



greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao

If calling please ask for: Democratic Services

3 November 2017

Wairarapa Committee

Order Paper for meeting to be held in the Hurunui o Rangi Room, Carterton Events Centre, 50 Holloway Street, Carterton on:

Thursday, 9 November 2017 at 10.00am

Membership of Committee

Councillor Staples (Chair)	Greater Wellington Regional Council
Councillor Donaldson (Deputy Chair)	Greater Wellington Regional Council
Councillor Laidlaw	Greater Wellington Regional Council
Mayor Booth	Carterton District Council
Councillor Dalziell	Masterton District Council
Councillor Wright	South Wairarapa District Council

Nelson Rangī
Horipo Rimene

Recommendations in reports are not to be construed as Council policy until adopted by Council

Wairarapa Committee

Order Paper for meeting to be held on Thursday, 9 November 2017 in the Hurunui o Rangi room, Carterton Events Centre, 50 Holloway Street, Carterton at 10.00am

Public Business

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Please note that these minutes remain unconfirmed until the meeting of the Wairarapa Committee on 9 November 2017.

Report 17.276

3/08/2017

File: CCAB-628029985-36

Minutes of the Wairarapa Committee meeting held on Thursday, 3 August 2017 in the Hurunui o Rangi room, Carterton Events Centre, 50 Holloway Street, Carterton at 10:01am

Present

Councillors Staples (Chair), Kedgley and Laidlaw (Greater Wellington Regional Council), Mayor Booth (Carterton District Council), Councillor Dalziell (from 10:10am) (Masterton District Council) and Councillor Jephson (South Wairarapa District Council).

Nelson Rangi and Horipo Rimene.

Cr Staples welcomed the Committee members and referenced the role of this Committee in considering matters of importance to the Wairarapa.

With regard to agenda item 7 (Waiohine Floodplain Management Plan governance and project delivery structure) Cr Staples advised that the suggested terms of reference for the Waiohine Flood Management Plan Project Team prepared by the Waiohine Action Group would be tabled when that item was considered and that it was proposed that the resolutions on that agenda item would make it clear that the existing draft Waiohine Flood Management Plan was revoked.

Public Business

1 Apologies

Moved

(Mayor Booth/Cr Kedgley)

That the Committee accepts apologies for absence from Councillors Donaldson and Wright.

CCAB-628029985-36

The motion was **CARRIED**.

2 **Declarations of conflict of interest**

There were no declarations of conflict of interest.

3 **Public participation**

John Boon of the Waiohine Action Group spoke to item 7 on the agenda.

4 **Committee Terms of Reference**

Oral Report

Cr Staples gave an oral report regarding the Committee's terms of reference.

Cr Dalziell arrived at the meeting during the discussion on this item.

5 **Flood Protection Department Overview**

Report 17.265

File: CCAB-628029985-24

Moved

(Cr Jephson/Cr Laidlaw)

That the Committee:

1. *Receives the report.*
2. *Notes the content of the report.*

The motion was **CARRIED**.

6 **Waiohine Floodplain Management Plan independent audit and mapping revisions**

Report 17.257

File: CCAB-628029985-18

Wayne O'Donnell, General Manager, Catchment Management spoke to the report.

Michael Law, Senior Associate - Water Resources at Beca gave a presentation on the flood hazard model and mapping audit.

Moved

(Cr Staples/Mr Rangī)

That the Committee:

1. *Receives the report.*

2. *Notes the content of the report.*
3. *Endorses the outcomes of the Audit and the additional work commissioned to address the recommendations of the Independent Audit.*

The motion was **CARRIED**.

Noted: In terms of section 3 of the report, the Committee considered that the first priority for the scope of work was the item listed as item 2 in the list of the scope of work.

7 **Waiohine Floodplain Management Plan governance and project delivery structure**

Report 17.258

File: CCAB-628029985-20

Wayne O'Donnell spoke to the report.

The suggested terms of reference for the Waiohine Flood Management Plan Project Team prepared by the Waiohine Action Group were tabled.

Moved

(Cr Jephson/Cr Laidlaw)

That the Committee:

1. *Receives the report.*
2. *Notes the content of the report.*
3. *Notes that a report advising the Environment Committee on the proposed establishment of a Waiohine FMP Steering Group and Project Team will be presented to the Environment Committee on 9 August 2017.*
4. *Recommends that Council:*
 - a. *revokes the Draft FMP that was approved for consultation by the Environment Committee on 10 May 2016;*
 - b. *establishes a Waiohine FMP Steering Group; and*
 - c. *adopts terms of reference for the Waiohine FMP Steering Group as set out in Attachment 1 of this Report.*

The motion was **CARRIED**.

8 **Water Wairarapa update**

Oral Report

The Committee received a presentation from Michael Bassett-Foss, Project Director, Water Wairarapa and Alastair Smaill, Whitua Project Manager, regarding the Water Wairarapa project.

9 **Ruamāhanga Whitua Committee update**

Report 17.253

File: CCAB-628029985-17

Alastair Smaill, Whitua Project Manager, spoke to the report.

Moved

(Mr Rimene/Cr Kedgley)

That the Committee:

1. *Receives the report.*
2. *Notes the content of the report.*

The motion was **CARRIED**.

10 **Public Transport overview and update**

Report 17.271

File: CCAB-628029985-33

Wayne Hastie spoke to the report.

Moved

(Mr Rangī/Mayor Booth)

That the Committee:

3. *Receives the report.*
4. *Notes the content of the report.*

The meeting closed at 11:51pm.

Cr A Staples
(Chair)

Date:



Report 17.435
Date 27 October 2017
File CCAB-628029985-41

Committee Wairarapa Committee
Authors Wayne Hastie, General Manager, Public Transport

Public Transport update

1. Purpose

To inform the Committee of Greater Wellington Regional Council's (GWRC) activities relating to the Committee's areas of responsibility.

2. Strategic Framework

2.1 RLTP 2015 mid-term review

A review of the Regional Land Transport Plan (RLTP) 2015 and update of activities and projects in the second three years of the programme must be finalised and submitted to the NZ Transport Agency by the end of April 2018.

Two stakeholder workshops held during September provided useful input to the review. Phases 1-3 of the review are now complete and Phase 4 is underway.

The Regional Transport Committee considered activities and projects for years 4-6 at a workshop on 30 October and will agree a draft RLTP update at its November meeting.

3. Key initiatives and projects

3.1 Sustainable Transport

As part of NZ Transport Agency's on-going investment in cycling, a joint commitment with ACC to create a National Cycling Education System was announced in July. Following announcements of funding being available in the 2017/18 year, GWRC's Pedal Ready programme received \$92,000 of additional funding to deliver cycle skills training in the region. This will be focused particularly on increasing Grade 2 (on-road) training to schools, community groups or workplaces within 2 km of projects funded through the Urban Cycleway Programme.

3.2 PTOM bus contracts and transition

Wairarapa will be the first area in the region to have bus services operate under the new PTOM bus contracts, with Transit kicking off the first of its eight contracts in Wairarapa on 29 April 2018. The most obvious changes that our

customers will see will be a brand new fleet of Euro 6 buses branded in Metlink livery, bus drivers in new Metlink uniforms, and the 'a to b' bus card replaced with Snapper bus cards that enable free transfers between Metlink buses. New Sunday bus services between Martinborough, Featherston and Masterton will be included from July 2018 along with some further rail timetable changes.

The other PTOM bus contracts will commence on 17 June 2018 for Hutt Valley services and on 15 July 2018 for all other services in the region.

3.3 Fares and ticketing

A high level of engagement occurred with the *Better Metlink Fares* consultation in August and September – via social media channels, the website, public notices and a series of public meetings throughout the region, including a meeting in Carterton on the evening of 11 September 2017.

Over 750 submissions were received on the proposed fares changes, with around 500 of those coming to GWRC via Metlink channels. The remainder of submissions were forwarded to GWRC via a Victoria University Students' Association web-based survey form. A public hearing was held on 4 and 5 October, with 26 submitters speaking to their submissions. The Hearing Committee endorsed the fares package subject to some changes, including increasing the discount for blind and disabled customers to 50% off the smartcard fare (was 25%), and retaining a 30 day bus pass for high frequency bus users in Wellington City and for direct bus travel from Eastbourne to Wellington City.

Council adopted the variation to the Regional Public Transport Plan and agreed the revised fares package on 31 October. This paves the way for implementation to coincide with the new bus PTOM contracts, Wellington bus network changes and the extension of Snapper bus ticketing across the entire bus network.

The Integrated Fares and Ticketing project (being delivered in partnership with the NZ Transport Agency and other regional councils) is progressing well in the concept phase. The indicative business case process is progressing through the necessary approvals. The next phase will be to initiate a competitive, market-tested procurement for a next generation ticketing solution.

4. Metlink Public Transport – operational matters

4.1 Rail operations

4.1.1 RMTU Industrial Action

The Rail and Maritime Transport Union (RMTU), which represents many Transdev Wellington Limited employees, held a 2-hour stop work meeting on 4 October 2017 to discuss with members the progress of Collective Employment negotiations. Collective Agreement negotiations are continuing under mediation.

4.1.2 Wairarapa Timetable Change

Wairarapa off-peak services are currently timetabled to have shorter journey times than during the peak. While patronage is lower than the peak, off-peak

“dwell” times at stations are generally similar to, or longer than, at peaks because of the loading of bicycles and prams, for example. This has resulted in poor performance of the Wairarapa off-peak services. A timetable change will occur on 19 November 2017 to address this issue by increasing scheduled off-peak service journey times to match those for peak services. As the rail timetable is changing, in order to maintain ongoing reliable bus/train connections, there will be some consequential changes to bus timetables occurring at the same time.

4.1.3 Wairarapa carriage interoperability

Testing has commenced on the changes made to the two types of carriages that operate on the Wairarapa line. Carriage interoperability will enable more capacity to be added to specific services. In-service trials are likely to commence in late November 2017.

4.1.4 Crown Business Cases

Two Crown business cases are being prepared jointly with KiwiRail for submission to Ministry of Transport on 1 November 2017. The first covers KiwiRail network track infrastructure deferred renewals, which predominantly affects the Wairarapa line. The second business case is to remove network constraints to enable increased capacity (more frequent and longer trains) to operate principally on the Hutt and Kapiti lines.

4.2 Total Mobility

GWRC has entered into new contracting arrangements with Total Mobility customer eligibility assessors, now including improved availability of service for Wairarapa customers.

Officers have also initiated a customer newsletter with either email or standard post options. The newsletter contains useful information for Total Mobility customers, including reiterating the need to book wheelchair-accessible taxis in advance, especially in the evenings and on weekends when demand is high.

5. Communication

No communication is required.

6. Consideration of climate change

The matters addressed in this report are for the purpose of updating the Committee, and there is no need to conduct a climate change assessment.

7. The decision-making process and significance

No decision is being sought in this report.

7.1 Engagement

Engagement on this matter is unnecessary.

8. Recommendations

That the Committee:

1. *Receives the report.*
2. *Notes the content of the report.*

Report approved by:

Wayne Hastie
General Manager
Public Transport

Report approved by:

Luke Troy
General Manager
Strategy



Report 2017.436
Date 27 October 2017
File CCAB-628029985-44

Committee Wairarapa Committee
Author Kat Banyard, Project Advisor

Ruamāhanga Whaitua Committee Update

1. Purpose

The purpose of this report is to update the Wairarapa Committee on the progress of the Ruamāhanga Whaitua Committee.

2. Background

The whaitua process is a community-led, collaborative planning process to address a number of land and water management issues and to carry out our obligations under the National Policy Statement for Freshwater Management (NPS-FM). The programme aims to improve the integration of activities and achieve better resource management practices which reflect local aspirations.

The region has been divided into five whaitua or catchments (see Figure 1). Whaitua committees, consisting of community members and partner representatives, will make recommendations to the Council through a Whaitua Implementation Programme (WIP) report. These committees are a partnership between GWRC, iwi, territorial authorities and the community.



Figure 1: Whaitua catchments

The Ruamāhanga Whaitua Committee was the first of the five committees to be established in December 2013. The Committee is working to develop a WIP which will contain strategies and actions that will form a programme of work to implement the NPS-FM in the Ruamāhanga catchment. It will include both regulatory provisions and non-regulatory programmes. The regulatory provisions will be included into the Natural Resources Plan by way of a plan change into the whaitua specific chapter. The recommendations from the WIP aren't being considered as part of the current Proposed Natural Resources Plan Schedule 1 process.

The Wairarapa Coast Whaitua Committee will be the last of the five committees to be established, currently scheduled for 2020.

2.1 Collaborative Modelling Project

Collaborative Modelling Projects support Whaitua committees by feeding knowledge into their decision making process. Experts in the various topic areas (for example, ecologists, economists, social scientists) work collaboratively to ensure information and data is up to date and to provide expert advice to the Committee when required. The project involves partnering with mana whenua, as well as having significant iwi and community input from relevant stakeholders.

The current modelling project for the Ruamāhanga Whaitua provides collective scientific, cultural and community knowledge, data and information to describe the current state of each catchment. The Whaitua committee has asked questions about what could happen in the future under certain conditions, such as different land management practices, and how the catchment would respond to those. These are called scenarios. The models will be used to forecast the potential environmental, social, recreational, cultural and economic consequences of these scenarios. The Whaitua committee will use this information, alongside their own knowledge of community values, agriculture, biodiversity, mana whenua, recreation, urban and economic interests in setting freshwater objectives and limits.

3. Ruamāhanga Whaitua Committee

3.1 Policy direction

The direction that the Committee is starting to land on is becoming clearer through their discussions. Their policy direction for managing contaminants, river management and water allocation is detailed below and will continue to be informed by engagement with mana whenua, stakeholders and the community.

3.1.1 Managing contaminants

There are a number of places in the whaitua where the national bottom lines for water quality are not being met. In particular there are excessive levels of periphyton (algae) growth in rivers and streams in the Eastern Hills and the Parkvale Stream. The Parkvale Stream does not meet the bottom line for nitrate toxicity. Several rivers do not meet the revised swimming standard. Lake Wairarapa and Lake Onoke also have very poor water quality in general.

The Ruamāhanga Whaitua Committee (the Committee) will set limits (as regulatory rules) to achieve objectives at the sub-catchment scale as required by the NPS-FM. Limits will be set for nitrogen, phosphorus, pathogens and sediment.

The Committee supports a non-regulatory pathway to achieve these limits. Individual point source discharges will continue to be regulated as they are now. The Committee supports enabling sub-catchment groups who will have a practical implementation focus to achieve the limits. The Committee also supports a holistic approach to farm scale planning that seeks continuous improvement in environmental performance.

3.1.2 River management

The rivers, lakes and wetlands of the Ruamāhanga whaitua are highly modified and degraded which has led to a loss of natural character and habitat. The Committee is considering where opportunities exist to achieve a more natural river geomorphology and a holistic approach to river management. They want to improve the extent and quality of riparian margins.

Another option being considered is to put the Ruamahanga River back into Lake Wairarapa to improve the water quality and restore the mana of the lake. This will be a longer term option that may tie into the establishment of the Statutory Board.

3.1.3 Water allocation

Climate change is going to have ongoing effects in the catchment, with significant low flow reductions predicted by the end of the century. This will further restrict water user reliability even if there is no change in policy direction.

The Committee has reviewed minimum flows and allocation limits for the eight major rivers in the whaitua. Most suggested changes are small, however significant changes are being considered to the minimum flows in the Upper Ruamāhanga and the Waipoua rivers. These changes will provide better protection for fish habitat and from the pressures of climate change. Any changes will need to be implemented over a period of time to mitigate economic impacts.

The Committee is considering how best to manage groundwater takes that are directly connected with surface water. These may be restricted further.

3.2 Key work in the coming months

In the coming months the Ruamāhanga Whaitua Committee will develop and finalise their freshwater objectives – what they want to achieve in terms of environmental state improvement. Under the NPS-FM the Committee will need to maintain or improve water quality, and improve in places where national bottom lines aren't being met. They will also need to meet the 90% swimmable target by 2040. These discussions will be informed by a range of information and knowledge, including results from the collaborative modelling project and the perspectives of mana whenua and the community.

The Committee is just beginning to engage on their preferred policy approach to water allocation with the community and stakeholders. Peter Gawith, Chair of the Committee spoke at the Wairarapa Water Users Group AGM on 26 October. A letter and face to face meetings are also being set up for users who would be directly affected by the Committee's preferred changes to minimum flows and Category A groundwater restrictions at minimum flows. Some of the preferred changes have the potential to have significant impacts on water users, and the Committee is working to clearly communicate the rationale and timeframe over which any changes would occur.

Regular engagement with partners and stakeholders will continue. Updates to District Councils and the Farming Reference Group are already confirmed in the coming months.

The Committee is still expecting to make all their major decisions by the end of 2017. The Committee supports further engagement with stakeholders and the community on the 'whole package' in February and March 2018 with a view to a final WIP being presented to Council in April/May.

4. Consideration of Climate Change

The matters addressed in this report have been considered by officers in accordance with the process set out in the GWRC Climate Change Consideration Guide.

4.1 Mitigation assessment

Mitigation assessments are concerned with the effect of the matter on the climate (i.e. the greenhouse gas emissions generated or removed from the atmosphere as a consequence of the matter) and the actions taken to reduce, neutralise or enhance that effect.

Officers have considered the effect of the matter on the climate.

Officers note that the matter currently does not affect the Council's interests in the Emissions Trading Scheme (ETS) or the Permanent Forest Sink Initiative (PFSI). However, recommendations made by the Ruamāhanga Whaitua Committee could provide a co-benefit of mitigating climate change. For example, the retirement and planting of erosion-prone land could give effect to sequestering carbon, however this will not be able to be further analysed until the Committee make their recommendations. Officers involved in this work will ensure this is considered in the final WIP report.

4.2 Adaptation assessment

Adaptation assessments relate to the impacts of climate change (e.g. sea level rise or an increase in extreme weather events), and the actions taken to address or avoid those impacts.

Consideration of climate change adaption has been built into the collaborative modelling projects which support each whaitua project.

Climate change impacts on rainfall and catchment hydrology have been modelled. This information will allow for analysis of changes in contaminant

generation, water allocation and flow, and the effectiveness of mitigations (such as stormwater treatment, erosion and sediment control) on a catchment-by-catchment basis.

5. The decision-making process and significance

No decision is being sought in this report. This report is for Wairarapa Committee members to receive an update on the progress of the Ruamāhanga Whaitua Committee.

5.1 Engagement

Engagement on this matter is unnecessary.

6. Recommendations

That the Committee:

- 1. Receives the report.*
- 2. Notes the content of the report.*

Report prepared by:

Kat Banyard
Project Advisor

Report approved by:

Alastair Smill
Team Leader - Whaitua



Report 17.246
Date 1 November 2017
File CCAB- 628029985-16

Committee Wairarapa
Author Penny Fairbrother, Senior Science Coordinator

Are we meeting our environmental outcomes in the Ruamāhanga catchment?

1. Purpose

To discuss the state of the environment in the Ruamāhanga catchment, particularly with respect to whether Greater Wellington Regional Council (GWRC) is achieving its desired environmental outcomes.

2. Background

The Ruamāhanga catchment (Wairarapa Valley) is the agricultural powerhouse of the region. Dairying, drystock farming, orchards and vineyards all play a significant role in the area's economy.

The area covers a massive 3,555m² (44 percent of the region's land area) and is home to around 37,000 people (eight percent of the region's population). Most of the people reside in the towns of Masterton, Carterton, Greytown, Featherston and Martinborough.

The Ruamāhanga River is a central feature – with its headwaters in the Tararua Ranges north of Pukaha Mount Bruce, the river flows south and then southwest for 130km before emptying into Palliser Bay via Lake Onoke.

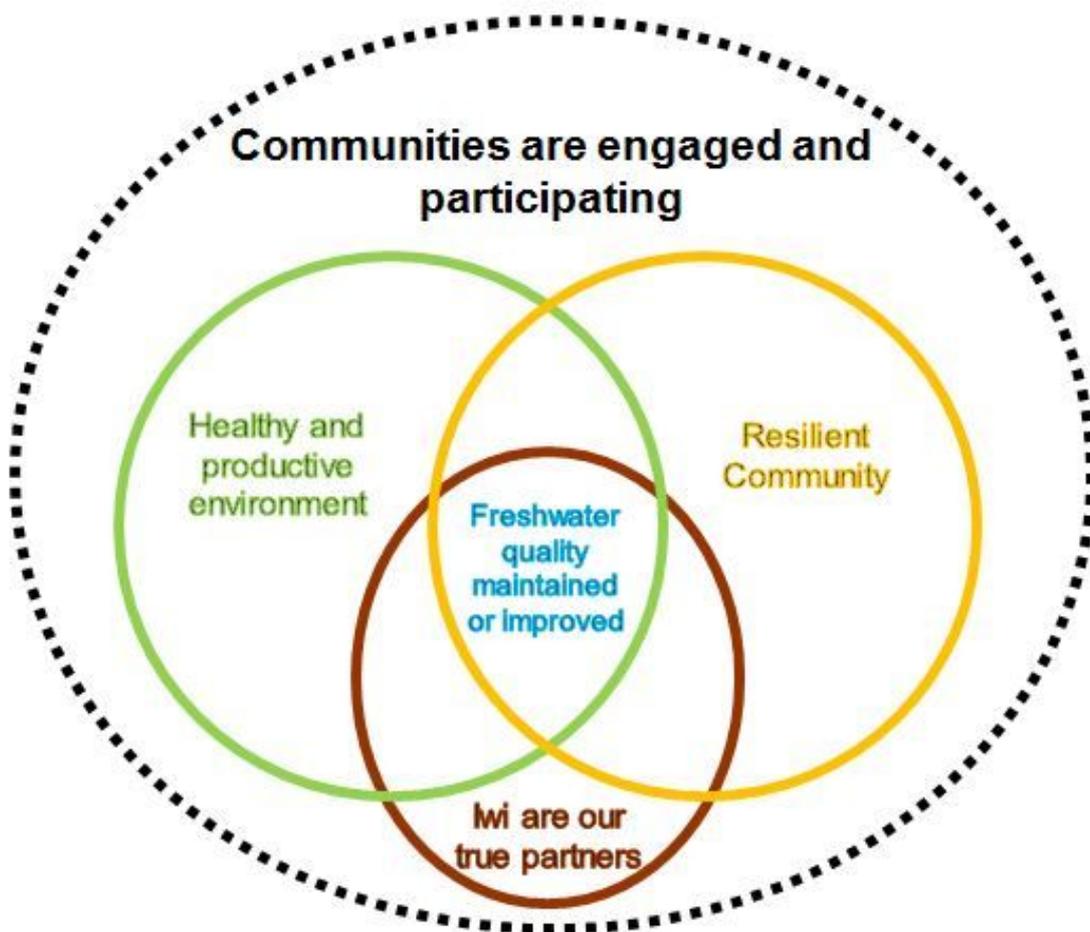
3. What are the environmental outcomes we are trying to achieve?

The Environment and Catchment Management groups have come up with five **draft** shared outcomes that are the driving basis for our work. These are shown in the diagram below.

All five outcomes are inextricably linked, but some key points to note are:

- In terms of our operational activities, they are largely directly working towards achieving the three outcomes *Resilient community*, *Healthy and productive environment* and *Partnering with iwi*. Note that some activities will span multiple outcomes.

- *Maintaining or improving water quality* does not happen in isolation. Water quality is in fact driven by everything we do “Te uta te kai” (from the mountains to the sea). The diagram represents the fact that improving water quality is not something that can happen in isolation, but will be a result of everything else we do – most importantly, how we manage our land-based activities.
- To achieve all this, GWRC cannot do this alone. Everyone has their part to play, so we must ensure that *Our communities are engaged and participating*.
- Not all of the outcomes can be evaluated by traditional science measures. Determining whether we are being successful in achieving the outcomes *Partnering with iwi* and *Our communities are engaged and participating* will require social measures.



4. Policy context

It is clear from the debate over the government's recent swimmability proposal and reaction following the Havelock North drinking water incident that New Zealand's societal awareness and expectations around clean water have shifted.

The National Policy Statement for Freshwater Management (NPS-FM) was introduced in 2011, revised in 2014 and there is currently a proposal for a 2017 version. Each iteration has tightened the national direction around freshwater quality, but the key message is that the overall quality of freshwater should be maintained or improved.

GWRC's Regional Policy Statement (RPS) identifies regionally significant issues around the sustainable management of the region's natural and physical resources. The quality of water in rivers, streams, lakes, wetlands and groundwater is considered an issue of significance in the RPS (chapter 3.4). Both regional and district plans are required to give effect to the RPS.

The proposed Natural Resources Plan (pNRP) was developed in accordance with the Resource Management Act 1991 (the Act). It set out the objectives, policies and methods (including rules) for the use of the region's natural and physical resources. The pNRP (once operative) will replace the five existing Regional Plans.

Of particular interest to the Ruamāhanga catchment is the proposed introduction of national stock exclusion rules. These will be national rules requiring the exclusion of stock (cattle, pigs and deer) from waterways. In some cases (e.g. dairy cattle in lowland areas) stock will be excluded from all waterways, including drains and wetlands.

5. Environmental Outcome – resilient community

5.1 What does this mean?

This is about ensuring our communities are healthy, safe, prosperous and prepared. The key things we do in this regard are:

- Ensuring security of water supply for drinking and other needs, including irrigation
- Protection of homes and land against flooding and other natural hazards
- Preparing landowners to cope with the impacts of climate change
- Work with local councils to ensure air quality improves and meets national standards and guidelines.

5.2 Ensuring security of water supply for drinking and other needs, including irrigation

What the science is saying...

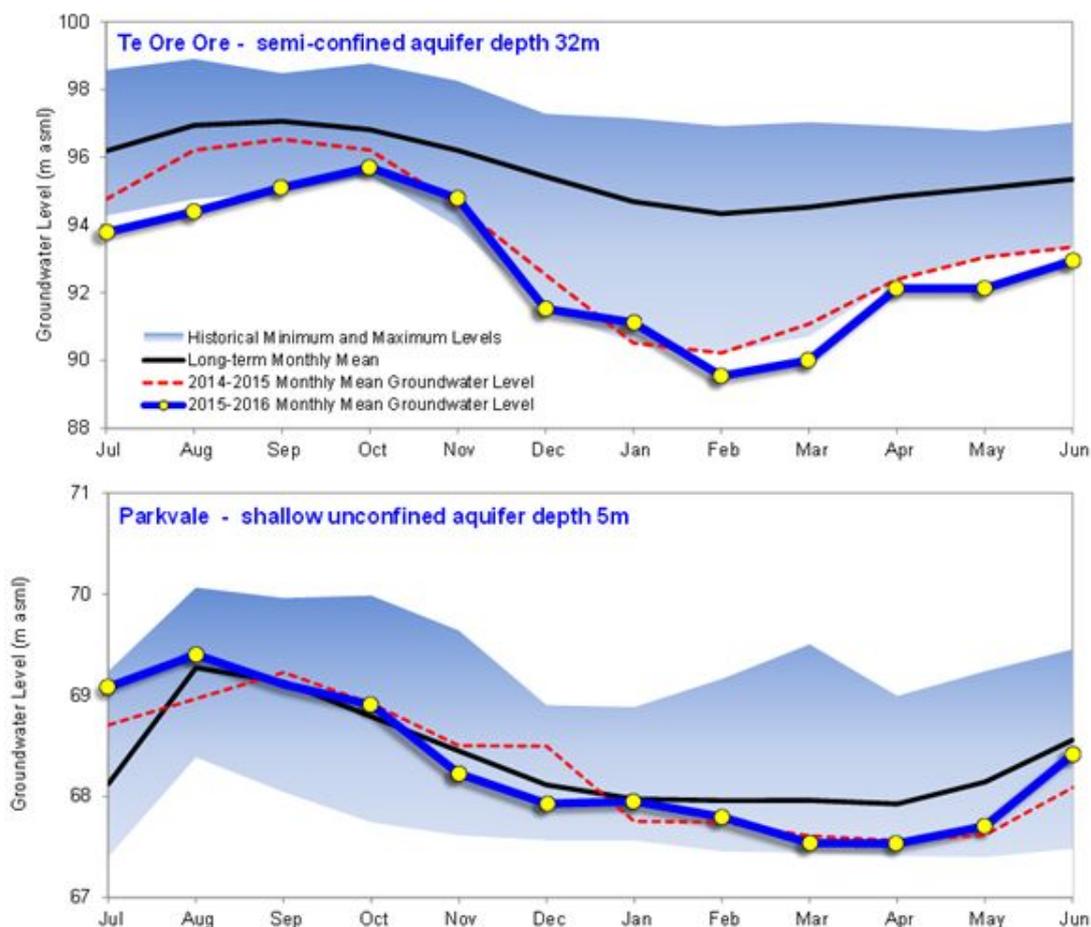
Monitoring results from the 2015/16 year show that rainfall was below average across most of the area, with the period February-April 2016 being particularly dry. Unsurprisingly, river levels were also below average for much of the year, with record lows reached in the Ruamahanga River during March.

A number of rivers and streams breached low flow thresholds resulting in restrictions on water takes. The number of days with restrictions was particularly high for the Waingawa River and Mangatarere Stream – 84 and 107 days respectively.

Interestingly, groundwater bodies do not necessarily follow the same pattern. The graph below shows that levels in the shallow unconfined Parkvale Aquifer have remained around average for the past two years, despite it being quite a dry period.

In contrast, levels in the deeper semi-confined Te Ore Ore Aquifer have been extremely low over the past two years. Looking further back, the levels in this aquifer were average-below average in 2013/14 (which was a wet year), and exceedingly low again in 2012/13 (another dry year).

The difference is at least in part because shallow unconfined aquifers (like Parkvale) are readily recharged by rain and surface water bodies, whereas more confined aquifers (like Te Ore Ore) take longer to recharge and are more likely to be reflective of long term trends in rainfall and water levels.



What are we doing about it?

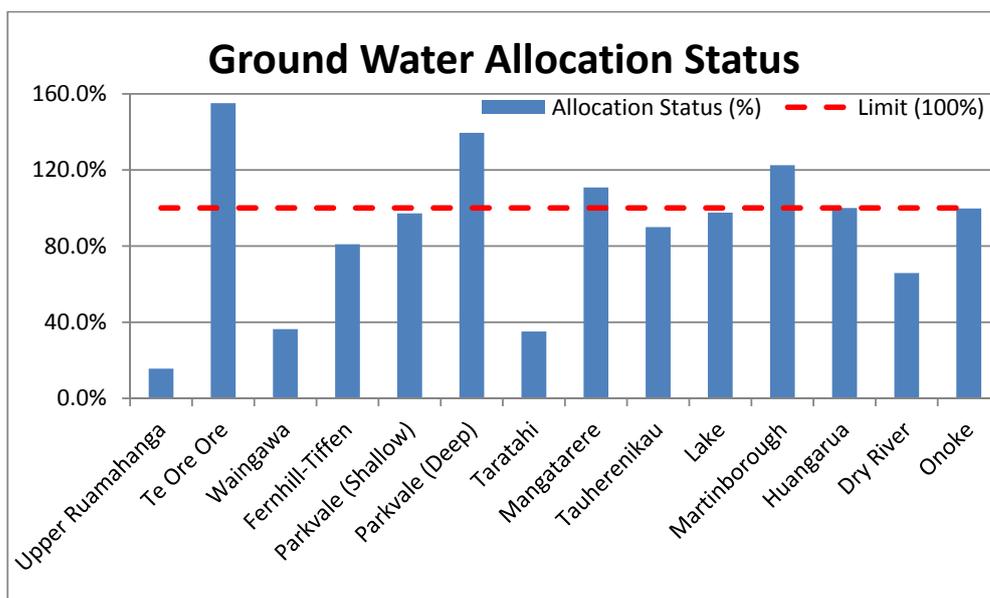
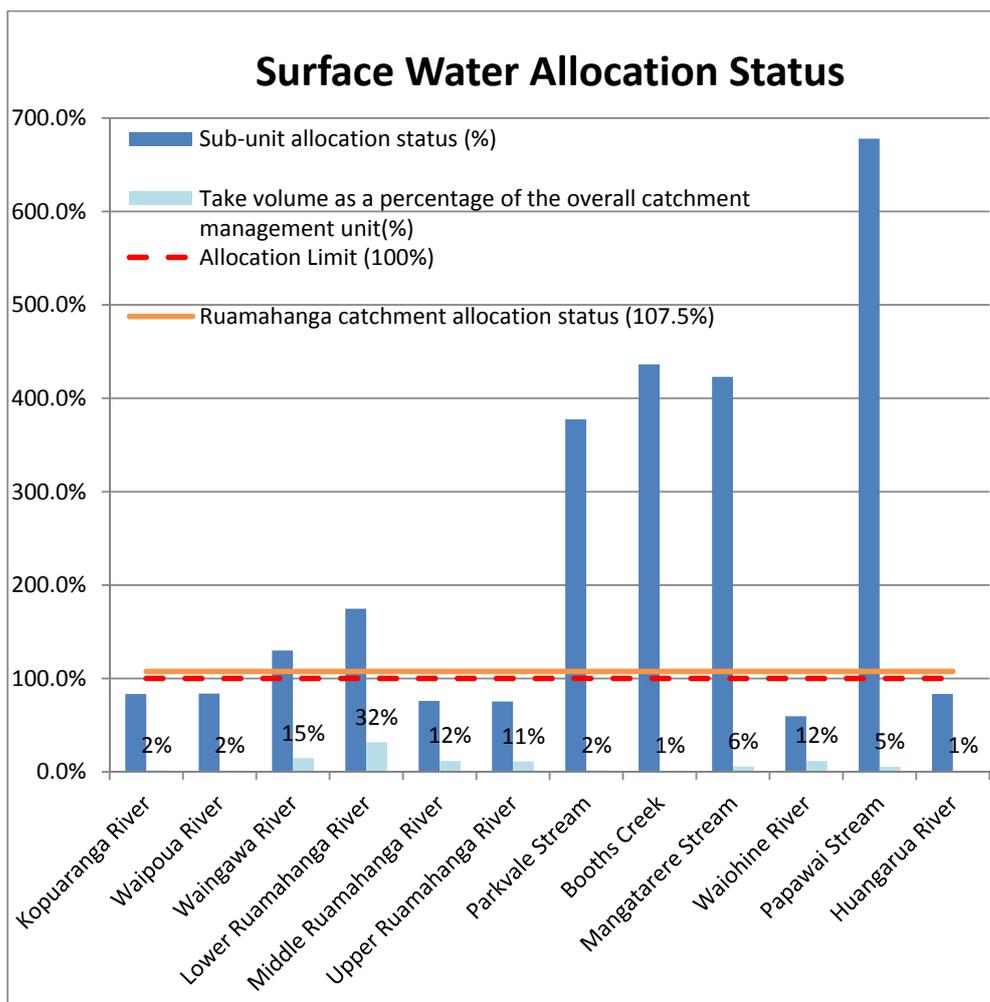
The amount of water allocated through resource consents across the region increased significantly between 1990 and 2010, but has largely remained stable since then. In the Ruamāhanga, irrigation is the dominant use.

Most of the region's major rivers are now fully allocated, meaning that at normal to low flows there is just enough water to meet all consented water takes while still maintaining the environmental health of these waterways.

The amount of groundwater that can be safely allocated is actually likely to reduce in the future. This is because we now know much more about the linkages between groundwater and surface water, and how groundwater abstraction affects nearby river and stream levels.

The figures below show the current allocation status of rivers and aquifers in the Ruamāhanga as set out in the provisions of the pNRP. The pNRP splits surface water allocation into overall catchment management units which are in turn split into sub-units. The overall catchment management unit in this case is the Ruamahanga River and all its tributaries, and is currently 107% allocated. Several of the sub-units are also markedly over-allocated.

Water take limits for surface water consist of a minimum flow (a river flow at which users cease taking water) as well as an allocation amount (the amount of water that can be taken when the river flow is above the minimum flow). The main environmental protection mechanism is the minimum flow. The Ruamāhanga Whaitua Committee is currently reviewing these limits.



The pNRP deals with over-allocation in a number of ways, including:

- *Prohibited activity for ‘new’ water* – under the pNRP, if adopted as currently written, any consent for a ‘new’ water take in a fully allocated catchment will be a prohibited activity. This does not apply to renewals of existing consents or where it is demonstrated as being essential for the health needs of people or stock drinking water.
- *Efficiency* – All renewals and new consents will be required to demonstrate that the amount applied for is reasonable and will be used efficiently. In addition, consent holders are increasingly using advanced technology, such as soil moisture technology, to ensure they are only irrigating when it is actually required.
- *Water metering* – All allocated takes over 5L/s are required to meter their actual water usage. Water meter records will help determine the actual needs of the consent holders and more closely align allocated takes with actual usage.
- *Attrition* - Allocation will be clawed back over time as consents are surrendered or renewed for lesser amounts (due to water meter records or efficiency tests showing less water is needed).

However, we know that current water users do not have enough water during dry periods. A major GWRC project, Water Wairarapa, is investigating water storage and distribution options that can harvest water when there is a surplus, and distribute it to where it’s needed during water shortages.

More complex water management scenarios can also be considered with appropriate water storage and distribution infrastructure in place, allowing a more efficient use and allocation regime.

Large scale infrastructure projects take anywhere from 10 years and more to complete. Water Wairarapa is only half way through this timeframe and has many years of more investigations to be sure of scheme viability across all parameters including financial, environmental, social and cultural.

5.3 Protection of homes and land against flooding and other natural hazards

What the science is saying...

We monitor a number of rivers and streams for flood warning purposes. The table below shows the number of times flood warning alarms were activated over the previous three years.

Site	2013/14	2014/15	2015/16
Ruamahanga River – Mt Bruce	11	11	0
Ruamahanga River – Wardells station	14	4	0
Ruamahanga River – Waihenga Bridge	14	6	4

Waipoua River	11	4	1
Waingawa River	1	1	0
Waiohine River	9	5	1
Mangatarere Stream	2	0	1
Taueru River	4	0	1
Huangarua River	1	0	0
Totals	67	31	8
Comment	Wetter than normal year	Largely below average rainfall	Largely below average rainfall
Any significant flood events?	12 July 2013, Taueru River (8-yr return period), no recorded flood damage	No	No

Initial results from 2016/17 have shown an increase in flood activity, however there has been no significant flood damage as a result.

A recent study undertaken by NIWA on regional climate change projections shows that although the Wairarapa is going to become drier overall (up to 10% less rainfall per year by 2090), extreme rainfall events are likely to become more extreme and more common. This essentially means that storms are going to bigger and more frequent, with less rain in between. This pattern is only going to increase the risk from flooding.

What are we doing about it?

When flood warning levels are breached we have protocols for informing potentially affected land/home owners so they can take precautions such as moving stock or evacuating in dire circumstances.

Two floodplain management plans (FMP) are currently in development for the Ruamāhanga catchment – the Waiohine FMP and the Te Kāuru Upper Ruamāhanga FMP. FMPs involve years of investigating the most comprehensive and long-term approach for managing flood and erosion risks to both rural and urban land. A FMP for the lower Ruamāhanga is planned for development following completion of the current projects.

We also facilitate nine river management schemes within the upper Ruamāhanga and a large lower valley scheme that is governed by the Lower Ruamāhanga Valley Floodplain Management Advisory Committee. The schemes are run by community-based committees and guide maintenance

activities that help achieve bank-edge protection and reduce the incidence of flooding.

The primary goal for the major gravel-bed rivers is to establish stable channel alignment through the adoption of a design channel fairway with vegetative buffers on either side of the river. The methods used generally involve bio-engineering practices (which is the term used to describe the use of vegetative systems and structures) and rely heavily on vegetative buffers to reduce river bank erosion and absorb/redirect the energy of flowing water.

5.4 Preparing landowners to cope with the impacts of climate change

What the science is saying...

Climate change is undoubtedly the biggest environmental challenge we face and will affect everyone in the region.

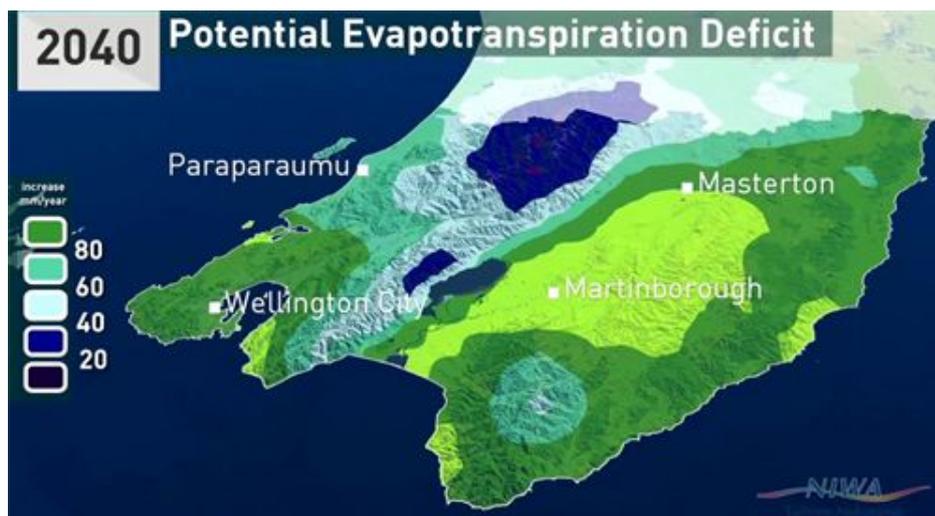
Being an inland valley, the Ruamāhanga won't be hugely affected by sea level rise. However during flood events the capacity for the river to drain out to sea will be reduced. There will also be a major impact on farming in the lower valley with a number of farms already relying on pump drainage schemes to survive. Increased sea levels will probably mean farming will have to cease in certain areas.

The biggest effects will be from changes in temperatures and rainfall. By 2090, the Wairarapa could be up to 3 degrees warmer. The number of extreme hot days (days with temperature exceeding 25 degrees) are also likely to increase significantly. This has the potential to impact on human health, power consumption and the health of livestock.

By 2090, the Wairarapa is projected to receive up to 10 percent less rainfall per year. However, extreme rainfall events are projected to become more extreme and more common. This essentially means that storms are going to be bigger and more frequent, with less rain in between. This adds to the risk of flooding, landslides and impacts from severe winds.

Potentially the biggest threat to the Ruamāhanga is that drought is highly likely to become more common and more severe. One way to measure the severity of drought is called the Potential Evapotranspiration Deficit (PED). It's quite complicated but essentially it can be thought of as the amount of rainfall needed in order to keep pasture growth at optimum levels. The higher the PED, the more drought-affected the area is going to be.

By 2040 the PED could increase by up to 120mm/yr, and by 2090 it could increase by up to 180mm/yr. This means that by the end of the century, what is presently considered as severe drought will be the norm. Drought of this severity will impact significantly on primary industry in terms of pasture and crop growth, and flow-on effects for water supply.



These projections are based on the most extreme climate change scenario, which is based on continued high emissions of greenhouse gases. While some of the effects of climate change are now inevitable due to past and current greenhouse gas emissions, it's not too late to make a difference and avoid the extremes as predicted above. The speed and magnitude of impacts in the longer term will be determined by how quickly the global community can reduce greenhouse gas emissions.

What are we doing about it?

A problem of this scale inevitably requires a response at both the national and regional level. One of our responses, as local government, was to develop a Climate Change Strategy which aligns and coordinates climate change actions across GWRC's responsibilities and operations.

Alongside the work we are doing to reduce our own emissions and influence emissions reductions across the region, we are also focussing on better understanding the **implications** of climate change impacts (like extreme rainfall events mixed with prolonged droughts).

The report that we recently commissioned from NIWA describes the climatic changes which may occur across the region over the rest of this century. The report discusses the predicted changes and outlines potential implications. The resolution at which the information is presented (ie, climate change mapping) sets this report apart from any others that have preceded it.

The information from the report will be used alongside other climate change-related studies that have been done as part of the Collaborative Modelling Project for the Ruamāhanga Whaitua Committee, to inform GWRC’s adaptation planning. It will also enable the community to better understand what climate change could mean for them.

Climate change projections are already being incorporated into flood protection operations, and are being progressively integrated into all aspects of our work, including transport, biodiversity, biosecurity and land management activities, as well as analysis of irrigation scheme options by Water Wairarapa.

Consideration of climate change is now a core component of decision making at GWRC and we are adopting an adaptive planning approach across our operations.

5.5 Work with local councils to ensure air quality improves and meets national standards and guidelines

What the science is saying...

Most of the time air quality in the Ruamāhanga is good. In this area, home heating places the greatest pressure on air quality, and does at times affect air quality in the townships during winter.

Wairarapa towns have the highest proportion of households (approx. 70 percent) in the region using wood or coal for home heating, and smoke from home fires contains high levels of fine particles (PM_{2.5}).

Winters in the Ruamāhanga are also less windy than elsewhere in the region and the valley can experience temperature inversions where the colder air is trapped beneath a layer of warmer air which restricts the dispersion of wood smoke. The table below shows key monitoring results from 2016.

PM₁₀ target	No. of days target was exceeded	PM_{2.5} target	No. of days target was exceeded
<i>National Environmental Standard:</i> Allows one day per year above 50 µg/m ³	Masterton West 1 day	<i>World Health Organisation guideline:</i> Allows three days per year above 25 µg/m ³	Masterton West 19 days
	Masterton East 10 days		Masterton East 35 days
	Carterton 2 days		Carterton 17 days

The good news is since monitoring started 14 years ago, winter air quality in Masterton has slowly improved. One of the reasons for the gradual improvement may be the phasing in of cleaner-burning wood burners required by the National Environmental Standard (NES) for Air Quality.

However more improvement is needed though to meet national standards and guidelines for levels of fine particles (PM₁₀ and PM_{2.5}).

Levels of combustion gases (carbon monoxide and nitrogen dioxide) easily meet national standards and guidelines.

What are we doing about it?

GWRC offers financial assistance (interest bearing targeted rate) to Masterton residents for upgrading their old home fires to a NES approved wood burner or heat pump. In 2016, 147 Masterton residents took advantage of the scheme.

Masterton District Council has also been actively involved in working towards improving air quality. A bylaw came into force in 2016 which bans outdoor fires in Masterton during the winter months.

Further, the pNRP seeks to improve winter air quality in the townships by working with district councils, stakeholders and local agencies to develop and implement action plans focussed on behaviour change (Method 5).

In practice this means people changing what they burn and the way they burn it so they are burning smoke-free most of the time. The non-regulatory behaviour change approach recognises the value to the community of being able to continue using wood for home heating, balanced against the need to improve air quality.

Behaviour change programmes need to be evidence-based and it is proposed to leverage learnings from the National Air Quality Behaviour Change Programme (co-funded by Ministry for the Environment). In 2015, Masterton District Council (MDC) participated in a pilot project using a sample of households observed to have smoky chimneys.

It found that smoke from home fires was not perceived to be an air pollution issue in Masterton – although industry was. To begin the process of change in Masterton, work needs to be done on generating awareness and community conversations around the issue. A successful campaign needs to be positive, supportive and focussed on the benefits of smoke-free burning, i.e. “it’s cheaper and warmer”.

MDC recently commissioned ChangeHub Consultancy to provide a local behaviour change programme outline, including resourcing and indicative costings. The three year programme would require a local coordinator and is estimated to cost \$120-750K (depending on the options selected). MDC have indicated they may be able to provide coordination support but would require assistance with the costs associated with the programme. We are currently exploring funding options, including through the LTP process.

6. Environmental Outcome – Healthy and Productive Environment

6.1 What does this mean?

This is about ensuring our environment is healthy and meets the needs of current and future generations. The key things we do in this regard are:

- Monitor soil quality and work with landowners to ensure soil is managed productively, soil quality is maintained and erosion is reduced
- Protect terrestrial environments against pests and enhance native biodiversity
- Protect, manage and restore wetlands
- Protect freshwater bodies and coastal waters against pollution.

6.2 Monitor soil quality and work with landowners to ensure soil is managed productively, soil quality is maintained and erosion is reduced

What the science is saying...

Soil quality in the Ruamāhanga is generally quite good. The table below shows key soil quality results from the past four years of monitoring.

Year	Type of site sampled	No sites graded A (All 8 indicators meet target range)	No sites graded B (7 of 8 indicators meet target range)	No sites graded C (5 or 6 indicators meet target range)	No sites graded D (<5 of 8 indicators meet target range)	Indicators most failed
2015/16	Mostly Dairy (some Drystock)	3	3	7	0	Olsen P – 9 sites Total Nitrogen – 4 sites Macroporosity – 4 sites
2014/15	Drystock	4	9	1	0	Olsen P – 8 sites
2013/14	Cropping	2	6	2	2	Olsen P – 9 sites Macroporosity – 5 sites
2012/13	Dairy*	4	4	6	0	Olsen P – 9 sites Total Nitrogen – 4 sites Macroporosity – 5 sites

*Note these are the same sites as were sampled in 2015/16.

The physical condition of soils in the Ruamāhanga are generally very good, however a number of dairy and cropping sites are showing signs of compaction (reduced macroporosity). Soil compaction happens when the spaces within the soil are reduced or compressed. It is undesirable because it can cause waterlogging, increased surface runoff, reduced pasture production and ultimately degrade the soil structure itself.

The chemical condition of soils is also generally good. Last year four sites exceeded the upper limit of the target range for total nitrogen, but not by much. The main issue is high levels of phosphorus (as measured by the indicator

Olsen P) at a number of sites. Over the last three years, 26 out of 41 (63%) sites had Olsen P levels which exceeded the upper level of the target range, and many were significantly higher.

Excess nitrogen leaches easily out of soil, whereas phosphorus tends to bind strongly to soil particles. This suggests that parts of the land are accumulating phosphorus, and over-fertilisation could be a contributing factor to this. It also means that any sediment from soil erosion is likely to be carrying phosphorus and contributing to nutrient enrichment of water.

What are we doing about it?

GWRC manage a Farm and Environment Plan (FEP) Programme, the vision of which is “Farmers use best practices to help solve farming and water quality problems in their catchment”. The programme has three goals.

1. Motivated farmers are engaged in the FEP programme, particularly in priority sub-catchments
2. Farmers are aware of how their farm and farming practices affect the wider catchment, particularly water quality
3. Landowners change their behaviour to good farming practices.

The current programme focusses on intensively farmed land, such as in the Mangatarere and the area around Lake Wairarapa. The programme provides financial incentives for on-ground works (such as fencing and riparian planting) to improve water quality and environmental outcomes. Other mitigations such as effluent management and strategic grazing of critical source areas to improve soil and water quality are also being promoted.

To help promote behaviour change and good farming practice, we have also held several farmer workshops and as a result produced two factsheets called *Soil compaction and pugging on dairy farms* and *Reducing the impacts of winter grazing*.

Another programme aimed at sustainably managing land and improving water quality is the Wellington Regional Erosion Control Initiative (WRECI). This programme is supported by the MPI Hill Country Erosion Fund and provides grants to landowners dealing with erosion prone land through; poplar and willow planting, conservation forestry or “retiring” land dominated by native scrub/forest.

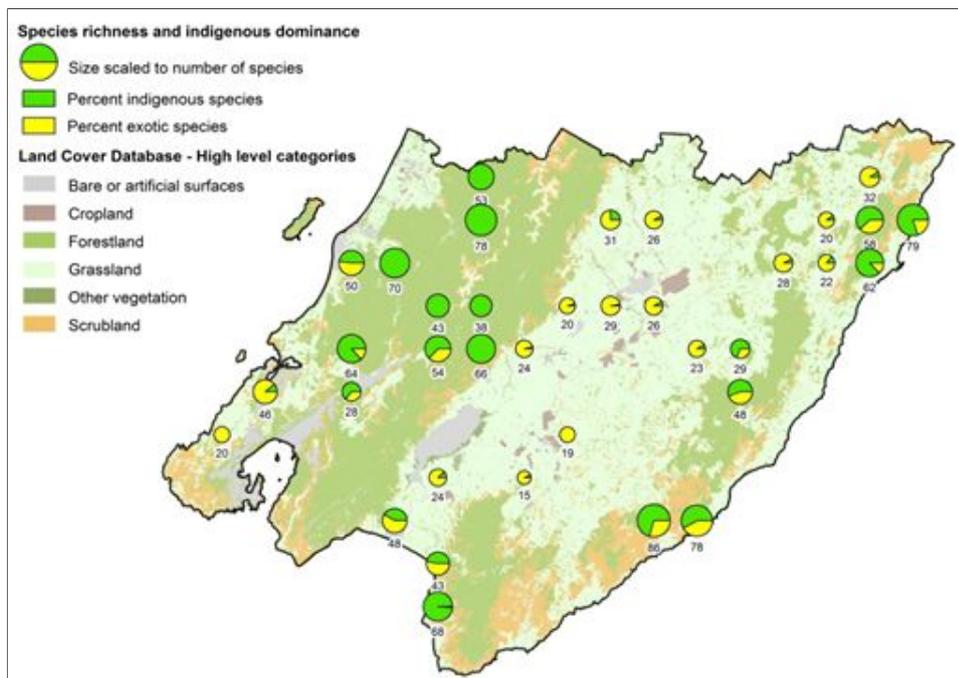
The programme treats over 130ha of erosion-prone land a year in the Ruamāhanga catchment. Research suggests that appropriately treated erodible land can reduce sediment loss by up to 70 percent.

6.3 Protect terrestrial environments against pests and enhance native biodiversity

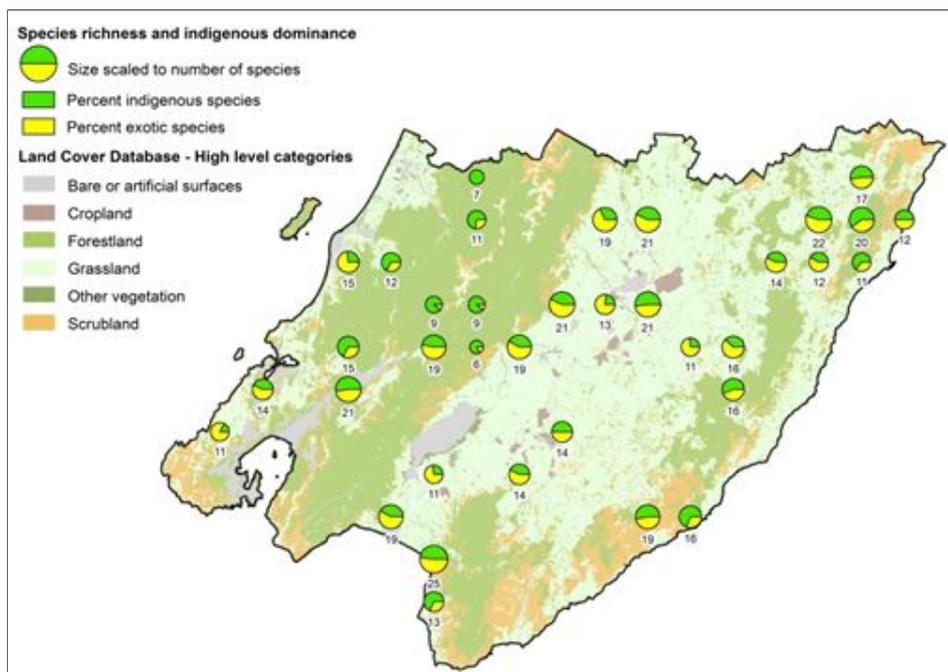
What the science is saying...

A national monitoring and reporting system for terrestrial biodiversity has been developed and implemented in the Wellington Region. The system involves gathering data on plant, bird and pest animal species from plots located on an

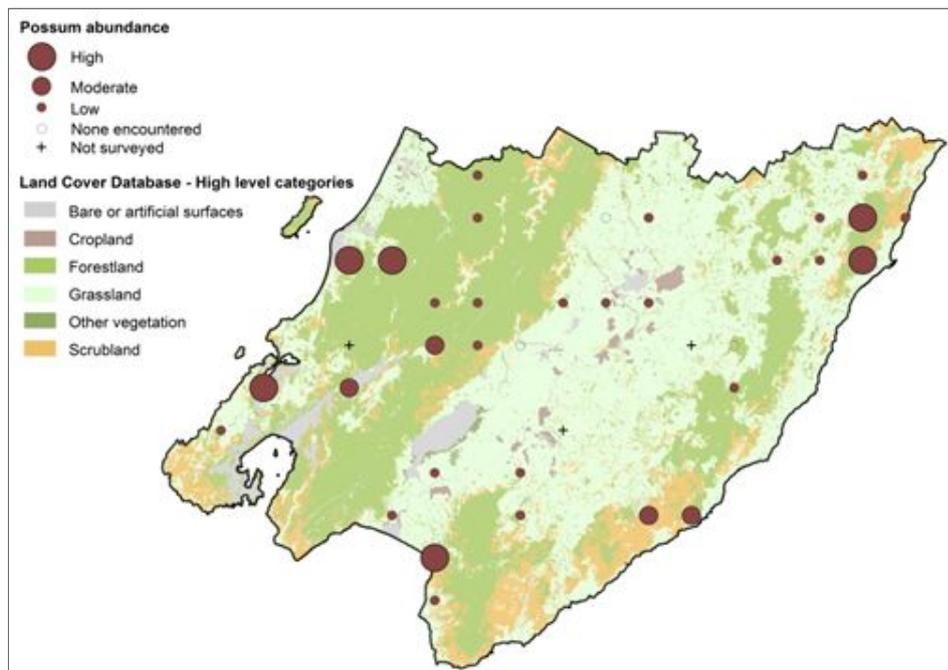
8km x 8km grid. Monitoring began in 2014/15, and the figures below show results from the first two years of monitoring.



Plant species richness and indigenous dominance – Compared to the rest of the region, sites in the Ruamāhanga tend to have fewer species of plants and are dominated by exotic species.



Bird species richness and indigenous dominance – Most sites in the Ruamāhanga have a relatively high number of bird species, but the majority of them are exotic.



Possum densities in the Ruamāhanga are generally very low.

What are we doing about it?

Our biosecurity work is guided by the GWRC Pest Management Strategy 2002-2022 and involves the control of unwanted plants and animals for environmental, economic and social reasons.

Most of our biosecurity activities in the Ruamāhanga revolve around Key Native Ecosystems (KNEs) and the Regional Possum Predator Control Programme. This programme aims to maintain possums, which were previously controlled under the TBfree programme, at low levels.

Our KNE programme seeks to protect some of the best examples of original (pre-human) ecosystem types in the Wellington Region. It does this by managing, reducing or removing threats to their ecological values. KNE sites are managed in accordance with three-year KNE plans prepared in collaboration with the landowners, tangata whenua and other partners.

The Ruamāhanga contains nine KNE sites covering a total of 2,023ha:

- Lake Pounui (960ha)
- Waihora (605ha)
- Sulphur Wells (75ha)
- Fensham (51ha)
- Tauherenikau bush remnants (50ha)
- Ruamahanga River Terraces (38ha)
- Strang’s Bush (30ha)
- Omahu (25ha)

- Rewanui (188ha)

All of these are forest sites and contain numerous threatened plant and animal species. They include some of the best remaining examples of indigenous tōtara-tītoki forest in the region, of which only 2 percent of the original extent (most of it in a modified state) now remains. Other forest types include kahikatea-pukatea forest, of which only 1 percent of the original extent remains.

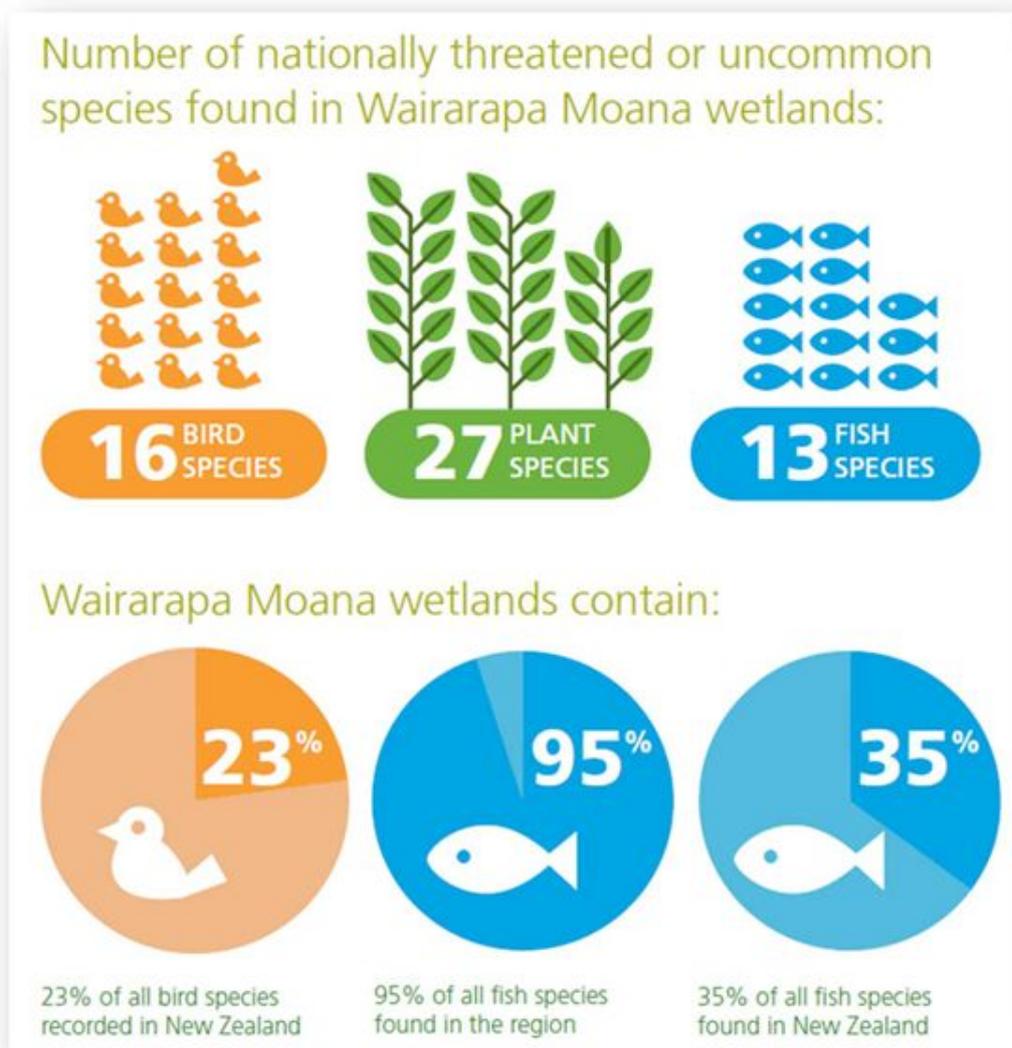
We are also supporting the work of the Queen Elizabeth II (QEII) National Trust to secure the long-term protection of natural features on private land. In the Ruamāhanga, nearly 150 sites covering around 3,300ha have been legally protected in perpetuity under a QEII open space covenant. GWRC provide up to \$50k a year to protect and enhance native biodiversity on QEII covenanted sites. Management activities include fencing to exclude stock from covenanted areas and establishing pest plant and animal control at new sites.

6.4 Protect, manage and restore wetlands

What the science is saying...

Wairarapa Moana is an internationally important wetland and the largest lake and wetland complex in the lower North Island. Historically Wairarapa Moana was an unparalleled resource for tangata whenua. The tuna fishery provided food and a basis for trade that underpinned the wellbeing and cultural standing of a widespread community. Although over a century of development (including the associated drainage and flood control schemes) has left the lake in a highly modified state, it still retains a number of high ecological values.

In 1991 minimum lake levels were set, partly because of the needs of wading birds that use the lake edge to feed and roost. Prior to this, the Department of Conservation undertook surveys to assess the abundance of birds living there. In 2011 we restarted those surveys to determine whether there has been any changes in bird numbers since lake levels were set. Quite a few species have increased in number including the NZ dabchick, black shag and black-fronted dotterel. A smaller number of species have declined in number including the pied stilt and spur-winged plover.



Wairarapa Moana is also a regular feeding and resting place for international migratory birds. The kuaka (or bar-tailed godwit) undertakes a 12,000 km non-stop flight from the Arctic to New Zealand in September every year – one of the longest non-stop flights carried out by any bird species anywhere in the world.

What are we doing about it?

Due to its regional, national and international importance Wairarapa Moana is in the final stages of achieving Ramsar status (the first site in New Zealand to do so in the last 10 years).

We also established the Wairarapa Moana Wetlands Project in 2010 to improve the health and restore the mauri of the lakes and surrounding wetlands. This project is a partnership between GWRC, the Department of Conservation (DoC), Ngāti Kahungunu ki Wairarapa, Rangitāne o Wairarapa, South Wairarapa District Council and Papawai and Kohunui marae.

DoC manages the delivery of ecological restoration activities and GWRC provides overall project coordination and financial support (75 percent of the annual \$264,000 operational budget). Ecological restoration activities include pest animal and plant control and restoration planting. GWRC also supports volunteer groups, school groups and the wider community in delivering restoration activities.

In the Ruamāhanga there are 53 significant wetlands and four outstanding wetlands. Five of these are actively managed as part of the KNE Programme. An additional five (Ti kouka Swamp, Tairoa wetland, Gretel Dick wetland, Taumata Lagoon wetland and Lake Nganoke wetlands) are part of our Wetland Programme.

The Wetland Programme involves providing advice on wetland restoration as well as incentives for landowners for restoration activities. Restoration activities which have been supported through the programme include pest animal and plant control, restoration planting and fencing. The programme aims to protect and restore even more wetlands in the Ruamāhanga by signing up new landowners.

6.5 Protect freshwater bodies and coastal waters against pollution

What the science is saying...

As shown by the table below, freshwater quality in rivers in the Ruamāhanga is variable and a good example of how water quality is affected by land use. Sites rated as *Excellent* are typically in areas where the predominant land cover is indigenous forest, whereas sites rated *Poor* or *Fair* are all in areas where the predominant land cover is pasture.

There is a reasonable relationship between water quality and the insects and bugs that live in the riverbed (as measured by the MCI – Macroinvertebrate Community Index). Sites that have *Excellent* or *Good* water quality also tend to be classed as *Excellent* or *Good* on the MCI. Similarly, sites with *Poor* or *Fair* water quality also tend to be classed as *Poor* or *Fair* on the MCI.

Sites with elevated levels of algae are also all located in areas where the predominant land cover is pasture.

Site Name	Dominant Land Cover	Substrate Type	Water Quality Grade	MCI Quality Class	Periphyton WCC (maximum)
Ruamahanga River at McLays	Indigenous forest	Hard	Excellent	Excellent	0.5
Ruamahanga River at Te Ore Ore	Pasture	Hard	Excellent	Good	16
Ruamahanga River at Gladstone Bridge	Pasture	Hard	Excellent	Good	43
Ruamahanga River at Pukio	Pasture	Hard	Good	Good	32
Taueru River at Castlehill	Pasture	Soft	Fair	Good	Not measured

Taueru River at Gladstone	Pasture	Hard	Good	Fair	37
Kopuaranga River at Stuarts	Pasture	Hard	Fair	Fair	95
Whangaehu River upstream of confluence	Pasture	Soft	Fair	Poor	Not measured
Waipoua River at Colombo Road Bridge	Pasture	Hard	Good	Fair	43
Waingawa River at South Road	Indigenous forest	Hard	Excellent	Good	15
Parkvale tributary at Lowes Reserve	Pasture	Hard	Poor	Fair	0
Parkvale Stream at weir	Pasture	Hard	Fair	Poor	33
Waiohine River at Gorge	Indigenous forest	Hard	Excellent	Excellent	0
Waiohine River at Bicknells	Pasture	Hard	Good	Good	6
Beef Creek at headwaters	Indigenous forest	Hard	Excellent	Excellent	0
Mangatarere Stream at State Highway 2	Pasture	Hard	Fair	Good	84
Huangaaru River at Ponatahi Bridge	Pasture	Hard	Excellent	Fair	93
Tauanui River at Whakatomotomo Road	Indigenous forest	Hard	Excellent	Excellent	20
Tauherenikau River at Websters	Pasture	Hard	Excellent	Good	3
Waiorongomai River at Forest Park	Indigenous forest	Hard	Excellent	Excellent	0.8

From a recreational water quality perspective, water quality is generally pretty good over the summer, except in poor weather conditions. Heavy rain flushes contaminants from urban and rural land into water and can affect water quality for up to two days afterwards.

Despite being relatively wet, water quality during the 2016/17 summer was still good most of the time. Only 7 samples out of 194 (4%) exceeded the guideline for safe swimming, and all of these were rainfall related.

The wetter conditions also meant that toxic algae growth was not as problematic as the previous year. Only two alert levels were recorded at the Waipoua River at the Colombo Rd site early in the season, compared to the last season when toxic algae warnings remained in place from late December through to February 2016.

Water quality in lakes Wairarapa and Onoke haven't changed that much since monitoring began. Both lakes are facing issues associated with nutrient enrichment and poor water clarity. Excessive algae growth can also occur at times.

Variable	TL Value	TL Class
Total nitrogen (mg/L)	4.6	Eutrophic
Total phosphorus (mg/L)	5.5	Supertrophic
Secchi depth (m)	6.6	Hypertrophic
Chlorophyll <i>a</i> (mg/m3)	4.0	Eutrophic
Overall TLI	5.1	Supertrophic

Lake Wairarapa is classed as *Supertrophic* meaning it has very high levels of nutrients.

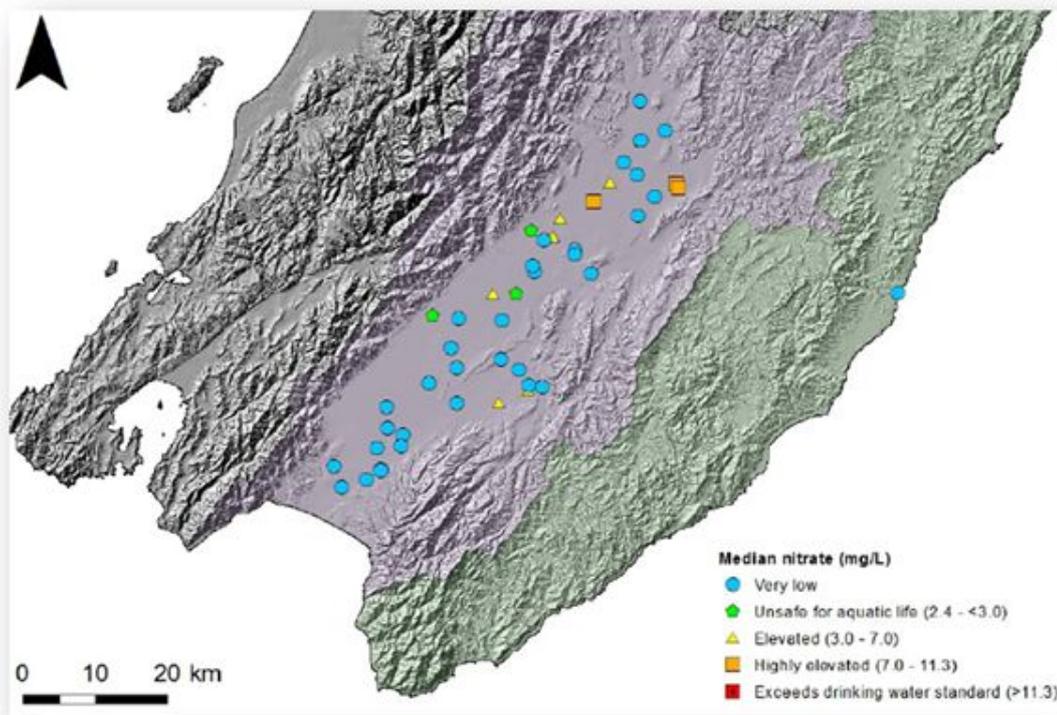
Variable	TL Value	TL Class
Total nitrogen (mg/L)	4.4	Eutrophic
Total phosphorus (mg/L)	4.7	Eutrophic
Secchi depth (m)	5.8	Supertrophic
Chlorophyll <i>a</i> (mg/m3)	3.2	Mesotrophic
Overall TLI	4.5	Eutrophic

Lake Onoke is classed as *Eutrophic* meaning it has high levels of nutrients.

Lake Pounui also shows signs of degradation and is classed as being in a *Moderate* ecological condition.

Groundwater quality in the Ruamāhanga is generally quite good, particularly from a drinking water perspective. The two key indicators of groundwater contamination are nitrate and *E. coli*.

Nitrate concentrations are low in most bores we monitor. Three bores have nitrate concentrations in the highly elevated range (but still below the drinking water standard of 11.3mg/L). Two of these are in the Te Ore Ore groundwater zone. A previous study suggests this is due to land use practises (largely fertiliser use) that occurred 20 or more years ago. Groundwater can be many years old, meaning that what we see today is often a result of what has occurred in the past. Only two bores out of 30 tested positive for *E. coli*.



Nitrate concentrations are very low in most bores we monitor in the Ruamāhanga, with none exceeding the NZ Drinking Water Standard.

What are we doing about it?

One of the key things we do to protect our waterways against pollution is prohibit or restrict the direct discharge of animal effluent, wastewater and other types of pollutants into our rivers and streams.

All animal effluent discharges are monitored to ensure compliance with consent conditions. Resource consents require collected animal effluent to be discharged to land, ie, there are no resource consents that allow the direct discharge of effluent to water. The table below shows the latest compliance ratings for the Ruamāhanga.

Complying	No further action required.
Minor non-compliance	Condition(s) not met. No environmental effects. Some action required.
Major non-compliance	Condition(s) not met. Immediate action required.

	Total	Complying	Minor non-compliance	Major non-compliance
Dairy farms	150	125	21	4
Dairy farm and piggery	2	1	0	1
Piggery	2	2	0	0
Chicken farms	6	5	1	0
Truck washes	1	1	0	0
Other facilities	2	2	0	0
Total	163	136	22	5

In relation to dairy farms, the major non-compliances are mainly related to overflow issues and excessive irrigation. All cases of major non-compliance were at sites that were previously complying. The action taken was a mixture of formal action (including infringement fines) and education.

A key education focus has been ensuring farms have adequate storage facilities on site. Adequate storage is required to allow for deferred irrigation, i.e. effluent is stored in ponds when soil is saturated and irrigated at times when the nutrients can be taken up by the root system of the pasture. If not managed well, effluent irrigation leads to ponding and runoff into adjacent surface water, or leaching into the groundwater.

One of the main point sources of contaminants to the Ruamahanga River, either directly or indirectly through its tributaries, comes from the Wairarapa towns' wastewater treatment plants. All the towns are committed to removing the vast majority of discharges from water to land-based systems over the next twenty years, and Carterton and Masterton are already discharging treated wastewater to land during summer and low flows.

In relation to protecting groundwater, policies 89-91 in the pNRP requires management of contaminated land, hazardous substances and landfills to ensure that any adverse effects on groundwater are minimised. We also take practical measures, such as informing the residents if a positive *E. coli* result is found in a bore used for drinking water so they can take precautionary measures such as boiling the water.

Many of our other activities including the work we do with landowners on managing land (refer section 8.2), protecting and restoring wetlands (refer section 8.3) and ensuring there is enough water in our waterways to maintain environmental health (refer section 7.2) all contribute to achieving this outcome as well.

7. Environmental Outcome – Iwi are our true partners

7.1 What does this mean?

This is about ensuring we have a true and trusted partnership with iwi at all levels including governance, decision-making and implementation. The key things we do in this regard are:

- Te Upoko Taiao
- Whaitua committees
- Cultural Health Monitoring

7.2 Te Upoko Taiao

Te Upoko Taiao - Natural Resources Plan Committee was established in 2009. The purpose of Te Upoko Taiao is to promote the sustainable management of the region's natural and physical resources by overseeing GWRC's regulatory responsibilities in relation to resource management, including the review and development of regional plans.

The formation of Te Upoko Taiao enabled all matters pertinent to the regional plan review process to be reviewed and discussed by Council and mana whenua together. The result is that the pNRP both integrates mana whenua perspective and also specifies mana whenua values in objectives, policies, methods and schedules throughout the document.

Te Upoko Taiao also established a set of guiding principles to underpin the overall management approach of the pNRP:

1. *Ki uta ki tai (connectedness)* – Managing natural and physical resources in a holistic manner, recognising they are interconnected and reliant upon one another.
2. *Wairuatanga (identity)* – Recognition and respect for mauri and the intrinsic values of natural and physical features, and including the connections between natural processes and human cultures.
3. *Kaitiakitanga (guardianship)* – Recognition that we all have a part to play as guardians to maintain and enhance our natural and physical resources for current and future generations.
4. *Tō mātou whakapono (judgement based on knowledge)* – Recognition that our actions will be considered and justified by using the best available information and good judgement.
5. *Mahitahi (partnership)* – Partnership between Greater Wellington (Wellington Regional Council), iwi (mana whenua) and the community, based on a commitment to active engagement, good faith and a commonality of purpose.

7.3 Whaitua committees

Whaitua committees work in partnership with mana whenua to develop catchment-specific recommendations for the management of land and fresh water resources. The work of the committees is guided by the five principles noted in section 9.2 above. More about the role of the whaitua committees and the work of the Ruamāhanga Whaitua Committee is outlined below in section 10.3.

7.4 Cultural health monitoring

A current project, the Regional Kaitiaki Monitoring Framework, is underway to develop a framework for undertaking cultural health monitoring in partnership with mana whenua and give effect to local kaitiakitanga.

This works towards meeting our obligations to iwi under the NPS-FM and the pNRP. Mahinga kai and māori customary use are key shared objectives for several non-regulatory methods in the pNRP and we intend to use method 2 (kaitiaki monitoring and information strategy) to define mahinga kai and māori customary use and how that will be monitored within each rohe.

In the Ruamāhanga this means working with the Ruamāhanga Whaitua Committee to identify mana whenua values and needs. By taking the specific needs of Kahungunu and Rangitāne and developing cultural monitoring strategies we aim to encourage and support long-term cultural monitoring by kaitiaki. The framework will also address how cultural information can be reported.

8. Environmental Outcome – communities are engaged and participating

8.1 What does this mean?

This is about ensuring our communities know what we do, understand how they can contribute, and are positively engaged and participating. The key things we do in this regard are:

- Mahi Waiora
- Ruamāhanga Whaitua Committee
- Citizen Science
- Engagement and Education

8.2 Mahi Waiora

Mahi Waiora is a new approach to how we work with landowners to improve water quality. It's about bringing together the Environment Management and Catchment Management groups so we can provide clear support and advice to landowners, helping them manage their land in a sustainable way.

Under the pNRP there will be changes to the rules around what landowners can do on their land, in particular the exclusion of stock from waterways and the protection of scheduled wetlands. To make sure they're ready and able to do the right thing, we need to deliver three things:

1. Training for everyone who interacts with landowners so they are empowered to represent GWRC as a whole, not just within the perspective of their role.
2. Developing further training, systems and tools to support staff to be able to improve how we work across our various functions, and see our work as part of the larger whole.
3. Work with industry groups and landowners to develop information about how the changes in the pNRP will affect them, why those

changes are important and what support we can offer them to be ready to meet the new requirements.



The six programs which will help us deliver Methods 12 (sustainable land management practices) and 20 (wetlands) in the pNRP

8.3 Ruamāhanga Whaitua Committee

The whaitua process forms the basis of how we intend to implement the NPS-FM. The NPS-FM includes minimum standards for freshwater that councils must seek to achieve, and requires overall water quality in a region to be maintained or improved. This is partly achieved via the setting of limits for each catchment.

Our process for setting catchment-based limits is through the pNRP and the whaitua committees. Whaitua committees are groups of local people responsible for developing a Whaitua Implementation Programme (WIP) in conjunction with their community. A WIP describes the ways in which the people from that catchment want to manage their water now and for future generations through a range of integrated tools, policies and strategies.

The Ruamāhanga Whaitua Committee was established in December 2013, and is working to produce their WIP by the end of 2017. The WIP will contain recommendations for provisions for the Ruamāhanga section of the pNRP, and for work programmes for the integrated management of land and water resources within the catchment.

Following extensive discussions across the community the committee has developed:

- A set of community values
- A list of key catchment issues
- A vision and outcomes they would like to see for the catchment:
 - Vision: Wairarapa – Where Water Glistens
 - Outcomes: The future is engaged communities proactive in the long term sustainability of the catchment as a whole. A place where:
 - we are all connected to the water so we are all equally responsible for creating a more natural state
 - holistic land and water management creates resilience
 - recreational and cultural opportunities are enhanced
 - there is a sustainable economic future
 - water quality is improving
 - ecological enhancement is sustainable
 - Ko wai, Mo wai, No wai - Waterways connect communities, there is a sense of identity for people and water
 - there is safety and security of (drinking) water supply.

8.4 Citizen Science

Citizen science is growing worldwide as a way of collecting extra data and information, and increasing scientific knowledge. Supporting citizen science will allow us to expand environmental monitoring activities in the Wellington Region (using a limited amount of funding and resources) while engaging more closely with our communities.

A draft Citizen Science Implementation Framework has been developed and will be tested using two pilot citizen science projects. One of these is in the Ruamāhanga with a group of landowners and iwi interested in better understanding and improving water quality in the Kourarau Stream and associated wetlands.

Under the Wairarapa Moana Wetlands Project, the local community are contributing to a citizen science programme to monitor the kākahi population of Lake Wairarapa as an indicator of wetland health.

8.5 Engagement and Education

We undertake a huge number of engagement and education activities, but possibly one of our more prominent education campaigns has been *Is it safe to swim?*

This campaign seeks to enable people to make informed choices about when and where to swim, as well as educate them about one of the key factors affecting swimming water quality – rain. Swimming water quality in our rivers and at our beaches is actually pretty good over the summer, except in poor weather conditions. Heavy rain flushes contaminants from the land into water and we advise people not to swim for at least two days after rain, even if a site generally has good water quality.

Another emphasis of the *Is it safe to swim?* campaign is informing people (particularly dog owners) about toxic algae, including any toxic algae warnings and how to spot it.

A couple of years ago we developed an interactive water quality map <http://bit.ly/WaterQualityMap> and last summer we ramped up our communication efforts through more extensive use of social media. Every Friday over the summer period we put up a Facebook post advising people of any current water quality or toxic algae warnings, as well as the outlook for the weekend. This included a series of “Tank Talks” to better engage with dog owners (see example below).



9. Environmental Outcome – Is freshwater quality being maintained or improved?

A draft report (due to be published in July) has analysed water quality trends for rivers and lakes in the Wellington Region. The analyses covered water quality as well as biological parameters (i.e. algae growth and aquatic insects). A new assessment method, which assesses the direction of a trend, was used. If the direction of the trend could not confidently be inferred, the trend was considered to be ‘uncertain’.

Some of the key findings for river/stream sites in the Ruamāhanga:

1. Most of the water quality analyses resulted in uncertain trends.
 - a. The most notable trend was in **water clarity**. Approximately 60 percent of sites in the Ruamahanga showed an improving ten-year trend in water clarity. No sites showed a degrading trend.
 - b. There were a small number of sites that showed degrading **nitrogen** trends and a small number of sites that showed improving trends.
 - c. There were a small number of sites that showed improving trends in ***E.coli*** and **phosphorus**.
 - d. Most sites showed no consistency in trends across **multiple variables**, the exceptions being Enaki and Mangatarere streams which exhibited improving trends across a number of variables.
2. At most sites **periphyton (Chlorophyll *a*)** trends were classified as uncertain. However, there were a small number of sites that showed an improving trend. No sites showed a degrading trend.
3. At most sites the **MCI (Macroinvertebrate Community Index)** trends were classified as uncertain. However, there were a small number of sites that showed an improving trend. Only one site showed a degrading trend.

Some of the key findings for lakes Onoke and Wairarapa:

1. Water quality trends (five-year) for Lake Onoke were mostly classified as uncertain. The trend for **Secchi depth** is increasing suggesting water clarity is improving. Further, the trends for **TP (total phosphorus)** and the **TLI (Trophic Level Index)** are decreasing indicating the lake’s nutrient status is improving.
2. Water quality trends (five-year and ten-year) for Lake Wairarapa were mostly classified as uncertain. The trends for **TP (total phosphorus)**, **TKN (total Kjeldahl nitrogen)** and the **TLI (Trophic Level Index)** are decreasing indicating the lake’s nutrient status is improving.

A recent report analysing groundwater nitrate trends over the last fourteen years showed that:

1. Eight out of 29 bores were found to have a meaningful decrease in nitrate concentrations, and
2. Two out of 29 bores were found to have a meaningful increase in nitrate concentrations.

Overall, a common theme observed from the data is that increased pastoral farming (dairy, sheep and beef) appears to result in increased nitrate concentrations in groundwater, and the conversion of pastoral farming operations to lifestyle and/or viticulture results in decreased nitrate-nitrogen concentrations.

What is apparent is that better water quality, and the associated healthy ecosystems that we want to achieve with it, will not happen overnight. Our water quality today is the result of over 100 years of mismanagement, and it will probably take a further 100 years to put it back to a healthy state.

It is only over the last 30 years or so that the thinking around the value of our freshwater resources has changed dramatically, and our actions are yet to fully catch up with our thinking. Restoring the health of our waterways needs to be thought of not as some short-term engineered 'corrective surgery', but as a life-long journey back toward 'healthy living'.

10. Moving forward

To maintain and restore water quality in the Ruamāhanga catchment will require a collaborative effort between affected communities and government agencies mandated to bring change.

The process of creating behaviour change will be a long journey, one where mistakes will be made. Flexibility and adaptability will be essential for all parties. The key will be working together, using a mix of non-regulatory and regulatory methods. Industry participation and leadership will be essential.

11. Communication

No communication is necessary.

12. Consideration of Climate Change

The matters addressed in this report have been considered by officers in accordance with the process set out in the GWRC Climate Change Consideration Guide.

Climate change is further discussed in above in section 5.4 of this report.

13. The decision-making process and significance

No decision is being sought in this report.

13.1 Engagement

Engagement on this matter is not necessary.

14. Recommendations

That the Committee:

- 1. Receives the report.*
- 2. Notes the content of the report.*

Report prepared by:

Penny Fairbrother
Senior Science Coordinator

Report approved by:

Nigel Corry
Environment Group Manager

Report approved by:

Wayne O'Donnell
Catchment Management
Group Manager



Report	17.446
Date	1 November 2017
File	CCAB-628029985-46
Committee	Wairarapa Committee
Author	Wayne O'Donnell, General Manager, Catchment Management Nigel Corry, General Manager, Environment

Wairarapa – general update

1. Purpose

To provide an update to the Wairarapa Committee on recent Greater Wellington Regional Council (GWRC) activities in the Wairarapa district.

2. Catchment Management

2.1 Biosecurity

2.1.1 Regional Pest Management Plan (RPMP) Review

GWRC has commenced a review of the RPMP to ensure compliance with the recent National (Biosecurity) Policy Direction. This review provides an opportunity to make changes to the Plan to meet required criteria under the Biosecurity Act. Drafting of the Plan continues alongside undertaking cost-benefit analysis (CBA) to determine the appropriate control programmes for species.

Wildland Consultants have been contracted to undertake analysis on species that require a higher level of analysis, as determined by a set of criteria under the National Policy Direction for Pest Management (2015). These species include the Canada goose, possums, feral cats, Bathurst bur and Boneseed.

For pest plant species, delimiting surveys have been completed and the data will be used in the CBA to determine which species should be selected for inclusion in the reviewed RPMP.

2.1.2 Regional Possum Predator Control Programme (RPPCP)

Work has commenced on the 2017/18 programme which covers 90,000ha. The Bioworks team has completed control over 28,000ha to date. Approximately 15,500ha will be treated in the Wellington - Kapiti area and the remainder will be undertaken within the Masterton and Carterton districts.



2.1.3 Mycoplasma bovis

To assist with the Mycoplasma bovis response coordinated by MPI, Wayne Cowan, Senior Biosecurity Officer, was deployed as part of the national response team, to carry out and enforce 'restricted place notices' on the seven infected farms in Oamaru. His presence will make the management of farm depopulation easier on landowners and staff delivering this gruesome task. To date, Wayne has spent three weeks on the response team.

2.1.4 Tb Free NZ Contracts

GWRC has completed the final aerial 1080 operation under contract to Tb Free NZ. The area under control covered large parts of the Wainuiomata and Orongorongo River catchments. This area had never received intensive possum control, mainly due to parts of the catchment being included in a long running bovine Tb research project.

This completion of this contract brings to an end our operational relationship with Tb Free NZ. A decision was made earlier this year that we would cease competing for all Tb Free NZ contracts from July 2017.

2.2 Land Management

2.2.1 NZARM Conference - Southland

The annual New Zealand Association of Resource Management (NZARM) conference was recently held in Invercargill. This is traditionally the main

conference for land managers across the country. Attendees included regional councils, territorial authorities, industry representatives (fertiliser companies, Beef and Lamb, Fonterra, and DairyNZ), research providers, farmers, land and water consultants, and forestry representatives.

Titled “managing soil and water interaction through people and science” the programme had a strong focus on innovative science happening in Southland. Due to the unique ‘Physiographics of Southland’ the region has been grouped into different zones according to factors such as water origin, soil type, geology and topography. Now being used in the planning and extension areas of Council, recommendations for good on-farm management practices are tailored to zones as each zone is different in the way contaminants build up and move through the soil and aquifers, and into streams and rivers.

While still in the early stages of the freshwater engagement process, Southland’s catchment groups are setting themselves up and taking a practical approach to promoting and adopting good management practices.

2.2.2 Stoney Creek Harvesting Plan

It is anticipated that harvesting of the forest at Stoney Creek will commence in early 2018. Stoney Creek forest was included in the cutting rights sale to RMS. PF Olsen act as forest managers on behalf of RMS.

In preparation for the commencement of harvesting, a community meeting was held to explain to the residents and stakeholders that a ten year harvesting operation was about to start and allow the community to raise any concerns. The meeting was held on 17 October at the Tutumururi School and was well represented by GWRC, South Wairarapa District Council and PF Olsen staff. The community was also well represented and had a good cross section of residents and farmers.

The main areas of concern to the community were traffic movement and traffic safety issues. This is particularly relevant to Range Road, where significant work to upgrade the road was required before it would be fit for purpose. This was currently being worked through with staff from South Wairarapa District Council and PF Olsen. All parties present would be satisfied that traffic movements and traffic safety would be occurring with the safety of all road users in mind. Overall it was a successful meeting and those present would have left the meeting satisfied that they have had the opportunity to raise concerns and now have avenues to raise future issues.

2.2.3 Akura Nursery

Akura Nursery is now officially closed as of 30 September 2017. The 2017 winter planting programme was fairly intense with cold, wet weather and challenging environments. Considerably more native plants were purchased from Akura Nursery than the previous few years. Plant numbers were as follows:

	SOLD
Eco-sourced manuka plugs	22,325
Eco-sourced natives	52,681
non eco-sourced natives	28,864
Open Grown flax	2,710
Eucalypts	8,334
Other	14,936
Pines	101,200
Total	208,725

A number of old poplar and willow stool beds have been completely removed and the land re-cultivated and replanted with new material. This work is part of the ten year stool replacement programme which will increase the pole production to full capacity by 2020/21. At present the pole nursery has not reached its full potential and this year produced the following:

	SOLD
3mA Poles	24,140
3mB Poles	630
2.5m poles	1,894
3.2m Poles	1,131
2m River Poles	5,250
Total	33,045

2.2.4 Riparian programme

The Riparian programme supports landowners to achieve water quality and biodiversity outcomes through the management of stock access to waterways. Part of this programme is to work with landowners to identify waterways and sites that meet the definitions for Category 1 (sites of significance under the proposed Natural Resources Plan (pNRP)).

Members of the project team, landowners and local iwi spent a day at Pararaki River Mouth, a site identified as Category 1 for its cultural values, to learn from former Department of Conservation archaeologist, Kevin Jones, on how conventional methods of excluding stock (fencing) could compromise the cultural values present. The day provided a great opportunity to apply what was learnt at other similar Category 1 sites and how the effects of grazing can be managed to protect the values identified in the plan.



During this quarter, the Riparian project has focused on shifting the landowners forward along the behaviour change spectrum through to implementation of their stock exclusion plans.

2.2.5 WRECI programme

Following a wetter than average winter season, the Wellington Regional Erosion Control Initiative (WRECI) planting programme has been completed with 14,822 poplar and willow 3m A grade poles and 84,901 seedlings contract planted in July and August this year.

Applications for WRECI afforestation and reversion grants for 2017/18 and 2018/19 were mailed out in September with applications needing to be returned in late October. A strong response from landowners has been received which should see the fund fully subscribed.

2.2.7 Farm Environment Plans (FEP)

The FEP programme has received strong interest from landowners to enter into the programme possibly buoyed by an increase in conversations around stock exclusion. Although interest from landowners wanting an FEP developed around Lake Wairarapa remains high, Land Management advisors will begin to actively engage with farmers in the Parkvale catchment as it has been identified in the pNRP and the FEP programme strategy as a priority catchment.

Applications for the contestable fund have also been strong with close to \$300,000 of on-farm work to improve water quality and biodiversity under consideration for approval.

2.3 2.2.8 Flood Protection Implementation

2.3.1 Lower Wairarapa Development Scheme Improvement works

Whakawhiriwhiri Stream drainage improvement works are delayed with ongoing landowner entry negotiations and Soil Conservation and River Control Act 1941 (SCRA) compulsory entry process. It is unclear if works will proceed this financial year. Condition 12(a) of the consent order requires that works shall be completed by 19 December 2018.

2.4 Operations, Delivery and Planning

2.4.1 Wairarapa Operations

Significant buffer erosion occurred in the Ruamahanga River during a minor flood at the end of September. Approximately 20 metres of berm was lost and the stopbank endangered adjacent to the Rathkeale School. Staff have responded quickly to make interim repairs and realigned the river.



Ruamahanga River, Rathkeale stopbank damages and repairs

2.4.2 Asset Management and Operations Planning

A successful asset management workshop involving ten regional councils and two unitary authorities was held on 14 September 2017. The purpose of the workshop was to establish a national user group for the implementation of a flood protection asset performance code of practise to drive best practise within the sector.

2.4.3 River management resource consents

Progress continues to be made on the project to renew resource consents for the operation of the Geoffrey Blundell Barrage Gates. Background information to

support the application has been collated, consent strategies developed and consultation undertaken with key stakeholders.

Resource consent applications are also being prepared for the Porirua Stream to renew the consent for gravel extraction in the lower reaches and to enable erosion repairs caused by flood damage.

2.5 Investigations, Strategy and Planning

2.5.1 Floodplain Management Plan (FMP) Development

Waiohine FMP

The first Steering Group meeting for the Waiohine FMP was held on 6 October. The Project Team was confirmed and guidance was given on its Terms of Reference. The Steering Group will meet monthly.

The first Project Team meeting is scheduled for 19 October and these meetings will be held weekly. The Project Team is responsible for reviewing information, obtaining community and expert input, and making recommendations to the Steering Group on a preferred combination of options.

Te Kāuru Upper Ruamāhanga River FMP

Both work streams of FMP development - rural and Masterton urban – are continuing. The project team will present a revised Volume 1 and Volume 2 of the draft FMP to the Subcommittee in the next quarter for feedback and look for endorsement to proceed to public consultation.

Work continues on modelling the agreed Waipoua hydrology to feed into options development for Masterton. We are currently calibrating this new hydraulic model with the revised hydrology.

2.5.2 Investigations and Strategy

(a) Flood Warning review

The Implementation Plan has been completed. The current Flood Warning Manual, as well as other internal documentation regarding flood warning from Environmental Science and WREMO now needs to be updated. This process will be started in the later part of 2017 through a project looking to rationalise the internal documentation. This rationalisation will then feed into the development of an interagency masterplan in the next two years.

(b) Climate change policy

GWRC has a policy on the allowances that should be made for climate change in mapping and design for large floods. NIWA has confirmed that the climate change report recently released for GWRC does not provide new information to change any allowances we currently have. It is, however, timely to consider if the policy needs to be updated with any other new information. We will report back to the Committee with a more detailed explanation, including recommendations for any changes to the policy.

3. Biodiversity

3.1 Biodiversity Management

3.1.1 Key Native Ecosystem (KNE) programme

The Biodiversity department has arranged a series of collaborative planning meetings with internal and external partners to discuss and agree the approach to managing KNE sites in Regional Parks, in the Kapiti Coast district, and in the Wairarapa. These meetings will inform the next round of three-year KNE management plans.

The KNE ungulate control programme has begun in Akatarawa, Wainuiomata/Orongorongo (including the Wainuiomata Mainland Island), Kaitoke and East Harbour Northern Forest KNE sites. In total 34 goats, 39 pigs and 7 deer have been killed. High numbers of pigs were reported in the Wainuiomata Mainland Island.

3.1.2 QEII National Trust Programme

A presentation to the QEII National Trust (QEII) outlined how the Wetland and Riparian programmes support landowners to meet the new pNRP rules. We will subsequently provide information to QEII so they can to send information to QEII covenant holders in the region outlining how the new rules may affect them.

3.1.3 Wetland programme

Biodiversity staff have conducted initial site visits to significant natural wetlands in the Wellington Region. These sites are; Whakatiki River Mouth (estuarine marsh) near Castlepoint, D Cook wetland (*Olearia virgata* swamp) and Matahiwi Bush II wetland (swamp forest) near Masterton and the Blue Mountain Bush Swamp Forest in Whitemans Valley.

Landowners of two significant natural wetlands signed up to the Wetland Programme; Te Hopai Lagoon in South Wairarapa and Woodside Bush Fragments wetland near Greytown. Restoration Management Plans are currently being developed for these two sites.

3.2 Biodiversity Advice and Advocacy

3.2.1 Biodiversity Advice

GWRC and Auckland Council are leading the development of national guidance for biodiversity offsetting on behalf of all regional councils and unitary authorities. A final draft has been received and will be converted into a public guidance document over the next few months.

3.2.2 Biodiversity Advocacy

A free 'In Safe Hands' Restoration Day workshop, planned by Biodiversity department staff, was delivered in Wellington City to the volunteer restoration community by Conservation Volunteer New Zealand. The topic was 'HOW to be safe on a community conservation activity and WHAT you can do in very practical ways to manage safety'. The workshop was jointly funded by GWRC and WCC.

Event planning for Restoration Day 2018 has begun. The inter-agency planning committee meet in October to decide on the theme of next year's event (hosted by GWRC). Restoration Day is a day-long conference that celebrates the work of restoration volunteers in the region.

4. Enabling Catchment Communities

A cross department team from Land Management and Environment Policy has been set up to look at how GWRC can best position itself to engage with catchment community groups that are beginning to form in the region. These eight groups, all Wairarapa based catchment communities have formed for a number of reasons; one of the main drivers being an awareness of increased expectations on rural communities to improve land use and water quality and the need for collaborative responses to achieve and maintain change.

The Enabling Catchment Communities (ECC) team has been meeting with a working group of iwi partners, community, Federated Farmers, primary industry and the Department of Conservation to set up the coordination and integration of services supporting Wairarapa Catchment Communities.

This is likely to take the form of a Wairarapa-owned organisation that provides strategic oversight to catchment communities enabling them to plan for catchment wellbeing and access specific services in a way that best meets their needs. Service providers who deliver a great number of programmes and resources to catchment communities will also benefit through coordinated provision that enables broader outcomes to be achieved as well as more direct benefits from being able to work off each other's service delivery platforms.

There is strong support indicated for development of a Wairarapa catchment community service from central government and primary industry.

Internally ECC are beginning a programme of workshops discussing "becoming an enabling organisation?". Workshops and presentations are being planned with senior leadership, departments and teams for the remainder of the year.

4.1 Environmental Regulation

4.1.1 Wairarapa Wastewater re-consenting

Application assessments are continuing for both Featherston and Carterton wastewater discharge consents. We are awaiting further information in relation to Featherston before proceeding with formal public notification of the proposal. With regards Carterton, discussions between Carterton District Council and GWRC around conditions are currently being held which, if resolved, will result in Carterton proceeding without the need for a hearing (as all the submitters on the proposal have now withdrawn their right, or do not wish, to be heard).

4.2 Environmental Science

4.2.1 Climate

The *Climate change and variability – Wellington region* report (commissioned from NIWA) which sets out climate change projections for the Wellington region to the end of the century was released on 7 August 2017.

Environmental Science officers facilitated the development of the report and contributed to the communications associated with it. Officers provided an overview of the implications of the report's findings at the formal launch to mayors and councillors from councils across the region on 7 August 2017 and have contributed to a series of subsequent presentations associated with the report's release, detailed below at section 6.

4.2.2 Land

Latest bird monitoring undertaken for Wellington City Council shows a significant increase in native forest bird numbers between 2011 and 2016. The presence of Zealandia, along with increasing levels of predator control being conducted in parks, reserves and suburban areas, are creating improved opportunities for encountering a wider range of native bird species in the heart of the capital.

Senior Monitoring Officer, Owen Spearpoint, was interviewed on Radio New Zealand on our involvement in *Bringing Kirk's tree daisy back to Wellington*. Kirk's tree daisy (kohurangi) is very susceptible to deer and goat browse and threatened at both a national and regional level. Owen assisted Otari Reserve staff to collect some of these plants from the Wainuiomata Water Collection Area, so that the nursery at Otari can increase the numbers of these plants through 'ex-situ' conservation methods.

<http://www.radionz.co.nz/national/programmes/ourchangingworld/audio/201856985/bringing-kirk-s-tree-daisy-back-to-wellington>

Based on information gathered through our river bird monitoring in the Wairarapa, we are working with the Flood Protection department on enhancing river nesting habitat for black-billed gulls (a critically threatened species).

4.2.3 Working with communities

Planning for the Wellington Harbour/Hutt Valley Whaitua, due to start in 2018, is underway. We have engaged a consortium of experts to help explore learnings from our current experiences with the Ruamāhanga and Te Awarua-o-Porirua whaitua, as well as other New Zealand experiences. A number of interviews with key people (internal and external) involved in the current two whaitua have been undertaken, and have identified some factors that will help improve and streamline the whaitua process. A workshop will be held in November to present the learnings and a proposed new process design.

Further development and support of citizen science potential including a freshwater quality catchment group monitoring project in Kourarau (being undertaken by the landowners in the Kourarau Stream catchment), and a project to quantify the ecological benefits of community-led stream restoration

works in Waiwhetu Stream (to be undertaken by Friends of Waiwhetu Stream). In parallel, we are also progressing conversations with the National Advisory Group for Freshwater Citizen Science to develop a nationally consistent approach to, and tools for, citizen science.

4.2.4 Proposed Natural Resources Plan update

Officers were asked questions by the Hearing Panel on their Right of Reply statements for Hearings 1 and 2 on 4 September in Masterton. Hearing 3 (Water allocation and Natural form and function) then commenced on the following day on 5 September in Masterton. Hearing 3 is being reconvened in November following expert conferencing on water allocation. The Officers Right of Reply statement for Natural form and function was due for pre-circulation on 13 October, with questioning when the hearing is reconvened.

Officers continue to progress s42A reports for Hearing 4, 5 and 6, aiming to have Hearing 4 reports complete by 22 December (ahead of the 12 January deadline). All hearing information, including audio recordings is available on a portal accessed through the Council website <http://pnrp.gw.govt.nz>.

Hearing 4 (water quality and stormwater) will now commence on 12 February 2018, Hearing 5 commencing 26 March 2018 and Hearing 6 on 7 May 2018. The hearing panel's decisions on submissions are now due by 30 November 2018.

4.2.5 Summer swimming engagement

The 2017 amendments to the National Policy Statement (NPS) for Freshwater Management require us to schedule specific sites for primary contact recreation where there is immersion in water. This is part of the new swimming requirements of the NPS.

During the summer period we will be running an engagement process to understand where our community swim and where they would like to swim in the future. This will form the basis of further consultation prior to this information being notified at the first available plan change.

4.3 **Dissemination of NIWA Climate change and variability – Wellington region report:**

GWRC officers and Councillors have participated in a number of public forums through which the GWRC-commissioned NIWA report *Climate change and variability – Wellington region* has been promoted since it was released on 7 August.

These include:

- 3 August: Confidential pre-release to the Water Wairarapa Governance Group (Councillor Laidlaw, Councillor Staples and officers)
- Science Scones (internal GWRC presentation to all staff by officers)
- 10 August: Victoria University Geography, Environment and Earth Sciences Seminar (officers)
- 10 August: Water Wairarapa Stakeholder Advisory Group (officers)

- 21 August: Farming Reference Group (officers)
- 18 September: Wairarapa District Health Board (Councillor Staples and officers in collaboration with Ora Taiao - NZ Climate and Health Council)
- 14 September: Sustainable Wairarapa / Forest and Bird Wairarapa (Councillor Blakely in collaboration with NIWA)
- 29 September: Wairarapa Combined Councils Meeting (Councillor Laidlaw and officers)
- 13 October: Wairarapa River Scheme (officers)
- 18 October: Wairarapa Chamber of Commerce (officers)

5. Consideration of Climate Change

The matters addressed in this report has been considered by officers in accordance with the process set out in the GWRC Climate Change Consideration Guide.

Officers have considered the effect of the matter on the climate and these matters have been discussed earlier in this report.

Officers note that the matter does not affect the Council's interests in the Emissions Trading Scheme (ETS) and/or the Permanent Forest Sink Initiative (PFSI).

6. The decision-making process and significance

No decision is being sought in this report.

6.1 Engagement

Engagement on this matter is not necessary.

7. Recommendations

That the Committee:

1. **Receives** the report.
2. **Notes** the content of the report.

Report approved by:

Report approved by:

Nigel Corry
General Manager, Environment
Management

Wayne O'Donnell
General Manager, Catchment
Management