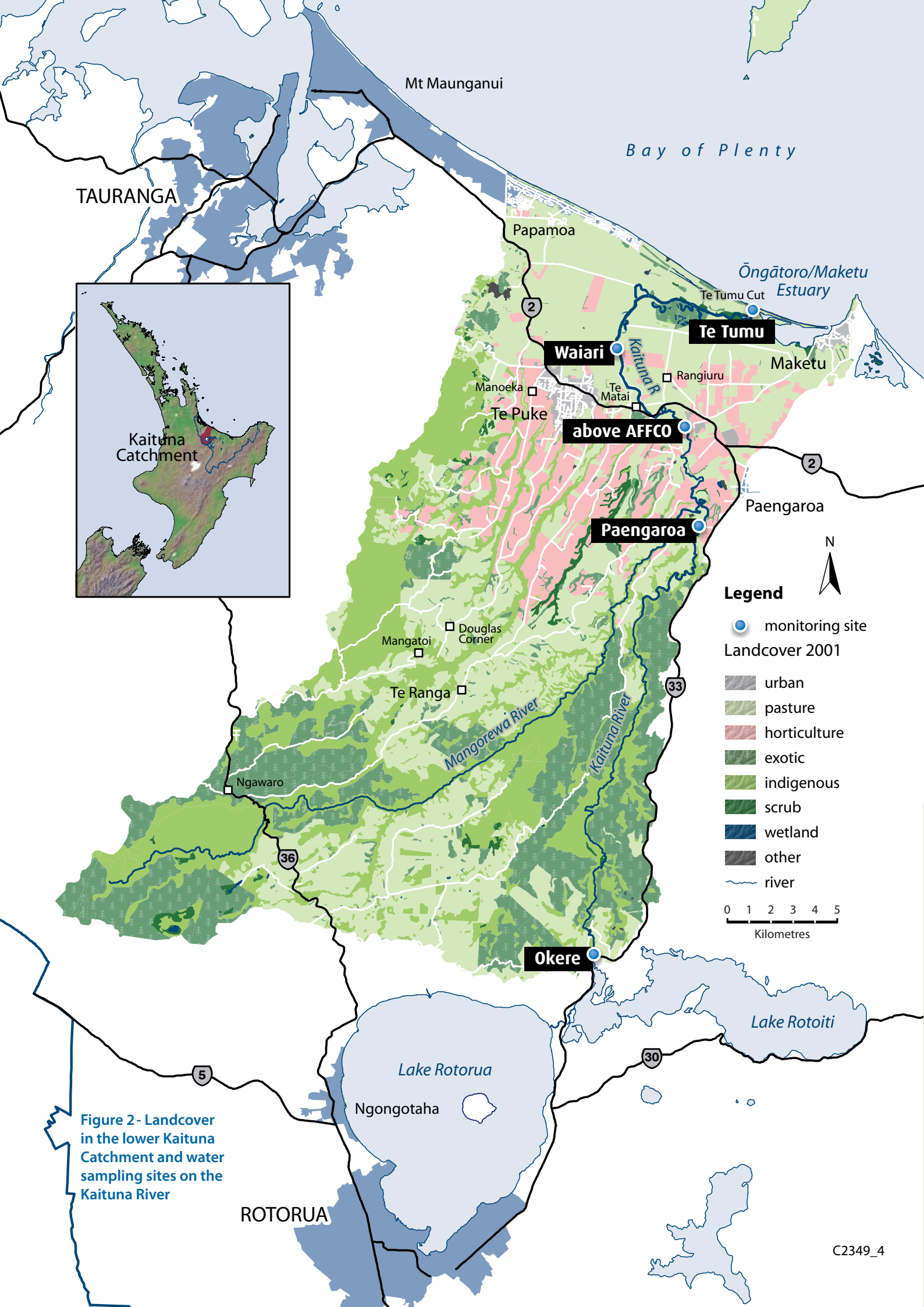


Figure 2 - Landcover in the lower Kaituna Catchment and water sampling sites on the Kaituna River

2.4 Timeline of Changes to the Kaituna River and Ōngātoro/Maketu Estuary

Early 1900s – Okere Falls used to generate electricity for Rotorua.

1907 – After severe floods the Kaituna River created a new channel directly out to sea at Te Tumu, bypassing the Ōngātoro/Maketu Estuary. This improved the navigability of the lower river.

1920s – Kaituna River Board constructed Ford's Cut to divert water from the river back into the Ōngātoro/Maketu Estuary.

1928 – Rail line from Te Puke to Auckland completed and roads constructed across the swamps which helped open up much of the farming land that is in use today.

1940s – Okere Power Station closed.

1950s – The Kaituna River diverted away from the Ōngātoro/Maketu Estuary as a temporary measure. Ford's Cut and Papahikahawai Channel blocked in an effort to lower river levels upstream and reduce flooding of surrounding land.

1966 – Establishment of a meat freezing plant (AFFCO) adjacent to the lower Kaituna River. Waste water from the factory is discharged to the river.

1970s – Proposal to discharge sewage from Rotorua into the Kaituna River. This proposal was eventually abandoned following strong opposition from iwi and other members of the community.

1974 – Causeway at Ford's Cut reinforced, further restricting water flow into the estuary. Informal stopbanks and drainage work constructed around Papahikahawai Island.

1979 onwards – Flood protection works undertaken as part of the Kaituna Catchment Control Scheme.

Mid-1990s – Some flow from the Kaituna River is diverted back into the Ōngātoro/Maketu Estuary through Ford's Cut.

2008 – Ohau Wall built to divert Lake Rotorua outflow straight into Okere Falls, bypassing Lake Rotoiti, to improve the water quality of Lake Rotoiti.

Kaituna Catchment Control Scheme

The Kaituna Catchment Control Scheme is a drainage and flood management scheme that takes into consideration the characteristics of the whole Kaituna Catchment.

The scheme includes soil conservation works in the upper catchment/lakes area; flood control works through Rotorua; lake-level control structures on Lakes Rotorua and Rotoiti; flood protection works; drainage and pumping in the lower Kaituna basin; and supply of water to the Ōngātoro/Maketu Estuary.

These works provide protection of valuable assets and to the communities living and working in the Kaituna Catchment; however they can also affect water quality and the health of the aquatic ecosystems.

Chapter 3: Community Concerns

Concerns raised by the community about the Kaituna River and Ōngātoro/Maketu Estuary have been grouped under the following headings:

- Kaitiakitanga
- Water quality in the Kaituna River
- Urban and industrial development
- Flood management
- Environmental health of the Ōngātoro/Maketu Estuary
- Wetlands and aquatic habitats
- Recreation.

3.1 Kaitiakitanga

Upon entering the Kaituna River estuary the bow of the Te Arawa canoe was tethered to a large rock, Tokaparore, and to an anchor rock called Tūterangiharuru, which held her fast in the current of the Kaituna River. The descendants of these arrivals are the Te Arawa people, formerly known as Ngati Ohomairangi.

Maketu is one of the most historic coastal landmarks in the Bay of Plenty. It has long been revered by the tribes of Te Arawa. Before the landing of the waka at Maketu, the taumau of Hei, Tia and Tamatekapua took place. The name Maketu is a reminder of the fatherland Hawaiki, from where these early explorers journeyed.

The Te Arawa tribes include Tapuika, whose people live on the coastal plain and alongside the lower reaches of the Kaituna River. Tapuika's territory merges with Ngati Pikiao, who occupy the land alongside the upper reaches of the Kaituna River and most of the northern shores of Lake Rotoiti. Ngati Whakaue ki Maketu and Waitaha iwi also have a close relationship with the Kaituna River and Ōngātoro/Maketu Estuary.

The Rotorua lakes, Kaituna River and Ōngātoro/Maketu Estuary all lie within the ancestral land of Te Arawa, which stretches from Mt Tongariro to the sea. All four water bodies are important to Te Arawa's tribal history and culture.

The Kaituna River and Ōngātoro/Maketu Estuary have been a bountiful source of fish, shellfish, eels, fresh-water crayfish (kōura) and many other kinds of kai (food) to Te Arawa – the Ōngātoro/Maketu Estuary was historically their "food bowl".

In traditional Māori society, the ability to collect kai awa (food from the river) and kaimoana (food from the sea) enriches the people and so is of great cultural significance. The Ōngātoro/Maketu Estuary has had great importance for Te Arawa since their beginnings in Aotearoa.

Tangata whenua have a traditional relationship with the Kaituna River Catchment and Ōngātoro/Maketu Estuary. They will continue to provide for their relationships with their ancestral taonga and exercise their role as kaitiaki of that taonga.

Iwi are concerned:

- About the lack of recognition for their history, mana, kaitiakitanga (guardianship and stewardship) and cultural practices related to the estuary and river
- That major decisions have been made in the past which have removed their influence and connection to places over which they traditionally have guardianship
- That Māori cultural values need to be better incorporated into the management of the Kaituna River and Ōngātoro/Maketu Estuary.

Kaitiakitanga concerns are addressed in the key outcomes in Chapters 6 and 7.

3.2 Water Quality in the Kaituna River

Water quality in the Kaituna is dependent on a number of factors. Although half the water in the lower river comes from Lakes Rotorua and Rotoiti, most of the influences that affect the quality of the water are located downstream of the lakes. These include the discharge of pollutants into the water; the surrounding land use; and the quality of water in its tributaries.

Tangata whenua have consistently expressed concerns about the mauri (life principle) of the Kaituna River and Ōngātoro/Maketu Estuary. Their kaitiakitanga is based on maintaining the mauri of the waters. It is important to tangata whenua that the pollutant impacts are addressed and the natural state of the waters restored.

Environment Bay of Plenty monitors water quality at a number of sites on the Kaituna River (see Figure 2) to assess whether there have been changes to water quality over time, and to work out which factors are likely to be having a negative impact. The health of the river has also been monitored with ecological surveys. This involves examining the plant and animal communities living in streams to find out whether they include the diversity and number (abundance) of species that would normally live in a healthy river ecosystem.

The following types and sources of pollutants have been identified by the community as contributing to poor water quality in the Kaituna River:

- Sediment
- Nutrients
- Discharges into the river
- Septic tanks – a source of bacteria and nutrients
- Surrounding land use and drainage.

Extensive water quality monitoring has been undertaken in Lakes Rotorua and Rotoiti, which form the upper catchment of the Kaituna River. Although water quality in the upper reaches of the river is generally good, this monitoring shows that the long-term deterioration of water quality in the lakes has had some impact. This impact is illustrated by increased turbidity, suspended solids and bacterial levels and, most noticeably, nutrients. Action plans are in place for both lakes to address these issues.

The primary issue with the lakes' discharge has been potentially toxic blue-green algae flowing into the river system. Remedial actions for the lakes are largely focused on eliminating these algal blooms. This benefit will flow on to the river (Park, 2007).

Water quality is declining in the lower part of the river, which is being affected by land-use activities (see Figure 2) and discharges of contaminants. Nutrient levels are increasing in the river over time, and at some sampling points levels of suspended solids are also increasing.

Nutrients are nitrogen and phosphorus-containing compounds that are dissolved in the water and used by aquatic plants and algae as a food source. An imbalance of nutrients (either too few or too many) alters the type and number of plants and algae that grow in the water. This in turn affects

which fish, birds, invertebrates and other animals are able to live in the river, and can contribute to the formation of algal blooms.

Nutrients in the river come from a number of places, including cold-water springs feeding into the upper section of the river – the water from these springs contains high levels of nitrogen and phosphorus from the volcanic rocks that lie beneath the springs.

As well as non-point sources of contamination from land use, there are two significant point-source discharges, both of which are subject to resource consent under the Resource Management Act 1991. The AFFCO freezing plant at Rangiuru discharges waste water that includes nitrogen and phosphorus, and levels of these nutrients in the river water are noticeably higher downstream of the AFFCO discharge. Treated sewage is discharged into the tributary Waiari Stream from the Te Puke waste-water treatment plant and also has an effect on water quality in the river.

There has been a long-term deterioration in the quality of the water in the upper catchment and lakes. In the lower catchment and Kaituna River itself, there have been increasing pressures from land-use change and point-source discharges. Data from 1989 onwards compared to historic data from 1975 shows that nitrogen concentrations in the Kaituna River have increased between 50 and 100%. For the lower Kaituna River, nitrate levels at Te Matai (Waitangi) have been increasing at the rate of 2% a year since 1990 (see Figure 3). Phosphorus concentrations do not show any change since 1975. Monitoring shows that water quality in the Kaituna River is generally good in the upper section of the river, but declines in the lower reaches (see Figure 4).

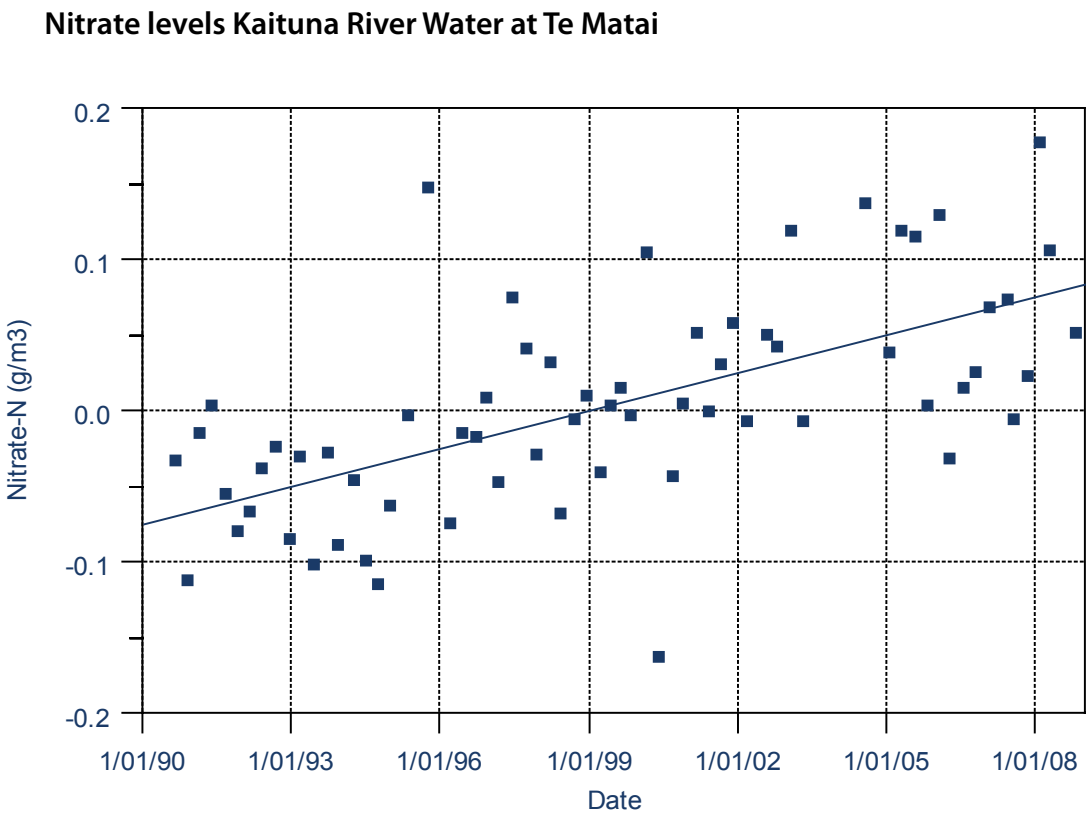
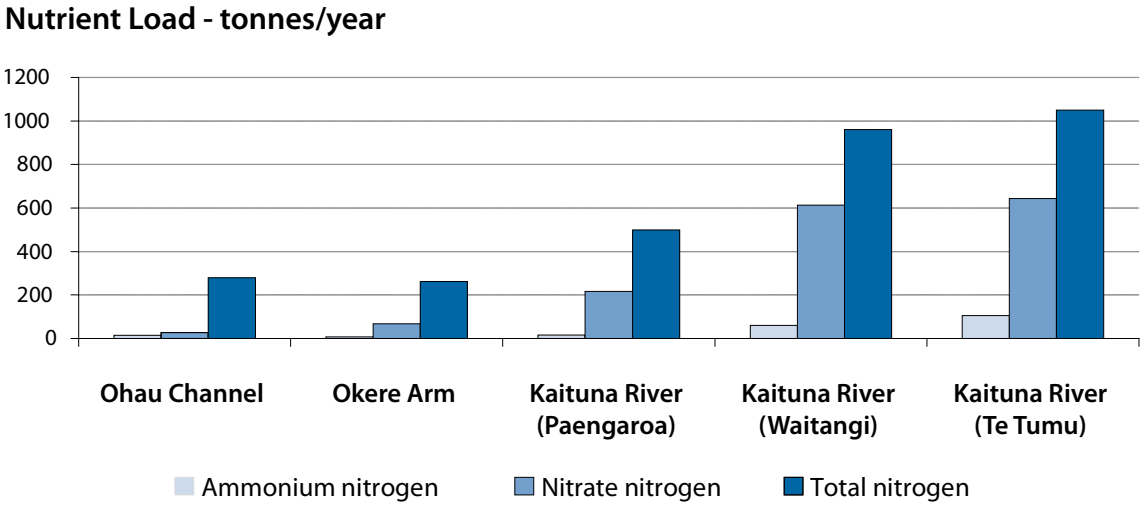


Figure 3 Nitrate levels in the lower Kaituna River at Te Matai (Waitangi).



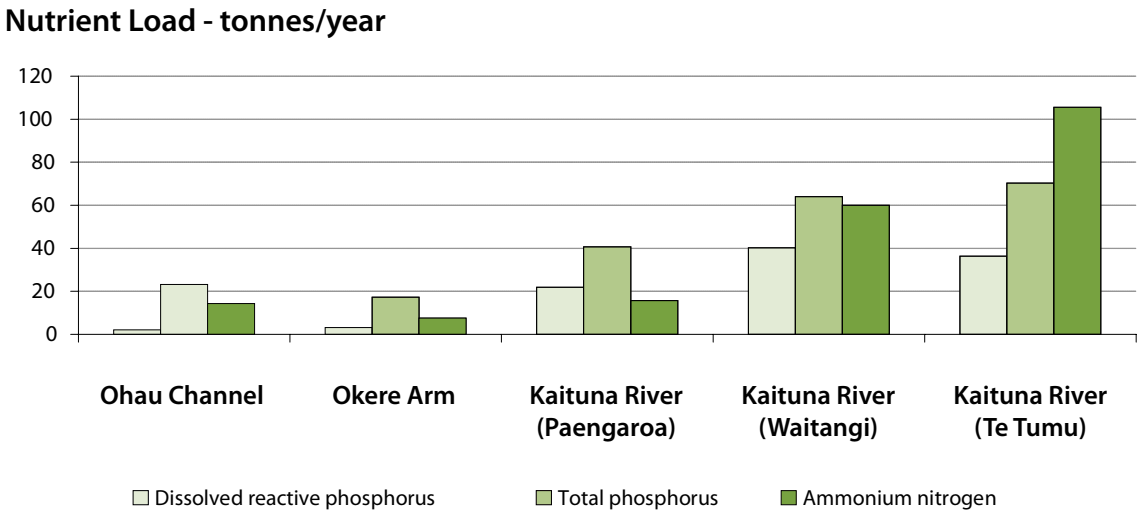


Figure 4 Average nutrient load (tonnes/year) from five sites.

Bacteria levels have been improving gradually since 1990 primarily due to improvements in industrial discharge from the AFFCO plant (see Figure 5).

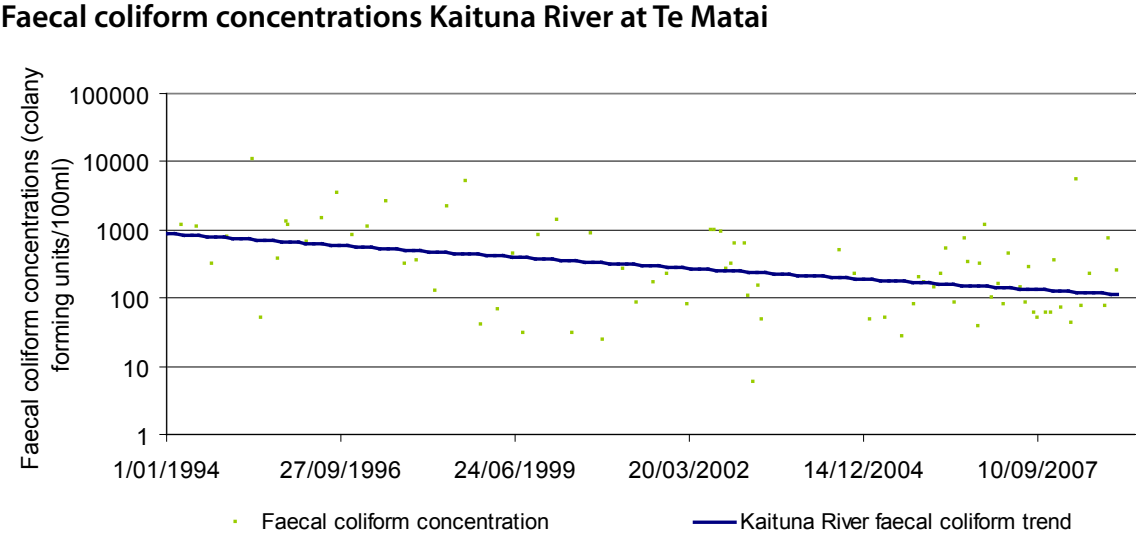


Figure 5 Bacterial (faecal coliform) loads at Te Matai.

Most of the time water quality in Maketu Estuary meets standards set in most environmental guidelines (including guidelines for the protection of the aquatic ecosystem) but is not as good as other Bay of Plenty estuaries. In terms of recreational bathing, the estuary is acceptable, but influenced by septic tank seepage from Maketu township (Park, 2007).

High bacteria levels in the water can mean that it is not safe to eat kaimoana (Park, 2007). Shellfish sampling in the estuary has showed an increase in bacteria levels since 1994 with more recent data (since 2003) trending back towards 1994 bacteria levels. Bacteria levels in shellfish have occasionally reached levels considered unsafe for human consumption.

The river mouth at Te Tumu has been identified by Environment Bay of Plenty as a site needing action to address potential water quality issues. Nutrient levels are a problem here, as well as bacterial contamination. The community wants to ensure that water quality in the lower reaches of the Kaituna River is protected to allow for the harvesting of kaimoana.

Water quality concerns are addressed in the key outcomes in Chapter 4.

3.3 Urban and Industrial Development

The community is concerned about the environmental impact of urban and industrial development in the lower Kaituna Catchment, with key concerns focusing on land-use change and protection of significant sites and values.

New development often results in an increase in population, an increase in impermeable surfaces, and the construction of new buildings and infrastructure. The community is especially concerned about the effects of development on low-lying land such as at Papamoa East and Rangiuru.

The effects associated with land development can include increased:

- Stormwater volume that adds more pollution and sediment to the river and estuary
- Pressure on the river drainage scheme
- Pressure on the sand dune system
- Pressure on recreation spaces.

Papamoa East is identified as a significant growth area in the SmartGrowth Strategy. Tauranga City Council has been granted a 35-year consent by Environment Bay of Plenty for the management and discharge of stormwater from the Papamoa urban growth area. This consent provides for two ocean outfalls and six outlets to the Kaituna River.

Further to these effects, the construction of new buildings on inappropriate sites may impact on community values. Particularly sensitive sites include:

- Significant ecological sites
- Significant cultural sites
- Landscapes with natural character values.

Land-use change and development concerns are addressed in the key outcomes in Chapters 5, 6 and 7.

The community also identified demand for water abstraction as a key concern. Increasing water demand is a common issue for the Western Bay of Plenty that will be addressed in the separate Water Supply Strategy for the Western Bay of Plenty.

3.4 Flood Management

The community has two concerns relating to flood management:

- Blockages to stormwater flow-paths into the Ōngātoro/Maketu Estuary
- Developing a reliable flood-level model for the Kaituna River.

Sediment building up in stream channels is on-going and can reduce the flow-carrying capacity of streams, thereby affecting flood-control capacity. Continued monitoring of channel changes is necessary and occasional channel excavation will be required. As well, riparian land should be set aside as reserve when new urban areas are developed to provide the access required for stream-bank maintenance.

A number of factors, including climate change, will affect the reliability of a flood-level model for the Kaituna River. A significant factor is the proposal to re-divert the Kaituna River's flow back through the Ōngātoro/Maketu Estuary. Depending on how it is done, the re-diversion could raise flood and drainage water levels and have an impact on flood control in the lower Kaituna area. There are considerable issues to work through to reach an outcome that will satisfy all parties.

Flood management concerns are addressed in the key outcomes in Chapters 5 and 6.

3.5 Health of the Ōngātoro/Maketu Estuary

The community has indicated that restoring the Ōngātoro/Maketu Estuary is a priority because of its significant history and heritage.

The community is concerned about the:

- Ecological condition of the estuary
- Lack of water flow into the estuary
- Quality of water feeding into the estuary
- The availability of kaimoana.

Lack of water flow into the estuary appears to be the central cause of its degradation, and the community has identified the return of water from the Kaituna River into the estuary as crucial to its recovery.

The community is concerned about the amount of sediment entering the estuary and the lack of erosion-protection for the sand dunes and sand spit. In the last few decades, the Ōngātoro/Maketu Estuary community has witnessed dramatic changes in the estuary. There used to be three channels, but now there is only one, and the sand dunes used to be so tall that they blocked the view of Motiti Island from Maketu township – now Maketu residents can see the horizon past the dunes. Erosion along the stream banks and from sand dunes may have contributed to what the community has observed.

Water quality in the estuary must also be protected and enhanced as the ecology of the estuary cannot improve if the water cannot support healthy aquatic ecosystems.

Concerns about the health of the Ōngātoro/Maketu Estuary are addressed in key outcomes in Chapters 4, 5, and 7.

3.6 Wetlands and Aquatic Habitats

Over the last century there has been a significant loss of wetlands in the Kaituna River Catchment to the point where only 1.5% of the freshwater wetland that existed in 1840 now remains. In 1840 there were 6,100ha of freshwater wetland compared to 92ha in 2001.

The community is concerned about the loss of wetlands and the degradation of those that remain.

Wetlands provide habitat for a diverse array of animal species, including threatened bird species such as the mātātā/fernbird and the matuku/bitten. Wetlands are important for waterfowl, as well as providing a habitat for fish to breed, spawn and rear their young.

It is important to have enough wetlands and vegetated waterways to support healthy aquatic habitats and eco-systems.

Freshwater wetlands typically comprise a diverse range of water-tolerant native plants such as harakeke/flax, raupō, sedges, mānuka and tī kouka/cabbage tree. Exotic pest plants, such as willow and parrot's feather, are now common in degraded freshwater wetlands.

Wetlands are important for:

- Māori cultural uses, including traditional food sources and fisheries, paru (mud dye), urupa, weaving resources, and mahinga kai
- Natural character, landscape, amenity and recreational values
- Aquatic and semi-terrestrial habitats for indigenous flora and fauna
- Water quality improvement due to filtering of sediments
- Water quantity control and flood mitigation by holding back water.

The community would like to see an increase of 100ha in the area of wetlands in the lower Kaituna River Catchment by 2018.

Concerns about wetland areas are addressed in the key outcomes in Chapters 4, 5, 6 and 7.

3.7 Recreation

Recreational use is an important aspect of the Kaituna River and Ōngātoro/Maketu Estuary. There are three main community concerns relating to this:

- Access and opportunities
- Conflicting activities
- Water quality.

The community is concerned there will be insufficient recreation space and facilities as the population increases, and inadequate access to public lands, particularly for walking, near the river and estuary.

Another concern is that of managing conflicting or inappropriate recreational use of the Kaituna River and Ōngātoro/Maketu Estuary. The community fears some activities could damage places of great community value, or attract inappropriate activities which disrespect the customs and protocols (mana) of a place.

The effects of substandard water quality on recreational activities are also of concern. Poor-quality water that has an unusual colour or smell or contains a large amount of debris can limit what people do, and their enjoyment of leisure activities such as swimming and gathering food.

Concerns about recreation are addressed in key outcomes in Chapters 4, 6 and 7.

3.8 Other Community Concerns

During the development of this Strategy the community has identified concerns over a number of resource consent matters, such as the Ohau Channel diversion, a proposed hydro-electricity scheme and land-use changes. It has been suggested that authorities should withhold the granting of all resource consents relating to the Kaituna River and Ōngātoro/Maketu Estuary area until this Strategy is completed. However, the process for granting resource consents is set out in the Resource Management Act and consent authorities have an obligation to follow the procedures timeline set out in the Act. Moreover, each resource consent application is considered on a case-by-case basis, which means that the environmental impacts of each application are assessed carefully.

How are the River and Estuary used for Recreation?

The Kaituna River and Ōngātoro/Maketu Estuary are important recreational areas in the Bay of Plenty. The river and estuary are used for both active and passive recreational pursuits. The upper reaches of the Kaituna River have world-class white-water rapids that attract both local and international kayakers and rafters. Many commercial operators run adventure tourism (white-water rafting, white-water kayaking and river boarding) in the upper Kaituna. The Ōngātoro/Maketu Estuary is an excellent location for kite boarding and wind surfing, and offers a safe swimming area, with the adjacent park catering for whānau picnics. Schools also use these areas of the estuary for seashore studies. In the right conditions the Ōngātoro/Maketu Estuary mouth and the Kaituna Cut at Te Tumu offer excellent surfing opportunities. The river and estuary have traditionally been used for eeling and whitebaiting, both of which are still popular. Surf-casting for kahawai and snapper is very popular at the mouths of the river and estuary. Netting for fish and shellfish gathering are also popular activities in the Ōngātoro/Maketu Estuary and lower reaches of the Kaituna River.

Photo Peter Graney

Chapter 4: Key Outcome - Improving Water Quality

One of four key outcomes identified as a goal and a desired action from the community is to improve water quality.

People value clean, fresh water for many reasons – recreational, aesthetic, ecological and cultural. Good water quality means that a stream or river is able to support the range of uses and values for which it is required, provide for a healthy aquatic ecosystem and has the potential to meet the needs of future generations. In other words, water quality influences each of the key outcomes. Achieving and maintaining good water quality in Lakes Rotorua and Rotoiti, the Kaituna River and Ōngātoro/Maketu Estuary is essential to make the vision a reality.

The community is particularly concerned about pollution entering the river from:

- Industry along its lower reaches
- Stock grazing near waterways (effluent discharge)
- Lake Rotorua and Lake Rotoiti
- Urban stormwater
- Streams and tributaries carrying sediment and silt from upstream land-use changes.

Action plans are being developed for Lakes Rotorua and Lake Rotoiti to address their water quality, therefore actions relating to improving lake-water quality are not contained in this Strategy.

Management Goal: Protect and enhance water quality in the Kaituna River and Ōngātoro/Maketu Estuary

Strategic Actions:

- Manage land use to minimise sediment and contaminant run-off entering the Kaituna River and its tributaries and associated waterways from many different sources
- Use riparian strips, swales and wetlands for stormwater treatment
- Consider alternative options for sewage and stormwater treatment
- Ensure sewage discharges comply with Regional Plan rules
- Endeavour to meet the targets set in the Dairy and Clean Streams Accord.

Chapter 5: Key Outcome - Restoring Healthy Ecosystems

Restoring healthy ecosystems is a key outcome, particularly in the Lower Kaituna River and Ōngātoro/Maketu Estuary.

The Maketu community has observed fish species, such as mullet, disappear and a reduction in whitebait numbers, fish habitat and spawning areas, wetlands and riparian vegetation along the Kaituna River. The river and estuary community wants to see the natural environment of the waterways restored and areas of robust wetland (particularly in the lower reaches) enhanced:

- So the river and its tributaries provide good habitats for indigenous flora and fauna
- So fish can migrate freely along rivers and streams, and spawn in the tidal reaches of the lower Kaituna River
- To provide for a balanced, nourishing, natural environment (by stabilising coastal sand dunes and the sand spit, and increasing wetland and riparian margins).

Management Goal: Improve the coastal and tidal environment

Significant Action:

- Kaituna River to the Ōngātoro/Maketu Estuary re-diversion (exploring options to increase water flow from the river to the estuary).

Strategic Action:

- Rehabilitate the coastal sand-dune environment.

Management Goal: Protect and enhance existing wetlands, while increasing the extent of wetlands in the lower Kaituna Catchment, to provide for Māori cultural values and uses of wetlands, habitats for endangered and indigenous wetland species (including birds, fish and flora) and habitats of waterfowl

Significant Action:

- Create at least 100ha of wetland in the lower Kaituna Catchment by 2018.

Strategic Actions:

- Identify, prioritise, protect and enhance water-based habitats
- Manage and protect riparian margins
- Undertake natural habitat restoration projects to provide for indigenous flora and fauna, and for fish to spawn
- Increase and enhance the extent of wetlands in the lower Kaituna Catchment
- Protect, enhance and showcase the Lower Kaituna Wildlife Management Reserve.

Chapter 6: Key Outcome - Ensuring Sustainable Resource Use

This outcome is focused on making sure that resources in the Kaituna River and Ōngātoro/Maketu Estuary are managed and used in a way that protects and enhances the things we value – views, collecting kaimoana, and enjoying the natural features that the Kaituna River and Ōngātoro/Maketu Estuary offer.

The following goals and strategic actions are community aspirations in response to concerns about urban development pressure, surface run-off and the decline of kaimoana.

Management Goal: Sustainable land-use development

Significant Action:

- Development of a sub-regional/regional park in the lower Kaituna area.

Strategic Actions:

- Increase riparian reserve areas
- Protect the existing character and amenity values of the catchment and its settlement
- Improve resource management protocols.

Management Goal: Recognise kaitiakitanga when managing activities

Strategic Actions:

- Identify culturally significant sites for protection
- Manage recreation activities to ensure the environment is not damaged.

Photo Kenny McCallum

Chapter 7: Key Outcome - Supporting Kaitiakitanga and Local People's Stewardship

When the Kaituna River and Ōngātoro/Maketu Estuary tangata whenua and community look into the future they envisage a special place which offers many opportunities to:

- Walk, relax and swim
- Appreciate the history and beauty of the river and estuary
- Collect fish and kaimoana.

Tangata whenua want the use of the area to be based on a respect for their tikanga and a respect for their responsibilities to care for the Ōngātoro/Maketu Estuary. They desire a place where:

- The legacy of their ancestors is honoured
- Their mana and rangatiratanga is upheld
- Tikanga is taught and practiced
- Mokopuna can play and learn their responsibilities as kaitiaki
- Health and well-being can be maintained and restored
- People can gather kai.

The local community feels the cultural and recreational values of the river and estuary, and the relationship of the people with these special places, need to be respected and reinstated.

People are also concerned there are not enough spaces, information and facilities for recreation, especially with a larger population likely in the near future.

Management Goal: Include tangata whenua and local people in managing, restoring and enhancing the mauri of the Kaituna River and Ōngātoro/Maketu Estuary

Strategic Actions:

- Educate the public about the spiritual relationship between tangata whenua and the Kaituna River and Ōngātoro/Maketu Estuary
- Identify options for the restoration and enhancement of the Kaituna River and Ōngātoro/Maketu Estuary
- Promote and encourage local restoration initiatives, such as wetland restoration, by landowners and community groups.

Management Goal: Improve access and recreation opportunities

Strategic Actions:

- Improve access and outlook points and walking links in the Lower Kaituna Wildlife Management Reserve and other identified public reserves
- Provide adequate recreational and social space and facilities within new urban development.

Management Goal: Restore kaimoana in the Ōngātoro/Maketu Estuary

Strategic Action:

- Restore kai awa and kaimoana beds and fish populations to the Ōngātoro/Maketu Estuary.

Chapter 8: Implementation Plan

The Implementation Plan below outlines a programme of actions that agencies have committed to deliver over the next three years and beyond.

Actions that have already been completed are listed in Appendix 2.

Other actions identified for implementation over the longer term are outlined as Appendix 3. Agencies, groups and businesses can adopt these actions over time in their work, social responsibility programmes or undertake as opportunities arise.

8.1 Actions for Implementation (now and the next three years)

Key Outcome: **Improving Water Quality**

Management Goal: **Protect and enhance water quality in the Kaituna River and Ōngātoro/Maketu Estuary**

- Ensure discharges comply with the Regional Water and Land Plan.
- Review the level of sewage discharge monitoring in the Compliance and Impact Monitoring Policy.
- Promote and assist through advice the planting of riparian margins and their management by landowners, including public reserves.
- Provide advice and promote the planning of fencing to reduce stock entering water bodies.
- Promote the use of Clean Streams – A Guide to Managing Waterways on Bay of Plenty Farms.

Lead agency: Environment Bay of Plenty

Key Outcome: **Restoring Healthy Ecosystems**

Management Goal: **Improve the coastal and tidal environment**

- Assess the potential impacts of a re-diversion option.
- Progress the development of assessments for a re-diversion of the Kaituna River to the Ōngātoro/Maketu Estuary.

Lead agency: Environment Bay of Plenty

Management Goal: **Protect and enhance existing wetlands, while increasing the extent of wetlands in the lower Kaituna Catchment, to provide for Māori cultural values and uses of wetlands, habitats for endangered and indigenous wetland species (including birds, fish and flora) and habitats of waterfowl**

- Assess the feasibility of creating 100ha of wetland.
- Define, identify, and document regionally significant wetlands on dairy farms.
- Manage weeds in accordance with existing polices and priorities.
- Provide advice to landowners on riparian management.
- Continue to work closely with willing landowners to provide design advice for riparian management.
- Consider purchasing or leasing land to protect regionally significant wetlands.
- Take appropriate enforcement action where any activity results in significant adverse environmental effects on a regionally significant wetland.

Lead agency: Environment Bay of Plenty

- Re-establish biological associations and habitat previously found in the lower Kaituna wetlands complex, and improve access and visitor facilities.
- Continue to cooperate and work alongside relevant organisations and communities to restore wetlands and to improve links between wetland habitats.

Lead agency: Department of Conservation

Key Outcome: **Ensuring Sustainable Resource Use**

Management Goal: **Sustainable land-use development**

- Restrict ad hoc urban development through Change 2 to the Regional Policy Statement which manages growth in the Western Bay of Plenty sub-region and puts in place urban limits.
- Draft a Western Bay of Plenty sub-regional cultural heritage strategy.

Lead agency: Environment Bay of Plenty

- Propose in the Western Bay of Plenty District Plan to require any dwelling/activity within 100m of a significant ecological feature to assess the effect on the feature(s) in the resource consent.

Lead agency: Western Bay of Plenty District Council

- Develop a comprehensive stormwater consent for management of stormwater from proposed urban development areas.

Lead agency: Tauranga City Council

Management Goal: **Recognise kaitiakitanga when managing activities**

- Manage boating access at Bell Road (other sites are privately owned).
- Identify culturally significant sites for protection in any future Kaituna Link Road designation process under the Resource Management Act.

Lead agency: Western Bay of Plenty District Council

- Provide material and training support to local harbour warden volunteers.

Lead agency: Environment Bay of Plenty

Key Outcome: **Supporting Kaitiakitanga and Local People's Stewardship**

Management Goal: **Include tangata whenua and local people in the management of Kaituna River and Ōngātoro/Maketu Estuary**

- As a part of the Maketu Community Development Plan, the community is to hold a hui for environmental groups to explore opportunities and options to collaborate and work together on environmental issues.

Lead agency: Maketu community and Western Bay of Plenty District Council

- Work together to investigate opportunities and options for co-management.

Lead agency: Te Runanga o Ngāti Whakaue ki Maketu and Te Arawa Lakes Trust

- Make Plan Change 44 operative for Wairakei urban development and work with landowners, tangata whenua and other interested parties on the long-term future urban growth area at Te Tumu.

Lead agency: Tauranga City Council

Management Goal: **Improve access and recreational opportunities**

- Improve signs within reserves to identify the level of recreational activity that is consistent with the Strategy.
- Focus active recreation toward reserve areas that are designed to accommodate this.
- Develop promotional and educational material for the public about the river's passive and active recreational opportunities.
- Implement a Walking and Cycling Strategy to provide for enhancing pedestrian links between public reserves and opportunities for creating walkways.

Lead agency: Western Bay of Plenty District Council

- Improve access and visitor facilities in the Lower Kaituna Wildlife Management Reserve.

Lead agency: Department of Conservation

- Review the speed limit on the Kaituna River as a part of the review of the Bay of Plenty Regional Navigation and Safety Bylaw.

Lead agency: Environment Bay of Plenty

Management Goal: **Restore kaimoana in the Ōngātoro/Maketu Estuary**

- Study the existing resource and harvesting activities.
- Monitor kaimoana and patterns of harvesting.

Lead agency: Maketu Taiapure Committee of Management

8.2 Actions for Implementation (three years and beyond)

Key Outcome: **Improving Water Quality**

Management Goal: **Protect and enhance water quality in the Kaituna River and Ōngātoro/Maketu Estuary**

- Review permitted activity criteria for quality, volume and rate of stormwater discharge into the Kaituna River and Ōngātoro/Maketu Estuary when the Regional Water and Land Plan is reviewed.

Lead agency: Environment Bay of Plenty

Key Outcome: **Restoring Healthy Ecosystems**

Management Goal: **Protect and enhance existing wetlands, while increasing the extent of wetlands in the lower Kaituna Catchment, to provide for Māori cultural values and uses of wetlands, habitats for endangered and indigenous wetland species (including birds, fish and flora) and habitats of waterfowl**

- Compile an assessment of wetland enhancement.

Lead agency: Environment Bay of Plenty

Key Outcome: **Ensuring Sustainable Resource Use**

Management Goal: **Sustainable land-use development**

- Purchase and develop land for a passive coastal regional park and review policy after implementation as listed in the SmartGrowth Strategy and Implementation Plan May 2007, while recognising Regional Park Policy, Sub-regional Parks Policy and each Council's Long-term Council Community Plan.

Lead agency: Environment Bay of Plenty

- Secure rural land for both active and passive sub-regional parks and review policy after implementation as listed in the SmartGrowth Strategy and Implementation Plan May 2007, while recognising Regional Park Policy, Sub-regional Parks Policy and each Council's Long-term Council Community Plan.

Lead agency: Tauranga City Council, Western Bay of Plenty District Council.

Key Outcome: **Supporting Kaitiakitanga and Local People's Stewardship**

Management Goal: **Restore kaimoana in the Ōngātoro/Maketu Estuary**

- Control the harvesting of the resources to a sustainable level and undertake enhancement of the habitat.
- Work towards a sustainable harvest for all users of the resources.

Lead agency: Maketu Taiapure Committee of Management.

Appendices

Appendix 1 **Annual reporting template**

Appendix 2 **Completed work: The Lower Kaituna Catchment**

Appendix 3 **Actions for longer-term and the wider community**

Appendix 4 **Glossary**

Appendix 5 **References**

Appendix 6 **How the Strategy was developed**

Appendix 1

Achieving the Vision – Annual Reporting Template

Annual reporting will use a template approach to show what has been done in the year and what is proposed for the next year. The key purpose of reporting on the Strategy is to allow the Strategy partners and the community to be able to measure progress against the vision and to keep track of what was promised to be done.

The reporting process will also be used to plan the next year's activities.

Vision: "Celebrate and honour river and estuary life as taonga"			
Key Outcome	Activities	Strategic Action Targeted	Lead
Improving water quality			
Restoring healthy ecosystems			
Ensuring sustainable resource use			
Supporting kaitiakitanga and local people's stewardship			

Appendix 2

Completed work: The Lower Kaituna Catchment

Actions that have already been completed and that contribute to the vision and key outcomes of the Strategy are outlined below by the lead agencies.

Key Outcome:	Improving Water Quality
Management Goal:	Protect and enhance water quality in the Kaituna River and Ōngātoro/Maketu Estuary
Actions achieved:	Environment Bay of Plenty has reviewed the criteria for the quality, volume and rate of stormwater discharge for the Regional Water and Land Plan. Criteria for stormwater discharges are set in Section 4.2 of the Regional Water and Land Plan, which became operative in 2008.
Key Outcome:	Restoring Healthy Ecosystems
Management Goal:	Protect and enhance existing wetlands, while increasing the extent of wetlands in the lower Kaituna Catchment, to provide for Māori cultural values and uses of wetlands, habitats for endangered and indigenous wetland species (including birds, fish and flora) and habitats of waterfowl
Actions achieved:	Environment Bay of Plenty has identified significant natural wetlands in the region. Funding has been allocated to restore/enhance identified significant wetlands. Environment Bay of Plenty has waived resource consent fees for minor damming of clean, surface run-off water for the creation of wetlands; and wetland enhancement is now a permitted activity in the Regional Water and Land Plan. Environment Bay of Plenty has developed and produced brief fact sheets on opportunities and ways to create wetlands, ways to improve aquatic habitats in streams and rivers, and funding opportunities. The Ornithological Society of New Zealand has collected data for over 20 years on the Ōngātoro/Maketu Estuary.

Key Outcome:	Ensuring Sustainable Resource Use
Management Goal:	Sustainable land-use development
Actions achieved:	Western Bay of Plenty District Council has included rules for building height and setback restrictions in its District Plan. Western Bay of Plenty District Council requires an assessment when subdivision occurs near an identified significant wetland through its District Plan. The Western Bay of Plenty District Plan provides Protection Lot incentives for Transferable Development Rights if allowing enhancement or restoration of land and the ecological benefits meet the standards set down in the policy. A Plan Protocol agreement was signed by all Bay of Plenty councils in 2006. The protocol puts in place requirements for consultation and council input to resource management plans and plan changes. Environment Bay of Plenty has protocols in place with each council for commenting and submitting on district consent applications. There is currently no reciprocal protocol for regional consents. Rotorua District Council has done a number of landscape assessments of various parts of Rotorua District. Rotorua District Council has included a Lakes A Zone design guide for buildings.
Management Goal:	Recognise kaitiakitanga when managing activities
Actions achieved:	Navigation safety information signs are in place. Western Bay of Plenty District Council has referenced ecological sites in its District Plan. Western Bay of Plenty District Council has reviewed cultural sites by communicating with tangata whenua and reviewing previously identified sites. Tauranga City has mapped known significant cultural and ecological sites in the Wairakei and Te Tumu areas. Maketu Taiapure Committee of Management has appointed kaitiaki. Maketu Taiapure Committee of Management has appointed and trained education officers.
Key Outcome:	Supporting Kaitiakitanga and Local People's Stewardship
Management Goal:	Include tangata whenua and local people in managing, restoring and enhancing the mauri of the Kaituna River and Ōngātoro/Maketu Estuary
Actions achieved:	Western Bay of Plenty has developed a bilingual Maketu Community Development Plan (A Plan for the Future of Maketu). The Maketu community has held Matariki celebrations, and Western Bay of Plenty District Council will support these as appropriate.
Management Goal:	Improve access and recreation opportunities
Actions achieved:	Western Bay of Plenty District Council has included actions to improve access and recreation opportunities in the Te Puke Ward Reserve Management Plan. Western Bay of Plenty District Council has included actions to improve access and recreation opportunities in the Maketu Ward Reserve Management Plan.
Management Goal:	Restore kai awa and kaimoana beds and fish populations to the Ōngātoro/ Maketu Estuary
Action achieved:	Maketu Taiapure Committee of Management controls customary harvesting.

Appendix 3

Actions for longer-term implementation

The table below lists actions identified by the community. These longer-term actions will be considered by Strategy partners and the wider community progressively for ongoing work programmes.

Outcome – Improving Water Quality

Management goal: Protect and enhance water quality in the Kaituna River and Ōngātoro/Maketu Estuary

Table 1

Strategic action:	Manage land uses to prevent sediment and contaminant run-off entering the Kaituna River and its tributaries and associated waterways.
Action type:	Education and operational projects.
Possible actions:	Manage and minimise stormwater and sediment run-off from some land uses entering the Kaituna River and its waterways through best practice methods and rule provisions, such as Code of Practice for Development, resource consent, forestry harvesting practice and building consent provisions.

Table 2

Strategic actions:	Use riparian strips and wetlands for stormwater treatment. Consider alternative options for sewage and stormwater treatment.
Action type:	Education, statutory, operational project and research.
Possible actions:	▪ Seek planting and retirement at riparian margins from grazing and other point and diffuse discharges to provide buffer areas for waterways. ▪ Encourage sewage to be discharged to land and use artificial wetlands, where appropriate, for treatment. ▪ Require artificial wetlands for stormwater treatment before the discharge of urban stormwater to the Kaituna River and associated waterways where appropriate. ▪ Explore options for a further coastal outfall for the Wairakei Stream in terms of the overall permanent stormwater management for the Papamoa Catchment.

Table 3

Strategic action:	Ensure discharges comply with the permitted Regional Water and Land Plan rules.

Table 4

Strategic action:	Promote the targets set in the Dairy and Clean Streams Accord.
Performance Targets including:	▪ Majority of significant wetlands are fenced by 2012. ▪ 90% of regular stock crossing points have bridges or culverts by 2012. ▪ Dairy cattle excluded from 90% of streams, rivers, lakes, and their banks by 2012.

Outcome – Restoring Healthy Ecosystems

Management goal: Improve the coastal and tidal environment

Significant Action: Increase the flow of water to the Ōngātoro/Maketu Estuary

Table 5

Strategic action:	Rehabilitate the coastal sand-dune environment.
Action type:	Education and operational projects.
Possible actions:	▪ Encourage and provide resources and support to the Maketu Spit Coast Care group. ▪ Continue to work with community and other agencies to manage restoration of the sand spit. ▪ Plant sand dunes and the sand spit with suitable native species for stabilisation.

Management goal: Protect and enhance existing wetlands, while increasing the extent of wetlands in the lower Kaituna Catchment, to provide for Māori cultural values and uses of wetlands, habitats for endangered and indigenous wetland species (including birds, fish and flora) and habitats of waterfowl

Table 6

Strategic action:	Identify, prioritise, protect and enhance water-based habitats.
Action type:	Research and operational projects.
Possible actions:	▪ Map indigenous habitats in the catchment of the river to determine the best ecosystem management for these areas including conservation, pest animal and plant control, and determining ecological corridors. ▪ An assessment of the catchment and its waterways in terms of requirements for ecological quality and management. Develop a greater understanding of indigenous fish species and habitat in the streams that flow into the Kaituna River and Ōngātoro/Maketu Estuary. ▪ Investigate and implement ways to improve aquatic habitat value (for fish and waterfowl) in drains and canals, including: – Maintaining water levels – Protecting peat soils – Avoid creating new perched wetlands – Providing fish passage between waterways – Providing nesting areas for waterfowl – Increasing natural shading – Ensuring appropriate timing for maintenance works. ▪ Prioritise aquatic habitat protection and improvement, including for: – **Trout fisheries** in Kaituna River, Mangorewa River, Waiari Stream – **Indigenous fish** in Kaituna River, Mangorewa River, Pakipaki Stream, Parawhenuamea Stream, Kopuroa Canal, Ohinengaanga Stream, Raparapahoe Stream, Wairapukao Stream and Waiari Stream – **Whitebait spawning; indigenous flora and fauna** in rivers and streams. ▪ Identify potential whitebait spawning sites in the lower Kaituna River tidal reach on public-owned land.

Table 7

Strategic action:	Manage and protect riparian margins.
Action type:	Operational projects.
Possible actions:	▪ Prepare an implementation plan to undertake active management and protection of the riparian margins of the Kaituna River, its tributaries and ephemeral waterways through covenants, environmental protection plans, farm plans, education and land purchase. ▪ Work closely with landowners to fence and plant riparian margins as a buffer to urban areas and cattle grazing.

Table 8

Strategic action:	Undertake natural habitat restoration projects to provide for indigenous flora and fauna, and for fish to spawn.
Action type:	Operational projects.
Possible actions:	▪ Consider restoring saltmarsh communities, including planting the upper estuary as maritime marsh if suitable areas can be found. ▪ Encourage the development of seagrass meadows in the middle estuary as a feeding ground for fin fish. ▪ Be open to opportunities for weed control.

Table 9

Strategic action:	Enhance and increase the extent of wetlands in the lower Kaituna Catchment.
Action type:	Research, statutory, education, operational projects.
Possible actions:	▪ Identify and protect key shorebird habitat. ▪ Identify threats and impediments to protecting or improving each wetland. ▪ Identify areas best suited to be maintained as wetlands. ▪ Continue to work with relevant organisations and communities to restore wetlands and to improve links between wetland habitats.

Table 10

Strategic action:	Protect, enhance and showcase the Lower Kaituna Wildlife Management Reserve.
Action type:	Education, operational projects.
Possible actions:	▪ Showcase indigenous flora and fauna by re-establishing biological associations and habitats which were formerly characteristic of the lower Kaituna wetland system. (Suggested lead agency, Fish and Game in association with the Department of Conservation.) ▪ Undertake pest control to protect populations of indigenous plant and animal species at highest risk of loss. (Suggested lead agency, the Department of Conservation.) ▪ Value and protect the cultural and historical heritage of the Lower Kaituna Wildlife Management Reserve.

Outcome – Ensuring Sustainable Resource Use

Management goal: Sustainable land-use development

Table 11

Strategic action:	Increase riparian reserve areas.
Action type:	Statutory.
Possible actions:	▪ Encourage planting of riparian margins adjacent to rivers and streams. This planting should be of a sufficient width to protect and maintain aquatic ecosystem values. ▪ Encourage buffers around wetlands. ▪ Require sufficient buffer zones (a minimum 20m buffer is suggested) around wetlands as a resource consent condition when changing land use or subdivision.

Table 12

Strategic action:	Protect the existing character and amenity of the catchment and its settlements.
Action type:	Statutory and research.
Possible actions:	▪ Prepare comprehensive urban design and infrastructure plans for new urban growth areas as suggested by the SmartGrowth Strategy.

Table 13

Strategic action:	Improve resource management protocols.

Management goal: Recognise kaitiakitanga when managing activities

Table 14

Strategic action:	Identify culturally significant sites for protection.
Action type:	Research and statutory.
Possible actions:	▪ Consider applying for a Wetland of International Importance status for the Ōngātoro/Maketu Estuary and the lower Kaituna and associated wetlands. (Suggested lead agency, the Department of Conservation.)

Table 15

Strategic action:	Manage recreation activities to ensure the environment is not damaged.
Action type:	Education, operational project and research.
Possible actions:	▪ Provide information to the public about the use and values (environmental, social, cultural and spiritual values) of the Kaituna River and Ōngātoro/Maketu Estuary for recreational purposes. ▪ Manage recreational activities that are not compatible with the cultural and ecological values of the area, and allow for passive recreational activities in the Lower Kaituna Wildlife Management Reserve. (Suggested lead agency, the Department of Conservation and local community.) ▪ Opportunities exist for relevant agencies to work together to manage recreational activities on the Kaituna River and Ōngātoro/Maketu Estuary.

Outcome – Supporting Kaitiakitanga and Local People's Stewardship

Management goal: Include tangata whenua and local people in managing, restoring and enhancing the mauri of the Kaituna River and Ōngātoro/Maketu Estuary

Table 16

Strategic actions:	Educate the public about the spiritual relationship between tangata whenua and the Kaituna River and Ōngātoro/Maketu Estuary. Restore and enhance the mauri of the Kaituna River and Ōngātoro/Maketu Estuary.
Action type:	Education and research.
Possible actions:	▪ Educate the public on the spiritual relationship tangata whenua have with the Kaituna River and Ōngātoro/Maketu Estuary. ▪ Investigate options for co-management of the river and estuary by tangata whenua under the Resource Management Act 1991.

Table 17

Strategic action:	Promote and encourage local restoration initiatives, such as wetland restoration, by landowners and community groups.
Action type:	Education and community action.
Possible actions:	▪ Develop and distribute publicity about opportunities and ways to create wetlands, ways to improve aquatic habitats in streams and rivers, and funding availability. ▪ Prioritise working with willing landowners on retiring land and creating wetlands. This land could be low-lying, flood-prone, coastal or estuarine, marginal land, degraded wetlands, land linked to the Kaituna wetland, and adjacent to the Kaituna River. Also work to create wetlands for sewage treatment and discharge where appropriate. ▪ Work with community groups to create or enhance areas of potential whitebait spawning sites in the lower Kaituna River tidal reach on publicly owned land. ▪ Investigate a number of funding mechanisms to improve aquatic habitats and create or improve wetlands, including: – QE2 National Trust – Nga Whenua Rahui – Private funding – Central government funding – Local, national and international organisations – Lottery and charitable funds.

Management goal: Improve access and recreation opportunities

Table 18

Strategic action:	Improve access, outlook points and walking links in public reserves.
Action type:	Research.
Possible actions:	▪ Improve access and visitor facilities in the Lower Kaituna Wildlife Management Reserve. (Action by the Department of Conservation.)

Table 19

Strategic action:	Provide adequate recreational and social areas within new urban development. Provide adequate recreational land.
Action type:	Operational projects.
Possible action:	▪ Provide a Te Tumu Integrated Park Network to accommodate the wide range of recreational and social pursuits of future residents in the proposed Te Tumu urban area. (Action by Te Tumu Landowner Group.) ▪ Consider a route from Te Matai to the Ōngātoro/Maketu Estuary in the next local walkway and cycleway network plan, which will feed into the Regional Walking and Cycling Strategy. (Action assumed to be owned by the Western Bay of Plenty District Council.)

Management goal: Restore kaimoana in the Ōngātoro/Maketu Estuary

Table 20

Strategic action:	Restore kai awa and kaimoana beds and fish populations to the Ōngātoro/Maketu Estuary.
Action type:	Operational project.
Action:	▪ Hapū initiatives to reintroduce (re-seed) suitable shellfish in appropriate areas of the estuary. ▪ Develop and implement a plan to restore species in the river and the estuary once the river has been re-diverted to the estuary.

Appendix 4

Glossary – Māori terminology

Harakeke – flax/Phormium spp.

Kahawai – a salt-water fish, Arripis tutta, that is edible.

Kai awa – native foods from a river.

Kai moana – native foods from the sea.

Kaitiaki – guardian, caretaker, manager, trustee.

Kaitiakitanga – guardianship, stewardship.

Kaituna – to eat eels.

Kōterotero – sea-anenome.

Kōura – crayfish/ Jasus spp, prawn/ Penaeus setiferus.

Kukuroa – horse mussel/ Atrina zelandica.

Mahinga kai – cultivation, vegetable garden.

Mana – integrity, charisma, prestige.

Mana whenua – customary authority over an area, the local tribal group having this authority.

Mānuka – tea-tree/ Leptospermum.

Manuhiri – guest, visitor.

Mātātā – fernbird/ Bowdleria punctata.

Matuku – Australasian bittern/ Botaurus stellaris poiciloptilus.

Mauri – life principle.

Mokopuna – grandchild, younger generation.

Paru – mud dye, dirty.

Pāua – shellfish/ Haliotis spp., abalone.

Pūpū – shellfish, cat's eye, winkle/ Lunella spp.

Rangatiratanga – kingdom, principality, sovereignty, realm.

Raupō – bullrush/ Typha orientalis.

Tangata whenua – people of the land.

Tī kouka – cabbage tree/ Cordyline australis.

Tikanga – custom, obligations & conditions, provisions, criterion.

Tuangi – New Zealand cockle/ Austrovenus stutchbury.

Tupuna – ancestors.

Urupā – cemetery, tomb.

Glossary – English terminology

Aesthetic – beauty of art and people's appreciation of beautiful things.

Alluvial – soil that comprises earth and sand left behind on land which has been flooded or where a river once flowed.

Anthropogenic – relating to anthropogeny, the study of the origin of humankind; originating in human activity.

Aquatic – relating to water and the animals or plants that live or grow there.

Array – a large number or wide range of different things or people.

Basin soil – the area of land around a large river that streams run into.

Causeway – a raised road or track across low or wet ground or a stretch of water.

Degradation – refers to the process of something becoming worse (or weaker), or being made worse (or weaker).

Divert – turn aside from a proper direction or course.

Ephemeral – transient, something that lasts only for a very short time.

Excavation – dig in the ground, for example, in readiness to build there. Or to remove earth carefully from an archaeological site to inspect things buried there in order to discover information about the past.

Mullet – a small, edible fish.

Navigability – the degree of an area of water deep, wide or safe enough for a boat to go through.

Nutrients – substances that help plants and animals to grow.

Re-divert – refers to a process opposite to the diversion that has already taken place.

Rehabilitate – restore to a former condition.

Reinforced – strengthen or support.

Riparian margins – the edge of the banks of a water course.

Riparian strips – a strip of land on the banks of a water course.

Sedge – a grass-like plant that grows in wet ground.

Sediment – a solid material that settles at the bottom of a liquid, especially earth, pieces of rock.

Semi-terrestrial – partly of or on dry land.

Suspended solids – solid particles in a fluid medium floating somewhere between top and bottom.

Swale – a low or hollow place, a wide shallow channel for drainage.

Turbidity – (of a liquid or colour) muddy, thick; not clear.

Appendix 5

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Appendix 6

How the Strategy was developed

Representatives from various stakeholder and community groups were invited to be involved in the development of this Strategy. Focus Groups and a Working Party were established to ensure that community views and interests were captured. The Working Party meetings were also open to individual members of the public.

The Working Party included representatives from:

- Local government
- Department of Conservation
- Fish and Game New Zealand
- Te Tumu landowners
- Kaituna Drainage Scheme
- Maketu and Te Puke Community Boards
- Maketu Community Group for the Environment
- Maketu Taiapure Committee of Management
- Tapuika Iwi Authority
- Te Arawa Federation of Māori Authorities
- Nga Tangata Ahi Ka Roa o Maketu
- Tapuika Mokopuna of Tupuna Tia
- Te Runanga o Ngati Pikiao
- Te Runanga o Ngati Whakaue Ki Maketu
- Tuhourangi
- Waitaha.

A variety of reports was produced during the development of the Strategy, including iwi history reports, which are available on the Environment Bay of Plenty website.

The Strategy was developed after hearing the views of the community about where we are now and the issues that need to be addressed. The issues and concerns have been woven into a vision for where we want to be. Collectively the vision, outcomes, management goals and strategic actions provide a framework for action.

The Kaituna River and Ōngātoro/Maketu Estuary feedback package was released to the public in November 2008, with the period for public feedback open from late November 2008 to 18 February 2009.

The consultation package included a draft Strategy, Action Plan and a discussion document on potential re-diversion options.

A total of 38 written responses were received. The Hearing Panel heard 23 submitters on 1 April 2009. The Hearing Panel included all members in the Kaituna Maketu Joint Council Committee, plus the Chairperson of the Working Party, Dean Flavell.

On 1 April 2009 after the hearing was completed, Environment Bay of Plenty staff provided the Hearings Panel with an analysis of public feedback and recommended responses.

On 2 April the Hearings Panel convened to deliberate and make recommendations on the public feedback to the Kaituna Maketu Joint Council Committee. Staff have implemented the amendments as requested by the Hearings Panel.

These changes have been incorporated into a Public Feedback Report (June 2009) and this final Kaituna River and Ōngātoro/Maketu Estuary Strategy.

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