Wairarapa Water Use Project

May 2014

Project overview

The Wairarapa Water Use Project is investigating a multi-purpose water scheme for Wairarapa to collect and store water then distribute it for a variety of economic and community uses. This will be done in a way that promotes sustainable management of land and water and creates regional prosperity.

An increased and reliable water supply for Wairarapa has the potential to create significant economic and social development in the greater Wellington region. The flow-on benefits could include:

- improved environmental outcomes
- use of treated waste water for irrigation
- better farming output and returns
- a more diverse range of agricultural outputs
- improved farming practices
- more jobs and increased regional GDP

Once water is stored it is potentially available for:

- augmenting summer river flows
- increasing the irrigated area
- recreational uses
- stock drinking water
- urban water

The opportunities

- Better long-term management of the valley's stressed water sources.
- A catchment-wide approach to the rural water resource compared with the current 'first-in-first-served' individual applications for water take.
- Manage the inevitable 'natural' growth in demand for summer-time surface and ground water.
- Improve fresh water quality by addressing land management issues
- Maximise the viable land productivity and subsequent economic return and flow-on social benefits
- Increase returns through high-value land uses
- Value-added processing of primary produce resulting from more reliable production.

What is proposed?

The proposal is to establish one or more multi-purpose water schemes based on the harvesting, storage and distribution of water in the Wairarapa valley.

The Tararua mountain range west of Wairarapa captures an annual rainfall of 5-6 metres. However, comparatively little of it falls on the good soils of the flat valley floor, much of which are potentially suitable for high-value production.

The water is not always in the right place at the right time – there is often too much in winter and not enough in summer.

Currently around 12,000 hectares of Wairarapa land are irrigated. New water harvesting and storage could increase this area to about 42,000 hectares depending on actual demand.

Potential schemes are in the investigation stage and no decisions on these have yet been made. Any eventual concept could include one or more storage reservoirs that provide water to different parts of the valley. The number and location of these will be depend on a range of factors including:

- suitability of dam sites (engineering and geotechnical aspects) and distribution networks.
- water availability
- demand for water
- environmental, social and cultural effects
- availability of land
- overall financial viability of each scheme

Water would be harvested at times of high flow. There will be no in-stream damming of the main stems of the Ruamāhanga, Waingawa, Waiohine and Tauherenikau Rivers.

Assessing demand

Determining the demand for water from farmers and the wider community is vital in establishing the viability of any water scheme. So far, three related investigations have been done and further work is underway.

1. On-farm actual demand for irrigation water
2. Theoretical demand for irrigation water for a range of normal and dry years
3. Wider community demand for water

The on-farm demand study interviewed 201 landowners representing 269 properties covering 51,000 hectares of the Wairarapa valley. It found that there is a strong demand for irrigation water, although information is not yet available on how much that water will cost to supply. Reports on the three studies can be found at **www.wairarapawater.org.nz**

Future land & water use

The project offers potential gains in land-based productivity and reliability through intensification and/or expansion of arable farming, high-value new crops e.g. pharmaceutical; sheep and cattle (finishing stock), dairy and seeds.

Expansion of dairy farming and dairy support is likely, at least in the initial water uptake stage, because there is an existing industry infrastructure and market mechanisms.

The demand study suggests that the area of non-pasture land uses will increase as horticulture/arable uses generally need less water.

A wider range of land uses than pastoral/dairy production has the potential to spread the demand for water by reducing the peak demand times.

Water Use Project investigations run alongside related work by the Ruamāhanga Whaitua, a community advisory group that is leading a collaborative process to maintain and improve water quality in the Ruamāhanga catchment.

Established in December 2013, the Whaitua will create a vision and priorities for the management of land and water resources. It will make recommendations on land and water management that will inform the Greater Wellington Regional Plan which sets the rules for how natural resources can be used. Both the Whaitua and the Wairarapa Water Use Project are being informed by the Regional Council's science strategy (see back page).

Finance & ownership options

Financial viability and an appropriate ownership structure are required to make any scheme a reality.

While the shape and extent of a Wairarapa scheme is yet to be established, a model has been developed to help determine financial viability once scheme costs are developed. Further work is planned on this.

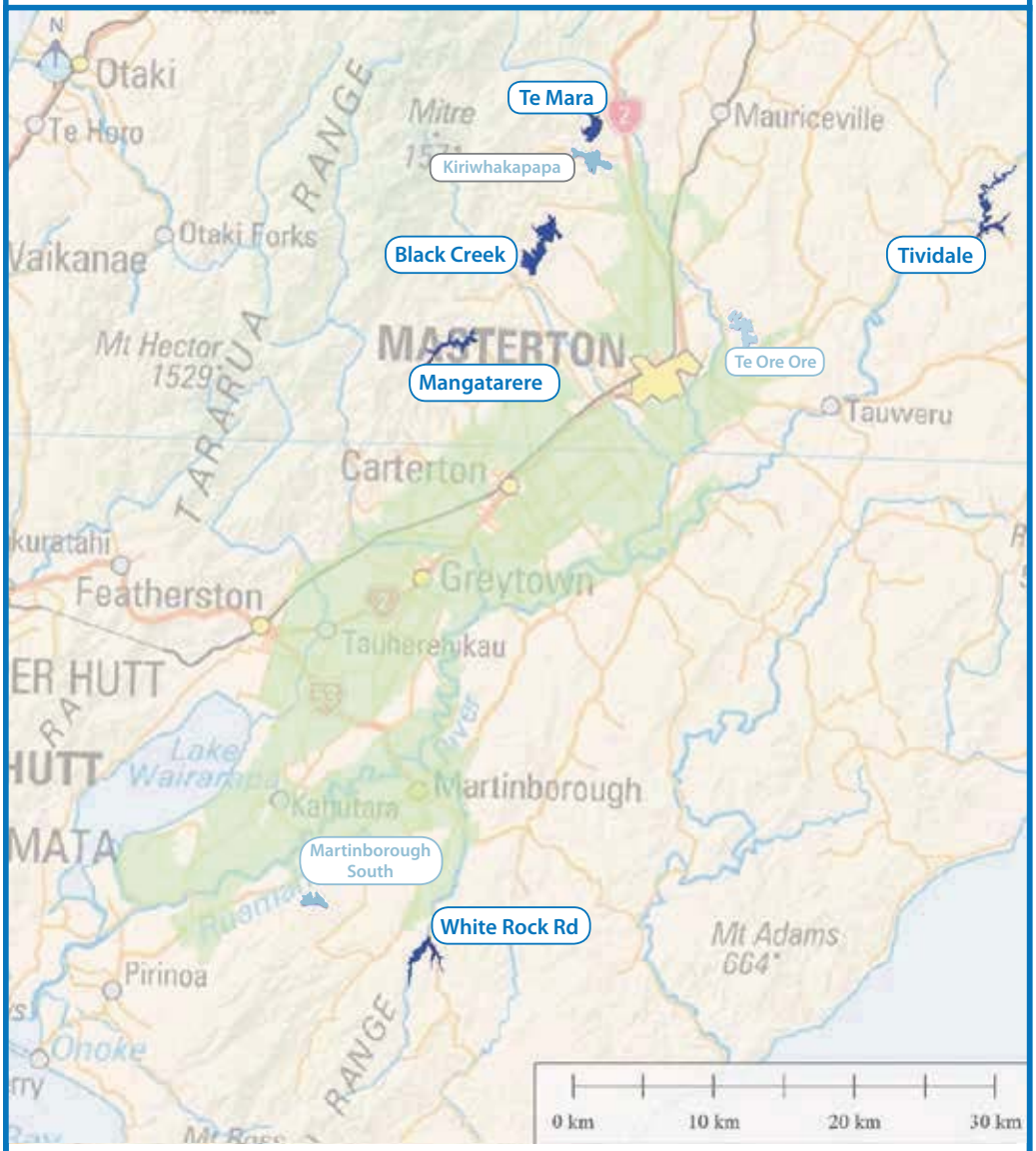
Project governance

A Governance Group established in February 2014 recognises the project's increasing complexity and pace. Chaired by former Masterton mayor Bob Francis, the group acts as a working committee to oversee the project. Previous involvement with the project by members ensures continuity and momentum are maintained.

The project's Leadership Group, made up of leaders in the regional economy and whose organisations are important stakeholders in the project, continues to provide on-going guidance to the project. Membership of these groups recognises the importance of water, the right to its use by the whole community, and the magnitude of the economic, social, environmental and cultural opportunities and challenges.

Wairarapa Water Use Project

Possible water storage & irrigable areas as at Sept 2013



Note
The indicative irrigable area shown is for a long-term multi-storage scheme concept. The area is yet to be refined as the understanding of the storage sites and the water demand increases during future phases of work.

LEGEND
- Priority Storage Options
- Reserve Storage Options
- Indicative Irrigable Area

Current investigations

Preliminary investigations during 2012/13 narrowed a large number of possible water storage sites throughout Wairarapa down to eight, mostly on privately-owned land.

Five of these are priority sites that are being actively investigated further. The other three are reserve sites that will only be investigated if any of the priority sites are found not to be suitable. Details of the early investigations are in the reports section at **www.wairarapawater.org.nz**

It is not expected that all five priority sites will be suitable for development, for a range of social, technical, economic, cultural or environmental reasons. The current pre-feasibility stage of work, expected to continue until early 2015 includes assessments of:

- demand for water
- potential irrigable area
- available water resources
- economic viability at a high level
- geological & geotechnical aspects of storage sites
- water distribution systems
- environmental, social & cultural implications & opportunities
- alternative land uses
- project ownership
- commercial & financing options

This work aims to identify which scheme/s are suitable for a full feasibility study that is expected to begin in 2015. The pre-feasibility work programme can be found at www.wairarapawater.org.nz/Project_Overview/Project_Plan

On-going conversations with all parts of the community are vital to hear perspectives and ideas about water uses and values, and to develop a viable and environmentally sustainable project.

Wairarapa Water Use Project investigations are being funded by the Greater Wellington Regional Council and the Ministry for Primary Industries' Irrigation Acceleration Fund.

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Wairarapa Water Use Project

Indicative project plan

(as at April 2014)

Dates are approximate & subject to review as investigations progress

- Identify research gaps
- Resource survey
- Develop catchment model
- Test scenarios

Whaitua scenarios

WWUP scenarios

Environmental data inventory & summaries

Landowner & community engagement ♦ Environmental, cultural, economic & social impact studies

Demand assessment ♦ Assess economic viability

- Wellington Regional Council Science Strategy
- Wairarapa Water Use Project (WWUP)
- New Regional Plan

2013

- Discussion document
- Ruamāhanga Whaitua* formed

2014

- Possible schemes shortlisted
- Whaitua convenes
- Model scenarios
- Draft Regional Plan

2015

- Prefeasibility study
- Full feasibility study - selected scheme(s)
- Consider entity for ongoing project
- Initial financing plan

Regional Plan proposed

2016

- Start consent process
- Start land purchase discussions

Whaitua makes recommendations

2017

- Secure land
- Detailed scheme design
- Construction tender

2018

- Secure investment
- Consent process ends
- Construction starts

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*Catchment committee representing community values and needs. It is using a collaborative process to recommend how land and water resources are managed through the new Regional Plan.