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Committee Environment Committee
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General Managers' report to the Environment Committee meeting 9 August 2017

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 The Regional Pest Management Plan (RPMP) review

The submission deadline on the RPMP Review discussion document closed mid-July. We received 56 submissions through the GWRC 'have-your-say' webpage and a handful of submissions via email and phone. These submissions are now being analysed to determine how we use the information in the development of the plan. The next step is completion of the cost benefit analysis for proposed pest species and management options.

2.1.2 Electronic trap closure nodes

New technology that could change how GWRC, contractors and landowners could achieve more efficient predator control has recently been purchased. We have taken delivery of the remote sensing Celium electronic trap closure nodes that will be attached to all traps within the Pukaha buffer Key Native Ecosystem (KNE), along with the establishment of two hub units to transmit information that identifies which traps have been activated. We anticipate with the development of long-life lures, traps will not need to be serviced as frequently, and targeted visits can be made only to traps that have been triggered.

2.1.3 Regional Possum Predator Control Programme (RPPCP)

The 2016/17 programme treated 81,700 ha, significantly more than the planned 74,800 ha. The weighted monitoring residual trap catch (RTC) over 12 areas achieved 2.0% (vs 5% target).

In 2017/18 it is proposed to treat 85,500 ha including 35,000 ha of initial control in Wairarapa that were declared free of bovine TB in June 2017. A further 3,700 ha of initial control is planned in Otaki.

2.1.4 Southern Rimutaka Aerial Operation

Following the successful completion of the first part of the operation in May, we have completed the ground control activities (2,500 ha). The prefeed baits were applied to the remaining area on 16 and 17 June. The application of toxic baits was finally completed on Sunday 30 July. This is likely to be the final contract that GWRC will have with TbFree NZ.

2.2 Land Management

2.2.1 Wellington Regional Erosion Control Initiative (WRECI)

The WRECI programme has just completed its seventh year of operation. The winter of 2016 was one of the driest in recent times and a number of clients either cancelled or reduced pole orders.

Year - Operations	2016/17 Budget	2016/17 Actual	Percent Completed
Erosion prone land under management (ha)	410	424.1	103.4%
Poles Planted (#)	28,000	20,430	72.3%
Poles planted (ha.)	350	324	92.6%
Land retired (Afforestation & reversion) (ha)	60	100.1	166.8%

The resulting operational figures reflect the lower number of poles planted. Despite the dry winter, pole survival rates topped 90%, a very good result considering the lack of moisture at planting. The result reflects the very good late summer and autumn rains which were hugely influential in pole survival rates.

To offset the reduced area planted with poplar and willow poles, an increased area of afforested or reverted land was targeted. This was a successful strategy and as a result the area of 'land planted' was above the budget figure.

Year - Finances	2016/17 Budget	2016/17 Actual	Percent of Budget
MPI HCE Fund	\$297.2k	\$229.1k	77%
GWRC	\$292.2k	\$229.1k	77%
Landowners	\$327.8k	\$256.4k	78%
Total Expenditure	\$913.2k	\$714.6k	78%

As a result of the reduced pole numbers the annual budget is underspent. While the area targets were met, it is more expensive to plant poles on a per hectare basis than reversion and some afforestation projects.

Discussions are taking place with MPI to secure their underspend of \$68k for the 2017/18 year. There are a number of afforestation and reversion projects that can be used to fully utilise unspent budget.

To date this winter has been the opposite of last year. Good rains through April, May and June have provided ideal planting conditions although it is more difficult to gain access across a number of farms. Strong pole orders have been evident and the soils are fully saturated making pole planting in particular a much easier task.

2.2.2 Hearing Commissioners Tour

The three pNRP Hearing Commissioners requested a tour of farms, forests and vineyards to gain a better understanding of issues raised by submitters. This took place in the southern Wairarapa area, and is to be repeated in the Wellington/Porirua area where the issues are more urban focussed.

Of particular interest on farms were the classifications of waterways, break feeding, erosion-prone land, soil disturbance and riparian management. In forests the focus was on sediment management, roading, skid sites and soil disturbance. The main issues for vineyards were agrichemical use, frost protection and burning.

This was a most successful day and the time given freely by farmers, viticulturists and foresters was much appreciated. A key point of the day was the request by the Commissioners to talk to landowners so that they gained the perspective of the practitioner.

2.2.3 Farm Environment Plans (FEPs)

Eleven new FEPs were been completed for the 2016/17 financial year, predominantly in the Wairarapa Moana catchment, bringing the total FEPs in the region to fifty nine.

A spend of just under \$520,000 on contestable fund projects was spent for the financial year. The funding has been split across a variety of land uses with projects being predominantly focused on riparian or effluent management issues.

This has been the first year of the contestable fund and it has proven to be effective as a process of allocating funding to farmers through the region whilst targeting work on the priority catchments identified in the PNRP.

2.2.4 Akura Nursery

The retail section at Akura opened on 1 June this year and for the month of June a total of 25,514 native plants were sold. 17,040 were sold to internal farmer clients and 8,474 were sold through the retail section of the nursery. An additional 1,564 Eucalypts, 9,400 pines and 2,525 other exotics were also sold in June. Overall this represents a very solid start to the winter.

The contractors harvesting poplar and willow poles have been very busy since mid-May trying to meet the required number of poles to satisfy the WRECI requirements for erodible land treated. In order to meet this commitment to the WRECI programme, we were able to negotiate the harvesting of 4,000 poplar and willow poles from the Mangapakeha Nursery.

2.2.5 Works Programme

In total 8,115 poplars and willow poles and 18,400 pine seedlings were contract planted up to the end of June 2017. This is a great effort considering the amount of rain that we have had to contend with. Access to planting areas is difficult.

2.2.6 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).

Landowners with Category 1 waterways or sites have received a letter setting out the requirements to manage stock access and offering assistance and advice to achieve compliance with the pNRP provisions by July 2018. Staff are currently contacting these landowners and arranging site inspections. There are 251 category 1 sites identified in the pNRP. 214 of these sites have been classed as complex and as such have been prioritised for site inspections.

The project is a working example of collaboration and coordination across multiple Environment and Catchment Management Departments. It is using a behavioural change approach, developed using a stages of change model to monitor landowner progress towards the understanding and acknowledgement of the importance of these sites and acceptance of stock being excluded. The table below details the progress in assessing sites along with the recorded stages of change for landowner behaviour.

The encouraging signs from this project are that a large number of sites have no stock or already have stock excluded. And, of the remaining sites, over 50% of landowners are willing to begin considering stock exclusion.

Complex Sites Project Progress	
Number of Sites	214
Initial site assessment complete	105
Confirmed no stock	41
Already in action	13
Still to contact	55

Behavioural change monitoring - Stages of change (sample size = 136)	
No	13%
Yeah...but	13%
Ok	15%
Action	9%
Maintenance	4%
No Stock	48%

In the next quarter, the project will focus on shifting the landowners forward along the behaviour change spectrum through to implementation of their stock exclusion plans.



Pahaoa River Mouth Complex site

2.3 Flood Protection Implementation

2.3.1 River Floodplain Management Plan Implementation

Hutt River Environmental Strategy Review

Stakeholder engagement for the Hutt River Environment Strategy review commences in July, this includes both Upper Hutt City Council and Hutt City Council. Community engagement regarding the updated plan has been postponed until summer to try and capture a greater interest in the review outputs from people who use the area and participated in earlier survey work to support the review.

Taita Park and Robin Maud Memorial Planting

In July an event will be held to plant a living memorial for Robin Maud and to celebrate the 25th anniversary of the Hutt River Trail. This project will be a springboard to engage with recreation users and the local community to further develop design improvements for the riverbank and berms in the Taita reach of Te Awakairangi/Hutt River.

2.3.2 RiverLink Project

Subcommittee design workshops

Preliminary design information and development workshops were held with the Hutt Valley Flood Management Subcommittee on 29 March 2017, 7 April 2017, and 10 May 2017. These workshops included:

- An overview of all aspects of preliminary design
- Updates from officer teams at GWRC, HCC and NZTA
- Opportunities that may be realised from three agencies working together
- Opportunities to deliver on broader council initiatives
- Opportunities to increase value of the project to the community
- High level consideration of programming and funding challenges to be addressed
- Issues identified during preliminary design process.

These workshops provided valuable insight to support design direction for the project and have assisted with delivery of the technical reports for the Preliminary Design.

Community engagement update

Community engagement continued with further Preliminary Design open days at the Dowse. These were well attended over a period of three days and showed continued support for design direction and completion of the project.

More general engagement continues through use of the RiverLink information container which will spend 10 days each month at different key locations around Hutt City and close to the project area. These include Avalon Park, Andrews Ave, Melling Station, and Dowse Square. Information in the container is being tailored to respond to communities who focus activities in these areas and cover recreation, transport, and urban living topics.

Trial wetland update

A wetland trial design is being developed for a site adjacent to Belmont School on the State Highway 2 side of the river. This wetland will have a combination of storm-water treatment and habitat functions and we aim to include the school in its development, monitoring and management. The wetland trial aims to establish a site that both functions as a treatment wetland but also can be visited by other organisations across the region as an example of stormwater treatment methods.

Forward work programme

The workshop programme informing preliminary design is moving into consideration of value delivery and cost. This is looking at core project deliverables as well as where the project can support the implementation of wider objectives from each of GWRC, HCC and NZTA, as well as opportunities for community groups and a wider set of infrastructure owners and utility providers.

It is forecast that recommendation to proceed to detail design will now be in March 2018.

2.3.3 Waikanae FMP Implementation

Jim Cook Park

The Jim Cook Park river channel widening works have been completed and the construction of the 1.25km stopbank is nearing completion. Expected completion of reinstatement works, excluding planting, is end of July 2017.

The contract was delayed by 26 working days due to wet weather during February to May. The wet period meant that a significant amount of river widening material could not be used because it was too wet. This was replaced with quarry material at extra cost.

Overall the works have proceeded smoothly and there have been very few public complaints.

Mitigation planting both environmental and amenity, and installation of agreed environmental enhancement works associated with the project will also commence shortly.

2.4 Operations, Delivery and Planning

2.4.1 Western Operations

Rock deliveries for flood damage repairs have now been completed for Te Awakairangi/Hutt River with 3,000 tonnes of rock delivered over the last two months.

A new rock line has been constructed adjacent to the Waikanae River Iwi planting site. Improvements are proposed to the walkway at Kebbells Bend to reduce frequent damage to the track and walkway in minor flood events.

Traceys rock groynes have now been repaired with 1,000 tonne of rock placed in four groynes to stop them being outflanked during flood events.

Willow and native planting programmes are now underway in the major western rivers and will make up most of our work load over the next several months. Drain cleaning is also under way in Kapiti using both excavators and the weed boat which is contracted from the Hawkes Bay Regional Council.

Flood protection assets coped well with the weather event on 13 and 14 July. Significant flooding occurred in the Wainuiomata catchment and fallen trees were a widespread problem across the region.

2.4.2 Wairarapa Operations

Annual meetings of the ten Wairarapa River Schemes were held in May. The Advisory Committees were all supportive of the river maintenance works being managed by GWRC.

A significant amount of river maintenance works were completed in the 4th quarter to complete various river scheme work programmes and to proactively complete some work scheduled to be done in 2017/18.

Staff will be busy in the coming weeks responding to multiple damage reports and inspecting the Wairarapa flood protection assets following the significant weather event on 12 to 14 July 2017. Significant damage occurred to sill that controls water flowing down the Tawaha floodway which may increase flooding on SH58 to Martinborough.



Ruamahanga River, Tawaha sill flood damage July 2017

GWRC recently supported a 35 hectare accretion claim on the right bank of the Ruamahanga River, about 1.5km downstream of the Waingawa confluence, claimed by The Cliffs Ltd (Kyle Wells). This accretion claim involved a river works easement in favour of GWRC to provide ongoing legal access to carry out river management works. This is good outcome that solidifies the agreement to undertake river works, in particular buffer establishment, on this section of private property.

2.4.3 River management resource consents

Submissions for the four western consents closed on the 1 May 2017. Over the next four months our intention is to resolve most, if not all, of the submissions without the need for a hearing as we believe this is achievable given the nature

of the submissions and our discussions with most submitters prior to notification. We have started this process and have already had several meetings with submitters. We are also keeping in contact with Environmental Regulation around procedural issues with submitters, commissioners and prehearing and hearing processes. In September we will review where we are at with all submitters and make a decision whether to proceed to a hearing or spend more time trying to resolve any outstanding issues. If we decide to proceed to a hearing, it is anticipated that this could be scheduled before Christmas 2017.

The key areas of focus are developing operational plans and work programming, Cultural Health monitoring, gravel extraction, Code of Practice and ongoing environmental monitoring.

2.5 Investigations, Strategy and Planning

2.5.1 Floodplain Management Plan (FMP) Development

Waiohine FMP

A hydraulic modelling consultant, Matthew Gardner of Land River Sea consulting, has been engaged to revise the Waiohine River hydraulic model in line with the recommendations from the independent audit.

A proposed governance and project delivery structure to complete the FMP, including representation from the local community, has been put forward to the Wairarapa Committee for consideration. This will be the subject of a separate report to the Environment Committee.

Te Kāuru Upper Ruamāhanga River FMP

The TKURRFMP subcommittee has endorsed the establishment of a Waipoua Masterton Urban Area Project Group.

Work continues on modelling the agreed Waipoua hydrology to feed into options development for Masterton. This work has been delayed as the modelling has been more difficult than expected (in terms of developing a new model using the new hydrology). The Waipoua officers working group (GWRC, MDC and CDC represented) has agreed key aspects of hydrology and climate change, and had further discussions on peer review and how best to address uncertainty. We intend to arrange a meeting in early August for the Urban Area Project Group to begin the work of recommending a solution for the urban flooding issues.

2.5.2 Investigations and Strategy

(a) Flood hazard mapping on the internet

The new system is now live. It can be accessed from <http://www.gw.govt.nz/flood-hazard-advice/>

(b) Otaki FMP review

Work is underway on the following workstreams:

- Engagement with Ngā Hapū o Ōtaki to finalise the scope and confirm their interest in the different aspects of the review
- Working with KCDC to understand how effective planning controls have been in avoiding flood risk
- Hydraulic modelling of a range of scenarios to answer the question, “how much damage would be avoided in a large flood today, by the works carried out to date”?

(c) **Flood Warning review**

The Implementation Plan has been completed, and will be reported to ELT in early August. It will be used to guide work programming and alignment between LTP activities for the various Departments involved.

(d) **Flood Hazard Modelling**

Hydraulic modelling of the Porirua Stream (using the new hydrology) is expected to be completed and peer reviewed in July, working towards PCC’s upcoming District Plan review and will probably be combined with Wellington Water’s stormwater flood hazard mapping.

The Mangaone Stream survey is underway for hydraulic modelling later this year.

(e) **Policy/District Plan input**

The UHCC Plan Change 42 (Pinehaven and Mangaroa) hearing date has been set for late September and GWRC will be participating as a submitter.

Porirua City Council intends to update its District Plan Hazards chapter in 2017. We are updating our Porirua Stream flood hazard mapping in line with their September deadline.

3. Biodiversity

3.1 Biodiversity Management

3.1.1 Key Native Ecosystem (KNE) programme

- Work to protect the Kaitoke and Pakuratahi KNE sites from incursion by wilding pines has been completed. Young pine trees alongside State Highway 2 at Kaitoke Hill were felled in June by the New Zealand Transport Agency.
- Biodiversity staff are working with the Biosecurity department to review the effectiveness of KNE programme pest control contracts undertaken in 2016-17. This review will be used to plan pest control activities for the coming financial year across 58 KNE sites.
- 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 KCDC, and in

the Wairarapa. These meetings will inform the next round of three year KNE management plans.

3.1.2 Wetland programme

- Biodiversity and Land Management department staff made several visits to significant natural wetlands to provide advice to landowners. The Wetland programme is subsequently awaiting landowner sign-up for Waingawa Swamp, Papatahi Neville Davies Wetland, Moeraki Wetland, Northern Lake Wairarapa Wetland and Te Hapua Complex Wetland in Waikanae.
- Biodiversity staff are working with Land Management, Environmental Policy, Environmental Regulation and Environmental Science staff to consider how to best support landowners surrounding Wairarapa Moana to implement the new proposed Natural Resources Plan stock exclusion rules. Landowners at this site are likely to lose a lot of grazeable land resulting from the requirement to exclude stock from Category 1 waterbodies.

3.1.3 Fish Passage

- The Fish Passage Programme has been reviewed to ensure that it aligns with the proposed Natural Resources Plan, the GWRC Biodiversity Strategy and GWRC priorities. The scope of the programme has been expanded to include fish habitat enhancement as well as fish passage. The programme name has been changed to ' Freshwater Fish Programme' and it now supports fish passage and habitat restoration projects on GWRC owned/managed land in priority catchments.

3.2 Biodiversity Advice and Advocacy

3.2.1 Biodiversity Advice

- Biodiversity staff gathered planners and ecologists from many of the region's district councils to work on ways of protecting biodiversity through district and city plans. The one-day workshop focused on gauging the progress councils are making in implementing the biodiversity protection objectives of the Regional Policy Statement in their planning work. Participants identified issues, roadblocks, and options for doing this. There was broad agreement to coordinating more closely and a key next step is to identify how to better work together in future.



Fig 1. Attendees at the Planning to Protect Significant Biodiversity in the Wellington Region workshop

- GWRC and Auckland Council are leading the development of national biodiversity offsetting guidance on behalf of all regional councils through the Biodiversity Working Group. A second draft has been reviewed and feedback collated. A final draft of the guidance is anticipated in September, with public release toward the end the year.
- Biodiversity staff coordinated a GWRC submission on the draft Department of Conservation *New Zealand's Threatened Species Strategy*. Comments included that more details are needed on how 'working in partnership' will be achieved, the linkages between the vision, goals and actions should be clarified, goals should be reworked to provide more specific measurable outcomes and that the next step should be to develop an implementation plan which sets out the specifics of delivery.

4. Environment Management

4.1 Harbours

4.1.1 Navigation aids

Two wind generators were changed at the rear lead light after the weather took its toll and faults were discovered. We hold a spare in reserve to aid quick response when this occurs. Battery conditions are monitored carefully over winter as long nights and short, often cloudy days are not an ideal mix.

Reliable navigation aids are a key component of our Risk Control Measures.

4.1.2 Weather issues

The drilling barge Tuhura has returned to their location and drilling, after being interrupted by the need to stop work, lift the drill and return to the wharf due to forecast heavy weather.

The heavy southerly weather arrived slightly earlier than forecast (late morning, Wednesday, 12 July) leading to the media reporting a rough crossing for ferry passengers. The ferry companies had already made the decision earlier

in the week to suspend crossings from Wednesday evening. Normal services resumed that Friday.

Over this period GWRC hosted the NSSIG (Navigation & Safety Special Interest Group), so we had a large number of Harbourmasters here to experience some Wellington weather. While the meeting finished on Thursday afternoon, many were still here on Friday morning still trying to leave.

The July storm caused five vessels to damage or break free from their moorings. This can result from neglected maintenance, inadequate moorings or simply stress of weather. We have processes in place to remind and follow up with mooring owners regarding their inspection requirements and subsequent maintenance; however it is ultimately the owner's responsibility to ensure their vessel is secure. Two of the vessels that came adrift did not come from swing moorings. Our Harbour Rangers, the Maritime Police and Mana Coastguard were all involved in securing these vessels.



Photo: James Allen

4.1.3 Shipping news

Some commercial vessels were noted to be exceeding 5 knots within 200 metres of shore (a breach of bylaws) in certain parts of the harbour. This has implications for possible groundings and interaction with recreational users. As a result a guard zone has been established in our Navi-Harbour navigation system at Wellington Harbour radio (Beacon Hill) that will alert the Communications Officer on duty if a vessel has entered this area at excessive speed, we are then able to follow this up with the vessel operator.

On 11 July, we had thick fog on the harbour that caused some issues for both commercial and recreational craft and we are following those up.

On 18 July, the Strait Feronia returned from dry-docking in Australia. Due to the size of the current Cook Strait ferries they are unable to dry dock in New Zealand.

4.1.4 Other activities

In June we carried out a joint self-assessment of our Safety Management System (in line with our SMS requirements) with key marine staff from

CentrePort. We concluded that we are operating in accordance with the Port and Harbour Marine Safety Code and have submitted our report to Maritime New Zealand.

James Allen has attended a 3-day course run by Maritime NZ on Regional Responders and oil spills, held in Auckland.

On 8 July, in calm weather and good conditions a 6.5 metre recreational vessel sunk quickly and unexpectedly off Somes/Matiu Island. The three occupants were wearing lifejackets and were rescued very cold but otherwise unharmed by a passing yacht. Police and Coastguard were in attendance and the Coastguard took the people to shore. The boat has not been recovered.

4.2 Environmental Regulation

4.2.1 Lower Hutt Water Supply: Waiwhetu Aquifer Investigations

An integrated work programme continues with Wellington Water Limited (WWL) (alongside the Environmental Science team) to investigate and respond to Waiwhetu Aquifer contamination risk. Our regulatory work currently includes a desktop analysis of bore construction data, which has confirmed all geotechnical bores have been decommissioned and backfilled to the required standard. We are also looking into some ‘historical’ bores to confirm their existence (or not), and plan to contact site owners and conduct inspections where information is missing. We expect this work to be completed by the end of August. Work has also progressed to adjust bore permit forms and information requirements, on the back of learnings from the Havelock North Inquiry and Stage One findings.

We have also been working with WWL on contingency consents that may be needed over the coming summer. WWL needs to adjust some of their operational consents for the takes from the Wainuiomata River (to enable WWL to increase its reliance across other public drinking water sources). Additionally consents to discharge ‘backwash’ water are needed from the Waterloo Plant, to deal with turbid water not able to be treated by the proposed new UV treatment.

4.2.2 Community Liaison Group engagement

Community Liaison Groups (CLGs) form a vital engagement link between consent holders, local communities and GWRC. We have instituted CLG requirements through consent conditions since the early 2000s, and we find their function informing and problem solving has only grown in relevance over time. Considerable effort is being particularly devoted to servicing several CLGs, including Carys Gully waste facilities (Southern Landfill complex), Spicer Landfill, and Winstone’s Otaki Quarry. On the latter, work with experts, the consent holder and residents, has enabled the sources of bore contamination to be identified and an action plan developed to fix this situation. The Spicer Landfill CLG has been active since a large spike in complaints in July 2015. Porirua City Council (PCC) and GWRC have worked through the operational and consent issues with this group in a transparent and frank way. This CLG has recently agreed to a set of significantly revised consent conditions for the operation. PCC will be lodging an application to update and refresh their landfill operation consents in the next few months. The Carys Gully CLG is

our longest standing community engagement forum, being in existence for some 15 years. We are currently working through issues relating to the refurbishment of some hardware at the sludge dewatering facility, and discussing potential up-gully expansion of the Southern Landfill.

4.2.3 T and T Landfill

Substantial compliance work continues for T and T (construction and demolition fill) Landfill. Works on the stormwater diversion are continuing and are on target (shown in image below) to be completed by the end of the calendar year. In late June we also issued an abatement notice on the site to confirm the importance of meeting the December 2017 timeframe – and primarily because we don't yet have a resource consent in place for these works (in place to assess compliance). We expect the consent to be finalised by September 2017.

Engagement with media continues on an 'as needed' basis, as does our regular series of updates for the community via our dedicated webpage.

A Councillors' site visit scheduled for mid-July was cancelled due to extreme weather. We are arranging a new time to follow in August.



4.2.4 Transmission Gully and PCC Link Roads

Consenting, compliance and management plan review and approval work continue.

Two abatement notices issued in May remained in place as the CPB HEB Joint Venture (JV) continues to work on site compliance issues. Resource consent and Site Specific Environmental Management Plan (SSEMP) improvement workshops involving NZTA, JV, PCC, KCDC and GWRC identified some opportunities to tweak existing processes, but acknowledged the constraints faced by each party in their respective systems.

A Mitigation Working Group, comprising officers from NZTA, JV and GWRC, was established and has met weekly to resolve outstanding stream mitigation uncertainties, with positive progress made. Notable consents being processed or approved in June include applications for areas of additional earthworks required to construct the project and works associated with the redesign of Bridge 19 in the Duck Creek catchment. Drafts of the first mitigation planting plans were reviewed in advance of the first stage of planting commencing over winter.

4.2.5 Featherston Wastewater Treatment Plant re-consenting

Application assessment is continuing for Featherston wastewater discharge re-consenting. We are currently awaiting further information and are discussing issues around mitigating effects on the receiving environment with the SWDC team in an attempt to find an agreed way forward prior to formal notification of the application.

4.2.6 Wairarapa Gun Club

The Wairarapa Gun Club has been granted consent to shoot lead on agricultural land east of State Highway 2 near Featherston. They had previously applied for, and subsequently been granted, a resource consent to discharge steel shot and clay targets to land.

We engaged an external expert who specialises in such matters to advise us, and we have been working with the Gun Club's experts to resolve technical issues (ie. managing lead shot deposition and effects). The result is a consent that is subject to a number of restrictive conditions which require the applicant to mitigate any effects. This includes active monitoring of the site for levels of lead in the soils. The consent has an early trigger level and also a maximum operational limit for lead. If the soil samples are at maximum operation limits then further sampling is required and an investigation is triggered under separate conditions which looks into whether remediation is required and if so what the best option and subsequent timeframe would be to implement such options.

4.2.7 Take Charge – Responsible Vehicle Washing

In the *Take Charge* Programme, a new education brochure on Responsible Vehicle Washing in a domestic context has gone to print. This is the first in a series on “Keeping our Environment Healthy”. We have begun distribution of hard copies and are working with the Community Engagement Department on

distributing them to the community. The information has also been put out via our social media channels.

4.3 Environmental Science

4.3.1 12-14 July Flood Event

GWRC hydrological monitoring stations across the region recorded some large rainfall totals and high river flows during the storm event from 12 to 14 July. The southern coast and Wairarapa eastern hills areas were the worst hit with recorded data showing that peak flows in the Kopuaranga, Whangaehu, Taueru, Huangarua, Pahaoa and Wainuiomata rivers got to levels that are expected once every 10 to 15 years.

Hydrology staff from the Masterton office braved the weather and completed a ‘flood gauging’ of the Ruamahanga River at the SH53 Waihenga Bridge. Flood gaugings are essential to maintain accurate data and to provide vital warnings of flood levels that can impact on road closures or evacuations.

The equipment pictured is being used on the Jenkin’s Dip Floodway. Sensors are floated out into the flow that acoustically measure the water depth and the velocity of the water column. GPS tracking calculates the distance across and the rate of river flow can be calculated.



4.3.2 Wellington Water and NZTA rain gauge installations

The hydrology team continues to install new rain gauges around the Porirua, Upper Hutt, Lower Hutt and Wellington urban areas as part of its programme with Wellington Water. The most recent gauges are located at Woodridge, Whitby and Riverstone Terraces.

A new rain gauge has also been installed in the headwaters of the Korokoro Stream at the Belmont Trig as part of the NZTA led programme to provide floodwarning capability for the Korokoro Stream where it crosses SH2 in Petone.



Belmont Trig rain gauge installation

4.3.3 Wellington Harbour real-time biophysical monitoring

We are excited to announce the deployment of Wellington Regional Integrated Buoy Observations (WRIBO) – a high-tech, solar-powered buoy and string of instruments which collects information about freshwater plumes entering Wellington Harbour. WRIBO was deployed by GWRC and NIWA on Monday 10 July from NIWA’s research vessel Tangaroa. Wellingtonians might catch a glimpse of the 3 metre high yellow buoy in the waters south east of Matiu/Somes Island. The buoy is fitted with a variety of instruments to analyse harbour conditions at different depths. After periods of heavy rain, plumes from Te Awakairangi/Hutt River carry sediments and nutrients from the Hutt catchment to Wellington Harbour. These river plumes are generally only one to two metres thick, so one instrument is positioned just below the surface of the water, with additional instruments throughout the water column and close to the seabed to measure changes in water quality and the speed and direction of water movement.



A key focus for GWRC is making the data accessible to the public, and that information will start being streamed real-time in the weeks following the buoy's deployment. In the longer term, GWRC hopes to see the data sit alongside information from other buoys across New Zealand, forming a national network.

4.3.4 Urban Stream Biodiversity Monitoring

Together with Wellington City Council, we are implementing the 'Urban Stream Biodiversity Monitoring Programme' to identify and assess the biodiversity values of Wellington City's urban streams. In May 2017 we conducted invertebrate sampling, fish surveys and inanga spawning assessments in the Ōwhiro and Kaiwharawhara stream catchments. Longfin eel, shortfin eel, banded kokopu, redfin bully and koura (freshwater crayfish) were found in both catchments, and the Kaiwharawhara Stream was found to support giant kokopu populations and provide spawning habitat for inanga. The fact that streams as degraded as the Ōwhiro and Kaiwharawhara can support such diverse native fish populations highlights that there is a real need to develop a greater understanding of the ecological values of urban streams in the Wellington Region so that they can be managed appropriately.

4.3.5 Rodent Survey of Wairarapa Forests

A study of rat abundance in the native forest fragments of the eastern and northern Wairarapa was recently completed. Little is known about the abundance of these pests in these areas, yet they provide habitat for a wide range of native bird species, including rarer species such as rifleman, tomtit and whitehead. Two forest types were sampled – conifer-broadleaf and manuka-kanuka-beech forests. Significantly more rats were found in the conifer-broadleaf forests. This was considered to be related to greater food availability and denning sites. It was of interest that rat levels in old growth lowland forest were similar to that found on the western side of the region. This study provides information that can be used for conservation planning purposes.

4.3.6 Wellington City Bird Counts

GWRC carries out bird counts in the Wellington City Reserves on contract to Wellington City Council. It has taken some time to be able to scientifically prove an increase in bird numbers across the city, but we can now show that since 2011 there has been a significant increase in the average number of native forest bird species encountered per bird count. Tui, North Island kaka and red-crowned parakeet numbers have all increased significantly since 2011, and no decreases have been detected for any other species. These results suggest that the presence of Zealandia, and the increasing levels of predator control being carried out in parks, reserves and suburban areas throughout the city are creating improved opportunities for local residents and visitors to encounter a wider range of New Zealand's native forest bird species in the heart of New Zealand's capital city.

4.4 Environmental Policy

4.4.1 Natural Hazard Management Strategy

The draft Strategy has been endorsed by all councils with the exception of Wellington City Council. It is being considered by WCC during the week of the 31 July with final approval 28 August. Officers have been working with WCC to ensure the Strategy aligns with the 100 resilient cities programme and the broader post-earthquake resilience work.

We intend to bring the final strategy and implementation structure to the next Environment Committee meeting.

4.4.2 Proposed Natural Resources Plan (pNRP) update

Hearing Stream 2 is now complete (Air Quality Management, Land use in riparian margins and stock access to water bodies, & Soil Conservation). Forty submitters were heard across the three locations.

The Hearings Panel also undertook site visits in the Wairarapa and Wellington city. These covered stock access, forestry practices, urban development earthworks, Taylor Preston and CentrePort.

Officers' reports are being finalised this week for Hearing Stream 3 (Water Allocation and Natural Form and Function) which begins on 4 September.

4.4.3 Planning Standards feedback

The Ministry for the Environment sought technical feedback on a suite of Planning Standards documents. Planning Standards were introduced as part of the latest round of RMA reforms. The first suite of standards has to be in place by April 2019.

The Standards are proposing mandating a structure for regional plans including a combined RPS and a topic-based structure. These changes would have significant impacts on the pNRP. GWRC are now a pilot council to test the proposals with our planning structure and provide direct feedback to officials at the Ministry.

4.5 Parks

4.5.1 Greater Wellington Great Outdoors

The annual summer events programme finished in April 2017. This year saw the event programme being refreshed with a new name – Greater Wellington Great Outdoors (GWGO), and a strong social marketing campaign.

Overall, the event programme attracted over 9000 people into GWRC parks over the summer period, which is on par with previous years. This year the event programme was heavily impacted by adverse weather, which meant that six events were cancelled, and many proceeded in poor weather, which had a negative impact on attendance.

The social marketing campaign was a highlight, with a new online video that reached over 100,000 people across the region. Post-event surveys showed that attendees were drawn from a much more diverse cross section of the region,

with high numbers of new attendees and people from Wellington City. This was a specific aim of the new marketing approach and demonstrates its effectiveness. Other improvements were the introduction of a new bookings process to make it easier for people to register and pay for events (where required).

Satisfaction with GWGO remains high, with 96% of attendees having an above average or excellent experience. The survey also revealed a high number of people who meant to attend events after seeing them advertised, but didn't for some reason or another. However, this does mean that they were engaged with GWRC through the programme's marketing.

Overall, the GWGO events programme was successful, in terms of attendance at events, promoting GWRC Parks as great spaces to be in, as well as attracting new people to these spaces. Emphasis for next year's events will turn to continuing the trends seen in 2016/17, and also looking to introduce more diversity by way of what events are offered through the programme.

4.5.2 Kaitoke Regional Park

Contractors completed the new Top Terrace Loop Road at the park to enable better utilisation of the Top Terrace area. Increasing camping numbers have prompted us to start developing the experience and facilities in the top terrace area. The new road adds to the four powered campsites and BBQ/kitchen area.



Camping revenue at Kaitoke Regional Park for the 2016/17 year was just under \$100,000, even with a wet spring and summer. This is very encouraging as this figure exceeds the 2014/15 season during which the summer weather was excellent. A new loop road and recycling area were created in the Top Terrace at Kaitoke to cater to this growing use of the area.

This work was identified as critical to support the recently announced "Just So" Festival to be held at Kaitoke Regional Park in February 2018. We are planning for the entire Top Terrace to be occupied by campers then, with stages to take up most of the Lower Campground space.

4.5.3 East Harbour Regional Park

The new Harbour Views track (Muritai) is one-third complete. Site work will recommence in October when ground conditions improve.

GWRC continues to work with the Friends of Baring Head Trust on a range of proposals to restore the historic lighthouse complex to be available as visitor accommodation. Naylor Love has now come on board as a project partner, helping supply planning expertise at discounted/ pro bono rates. The Stout Trust has given approval for their recent grant to be used together with GWRC funds to start on the “Garage Project” and “Loo with a View” tasks which will help show what can be achieved, give a base for volunteers to work from, and provide basic facilities to keep the site clean.

The Baring Head and Parangarahu Lakes areas of the park suffered damage in the July storms. The Baring Head bridge deck was underwater as the Wainuiomata River ran very high and this also flattened fences adjacent to the river in the park. These have now been repaired to contain stock.

At Parangarahu Lakes the outflow from the Gollans Valley Catchment blew out the road completely. GWRC is meeting with HCC and other stakeholders to discuss repairs and ongoing obligations for the road.



4.5.4 Akatarawa Forest

The Birchville Dam safety work is complete, including installation of a hardened scour valve structure and visitor safety improvements on the Dam. The viewing area has been extended and offers a better view point for visitors, along with the additional safety of the new safety-fence barrier system.

4.5.5 Pakuratahi Forest

The water supply to the toilets at Tunnel Gully has been upgraded. This included work to rebuild the intake, pipeline and installation of a 2,000 litre water tank. This has led to much greater resilience to tree falls and improved water pressure in the toilets.

4.5.6 Queen Elizabeth Park

The Queen Elizabeth Park Visitor Hub construction project continues, including Māori designs for panels adorning the new buildings (designed by Ngati Toa carvers).

The entranceway gate has been upgraded with a new automated gate designed in keeping with the existing historic gate structure. This is the fourth automatic gate to be installed around the regional parks network, all of which help to improve park security and reduce ongoing costs. The gate has now been commissioned and is fully operational.



The winter restoration programme is underway with successful Arbor Day plantings completed with local schools at both Battle Hill Farm Forest Park and Queen Elizabeth Park. A regular corporate group completed planting of approximately 2,000 trees as part of the Queen Elizabeth Park (QEP) entrance development. Community planting days are underway with good turnouts of locals attending. The “Spade Aid” event in late July attracted around 150 people in perfect weather to put in around 3,500 plants near Te Ara o Whareroa at Whareroa Beach.



Fencing to create two new wetland areas and another 900 metres of stream retirement in the North Whareroa Stream was completed at QEP.

Sediment removal works were completed in Waterfall Stream in accordance with resource consent requirements. Approximately 600mm of sediment was removed along a 300 metre section, and stream gravels are now evident, which improves habitat for fish and invertebrates. Several years of rubbish from the State Highway was also removed, including road cones, tyres, plastic bottles and cans.

Two new large culverts have been installed in tributaries of the Whareroa stream. The old culverts were well past retirement with holes evident in them on removal. All consent requirements were met, including fishing and dewatering the stream sections, and completion of an ecologist's report. The timing of works turned out to be ideal as a significant rainfall event (123mm in 24 hours) thoroughly tested the new installation.





4.5.7 Battle Hill Farm Forest Park

Fencing works are underway in Swampy Gully, Battle Hill Farm Forest Park to meet the requirements of a category 1 wetland under the pNRP.

After a thorough process of working through site considerations, Riding for Disabled's long term proposal for a covered riding arena at Battle Hill is now available for public review and feedback until Friday, 1 September. Based on community comment and support to date, we expect that the proposal will be positively regarded by the regional community, and await the results with interest.

4.5.8 Belmont Regional Park

The track upgrade work is now complete at Oakleigh Street (Korokoro Loop). User feedback has been overwhelmingly positive, as they no longer have to contend with muddy, steep sections and enjoy the easier graded track with five new bridges. Numerous old structures have been removed altogether – resulting in significant risk reduction and ongoing cost savings.

Stabilisation work at the historic Woollen Mills Dam (Korokoro Stream) is complete. A new fish pass is being integrated into the structure.

The new Dry Creek toilet building has been installed and will be commissioned in early August. This doubles the number of available toilets and will cater to both budget camper and day visitor use. Camping receipts at Dry Creek were just over \$20,000 for the 2017 year, up from almost zero two years ago, and we expect growth in visitation to continue.



4.5.9 Whitireia Park

The Thornley Street entrance gate is to be replaced with an automated version to improve overall park security, especially consistency around opening and closing times.

4.5.10 Regional Trails Framework

The draft Regional Trails Framework document was forwarded to over 120 stakeholders for feedback in July 2017. This project involves all 8 local councils, GWRC, Department of Conservation and Wellington Regional Economic Development Agency working together to develop a collective approach to managing, marketing and developing trails throughout the region. GWRC Parks along with WCC have lead the project for the region.

4.5.11 Parks Planning

The process to review the Parks Network Plan is commencing. Two periods of public consultation are proposed. The first early in 2018, on issues and opportunities outlined in a Discussion Document, and the second on a draft revised plan. A presentation and discussion about the planning process is planned for a Council workshop.

5. Climate Change

5.1 Climate Change Assessment Report: Regional downscaling

GWRC commissioned NIWA to prepare a report that provides high resolution climate change projections for the Wellington region. The projections concentrate on mid- and end-of-century projected climate changes and impacts associated with a moderate and a high greenhouse gas emissions scenario¹.

The report and high resolution risk maps (GIS layers) provided by NIWA will inform climate change risk assessments for planning and decision making across all GWRC departments. The resource will also be used for community and stakeholder engagement, for example it can be applied at the Whaitua scale and will help people better understand which areas of these catchments and resources are under the greatest risk from the impacts of climate change. The report will be made publically available on the GWRC website following its release on 7 August.

5.2 Low Carbon Challenge

GWRC is supporting the 2017 Low Carbon Challenge (LCC), an innovation programme and fund designed to grow Low Carbon businesses with new skills, connections and funding. The LCC will support 6 businesses and projects that can help to reduce greenhouse gas emissions in areas that are strategically important to Wellington city's emissions profile: Transport, Waste, Energy and Housing.

GWRC will provide match funding to the Wellington Low Carbon Partnership Fund, supporting projects that match three core strategic objectives related to transport:

- Increase public and active transport mode share
- Accelerate uptake of electric vehicles in the commercial sector
- Increase vehicle occupancy.

The LCC has grown out of the Smart Energy Challenge which GWRC supported in previous years, and provided the impetus for the development of a number of local businesses focused on greenhouse gas emissions reduction including Switched On Bikes, Mevo and Nocarcargo.

¹ The mid- and end-of-century projections are based on two IPCC Representative Concentration Pathway (RCP) emissions scenarios, the moderate 4.5 scenario and the high scenario of 8.5.

The challenge will be launched on 1 August and more information is available on the LCC website www.lowcarbonchallenge.nz

5.3 Local Government New Zealand Climate Change Declaration

GWRC Chair, Chris Laidlaw, along with 38 other mayors and regional council chairs signed a Local Government Leaders Declaration on Climate Change at the Local Government New Zealand (LGNZ) conference in July.

A Local Government Position Statement on Climate Change was also released, which details key actions and policy changes to manage the effects of climate change on New Zealand's communities. The objective of the policy development is to provide a focus on key joint central and local government actions and policy changes needed to manage climate change effects on communities.

6. Responses to public participation

7. 21 June 2017

- Professor Jonathan Gardner, Victoria University Marine Biology, and Dr Geoffroy Larmarche, NIWA Principal Scientist, spoke about the findings of their recently completed high resolution, multi beam sonar mapping project of the Kapiti marine environment that was conducted by a team from NIWA, Victoria University, Land information NZ and DoC.

Officers have noted the findings.

Grant Baker, Chairperson, Te Awarua o Porirua Harbour Trust, spoke to their annual "scorecard" assessing progress towards implementing the Porirua Harbour Strategy. GWRC is a partner in implementation of the Strategy along with Porirua City and Wellington City Councils and Ngati Toa.

Officers have noted the Trust's desire to continue to work closely with GWRC and GWRC officers regularly attend Trust meetings to update members on relevant Council matters.

- Dana Carter, Enviroschools Regional Coordinator, spoke about the Enviroschools programme in the Wellington region. She expressed her gratitude for the level of financial and in-kind support provided by GWRC.

Officers have noted the strong support expressed by the Committee for the work of Enviroschools and continue to explore ways that the Enviroschools programme can support GWRC's objectives in the Porirua Harbour and Wairarapa Moana collaborative restoration projects. Several programmes are already underway.

8. The decision-making process and significance

No decision is being sought in this report.

8.1 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