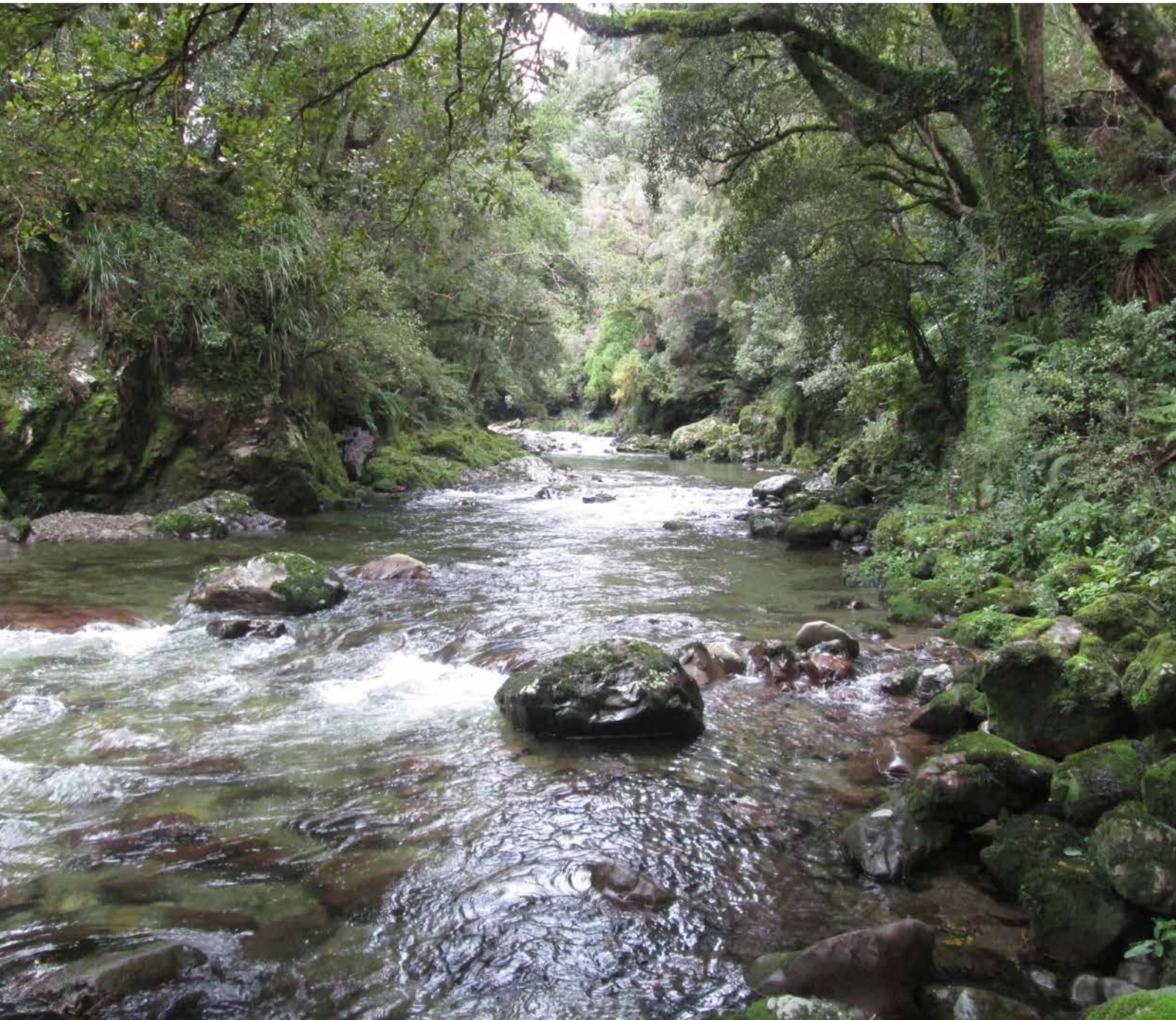
Wellington Water

greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao

Hutt and Wainuiomata/Orongorongo Water Collection Areas Management Plan

SUMMARY

MANAGING WELLINGTON'S DRINKING WATER CATCHMENTS



The population of Wellington relies on a constant supply of safe and reliable drinking water, most of which comes from the forested catchments of two water collection areas. These are the Hutt Water Collection Area, located at the southern end of the Tararua mountain range, and the Wainuiomata / Orongorongo water collection area located on the western side of the Rimutaka mountain range. Together they annually supply approximately 60% of Wellington's water, with the remainder drawn from the Waiwhetu aquifer system below the Hutt Valley.

The water collection areas (WCA) contain old growth forest with rich biodiversity and flourishing aquatic ecosystems where mana whenua kaitiakitanga values are maintained. These areas were identified in the early years of European settlement as places of high rainfall and then protected for water collection purposes. The Wainuiomata water catchment also encompasses a 'mainland island' where previously locally extinct species have been reintroduced and other restoration activities take place with the assistance of Rimutaka Forest Park Trust volunteers.

Managing water collection areas to achieve an uninterrupted supply of high quality drinking water requires a significant effort, which is focused on minimising threats to water quality and supply. Threats to terrestrial and aquatic ecosystem health are managed through programmes such as active pest plant and animal control. These programmes help protect biodiversity and ensure optimum water quality, which minimises the need for more expensive treatment. Closing and providing very limited public access to the water collection areas also helps manage threats to water quality.

The Hutt and Wainuiomata/Orongorongo Water Collection Areas Management Plan documents the key threats and outlines how Wellington Water and Greater Wellington Regional Council and will manage these areas to ensure continuity of water quality and supply. The approach outlined in the Management Plan represents international good practice.

Large rata tree amongst mature forest in the Wainuiomata Water Collection Area. Regular monitoring of forest health takes place to look for changes potentially impacting forest canopy cover caused by plant disease and weed plant infestations. Rata is an ideal indicator species for evidence of brush tailed possum browsing and damage.

Part of the the Wainuiomata Water Collection Areais also a 'mainland island' where Rimutaka Forest Park Trust volunteers maintain pest animalcontrol traps and undertake restoration activities.

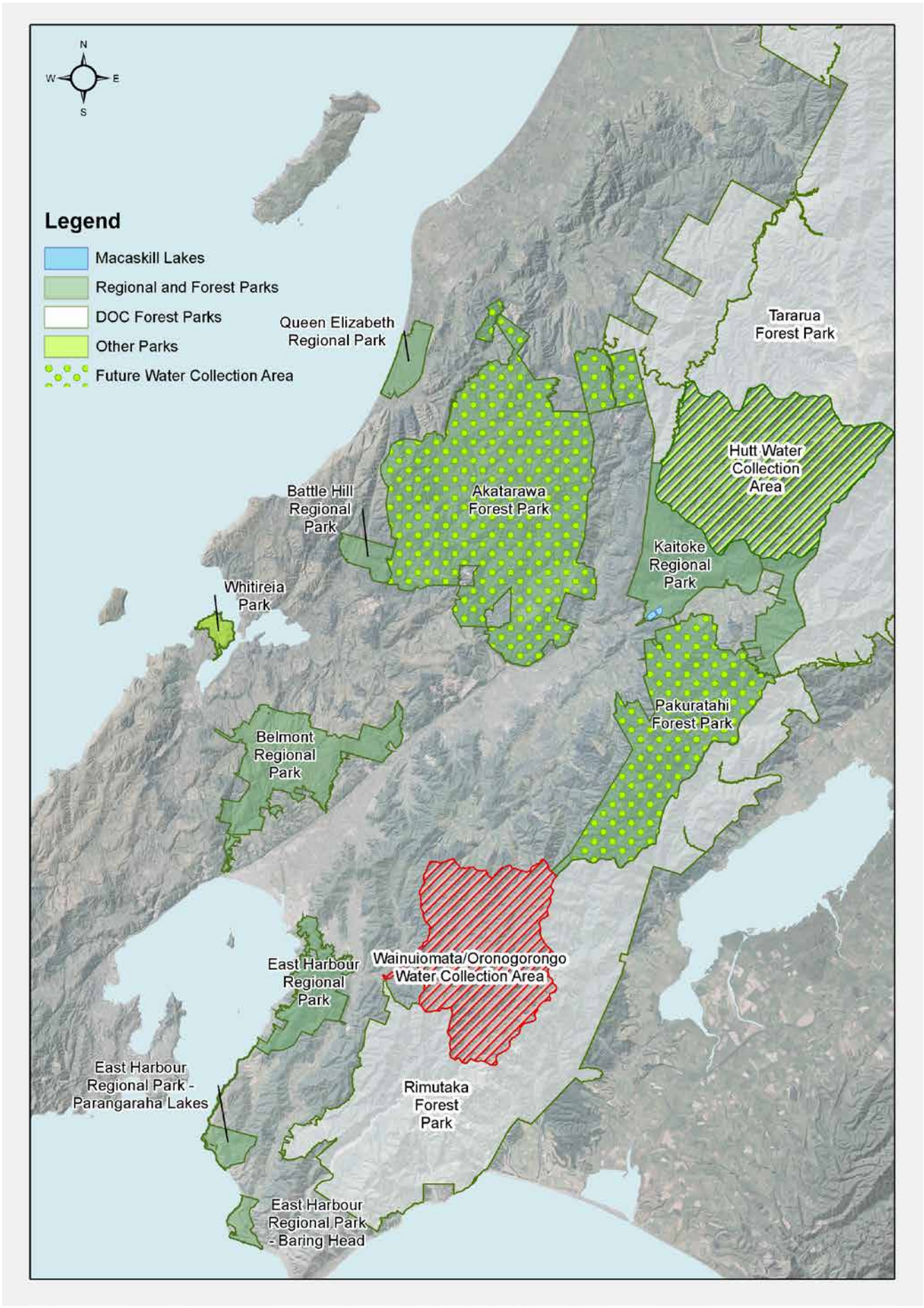
The clear waters of the Western Hutt River in the Hutt Water Collection Area have rich aquatic. To minimise threats to water water quality, recreation visits are permitted to most areas but not encouraged However, adjoining Kaitoke Regional Park and Tararua Forest Park are highly accessible with a wide variety of recreation opportunities and facilities.

Management of water collection areas and drinking water supply is guided by law. The quality of drinking water is guided by National Standards and the Health (Drinking Water) Amendment Act 2007. In these catchments, national environmental standards and regulations for the sources of drinking water, made under the Resource Management Act 1991, set requirements for protecting drinking water from contamination.

The catchment land is held under Wellington Regional Water Board Act 1972 for water supply purposes. Whilst the development of management plans is not a legislative requirement, the two agencies responsible for managing the water collection areas work together on the shared goal of ensuring an uninterrupted supply of quality drinking water and see the strategic need for a plan. The Plan is the result of collaboration between these agencies.

To minimise risks, operating procedures include the requirement for all vehicles entering the Wainuiomata /Orongorongo WCA to pass through a wheel wash to remove potential contaminants such as weed seeds or plant disease.

LOCATION OF THE WATER COLLECTION AREAS



ABOUT THE MANAGEMENT PLAN

The water collection areas are carefully managed to protect their long term health to ensure they supply consistently high quality water.

The Plan focuses on management of the water catchments of the Hutt and Wainuiomata/ Orongorongo rivers **upstream of the water intakes**. It defines the **primary purposes** of water collection area **management** as:

- Supplying water to meet drinking water quality standards to the Wellington metropolitan areas and minimise water treatment
- Minimising risks of water supply contamination to be compatible with the objectives of the Water Safety Plans as mandated by the Health Act
- Providing a naturally resilient water catchment area through the maintenance of healthy catchment ecosystems to optimise water supply.

The water collection areas also have intrinsic biodiversity value and offer some opportunities for recreation activities. The **secondary purposes** of water collection area management are to:

- Protect and enhance the regionally significant biodiversity values
- Provide for limited recreation activities.

The Plan encompasses background information including the overarching planning context and descriptions of the important and unique natural and cultural values of the water collection areas. This sets the scene for identification and analysis of the **key threats to water quality and supply** which are based on water safety plans, and includes actions to minimise or mitigate them.

Section seven of the Plan is operationally focused. It outlines a **management framework** which defines goals, objectives and actions for implementation over the next ten years. It also clearly outlines management decision making responsibilities, and identifies rules for use and development which encompasses permitted access and activities in the water collection areas. These rules are presented in a quick reference format which is consistent with approach of the GWRC Parks Network Plan (2011).

In the planning hierarchy, this management plan guides and informs operational plans and management procedures for the water collection areas, including 'key native ecosystem' (KNE) plans for biodiversity management, and service level agreements (SLAs) between Wellington Water and GWRC which define operational management responsibilities.

The Plan defines core **goals** for management of the water collection area management which are:

- Maximise the **quality** of raw water and minimise the extent of water treatment required.
- Manage threats to water **supply** to maintain volumes of raw water.

Secondary goals are:

- Maintain and enhance the significant **ecosystem and biodiversity** values of the water collection areas.
- Maintain the **cultural heritage** values of the water collection areas, including managed **recreational** access.
- Maintain collaborative working relationships within and between agencies and with others to achieve water quality, supply and biodiversity objectives.

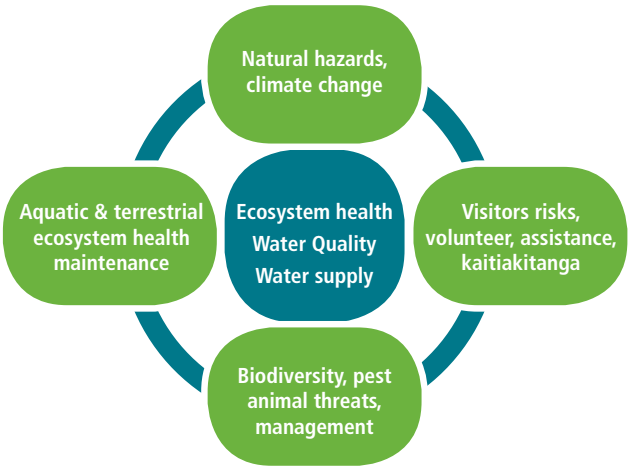
A range of **objectives** are outlined to implement goals such as:

- Aquatic and terrestrial ecosystem health threats from pest animal species are minimised by:
- Maintaining pest animal control programmes for possums, goats and deer
- Monitoring pest animal numbers
- Ongoing water quality monitoring for threats such as cryptosporidium and giardia in accordance with NZ Drinking Water Standards
- Water supply and other water supply assets are sustainably maintained and renewed
- The resilience of assets is improved
- The projected effects of climate change are considered
- Recorded and unrecorded archaeological sites are protected and conserved.

Pest animals such as goats are heavy browsers and highly destructive to native vegetation and pose a threat to both water quality and supply. Feral deer pose a direct threat to water quality through contamination from faecal matter and the parasites Giardia and Cryptosporidium which are present in the guts of warm blooded mammals. Maintaining low feral animal numbers is a critical for minimising the threat they pose to water quality.

MANAGEMENT CHALLENGES

A key challenge in management of the water collection areas is the overarching context of a changing climate and the need to build as much resilience as possible into the manageable aspects of water quality and supply. This includes water supply infrastructure such as weirs, pipes, monitoring equipment, access roads and tracks, and environmental and water quality monitoring to identify changes for management response. It also involves asset planning for future changes and emergency response plans and procedures.



The inputs and influences on water quality, supply and overall terrestrial and aquatic ecosystem heath are interrelated and can be difficult to separate and precisely quantify with many variables to consider. Maintaining raw water quality at source and protecting it from contamination is a key component of a multiple barrier approach (recommended by the World health Organisation) to management of drinking water supplies. Reducing the risks of contamination upstream of water intakes reduces water treatment requirements to meet drinking water standards.

Climate change may result in increased fire risks in the water collection areas from more frequent dry spells, higher temperatures and changing vegetation creating a dryer, more flammable forest. A major fire could have a catastrophic effect on water quality and potentially also supply with increased sediment runoff. The effects of previous fires are still evident in the Hutt Water Collection Area, near Hutt Forks and along the Marchant Ridge. There is a no fires policy for visitors to the water collection areas.

KEY ACTIONS

The Plan outlines a range of activities correlating with goals. Key actions include:

- Undertaking a range of actions to minimise threats to water quality including pest plant and animal control and monitoring programmes
- Completing and publishing the Draft Resource Statement for the water collection areas which will provide further detail of the significant natural and historic heritage values of these areas
- Maintaining and enhancing mana whenua relationships and opportunities for involvement in maintaining kaitiakitanga values
- Maintaining collaborative working relationships between all agencies involved in or neighbouring the catchments, developing a single register of all operating procedures for the water collection areas and a single agrichemical register
- Asset planning for the projected effects of climate change, and developing conservation management plans for significant heritage assets
- Ongoing work to inform and educate visitors to the water collection areas about appropriate minimal impact behaviour to minimise risks to water quality.

The steep hill sides of the Rimutaka Ranges are highly prone to land slips and erosion which is a threat to both water quality and supply. Major slips can block water intakes, reduce stream flows and increase water turbidity (which increases the need for water treatment).

USE OF THE PLAN

The Plan is primarily intended to guide management of the water collection areas, but given the general inaccessibility of these areas because of management control and terrain, it is also likely to be useful as a general reference for those with an interest in these rugged and relatively remote areas. The Management Plan is available to download from the Wellington Water and Greater Wellington Regional Council websites: www.wellingtonwater.co.nz and www.gw.govt.nz

Information for visitors about the Hutt Water Collection Area in Kaitoke Regional Park identifies areas closed to public access and how visitors can minimise impacts to protect water quality.

The Wainuiomata / Orongorongo Water Collection area is closed to casual visits, but ranger-led walking and cycling tours provide the opportunity to see the old growth forest and learn about how the catchments are managed for optimum water quality, as well as the volunteer led restoration activities in the Mainland Island.

Looking towards Wellington from the lush forest of the Wainuiomata/ Orgonrongo water collection area on a fine day. The average annual rainfall here is over 1800mm per year, and snow falls over 800m elevations are common in winter.

KI UTA KI TAI – FROM THE MOUNTAINS TO THE SEA, WATER IS LIFE