



greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao

If calling please ask for: Democratic Services

9 February 2018

Environment Committee

Order Paper for the meeting of the Environment Committee to be held in the Council Chamber, Greater Wellington Regional Council, Level 2, 15 Walter Street, Te Aro, Wellington on:

Thursday, 15 February 2018 at 9.30am

Membership

Cr Kedgley (Chair)
Cr Brash (Deputy)

Cr Blakeley
Cr Gaylor
Cr Laidlaw
Cr McKinnon
Cr Ponter
Cr Swain

Cr Donaldson
Cr Laban
Cr Lamason
Cr Ogden
Cr Staples

Peter Gawith

Ihaia Puketapu

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

Environment Committee

**Order Paper for meeting to be held on Thursday, 15 February 2018
in the Council Chamber, Greater Wellington Regional Council, Level
2, 15 Walter Street, Te Aro, Wellington at 9.30am**

Public Business

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Please note that these minutes remain unconfirmed until the meeting of the Environment Committee on 15 February 2018.

Report 17.503

6/12/2017

File: CCAB-10-451

Public minutes of the Environment Committee meeting held on Wednesday, 6 December 2017 in the Council Chamber, Greater Wellington Regional Council, Level 2, 15 Walter Street, Te Aro, Wellington at 10.01am

Present

Councillors Kedgley (Chair), Blakeley, Brash, Donaldson, Gaylor (from 10.17am), Laban, Laidlaw, Lamason, McKinnon (until 11.14am), Ogden, Staples and Swain.

Peter Gawith (until 12.47pm)

Public Business

The Chair opened the meeting by reading an email from Ihaia Puketapu thanking officers for their outstanding work and wishing the Committee a Merry Christmas.

1 Apologies

Moved

(Cr Kedgley/ Cr Donaldson)

That the Committee accepts the apologies for absence from Councillor Ponter and Ihaia Puketapu and for lateness from Councillor Gaylor.

The motion was **CARRIED**.

2 Declarations of conflict of interest

There were no declarations of conflict of interest.

3 Public Participation

There was no public participation.

4 **Confirmation of the public minutes of 1 November 2017**

Moved (Cr Staples/ Cr Donaldson)

That the Committee confirms the public minutes of the meeting of 1 November 2017, Report 17.439.

The motion was **CARRIED**.

5 **Action items from previous meetings**

Report 17.482

File ref: CCAB-10-441

Moved (Cr Kedgley/ Cr Brash)

That the Committee:

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

The motion was **CARRIED**.

6 **Are we meeting our environmental outcomes in the Wellington Harbour and Hutt Valley catchment?**

Penny Fairbrother, Senior Science Coordinator, and Mark Heath, Environmental Scientist – Freshwater, spoke to the report.

Councillor Gaylor arrived at 10.17am during consideration of this item.

Report 17.471

File ref: ENPL-6-1806

Moved (Cr Lamason/ Cr Ogden)

That the Committee:

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

The motion was **CARRIED**.

Noted Officers agreed work on a communication plan regarding Te Awa Kairangi/Hutt River algal bloom and recommendations that the public stay away from the river. Officers also agreed to communicate this approach to Hutt City Council and Upper Hutt City Council.

The meeting adjourned at 11.14am and reconvened at 11.22am.

Councillor McKinnon left the meeting during the adjournment.

7 **Floodplain management planning – principles update**

Graeme Campbell, Manager, Flood Protection, spoke to the report.

Report 17.494

File ref: CCAB-10-447

Moved

(Cr Donaldson/ Cr Swain)

That the Committee:

1. *Receives the report.*
2. *Notes the content of the report.*
3. *Endorses the four principles that underlie GWRCs approach to floodplain management in the Region.*

The motion was **CARRIED**.

Noted Officers agreed to provide a report to a forthcoming meeting on climate change estimates and sea-level rise.

Noted Officers agreed to change the way flood standards are expressed in reports from “1 in 100 year flood standard” to percentages instead.

8 **Marine and Coastal Area Act 2011 obligations**

Pauline Hill, Kaitohutohu Matua/Senior Policy Advisor, Te Hunga Whiriwhiri, spoke to the report.

Report 17.454

File ref: CCAB-10-400

Moved

(Cr Swain/ Cr Laidlaw)

That the Committee:

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

The motion was **CARRIED**.

9 **Porirua City Council request for exception to sea level rise Climate Change Design Criteria**

Graeme Campbell, Manager, Flood Protection, spoke to the report.

Report 17.466

File ref: CCAB-10-437

Moved

(Cr Brash/ Cr Donaldson)

That the Committee:

1. *Receives the report.*
2. *Notes the content of the report.*
3. *Notes that the existing sea level rise allowance for climate change design criteria is 0.8m by 2100.*
4. *Approves the use of a 1.0m sea level rise allowance for climate change by 2100 for the upcoming Porirua Stream flood hazard maps.*

The motion was **CARRIED**.

10 **General Managers' report to the Environment Committee meeting 6 December 2017**

Nigel Corry, General Manager, Environment Management, and Wayne O'Donnell, General Manager, Catchment Management, spoke to the report,

Peter Gawith left the meeting at 12.47pm during consideration of this item.

Report 17.460

File ref: CCAB-10-436

Moved

(Cr Donaldson/ Cr Brash)

That the Committee:

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

The motion was **CARRIED**.

Noted Officers agreed to coordinate a joined-up and consistent message from the Region's Mayors and Territorial Authorities regarding water usage savings and restrictions.

The meeting closed at 12.54pm.

Cr S Kedgley
(Chair)

Date:



Report 18.26
Date 8 February 2018
File CCAB-10-460

Committee Environment Committee
Author Nigel Corry, General Manager, Environment Management
Wayne O'Donnell, General Manager, Catchment Management
Luke Troy, General Manager, Strategy

Action items from previous Environment Committee meetings

[Attachment 1](#) lists items raised at Environment Committee meetings that require actions or follow-ups from officers. All action items include an outline of current status and a brief comment. Once the items have been completed and reported to the Committee they will be removed from the list.

No decision is being sought in this report. This report is for the Committee's information only.

Recommendations

That the Committee:

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

Report prepared by:

Nigel Corry
General Manager,
Environment Management

Report prepared by:

Wayne O'Donnell
General Manager, Catchment
Management

Report prepared by:

Luke Troy
General Manager, Strategy

Attachment 1: Action items from previous Environment Committee meetings

Attachment 1 to Report 18.26

Action points from previous Environment Committee meetings

Meeting date	Action point	Status and comment
1 November 2017	Noted <i>Officers to organise a further fieldtrip to Transmission Gully for Councillors.</i>	Status: <i>Under action</i> Comments: Officers discussing with NZTA and JV with a view to having a field trip in early 2018.
1 November 2017	Noted <i>Officers to provide information to Councillors about lizard populations within the Wellington Region collected by the Department of Conservation.</i>	Status: <i>Completed</i> Comments: Report was included in the Councillors' Bulletin in December 2017.
1 November 2017	Noted <i>Officers to provide a copy of the communication plan for the Parks Network Plan Review 2017-18 to Councillors once it has been completed.</i>	Status: <i>Completed</i> Comments: Communications plan was circulated to Councillors on 20 December 2017.
1 November 2017	Noted <i>Officers to arrange a visit for Committee members to the Wairarapa to look at farming methods being used in response to climate change.</i>	Status: <i>Completed</i> Comments: Field trip undertaken as part of the Councillors' retreat on 29 January 2018.
6 December 2017	Noted <i>Officers to work on a communication plan regarding Te Awa Kairangi/Hutt River algal bloom and recommendations that the public stay away from the river. Officers also agreed to communicate this approach to Hutt City Council and Upper Hutt City Council.</i>	Status: <i>Completed</i>

<p>6 December 2017</p>	<p>Noted</p> <p><i>Officers to provide a report to a forthcoming meeting on climate change estimates and sea-level rise.</i></p>	<p>Status: <i>To be actioned</i></p>
<p>6 December 2017</p>	<p>Noted</p> <p><i>Officers to change the way flood standards are expressed in reports from "1 in 100 year flood standard" to percentages instead.</i></p>	<p>Status: <i>To be actioned</i></p>
<p>6 December 2017</p>	<p>Noted</p> <p><i>Officers to coordinate a joined-up and consistent message from the Region's Mayors and Territorial Authorities regarding water usage savings and restrictions.</i></p>	<p>Status: <i>Completed</i></p> <p>Comments:</p> <p><i>Additional water restrictions likely to be lifted shortly.</i></p>



Report 2018.20
Date 26 January 2018
File CCAB-10-457

Committee Environment
Author Kat Banyard, Project Advisor & Suze Keith, Project Advisor

Whaitua Programme Update - February 2018

1. Purpose

To provide information to the Environment Committee on the status of the three active whaitua projects and any key upcoming work.

2. Background

The whaitua process is a community-led, collaborative planning process to address a number of land and water management issues and carry out GWRC's 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 that reflect local aspirations.

The Wellington Region has been divided into five whaitua or catchments. Whaitua committees, consisting of community members, iwi representatives, partner representatives, and GWRC representatives will make recommendations to the Council through a Whaitua Implementation Programme (WIP) report. A WIP will contain strategies and actions that will form a programme of work for the management of land and water in that catchment.

There are currently two committees operating: the Ruamāhanga Whaitua Committee and Te Awarua-o-Porirua Whaitua Committee. Council established the Wellington Harbour and Hutt Valley Whaitua Committee as an advisory body in December 2017.

A Collaborative Modelling Project supports each Whaitua Committee 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 Whaitua Committee when required. The project involves partnering with mana whenua as well as having significant iwi and community input, as well as input from relevant stakeholders.

3. Ruamāhanga Whaitua

3.1 Progress since last update

3.1.1 Developing freshwater objectives

The Ruamāhanga Whaitua Committee has developed a draft set of freshwater objectives – the environmental states they want to see achieved in rivers and lakes in the Ruamāhanga catchment. Freshwater objectives have been developed for measures required by the NPS-FM such as *E.coli* and periphyton, and for others measures the Committee think are important such as native fish and macroinvertebrate community health. Where the Committee is looking to recommend an objective that is an improvement on the current state it has agreed on a timeframe for this to occur.

The Committee has developed their draft freshwater objectives using a range of information and knowledge. This includes the aspirations of the community and iwi, science and technical information from the Collaborative Modelling Project (including social and economic impact assessments), their own knowledge, the five guiding principles set out by Te Upoko Taiao – Natural Resources Plan Committee, and the legislative requirements from the NPS-FM, for example, that they have to maintain or improve water quality.

When working on their freshwater objectives the Committee identified *E.coli* as a key water quality measure to improve across the whaitua. High levels of *E.coli* impact on swimming, other recreation activities, Māori customary use and mahinga kai, all values important to the community. Some rivers in the Ruamāhanga whaitua are below the definition of ‘swimmable’ in the NPS-FM as it relates to *E.coli* levels. Nationally, the NPS-FM requires 90% of rivers to be swimmable by 2040 and improvements across all waterways by this time.

Lake Wairarapa was also identified as a key place for improvement as it has very poor water quality. The Lake currently does not meet two national bottom lines and is in a supertrophic state. The Committee noted that improvement is going to be hard to achieve and is likely to take significant time and effort due to the complex nature of interactions in the lake. Modelling of mitigation options shows that the improvement of the lake will likely require both reducing the amount of pollutants reaching the lake and changing the hydrodynamics of the lake.

3.1.2 Engagement on water allocation approach

Engagement on the Ruamāhanga Whaitua Committee’s preferred approach to water allocation with the community and stakeholders continues. The current focus is on the proposals to raise minimum flows in two rivers and to seek greater restriction of Category A groundwater users at minimum flow. Letters have been sent to water users who would be directly affected if the Committee’s proposed changes were implemented. These users have been invited to engage with the Committee through community meetings and drop in sessions in mid-February. The Committee is looking for feedback on their

potential changes, the timeframes over which any changes could be phased in, and any innovative solutions to aid a transition.

3.2 Key work in the coming months

In the coming months the Ruamāhanga Whaitua Committee will be completing their work on freshwater objectives and developing their policy packages to deliver on these objectives in more detail. This will include considering whether the policy approaches they've developed so far for water allocation, managing contaminants and river management will lead to the water quality improvements needed for the draft freshwater objectives to be met.

The Committee will complete their water allocation discussions in late February. Following the work described above, the Committee will engage broadly with the community and stakeholders on the 'whole package' – the draft objectives and policy packages across all water bodies. The Committee will use feedback from these engagements to develop final recommendations for their Whaitua Implementation Programme (WIP). It is expected the WIP will be presented to Council in mid-2018. As per the Ruamāhanga Whaitua Committee Terms of Reference, if any parts of the WIP are inconsistent with the Council's view or statutory requirements, these elements can be referred back to the Whaitua Committee for further consideration.

4. Te Awarua-o-Porirua Whaitua

4.1 Progress since last update

Te Awarua-o-Porirua Whaitua Committee has developed a draft approach to water allocation limits and policy recommendations. Having taken into account the impacts on instream values and reliability of supply, the Committee agreed with the default allocation approach in the proposed Natural Resources Plan (pNRP) and said that the water allocation limits be specified in absolute terms rather than as a proportion of the mean annual low flow (as it is currently for this whaitua in the pNRP). This helps ensure that limits provide robust protection of instream values in a changing and drying climate.

The Committee has also considered how people take water as a permitted activity and agreed that the current approach is too lenient in this catchment of small streams. The Committee's draft approach is to require all water takes to be consented, except for takes for domestic needs and for stock watering purposes. This is so flows are protected but ensures water is available for abstractive use.

These draft decisions signal the start of the Committee's decision-making phase and the drafting of the Whaitua Implementation Programme for Council consideration later in 2018.

The final Committee meeting of 2017 was a fieldtrip to Kenepuru Stream for a place-based examination of a compromised stream and a discussion about the issues and potential for change. Since then, the Committee has been on summer break, with their 3-weekly meeting schedule resuming 15 February 2018.

The Collaborative Modelling Project has completed conversion of the Committee's future scenario narratives into modelling inputs and the current state modelling.

4.2 Key work in the coming months

In the coming months Te Awarua-o-Porirua Whaitua Committee will be building their knowledge and capability, and bringing together what is known about the streams and coastal water bodies of the whaitua. Information they will be considering is mātauranga Māori, community input, monitoring data, and modelling results. Drawing on this they will be identifying policy preferences, freshwater objectives and limits for each water body. This process will involve working closely with Ngāti Toa and maintaining ongoing dialogue with our institutional project participants, Wellington City Council, Porirua City Council and Wellington Water.

Committee engagement with community members will increase as their recommendations begin to take shape and they seek out feedback from primarily impacted community members and stakeholders, including the rural and development communities. A public meeting for rural landowners is scheduled for 12 February 2018.

In the coming months the Collaborative Modelling Project will complete the freshwater modelling and begin marine modelling. They will complete the case study modelling of stormwater effects on stream flows and modelling for the economic impacts of different land development approaches. Outputs from the modelling will then feed into the Committee's work and the process to set draft freshwater objectives.

5. Wellington Harbour and Hutt Valley Whaitua

5.1 Progress since last update

On 13 December 2017 the Wellington Harbour and Hutt Valley Whaitua Committee was established as an advisory body of Greater Wellington Regional Council. At the same time the terms of reference and the process for appointing Committee members was also approved.

The consortium working with officers to revise the design of the whaitua process for the Wellington Harbour and Hutt Valley Whaitua has provided a draft report and is currently considering feedback prior to it being finalised. The report makes a number of recommendations that officers will then need to develop further into a comprehensive process design.

The emerging thinking is that significant change is required in three key areas:

- Less reliance on modelling and greater use of in-house scientific expertise and other forms of knowledge (such as Matāuranga Māori, citizen science, local knowledge and systems thinking). This will allow the process to be more agile and responsive to the needs of the committee.

- How we organise ourselves and our partners to support the work of the Committee, and ensure that all aspects of the process are more integrated, efficient and cohesive.
- Making the whaitua process more engagement led. Having a more cohesive approach to community engagement alongside our partner organisations which allows for better participation and integration into Committee decision making.

5.2 Key work in the coming months

The focus of work in the coming months will be:

- Initial engagement and communication activities
- Selection and appointment of Committee members
- Further developing the whaitua process design.

5.2.1 Engagement and communication activities in the coming months

Initial Engagement and Communications activity is intended to steer activities and strategies in the period February – August 2018. The communications during this period will be introductory in nature – informing the public that the process is underway, and putting emphasis on ‘preparing’ the public for the second, more engagement-heavy stage of the process. Engagement during this initial period will not focus on any significant consultations with the community or on large-scale information gathering. Instead, engagement will revolve around informing members of the community that the process is beginning, and encouraging them to apply for committee membership.

The five key streams of communications and engagement in this period will be:

To inform:

- To inform members of the public and potential Whaitua Committee members that the Wellington/Hutt Valley Whaitua process is coming up.
- To inform members of the public about the purpose and role of Whaitua Committees.

To educate:

- To educate members of the public about water issues in their catchment.

To demonstrate GWRC’s role in improving water quality:

- To demonstrate to members of the public that GWRC is playing an active role in protecting and improving water quality in the catchment.

To prompt committee applications:

- To stimulate potential Committee members’ interest in applying for the position.
- To start stimulating interest among members of the public about the Whaitua process and water quality issues more generally.

To scope:

- To start scoping and getting a feel for the catchment, its residents and the way they value water.

The activities supporting these objectives will likely include:

- Communication with mana whenua and other partners;
- Communication with residents' associations and other interest groups;
- Proactive media releases and media engagement;
- Posters on community noticeboards;
- Social media posts and advertising;
- Factsheets for dissemination online and at relevant events;
- Greater Wellington website content;
- HaveYourSay engagement platform content; and
- Newspaper advertising (for Committee applications).

5.2.2 Timeframe for selecting and appointing Committee members

The selection and appointment of Committee members will follow the process agreed by Council when the Committee was established. The tentative timing for selection of Committee members to occur is:

February & March 2018

Planning, development of engagement materials and meetings with the relevant iwi, territorial authorities and Wellington Water.

April & May 2018

Promotion and socialisation of the whaitua process and of the selection process to find community representatives for the Committee.

June 2018

Applications for community members are open.

July 2018

Shortlisting and interviewing of community candidates.

All those with representatives on the Committee to notify of preferred representatives by this time - Greater Wellington Regional Council, Te Upoko Taiao – Natural Resources Plan Committee, Port Nicholson Block Settlement Trust, Te Rūnanga o Toa Rangatira Incorporated, Hutt City Council, Upper Hutt City Council, Wellington City Council and Wellington Water.

August 2018

Successful community candidates and partner representatives appointed to the Wellington Harbour and Hutt Valley Whaitua Committee by Council.

6. **Consideration of Climate Change**

No decision is being sought in this report.

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.

6.1 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 Whaitua Committees 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.

6.2 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 are being modelled and will be applied to the scenarios developed by the Committees. 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.

7. The decision-making process and significance

No decision is being sought in this report. This report is for Environment Committee members to receive an update on the progress of the three whaitua projects.

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 prepared by:

Kat Banyard & Suze Keith
Project Advisors

Report approved by:

Alastair Smaill
Team Leader - Whaitua

Report approved by:

Nigel Corry
General Manager,
Environment Management
Group



Report 18.2
Date 5 February 2018
File CCAB-10-455

Committee Environment Committee
Author Nigel Corry, General Manager, Environment Management
Wayne O'Donnell, General Manager, Catchment Management
Luke Troy, General Manager, Strategy

General Managers' report to the Environment Committee meeting on 15 February 2018

1. Purpose

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

2. Catchment Management

2.1 Biosecurity

2.1.1 Rooks

We are well positioned to eradicate rooks from the Region. The season's aerial rook control programme has been completed with eight confirmed rookeries treated and only 16 active nests treated in total. In 2016 there were 11 active rookeries and 33 active nests.

2.1.2 Rabbits

Natural seasonal cycles has meant numbers of rabbits have been increasing across the region. Steady numbers of enquiries from private landowners wanting rabbit control are keeping staff busy doing inspections and providing advice. Most of our enquiries are for amenity reasons and in most cases populations are not large. Rabbits have just become more visible in urban and semi-rural settings, and at this stage we are unaware of any "explosions" of rabbits on rural properties.

2.1.3 Myna birds

These birds have become more visible in Masterton with suspicions that there has been a lift in numbers. At present this is only anecdotal and we are working to determine their presence throughout the region. A press release is being prepared to encourage the public to report sightings to GWRC, enabling us to

map and follow up sightings. Future management options can then be investigated. Myna birds are very prevalent in Hawkes Bay.

2.1.4 Wasps

Wasps are yet to make their presence felt, but with a warm, dry November this was ideal climatic conditions for queens to produce successful nests.

2.1.5 Education and engagement

Staff have been involved with various events and school visits, including a couple of Predator Free launches. Pest Feast, which celebrates conservation week was held over 2 days in October, the Wairarapa A&P show was another opportunity to engage with the community.

2.1.6 Pest plant aerial spraying

Good weather has enabled multiple aerial pest plant spraying operations to be completed much earlier than is normally possible during the spring equinoctial period. Some of the locations include:

- Matthews Lagoon, Wairarapa Moana - willows spraying
- Wellington South Coast - boneseed spraying
- Te Harakeke wetland - Manchurian wild rice spraying
- Ngawi escarpment - boneseed manual control
- Wairarapa coast - boneseed survey



Matthews Lagoon Willow spraying



Baring Head, East Harbour Regional Park, Gorse spraying

2.1.7 Pest Plant Inspections

1,147 property inspections were carried out throughout the region surveying for new or existing infestations of pest plants.

2.1.8 Regional Possum Predator Control Programme (RPPCP)

A review of the 2017/18 RPPCP programme was carried out due to good progress during the first half of the year. As a result the programme has been increased by 10,000 ha to 100,000 ha.

New projects, Tinui (8,900 ha) and East Waitawhiti (1,800 ha) have now been included into the 2017/18 programme. Approximately 60,000 hectares has been completed.

Work will be undertaken during January-February on the Wellington South Coast at Te Kopahou Reserve. This work will support adjoining programmes implemented by Wellington City Council and reduce reinvasion within the area. This work will also support the Predator Free Wellington project. Access to some rural properties has been difficult to achieve. However, supporters of the Capital Kiwi project are assisting to progress discussions about pest control on the affected properties.

2.2 Land Management

2.2.1 Akura Nursery

Approximately 26,000 poplar and willow stools are to be pruned in January/February 2018. Irrigation has been on-going since November 2017. Combined with the high summer temperatures and the significant rain events, there has been tremendous growth in the nursery. This will hopefully result in a greater than anticipated number of A grade poles being harvested this coming winter.

Staff are currently undertaking an estimated pole count. This will provide the Land Management Advisors with an estimated pole tally with which they can distribute amongst their farm plans. The new stool beds have been flourishing under the irrigator regime.



Newly established willow block

2.2.2 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 definition for Category 1 (sites of significance under the proposed Natural Resources Plan (pNRP)).

Much of the focus of this programme has now shifted on to moving the landowners forward along the behaviour change spectrum through to implementation of their stock exclusion plans. This is challenging work, but it is seeing an excellent level of collaboration across departments as they work alongside landowners to find solutions.

A cross-departmental team have developed Livestock Access Plans for landowners whose Category 1 sites cannot be fenced in their entirety due to it not being practicable. These plans allow GWRC and landowners to agree on how the effect of infrequent livestock access will be managed so that the effects are less than minor.

2.2.3 Metro Forestry

The overall management of the forestry Cutting Rights Agreement across GWRC land has been shifted to the Parks Department in recent months. Previously this was managed by the Land Management Department. This new arrangement reflects the importance of the integration of recreational activities with forest harvesting operations in both the Akatarawa and Pakuratahi Forests. Day to day oversight of forest harvesting operations in the Akatarawa and Pakuratahi forests will also be carried out by Parks staff.

Day to day oversight for forest harvesting operations in the Wairarapa Forests, covered by the same Cutting Rights Agreement will continue to be the responsibility of the Land Management Department. This reflects the particular focus on ensuring the soil conservation objectives of each of the three Wairarapa forests are not compromised by any harvesting operations.

2.2.4 Wairarapa Forestry

Earthworks associated with the Stoney Creek harvesting operation has been underway since early December 2017. To date Range Road has been widened and upgraded to enable logging gear and trucks into the forest (refer to photo below). The harvest operation is about to commence on 1 March 2018.



Road upgrading ahead of harvesting

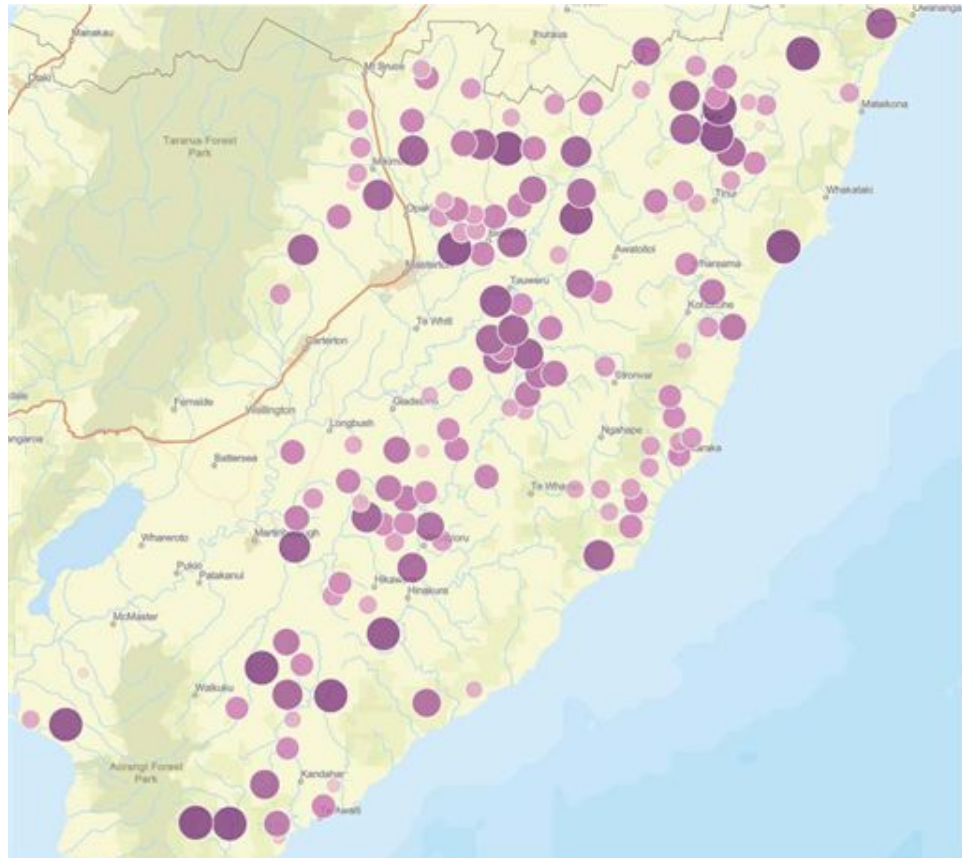
An application is currently being processed by South Wairarapa District Council for a 7-lot rural subdivision on GWRC land at Stoney Creek (4 new titles and 2 balance lots). The subdivision is a non-complying activity. Once granted and surveying of the new titles is complete, the land and assets will be placed on the open market or gifted to the relevant entities. The land is surplus to GWRC requirements and is not required by the Cutting Rights holder for harvesting operations.

2.2.5 Wellington Region Erosion Control Initiative (WRECI) Programme

The six monthly progress report to our funding partner, the Ministry of Primary Industries (MPI) has been completed. The report tracks the programmes progress against target milestones around hectares of erosion prone land under management, number of poles planted and area of reversion/afforestation. A summary of this progress is provided in the table below with the 2017/18 figures the year to date.

Year	2015/2016	2016/2017	2017/2018
Erosion prone land under management (ha)	398.2	424.1	446.5
Poles planted (#)	24,411	20,430	15,279
Poles planted (ha.)	344	324	290
Land retired via WRECI (Afforestation ha)	41.1	55.1	34.5
Land retired via WRECI (Reversion ha)	13.1	45.0	122.0

During the previous planting season, new GIS based planning and recording processes were put in place that allow better tracking of progress to milestones and an improvement in data management and reporting. Below is one of the maps generated indicating the Wairarapa poles that were planted during the 2017 winter. The larger and darker the circle, the higher the pole numbers. The average number of poles per property is 170.



Applications for WRECI afforestation and reversion grants for 2017/18 and 2018/19 have been approved and landowners notified of their applications success. Twenty-six applications were approved across 9 properties with 175 hectares of erosion prone land to go into conservation forestry or native reversion at a total budgeted works cost of \$365,000.

2.2.6 Farm Environment Plans (FEP)

The FEP programme continues to receive strong interest from landowners to enter into the programme possibly buoyed by an increase in conversations around stock exclusion and the ongoing work of the Ruamahanga and Te Awarua-o-Porirua whitua committees. Although interest from landowners wanting an FEP developed around Lake Wairarapa remains high, Land Management advisors will shortly 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. Work through our FEPs on the Kapiti coast in the Mangone and Waitohu catchments also remains a focus.

Applications for the contestable fund have also been strong with nearly \$340,000 of on-farm work in priority catchments to improve water quality and biodiversity under consideration for approval.

2.3 Flood Protection Implementation

2.2.7 RiverLink

The Hutt Valley Flood Management Subcommittee completed its series of workshops for RiverLink preliminary design. This covered topics including design deliverables, project programme options, project component costs, inter organisation support, residual risk and future proofing design decisions. Hutt City Council and GWRC are in the process of confirming their funding commitments through their respective Long Term Plan processes, and the New Zealand Transport Agency intends to complete its detailed business case in 2018.

The flood protection design components and the 'making places' urban development components are going through separate independent peer review processes to provide increased certainty to decision makers at both councils that the preliminary design will deliver the core objectives of each organisation. The results of these peer review processes will be presented to Council as part of the recommendation process for the preliminary design.

RiverLink is participating in the summer events programme, and will be in attendance at a number of events in addition to events structured around the project. This includes Battle Hill Farm Day, RiverLink Ramble (a guided evening walk around the project), and RiverLink Rocks (a day of rock and river education activities at the pop up beach next to the riverbank carpark in Lower Hutt, and repeat of the pop-up beach activities that ran in summer 2017).

Property acquisition for the properties along Pharazyn St and Marsden St required for delivery of RiverLink continues to progress slightly ahead of forecasts. 25 of 118 properties required for delivery of the works are now owned by GWRC, and a further 50 are in various stages of the acquisition process.

2.2.8 Te Awa Kairangi/Hutt River Environment Strategy and Action Plan

The Hutt Valley Flood Management Subcommittee has endorsed the release of the Te Awa Kairangi/Hutt River Environmental Strategy and Action Plan for public engagement.. This engagement session seeks to inform the community about the new environmental strategy prior to endorsement of the strategy and action plan by the subcommittee.

2.2.9 Pinehaven Flood Management Plan and Upper Hutt City Council Plan Change 42

Design for implementation of the Pinehaven Stream flood protection works has been put on hold until the hearing commissioner's recommendation for Plan Change 42 is endorsed by UHCC. Controls within the plan change are required to protect the Council's investment in the channel works and the wider catchment against negative effects of additional storm water run-off impacts and ensure that future development in the catchment is compatible with flood risk.

2.2.10 Jim Cook Park Stopbank Upgrade

The flood security parts of the Jim Cook Park stopbank upgrade project have been completed and work continues to finish the reinstatement, planting, fencing and tracks. GWRC and Kapiti Coast District Council have been working closely to support each other in delivering these outcomes. These works have involved addressing private property encroachments, improvements to tracks and pathways through the park, native plant and tree planting in association with the Friends of Waikanae River, and removal of dangerous mature trees alongside the paths and tracks.

2.2.11 Lower Wairarapa Valley Sheme Update

The planning stage of Pukio East Dairy Ltd (PEDL) stopbank relocation project has been completed. Landowner negotiations will commence in late January. A start date for construction is dependent on the outcome of these negotiations. This work has been delayed to align the project with a newly developed stopbank design and construction guideline.

The Whakawhiriwhiri Stream drainage improvement project is still awaiting the resolution of landowner entry negotiations and the compulsory entry process. It is unclear if further works will proceed this financial year. Condition 12(a) of the consent order requires that works shall be completed by 19 December 2018.

The Tauanui River project which realigns the confluence of the Tauanui River with the Ruamahanga River will commence during the next quarter. This work is intended to manage the gravel deposition in the confluence area by changing the stopbank alignments, widening the confluence area, and including positive ecological improvements.

2.3 Operations, Delivery and Planning

2.3.1 Western Operations

In the Hutt River significant willow layering and cabling work was completed below the Kennedy Good Bridge. The river was also realigned in this area to

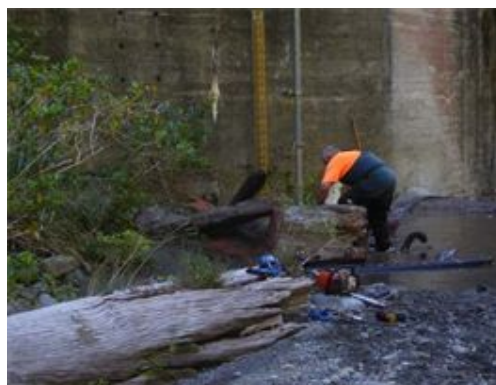
reduce erosion of the Belmont berm that was threatening the main trunk sewer and SH2, and willow poles have been planted to provide short term protection until the Riverlink project can be progressed.

Beach ripping was also carried out along the urban length of Te Awa Kairangi/Hutt River; exposed gravel beaches were loosened to reduce the aggradation of gravel islands and berm erosion and to encourage bedload to move down through the river system.

Staff also provided assistance to the Hydrology Section and Wellington Water by removing a number of large logs from the Kaitoke Weir water intake.



Hutt River Belmont edge protection works



Removal of obstructions from the Hutt River Kaitoke Weir water intake

In the Otaki River 1000 tonnes of rock maintenance work was completed on the Leithbridge rock groynes and the adjacent right bank rock line.

Access track repair work along the Waikanae River has now been completed following gravel extraction operations required for the Jim Cook Park stopbank works. Dangerous poplar trees have also been removed along the southern walking track to improve public safety.

2.3.2 Wairarapa Operations

Wairarapa River schemes maintenance work is ahead of programme and has included buffer maintenance and repair work. Land Management staff have been seconded to assist staff resourcing. Channel maintenance activities were delayed in November and December due to low river flows in order to mitigate environmental effects. Programmed channel work will be completed in the 3rd and 4th quarters. Approximately 110,000 m³ of gravel has been extracted from Wairarapa Rivers. There continues to be a high demand for gravel extraction in the upper valley and we are encouraging the aggregate industry to consider gravel extraction in the lower valley where great aggradation is occurring. Fine weather has allowed a good start to the programmed agrichemical spray maintenance work.

Lake Onoke was opened on 9 January 2018 after being blocked since early December. The previous Lake Onoke opening was on 25 June 2017.

Staff have coordinated a works programme for the Waipoua River urban reach with Masterton District Council staff. The works completed to date have received good feedback from the public and MDC staff.



Waipoua River before and after pest plant clearance upstream of State Highway 2

2.3.3 River management resource consents

Meetings with submitters to the four western river consents have continued. Good progress has been made with the Department of Conservation and Wellington Fish and Game to understand issues and identify alternative approaches.

Progress continues to be made on the project to renew resource consents for the operation of the Geoffrey Blundell Barrage Gates. It is evident that the consent renewal project is linked to a number of other Council projects and a higher level of programme management will be required to ensure success. There is increasing public interest in the project from a number of stakeholder groups.

A resource consent application has been lodged for gravel extraction in the lower reaches of the Porirua Stream. This has triggered the need for further discussions with Porirua City Council about wider development issues. A further consent application is being prepared to enable bank erosion repairs caused by flood damage.

2.4 Investigations, Strategy and Planning

2.4.1 Waiohine Flood Management Plan (FMP)

The Project Team has now had eight meetings (as of 4-1-2017) and the Steering Group has had two meetings. The main focus to date has been the flood maps. Topics substantially or completely addressed have included;

- Revision and improvements to the original model in line with Independent Audit recommendations and Project Team direction
- Calibration of the new model
- Modelling and mapping uncertainties
- Planning horizons
- Hydrology

- Climate change
- Loan terms
- Historical floods of note
- Additional river and floodplain survey carried out

We will contact iwi partners and key stakeholders early in the New Year to invite them to work with the Project Team and will also contact all previous submitters to give them the opportunity to participate in this process. We are also looking at having an open day early in the new year where people can meet the Project Team and see what we've been working on.

This project is overseen by a Steering Group and reported to Council via the Wairarapa Committee.

2.4.2 Te Kāuru Upper Ruamāhanga River FMP

Both workstreams of FMP development - rural and Masterton urban – are continuing.

The project team presented revised Volumes 1 and 2 of the draft FMP to the Subcommittee in late November 2017 for feedback and will be looking for endorsement to proceed to public consultation from the Subcommittee in March 2018.

Work continues on modelling the agreed Waipoua hydrology to feed into options development for Masterton.

The Waipoua Masterton Urban Area Project Group held their second meeting. The meeting discussed the Current River Management Practices and Roles.

2.4.3 Porirua Stream

The peer review of the revised flood hazard model is complete. Community consultation on updated flood maps (in conjunction with Wellington Water) is scheduled for February 2018. Initial consultation with Wellington City Council and Porirua City Council on draft flood maps has been positive.

2.4.4 Otaki FMP review

This work is proceeding significantly behind schedule (by about six months), mainly due to delays in engaging with Nga Hapu o Ōtaki (NHoO) to agree the scope and limited GWRC/consultant resource availability. These issues have been overcome now. Progress in the past quarter has been good, with significant areas of progress including:

The current projected completion for this project in September 2018 is beyond what is stated in the current LTP (June 2018). Good progress is currently being made on working with NHoO and it is hoped that this can continue through to agreeing key elements of the updated designs for the structural works in the coming months.

The following work streams are well underway:

- Engagement with iwi
- Review of land use control effectiveness
- Damages assessment
- Comprehensive review downstream of SH1
- Comprehensive review of Waitohu works

2.4.5 UHCC Plan Change 42

The hearing for Plan Change 42, for the Pinehaven Stream and Mangaroa River flood hazards, concluded in late 2017. We expect a decision on the Commissioners' recommendations from UHCC in February 2018.

3. Biodiversity

3.1 Biodiversity Management

3.1.1 Key Native Ecosystem programme

- Ungulate hunting in the Hutt Water Collection Area, Akatarawa, Kaitoke, Pakuratahi and Wainuiomata/Orongorongo KNE sites has resulted in a total of 57 feral pigs, 127 feral goats and 12 deer being culled. Pig hunting in and around the Wainuiomata Mainland Island (part of the Wainuiomata/Orongorongo KNE site) will be reviewed given the high number of individuals found in the area. High numbers of feral goats in Pakuratahi KNE site are likely due to reinvasion from the adjoining DOC managed Rimutaka Forest Park
- A number of aerial helicopter surveys and spraying have been undertaken during the fine spell of weather in the region. Operations have included gorse spraying at Baring Head and Parangarahu Lakes Area KNE sites, and a wetland weed survey at Te Hapua KNE site

3.1.2 Wetland programme

- Restoration Management Plans have been approved for Te Hopai Lagoon near Martinborough, and Wairongo Stream and Road wetlands on the eastern coast. The wetland programme will be funding fencing to exclude stock at both sites and will also provide plants for enhancement planting at Te Hopai Lagoon for the next 3 years
- Landowners of four significant wetlands: in Masterton, Blue Mountain Bush Swamp Forest and Johnsons Road in Whitemans Valley, and Northern Lake Wairarapa wetlands in Featherston, have signed up to the Wetland Programme

3.2 Biodiversity Advice and Advocacy

3.2.1 Biodiversity Advice

- Biodiversity staff have commented on the draft public discussion document for the new Parks Network Plan. The department will continue to assist with developing the document, with a focus on the environmental components. The aim of the document is to seek public feedback on how

GWRC should manage regional parks and demonstrate leadership in environmental management

3.2.2 Collaborative Restoration: Wairarapa Moana Wetlands Project

- Mountains to Moana, a GWRC Great Outdoors community event, will be held on Saturday 3rd February in conjunction with World Wetlands Day 2018. The event will focus on the western streams of Lake Wairarapa and their importance to the area's wetlands, and will involve storytelling, demonstrations on native fish, a nature photography session and other activities
- The annual Lake Wairarapa kākahi count will be held on Saturday 10th February. The project uses volunteers to collect long-term data on the health of the kākahi (freshwater mussel) population in the lake

3.2.3 Collaborative Restoration: Te Awarua-o-Porirua Harbour and Catchment Project

- So far this financial year 257 students and 46 adults in the catchment were engaged in the GWRC funded Healthy Harbours Porirua programme. Students were taken snorkelling in the harbour or testing the health of their local stream, and then worked on a kaitiaki project to help improve the health of the harbour. Project highlights have included installing fish passage devices in streams, artworks around stormdrains, installing 'Littatrap' devices in stormdrains and students presenting their concerns at PCC Council meetings



Fig 1. Titahi Bay Intermediates' Stormwater Drain Art at Titahi Bay Beach

- School students across the catchment with the best school projects to improve the health of Te Awarua-o-Porirua Harbour and its waterways presented their projects in a public forum. The winners were taken on an GWRC funded overnight trip to Kāpiti Island to snorkel in the marine reserve and have a guided tour of the island

- Biodiversity staff supported two stalls at the Porirua Waitangi Day celebrations on February 6th this year. Both the GWRC stall and the Te Awarua-o-Porirua Harbour Catchment Strategy and Action Plan stall, which was run by PCC, outlined how we are working to improve freshwater in the catchment



Fig 1. Te-Awarua-o-Porirua kaitiaki project winners spotting Tieke in the forest on Kāpiti Island. From left: Cara, Anika, Coralie, Te Kawa, Devante and Ryan

3.2.4 Biodiversity Advocacy

- Two public snorkelling events will take place in March at Whitireia Park, funded by GWRC and delivered by Mountains to Sea Wellington. These popular annual events are tied into both Seaweek and the Greater Wellington Great Outdoors (GWGO) programme, and involve guided tours with marine experts. An additional snorkelling event is being planned for Wellington's south coast during February
- GWRC staff are coordinating Seaweek for the Wellington region again this year. This national initiative will run from the 3rd to 11th March and will include a wide range of events delivered by agencies and community groups

Biodiversity staff supported two GWGO events at Battle Hill Forest Farm Park in February, introducing participants to some of our unusual stream creatures at both the Dragon Adventure Trail and Battle Hill Farm Day

4. Environment Management

4.1 Harbours

4.1.1 Recreational boating

Given the good weather, recreational activities have been a focus. In December we had our first “No Excuses” day in conjunction with Maritime NZ and Maritime Police - there will be another four by the end of March.

Action was taken against five vessels, three have taken alternative options to the fine and we are waiting to see what the others do. We handed out information and safety items (funded by our applied for monies from the fuel exercise duty via Maritime NZ).



The Harbourmaster getting his feet wet to speak to boaties

Over 100 boaties were spoken to and we had full compliance with carriage of lifejackets, which was very positive. The infringements given were of underage use of a power boat and exceeding 5 knots within 200 metres of shore.

We worked alongside the Coastguard in their Old4New lifejacket trade up campaign at several sites within the region (Mana, Evans Bay and Masterton) handing out safety information.

The bridges at Mana have continued to be an area of difficulty. We are trialling moveable stakes with safety tape at the launching area and this seems to be having a positive result. This is only in use while we have staff or the security guard on site and is not a permanent solution.



After 25 years use with few problems, this summer one of the swim rafts at Oriental Bay has been tipped over twice. We have spoken to WCC and with divers attached extra chains (attached to the purple strops) to try and prevent a repeat. These rafts are heavy and solid and could do damage if they landed on anyone. The Oriental Bay residents provided the rafts and we look after them in conjunction with WCC.



A jet-skier, while 'showing off' and speeding near Petone Wharf, appeared to lose control and made contact with the wharf. The rider left the scene and one of our Harbour Rangers assisted a friend of the owner (not the rider) to recover the ski. The ski was badly damaged and the Police are following up with this incident.



4.1.2 Pollution prevention and response

Every six months Mobil conduct pressure testing on their under wharf pipelines along Aotea Quay. During their most recent test there was a report of oil in the water by a visiting cruise ship. It appeared that the oil came from a

stormwater outlet, an unfortunately frequent event. Mobil carry out under wharf inspections during the pressure test but still wanted better confirmation that their pipeline was not the source. We support their pro-active approach to this work and made a boat available the next day one with a Harbour Ranger to take them under the wharf. They confirmed there were no leaks from the pipeline. We approve transfer sites like this in conjunction with Maritime New Zealand. Maritime NZ are increasing the emphasis on Tier One sites to increase their response capability.



4.1.3 Navigational Safety

During the first week of January, the drilling of the second harbour bore in search of an alternate emergency water supply Wellington city. A Harbourmaster's Direction created a restricted area of 150 metres around the drilling barge and its associated moorings to keep other vessels clear.



4.1.4 Other

After almost 50 years in operation Vega Industries Ltd, a world class designer and manufacturer of navigation lights will be closing and its operations are moving overseas. Vega was sold last year to Canadian company Sabik who are now the largest supplier of LED navigation lights and are consolidating their manufacturing operations. The majority of our navigation lights are Vega and this is a loss to the region in terms of employment and exports and a loss for us by no longer having a world class supplier just up the road. Their products will continue to be supplied and supported by the new owners.

5. Environmental Regulation

5.1.1 Waiwhetu – bore security investigation

Our investigation continues, with the focus now being on six 'high risk' bores within the Waiwhetu aquifer. A specialist drilling company has been engaged to undertake investigations of these bores, in order to assess whether any works are required to make them 'secure' – that is, to ensure they do not present a contamination pathway from the surface into the aquifer. This work has commenced and should be complete by March 2018.

5.1.2 Kapiti Coast – bore security investigation

We have almost completed a bore assessment exercise of groundwater supply protection areas on the Kapiti Coast, with a positive response from nearly all land owners to supply information about their bores. However, some landowners have refused to supply information or refused access to their land. We are currently looking at alternative approaches to gaining access and missing information.

5.1.3 Havelock North Inquiry response – Regional Water Supply forum

The Phase Two Havelock North Inquiry report from Department of Internal Affairs was released in December 2017. We have completed a preliminary review of the report, and consider that our existing regulatory processes around bores and compliance to be robust – noting that we have made changes since the first report.

Wellington Water are currently leading work with Regional Public Health, GWRC and all the Territorial Authorities to formalise coordination, and joint arrangements and protocols around managing water supply safety. A MOU is being developed to clarify and confirm this.

5.1.4 Kapiti Coast District Council (KCDC) – Water Supply (river recharge) project

With the dry weather over the last few months, KCDC has partially activated its river recharge system. The project sees treated river water supplied to the public and in turn, bore water pumped and discharged into the river to 'recharge' it – thereby maintaining environmental baseflows.

The compliance regime over the summer period has ramped up as we receive large amounts of monitoring data to check to ensure compliance with the consent conditions and management plans. We have a very effective working relationship with KCDC, and are looking forward to this project's successful implementation in full this summer. So far, the project has been fully complying with its consent conditions.

5.1.5 WIAL Airport runway extension

WIAL is seeking to keep the resource consent application before the Environment Court 'alive' and on hold until the end of February 2018. In light of the recent Supreme Court decision which was unfavourable to WIAL, they will need to reapply to the Director of Civil Aviation for approval to operate the extended runway. It is unclear whether that approval will be to operate the

at the length proposed in the original resource consent application, or at a longer length (which may require a modified or new application).

The Environment Court has agreed to this approach and WIAL is now required to provide a report to the Court and the parties no later than 28 February 2018.

5.1.6 T and T Landfill

The stormwater diversions upgrade works were completed in December, as required by the Abatement Notice. This work programme was ambitious, but the consent holder committed to the work programme, and completed the works to a very high standard. We will be paying close attention to operation of the system in autumn and winter 2018, when we hope to see discharge to the Owhiro Stream greatly reduced.



Western tributary Dam filling up (November compliance inspection)



Finalising earthworks on eastern dam (November compliance inspection)

5.1.7 Carterton Wastewater reconsenting

Consent has been granted for 35 years subject to a number of agreed conditions. Despite being publicly notified, due to a very successful collaborative process, no formal hearing was necessary, with all submitters satisfied with the process and withdrawing their right to be heard.

5.1.8 Masterton District Council water takes

We are currently in discussion with MDC over potential conditions of consent for their water supply. The main discussion points with regard to conditions have been increasing the MDC commitment to water conservation methods and community education at times of low flow in the river. We are also seeking to agree a longer term strategy regarding management and operation of the future water take particularly at the critical times of low flow.

We are also processing a consent from MDC for a water take for Henley Lake – with discussion focussing mainly around the proposed amount of water needed to be taken for the lake at times of low flow in the river. At present it is likely that this will be a publicly notified consent due the more than minor environmental effects of the proposal on the river, however discussions in this regard are ongoing.

5.1.9 Water take appeal

Following further evidence being received from the Applicant's expert which threw some doubt on the level of connectivity of this groundwater take to the surface water, further caucusing was held between the experts. This caucusing was primarily to inform the PNRP process but also this appeal. The result of this further work effectively concluded that while the groundwater was connected to the surface water, the level of connectivity was not so significant to meet the criteria to warrant a low flow condition (the main subject of the appeal). Discussions/mediation is still ongoing with regard to the other

conditions under appeal – namely the requirements for telemetry and the rate at which monitoring of the take should occur

5.1.10 Roads of National Significance (RoNS) Projects

(a) Transmission Gully (TG) and Porirua Link Roads (PLRs)

The dry weather continues to assist construction progress on site for the TG and PLR projects. Site compliance auditing continues on a weekly basis. Work is ongoing with CPB HEB Joint Venture regarding opportunities to streamline and improve systems in the TG compliance space. The resource consent and Site Specific Environmental Management Plan (SSEMP) certification workloads on both TG and PLRs have now eased. The Stream Mitigation Working Group continues to meet regularly to work through stream mitigation and related diversion design matters.

(b) Peka Peka to Ōtaki

Enabling works along the alignment and permanent work around the SH1 bridge in Otaki continue. The site is being audited by GWRC compliance officers. An SSEMP to enable abutment works on the new Otaki River Bridge is expected to be lodged for certification in the near future. Bulk earthworks are expected to commence in March. A consent application associated with ancillary works in the Winstones Aggregates Otaki processing site is being processed.

5.1.11 Significant Investigations and Enforcement

The Environmental Protection Team has concluded a number of investigations into non-compliance with moderate to high environmental effects in the period just before and after the Christmas break. These included large scale illegal burning, effluent discharges and works in the bed of a stream. In each of these cases a decision was made not to prosecute but issue infringement notices and use other, non-regulatory tools, to influence behaviour change in the culpable parties.

There is one live case before the courts, a prosecution for works in the bed of a river. This is still waiting to proceed to trial.

5.2 Environmental Science

5.2.1 Toxic algae in Te Awa Kairangi/Hutt River

In conjunction with Community Engagement and our partners (Territorial Authorities), we coordinated and implemented a comprehensive warning campaign in response to an extreme toxic algae bloom in Te Awa Kairangi/Hutt River in late November and December 2017. Media releases, radio, special signage along Te Awa Kairangi/Hutt River and social media was used to inform the public of the risks. Drone footage collected by one of our staff proved to be especially popular with the public.

Unfortunately we still had two dog deaths occur, one in early December and one just before Christmas. One of the owners was from out of the region and had no idea of the issue. There were also two “near misses” – fortunately both owners were aware of the situation and took quick action. The combination of a probable low dose (i.e., one owner saw its dog drinking from the water and

“quickly yanked it away”) and immediate vet attention means these two dogs had a very lucky escape.

The toxic algae bloom was flushed out of the river by a decent rainfall in early January; however, the exceptionally warm and fine weather since then has seen the return of toxic algae to Te Awa Kairangi/Hutt River fairly quickly. Working with our partners we are again implementing our response protocol to keep our communities informed and safe.

This is by far the worst season for toxic algal blooms we have seen since we started monitoring over 12 years ago.



Facebook post from 24 January advising of the increasing toxic algae levels in the Hutt River

5.2.2 Amendments to the NPS-FM re swimmability

In response to the latest NPS-FM changes regarding swimmability, and in conjunction with Environmental Policy and Community Engagement, we have just released the *What Spot?* Survey to identify where people want to swim (and therefore where we should be monitoring).

<http://haveyoursay.gw.govt.nz/what-spots/maps/what-spot>

5.2.3 Rainfall and water levels – Responding to the effects of the dry summer

The Hydrology team has been very busy monitoring receding river and stream levels after the abrupt change from a very wet autumn/winter to a very dry spring/summer. The team has been working hard to ensure the monitoring data is accurate and of the highest quality as important decisions on water allocation and irrigation restrictions are based on this information.

A drought check webpage <http://www.gw.govt.nz/drought-check/> was also established on our website. The page contains brief statement on the current situation and outlook, and links to the NIWA national drought index and various anomaly maps and site-specific graphs for the region. This webpage will provide landowners with real-time information on rainfall, water levels and soil moisture levels.

5.2.4 Working with Wellington Water

We are continuing to grow the Wellington Water Ltd rainfall monitoring network in the urban environments of Wellington, Porirua, Lower Hutt and Upper Hutt. The most recent rain gauges to be installed are at Tawa Junction, Riverstone Terrace, Woodridge and Samuel Marsden Collegiate in Karori. Samuel Marsden will also have meteorological monitoring equipment and students will have access to the data and opportunities to learn about environmental monitoring.

One of our senior scientists is also overseeing the development and implementation of the stormwater monitoring plan (SMP) for Wellington Water (WWL), as required under their global stormwater consent. Collaborating on this will allow numerous opportunities for data and information sharing. It is also intended that ESci will undertake the monitoring, which will be funded by WWL.

5.2.5 The whitua and Collaborative Modelling Projects (CMP)

All modelling for the Ruamāhanga has been completed. In Te Awarua-o-Porirua, scenario modelling is well underway.

Planning for the Wellington Harbour/Hutt Valley Whitua is advancing well. We engaged a consortium of experts to help explore learnings from our current experiences with the Ruamāhanga and Te Awarua-o-Porirua whitua, as well as other New Zealand experiences. A report from the consortium was received late last year and is currently being reviewed.

5.2.6 Citizen science

It's been an exciting time for citizen science with a number of activities occurring recently, most notably:

- Development of customised freshwater monitoring plans for Friends of Waiwhetu Stream and Kourarau Catchment Group

- In conjunction with WCC, Mountains to Sea, MfE and Zealandia, delivery of a freshwater monitoring workshop (on how to use SHMAKits) with over 30 community members
- Provided GWRC Land Management Officers with nitrate and phosphate test kits (including training on how to use the kits and interpret results) to test with farmers
- Liaising with Landcare Trust on contributions to a Citizen Science Consortium in April 2018 at Te Papa
- Contributed to the national advisory group for NIWA's freshwater citizen science database
- Finalised a Citizen Science Implementation Framework plus an internal memo (awaiting approval from the Internal Engagement Advisor) to coordinate citizen science activities across GWRC.



Grant and Steven from the Friends of the Waiwhetu Stream doing the first round of monitoring for their citizen science project

5.2.7 Outcome of Waingawa investigation and new programmes

The investigation into elevated nitrate levels in the Waingawa catchment (Wairarapa) has been completed as required by Method 10 of the pNRP. There has been suggestions that this may have been caused by historic groundwater contamination from the Waingawa Freezing Works. However the use of isotopes and groundwater age-dating shows it is a combination of all land uses in the catchment.

A new dune monitoring programme was started. This programme will assess the impacts of our management activities in these ecosystems, as well as

monitor the impacts of rising seas and increased storm surges on coastal communities.

A year-long campaign monitoring arsenic levels in air has also been set up at the Masterton air quality monitoring station.

5.3 Environmental Policy

5.3.1 Continued development of national planning standards

The Ministry for the Environment is undertaking targeted consultation on a number of the potential planning standards including structure, form and definitions. We will continue to provide input as a pilot council and have provided information to consultants undertaking the economic analysis. We are expecting the Minister to consult on the standards after April this year.

5.3.2 Kāpiti Coast District Plan appeals

The period for appeals on the decision version of KCDC's district plan has closed. There are number of appeals that involve topics that we have previously submitted on. Officers are evaluating how many of these will require our input, as a 274 party. Topics of interest include drain clearance, natural hazards, flooding, stormwater management and the coastal environment.

5.3.3 Setting of draft swimming targets

We are required to set draft swimming targets by 31st March 2018. These targets are a requirement of the National Policy Statement for Freshwater Management:

Policy A6

By every regional council developing regional targets to improve the quality of fresh water in specified rivers and lakes and contribute to achieving the national target ... and ensuring:

- a) Draft regional targets are available to the public by 31 March 2018 and*
- b) Final regional targets are available to the public by 31 December 2018.*

A regional sector approach has been adopted which includes modelling of all regions by the Ministry for the Environment, development of a template for all regions to complete and a consistent approach to public engagement. MfE's modelling indicates that our current policies and rules will get us to 75% of rivers swimmable; this excludes the outcomes of the limit setting process through our whaitua committees.

Our final targets will also be informed by the existing information we hold about where our community undertakes contact recreation plus the results of our ['What Spot' survey](#).

5.4 Parks

5.4.1 Parks network

The Regional Trails Framework was approved by the Regional CEs Forum and at the Mayoral Forum, and the document distributed to all partners, DOC and WREDA. The framework identified a 0.5 FTE funding for 3 years for regional trails initiatives and we have assisted WREDA in the recruitment process.



Dam Emergency Action Plans have been prepared for Birchville, Woollen Mills and Korokoro dams

A comprehensive helicopter services procurement process was completed and two operators selected to provide Parks services.

There were very strong camping numbers at Kaitoke, Battle Hill and Dry Creek in November and early December due to fine sunny weather. Dry Creek remains especially popular with international budget camper tourists.

Significant road maintenance, fencing and pest plant control has occurred across the network

5.4.2 Queen Elizabeth Park

We completed construction of 'Ramaroa' – the visitor hub complex at Queen Elizabeth Park. A ceremonial opening was held on 2 December. The Park Rangers have shifted into their new offices in time for the peak summer season, and the first meetings have been held in the new Kotare Room

Kapiti Stables commenced their new licence to operate horse trekking and grazing at QEP. This completed an open tender process and saw the departure of longstanding licence holder Stables on the Park

Following the signing of the Maclean Trust agreement to retire and revegetate 21ha of peatland at Queen Elizabeth Park, the first aerial weed control work was

carried out in January. 10.5 of the total 19 hectares was treated in around 2 hours.



Aerial weed control in the northeast of QEP; SH1 and the railway line in the background

Weed and sediment removal in the North Whareroa Stream has been completed. Aimed at improving stream flow and habitate, this work was funded by NZTA to mitigate the effects of additional water entering the park from the M2PP Expressway.



North Whareroa Stream following works. Note the still water; there is very little drop in height between Poplar Ave and Waterfall Stream further south.

5.4.3 Akatarawa Forest

A temporary test radio repeater was installed at Mt Wainui as part of GW's Field Radio trial. This is already delivering significantly improved radio communications, while being of such a small scale as to preserve the natural backdrop of Mt Wainui to the Kapiti Coast

The Cannon Point walkway was closed due to withdrawal of public access across an adjacent private land holding. GWRC is supporting UHCC to address the landowners access requirements and hopefully formalise the walkway, which is a very popular recreational opportunity.

As noted above (section 2.2.3), Parks now leads the RMS/ PF Olsen relationship management. A transition arrangement is now in place to ensure all obligations are met, and we achieve the best possible integration with public access.

5.4.4 Pakuratahi Forest

Heritage culverts maintenance continued on the Rimutaka Rail Trail, with a substantial fish passage improvement near the Upper Hutt deerstalkers rifle range.

New electronic locks were installed on all gates across the forest, while new mapboards were printed and in place at main entrance areas before Christmas.

A new carpark was completed at Tunnel Gully at a mountain bike trailhead, using a former forestry skid site. Catering for around 14 vehicles, the new car park provides good access to the trails and effective separation from walkers.



New carpark in former skid site; access to the forest at the right

5.4.5 Battle Hill Farm Forest Park

A 35-year lease has been signed with the Riding for Disabled Association for their permanent covered arena in Abbots Field. This is a major achievement for both RDA and GWRC; they have a long term home and we have an intergenerational partner at the park. Over the last year RDA have settled in really well at Battle Hill, enriching the park and engaging visitors and other stakeholders – especially the equestrian community – in what they do.

Works have been underway over the last couple of months to fell large exotic trees and complete fencing in preparation for earthworks required for construction.



Upper Abbots Field showing site of planned arena and new fence top right

Fish passage works have been completed at Battle Hill to improve fish access past a weir and perched culvert in the Ponds area. As works were being completed two eels were observed working their way up through the rocks into the pond.



Before with weir preventing fish passage

After with rock ramp in place

5.4.6 East Harbour Regional Park

Construction of the Harbour Views track from Muritai Rd to the Main Ridge has resumed, and will be completed by the end of the financial year.

Naylor Love Construction completed work removing asbestos roofs, installing new roofs and exterior building work on the historic garage and generator building at Baring Head. The majority of the work was funded through a \$50,000 grant from the Stout Trust obtained by Friends of Baring Head.



From left: generator building with new roof and spouting; historic garage with new roof, spouting and bracing.

5.4.7 Kaitoke Regional Park

Following PF Olsen harvesting pines on Kaitoke Hill in early 2017, NTrailZ volunteers reinstated the Flow-K2 mountain bike track in the area, with assistance from GWRC.

GWRC also invited Trail Fund to run a half day trail building course for volunteers in the park, which was very well received.



NTrailZ volunteers do the hard graft to re-establish the Flow-K mountain bike track

6. Climate Change

6.1 Wellington Region Climate Change Working Group

Every council in the region has appointed a main and an alternative representative to the Wellington Region Climate Change Working Group which was established in late 2017 with the purpose of providing a forum via which councils across the Wellington Region can network, discuss issues, share information and where appropriate, achieve a consistent approach across all jurisdictions on climate change mitigation (reducing greenhouse gas emissions) and adaptation (preparing for impacts such as sea level rise, drought and enhanced natural hazards effects). GWRC's main representative is Cr Kedgley with Cr Blakely acting as the alternate.

The working group met in the GWRC Council Chamber for the first time on 4th December. Presenters included:

- Ministry for the Environment's Director of Climate Change
- LGNZ Climate Change work programme leads
- Dr Judy Lawrence Senior Research Fellow - Climate Change Research Institute, Victoria University re Adaptation challenges
- Chair of the Natural Hazards Management Strategy Steering Group.

The working group also discussed its draft Terms of Reference which is now with each council and Ara Tahi for consideration. The Working Group will meet again in mid March.

6.2 Wellington Low Carbon Partnership Fund

GWRC contributed \$5,000 to the 2017 Wellington Low Carbon Partnership Fund which was established in 2017 to help innovative low carbon initiatives raise funding, build momentum and grow as part of the Wellington City Council led Low Carbon Challenge programme.

The fund provides match funding to leading innovators that have successfully completed the Low Carbon Challenge and obtained the level of crowd funding they pledged to achieve as part of the challenge.

Of the six initiatives that came through the programme this year Kapiti Biodiesel and Waste-ed aligned best with GWRCs strategic priorities, as they are designed to enable emissions reductions in the transport and waste sectors (which account for 31% and 5% of regional emissions respectively).

The Kapiti Biodiesel initiative addresses an issue of particular importance which is finding solutions for small to medium commercial businesses for whom there is no alternative to using private vehicles, as carting heavy goods

across the region is often not practical using active (walking & cycling) and public transport modes.

The Kapiti Biodiesel collective will take local waste cooking oil and transform it into biodiesel fuel, reducing greenhouse gas emissions by up to 86% in the collective's vehicles. The biodiesel can be used in any diesel engine without modification, which means the initiative has the capacity to expand. The funding raised will be used to fund the purchase of a 500L biodiesel minitanker that will distribute the biodiesel to the collective's members.

Waste-ed will host a 'Waste Conversation' summit in early 2018, bringing together local low waste initiatives and inspirational success stories in waste reduction. It will include talks from change leaders, workshops with local change makers and action planning with local councillors.

The summit builds on existing initiatives such as the update of the region's Waste Management and Minimisation Plan and the Regional Waste Forum, and will help inform the significant potential of joint working and co-operation arrangements between councils and the private and community sectors.

More information about the Low Carbon Challenge and the Low Carbon Partnership Fund can be found at the website <http://www.lowcarbonchallenge.nz/>, and a full report on the 2017 challenge is available at <https://uploads.strikinglycdn.com/files/1c7d4e8f-5801-44e9-b2fd-bf57192739a7/LCC%20Report%202017%20-%20FINAL.pdf>

7. The decision-making process and significance

No decision is being sought in this report.

8. Engagement

Engagement on this matter is not necessary.

9. Recommendations

That the Committee:

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

Report approved by:

Report approved by:

Report approved by:

Nigel Corry
General Manager, Environment
Management

Wayne O'Donnell
General Manager,
Catchment Management

Luke Troy
General Manager,
Strategy