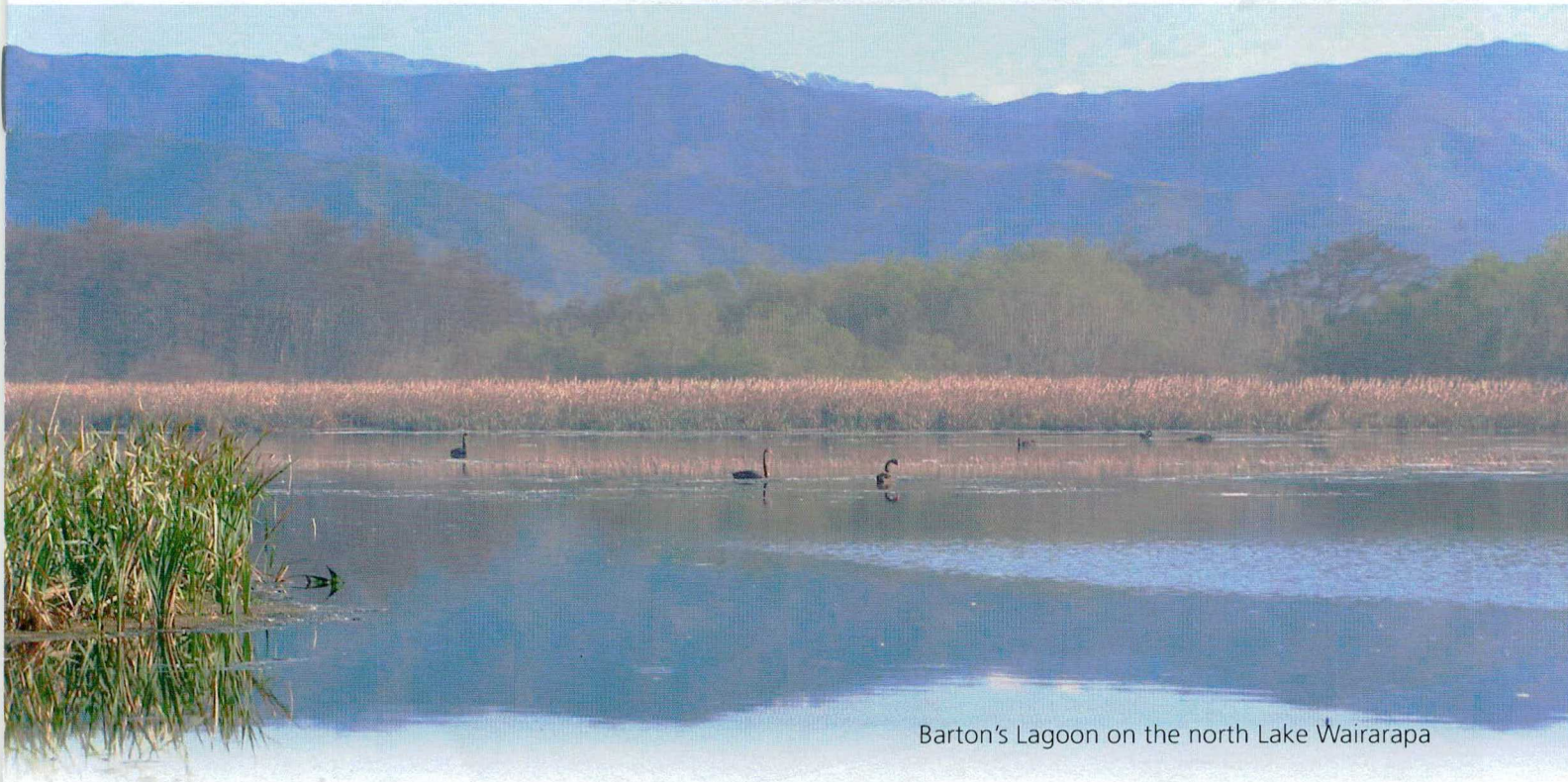


# Wairarapa Moana

Whakaora te repo, ka ora te taonga Wai  
Restoring our wetland treasure



Barton's Lagoon on the north Lake Wairarapa

The Wairarapa Moana Wetlands Project began in 2008 to enhance the native ecology, recreation and cultural opportunities on the public land in the area. The project partners are Greater Wellington, Department of Conservation, Rangitane o Wairarapa, Kahungunu ki Wairarapa, local hapu and South Wairarapa District Council. They in turn are working with community groups, farmers and environmental and recreational groups to restore our wetland treasure. Everyone recognises you can't succeed in a project this size without all interested parties being involved.

## Restoring the edge wetlands

The project got a major shot in the arm with a successful bid for funding from the Government's Fresh Start for Freshwater Clean Up Fund to improve the water quality of the edge wetlands. The Ministry for the Environment will contribute \$1 million over the next three years. This funding will be matched by the following funding partners in cash or in kind – Ducks Unlimited, Dairy NZ, Department of Conservation and Greater Wellington Regional Council.

The priority for the fresh start project is to enhance the wetland habitat around the edge of Lake Wairarapa and Lake Onoke by improving water quality through restoring selected wetland areas – **Boggy Pond, Matthews Lagoon, Wairio Wetlands, JK Donald Reserve and Barton's Lagoon** stand out as priorities. This booklet is a very simplified look at Wairarapa Moana and what this funding sets out to achieve.

# Wairarapa Moana Edge Wetlands



Lake Domain Reserve Wetlands

JK Donald / Tairoa Wetlands

Wairio Ponds

Boggy Pond / Matthews Lagoon

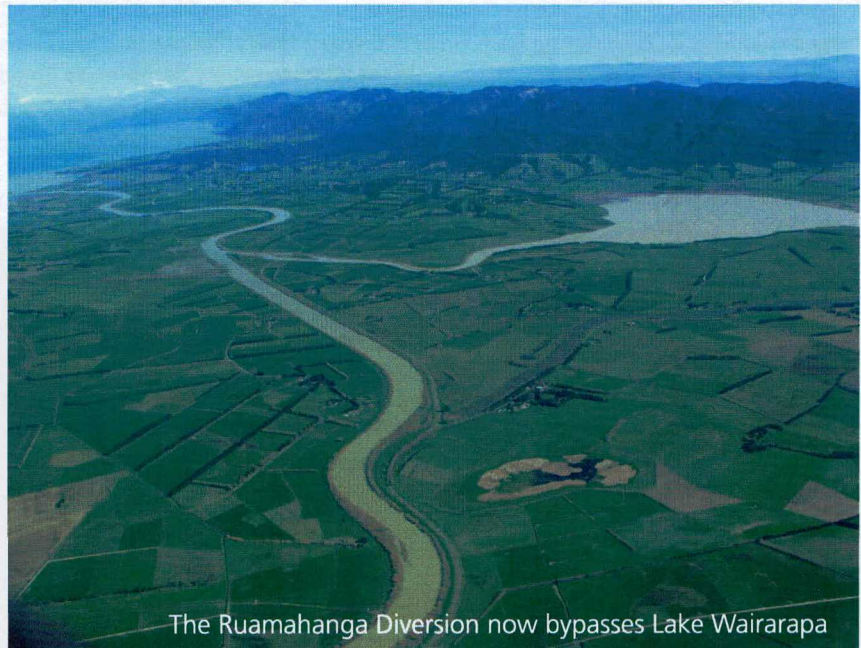
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Topographic and Cadastral data Copyright: LINZ

## Poor water quality – our inherited problem

Lake Wairarapa is among New Zealand's 10 dirtiest lakes. It has high levels of nutrients like nitrogen and phosphorous, lots of algal growth and poor water clarity.

For years it was the receiving environment for sediment washing off Wairarapa's erodible hills, all our towns' sewerage systems, dairy factories and other industrial waste. That was until the 1970s when the Ruamahanga River was diverted past Lake Wairarapa and directly into Lake Onoke. Now 95 percent of the water in the Wairarapa Valley flows past Lake Wairarapa, but decades of accumulated silt and nutrients sit on the shallow lake bed and get stirred up every time it blows.



The Ruamahanga Diversion now bypasses Lake Wairarapa

Changing environmental standards means far less waste is put in our rivers and streams. Lake Wairarapa still gets water from the Tauherenikau River and a host of streams running out of the Rimutaka Ranges and the surrounding plains. Among that water can be treated effluent from Featherston and agricultural run-off. Several large drainage schemes on the eastern lake shore direct nutrient rich water, drained from pasture, into adjacent wetlands and on to the lake. Monitoring shows some edge wetlands are in a poorer state than the lake with higher concentrations of nutrients and algae.

### Why does this matter?

Wairarapa Moana is the largest wetland area in the southern North Island and is made up of the Lakes Wairarapa and Onoke and their surrounding wetland areas. Most wetlands across New Zealand have been drained and developed, making those that remain, and the native plants and animals that live in them, increasingly rare and valuable. The wetlands around Wairarapa Moana make up 50 percent of all wetlands left in the Wellington region.

Wetlands have a natural ability to filter water and remove both sediment and nutrient. Wairarapa Moana's edge wetlands are likely to be overloaded to the point where these functions are not working as well as they could. It is to the benefit of both the farming and environmental communities that they work to their full potential. It is important to point out that wetlands don't need crystal clear water to function, but a combination of poor water quality, sediment and weeds has them struggling to maintain themselves.

Many of the native plants, birds and fish around Wairarapa Moana struggle with the poor water quality and weeds and do not thrive as they might. A good example of this is the five species of fish that make white bait – inanga, koaro, short jawed kokopu, banded kokopu and giant kokopu – they are found in far fewer numbers around Wairarapa Moana than you would expect if the area was in better health.

Introduced species that cope better with nutrients and sediment are taking over large areas and muscling out the natives – alder trees on the eastern lake shore and perch (fish) throughout the lakes and wetlands.



Long-fin eel

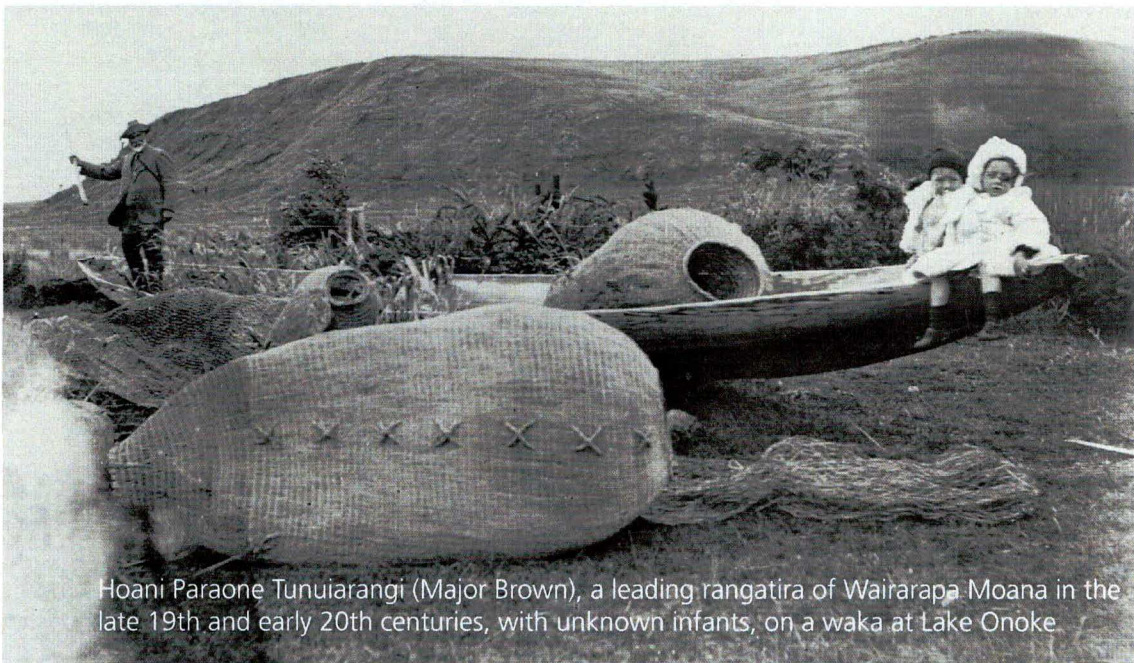
Inanga

## Importance to Maori

Wairarapa Moana literally means “sea of glistening water” and was among the first areas settled in New Zealand with sites dating back some 800 years. Fish and waterfowl were plentiful, but the major drawcard was tuna – the native freshwater eel. Tuna could be caught in vast quantities during their seasonal migration to the sea, and the catch could be dried for storage or trading. Seasonal eeling settlements dotted the edge of Wairarapa Moana with several permanent settlements on the surrounding higher ground.

In the 1840s sheep farmers started arriving in Wairarapa and began leasing land from Maori landowners. Leasing was soon made illegal by the Crown, which was only interested in purchasing land from Maori and selling it to settlers for a profit. Land was sold, but Maori retained the flood-prone areas crucial for eel fishing, and the lakes themselves.

When the outlet to the sea was blocked, the lakes and wetlands filled up. Between February and April this process was called the hinurangi, which was important for tuna preparing to migrate over two thousand kilometres into the South Pacific to breed. There were several decades of disagreement between Maori fishers and Pakeha farmers over opening the mouth of Lake Onoke. One wanted high water for fishing and the other dry pasture for farming. This was resolved in 1896 when the chiefs of the day gifted the lakes to the nation. Wairarapa Moana is still revered by Maori as a source of wellbeing for the region.



Hoani Paraone Tunuiarangi (Major Brown), a leading rangatira of Wairarapa Moana in the late 19th and early 20th centuries, with unknown infants, on a waka at Lake Onoke

## Recreation

Wairarapa Moana is a popular spot for fishing, bird-watching, picnicking, walking, camping and many other activities. But duck shooting has been the mainstay of recreation for several decades. Every May hundreds of hunters from around the lower North Island come to Wairarapa Moana to try their luck.

## Biodiversity at a glance

- 22 species of native fish
- 9 species of introduced fish
- 96 bird species – 19 which are listed as threatened. The shallow flats on the eastern shore of Lake Wairarapa is a very important feeding ground for many species of wading birds, including a number of migratory species
- 190 native plant species – including complex communities of tiny turf plants and nationally threatened grasses



Bar-tailed godwits



Brown mudfish

## Threats to native biodiversity at a glance

Aquatic weeds - hornwort, lagarosiphon, elodea, curled pond weed. These pest plants clog waterways and irrigation equipment and crowd out native species.

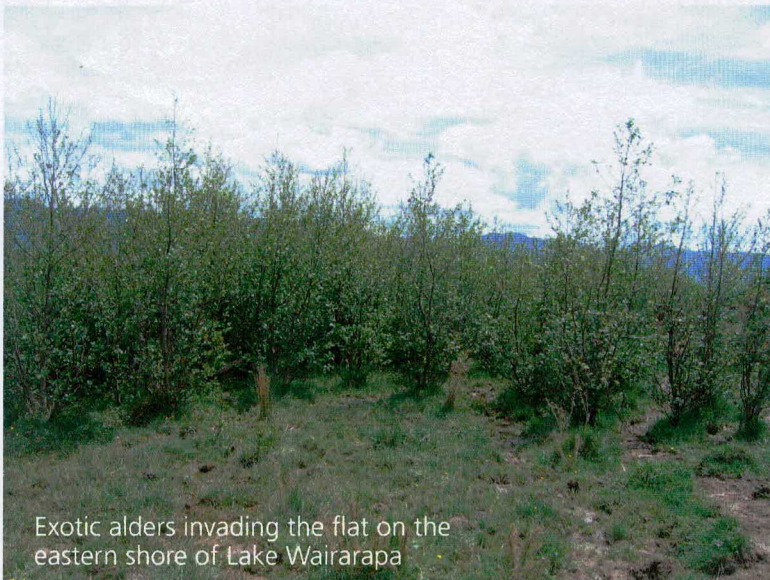
Invasive trees – alder, willow. These fast growing and water tolerant trees invade wetlands and the lake edge and can dominate entire ecosystems.

Invasive grasses – tall fescue, Mercer grass. Both are introduced grasses that out-compete native grasses and form an impenetrable barrier for any native species that might otherwise establish.

Introduced mammals – rabbits, hares, possums, stoats, ferrets, feral cats, rats. All either chew pasture, native plants or native animals.

Introduced fish – perch, tench, rudd, goldfish. Some of these fish eat our native fish, others out-compete them for food, while some eat plants and create more sediment in the water.

Poor water quality – nutrients, effluent, waste water. Many native species are will not tolerate nutrified water.



Exotic alders invading the flat on the eastern shore of Lake Wairarapa

## Working with farmers to make a difference

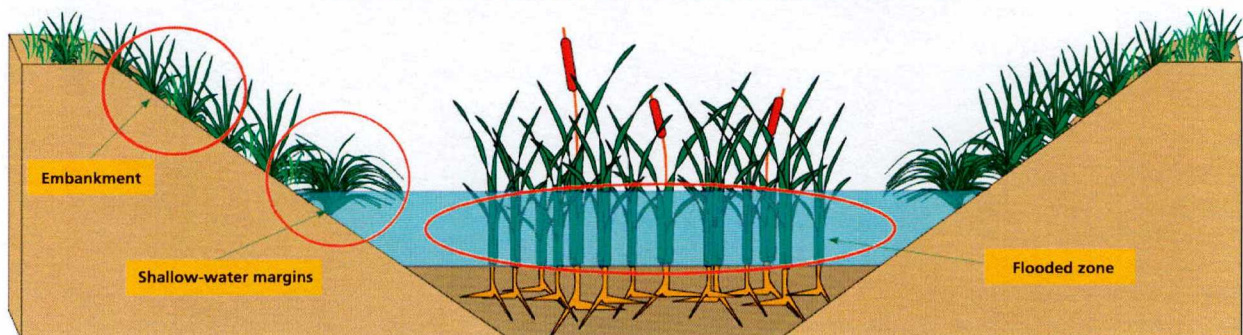
Our aim is to work in partnership with willing farmers around Wairarapa Moana to find win win solutions that benefit the wetland environment and the farm. For example, how can we reduce the loss of valuable nutrients to the wetlands and lake, or make drains on farms more useful habitat for fish? Farmers need to make a living and we need to work together to find ways of running profitable farms that support healthy wetlands. We are primarily interested in working with farmers close to **Boggy Pond, Matthews Lagoon, Wairio Wetlands, JK Donald Reserve and Barton's Lagoon**, but other areas may be considered.

There are a range of tools to help with this including riparian fencing and planting, and constructing new wetlands to treat water before it enters the larger natural wetlands. The project can assist with farm assessments and plans to provide information on soils and waterways and options for enhancing management of nutrients, effluent and natural values as part of a profitable farming operation.

Greater Wellington staff can work with farmers to develop Land and Environment Plans to map the soils and waterways on farms to identify where pollutants have the potential to run-off or leach into groundwater. These will be similar to the Farm Sustainability Plans staff create for landowners in the eastern hill country to manage soil erosion. The hill country farm plan model has been operating for 50 years and treated large tracts of erosion prone land. There have been significant benefits for pasture cover, stocking rates, farm infrastructure and a large reduction in the amount of sediment getting into waterways.

We are developing a grant policy for our contribution for on-farm work to mitigate nutrients and effluent entering the wetlands and lake. Areas where work would have a major benefit for biodiversity but less for the farm business would get a **higher grant rate**. Areas where work would have more benefit for the farm business and less for biodiversity would get a **lower grant rate**.

Constructed wetland cross-section illustrating planting zones



## Working in the edge wetlands

Boggy Pond, Matthews Lagoon, Wairio Wetlands, JK Donald Reserve and Barton's Lagoon

These areas in the east and north of Lake Wairarapa are regarded as the best examples of native wetlands left at Wairarapa Moana. All are on public conservation land and have infestations of pest plants to some degree - alder, willow, hornwort, tall fescue, aquatic weeds, etc. The pest plants have changed the natural character of the wetlands and have made it difficult for some native plants and animals to thrive and also made it difficult for the wetlands to act as sediment and nutrient filters. Some money and time will be spent dealing with the pest plants in these areas and planting to enhance the native ecology that is already there.

# Wairarapa Moana Wetlands Project

The clean up work around the edge wetlands is just one part of the wider Wairarapa Moana Wetlands Project. The project has the following partners - Kahungunu ki Wairarapa, Kohunui and Papawai Marae, Rangitane o Wairarapa, South Wairarapa District Council, Department of Conservation and Greater Wellington Regional Council. All of these partners are represented on a Governance Group. After a number of years of discussion the Wairarapa Moana Wetlands Project was formalised at the Kohunui Marae in June 2010.

The prime focus of this project is the publically owned land within the Wairarapa Moana catchment, see map. The Governance Group is committed to working with the adjacent farmer and the users of the moana. To recognise this it has formalised the Wairarapa Moana Coordinating Committee which includes landowners, representatives from the Lower Wairarapa Valley Development Scheme, Fish and Game, Forest and Bird, Ducks Unlimited, Wellington Conservation Board, local hapu, South Wairarapa District Council, plus staff from the above partners. This committee has a wide ranging terms of reference to provide advice to the Governance Group.

The Governance Group has developed the following;

- Vision statement- Whakaora te repo, ka or ate taonga Wai – Restoring our wetland treasure.
- Mission statement- We will work with the community to enhance the spiritual identity and ecology of Wairarapa Moana, and improve recreational and economic opportunities for the benefit of everyone.
- Aspirations:
  1. Wairarapa Moana is highly valued as a place of cultural and historical significance that inspires our future.
  2. Healthy water in Wairarapa Moana nurtures all native plants, animals and their ecosystems.
  3. Wairarapa Moana underpins environmental, customary, recreational and commercial values that benefit the wider community.

A management team comprising staff from the partners supports the Governance Group. Each year it has been completing tasks within the following areas; recreation, marketing, relationships and biodiversity investigations and enhancement.



Some representatives of the Wairarapa Moana Wetlands Group at Kohunui Marae in 2010. From left to right, Alan McKenzie (Department of Conservation), Nelson Rangī (Kahungunu ki Wairarapa), Adrienne Staples (South Wairarapa District Council) Mihi Namana (Papawai Marae), Fran Wilde (Greater Wellington), Yvette Grace (Rangitane o Wairarapa), Haami Te Whaiti (Kohunui Marae)



Ducks Unlimited members and volunteers planting at Wairio Wetlands

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**DairyNZ**

