

I hereby give notice that an ordinary meeting of the Catchment Operations Committee will be held on:

Date: Wednesday, 11 September 2019
Time: 9.00am
Venue: Tararua Room
Horizons Regional Council
11-15 Victoria Avenue, Palmerston North

CATCHMENT OPERATIONS COMMITTEE

AGENDA

MEMBERSHIP

Chair	Cr DB Cotton
Deputy Chair	Cr LR Burnell QSM
Councillors	Cr JJ Barrow
	Cr EB Gordon JP(ex officio)
	Cr RJ Keedwell
	Cr GM McKellar
	Cr JM Naylor
	Cr NJ Patrick
	Cr PW Rieger QSO JP
	Cr BE Rollinson
	Cr WK Te Awe Awe

Michael McCartney
Chief Executive

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www.horizons.govt.nz

Note: The reports contained within this agenda are for consideration and should not be construed as Council policy unless and until adopted. Items in the agenda may be subject to amendment or withdrawal at the meeting.

for further information regarding this agenda, please contact:
Julie Kennedy, 06 9522 800

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PX3	Members' Questions	

AGENDA

1 Welcome/Karakia

2 Apologies and Leave of Absence

At the close of the Agenda no apologies had been received.

3 **Public Forums:** Are designed to enable members of the public to bring matters, not on that meeting's agenda, to the attention of the local authority.

Deputations: Are designed to enable a person, group or organisation to speak to an item on the agenda of a particular meeting.

Requests for Public Forums / Deputations must be made to the meeting secretary by 12 noon on the working day before the meeting. The person applying for a Public Forum or a Deputation must provide a clear explanation for the request which is subsequently approved by the Chairperson.

Petitions: Can be presented to the local authority or any of its committees, so long as the subject matter falls within the terms of reference of the council or committee meeting being presented to.

Written notice to the Chief Executive is required at least 5 working days before the date of the meeting. Petitions must contain at least 20 signatures and consist of fewer than 150 words (not including signatories).

Further information is available by phoning 0508 800 800.

4 Supplementary Items

To consider, and if thought fit, to pass a resolution to permit the Committee/Council to consider any further items relating to items following below which do not appear on the Order Paper of this meeting and/or the meeting to be held with the public excluded.

Such resolution is required to be made pursuant to Section 46A(7) of the Local Government Official Information and Meetings Act 1987 (as amended), and the Chairperson must advise:

- (i) The reason why the item was not on the Order Paper, and
- (ii) The reason why the discussion of this item cannot be delayed until a subsequent meeting.

5 Members' Conflict of Interest

Members are reminded of their obligation to declare any conflicts of interest they might have in respect of the items on this Agenda.

Minutes of the sixteenth meeting of the tenth triennium of the Catchment Operations Committee held at 9.00am on Tuesday 11 June 2019, in the Tararua Room, Horizons Regional Council, 11-15 Victoria Avenue, Palmerston North.

PRESENT Crs DB Cotton (Chair), JJ Barrow, LR Burnell QSM, EB Gordon JP (ex officio) (to 10.21am and from 12.05pm), RJ Keedwell (to 10.21am and from 11.56am), GM McKellar (from 9.24am), JM Naylor, NJ Patrick, PW Rieger QSO JP, BE Rollinson, CI Sheldon, and WK Te Awe Awe.

IN ATTENDANCE Chief Executive Mr M McCartney
Committee Secretary Mrs KA Tongs/Mrs JA Kennedy

ALSO PRESENT At various times during the meeting:
Mr R Strong (Group Manager River Management), Dr J Roygard (Group Manager Natural Resources & Partnerships), Mr G Shirley (Group Manager Regional Services & Information), Dr N Peet (Group Manager Strategy & Information), Mr J Bell (Manager Investigations & Design), Mr G Cooper (Manager Land & Partnerships), Mr C Veale (Programme Coordinator), Mr M Todd (Environmental Programme Coordinator), Mr P Joseph (Area Engineer), Mr I Lowe (Manager Emergency Management Office), Mr R Brannigan (Senior Emergency Management Coordinator), Ms C Kitson (Project Engineer), Ms S Boyte (Scientist - Land), Ms E Whale (River Management Analyst), Ms S Dellow & Mr C Worts (GNS Science staff), Dr S Vale (Geomorphologist from Manaaki Whenua), Ms C Morrison (Manager Media & Communications).

The Chair welcomed everyone to the meeting and invited Cr Te Awe Awe to say a Karakia.

APOLOGIES

It was noted that Crs Gordon and Keedwell, plus the Chief Executive, would be leaving the meeting from approximately 10.30am – 12.00pm to attend other Council business – National Land Transport Plan Roadshow.

An apology for lateness was received from Cr McKellar.

PUBLIC FORUMS / DEPUTATIONS / PETITIONS

There were no requests for public speaking rights.

SUPPLEMENTARY ITEMS

There were no supplementary items to be considered.

MEMBERS' CONFLICTS OF INTEREST

There were no conflicts of interest declared.

CONFIRMATION OF MINUTES

COP 19-112 Moved Gordon/Rieger

That the Committee:

confirms the minutes of the Catchment Operations Committee meeting held on 9 April 2019 as a correct record, and notes that the recommendations were adopted by the Council on 30 April 2019.

CARRIED

REGIONAL COAST & LAND

Report No 19-91

This report updated Members on progress with Council's Regional Land and Coastal and Whanganui Catchment Strategy (WCS) activities from 1 March to 30 April 2019. Mr Cooper (Manager Land & Partnerships) spoke to the report and highlighted the targets listed in tables one and two being on track for the year, the Woodville nursery upgrade, and the positive feedback and success from the WCS pole programme.

COP 19-113 Moved Burnell/Keedwell

That the Committee recommends that Council:

a. receives the information contained in Report No. 19-91.

CARRIED

SUSTAINABLE LAND USE INITIATIVE (SLUI)

Report No 19-92

Dr Roygard (Group Manager Natural Resources & Partnerships) introduced this report which updated Members about progress on Horizons' Sustainable Land Use Initiative (SLUI) for the period 1 March to 30 April 2019. Dr Roygard and Mr Cooper (Manager Land & Partnerships) discussed with Members the recent success of funding applications, the implications of farmers diverting work to Central Government's One Billion Trees programme, and the impact in our region of the tree planting programme.

Cr McKellar joined the meeting at 9.24am.

Discussion was had regarding the importance of farm scale mapping and Members' questions were answered.

COP 19-114 Moved Rollinson/Patrick

That the Committee recommends that Council:

a. receives the information contained in Report No. 19-92.

CARRIED

SUSTAINABLE LAND USE INITIATIVE FUNDING

Report No 19-94

This item updated the Committee on changes to the Sustainable Land Use Initiative (SLUI) funding over the next four financial years as a result of the Hill Country Erosion Fund (HCEF) application and subsequent contract negotiations. The report also overviewed some changes to the SLUI programme as part of the new HCEF contract and in response to increasing interest in afforestation in the Region. Dr Roygard (Group Manager Natural Resources & Partnerships) introduced the item, explained the background to the funding and took Members through each of the recommendations. After consideration of the recommendations by Members, Cr Barrow proposed a new recommendation e. Members discussed the proposed recommendation, provided their views and sought clarification.

This item was adjourned at 10.22am.

Crs Gordon & Keedwell left the meeting at 10.22am.

PRESENTATION: MANAWATU GORGE LANDSLIDE DAM ASSESSMENT

Report No 19-90

Ms Sally Dellow and Mr Chris Worts from GNS Science made a presentation on the methodologies and techniques employed with the assessment and the conclusions drawn from assessing the potential for landslide dams in the Manawatu Gorge, and answered Members' questions.

COP 19-115 Moved Sheldon/Burnell

That the Committee recommends that Council:

a. receives the information contained in the presentation from GNS Science.

CARRIED

The meeting adjourned at 10.50am.

The meeting reconvened at 11.03am.

HILL COUNTRY EROSION AND SEDIMENT MANAGEMENT IN THE MANAWATU WHANGANUI REGION

Report No 19-94

This report updated on the issue of sedimentation of rivers in the Manawatū-Whanganui region, and included an overview of the various programmes to manage that, including hill country erosion management, science and monitoring and linking the work in the catchment with outcomes in the river for water quality and flood protection. Dr Roygard (Group Manager Natural Resources & Partnerships) introduced the item and highlighted tables 1, 6 and 7 which depicted percentages of highly erodible land in our region. Ms Boyte (Scientist - Land) mentioned the impact of climate change on sediment loads and the current studies on sediment and erosion control. Dr Simon Vale (Geomorphologist from Manaaki Whenua) gave a presentation on the programme overview and structure of Smarter Targeting of Erosion Control (STEC) and answered Member's questions.

COP 19-116 Moved Sheldon/Burnell

That the Committee recommends that Council:

a. receives the information contained in Report No. 19-94 and Annex.

CARRIED

MANAWATU & OROUA GRAVEL RESOURCE STUDIES

Report No 19-89

Ms Whale (River Management Analyst) gave a presentation to Members about the findings of an updated assessment of the gravel resource in the lower reach (downstream of the Gorge) of the Manawatū River.

Cr Keedwell rejoined the meeting at 11.56am.

Ms Whale highlighted findings with regard to the gravel reach and silt phase, gravel extraction and the One Plan reaches, and Members' questions were answered.

Cr Gordon rejoined the meeting at 12.05pm.

COP 19-117 Moved Naylor/Te Awe Awe

That the Committee recommends that Council:

- a. *receives the information contained in Report No. 19-89.*

CARRIED

The meeting adjourned at 12.20pm.

The meeting reconvened at 1.00pm.

SUSTAINABLE LAND USE INITIATIVE FUNDING (Continued)

Report No 19-94

Cr Patrick proposed a new recommendation, f. and spoke in support of it. Cr Barrow amended the wording to his previously proposed recommendation e. Discussion ensued with Members having the opportunity to express their views around the proposed recommendations and seek clarification. Dr Roygard explained any implications/consequences associated with recommendation e. and explained the principles associated with recommendation d.i. and d.ii. Cr McKellar foreshadowed an amendment to the wording of proposed recommendation e. in the event that it failed.

The Chair separated out the recommendations with a division called for recommendation e.

COP 19-118 Moved Barrow/Te Awe Awe

That the Committee recommends that Council:

- a. *receives the information contained in Report No. 19-94.*
- b. *endorses the approach of providing Sustainable Land Use Initiative assistance (mapping and funding) to farms with Sustainable Land Use Initiative Whole Farm Plans, Sustainable Land Use Initiative Whole Farm Maps, Sustainable Land Use Initiative Paddock Maps, and Whanganui Catchment Strategy Plans.*
- c. *endorses changes to the Sustainable Land Use Initiative programme as a result of the new Hill Country Erosion Fund funding contract as outlined in paragraph 7.5 and 8.21,*
- d. *endorses the changes to Sustainable Land Use Initiative grant funding as outlined below:*
 - i. *encourage and support landowners to seek funding support for hill country erosion works through the 1 billion trees programme;*

- ii. *for radiata afforestation grants remaining within the Sustainable Land Use Initiative apply the approach in paragraph 8.12.*

CARRIED

- e. *strongly discourages funding to those properties that do not enable the continuance of pastoral farming on land not considered top, or high priority land under the Sustainable Land Use Initiative programme.*

Against: Crs Keedwell, Naylor, Patrick, Cotton

For: Crs Barrow, Burnell, Gordon, McKellar, Rieger, Rollinson, Sheldon, Te Awe Awe

CARRIED

- f. *directs the Chief Executive to support the Chair to write a letter to the Minister and Chief Executive of Ministry of Primary Industries to seek analysis and action on unintended consequences including environmental risks and socio-economic damage to rural communities of some elements of the One Billion trees programme, and to advocate for stronger alignment with the 'right tree, right place' approach to implementation*

CARRIED

RIVER AND DRAINAGE ENGINEERING REPORT

Report No 19-86

This item reported on progress with river and drainage activities for the period 9 April to 11 June 2019. Mr Strong (Group Manager River Management) took Members through the report, provided updates on various activities, and responded to Members' questions of clarification. A series of photographs were shown in support of several of the activities.

COP 19-119 **Moved** **Burnell/Patrick**

That the Committee recommends that Council:

- a. *receives the information contained in Report No. 19-86.*

CARRIED

FISH PASSAGE UPDATE

Report No 19-87

This item updated Committee Members on progress with improving native fish species populations in scheme drains. Mr Strong (Group Manager River Management) introduced the item and outlined the ongoing work to identify potential solutions and costs, and reported on achievements and remedial options available. He and Mr Foxall (Area Engineer Southern) responded to Members' questions, and there was comment around the need for future funding.

COP 19-120 **Moved** **Barrow/Patrick**

That the Committee recommends that Council:

- a. *receives the information contained in Report No. 19-87 and Annexes.*

CARRIED

RURAL UPGRADE PROJECT UPDATE (OMS 15 36)

Report No 19-88

This item updated Members on progress with implementing the Lower Manawatu Scheme (LMS) Rural Flood Protection Upgrade Project (RUP). Mr Strong (Group Manager River Management) introduced the report and highlighted a map showing progress on the project. Mr Strong commented on achievements to date, explained the final packages of work to deliver in the 2019-20 construction season, and highlighted some of the primary delivery risks and mitigation strategies.

COP 19-121 Moved Naylor/Keedwell

That the Committee recommends that Council:

- a. receives the information contained in Report No. 19-88; and*
- b. notes progress with implementing the Lower Manawatu Scheme Rural Flood Protection Upgrade Project.*

CARRIED

The meeting closed at 2.22pm.

Confirmed

CHAIR

GROUP MANAGER RIVER MANAGEMENT

GROUP MANAGER NATURAL RESOURCES
AND PARTNERSHIP

Report No.	19-133
Information Only - No Decision Required	

RIVER AND DRAINAGE ENGINEERING REPORT

1. PURPOSE

- 1.1. The purpose of this item is to report on progress with river and drainage activities for the months of June, July and August 2019.

2. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 19-133.

3. FINANCIAL IMPACT

- 3.1. Funding provision for all activities reported on in this item is either included in the River and Drainage General or River and Drainage Schemes Activity sections of the 2018-28 **Long-term Plan (LTP)**; is covered by an approved carry-forward of unexpended budget from the 2018-19 financial year; or additional approval will be specifically sought by way of recommendation in the item.

4. SIGNIFICANT BUSINESS RISK IMPACT

- 4.1. There are no significant risks relating to the adoption of the recommendations contained in this report.

5. DISCUSSION

- 5.1. Much of the focus over the period has been on procurement, in particular initiatives that better align the use of casual plant/ equipment hire with updated organisational policy. Much of Horizons operational river management activity requires the direct engagement of contractors, a function of the type of work, it's largely reactive nature and the administrative cost/ complexity of running formal tender processes for individual work packages.
- 5.2. The refresh has involved the use of an external procurement consultant to assist staff, ensuring cross-pollination/ application of best practice as it applies across the government/ local government sector. It involves the establishment of supplier panels for work categories and districts, using an industry-standard pre-qualification process. The refresh has a few aims, looking to build depth in regard to contractor capability/ capacity but also having a more robust framework around contractor selection and performance, endeavouring to balance transparency with efficiency.
- 5.3. Aligned with that, a term maintenance contract has been awarded for pump station electrical maintenance. Something of a first for river management, others are in the pipeline, identifying programmable and easily definable activities that are more appropriate to administer as term maintenance contracts. The intention is to continue to add activities

that are compatible with a term maintenance contract approach over the next 2 to 3 years. While the concept is new to staff the merits of the new arrangement are already evident.

- 5.4. At the June meeting I noted to members some of the consideration being given to environmental enhancement projects in and around Foxton; ways in which the quality of the discharge from Horizons Purcell Street drain to the Foxton loop could be improved. Added to that, an approach has been made around the scope that might exist to develop an area of wetland at the bottom end of the Moutoa floodway. That coincides with issues being flagged by staff around the remaining life of the pump station and the structure known as the wet gates at the bottom end of the floodway.
- 5.5. Those issues relate to the condition of the current structures and the challenges associated with continuing to provide land drainage to an area that will be impacted by sea level rise. The proposal would seem to have considerable merit to it, subject to confirmation that it does not materially impact either floodway conveyance or sediment build up. Although the actual change may be some years off consideration now is timely - not investing too much into structures that may in future be surplus to requirements.
- 5.6. Linked to that, the **Horowhenua District Council (HDC)** have engaged a consultant to progress, in a more unified way, a **Provincial Growth Fund (PGF)** application for Foxton. The development of that application (in many ways an economic development plan for the town) has involved conversations with a wide range of parties, including river management. While those discussions have in part focused on the link channel between the river and the loop, they have also covered the opportunities associated with the RAMSAR site beside the reach of the Manawatu River upstream of the mouth and how River Management might be able to assist.
- 5.7. Initiatives to reduce the flood hazard risk for Foxton continue to progress; a staff technical workshop took place in June where the engineering consultant engaged to review the outline approach (and then undertake the detailed design) provided an overview of technical work completed to date. That work included reviewing both the 2019-20 Annual Plan and 2018-28 LTP submissions that referenced the proposals for Foxton and offered alternatives, as well as meeting with the Chair of the Foxton Community Board and others with views on what the best mitigation approach for the town might look like.
- 5.8. A second technical workshop is planned for September to collectively test thinking around a preferred mitigation approach. Specifically, identifying the different elements that would constitute an effective mitigation strategy and considering their merits, including to what degree they address current operating issues/ risks (and what new issues/ risks they might create), as well as considering sequence, timing and likely cost.
- 5.9. In short, the detailed hydraulic modelling provided by the consultant at the June workshop identified that the Cook Street pipeline as originally sized is likely to become overloaded by relatively modest flow events in Kings Canal. Providing effective mitigation would require a very large diameter pipeline - one that would, with all of the site constraints that exist, probably be prohibitively expensive.
- 5.10. The broad concept suggested a shorter section of pipeline for Cook Street that does not connect to Kings Canal but instead provides the platform for stormwater improvements for that part of the town. Initial thinking is that the best solution may be to upgrade/ extend Kings Canal to the south of the town, linking with the Whirokino Scheme, a modification to the original mitigation concept that has logic to it but that will also add both cost and complexity (when compared to the original mitigation approach).

- 5.11. As noted to the June meeting, Massey University hosted a two-day river practitioners workshop in June, an event well attended and well praised. More broadly, the sector initiatives around working together more effectively, setting/ influencing the national research agenda, workforce capability and capacity and raising the profile of the sector continue. In July, I facilitated a workshop hosted by Environment Canterbury looking at ways in which tertiary institutes can better meet the needs of the sector. That advanced the idea of looking to have the overlap between the engineering and science components more broadly addressed by way of an ongoing, rotating post-graduate education programme that encompasses a number of universities.
- 5.12. Implementation of the new **Asset Management Information System (AMIS)** continues, with the focus shifting to the use of the scheduled tasks function that the software has. That begins to tie in other earlier (the dams assessment work) and current/ future initiatives (application of the dam safety guidelines to Palmerston North's stopbanks – the subject of a separate presentation to members – and the development of scheme Operations and Maintenance Manuals). That brings the threads of a more systematic operational approach together, consistent with the reliability theme outlined in the Infrastructure Strategy.
- 5.13. On the subject of dams, over the period the **Ministry for Business, Innovation and (MBIE)** sought comment on a proposed regulatory framework for dam safety. Horizons provided comment on that proposal, in both capacities (regulator and asset owner). The regulations contain relatively short timeframes for implementation, although the earlier work undertaken makes that a relatively easy proposition for Horizons (as asset owner).
- 5.14. The June meeting agenda contained, amongst other things, a presentation from GNS Science staff on work to assess the potential for landslide dams in the Manawatu Gorge. Funded by way of a grant from the Ministry for Civil Defence and Emergency Management's Resilience Fund, the work concluded that the risk to communities on either side of the gorge is low, even considering maximum credible scenarios. The final report defines/ confirms more precisely (using a LiDAR generated digital terrain model) the threat to Ashhurst (which is essentially zero).
- 5.15. Staff are also progressing discussions with GNS Science, NIWA and the University of Canterbury Quake Centre around obtaining a better understanding of the likely scale/ extent of damage to river management assets from a major earthquake. Risk exposure is relatively high for the **Lower Manawatu Scheme (LMS)**, a function of the nature of the assets, their location, the soil types they are founded on and the high seismic risk. Options to prevent earthquake damage are in general very expensive – the focus is on ensuring adequate insurance cover.
- 5.16. In a similar vein to the Tararua District-wide Scheme, staff have also begun looking at the consents/ approvals needed for the new Ruapehu District-wide Scheme and the Ohakune Scheme introduced with the 2019-20 financial year, with staff meeting with **Ruapehu District Council's (RDC)** Iwi Liaison Officer in early July. The previous very limited scope of river management activity in the district combined with the number of Iwi/ hapu and the statutory requirements associated with Te Awa Tupua will constrain particularly large scale work in the first year but also provides an opportunity to set a firm foundation for Iwi/ hapu involvement with the new entity.
- 5.17. Existing relationships with Ngāti Hauā and Ngāti Rangi are strong and staff are also establishing strong relationships with **Ngā Tāngata Tiaki o Whanganui (NTT)** staff. New relationships will need to be developed (at a hapu level) with Uenuku, Ngāti Maniapoto and Ngāti Tūwharetoa; how those discussions progress will drive whether a single district-wide consent is obtained or whether more of a sub-catchment approach is adopted.

- 5.18. From a resourcing perspective, the 2019-20 financial year is proving (at least to start with) something of a juggling act, particularly for the northern team, with Engineering Officer Daniel MacKay resigning his position and Dougal Ross seeking (and having been approved) a years' leave without pay to travel. Replacements for both are currently being sought. The change to the River Management organisational structure (creating the position of Operations Manager) has been confirmed; the initial round of recruitment for that position proved unsuccessful with a second round of advertising due to begin shortly.

6. INVESTIGATIONS AND DESIGN

- 6.1. The Investigations and Design team has a large and complex programme of works for delivery this financial year. As well as a programme of scheme and classification reviews, there are also a number of design tasks that are required to support the River Management teams. The following summarises the work that the team has undertaken during this reporting period.

LMS – APPLICATION OF DAM SAFETY GUIDELINES TO PALMERSTON NORTH STOPBANKS

- 6.2. A draft of the report has been received from Tonkin & Taylor, who will present their findings as a separate item to Committee members. One of the deliverables from this project is a surveillance and maintenance regime for the stopbanks in Palmerston North. This regime will be incorporated into the LMS Operations and Maintenance Manual that is being developed as a separate project.

SEDIMENTATION IN THE LOWER MANAWATŪ AND OROUA RIVERS

- 6.3. Following on from the sedimentation work that Tonkin & Taylor presented to the last Catchment Operations Committee meeting, staff have begun the process of building the sediment management strategy identified in the Infrastructure Strategy. To inform this strategy, a series of workshops with internal and external stakeholders are being organised.

KOPUTAROA SCHEME REVIEW

- 6.4. Staff have continued work on this Scheme Review primarily looking at how the scheme will need to function to meet changing and evolving expectations and demands over the coming years. These challenges include those driven by changing community expectations in terms of environmental management as well as those related to the predicted economic growth in the Horowhenua district and the anticipated land use changes.
- 6.5. Work on this review has slowed somewhat over the past couple of months however, consultation with local iwi has begun with a view to getting the Scheme Review completed by the end of this calendar year.

OROUA GRAVEL RESOURCE

- 6.6. The Oroua River Gravel Resource Study has been completed and is presented as a separate item.

REID LINE FLOODWAY MODELLING

- 6.7. Following the completion of the 2 dimensional hydraulic model of the Reid Line Floodway, engineering consultants Jacobs have used that model to simulate how potential modifications to the drop structure would affect the flood profile along the floodway. This

information will be used to inform discussions with landowners potentially impacted by the upgrade project.

ASSET MANAGEMENT

- 6.8. During this reporting period, staff have been working closely with Finance and Corporate staff around year end processes as well as the development of the Annual Report.
- 6.9. Additionally, staff have worked closely with our insurers, AON, around the renewal of our infrastructural asset insurance policies. This has included the provision of data relating to asset valuations, condition, as well as geospatial data. The provision and explanation of this data will ensure that we receive the necessary cover for the best price.
- 6.10. Work has also continued to help the migration to the new AMIS. During this reporting period, work has gone into user acceptance testing as well as the scheduling of tasks and the development of a business process around the management of geospatial asset information.
- 6.11. Staff have also been working on the integration of the recommendations from last year's Dam Safety Review into the new AMIS.

HAZARD MAPPING – UPPER MANGAONE & EAST OF LEVIN MODELLING

- 6.12. The modelling work is being done as part of the cross-organisational Hazard Mapping Project. Jacobs have been engaged to undertake this work, which will provide modelled information about the flood hazard in these two areas.
- 6.13. Staff will work with the consultants, and with Horizons' Survey team, to acquire the data necessary to build the models, before the modelling work itself is commenced later this calendar year.

MATARAWA SCHEME

- 6.14. During this reporting period, staff have worked with the Northern Area team looking at the potential to increase the amount of flood flow diverted from the Matarawa Stream to the Mateongaonga Stream. The outcomes of this work, which will be delivered in the next month, will help to inform the future management of the Matarawa Scheme, which is of interest to WDC and the future development of the eastern areas of the city.

POHANGINA RIVER BANK PROTECTION

- 6.15. As reported to the last Committee meeting, a 'geogrid' solution has been implemented at an erosion site on the Pohangina River. During this reporting period, the Pohangina River has seen a number of 'fresh' flows and staff have been involved with monitoring performance to determine the practicalities of its potential use in other situations.

LOWER WHANGANUI DESIGN WORK

- 6.16. During this reporting period, work has begun on a number of designs for the Lower Whanganui Scheme.
- 6.17. The first of these design jobs has been to look at the practicalities of replacing the 'WIPP' flood barriers at Kowhai Park, part of a wider, long-term initiative to reduce the number of 'moving parts' in the event of a flood. Staff are working with the Northern Area team to investigate necessary changes to roading geometry associated with a potential raising of the stopbanks where the WIPPs are currently deployed.

- 6.18. The second design job in Whanganui is to develop a design that will allow the Kowhai Park area to drain following a flood event. The need for this work was made evident in 2015 when the downstream end of the Kowhai Park stopbanking needed to be breached to enable the park to be drained when flood levels in the Whanganui River receded.
- 6.19. The other design work that has begun in Whanganui seeks to develop a flood mitigation solution for the Taupo Quay area. There are a number of constraints that make this a difficult task not least the physical constraints around the tram tracks, as well as the desire to maintain the openness of the area and connectivity to the river. To date, most of the work has focused on a desktop study of different flood defences that have been successfully implemented elsewhere.

MANAWATU DRAINAGE SCHEME MODELLING

- 6.20. During this reporting period, staff have facilitated an interactive tender process to appoint a suitably qualified and experienced consultant to undertake the necessary modelling work. This has involved staff from the Investigations and Design team as well as from the Southern Area team. The three consultants involved in this process have now been invited to provide an offer of service through a **Request For Proposal (RFP)** process.

REGULATORY ADVICE

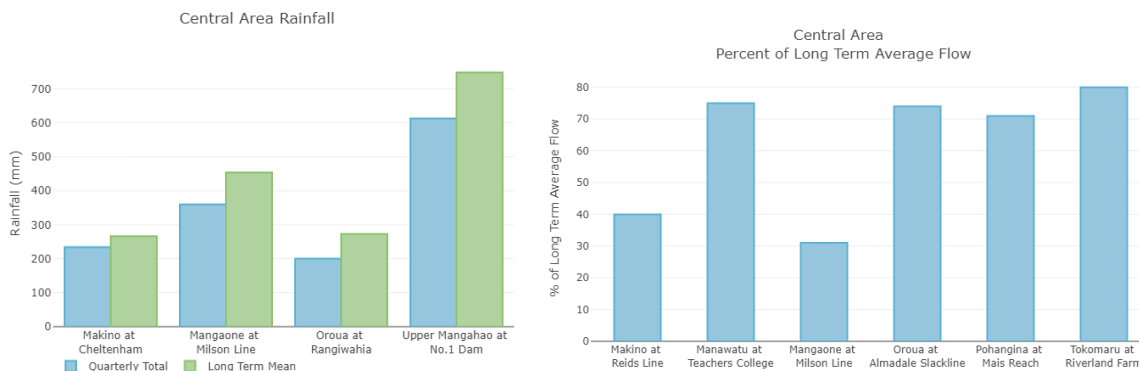
- 6.21. During this reporting period, advice was provided on a number of substantive matters. This regulatory work has included specialist advice on flood risk and the production of technical reports for consent applications, rezoning and subdivisions.

LOWER MANAWATU SCHEME RURAL FLOOD PROTECTION UPGRADE PROJECT

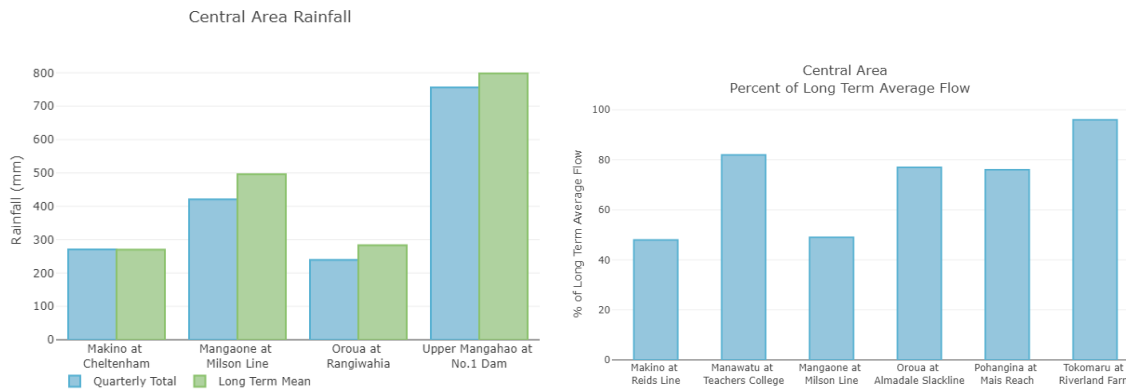
- 6.22. Through the past winter month's, staff have been working to ensure that this year's project works are delivered as efficiently as possible, as well as completing a number of jobs carried over from the last financial year. To ensure the delivery of the **Rural Upgrade Project (RUP)** this financial year staff have been developing tender documents for the largest packages of works remaining in the project. The intention is to go out to tender for these works as soon as possible to ensure a good response.
- 6.23. Given the good progression of key projects, river management staff have also begun discussing with Communications staff the mechanics of celebrating the completion of the RUP. This is envisaged to take place April/ May next year, primarily focussing on the Oroua component of the upgrade work.

7. CENTRAL

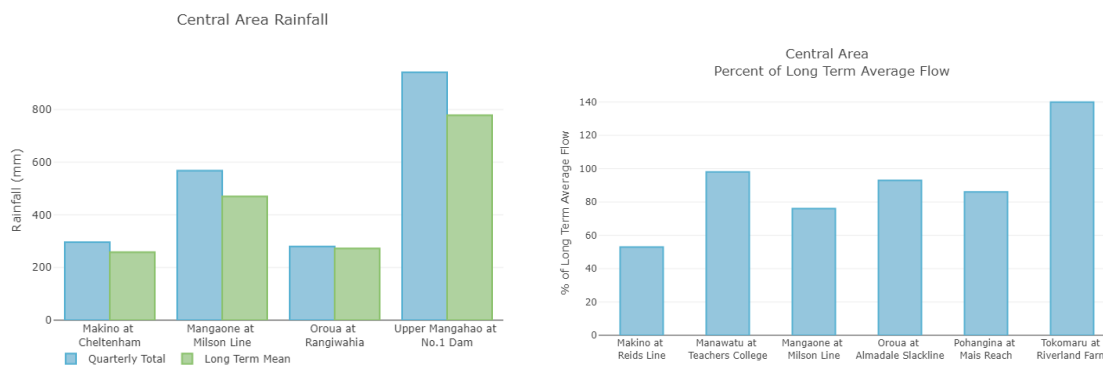
7.1. June Rainfall/Flow



7.2. July Rainfall/Flow



7.3. August Rainfall/Flow



- 7.4. This reporting period was characterised by frequent periods of heavy rain bands moving across the region resulting in a number of river flow peaks, separated by fine spells allowing levels to return to normal. In spite of the fine breaks, there were still two events where river levels were high enough to close SH 56 at Opiki where it crosses the Manawatu.
- 7.5. The willow pole planting season has had a slow start with only 400-500 poles being planted so far. Several smaller sites have been completed in combination with other works. The main factors delaying progress are ground conditions restricting access to a majority of locations and the continuing unsettled weather.
- 7.6. The **River Asset and Amenity Partnership (RAAP)** meetings between scheme staff and **Palmerston North City Council (PNCC)** are continuing, the most recent in July being the first for this financial year. Given the recent restructure at PNCC, this meeting provided an opportunity to meet new PNCC staff members, discuss the memorandum of understanding for activities in the river channel between PNCC and Horizons, and to forge new relationships.
- 7.7. Public enquiries have been numerous this period with topics ranging from accretion claims and resource consent conditions to grazing of stopbanks. The number of enquiries around stopbank grazing has noticeably increased since the updated Stopbank Grazing Guidelines leaflet was sent out to landowners. The majority of these communications have been positive and mainly centred around seeking permission to graze the stopbanks. Since the leaflet has been sent, only a few instances of minor stock damage have been reported to or discovered by scheme staff.

- 7.8. Staff fielded a number of accretion claim enquiries over the period. Accretion claims are made by landowners adjacent to a reach of river who seek to add to their title land that has slowly and imperceptibly been added along their boundary as a river has migrated. Erosion can also be claimed however, this is extremely rare for obvious reasons, unless it had occurred on the same parcel of land as the accretion is being claimed. Each new accretion claim has the effect of reducing the buffer zone for the river, as there is an expectation that as the landowner now owns the land, it will be protected from erosion. A solution would be to include an esplanade strip that moves with the river to any accretion claim. Central staff are currently mapping the accretion claim process to set-up a mechanism whereby esplanade strips are added to any claim.
- 7.9. The last three months have seen staff keep up-to-date with training requirements and take opportunities to improve job knowledge though both internally and externally presented workshops. Refresher training courses included four wheel driving, safe use of trailers and the Hytera radio system. A local archaeologist gave an insightful presentation to scheme staff around their knowledge of sites around the local area and region, and how different types of archaeological artefacts and evidence are pieced together to form larger scale patterns of the behaviours of previous inhabitants. Some staff also attended a LINZ run hui around New Zealand's new nationwide vertical datum, NZD2016.
- 7.10. Internally run workshops included a presentation by the River Management Investigations & Design team around hydraulic modelling. This provided a basic overview of the methods used, pros, cons and misconceptions around modelled outputs. The Freshwater unconference held at Regional House was another highlight with breakout workshops tackling various initiatives to improve freshwater in the region.
- 7.11. The Freshwater Team and River Management team also met to coordinate and cooperate on a number of tree clearing, planting, fish passage and fencing works across the region.
- 7.12. This reporting period saw the completion of the schemes' annual asset inspection programme. This task takes up a large portion of staff time at this time of year, however is pivotal in keeping a track of the overall state of the scheme and to enable reprioritisation of the works programme if required. The results of the inspections showed that the condition of stopbanks and existing assets had improved when compared with last year; that there was a large amount of pole planting to be undertaken this year, and that the increased size of gravel beaches has opened up new areas of erosion.

LOWER MANAWATU SCHEME

- 7.13. Works undertaken on the various rivers within the scheme this period include the following.

MANAWATŪ RIVER

- 7.14. A jet boat inspection was carried out in August from the Whirikino Trestle Bridge to the Ashhurst Domain, covering 90 km of the 99 km of the Manawatū River. This reach of the Manawatū River was in a good condition, with the spray programme effectively controlling vegetation on the inside of bends. The inspection identified planting locations, and new erosion locations that may need rock in the future.
- 7.15. The secondary stopbank located on Ruamahanga Crescent to Ruahine Street at Fitzroy Bend in Palmerston North is due for its detailed inspection, undertaken every five years. All property owners will receive a letter advising them of the inspection, seeking permission to enter the property and encouraging the owner to be present during the inspection. The secondary stopbank was the primary flood protection structure until the 1990s, when new

stopbanks were constructed closer to the river. The stopbank is still an important structure, providing a second line of defence to the city known as the Fitzroy Bend Special Project.

- 7.16. Works were undertaken during July and August at the confluence of the Pohangina and Manawatū Rivers adjacent to Ashhurst Domain to help stabilise alignments and repair existing erosion which was threatening to outflank existing river control assets. These works included rope and rail fences with tied trees and a gravel bund with rock reinforcement. Additional planting is planned for this planting season, along with further tied tree groynes, above the upstream rock groyne. Inspections show that this top rock groyne is working hard and providing good protection to the domain, while the tied tree works upstream on the Manawatu are proving effective at deflecting the flow away from the bank. Additional work will be required in the coming construction season, with funds looking to be carried forward to stockpile rock.
- 7.17. Staff presented an overview of the recent history and works undertaken to manage the Manawatū River at Ashhurst Domain during the field trip portion of this year's River Practitioners Workshop held in June. This workshop was attended by river management staff around the country.
- 7.18. The pedestrian bridge over the Manawatū River and connecting pathway to Massey and Linton was officially opened on 7 June. This is a major milestone for the He Ara Kotahi Project that scheme staff have been involved with over the last few years. Staff have and will continue to work with PNCC regarding further works along the pathways and around the various bridge structures.
- 7.19. Engineers have continued maintenance tasks along the Manawatū River, floodway; and around the Moutoa sluice gates and tower, including scheduled general running checks and inspections. Fence lines in the spillway have been cleaned up and the remaining debris from the last gate opening has been burned or buried. Due to the time of year and resulting ground and vegetation growth conditions, the rural stopbank mowing program has taken a back seat but will recommence as conditions improve.
- 7.20. The willow mulching and vegetation maintenance programme has continued along the lower reaches of the Manawatū River. This work involves the layering and/or mulching of the existing willows to control their size while maintaining a strong root structure. This live vegetation provides cost-effective bank stability and is the first line of protection against river edge erosion. Areas of work was on the true left bank of the Manawatū River, between Koputaroa Pump Stations 2 and 3.
- 7.21. Supplementary maintenance and repair works were undertaken at some sites during the programmed mulching, these included fence removal, repairs and reinstatement; berm and stopbank vegetation removal; debris burning; layering and supplementary pole planting. Other works have included minor stopbank repairs, hard facing of ramps and tracks and one floodgate replacement.
- 7.22. High flow channels that were created at several sites earlier in the year appear to be working well during recent high flow events. These high flow channels were shaped across several gravel beaches that are building up on the inside bend. Widening beaches can place increased pressure on the opposite riverbank. In some places, this has led to extensive areas of erosion. As gravel moves through the river system, these channels can refill with material and will require reshaping in the drier months to remain effective.
- 7.23. PNCC are proposing to rezone land between the BUPA Retirement Village and Leafland Nursery to enable residential development. A meeting was held with Horizons to understand the scheme's requirements and to see what recreational opportunities there might be for walkways along the stopbank and around the oxbow. Horizons advocated for

PNCC to include protections for the stopbank and integrate these into the structure plan as well as designate the stopbank in the plan change.

- 7.24. An inspection of the Awapuni quarry was undertaken to check compliance with resource consent conditions. Outstanding works included vegetation clearance and a reduction in aggregate stockpile heights.
- 7.25. Debris on the new bridge at Whirokino Bridge across the Manawatu at Foxton has been causing some concern for road users. Horizons are monitoring the situation, but do not believe that it is compromising flood protection standards. The contractor is currently removing the temporary bridge which will assist matters.

OROUA RIVER

- 7.26. Inspections have been undertaken of all assets on the Oroua River. There are a few minor repairs that need to be made to some stopbanks and bank protection works, but the general state of the river is good. Without any major flooding events, a lot of maintenance and upkeep work has been completed, such as mulching and layering which is often the first item to lose funding to flood repairs.
- 7.27. A repair of two scour holes and longitudinal bank erosion commenced but has been put on hold due to river conditions. Rope and rail groynes are to be installed with tied tree works and concrete riprap to add extra protection. Willows that were encroaching onto the beach, interfering with flood flows and causing erosion issues have also been mulched. These willows will also be sprayed once they have started to leaf.
- 7.28. Gorse spraying has been undertaken on the Oroua true right stopbank. This will be accompanied by spot spraying on both banks as small amounts of gorse are beginning to appear in the system.
- 7.29. The Oroua Flood Action Plan is in the final stages of review as the RUP has significantly altered potential issues and areas affected in a flood event. With the RUP due to be completed in the upcoming construction season, areas potentially affected by a flood less than a 1% AEP will be greatly reduced which is reflected in the updated Flood Action Plan.
- 7.30. On one of the stopbank upgrade sites completed this summer, several types of work were undertaken including; earthworks on the fill borrow sites; the burning of the stockpiled trees from the vegetation clearing works; and the re-fencing of the property following the construction works.
- 7.31. Concrete blocks to be used for erosion repairs were stockpiled at the Boness Road stockpile site.

MANGAONE STREAM

- 7.32. Annual inspections have been completed for the Mangaone Stream. The stream continues to be inspected regularly by scheme engineers and, overall, remains in a good condition.
- 7.33. A recent rabbit population boom above Rangitikei Line, that caused damage to the true right stopbank last reporting period, has continued. Repairs and fumigation of the burrows was undertaken late last period however, there is evidence to suggest the problem will not be an easy or quick fix with burrows being re-dug soon after repairs were completed. Different poisoning techniques are currently being employed in an attempt to eradicate or at least significantly decrease the population size. Horizons' Pest Management team is assisting.

- 7.34. During recent heavy rain events, a hole appeared in the lime pathway on the downstream left bank of Rangitikei Line Bridge. It was discovered that unconsented works had been undertaken to install services soon after the last known and approved works in the area had been carried out. The contractor involved was contacted, advised of the issue and requested to repair the damage in a timely and approved manner. Staff met with the contractor onsite before the works were completed. During this process, advice was sought from Horizons' Compliance team as to possible courses of action if repairs were not done to time or standard. The area will continue to be monitored to ensure the repair is successful.
- 7.35. Scheme staff met with members of a local charity group who were interested in installing distance markers along the Mangaone Stream walkway. Scheme staff were supportive of the initiative and discussed appropriate placement of the markers in order to not interfere with stopbank maintenance activities. Similar markers were previously installed along PNCC's pathway adjacent to the Manawatū River. PNCC had advised the community group to contact Horizons before installing the markers, which is testament to the positive relationship and ongoing regular communications between PNCC and Horizons' River Management staff.

MAKINO STREAM

- 7.36. All assets were inspected and found to be in a good condition. An existing floodgated culvert on the Makino Floodway was extended and upgraded.
- 7.37. The issue of previously unidentified subsoil drains beneath the Reid Line Floodway stopbank has arisen in the past few months, firstly via Mayor Worboys meeting with a Reid Line resident on another matter and then in the course of landowner discussions relating to the upgrade of the Reid Line Floodway. The issue identified through Mayor Worboys was investigated and the drains plugged; the more recent issue raised is still being investigated.

STONEY CREEK

- 7.38. All assets were inspected and found to be in a good condition. Repairs to a damaged floodgate on Stoney Creek were completed.

KARA CREEK & MANGAPUKATEA

- 7.39. Annual inspections of floodgates and assets have been completed. A large log was removed from the channel near a flood control structure.

MANGAORE STREAM

- 7.40. Annual inspections of floodgates and assets have been completed. Spraying of gorse and the removal of weed from channel has been undertaken.

LINTON MAIN DRAIN

- 7.41. Annual inspections of floodgates and assets have been completed.

TOKOMARU RIVER

- 7.42. Annual inspections of floodgates and assets have been completed.

LOWER KIWITEA STREAM SCHEME

7.43. Assets were inspected and found to be in a good condition, with two sites requiring the clearing of wattle regrowth, as it was suppressing the willow plantings.

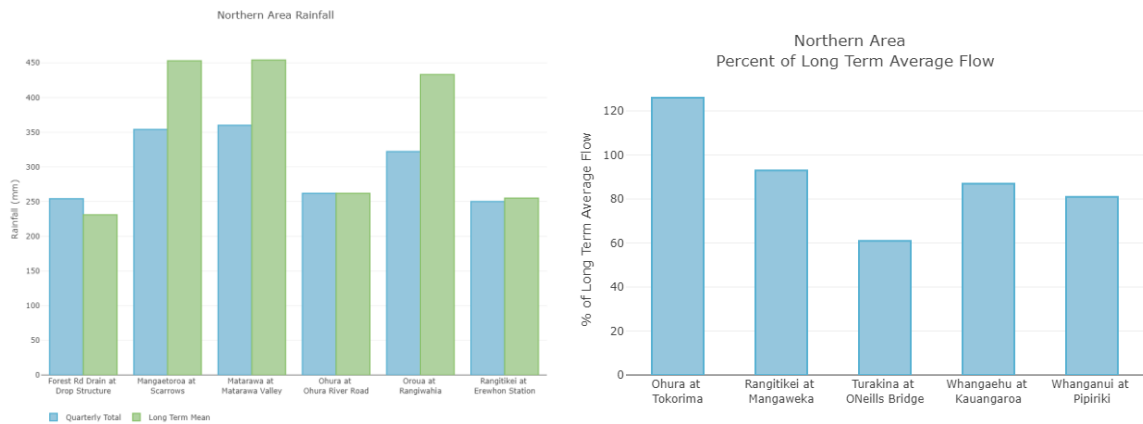
7.44. Gravel extraction was completed at one site to correct the stream alignment.

ASHHURST STREAM SCHEME

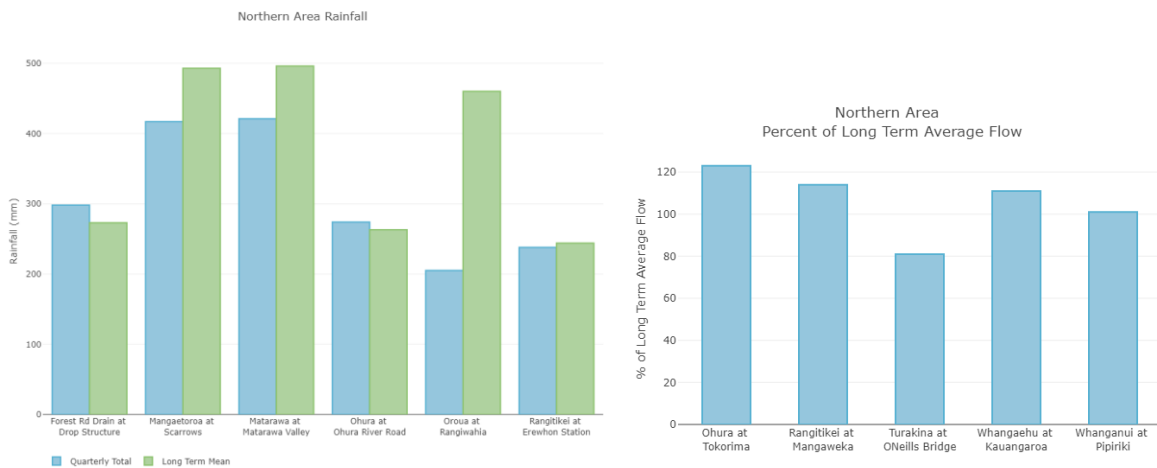
7.45. The programme of inspecting and reporting on the ‘condition’ of all scheme assets was completed.

8. NORTHERN AREA

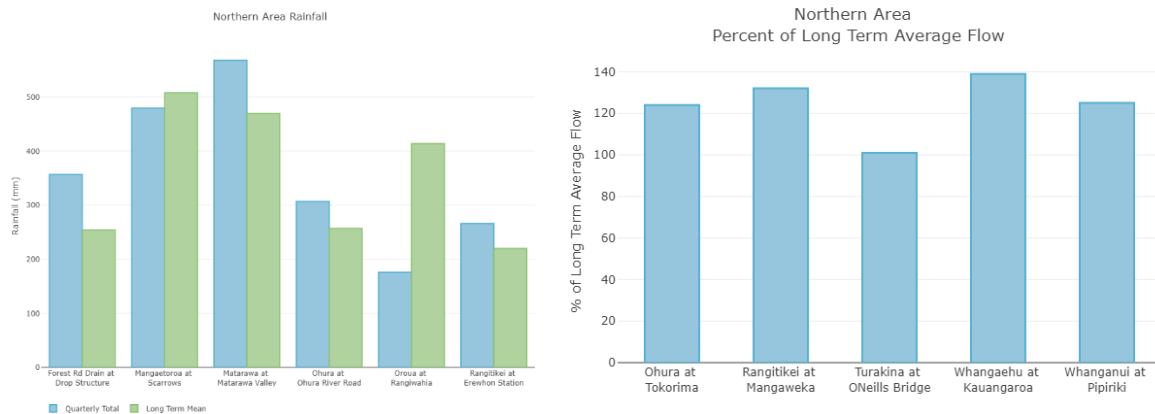
8.1. June Rainfall/Flow



8.2. July Rainfall/Flow



8.3. August Rainfall/Flow



8.4. The winter months have seen a change in the weather patterns from a very dry and warm autumn to the colder temperatures expected for this time of year with prolonged periods of wet weather. These wet days have not manifested into any flood ‘events’ as such but they have resulted in river levels remaining elevated for long periods. Staff have been busy completing asset inspections and preparing the work programmes for the coming year. Our field staff and contractors have also been kept busy planting around repaired river bank erosion sites and maintaining field nurseries.

COMMUNITY INVOLVEMENT

8.5. The development of the 2019 Swim Spot site at “The Channels” in Taumarunui is progressing well. The changing facility is now fabricated and is programmed to be installed over the next few months.

RANGITIKEI RIVER CONTROL SCHEME

- 8.6. The extended periods of elevated river levels usually associated with winter are beginning to take their toll on the scheme. Flood damaged areas resulting from the 2018 winter events remain exposed as the banks consolidate/stabilise. Reports from landowners will be followed up as weather conditions improve and access again becomes possible. Until then, field staff have worked continuously on vegetation works to ensure the annual planting targets are achieved.
- 8.7. Asset inspections and condition ratings were completed in June, providing the basis for the 2019-20 work programme. This was completed by a mixture of on the water jet boat inspection and on the ground 4x4 vehicle visits to individual sites.
- 8.8. Work to open up Paul Murphy’s existing irrigation channel is working well with more than one third of the flow now using this channel and starting to erode the beach for a more favored river alignment.
- 8.9. The second diversion has been completed and work to create the third has commenced. Total gravel extraction volumes are: 15,015 m³ from Diversion 1 and 15,560 m³ from Diversion 2. Unfortunately, the silt bund built behind the tied tree works gave way following the event in early July. This area is scheduled to be planted with willow trees to try and enhance the stabilization of the bank behind the tied tree works.
- 8.10. The channel formed to divert river flow away from the Rata rubbish dump had mixed success over autumn and winter. The original bund formed to assist guiding the direction of flow into the diversion channel was washed away in a small event with flow returning to the

original channel. A second bund has now been formed to continue encouraging flow through the man-made diversion. It is important to maintain some flow through this diversion to keep the channel open and to take pressure off the eroding river bend. This will assist the RDC if the option is chosen to construct a revetment to prevent further erosion (as opposed to relocating the dump). RDC expect to receive a repair option report from their consultant shortly.

- 8.11. Harvesting work is underway at Haylock's Nursery. An estimated 5,000 - 7,000 willow poles will be harvested from one block at Haylock's. Extra effort and attention is being taken to improve conditions with this block to make general maintenance easier in the long-term. These improved conditions will lead to better quality willow poles in the future.
- 8.12. Inspections of the floodgates through the Parewanui stopbank and at Tangimoana were carried out twice following periods of high flow. A significant blockage was cleared from the drain on the Tonui Farms property following an inspection. Drain cleaning was also completed at Scotts Ferry to remove silt and improve the effectiveness of the drain.
- 8.13. The completion of layering at John McManaway's has been delayed due to budget constraints and resourcing issues. This work is scheduled to be completed in spring, when the trees are in leaf and therefore less brittle.
- 8.14. In regard to the Parewanui stopbank upgrade project, work over summer 2019 was located on Walmac Farm near Scotts Ferry. The contract saw 500 m of stopbank upgraded, under budget, by Holland Earthmoving Ltd. Work commenced on 14 January 2019 and final completion was awarded on 25 June 2019.
- 8.15. A request for proposal was sent out on 22 November 2018 for design of a concrete wall to span the section of stopbank that intersects the high pressure gas main from Taranaki. A consultant has been engaged with the draft design now received and a peer review being conducted by another consultant. When finalised a contractor will be engaged with construction intended to be concluded by the end of the calendar year.
- 8.16. The next stage of the Parewanui stopbank upgrade is located on Horizons Regional Council leased land just upstream of Scotts Ferry. It is estimated that the contract will see 1,000 m of stopbank upgraded. Tender documents will be compiled in August and September, and contractors will be invited to tender in October. Work will be completed in the summer of 2019-20.
- 8.17. No gravel was extracted from the river under the scheme consent this reporting period.
- 8.18. Good Earth Matters have been engaged to prepare and lodge a global resource consent application to enable gravel extraction, for river management purposes, from the Rangitikei River over a series of reaches extending from the Makahikato Stream to the mouth of the river. A draft application is being prepared and will be ongoing while consultation takes place.

POHANGINA-OROUA RIVER CONTROL SCHEME

- 8.19. Scheme work over the winter months has focused around willow planting in areas where river bank erosion repairs took place last year. Work in the river channel is limited at this time of year as trout spawning is underway until 30 September.
- 8.20. During this period no major engineering repairs have been undertaken in the river channel due to the rise in river levels, the emergence of dotterels, and the need to remove mobile machinery from the river channel during the 1 May to 30 September trout spawning

season. That said, work is planned at the Ward Property for a minor repair on the left bank and we have commenced pole planting along the section which was damaged during the 12 June event last year. A nursery area is also being planted at the downstream boundary of the Ward MacDonald property and planting of approximately 1000 new willow poles for future repair stock material along this section is also planned.

- 8.21. We have also been planting the repaired area below the bluffs on the left bank opposite the Fairless property with 1000 willow poles planted already. In late July, gravel has been extracted along the Ward section of the river and has resulted in a re-profiled low flow channel out in the center of the river. Some gravel has also been removed opposite the Fairless section in the hope that the abrupt turn into the Ward property will be minimized and form a low-flow channel down the center of the river, thus allowing our remedial tree planting and repair works to be successful.
- 8.22. A list of tree bank protection repairs for the coming year has been identified on the Pohangina at the Spelman, Mia, Fairless and Rutherford properties which we are currently pricing up. The pole planting season is now upon us and most of the repair sites completed last year will require willow pole planting to safeguard and protect them in the years to come.
- 8.23. Programmed works will see approximately 7000 willow poles planted this financial year on the Pohangina River.
- 8.24. 10,100 m³ of gravel extraction has occurred from the Pohangina River this reporting period.

OROUA RIVER

- 8.25. Last year saw the completion of most of the major 2018 flood event repairs including the Miln and McDougall properties. However, there are still a couple of tree bank protection projects at Hoggards and at the Landcorp Cheltenham property with work on these projects commencing in late August. A large tree bank repair project of some 300 m in length has just been completed at Genets property on the Oroua River. The Landcorp repair works also involves tree bank erosion protection which is an extension of work completed last year.
- 8.26. It is intended to plant approximately 9000 willow poles this financial year on the Oroua River.
- 8.27. 6,752 m³ of gravel extraction has occurred from the Oroua River this reporting period.

TOTARA RESERVE

- 8.28. At Totara Reserve a tree bank protection repair job is shortly to commence at the old camp ground area along with some channel maintenance work to protect the work that was completed last year. We also intend to plant approximately 1200 willow poles at the same area and shore up a small nursery area with additional planting.

UPPER WHANGANUI RIVER MANAGEMENT SCHEME

- 8.29. The Lines Company and Horizons have entered into a joint venture to maintain willow growth under the main power supply feed to Taumarunui, along the left bank of the Ongarue River, at the western approach to Taumarunui. Treescape were engaged to undertake the works for us, operating under our Code of Practice, with the work completed in June.

- 8.30. Funding for a cattle fence along the right bank of the Whanganui River, at the end of Porou Street, has been granted, with the cost being shared between the Fresh Water team and the scheme. The lease holder appears to be content with the arrangement. A contractor has been approached to install the fence in August/September, when the weather is more favourable.
- 8.31. Taumarunui Hire Centre has completed several maintenance jobs on the Upper Whanganui Scheme. These include drilling and poisoning of wattles, layering of poplars and willows upstream of Cherry Grove and upstream of Victory Bridge and the removal of debris piles at Manunui.
- 8.32. Staff are continuing to work with RuDC staff on stormwater matters near Tuku Street, Taumarunui. RuDC staff are currently consulting with the landowner in order for work to progress. Tender documents will be compiled following this approval and let for tender. Construction is anticipated to be summer 2019-20. The work is fully funded by RuDC.

MATARAWA FLOOD CONTROL SCHEME

- 8.33. Asset inspections and condition ratings were completed in July. This information was used to form the work programme for the year 2019-20.
- 8.34. A minor tree blockage was removed from the Matarawa Stream behind a property in Gerse Street.

TUTAENUI FLOOD CONTROL SCHEME

- 8.35. There has been no significant work done on the scheme during the June-August period. However, channel clearing work is being planned for some of the Marton urban stream reaches and the rural reach areas to the west of Bulls Township when the weather improves. The wet, windy weather conditions have seen trees fall into the waterway partly blocking the channel that have required action by staff to remove. It is often during these types of works that landowners request that Horizons addresses stream bank erosion issues, an activity not currently rated for. These requests have become more frequent with the influx of new residents to Marton and consideration is now being given to how that can be best communicated.

MAKIRIKIRI FLOOD CONTROL SCHEME

- 8.36. No physical work during this reporting period. Cutting and pasting (poisoning) of some small willows is scheduled for August.
- 8.37. Asset inspections and condition ratings were completed in June, providing the basis for the 2019-20 work programme.

POREWA FLOOD CONTROL SCHEME

- 8.38. Asset inspections and condition ratings were completed in July. This information was used to form the work programme for the year 2019-20.
- 8.39. No physical work has been completed. Landowners south of Hunterville have advised Horizons of a tree blockage on the Porewa Stream that will be removed when conditions permit.

WHANGAEHU MANGAWHERO RIVER MANAGEMENT SCHEME

- 8.40. A new resource consent for aerial spraying of the Whangaehu-Mangawhero Scheme is required, as the previous one lapsed in mid-2018. The resource consent application has been accepted and is being processed.
- 8.41. Work on the Mangawhero River (accessed from both Mangawhero and Te Rimu Roads) to remove a large tree, that spanned the entire breadth of the river, was undertaken in June. This was a large operation and while machinery was already on site, many smaller debris piles within the reach were also removed.
- 8.42. Two trees on Te Rimu Road were also felled to prevent this from happening again in the near future.

TURAKINA RIVER MANAGEMENT SCHEME

- 8.43. A log in the Turakina River, downstream of the SH3 road bridge, will be removed in early spring. This work will also encompass removal of debris up to and including under the SH3 road bridge.
- 8.44. A landowner has expressed a desire for debris further downstream in the Turakina River to be considered for removal later into spring.

LOWER WHANGANUI VEGETATION MANAGEMENT AND FLOOD PROTECTION PROGRAMME

- 8.45. Asset inspections and condition ratings were completed in June, providing the basis for the 2019-20 work programme.
- 8.46. Repairs on Balgownie knee breakers, planter box capping, stopbank ramps have been carried out. Vehicle damage on the Kowhai Park stopbank by the Matarawa Stream has also been repaired.
- 8.47. Papaiti vegetation clearance has been delayed along with other work until regulatory matters are addressed.
- 8.48. Rock lining at the sailing club has also been postponed due to consenting issues surrounding the Lower Whanganui Scheme. A consent application was compiled over the months of June and July. The work was discussed at a Hui between Te Runanga o Tūpoho and Horizons with approval granted following this. A response is still to be received from NTT. The consent will be lodged once approval is obtained from NTT.
- 8.49. A LiDAR survey of the river mouth and adjoining sections of coastline has been organized, scheduled for August/September. This data will be overlaid with previous data sets to determine rates of erosion.
- 8.50. The Te Kaihau o Kupe Waka Ama group has approached Horizons for advice in regards to an access gate through the floodwall asset on Wharf Street in Whanganui. Modifications will permit direct access to the slipway for Waka launching. Costs have been obtained and the construction will be managed by Horizons.
- 8.51. Following the transfer of assets from WDC to Horizons, the assets (predominantly bank protection) located on the South Spit have now been surveyed and condition rated for addition into Horizons' asset management system.

- 8.52. The North Mole and South Spit Interface Wall investigations have been completed with the design of both commencing in July 2018. Work summary is as follows:
- Investigation and surveying of existing rock structures below and above water has been completed;
 - Wave height modelling and assessment for rock sizing calculations has been completed;
 - Conceptual design profile sketches for various batter treatment of the North Mole have been completed;
 - Development of plans for the repair/strengthening of the South Spit Interface Wall and the reinstatement of the Tanae Groyne have been completed;
 - The survey and associated construction drawings for the interface wall and Tanae Groyne are completed;
 - Public consultation has commenced;
 - Terrestrial and Aquatic Ecological Assessments have been completed with final reports received May 2019;
 - The identification of resource consent requirements is completed and the draft consent application is complete;
 - Consultation with Maritime NZ is substantially complete;
 - Final design of the North Mole and revetment;
 - Construction methodologies and estimates have been finalised; and

PAKIHI SCHEME

- 8.53. Asset inspections and condition ratings were completed in July, with this information used to form the work programme for the year 2019-20. It has been planned to mow Punch's Dam crest as the entire embankment is fenced off from stock. Prices are being sought.

FOREST ROAD DRAINAGE SCHEME

- 8.54. Nil work during the reporting period. Spraying will be undertaken in spring.
- 8.55. Asset inspections and condition ratings were completed in June providing the basis for the 2019-20 work programme.

HAUNUI DRAINAGE SCHEME

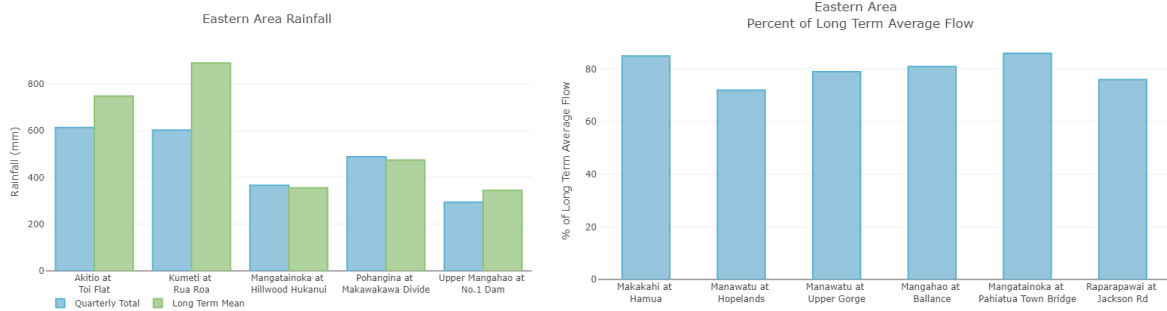
- 8.56. No work completed on this scheme this reporting period. We are however, looking to do a mechanical clean on a drain on Atkinson's property by a local contractor who has just been accepted onto the plant hire register. This will be completed when the scheme water levels drop. Inspections to be completed shortly to see if a scheme spray is required during September.

ENGINEERING ADVICE

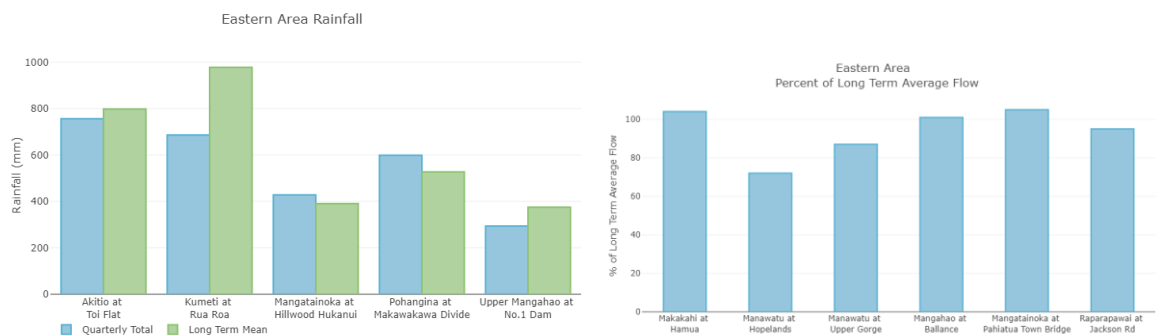
- 8.57. During the last two months, there have been continued requests for advice on a variety of issues including rural flooding in non-scheme areas, involving clearing blocked culverts, clearing stream channels of vegetation and fallen trees, diversion queries, compliance issues and flood damage work. Specifically, these include the Calliope Slipway upgrade in Whanganui, technical erosion advice on the Kukuta Bend in Whanganui, and erosion concerns on the Mateongaonga Stream in Okoia.

9. EASTERN AREA

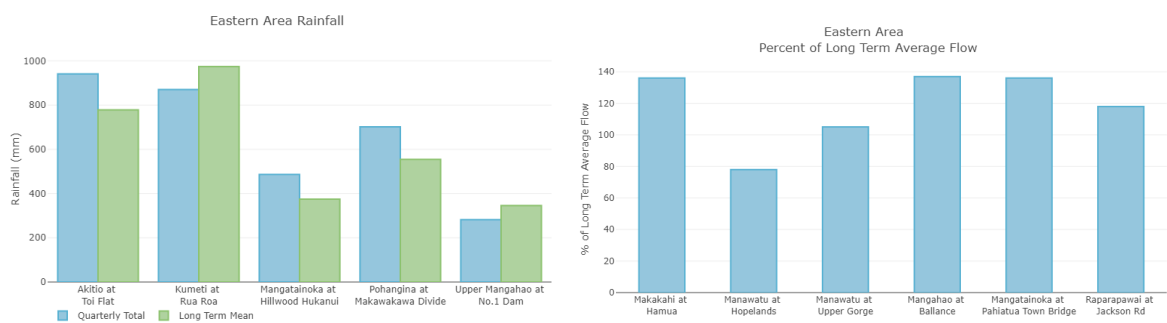
9.1. June Rainfall/Flow



9.2. July Rainfall/Flow



9.3. August Rainfall/Flow



- 9.4. The generally dry weather continued through May and rivers in the district remained at low levels. The start of June marked the beginning of rainfall within the Tararua district, and has seen consistent rainfall since. On 13 June, the Southern Ruahine ranges experienced some heavy rainfall, with figures of 130 mm recording having fallen over 8h in the Coppermine Valley area.
- 9.5. The net effect of this was extremely high flows in the Mangapapa Stream, Manga-Atua River and the Raparapawai Stream. The Mangapapa and Manga-Atua recorded flows at levels as high as those recorded in the 2004 flood events – and as such, overtopped their banks and flooded both farmland and roads for a period of 12 hours.
- 9.6. This rainfall event also created issues on the Raparapawai and Oruakeretaki Streams.

- 9.7. Large stretches of river bank along the Mangapapa Stream and Manga-Atua River have required remedial works, which have been started. Works on the Raparapawai and Oruakeretaki Streams will have to wait until the end of trout spawning and Galaxias spawning times – which is in January 2020.
- 9.8. The first Tararua River Management Community Group meeting was held on 13 June at the Woodville Service Centre which received a good attendance and some energetic discussion.
- 9.9. The last couple of months of the financial year saw works taper off in some streams, as trout spawning restrictions came into effect, though works on riparian edges were still able to be completed. Staff were busy completing works in all of the schemes, except the Tawataia-Mangaone, up until the last week of June.
- 9.10. The new financial year has started with willow planting, and it has been fortunate that the weather has turned creating softer ground.
- 9.11. Requests for miscellaneous issues and engineering advice has continued over the last two months, with some of the issues raised being around the removal of debris from non-scheme rivers, erosion, fencing, the removal of landslide materials from waterways and potential environmental grant work.

TARARUA DISTRICT RIVER MANAGEMENT SCHEME

- 9.12. After further consideration of the rules in the One Plan and definitions within the Resource Management Act, staff have concluded that vegetation clearance completed within the bed of a river or stream – but not on the banks of a river or stream – is able to be undertaken as a permitted activity. This interpretation was discussed with Regulatory staff who concur. However, a resource consent will still be required for vegetation clearance on the riparian edge, where the area does not fall under the definition of a river bed, for those rivers and streams which do not have a Schedule B value for Flood Control and Drainage within the One Plan.
- 9.13. This has meant that the removal of willows from the overgrown stream bed of the Mangapuku was able to be completed as a permitted activity.
- 9.14. Discussions with the Te Kaauru – Manawatū River Hapū Collective have been held around improving the amenity value to the Ngaawapurua site at Bluff Road. Previous works have involved some vegetation clearance and weed spraying. The current plan involves having the Bluff Road Whare carpark area limed and a walkway path cut through vegetation to make access to the Manawatū River easier and safer. Currently the shortest path requires a steep drop and the crossing of a swale to access the gravel beach currently sitting on that bend of the river.
- 9.15. The Ormondville Domain has also seen some erosion issues with the bends of the river starting to meander quite sharply. It is intended that a small amount of channel shaping and some planting be done in this area to help support the channel of the stream and protect local efforts in planting the domain with native trees.
- 9.16. It is intended that these two projects contribute to the amenity part of the scheme's objectives.
- 9.17. The first Community Group meeting was held on 13 June, with a representative of each of the Community Boards/Groups, **Tararua District Council (TDC)**, Horizons Regional Council and Federated Farmers. The meeting focused on the nature of the scheme, it's

objectives and the current version of the activity management plan. Good discussion was had and it was agreed to hold the next meeting at the end of October.

- 9.18. The scheme finished the year slightly favourable to budget and completed 17 separate activities across the district including works undertaken in Ihuraua, Akitio, Eastern Manawatu and Nireaha.

MANGATAINOKA SCHEME

- 9.19. Work slowed as the financial year came to a close and regulatory restrictions came into effect. A small peak in flow on the first of June (2617 mm at Pahiatua Town Bridge) made for a good first test for the recently completed rock lining near Te Hawera Road.
- 9.20. The same peak caused minor issues for a job that had recently been started near Fonterra's waste water treatment plant, near Pahiatua. One of our contractors had nearly completed a section of tied tree groynes when this peak flow came through and undercut a large section of bank upstream of the works. The damage was not major but it made sense to push the job size out in order to complete the works while the required plant was on site.
- 9.21. The other job completed in this period was a small rock lining near the Tiraumea confluence. Unlike other rock linings, it is not on the bank of the active channel. It protects the bank further back and acts as an access point from the farmer's paddock, through a line of protection planting that had been removed to gain access earlier in the season
- 9.22. The scheme finished slightly unfavourable to budget, but still with a health surplus to return to emergency reserves. The scheme achieved a better than target performance measure for asset condition and works completed on the non-financial performance measures, so overall it was a very successful year for the scheme.

SOUTH EASTERN RUAHINE SCHEME

- 9.23. Most of the effect of heavy rainfall on 13 June was seen in the lower half of the South East Ruahines with the rivers south of and including the Oruakeretaki being most affected. Previous works on the Oruakeretaki held up well to the higher flows except for the placement of rock groynes on a property downstream of Aldersons Weir. This area, as well as an area just downstream, were eroded by the flooding. A reach-wide strategy is being considered. Work will not be able to be undertaken on this waterway until the end of trout and dwarf galaxis spawning restrictions in January 2020.
- 9.24. The Raparapawai also struggled to carry floodwaters below SH2, with the river overtopping before the start of the stopbanks, as well as overtopping the stopbanks downstream of Gaisford Road. This impacted on homes on Gaisford Road and blocked access to the road. The Raparapawai also made a new channel downstream of the end of stopbanks. This is now filling a duck pond and leaving gravel strewn across a paddock. Works will not be able to be undertaken on this waterway until the end of trout spawning restrictions on 1 October.
- 9.25. The Mangapapa Stream recorded flows of up to 80 cumecs, which is as high as has been recorded for this stream. The stream overtopped its banks between Oxford Road and SH3 in Woodville and at further stretches between SH3 and its confluence with the Manga-Atua River. Significant damage was seen on a number of properties along this waterway and repair works commenced immediately and are still ongoing. The greatest damage seen was from lateral erosion of banks and removal of established willows, upstream of Oxford Road.

- 9.26. The Manga-Atua received a very large amount of rain reaching a level of 106 cumecs – the highest recorded flow since records began. There was extensive damage in the gravel reserve area with Coppermine Stream receiving most of the water in the catchment area and washing out trees opposite the confluence with the Manga-Atua. These trees then travelled downstream and collected on the Range Road rail bridge and road bridge. This caused the stream to back up and overtop the stopbanks on both sides of the river. This contributed to extensive flooding across Range Road, all the way down to SH2. Due to the subsequent overloading of the drainage system this also caused flooding across Broomfield Road. Both of these roads were closed during this time.
- 9.27. This flood event also highlighted issues with the Vowell and Johnstone Drain and as such, a large amount of channel clearance has happened on the lower stretch of this drain.
- 9.28. It is estimated for the cost of the repairs required from the June 13 flood event will total around \$90,000. The bulk of the works will be completed by November, with those works associated with the Oruakeretaki completed in January – February 2020. The need for any draw on reserves will become clearer as the financial year progresses.
- 9.29. Gravel extraction is still a key issue in the scheme with many parties wanting to extract gravel. The wishes of contractors are needing to be balanced with the degradation of some rivers – particularly the Oruakeretaki and it has been decided that there will be no extraction on the reach of this river above SH2. With the “opening” of the gravel reserves through the removal of some willows within the reserve plantings, it is hoped that this gravel will start to replenish the river and raise the bed levels to a more sustainable height. The Rokaiwhana is another river that needs to be monitored with one party having had an abatement notice served for improper practice around gravel extraction. Extraction will be paused on this river in the future to help replenish the bed levels, particularly as work was completed to open up the gravel reserve in December 2018.
- 9.30. Other rivers within the area – particularly the Kumeti and the Otomaraho have aggrading bed levels in the upper reaches, with bed heights coming very close to the underside of the road and access bridges.
- 9.31. This also raises the question of weir suitability. With some weirs damaged and others worn we are starting to look into the feasibility of some of the weirs and whether they are still fit for purpose in their current state, need a design change, repairs, or need to be removed.
- 9.32. Willow planting will start in this scheme near the end of August to support river works undertaken in the last financial year and to shore up any spaces in plantings were required.
- 9.33. Asset inspections have been completed for the scheme and the results showed some areas with condition grades of less than that targeted in the non-financial performance measures. Plans are currently being prepared to repair these assets in the next financial year.
- 9.34. The scheme finished the year slightly unfavourable to budget, but still returned a healthy surplus to reserves.

TAWATAIA - MANGAONE SCHEME

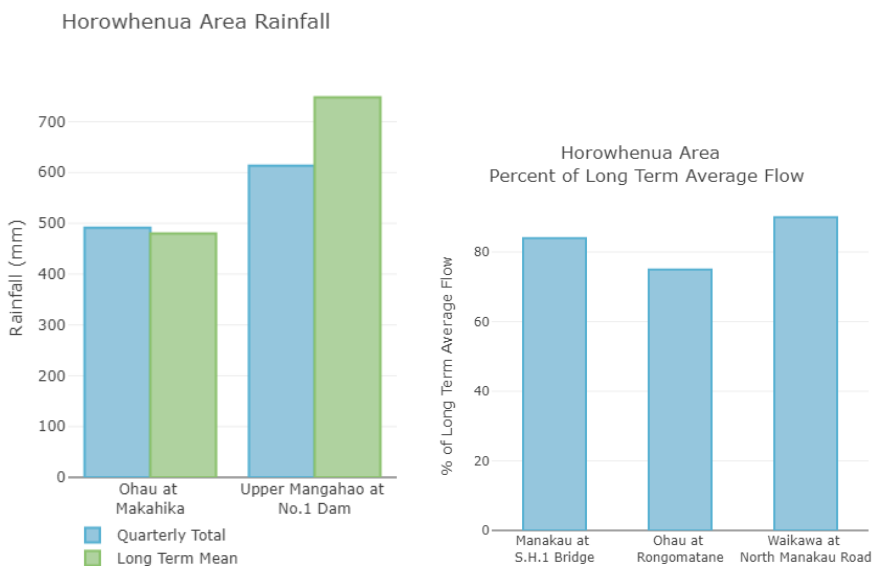
- 9.35. All work has been completed on this scheme for the financial year.
- 9.36. The interim dam inspection was completed by staff in March and this has not highlighted any issues which require work.

UPPER MANAWATU – LOWER MANGAHAO SCHEME

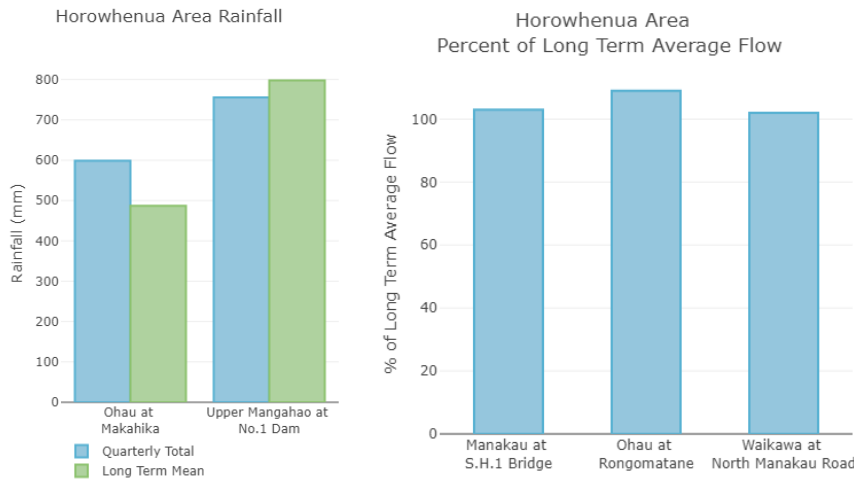
- 9.37. The scheme finished in transition, with works being completed at Blatchfords on the Manawatu between June and July. This work required installing PMU groynes on an undercut area of the bank – this work was delayed in finishing due to constantly rising and falling river levels. It was however completed in time for equipment to be removed before the start of the Dotterel nesting season.
- 9.38. Erosion near the edge of Oete Road, as it enters the access to the Haukopuapua Domain, is also starting to become an issue and we may have to discuss with Tararua Alliance staff ways to work together to fix this before access to this property becomes an issue.
- 9.39. The scheme finished slightly unfavourable to budget, but with a healthy surplus to return to the emergency reserves. Assets inspections for the scheme showed that asset condition was on target and that the scheme was performing well.

10. SOUTHERN AREA

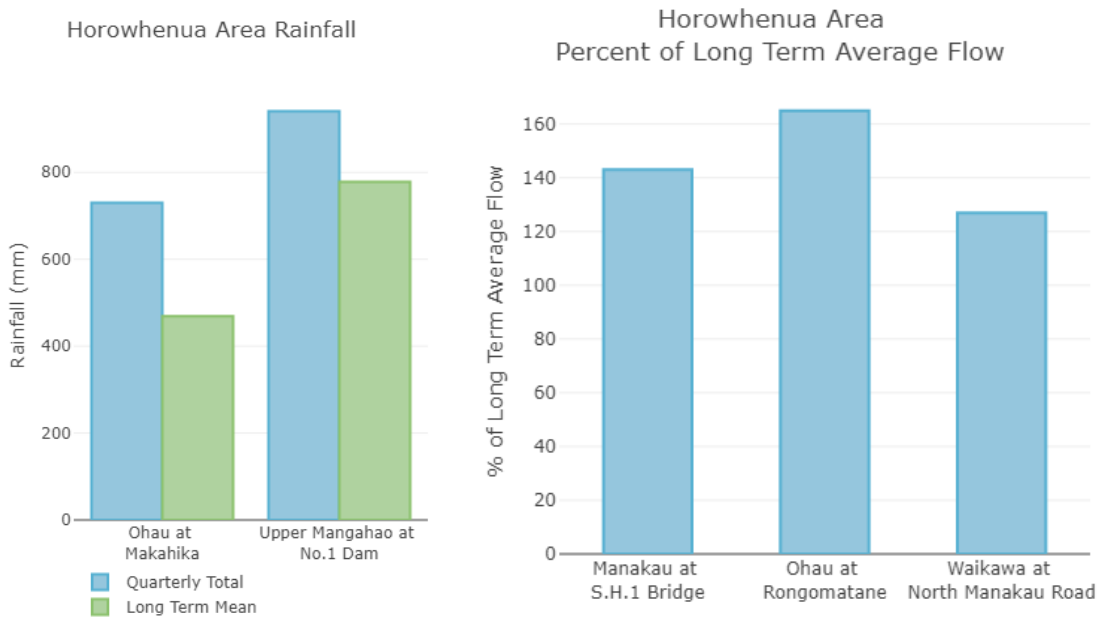
10.1. June Rainfall/Flow



10.2. July Rainfall/Flow



10.3. August Rainfall/Flow



- 10.4. Request for engineering advice continued over this period including a number of requests from district council staff around who is responsible for maintaining various drains around the area.
- 10.5. Staff have also been working with the rural upgrade team to repair a retaining wall that was being undermined at the toe of the guide banks on the Mangaone spillway.
- 10.6. Over recent months, River Management staff have been working with procurement consultants Clever Buying to review the processes that River Management uses to engage contractors to undertake unplanned/ reactive maintenance activities. The current process has been to engage contractors who are registered on the Council’s Plant Hire Register however, a review of this process has identified some compatibility issues with the updated procurement policy and as a result, a new process using a Plant and Machinery Supplier Panel is in the process of being implemented.

- 10.7. A number of supplier briefings were run during this current period to advise existing/incumbent contractors and potential new contractors of the process change and to update them on the additional information that they will be required to submit in order to be eligible to undertake routine work on the various River Management schemes. Applications to be considered for the new supplier panel close on 29 August 2019.
- 10.8. Staff continue to work closely with various other teams from within Council and consultants regarding the implementation of the new AMIS. Current focus now is rolling out the task scheduling module.

OHAU-MANAKAU SCHEME

- 10.9. With only minor flood flows occurring over the past year, the river channels within the scheme have remained fairly stable meaning that the annual channel erosion protection work has been less than usual. As a result, this year's planting program is significantly down on previous years with only 1,000 willow poles planted along the Ohau middle reach and some poles planted along the Waikawa to be completed next month.
- 10.10. Machine cleaning of some drains in the Waiwiri area was completed, totaling 3.6 km.

MANAWATU DRAINAGE SCHEME

- 10.11. Annual inspections of the floodgates and scheme stopbanks were completed this period, and a job list compiled. There have been a number of floodgates flagged as requiring repair or replacement due to their deteriorating condition. Some of this work will require immediate attention while the rest will be completed over the summer period.
- 10.12. A large weed block formed downstream of the Keri Keri Road bridge in the Whiskey Creek causing the opposite bank to erode. A long reach excavator was brought in to remove the block and prevent further erosion from occurring. When the paddock dries out and the weather conditions are more suitable for machinery, the bank erosion will be repaired with a retaining wall.
- 10.13. A 300 m section of the Taonui Stream had become significantly over grown with raupo causing water to be held up in the stream. This was machine cleaned and cleanings disposed of in the landowner's paddock.
- 10.14. Bull holes were repaired in a section of Burkes Drain spillway.

MAKERUA DRAINAGE SCHEME

- 10.15. Annual inspections of the floodgates were completed and a job list compiled of work that was found.
- 10.16. This period has seen the pump stations up and running, keeping staff busy with manual and machine cleaning of the weed build up at the pump station screens to ensure the pumps can operate efficiently.

KOPUTAROA DRAINAGE SCHEME

- 10.17. Winter rain has brought a lot of weed from private drains down to the scheme drains where it can block culverts this time of year. Culverts were required to be cleared on the Aratangata Drain No.3 due to weed build up.

- 10.18. A lot of work was completed around Pump Station No. 3 including refurbishing a 500 m portion of the access track, refurbishing the entrance to the station and removal of pampas grass starting to grow in the drain leading to the station.
- 10.19. The gravity and station outlets at Pump Station No. 3 were inspected. The floodgates are continuously under water so they need dewatering to be inspected. The opportunity was also taken to inspect by CCTV the pipelines.

MOUTOA - WHIROKINO DRAINAGE SCHEME

- 10.20. The focus this period was around ensuring the pump stations were working efficiently with much weed being pulled off station screens.
- 10.21. The drainage pump at the Pleuger Pump Station was required to be pulled out due to a fault. Repairs were undertaken and the pump put back in.
- 10.22. Work was completed at the Kere Kere Road Pump Station to allow the installation of a submersible pump. The chamber for the pump was made at the time of the original station construction so only some pipe work was required. There is still work to be done on the electrical part of the station to allow for the extra pump which is likely to be done during the next period. This extra pump will allow the station to pump down lower and allow the station to run more efficiently. The pump to be used initially will be a spare pump. If the Scheme Liaison Committee agrees the pump should stay in the station, then a new pump will be required to be purchased.
- 10.23. A blockage was removed in the No.6 Northern Drain.

TE KAWAU DRAINAGE SCHEME

- 10.24. Staff are working with **Manawatu District Council (MDC)** on a cost sharing option to upgrade the culvert on Solders Drain underneath Rongotea Road. MDC are in the process of upgrading the intersection of Rongotea Road and Green Road which presented an excellent opportunity to upgrade the culvert at the same time.
- 10.25. A new 450 mm culvert and two pipes were placed along Main Drain (a section that runs along Taikorea Road). This culvert and floodgate were installed to prevent Main Drain water flowing up into the adjacent landowner's property.

HOKIO CATCHMENT DRAINAGE SCHEME

- 10.26. A preliminary meeting has been held with Council staff from various teams to look at the information that Horizons currently has as part of the Arawhata Sedimentation and Drainage project.
- 10.27. Work was completed to remove weed building up between the Hokio township stream bridge and the mouth of the stream. There had been many requests by locals to remove the weed due to safety and aesthetic concerns.
- 10.28. Weed blockages were removed on the Arawhata stream at the Hokio Beach Road culvert.

FOXTON DRAINAGE SCHEME

- 10.29. A meeting has been held with Alistair Cole from the NZ Landcare Trust to discuss the option of installing a wetland at the outlet of the Purcell Street Drain.

10.30. Staff have been working with E2 Consultants, HDC and Horizons Survey team to identify and obtain the remaining survey information required to complete the modelling work on the proposed flood mitigation work for Foxton.

11. SIGNIFICANCE

11.1. This is not a significant decision according to the Council's Policy on Significance and Engagement.

Ramon Strong
GROUP MANAGER RIVER MANAGEMENT

ANNEXES

There are no attachments to this report.

Report No.	19-135
Information Only - No Decision Required	

PRESENTATION: THE APPLICATION OF THE DAM SAFETY GUIDELINES TO THE STOPBANKS PROTECTING PALMERSTON NORTH

1. PRESENTATION

- 1.1. One of main themes of Horizons' Infrastructure Strategy is the need to prioritise operational effectiveness and reliability. One component of work related to that area of focus is applying the 2015 Dam Safety Guidelines to parts of the stopbank network that have a high level of criticality; most of that high criticality relates to Palmerston North.
- 1.2. Engineering consultants Tonkin and Taylor successfully tendered for that package of work with the associated reporting in its final stages. River Management and Tonkin and Taylor staff will present the findings of that work.

2. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 19-135.

3. SIGNIFICANCE

- 3.1. This is not a significant decision according to the Council's Policy on Significance and Engagement.

Jon Bell
MANAGER INVESTIGATIONS AND DESIGN

Ramon Strong
GROUP MANAGER RIVER MANAGEMENT

ANNEXES

There are no attachments for this report.

Report No.	19-135
Information Only - No Decision Required	

OROUA GRAVEL RESOURCE STUDY (PRD 05 14)

1. PURPOSE

- 1.1. The purpose of this report is to inform members of the findings of an updated assessment of the gravel resource in the lower reach (from Feilding to the Manawatū River confluence) of the Ōroua River.

2. EXECUTIVE SUMMARY

- 2.1. The study concludes that the gravel resource in the Ōroua River has aggraded by approximately 94,000 cubic metres since it was last surveyed in 2012, which equates to around 23,500 cubic metres per annum.
- 2.2. The study has concluded that the river has aggraded over much of the gravel reach. It also notes that that the gravel reach from just below Kopane Bridge to a point about 1.2 km upstream of the Kiwitea Stream confluence was found to be in a degraded state when compared to the 2012 data.
- 2.3. As well as examining the gravel resource of the Ōroua River, this study also looked at the silt phase of the river from just below the Kopane Bridge to the Manawatū River confluence. It has been found that sedimentation has been occurring at a rate of approximately 47,000 cubic metres per annum. A comparison of cross section profiles shows that this deposition has mainly occurred on the berms, while the river channel has narrowed.
- 2.4. The significant sedimentation of the berms and the narrowing of the river channel could cause management challenges into the future. These findings align with those of the wider Lower Manawatu Sedimentation Study.

3. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 19-135.

4. FINANCIAL IMPACT

- 4.1. There are no financial impacts associated with this report or its recommendations.

5. COMMUNITY ENGAGEMENT

- 5.1. The findings of this report will be communicated to gravel extractors and other key stakeholders, principally Ngāti Kauwhata.

6. SIGNIFICANT BUSINESS RISK IMPACT

- 6.1. There are no significant business risks associated with this item.

7. BACKGROUND

- 7.1. As part of the fluvial programme, the gravel resource of the lower reach of the Ōroua River was last surveyed/ studied in 2012. This study builds upon those findings with information gathered by cross sectional survey carried out in the summer of 2015-16.
- 7.2. The Ōroua River cross sections have been surveyed at various times by Horizons Regional Council and its predecessors. These surveys have been undertaken for a variety of reasons including the design of flood protection and other infrastructure, as well as to inform the management of the river and its gravel resource.
- 7.3. Historically, the Ōroua River from the 43.5 km benchmark to the 0 km benchmark has been frequently surveyed. This section of the Ōroua River includes the gravel reach and silt phase of the river. Gravel extraction has necessitated the need to understand how these works have affected the physical characteristics of the river. Over the recent years, the surveying of the river has formed part of the fluvial programme and has been funded through the levies associated with gravel extraction consents.
- 7.4. Horizons' Infrastructure Strategy, as outlined in the current Long-term Plan, identifies "sedimentation effects on levels of service" as a significant issue in regards to the management of Council's flood protection assets. With this in mind, the surveyed section of the Ōroua River has been broken into the gravel reach and silt phase, as it is recognised the effects of sedimentation need to be considered separately.

8. REPORT PRECIS

- 8.1. The study examined the gravel resource and the silt phase of the lower reach of the Ōroua River based on an analysis of river cross section information and gravel extraction records. It covers the 43.5 km reach of the river between Feilding and the confluence with the Manawatū River.
- 8.2. Data comparison found that between 2012 and 2016 overall the gravel resource of the river has aggraded by approximately 94,100 cubic metres. This equates to approximately 23,525 cubic metres per annum.
- 8.3. This study has found that from 2012 to 2016 there were six consents for gravel extraction of the Ōroua River, three of which expired during this study period, with three remaining current as of 2019.
- 8.4. The One Plan (Table 17.1 – Long term average annual allocable volumes of gravel) separates the Ōroua into two reaches - upstream of Menzies Ford (reach 1) and downstream of Menzies Ford (reach 2). Gravel extraction has occurred at similar rates in reaches 1 and 2 of the One Plan, however no survey information is available for reach 1 so no quantitative conclusions are able to be drawn on the state of the resource in this reach; only reach 2 has been considered in terms of bed level change.
- 8.5. Reach 2 is within the aggrading gravel reach that has been assessed as part of this study. From this analysis, it has been concluded that the One Plan annual allocable volume of 55,000 cubic metres per annum is not considered to be appropriate for this reach and should be reduced to 45,000 cubic metres for sustainable gravel management.
- 8.6. The study recommends that the Ōroua River should be resurveyed in 2020-2021 up to the new survey extent recommended in the report. The extent of the survey should be increased to gain a better understanding as to how the gravel resource is being affected upstream of Menzies Ford.
- 8.7. The study looked at cross sectional changes in the silt phase of the river and found that generally the channel is narrowing and significant sedimentation has occurred on the berm land between the stopbanks. This is something the Lower Manawatu Scheme needs to be

mindful of as these morphological changes may have management/ level of service impacts.

- 8.8. Data comparison found that between 2012 and 2016 a net deposition of approximately 189,000 cubic metres occurred. This equates to approximately 47,000 cubic metres per annum.
- 8.9. The study looked at how recent trends compare with those observed in 2012 and found that the trend of degradation noticed within the gravel reach in 2012 has reversed and aggradation of the gravel resource is occurring from just below Kopane Bridge to a point 1.2 km upstream of the Kiwitea Stream confluence. It was also found that the aggradation that occurred in the silt phase of the 2012 study is a continuing trend in the findings of this study.

9. SIGNIFICANCE

- 9.1. This is not a significant decision according to the Council's Policy on Significance and Engagement.

Jon Bell
MANAGER INVESTIGATIONS & DESIGN

Ramon Strong
GROUP MANAGER RIVER MANAGEMENT

ANNEXES

There are no attachments for this report.

Report No.	19-136
Information Only - No Decision Required	

LAND MANAGEMENT ANNUAL REPORT AND PROGRESS UPDATE

1. PURPOSE

- 1.1. This report covers work carried out by the Natural Resources and Partnership – Land Management team for the 2018-19 financial year. It includes the activity areas of SLUI, Regional Land and Coast, and Nursery. The annexes provide an update on progress for this financial year (1 July to 15 August 2019).
- 1.2. Traditionally this report has been included as part of the annual Operational Plan.

2. EXECUTIVE SUMMARY

- 2.1. This report focusses on the operational targets of the Annual Plan 2018-19 and the contract targets with the Ministry for Primary Industries, and provides an overview of achievements in relation to the budgets allocated.
- 2.2. All of the Annual Plan 2018-19 operational targets were achieved. Activities included 3,613 hectares of on-farm work including over 2.3 million trees planted and 156 km of fencing completed.
- 2.3. Our Whole Farm Plan (WFP) programme achieved 22,968 ha of new farm plans mapped bringing the overall total of WFPs within SLUI to 552,067 ha (745 plans).
- 2.4. Our nurseries produced a record number of poles, and procured more to enable over 37,000 poles to be distributed for erosion control works.
- 2.5. We undertook two extra contracted projects with funding from Central Government through the Ministry for Primary Industries and Te Uru Rākau drawing in an additional \$707,000 of central government funding.
- 2.6. We continued to support industry and good management farming practices in our region particularly through our support of the Ballance Farm Environment Awards and the Poplar and Willow Research Trust.

3. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 19-136 and Annexes.

4. FINANCIAL IMPACT

- 4.1. There are no direct financial impacts associated with this report. However, it does update members on a number of financial matters associated with SLUI, Regional and Coast, and Nursery activities.

5. COMMUNITY ENGAGEMENT

- 5.1. Consultation was carried out through the 2012-22 Long-term Plan (LTP) submission process and the recent Annual Plan process.

- 5.2. The Ministry for Primary Industries (MPI) has a key role in part-funding and overseeing the SLUI section of this activity.
- 5.3. The SLUI Advisory Group is updated on SLUI progress approximately every six months. The group is tentatively due to meet again in November at the Woodville pole nursery.

6. SIGNIFICANT BUSINESS RISK IMPACT

- 6.1. There are no significant risks inherent in the adoption of the recommendations contained in this report.

7. BACKGROUND

The Land & Partnerships Team

- 7.1. The Land team is managed by Grant Cooper.
- 7.2. There are three teams and each team is coordinated as follows:
 - 7.2.1. Land Information – Coordinator Malcolm Todd; the team is responsible for recording progress and reporting results, inputting all claim and management data, monitoring and audit, soil health advice, and State of Environment soil monitoring.
 - 7.2.2. Land Management Regional and Coast – Coordinator Libby Owen; manages staff in the Turakina, Rangitikei, Manawatū, and other catchments and coastal area. Coordinates relationships with Ballance Farm Environment Awards, Poplar and Willow Trust, and Beef and Lamb.
- 7.3. Land Management Whanganui Catchment and Forestry – Coordinator John Jamieson; manages staff in the Whanganui, Whangaehu and western catchments, the Whanganui Catchment Strategy, Whanganui River Enhancement Trust, our Joint Venture forests, and nurseries. Coordinates relationships with forestry groups.
- 7.4. During the year Dave Harrison retired, Sarah Nicholson went onto maternity leave, and Myles Guy and Bryan McCavana resigned.
- 7.5. Libby Owen has moved into the Regional and Coast Coordinator role, and we have recruited Daniel Regtien and Phil Hodges. As at early August, we are recruiting for a Land Manager to replace Myles Guy.
- 7.6. Two new positions were created during the year: Land Management Advisor – Forestry (Josh Penn) and Information Support (Charlotte Holdsworth).

Annual Plan, Contract Targets and Operational Plan Results

7.7. The tables below provide an overview of the Land team results against annual work targets. More commentary on these results is provided in the Activity section of this report.

Table 1: Annual Plan results 2018-19

MEASURE	TARGET	RESULT	%	COMMENT
Sustainable Land Use Initiative				
Erosion reduction works programmes in targeted SLUI catchments (hectares)	3,100	3,155	102	Less hectares covered but more jobs completed than last year
Hectares of Whole Farm Plan properties mapped per year	20,000	22,968	115	There are still plans on the waiting list to be completed
Regional Land Initiatives, WCS, Coastal and Nursery				
Manage Environmental Grant programme to deliver erosion reduction works (hectares)	175	457	261	Well in excess of target; some support from Provincial Growth Fund (PGF) project
Support industry initiatives that promote sustainable land use via industry partnerships (incl. Whanganui River Enhancement Trust)	5	7	140	PWRT, BFEA, Beef & Lamb NZ, Middle Districts FFA, LandWise, FLRC and SFF
Operate Council nursery and source additional commercial material to deliver poles (poplar and willow) to erosion control programmes (number of poles)	30,000	37,624	125	A record level of Council production

PWRT – Poplar & Willow Research Trust, BFEA – Ballance Farm Environment Awards, FFA – Farm Forestry Association, FLRC – Fertiliser Lime Research Centre, SFF – Sustainable Farming Fund.

Table 2: SLUI contract results 2018-19

MEASURE	TARGET	RESULT	%	COMMENT
Sustainable Land Use Initiative				
Erosion reduction works programmes in targeted SLUI catchments (hectares)	3,100	3,155	102	
Hectares of Whole Farm Plan (WFP) properties mapped per year	15,000	22,968	153	
Hectares of WFP properties mapped in priority catchments (hectares)	10,500	21,985	209	A subset of 22,968
Supplementary SLUI				
Plant poles (Ruapehu storm response)	2,000	2,005	100	
On farm assessments for eligibility of poplar/willow poles into the ETS and (see below)	2	2	100	
One case study on above	1	1	100	
Hectares of reversion projects completed	500	0	0	
Riparian plants established	13,000	22,691	175	
Provincial Growth Fund				
Planting mixed species trees on 1,000 ha of erosion prone land	1.3 million	883,970	68	
Customised forestry appraisals for farm scale forestry	20	22	110	

Table 3: Operational Plan results 2018-19 (targets are key actions from the Operational Plan, not “hard” contractual targets)

MEASURE	TARGET	RESULT	%	COMMENT
Sustainable Land Use Initiative				
Sediment load reduction report	1	0	0	Variation of contract agreed, using information from the SLUI review rather than a new report
SLUI Advisory Group meetings held	2	2	100	Achieved
Catchment Operations Committee meetings and minutes	5	5	100	Achieved
Client case study	1	1	100	Achieved
New SLUI application submitted, successful and new contract signed	1	1	100	Achieved
Regional and Coast				
Manage Environmental Grant projects (R&C)	50	53	106	Achieved
Manage Environmental Grant projects (WCS) including WRET funding	50	46	92	Less jobs but 319 ha of work completed compared to 117 ha last year
Run soil health workshops	2	1	50	Not achieved In conjunction with Deer industry
Continue to implement State of Environment soil health monitoring programme	1	1	100	Achieved
New SOE monitoring sites	10	10	100	Achieved Completed last spring
Commit funding to the NZ Poplar and Willow Trust	1	1	100	Achieved
Commit funding and support to the Ballance Farm Environment Award programme within our region	1	1	100	Achieved
Nurseries				
Provide trial sites suitable for bulking new poplar and willow clones	2	4	200	Four new trial sites established
Finalise pole strategy (nursery)	1	1	100	Achieved In conjunction with HBRC
Complete capital upgrade and Woodville nursery	-	-		Site development completed. Still to investigate irrigation

Financial Results

- 7.8. Overall financial results are reported in the Annual Report. The Annual Report results include Fluvial Resources and Land Research activities, which are part of the NRP – Science activity.
- 7.9. The financial results for the land management programme, excluding the land science programme, are outlined below.

Revenue

- 7.10. An increase in revenue of \$0.707 million due to SLUI, the Supplementary SLUI Programme (SSP) and Provincial Growth Fund (PGF) programmes. There was also additional nursery revenue of \$0.089 million.

Expenditure

- 7.11. Expenditure exceeded budget by \$0.233 million, which includes a favourable result in Regional and Coast (\$0.072 million), offset by expenditure in excess of budget in SLUI (\$0.182 million) and Nursery (\$0.118 million).
- 7.12. Capital expenditure exceeded budget due to approved use of SLUI reserves for development of the Woodville nursery.

Overall land management activity

- 7.13. The end-of-year result varied from the Annual Plan. There were two significant new funding programmes entered into during the financial year: the PGF and the SSP. Together these created more expenditure by the team along with more revenue. At approved levels these programmes committed Council to use of SLUI reserves.
- 7.14. The following table shows the contracted and delivered cost share of PGF funded programmes.

Table 4: PGF contracted cost share

PGF	HRC/SLUI	HRC ALONE	LANDOWNER	TOTAL
Contracted Cost				
970,600	7,703	391,943	526,765	1,933,010
Delivered Cost				
587,279	153,993		470,212	1,211,484

- 7.15. The projected additional contracted spend for this project was \$391,943, which was partially offset by less expenditure in SLUI. The final result was an additional spend of \$153,993.
- 7.16. Less work was carried out than the application requested resulting in lower costs to PGF and Horizons. The lower level of work was primarily due to the changing funding environment from Central Government with alternate grant rates (e.g. free mānuka trees) made available during the year.
- 7.17. The following table shows the contracted and delivered cost share of SSP funded programmes.

Table 5: SSP contracted cost share

SSP	HRC/SLUI	LANDOWNER	TOTAL
Contracted Cost			
310,750	310,750	19,500	641,000
Delivered Cost			
66,907	66,907	54,501	188,315

- 7.18. Assuming the full contract was met, there would have been an extra cost to Horizons of \$310,750. These costs were primarily a 50/50 share of works for the Ruapehu pole planting programme and a 25/25/50 share of works within SLUI farm plans.
- 7.19. Less work was carried out than the application requested. The proposed major work by cost was the reversion of pasture to forest; however, this did proceed.
- 7.20. The overall results for all the land activity are shown in Table 6. The programme was \$1,153 million favourable, primarily due to additional central government revenue and increased income from the forestry revaluation.

Table 6: Revenue and expenditure for NRP land activity

ACTUALS	RATES REVENUE	EXTERNAL REVENUE	TOTAL REVENUE	TOTAL EXPENDITURE	NET RESULT	% EXTERNAL REVENUE
SLUI	3,677,003	1,139,500	4,816,503	4,550,085	266,418	24%
Forestry revaluation	348,000	346,052	694,052	-	694,052	-
SSP	-	68,737	68,737	73,697	(4,960)	100%
PGF	-	587,279	587,279	445,977	141,302	100%
R&C	681,140	90,489	771,629	674,585	97,044	12%
Nursery	1,590	640,449	642,039	682,686	(40,647)	100%
Total	4,707,733	2,872,506	7,580,239	6,427,030	1,153,209	38%
Less forest revaluation						459,157

7.21. Key points:

- SLUI revenue at \$1,139,500 was \$50,993 more than budgeted due to late payment from the 2017-18 MPI contract;
- Overall SLUI expenditure at \$4,550,085 was \$340,435 less than budget. This was due in part to PGF expenditure on afforestation offsetting some SLUI expenditure, less contractor charges to complete WFP, and riparian fencing programmes being incomplete at the end of the year;
- The increase in the SLUI Joint Venture forest value was double what had been budgeted reflecting continued strong log markets at the time of the valuation (March–April 2019). This increase in value is reflected in the SLUI balance sheet not in the SLUI cash position;
- SSP and PGF resulted in increased revenue and expenditure of \$656,016 in the work programme this year. Some of the PGF expenditure remains within the SLUI work coding. Overall the PGF programme and SSP were a net increase in cost to the SLUI programme;

- The Regional and Coast activity revenue at \$771,629 was \$25,489 more than budgeted due to an additional payment from WRET for marginal land use appraisals. This income was offset by external consultant expenditure to carry out the appraisals;
- Overall Regional and Coast expenditure at \$674,585 was \$71,555 less than budget. This was due to less labour cost (staff time) and lower Environmental Grant expenditure with the PGF programme picking up some budgeted afforestation costs;
- The Nursery activity revenue at \$642,039 was \$88,999 more than budget due to increased nursery sales from nursery production and product being bought in;
- Nursery expenditure at \$682,686 was \$117,576 more than budget reflecting extra cost in growing more poles and product purchases, and expanding new production beds;
- Overall the nursery made a loss of \$40,647 due to additional investment to enable greater production as current forecasts show demand exceeds supply;
- External revenue makes up 38 per cent of total revenue, or 33 per cent if the forestry revaluation is excluded;
- SLUI UAC rated activity had a favourable result. When the forestry revaluation was excluded this totalled \$402,760 available to SLUI reserves; and
- Regional Land and Coast, and Nursery general rated activities had a favourable result of \$56,397.

Activity Results

7.22. The favourable financial end-of-year results were within a work programme that also achieved all its main targets. The SLUI and Environmental Grant programmes exceeded all environmental works targets. This was helped by additional funding from the PGF programme that supported afforestation projects within the region.

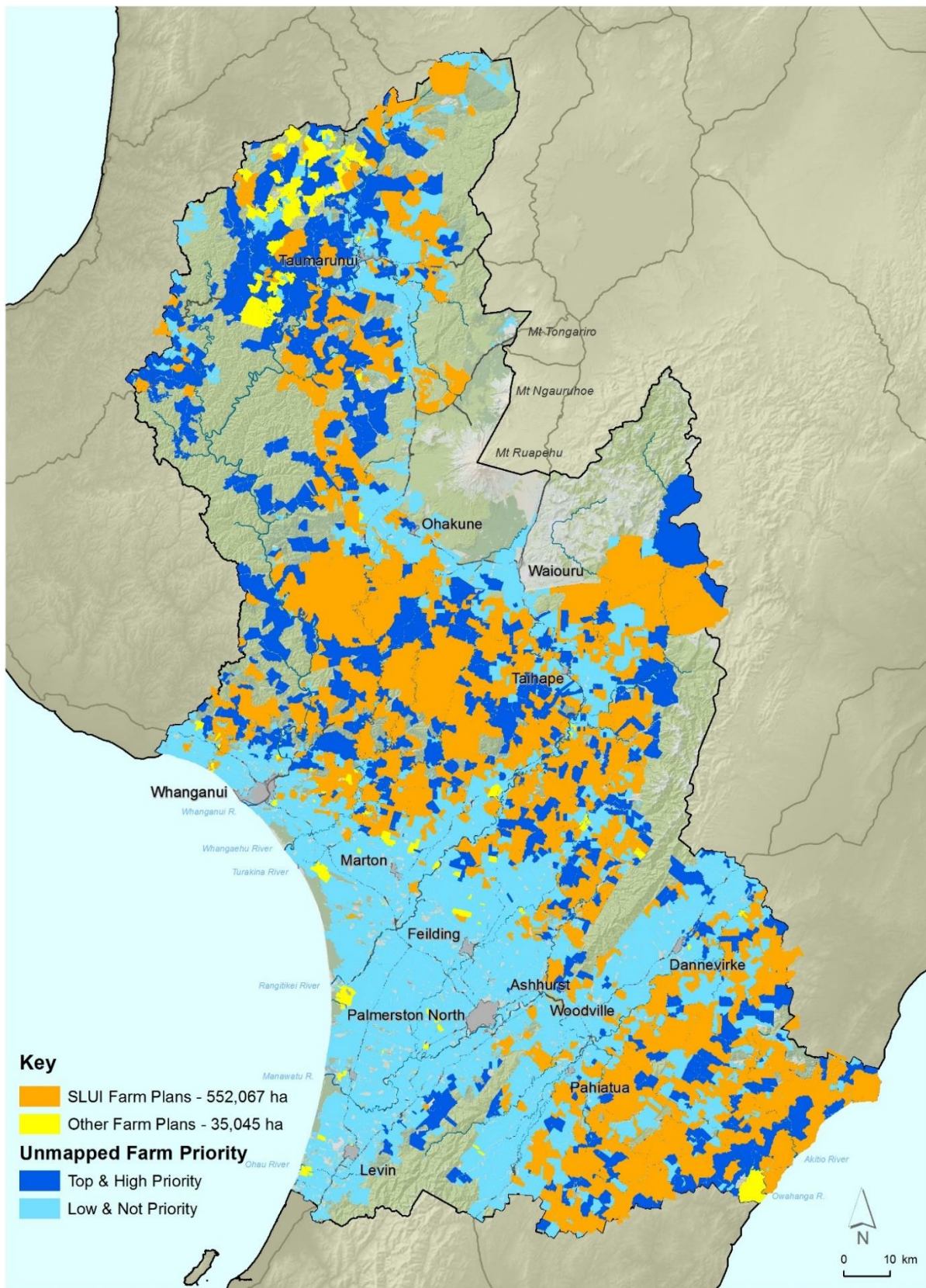
Table 7: Summary of work programme for land activity by activity area

PROGRAMME	# JOBS	TOTAL \$	GRANT \$	HECTARES	NO. TREES	FENCING (M)
SLUI SSP	59	149,997	95,495	71	28,557	
SLUI PGF	38	880,685	469,276	759	828,699	
SLUI AGS/1BT	3	-	-	489	932,612	
SLUI	380	3,030,471	1,438,833	1,838	461,932	142,446
Total SLUI	480	4,061,152	2,003,604	3,155	2,251,800	142,446
WCS PGF	4	157,280	78,640	39	25,671	
WCS	42	305,743	123,398	281	4,617	3,491
Total WCS	46	463,023	202,038	319	30,288	3,491
Egrant PGF	7	43,477	16,543	27	29,600	
Egrant	46	249,174	74,589	111	8,046	10,865
Total Egrant	53	292,651	91,132	138	37,646	10,865
TOTAL	579	4,816,827	2,296,774	3,613	2,319,734	156,801

7.23. The key points:

- There were 579 jobs claimed over all the activity areas within SLUI, which is an increase from 480 jobs claimed last year;
- Total expenditure on works was just over \$4.8 million. The various grant programmes committed \$2.296 million and landowners committed \$2.52 million (52 per cent);
- 3,613 ha of works were completed and claimed. SLUI totalled 3,155 ha of works and all programmes achieved their targets;
- 2.3 million trees were planted including 36,293 poplar and willow poles; and
- 156 km of fencing was completed. The bulk of this was carried out for riparian or wetland retirements.

SLUI, SSP and PGF Activity



SLUI Plan Progress

Map prepared by W McKay, NRP Group on 20/08/2019

Map 1: SLUI target farms and Whole Farm Plans

- 7.24. The SLUI work programme met all its contract targets with MPI. This included the target for new WFP with 22,968 ha of new plans mapped. This result brings the total area of WFP under SLUI to over 552,000 ha across 745 farms.
- 7.25. The work programme involved 480 individual claims (437 in the previous year) on over 300 farms, and our rate of “active farm plans” has continued to increase over the year. In the 12 months ending June 2019 we had improved from 79 per cent of plans active to 83 per cent.
- 7.26. Priority targeting of farm plans and provision of grants for works completed continue to have an emphasis. In doing this we will treat our top priority farmland, the land providing the greatest quantity of sediment to water, at the fastest possible rate.
- 7.27. This year we have completed 3,155 ha of work under SLUI, with 571 ha on top priority land (20 per cent); 1,263 ha on high priority land (40 per cent); 1,095 ha on erosion prone land; and 119 ha on land that is not prone to erosion. Over the life of the programme to date, a total of 37,268 ha of work has been completed. Of this, 11,855 ha of work has been on top priority land.
- 7.28. As a rule of thumb top priority land is likely to produce 100 times more sediment than non-priority land, and at the extreme level, Manaaki Whenua LCR suggest our most erodible land classes will produce 400 times more sediment than the lesser erodible land classes.

Table 8: Summary of work programme for SLUI, SSP and PGF by work type

WORK TYPE	# JOBS	TOTAL \$	GRANT \$	HECTARES	NO. TREES	FENCING (M)
Afforestation - PGF	38	880,685	516,048	759	828,699	
Afforestation - AGS	3	-	-	489	93,2612	
Afforestation - SLUI	15	584,577	254,612	319	42,9780	18,214
Retirement - SLUI	27	537,660	239,249	515	3,051	29,052
Riparian Retirement - SSP	27	86,139	41,061	25	22,691	
Riparian Retirement - SLUI	85	1,067,019	555,916	333	300	77,822
Wetland Retirement - SSP	7	18,848	9,424	7	3,861	
Wetland Retirement - SLUI	15	152,845	75,172	25	117	10,784
Managed Retirement - SLUI	3	86,076	29,854	19	0	6,574
Space/Gully Planting - SSP	25	45,010	45,010	39	2,005	
Space/Gully Planting - SLUI	232	593,568	297,137	624	28,834	
Structures/Earthworks SLUI	3	27,707	11,054	3	0	
Other - SLUI						
Total	480	4,080,134	2,074,537	3,155	2,251,950	142,446

- 7.29. Total grant expenditure over the work programme was \$2.074 million. This is an increase on last year when grant expenditure was \$1.778 million. As with last year, the commitment of funds to grant works was greater than the final claims. In February 2019 the forecast grant expenditure was \$3.283 million, including \$1.568 million of riparian and wetland fencing. The final fencing expenditure was \$0.681 million.
- 7.30. Afforestation was largely on track with over 2.19 million trees planted through SLUI, AGS and PGF. Of the 1,565 ha planted, 75 per cent were in mānuka. The largest individual job was 209 ha and 230,000 mānuka seedlings planted. The largest radiata pine planting was 68 ha and 70,000 seedlings. The average size of planting blocks was 28 hectares.

- 7.31. Along with riparian and bush retirement fencing, there were a number of areas where plantings were carried out either for riparian protection or bush infill planting. These were overwhelmingly native seedlings with just over 30,000 plants established. The SSP contributed to 22,691 of these plantings at a 50 per cent cost share between MPI and Horizons.
- 7.32. Space planting of poplar and willow poles included 28,834 poles planted in SLUI and a further 2,005 poles planted under the SSP in the Ruapehu erosion support programme. This was the highest SLUI planting year in the SLUI programme to date.
- 7.33. Overall the planting programmes were carried out to a high standard with survival rates across all planting types averaging over 80 per cent. This positive survival rate can be attributed to good planting stock, good ground preparation and planting techniques, and favourable growing conditions. There were two sites that stood out with poor survival. A mānuka planting of 12 ha claimed under PGF achieved only 48 per cent survival, with the landowner since committing to a blanking programme. A mixed mānuka and native planting that had very poor survival was not claimed, and the landowner will blank and re-submit the area for grant payment.

PGF

- 7.34. The contracted funding with PGF was for a central government share of \$970,600 and Horizons share (from SLUI or SLUI reserves) of \$391,943. The contract did not meet the targets with only 883,970 trees established against a target of 1,354,890 trees.
- 7.35. In reporting the results to PGF, circumstances changed considerably from the time of signing of the contract in mid-2018. Additional central government funding announcements through the One Billion Trees programme allowed landowners to choose different funding sources. A “free mānuka” seedling programme resulted in four PGF projects and 648,000 trees being lost to the programme.
- 7.36. The final programme outcome was accepted and payment received, resulting in a dollar saving to SLUI.

SSP

- 7.37. The contracted funding with SSP was for a central government share of \$310,750 and Horizons share (from SLUI or SLUI reserves) of \$310,750. This contract did not meet the targets with all of the proposed reversion work not being taken up resulting in a saving of \$250,000 to each party. Additional central government funding announcements through the One Billion Trees programme allowed landowners to choose a reversion fund offering \$500 per ha more than the offer proposed under the SSP contract. Two projects with a possible 330 ha of work have not proceeded as landowners consider their options, and one project of 200 ha is progressing with an application for funding under the One Billion Trees programme.
- 7.38. Key points in SLUI activity:
- Completion and publication of the SLUI Review;
 - Successful application to the fourth SLUI funding contract, resulting in funding of \$6.4 million over four years and the new contract signed in early August 2019;
 - Completion of two case studies: one on continuous canopy forestry and the other on entering pole planting into the Emissions Trading Scheme;
 - Support of the ACRE field day highlighting environmental progress made on a SLUI property;
 - Maintaining the completion time of a farm plan at around 160 days against a target of 250 days;

- Maintaining interest in the SLUI WFP with landowners on a wait list for the 2019-20 financial year;
- Maintaining Joint Venture forestry operations within budget and completion of a re-valuation to audit requirements;
- Improving the SLUI database;
- Completion of milestone reporting to MPI; and
- Maintaining the grant programme records and shapefiles, recording where funding went across all the potential funding streams.



Photo 1: Land preparation for mānuka establishment on LUC Class 7e11 land; SLUI WFP property with funding from PGF. Photo courtesy of Courtney Haywood, October 2019

Regional Coast and Land Activity (including WCS and WRET)

7.39. The Regional Coast and Land activity met all its Annual Plan targets. The targets for Environmental Grant programmes in Regional and WCS were both exceeded, and when additional PGF tree planting was added, the hectares of work achieved was 260 per cent over target.

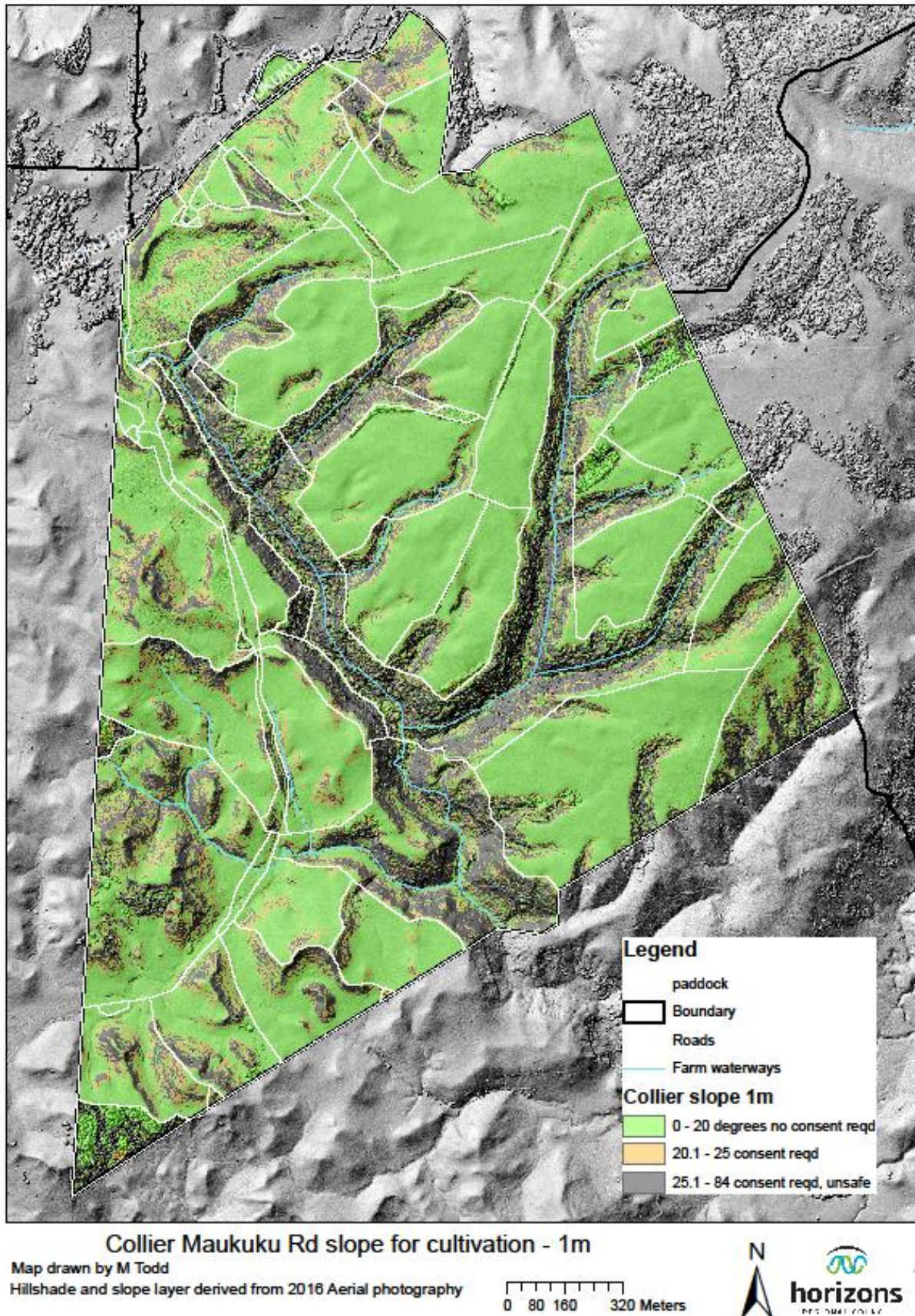
Tables 9 and 10: Summary of Environmental Grant programme for Regional and WCS

WORK TYPE	# JOBS	TOTAL \$	GRANT \$	HECTARES	NO. TREES	FENCING (M)
Afforestation - PGF	7	43,477	16,542	27	29,600	
Afforestation - E grant	2	40,157	11,884	4	4,600	1,179
Retirement - E grant	4	35,094	10,528	19	339	3,708
Riparian Retirement - E grant	4	92,183	27,654	45	-	5,978
Wetland Retirement - E grant	1	29,397	8,819	0	300	
Managed Retirement - E grant						
Space/Gully Planting - E grant	34	50,919	15,275	43	2,807	
Structures/Earthworks - E grant						
Other - E grant	1	1,425	427	0	-	
Total	53	292,651	91,131	138	37,646	10,865

WORK TYPE	# JOBS	TOTAL \$	GRANT \$	HECTARES	NO. TREES	FENCING (M)
Afforestation - PGF	4	157,280	78,640	39	25,671	
Afforestation - WCS						
Retirement - WCS	4	107,720	38,621	212	1,970	-
Riparian Retirement - WCS	13	123,709	54,518	21	-	3,491
Wetland Retirement - WCS	1	5,765	2,430	1	-	-
Managed Retirement - WCS						
Space/Gully Planting - WCS	24	68,549	27,830	46	2,647	
Structures/Earthworks - WCS						
Other - WCS						
Total	46	463,023	202,038	319	30,288	3,491

- 7.40. The land Environmental Grant programme consisted of 53 projects with a total grant spend of \$91,131. Seven projects were fully funded by the PGF totalling \$16,542. The remaining programme spend of \$74,589 was against a budget of \$80,000.
- 7.41. Afforestation (PGF and Environmental Grant (E grant)) accounted for 30 ha of work and over 34,000 trees planted. These were typically smaller jobs (up to 10 ha) and mostly radiata pine.
- 7.42. The bulk of the work programme is pole planting, usually on land that isn't high priority for SLUI or with landowners who are only interested in pole planting and have been doing so for years. The average pole job was 80 poles with a range of 25–300 poles.
- 7.43. The WCS Environmental Grant programme consisted of 46 projects with a grant spend of \$202,037. Four projects were funded in full by PGF with a grant spend of \$78,640. Of the remaining spend of \$123,397, WRET contributed \$63,716 in grants to these projects. The emphasis is on work within the Ohura and Waikaka catchments relating to their high sediment loads, however the programme can include projects throughout the Whanganui River Catchment.

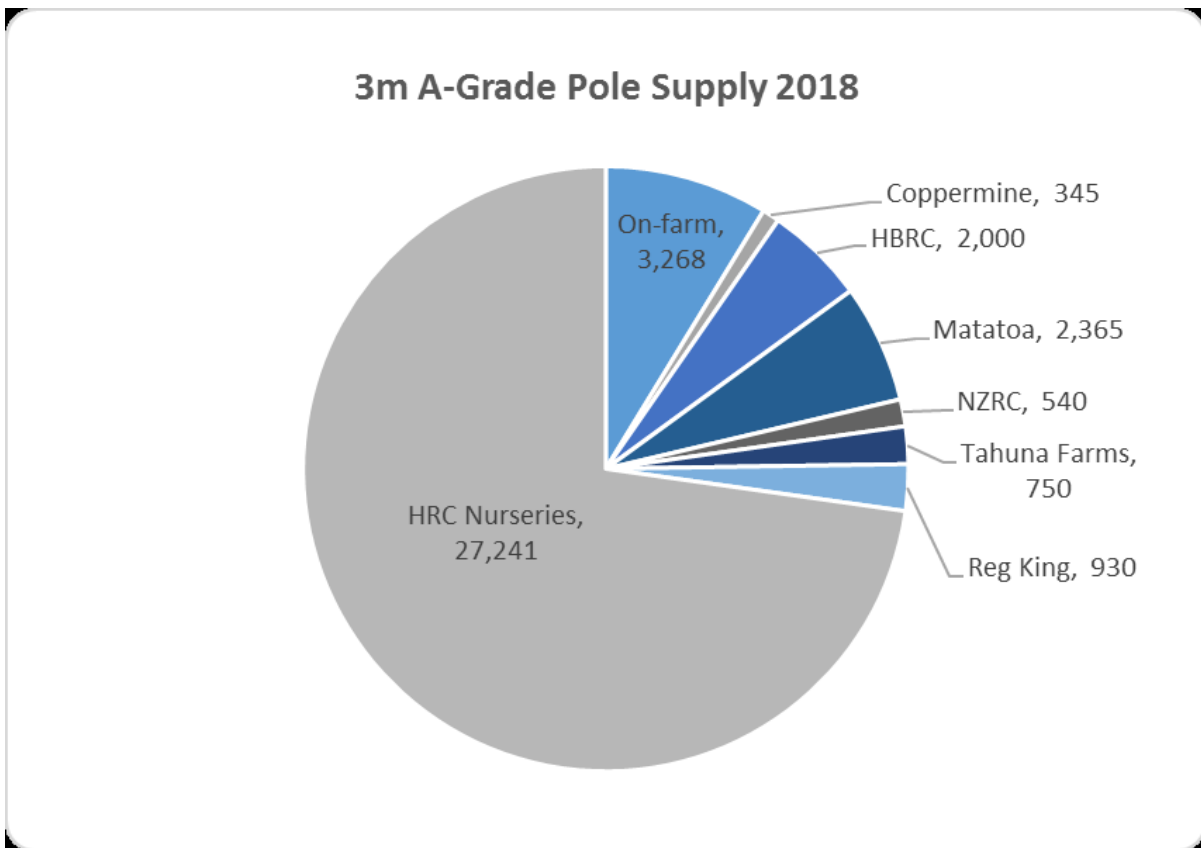
- 7.44. The afforestation projects funded by PGF were primarily mixed exotic species and natives. There were no radiata pine plantings and the largest block was 25 ha.
- 7.45. The bulk of the work by value was retirement fencing (bush, riparian and wetlands). One 2,200 m fence accounted for 110 ha of retirement work.
- 7.46. Space planting has been increasing throughout the catchment; 2,807 poles were planted across 34 projects. The average job was 116 poles planted with a range 10–500 poles planted. The Ruapehu pole planting project (SSP) accounted for another 2,005 poles planted last year. The total 4,812 poles planted in 2018-19 was an increase from the 3,800 planted in 2017-18.
- 7.47. Key points in this activity:
- Continued to develop our relationship with WRET and received their support in our move to account for WCS farm plans within the SLUI programme, allowing for wider works funding;
 - Completed another successful Ballance Farm Environment Awards programme, with staff providing input on the local organising committee, first round and finalist judging, and the winners field day;
 - Signed another two-year BFEA partnership agreement;
 - Supported the Poplar and Willow Research Trust. Horizons staff are members of the Technical Advisory Group and provide financial support through our Accounts department. One Horizons staff member is a member of the Trust through appointment by the Land Managers' Special Interest Group. The Taihape demonstration farm on SH 1 had signage erected this year. Staff continued to support the giant willow aphid trial with the research paper published this year;
 - Supported Sustainable Farming Fund projects around winter grazing and catch cropping. Final results back from MfE, Environment Canterbury and Horizons' project on aerial cropping;
 - Supported industry and other regional councils in winter grazing publicity campaign for the 2018 and 2019 winter seasons;
 - Completed the soil health monitoring programme with 10 new sites added last spring;
 - Investigated new techniques to derive slope information in hill country in the absence of regional LiDAR coverage. This was a collaborative effort with the Catchment Information team (see Map 2); and
 - Supported a number of new community catchment groups in the Rangitikei, Whangaehu and northern Manawatu.



Map 2: Using aerial photos to derive slope map information. Map prepared by Malcolm Todd

Nursery Activity

- 7.48. The Nursery activity met its Annual Plan target with 37,624 poles distributed for use in erosion control plantings. This number relates to distribution of “A” and “B” grade poles for space planting operations. Additional poles of lower specifications and a number of stakes were also distributed.
- 7.49. Not all of these poles were grown in Horizons nurseries. Some were supplied by commercial growers and some supplied by farmers.
- 7.50. Horizons nurseries produced 73 per cent of the total number of three metre A-grade poles supplied this year. On-farm nurseries supplied 9 per cent and the remaining 18 per cent came from other nurseries.



Graph 1: A-grade pole suppliers in winter 2018

- 7.51. The Woodville nursery produced 22,500 of the total Horizons production (83 per cent).
- 7.52. The nursery budget is also used to buy in poles and sleeves required for erosion control plantings, pine seedlings for afforestation projects and a small number of native plants for riparian projects. Purchased material is on-charged to landowners undertaking work programmes.
- 7.53. The 2018-19 growing season has produced poles for the winter 2019 works. This will be formally recorded as part of the 2019-20 programme.
- 7.54. Production for winter 2019 will be lower due to fluctuations caused by nursery development work. The fluctuations in production will even out once all nursery development work is complete. We have also entered into MOU supply agreements with commercial growers and farmers to ensure the availability of poles into the future.

- 7.55. A nursery strategy/supply analysis was completed for North Island nurseries this year. This work was led by Hawke's Bay Regional Council and supported by Horizons. The results confirm our regional knowledge that demand for poles continues to exceed supply and that regional councils are the main supplier of material. Greater Wellington, Northland and Hawke's Bay regional councils are all looking to increase production. Collaborative work to investigate increasing supply is underway.
- 7.56. Development in the Woodville nursery continued with the major infrastructure now in place. This work includes the provision of a shed, access road and internal tracking, pole storage facility and new land brought into production.



Photo 2: Poles loaded at Woodville nursery for delivery to Taihape Depot. Photo courtesy of John Jamieson, July 2019

8. SIGNIFICANCE

- 8.1. This is not a significant decision according to the Council's Policy on Significance and Engagement.

Grant Cooper

ENVIRONMENTAL MANAGER LAND

Jon Roygard

GROUP MANAGER NATURAL RESOURCES & PARTNERSHIPS

ANNEXES

- A Regional Coast, Land and Nursery Management Progress Report
- B Sustainable Land Use Initiative (SLUI) Progress Report



REGIONAL COAST, LAND AND NURSERY MANAGEMENT

1. OVERVIEW

- 1.1.1 The purpose of this report is to update Council on activities carried out under the Annual Plan 2019-20 and the Regional Coast and Land Operational Plan 2019-20. The report is presented in four sections: activity undertaken, progress against Annual Plan outputs, progress against Operational Plan outputs, and Environmental Grant expenditure.
- 1.1.2 Land Management activities included in this report focus on the delivery of the Whanganui Catchment Strategy, soil health, industry partnerships and nursery management. Also included are activities relating to advice and support for soil conservation and good management practice. Delivery of the Sustainable Land Use Initiative is not included.
- 1.1.3 The Land Management activities link to Horizons' Long-term Plan 2018-28 and to the non-regulatory methods of the One Plan (Chapter 5, Policies 5-1 and 5-5). The Operational Plan targets for 2019-20 have yet to be approved.

2. ACTIVITY

2.1 GENERAL

- 2.1.1 This report focusses on the work carried out within the current financial year from 1 July–15 August 2019.
- 2.1.2 The winter period has been relatively mild. July was unseasonably warm and dry, but August has seen a return to more normal rainfall patterns.
- 2.1.3 June, July and August is traditionally a busy time for land staff. Time is spent coordinating planting programmes including afforestation and space planting. Poplar and willow pole distribution began in June and continued through to early August. Poles are delivered to farmers or available for pick-up from depots. Staff provided advice, coordinated contractors and demonstrated pole siting and planting techniques.
- 2.1.4 Access onto properties has been good and tree planting activities have proceeded to plan.

2.2 SOIL HEALTH

2.2.1 There was no soil health activity during this period.

2.3 INDUSTRY PARTNERSHIPS

BALLANCE FARM ENVIRONMENT AWARDS (BFEA)

2.3.1 The BFEA regional committee met in July. Entries are now open for this year's awards programme.

POPLAR AND WILLOW RESEARCH TRUST (P&WRT)

2.3.2 The Trust circulated its Poplar and Willow Breeding Programme report for June 2019. This was published through Plant and Food Research.

OTHER

2.3.3 Staff attended a number of field days and meetings including:

- A deer industry expo at Manfeild;
- Four community catchment group meetings;
- A project completion meeting for aerial/hill country cropping. This was a joint-funded project between the Ministry for the Environment, Environment Canterbury and Horizons. The project delivered a sediment loss and mitigation calculator tool for proposed hill country cropping projects;
- Agricultural Communities Respecting the Environment (ACRE) meeting to discuss partnership opportunities;
- Liaison with Manawatū District Council regarding dune erosion at Himatangi Beach;
- Collaboration meeting with other North Island regional councils; and
- Hosted and presented to Ministry for Primary Industries (MPI) forest policy staff at the Woodville office.

2.3.4 Work with the Land Managers' Special Interest Group (SIG), which coordinates land management activities across the regional sector, has included:

- Planning a SIG meeting in Wellington in September; and
- Input into a proposed Farm Environment Plan framework through MPI.

WHANGANUI CATCHMENT STRATEGY (WCS) AND WHANGANUI RIVER ENHANCEMENT TRUST (WRET)

2.3.5 Staff formally reported to WRET in June, resulting in WRET resolving to approve funding for the 2019-20 financial year.

2.3.6 The annual report to WRET will be completed in time for their AGM in October.

2.4 NURSERIES

2.4.1 Harvesting of Horizons' nursery sites was completed in mid-August.

2.5 STAFF TRAINING

2.5.1 Staff training has included health and safety training relating to 4WDs and trailers, motorcycles and ATVs.

2.6 THE NEXT THREE MONTHS (AUGUST–OCTOBER)

2.6.1 This is traditionally the busy period for the team and will include:

- Completing pole deliveries for Environmental Grant projects;
- Liaising with landowners, many of whom will be new clients that require more input to ensure works are carried out to the appropriate standard;
- Commencing nursery clean-up post-harvest, mulching waste material and prunings; and
- Commencing a spray programme in the nursery. Giant willow aphid is present this year and a spray programme may be implemented to manage it.

3 REPORT ON PROGRESS – OUTPUTS FOR ANNUAL PLAN 2019-20

3.1.1 The Annual Plan 2019-20 outputs are noted in Table 1. At this stage of the year, no reporting of these targets is proposed. The table is included to provide overview of the work programme.

Table 1: Annual Plan 2019-20 targets and progress for the year to date (YTD)

MEASURE	PROGRESS FOR THE REPORTING PERIOD				YTD	TARGET	% YTD	Predicted Result
	1st	2nd	3rd	4th				
Regional Land and Coastal, Industry, WCS and Nursery								
Manage Environmental Grant programmes to deliver erosion reduction works (hectares)						175		
Support for at least five industry initiatives that promote sustainable land use via partnership initiatives						5		
Operate Council nursery and source additional poles to deliver for erosion control programmes						30,000		

4 REPORT ON PROGRESS – OUTPUTS FOR OPERATIONAL PLAN 2019-20

4.1.1 The Land Management activities and projects during 2019-20 are set out below. These programmes may be modified in the final Operational Plan. At this stage of the year, only limited reporting is possible. The table is included to provide overview of the work programme.

Table 2: Operational Plan 2019-20 targets and progress for the year to date (YTD)

MEASURE	PROGRESS FOR THE REPORTING PERIOD				YTD	TARGET	% YTD	Predicted Result
	1st	2nd	3rd	4th				
Regional Land and Coastal								
Provide advice to ratepayers and support applications to Environmental Grant projects (# projects)	59					50		
Whanganui Catchment Strategy								
Provide advice to ratepayers and support applications to Environmental Grant projects (# projects)	19					40		
Maintain funding partnership with WRET; complete annual report (# reports)						1		
WRET supported demonstration sites (3 sites)						2		
Maintain relationship with Taumarunui Sustainable Land Management Group (# meetings)						2		
Soil Health								
Promote and demonstrate soil health through Visual Soil Assessment (# demonstrations)						2		
Maintain regional SOE soil quality monitoring and complete report (# reports)						1		
Industry Partnerships								
Support BFEA programme within our region, including entrants, judging, awards night and field day. Maintain Council presence on Horizons Region committee (# awards)						1		
Support PWRT in delivery of advice to regional councils and farmers through TAG, nursery managers and finance admin. (# annual reports received)						1		
Nurseries								
Support wider collaboration with other regional councils, farmers and						1		

commercial nurseries (# meetings with each supplier)							
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Item 10



Annex A

Photo 1: Delivery of Dynex sleeves to Whanganui office in readiness for the winter 2019 planting season. Photo courtesy of John Jamieson.

5 REPORT ON EXPENDITURE – ENVIRONMENTAL GRANT FUNDING

5.1.1 Environmental Grant funding is in place to support landowners to undertake works that will reduce erosion and protect the environment. This funding is targeted slightly differently between the Regional Land and Coast (RL&C) environment grant and the WCS grant. Under the WCS, support from WRET enables a greater variety of work to be funded and at higher grant rates in some areas.

Table 3: Work area and budget expenditure for the year to date

Grant Type	WORK AREA (ha)				BUDGET (\$)			
	AP Target	Complete	Allocated	AP % Complete	AP Budget	Complete	Allocated	AP % Complete
WCS	75				113,000*1		57,354	
RL&C	100				80,000		88,847	
Total	175				193,000		146,201	

Note *1 this is \$50,000 Horizons and \$63,000 WRET

- 5.1.2 Fifty-nine regional Environmental Grant projects and 19 WCS grant projects have been allocated.
- 5.1.3 WRET has signaled an increase in allocation from \$53,000 to \$63,000 with more funding available on further application. They have also allocated \$12,000 to demonstration projects.
- 5.1.4 Some of the projects may be re-allocated to SLUI paddock works. These will be assessed over the next month.



SUSTAINABLE LAND USE INITIATIVE (SLUI)

1. OVERVIEW

- 1.1.1 The purpose of this report is to update Council on the Sustainable Land Use Initiative activities carried out under the Annual Plan, Ministry for Primary Industries (MPI) contract, and Operational Plan for the period 1 July to 15 August of the (current) 2019-20 financial year. The report is presented in four sections:
1. Activity over the last reporting period and upcoming activity;
 2. Report on progress against the Annual Plan, contract and Operational Plan outputs;
 3. Whole Farm Plan production and activity; and
 4. Work completed life-to-date, year-to-date and against targets.
- 1.1.2 The Annual Plan and contract targets are agreed, with the latest MPI contract signed in August 2019. This commits MPI funding of \$6.4 million over four years until 30 June 2023. The overall budget for this programme exceeds \$30 million, consisting of funding from Horizons, MPI and landowners.
- 1.1.3 Operational Plan targets for 2019-20 have yet to be approved. The Land Management activities link to the Council's Long-term Plan 2018-28 and to the non-regulatory methods of the One Plan (Chapter 5, Policies 5-1 and 5-5).
- 1.1.4 Land Management activities under this report relate only to the Sustainable Land Use Initiative, which has a focus on treating hill country erosion in order to reduce the amount of sediment entering the region's waterways. The programme uses Whole Farm Plans and land resource mapping to identify work areas. Works are then implemented in an incentive programme with individual landowners. Priority works are targeted and the rate of incentive is greater where top priority land will be treated.

2 ACTIVITY

2.1 ACTIVITY DURING LAST REPORTING PERIOD

- 2.1.1 The winter period has been relatively mild. July was unseasonably warm and dry, but August has seen a return to more normal rainfall patterns.
- 2.1.2 June, July and August is traditionally a busy time for land staff. This time is spent coordinating planting programmes including afforestation and space planting. Poplar and willow pole distribution began in June and continued through to early August. Poles are delivered to farmers or available for pick-up from depots. Staff provided advice, coordinated contractors and demonstrated pole sighting and planting techniques.
- 2.1.3 Access onto properties has been good and tree planting activities have proceeded to plan.
- 2.1.4 As part of the Provincial Growth Fund project, 20 forestry appraisals were prepared in the last financial year. Staff have continued to follow up with landowners around the outcomes and potential for afforestation projects. Landowners of 11 of the 20 forestry appraisals prepared (55 per cent) have indicated they are proceeding, or likely to proceed, with forestry planting.
- 2.1.5 Claims have continued to be processed for work programmes (jobs) that were not completed by the end of June 2019.
- 2.1.6 A number of new jobs have been added to the grant allocation process for 2019-20 works, and numbers will continue to increase as staff move from pole delivery to farm visits.

2.2 ACTIVITY OVER THE NEXT THREE MONTHS (AUGUST–OCTOBER)

- 2.2.1 Over the next three months (August–October), staff will:
- Continue to complete claims for fencing programmes;
 - Deliver any remaining WFPs from 2018-19 and discuss work programmes with landowners;
 - Implement the new MPI Hill Country Erosion Fund (HCEF) contract;
 - Complete the procurement process for WFP mapping as the current contract has now expired;
 - Complete follow-up visits with landowners who received forestry appraisals, discuss issues and formulate planting plans for next winter if required; and
 - Complete poplar pole planting.
- 2.2.2 There will be fewer on-farm inspections undertaken over this period as lambing will be in full swing.

3 REPORT ON PROGRESS

3.1 ANNUAL PLAN AND CONTRACT TARGETS (2019-20)

3.1.1 The Annual Plan and HCEF contract targets for 2019-20 are shown in Table 1 below.

Table 1: Annual Plan and HCEF contract targets 2019-20

MEASURE	ANNUAL PLAN	HCEF CONTRACT	TARGET	YTD	PREDICTED RESULT
Erosion reduction works programmes in targeted SLUI catchments (ha)	3,100	3,440	3,440	41	
Whole Farm Plan properties mapped per year (ha)	20,000	22,500	22,500	na	
Farm or paddock assessments mapped per year (ha)	-	1,000	1,000	na	
Case study completed (number)	-	1	1	0	
Feasibility reports (number)	-	6	6	0	

3.1.2 The breakdown of erosion reduction work targets by work type for 2019-20 is shown in Section 5.2.

3.1.3 The Operational Plan targets have yet to be approved. They may be modified from these targets in later reports.

Table 2: Operational Plan targets 2019-20

Contract Management
<ul style="list-style-type: none"> ▪ Complete milestone reports to Te Uru Rakau as contracted. Reports due in November, March, May and June. ▪ Provide shape files to Te Uru Rakau. ▪ Invoice Te Uru Rakau upon satisfactory completion of targets.
Farm Plans
<ul style="list-style-type: none"> ▪ Increase targeting of new farm plans and works (within catchments and within farms) to improve erosion control effectiveness, targeting "top" and "high" priority land. ▪ Implement new tools including SLUI whole farm maps (WFM) and SLUI paddock maps (PM) to improve flexibility when targeting priority land and widen the pool of land available to SLUI funding. ▪ Recognise Whanganui Catchment Strategy Plans as SLUI Plans and utilise SLUI funding on these farms, allowing more works to be funded. This will bring 40 farms and 22,000 ha into the SLUI programme. ▪ Maintain high level of active plans through periodic reviews and customer contact.
Grant Administration
<ul style="list-style-type: none"> ▪ Implement new SLUI limits on funding for whole farm afforestation as approved by Council in June 2019. ▪ Implement reclassification changes of some hill country riparian fencing projects to retirement projects, clarifying grant rates for the different types of plan (Whole Farm Plan, SLUI Whole Farm Map or SLUI Paddock Map). ▪ Implement new work programmes for lifecycle management of poplars and willows on farm, including grants for poplar pruning and removal of "old man poplars". These programmes will be carried out within a set funding limit. ▪ Review and increase auditing of works to deliver on contract targets and proof of establishment. Supply an annual report on this work. ▪ Assist with landowner applications to the One Billion Trees (1BT) programme where they align with the goals of the SLUI programme. Look for complementary funding with 1BT and SLUI. ▪ Monitor grant programme for effective delivery and targeting, provide feedback to staff and council and look for continuous improvement.
Information Management and Forest Management Systems
<ul style="list-style-type: none"> ▪ Upgrade information management to improve reporting processes and connectivity between the various sources of information in the programme, such as field information, SLUI database, financial reporting and Council/contract reporting and compliance. ▪ Maintain the work programme within the Joint Venture forests. ▪ Complete annual audit and valuation of Joint Venture forests. ▪ Effective management of SLUI reserves. ▪ Effective contractor management, including mapping contractors (let a new four year contract for WFP mapping).
Advice Services
<ul style="list-style-type: none"> ▪ Increase provision of advice for forestry appraisals to ensure environmental requirements of right tree, right place. ▪ Promote best practice in forestry to minimise environmental concerns. ▪ Complete case studies and support the compliance function around forestry management (National Environmental Standard for Plantation forestry, forestry harvesting etc). ▪ Increase alignment with other Natural Resources and Partnerships (NRP) teams to deliver on integrated catchment management outcomes. This will include alignment with biodiversity and biosecurity (weed and pest) functions.

4 WHOLE FARM PLAN (WFP) PRODUCTION

4.1.1 WFPs are a tool for bringing new land into the programme and for allocating grants to the various land types (priority land). An important part of maintaining the momentum of SLUI is the ability to bring new farms, new land and new work into the programme. This table shows the plans completed in SLUI's life-to-date (LTD) and progress with bringing new plans on board.

Table 3: WFP production (life-to-date)

No. of Plans	Hectares	Comments
745	552,067	WFPs completed in SLUI to 30 June 2019
5	1,139	Less plans completed but not yet delivered to landowners (from 2018-19)
0	0	Plus plans completed in 2019-20 and delivered to landowners
740	550,928	Equals landowners/hectares able to be engaged in SLUI WFP implementation
6	3,356	Plans/ha mapped in 2019-20 but yet to be delivered to landowners (overflow plans from last year)
8	2,732	Plans allocated to contractor for 2019-20, yet to be mapped
14	8,683	Landowners committed to a plan and on the list for 2019-20 yet to be allocated

- 4.1.2 Of the 45 plans completed last year, 40 have been delivered to landowners and, at this stage, 17 have agreed to a work programme. This number will rise as staff move from pole delivery to contacting landowners about work programmes.
- 4.1.3 There are 8 plans allocated to the contractor in 2019-20. The tender process for Whole Farm Plan production is underway.
- 4.1.4 There are 12 plans totaling 6,258 ha with documentation returned. These plans will be the first allocated to the 2019-20 programme.
- 4.1.5 We are awaiting the return of information/documents from a further 40 farms and more than 23,000 ha. Those still with paperwork outstanding have been prioritised by: having existing plans; being on top and high priority land, and the Oroua Catchment; and the likelihood of doing works.

4.2 WHOLE FARM PLAN IMPLEMENTATION (2019-20)

4.2.1 The implementation rate of WFPs provides a measure of uptake of work during the year. The number of landowners in a position to undertake works, the amount of work completed to date, and the projections for work this year are shown in Table 4.

Table 4: WFP implementation (current year to date 2019-20)

No. of Plans	Hectares	Comments
740	550,928	Plans completed by 30 June 2019 have been delivered and the landowners have had time to consider and start their works programmes this year (see Table 1)
6	41	Work completed and claimed through the grant process (6 claims)
-	1,093	Indicative commitment to works 2019-20 (329 claims)

- 4.2.2 Six jobs have been completed and entered into the system and a further six are waiting processing. These jobs are predominantly fencing projects rolling over from the last financial year.
- 4.2.3 At this stage there are 329 jobs in the system totaling 1,093 ha of works. This will increase as staff contact landowners and confirm their work programmes.
- 4.2.4 The estimated number of plans with works being carried out and hectares of work to be completed will change throughout the year as staff are in contact with farmers to keep up to date on progress.

4.3 WHOLE FARM PLAN ACTIVITY

- 4.3.1 While contract targets focus on the number of plans completed, the activity of individual plans is another measure of SLUI activity. The number of plans active in any one year can and does change. Table 5 tracks the number of plans that have had no activity at all in terms of implementation of grant works. This measure is complicated by new plans coming into the programme during the year.

Table 5: WFP activity (life-to-date)

No. of Plans	Hectares	Comments
740	550,928	Landowners able to be engaged in SLUI WFP implementation (see Table 3)
620	37,292	Active plans completed; 3,627 individual claims or an average of 5.85 claims per plan

- 4.3.2 At the time of this report there are 620 active plans involved in the work programme (Table 5) and this is increasing as more plans are completed and previously inactive plans have works carried out. There were 540 active plans at 30 June 2017 and 620 in June 2019.
- 4.3.3 The ratio of active to inactive plans has improved considerably. In 2010 there was approximately one active plan to one inactive plan, but by the end of June 2018 this had improved to more than four active plans for every inactive plan. At the end of June 2019 there were nearly five active plans for every inactive plan.
- 4.3.4 In the early part of every financial year we expect a slight rise in the number of inactive plans as the new plans are delivered and there is a lag before the work programmes commence.

Table 6: Trend of active vs. inactive plans over the life of SLUI

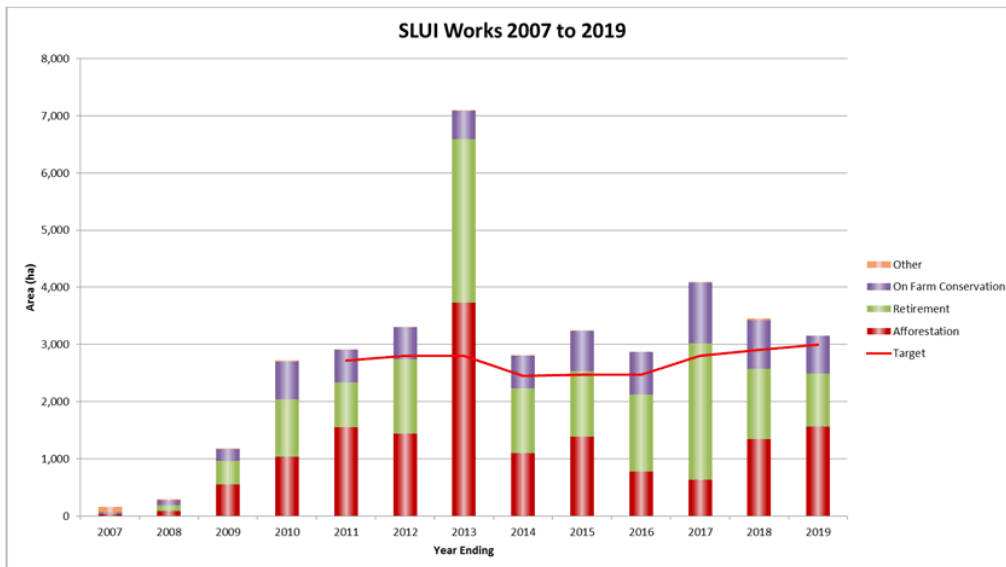
Age of Plan	Total Plans	Active	Inactive	% Active
<2 years	38	13	25	34%
2-5 years	109	82	27	75%
>5 years	599	525	74	88%
Total	746	620	126	83%

- 4.3.5 The data in Table 6 (620 active plans) shows 23 newly active plans since the last report to the Catchment Operations Committee.
- 4.3.6 There are 25 inactive plans that are less than two years old. This includes the plans completed in 2018-19. We would expect the majority of these plans to become active over the next 12 months.
- 4.3.7 The continuing trend is for one to two plans older than two years to go from inactive to active every two months.

5 WORK COMPLETED

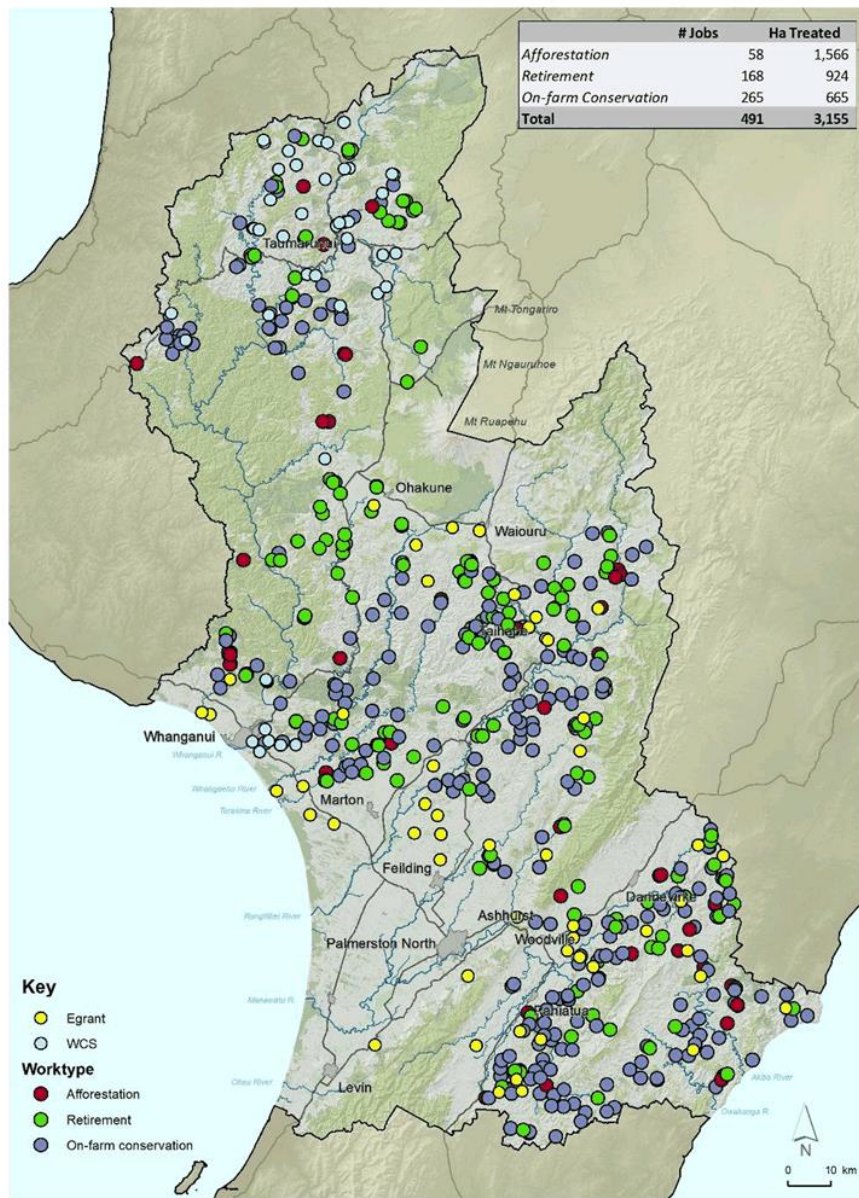
5.1 SLUI LIFE-TO-DATE

Graph 1: SLUI works completed by work type during the life of the programme against annual contract targets (red line)



- 5.1.1 Each year since 2010 the contract target for hectares of works completed has been exceeded.
- 5.1.2 The amount of work completed was relatively stable from 2010 to 2016. However, 2013 was an exceptional year with 3,224 ha of afforestation. This was due to uptake of the Afforestation Grant Scheme and retirement projects in association with Ngā Whenua Rāhui.
- 5.1.3 The 2017-18 year was the third largest work year largely due to an increase in the afforestation category with an increase in mānuka planted.
- 5.1.4 Up until June 2019 afforestation (red) made up approximately 41 per cent (15,268 ha) of the work completed and retirement/riparian retirement (green) was 39 per cent (14,641 ha). These two work types account for the bulk of the hectares of work completed during the life of the programme.
- 5.1.5 The on-farm conservation (purple) is predominantly space planting and gully planting with poles but also includes structures and earthworks. It makes up 19 per cent (7,208 ha) of the work by area to 30 June 2019. In total, the programme has planted more than 218,000 poplars with 28,414 ha planted in 2018-19. We expect to exceed that number this year with more than 30,000 poles allocated.
- 5.1.6 Overall work completed in 2018-19 was ahead of target but slightly less in hectares than the previous year. Despite this more jobs were completed with 480 SLUI jobs completed in 2018-19 compared to 437 the year before. The higher jobs completed but lower hectares covered is likely to be due to the larger number of space planting projects completed.

Map 1: Location of all grant works completed and claimed from 1 July 2018 to 30 June 2019



2019 Worktype Locations

Map prepared by W McKay, NRP Group on 23/05/2019

5.2 YEAR-TO-DATE ACHIEVEMENTS

5.2.1 Table 7 shows the types of works completed and claimed this financial year.

Table 7: Works year-to-date (completed and claimed, by grant amount and land priority)

Work Type	2019-20				Priority Land Type (ha)			
	Claims	Farms	Grant \$	Total ha	Not Erodible	Erodible	High Priority	Top Priority
Afforestation	2	2	12,185	23	-	-	-	-
Retirement	4	4	27,191	16	-	-	-	-
Riparian Retirement	3	3	8,401	1	-	-	-	-
Wetland Retirement	1	1	8,652	1	-	-	-	-
Managed Retirement	-	-	-	-	-	-	-	-
Space Planting	-	-	-	-	-	-	-	-
Gully Planting	-	-	-	-	-	-	-	-
Structures and Earth	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Total	10	10	56,430	41	-	-	-	-

5.2.2 Forty-one hectares of works have been completed, claimed and processed this financial year.

5.2.3 There are another six jobs awaiting processing. Four of these are fencing projects.



Photo 1: Recently completed retirement fence; originally planned for completion last financial year.
Photo courtesy of Libby Owen

5.3 FORECAST VS ACTUAL (TARGETS VS ACTUAL BY WORK TYPE)

5.3.1 Table 8 shows the forecast figures against target for 2019-20. The work programme is fluid and changes throughout the year. Some of the changes are due to postponements or cancellations and some are due to new plans coming on stream and bringing in new work programmes.

Table 8: Proposed work 2018-19 (contract vs forecast vs actual) and difference between forecast and contract

Work Type	Contract Target Ha	Forecast Ha	Actual Ha	Dif Ha	Dif %	Target \$ x1,000	Forecast \$ x 1,000	Actual \$ X 1,000	Dif. \$ X 1,000
Afforestation	1,460	642				1,097	241		
Retirement	850	191				426	151		
Riparian Retirement ^{*A}	220	102				358	275		
Managed Retirement	90	23				26	23		
Space Planting and Gully Planting	810	119				340	38		
Structures/Earthworks	10	16				30	50		
Other (inc. blank)	-					60			
Total	3,440	1,093				2,337	778		

*A – includes wetland

5.3.2 At this stage proposed works are yet to be fully allocated. Staff will follow up with landowners once pole planting season is completed in order to finalise work programmes.

5.3.3 The afforestation and retirement programmes are uncertain at this stage. A number of landowners have been encouraged to make applications to the One Billion Trees programme, and many are still awaiting the outcome of their application. For some they have not planted and may end up not planting this winter. For others who were committed to works having ordered trees or contractors, if they are not successful in their application to the One Billion Trees programme, they may turn to SLUI for support.

5.3.4 Pole supply is down this year. This is a result of lower production from Woodville nursery during nursery infrastructure works. There is no forecast excess supply from our neighbouring councils as they commit their poles to their own landowners.

Public Excluded Section

RECOMMENDATION

That the public be excluded from the remainder of the Council meeting as the general subject matter to be considered while the public is excluded, the reason for passing this resolution in relation to each matter, and the specific grounds under section 48 (1) of the Local Government Official Information and Meetings Act 1987 for the passing of this resolution follows.

This resolution is made in reliance on section 48(1)(a) of the Local Government Official Information and Meetings Act 1987 and the particular interest or interests protected by section 6 or section 7 of that Act which would be prejudiced by the holding of the whole or relevant part of the proceedings of the meeting in public, as follows:

General subject of each matter to be considered	Reason for passing this resolution	Ground(s) under section 48(1) for the passing of this resolution
PX1 Whanganui Update (PRD 05 36)	<p>s7(2)(a) - the withholding of the information is necessary to protect the privacy of natural persons, including that of a deceased person.</p> <p>The reason for this report being heard in public excluded is because it contains potentially sensitive information..</p> <p>s7(2)(c)(ii) - the withholding of the information is necessary to protect information which is subject to an obligation of confidence or which any person has been or could be compelled to provide under the authority of any enactment, where the making available of the information would be likely to damage the public interest.</p> <p>The reason for this report being heard in public excluded is because it contains potentially sensitive information..</p>	s48(1)(a) The public conduct of the part of the meeting would be likely to result in the disclosure of information for which good reason for withholding exists under section 7.
PX2 Council / Committee to consider whether any item in the Public Excluded minutes can be moved into the public domain and define the extent of the release		
PX3 Members' Questions		