

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

Date: Wednesday, 10 June 2020
Time: 9.30am
Venue: Tararua Room,
Horizons Regional Council
11-15 Victoria Avenue, Palmerston North

CATCHMENT OPERATIONS COMMITTEE

AGENDA

MEMBERSHIP

Chair	Cr DB Cotton
Deputy Chair	Cr AL Benbow
Councillors	Cr EM Clarke
	Cr SD Ferguson
	Cr EB Gordon
	Cr FJT Gordon
	Cr RJ Keedwell
	Cr WM Kirton
	Cr JM Naylor
	Cr NJ Patrick
	Cr WK Te Awe Awe
	Cr GJ Turkington

Michael McCartney
Chief Executive

Contact Telephone: 0508 800 800
Email: help@horizons.govt.nz
Postal Address: Private Bag 11025,
Palmerston North 4442

Full Agendas are available on Horizons Regional Council website
www.horizons.govt.nz

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

CONTACTS	24 hr Freephone : 0508 800 800	help@horizons.govt.nz	www.horizons.govt.nz	
SERVICE CENTRES	Kairanga Cnr Rongotea & Kairanga-Bunnythorpe Rds, Palmerston North	Marton 19-21 Hammond Street	Taumarunui 34 Maata Street	Woodville Cnr Vogel (SH2) & Tay Sts
REGIONAL HOUSES	Palmerston North 11-15 Victoria Avenue	Whanganui 181 Guyton Street		
DEPOTS	Levin 120-122 Hokio Beach Rd	Taihape 243 Wairanu Rd		
POSTAL ADDRESS	Horizons Regional Council, Private Bag 11025, Manawatu Mail Centre, Palmerston North 4442			
FAX	06 9522 929			

TABLE OF CONTENTS

1	Welcome / Karakia	5
2	Apologies and Leave of Absence	5
3	Public Forums / Deputations / Petitions	5
	• Agricultural Communities Respecting the Environment (ACRE Group)	
4	Supplementary Items	5
5	Members' Conflict of Interest	5
6	Confirmation of Minutes	
	Catchment Operations Committee meeting, 11 March 2020	7
7	River and Drainage Engineering Report	
	<i>Report No: 20-73</i>	13
8	Moutoa Floodway	
	<i>Report No: 20-74</i>	33
9	Rangitikei Stopbank Upgrade Project Update	
	<i>Report No: 20-75</i>	35
	<i>Annex A - 2020 Parewanui Stopbank Upgrade Plan</i>	37
10	Lower Manawatū Scheme Rural Upgrade Project Update	
	<i>Report No: 20-76</i>	39
11	Pohangina Gravel Resource Study	
	<i>Report No: 20-77</i>	43
12	Land Management Progress Report	
	<i>Report No: 20-78</i>	47
	<i>Annex A - Land Management progress report</i>	51
13	Public Excluded Section	
13.1	Procedural motion to exclude the public	73
PX1	Infrastructure Industry Reference Group Request For Shovel-Ready Infrastructure Projects	
	<i>Report No: PX20-79</i>	
PX2	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.	

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 second meeting of the eleventh triennium of the Catchment Operations Committee held at 9.30am on Wednesday 11 March 2020, in the Whanganui District Council, 101 Guyton St, Whanganui.

PRESENT Crs DB Cotton (Chair), EM Clarke, SD Ferguson, FJT Gordon (from 9.36am), RJ Keedwell, WM Kirton, NJ Patrick (to 9.45 and from 11.03am), and GJ Turkington.

IN ATTENDANCE Chief Executive Mr M McCartney
Committee Secretary 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 Cooper (Manager Land & Partnerships), Ms C Morrison (Manager Media & Communications), Ms J Buchanan (Engineering Officer), Mr J Jamieson (Environmental Programme Coordinator), Ms L Owen (Environmental Progress Coordinator), Mr K Russell (Operations Manager), Mr R Dalrymple and Mr M Chrystal (Rangitikei Catchment Community Group), Mr R Hall, Mr G Albert (Ngā Tāngata Tiaki o Whanganui Trust).

The Chair welcomed everyone to the meeting.

APOLOGIES

COP 20-6 *Moved* **Keedwell/Patrick**

That apologies be received from Crs A Benbow, B Gordon, J Naylor, and an apology from Cr W Te Awe Awe (attending other Council business).

CARRIED

PUBLIC FORUMS / DEPUTATIONS / PETITIONS

There were no requests for public speaking rights.

SUPPLEMENTARY ITEMS

The Chair advised that Mr Albert and Mr Hall (Ngā Tāngata Tiaki o Whanganui Trust) would provide Councillors with an overview of Te Awa Tupua.

MEMBERS' CONFLICTS OF INTEREST

There were no conflicts of interest declared.

CONFIRMATION OF MINUTES

COP 20-7 *Moved* **Turkington/Ferguson**

That the Committee:

confirms the minutes of the Catchment Operations Committee meeting held on 11 December 2019 as a correct record, and notes that the recommendations were adopted by the Council on 17 December 2019.

CARRIED

COP 20-11 Moved Cotton/Keedwell

That the Committee recommends that Council:

- a. *receives the information contained in Report No. 20-34 and Annex.*

CARRIED

LOWER MANAWATU SCHEME - SECONDARY STOPBANK RUAHINE STREET TO RUAMAHANGA CRESCENT

Report No 20-35

Mr Strong (Group Manager River Management) introduced Ms Buchanan (Engineering Officer) who provided a presentation and spoke of the challenges associated with maintaining a section of secondary stopbank adjacent to the Fitzroy Bend in the Manawatu River in Palmerston North. She explained that the stopbank structure had become compromised over time, due to the number of properties with structures on or near the stopbank. Members sought clarity, provided their comments, expressed concern at the risk of stopbank failure, agreed that the stopbank integrity should not be compromised, and that further discussion on the matter was warranted.

COP 20-12 Moved Kirton/Te Awe Awe

That the Committee recommends that Council:

- a. *receives the information contained in Report No. 20-35 and Annex.*

CARRIED

PRESENTATION: OVERVIEW OF LOWER WHANGANUI RIVER MANAGEMENT ISSUES

Report No 20-36

Mr Strong (Group Manager River Management) provided an overview of river management matters and work programme in Whanganui.

Cr Patrick joined the meeting at 11.03am.

COP 20-13 Moved Cotton/Turkington

That the Committee recommends that Council:

- a. *receives the information contained in Report No. 20-36.*

CARRIED

Report No.	20-73
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 period March to May 2020.

2. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 20-73.

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. The emphasis with this update to Committee is on the resourcing pressures within River Management – specifically the Investigations and Design team. Those pressures cover a wide range of areas such as scheme reviews and the various modelling and other related projects currently underway, but also less visible requirements related to other activities across the organisation.
- 5.2. One notable resourcing demand that impacts both River Management and the Science Team within the Natural Resources and Partnerships Group relates to resource consents. **Assessment of Environmental Effects (AEEs)** that accompany resource consent applications require review – whether the AEE captures / addresses the full suite of potential effects, whether the conclusions reached around likely effects and their severity / persistence are reasonable and whether mitigation measures / conditions proposed adequately / practically address those effects.
- 5.3. Often those applications have a degree of complexity and adequate due diligence can be a time-consuming exercise – the thorough / comprehensive application submitted by the New Zealand Transport Agency for Te Ahu a Turanga is a good example, where the ripple effects around resourcing are much wider than the regulatory team. The related gravel extraction consent applications have proved, for various reasons, to be equally time-consuming.

- 5.4. Various models have been tried in the past, including outsourcing to consultants. Often the effects related to a particular proposed activity can be subtle / esoteric and where schemes are involved the amount of staff input required might alter very little with the engagement of a consultant – building the requisite understanding to enable sound judgement to be applied.
- 5.5. Equally the Hazard Mapping project lead by Emergency Management (the database of information drawn on by District Advice staff) requires significant input from Investigation and Design staff; hydraulic modelling input / expertise required to underpin floodplain mapping.
- 5.6. Resource pressures in this area are also manifest in a range of other ways – delays with the programme of scheme reviews and delays to other investigations projects, compounded this reporting period by the loss of key asset management staff to central government. Ultimately those delays are reflected in the relatively high number of not achieved KPI results recorded against the River and Drainage activity area identified in the Annual Report.
- 5.7. An additional potential demand on staff time are the ‘shovel ready’ funding applications. Staff have, along with most other infrastructure asset owners in the country, submitted a list of ‘shovel ready’ infrastructure projects for consideration by central government as part of the post-lockdown stimulus package. Five projects with a total request of \$31.9M were submitted on 14 April. Acknowledgement emails have been received and relatively minor clarifications requested to date.
- 5.8. One of the discussions progressed over the lockdown was with the **New Zealand Transport Agency (NZTA)** and their consultants around the Ōtaki to north of Levin (O2NL) highway project and the overlap that has with Horizons’ river management responsibilities. The proposed corridor intersects three schemes, Ohau-Manakau, Hokio and Koputaroa, and presents an opportunity to address a range of problematic local issues e.g. Kuku Stream flooding of Tukorehe Marae.
- 5.9. Staff have also been working closely with NZTA, contractor Fletcher Construction and representatives from Ngāti Raukawa on the use of demolition material from the old Whirokino Bridge for bank protection works, specifically the potential to address sizeable river bank erosion issues along the Manawatu River downstream of the bridge. These issues fall outside the mandate of the Lower Manawatu Scheme as it does not threaten any flood protection asset but staff have been assisting with trying to find a win-win solution for both the agency and affected landowners.
- 5.10. However the volume of material required to make a difference at those locations is orders of magnitude larger than the volume of rip-rap that the bridge demolition is likely to yield; estimates are that the cost of the work would run well into the millions of dollars, well beyond the good will that could reasonably be expected of NZTA. The LMS will look to take and stockpile some of the demolition material for future scheme-related bank protection work.
- 5.11. Staff have continued to progress the review of the Koputaroa Scheme – the intention was to present this to the June meeting but the intent is now the September meeting. Focus with this review is to establish a template for the reviews to follow, with the focus on strategy; articulating the vision and the steps toward that vision. The review will, in a similar vein to the 30 year Infrastructure Strategy, identify a group of significant issues to give focus to that strategy.
- 5.12. Current thinking is that environmental enhancement, climate change, land use change and renewal / replacement are the four focus areas. Land use change captures the changing operating context for the scheme - increased flows, shorter catchment response times and higher sediment loads. The renewal / replacement strategy is centered on defining an optimal network configuration and working toward that vision - most efficient configuration

that provides the required level of service, principally targeting high cost elements such as the number of pump stations the scheme has.

- 5.13. In keeping with all things Horowhenua one focus over the period has been on iwi relationships – discussions with Raukawa hapū around both Foxton and matters relating to the Ōhau River (specifically gravel management). An assessment of the awa's gravel resource is intended to be presented to the September committee meeting, and that assessment will hopefully include input from a number of hapū.
- 5.14. Another impact of the lockdown and the necessary amendments to the consultative process for 2021 Annual Plan process was around informing Foxton residents of changes to the flood mitigation plan for the town. Staff had prepared an information sheet on those changes intended to be distributed to coincide with the consultation period; it is intended to distribute that information sheet (with some format changes) shortly. At the same time a letter will be sent to Whirokino Scheme ratepayers outlining changes in the mitigation approach for Foxton and what that means for the Whirokino Scheme.
- 5.15. The annual programme of scheme meetings was also impacted by the lockdown. Scheme meetings are timed to coincide with annual plan consultation and although a number did take place (eastern area meetings, Lower Whanganui and Matarawa) most were cancelled with the lockdown. A complication with those meetings that did take place was that the presentations made contained financial information superseded by the more austere assessments of the revenue required for the 2021 financial year with the post-lockdown economic environment.
- 5.16. The matter of how to address all of the lockdown effects on scheme meetings was discussed with Cr Cotton and Cr Benbow – summary is as follows:
 - No further information will be circulated for those meetings already held;
 - Presentations already prepared for meetings that were cancelled will be updated to align with the final form of the 2021 Annual Plan and sent to the address / contact lists held for those schemes;
 - Where presentations have not been prepared a summary sheet of key information will be compiled and sent to address / contact lists;
 - Lower Manawatu and Rangitikei scheme meetings will be re-scheduled for July.
- 5.17. Staff have also progressed the development of a flood risk reduction strategy for Anzac Parade in Whanganui over the period. Professor Bruce Glavovic, EQC Chair in Natural Hazards Planning at Massey University has been engaged to assist with the development of this strategy, intended to be completed in early 2021. Cr Patrick and Whanganui Mayor Hamish McDouall are assisting as governance representatives from both Councils with the community forums planned with the strategy development.
- 5.18. Finally reference is made in Section 6 to asset revaluation work and input from consultants AECOM. AECOM were engaged to review the valuation methodology applied by Horizons and in general their comments reflect favorably on our approach. They did however also concur with the staff view around the valuation methodology applied to Horizons detention dams – “the current valuation is significantly undervaluing the 54 dams”. AECOM are currently undertaking that revaluation process but preliminary estimates suggest the current \$12.4M valuation will likely end up close to \$30M.

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 Area River Management Teams.
- 6.2. This reporting period has seen some significant staff changes in the team. Hinewai Pouwhare-Anderson (River Management Analyst) left Horizons to take on another challenge, while Claire Platts (Senior Project Engineer) has started her maternity leave. At the time of writing an appointment has been made to back fill the Projects role to ensure that the resource is available to continue work on the Rural Upgrade Project.
- 6.3. Recruitment is also underway to fill the vacant River Management Analyst position but has been redefined to Assets and Environmental Engineer. As well as continuing the asset management work that the team is responsible for, the new person will also be tasked with assisting the wider River Management Group with managing environmental compliance.
- 6.4. During this reporting period, the COVID-19 lockdown had an impact on the Investigations and Design Team's work programme. Whilst, all of the team were able to work from home effectively, some of the tasks that were able to be undertaken were limited by the accessibility of certain specialist software packages. Despite this, staff were able to refocus on other tasks, ensuring that their time was well spent.
- 6.5. The following summarises the work that the team has undertaken during this reporting period.

SEDIMENTATION IN THE LOWER MANAWATŪ AND OROUA RIVERS

- 6.6. In partnership with the Science and Innovation Team, this work seeks to develop a Sedimentation Response Strategy for the long term management of sediment in the Lower Manawatu and Oroua Rivers.
- 6.7. The request for 'shovel ready' projects during the lockdown period has seen staff re-focus, in the short-term, on looking into some responses to sedimentation that could potentially receive financial support from central government.

ARAWHATA STREAM & HOKIO DRAINAGE NETWORK STUDY

- 6.8. This project looks at the Hokio Drainage network with a view to both improving and broadening levels of service, identifying opportunities to reduce sediment load in the drains that eventually flow into Lake Horowhenua, in addition to the mitigation measures already completed.
- 6.9. The Horizons team working on this project has been made up of staff from the Investigations & Design Team and the Southern Area Team, as well as from the Science & Innovation Team.
- 6.10. During this reporting period, our consultants have delivered a draft of the initial data review which staff have provided comment on. Consultants Tonkin and Taylor have also begun the technical work associated with identifying the range of mitigation measures that provide the best outcomes.
- 6.11. As part of the request for 'shovel ready' projects, staff have been able to leverage some of the work previously undertaken in this workstream to inform the development of a potential Arawhata wetland.

KOPUTAROA SCHEME REVIEW

- 6.12. Following consultation with a number of landowners, Iwi groups, and other key stakeholders, an initial draft of the Scheme Review has been completed.

- 6.13. Progress on this review was somewhat slowed by the COVID-19 shutdown and staff changes within the Investigations and Design Team. The review of the Koputaroa Scheme is a significant piece of work, as it seeks to understand the multiple issues and drivers that will shape the Scheme's operations and management well into the future.

POHANGINA GRAVEL RESOURCE STUDY

- 6.14. The reporting of this study was completed during this reporting period and is presented as a separate item to this committee.

HAZARD MAPPING – UPPER MANGAONE & EAST OF LEVIN MODELLING

- 6.15. This modelling work is being done as part of the Hazard Mapping Project that is led by the Emergency Management Team. Jacobs have been engaged to undertake this work, which will provide modelled information about the Flood Hazard in these two areas.
- 6.16. Staff have been working with the consultants who have updated their delivery programme to ensure that this work is completed within this financial year.

MOUTOA FLOODWAY

- 6.17. During this reporting period, staff have analysed cross-sectional survey data from the Moutoa Floodway. This work will be presented to this committee meeting as a separate item.

HAZARD MAPPING – OHURA

- 6.18. This modelling work is also being done as part of the Hazard Mapping Project. This model is being developed internally and staff have been working with the Survey and Information Management Teams to assemble and process the topography and elevation data that will underpin the model.
- 6.19. Progress on this work was hindered, by the accessibility of modelling software, over the lockdown period. Staff are currently picking this work back up with the aim of completing the work by the end of June.

MANAWATU DRAINAGE SCHEME MODELLING

- 6.20. Consultants Tonkin and Taylor have been awarded a contract for the modeling of this ~170 km² catchment. This will utilize the latest advances in modeling approaches and technology to map out an investment plan to address both current level of service issues but also to provide some resilience to future catchment changes. Where possible the work will utilize the findings from a study done after the 2004 floods, as well as taking on board the experiences of the June 2015 flood, when floodwater effects, in some locations, were actually more extensive than in 2004.
- 6.21. Considerable effort has gone into working with the consultant to understand and provide all of the pertinent information and data required to enable the construction of a comprehensive and credible model of the Drainage Scheme. The consultants have made good progress in terms of building this model.
- 6.22. Consultants will be attending the re-organised Scheme meeting to provide an update on their progress, and also to seek valuable inputs from landowners and ratepayers.

ASSET MANAGEMENT

- 6.23. During the lockdown period significant work was put into the revaluation of our infrastructural assets following the review work that was undertaken by consultants AECOM. This work has been undertaken to ensure that the year-end processes are undertaken as smoothly and robustly as possible, taking into account the resourcing issues within the Investigations and Design Team.

REGULATORY ADVICE

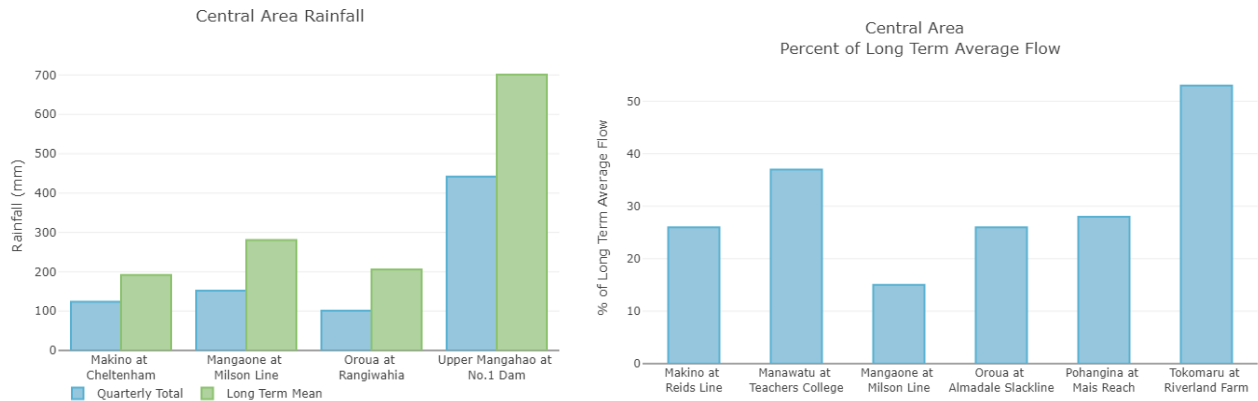
6.24. During this reporting period, advice was provided on a number of substantive matters. This regulatory work has included specialist advice on flood risk and the production of technical reports for consent applications, rezoning and subdivisions.

LOWER MANAWATU SCHEME RURAL FLOOD PROTECTION UPGRADE PROJECT

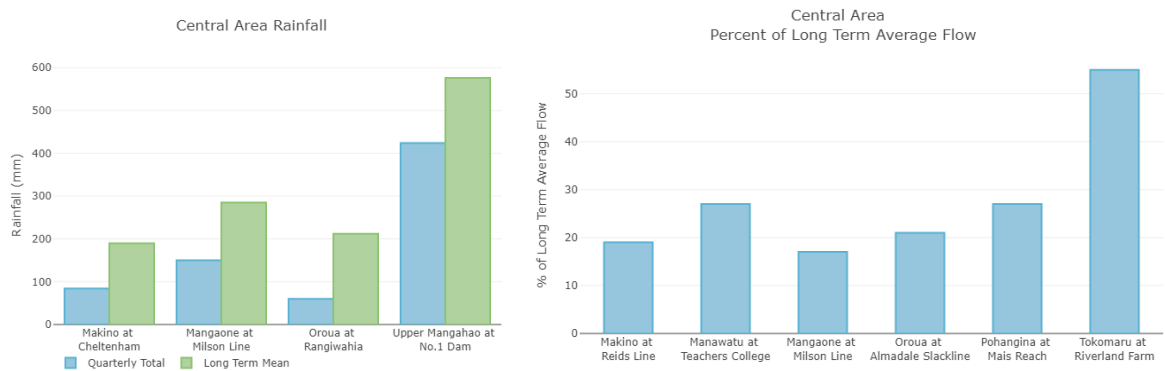
6.25. This project is discussed in detail in a separate item to this committee meeting.

7. CENTRAL

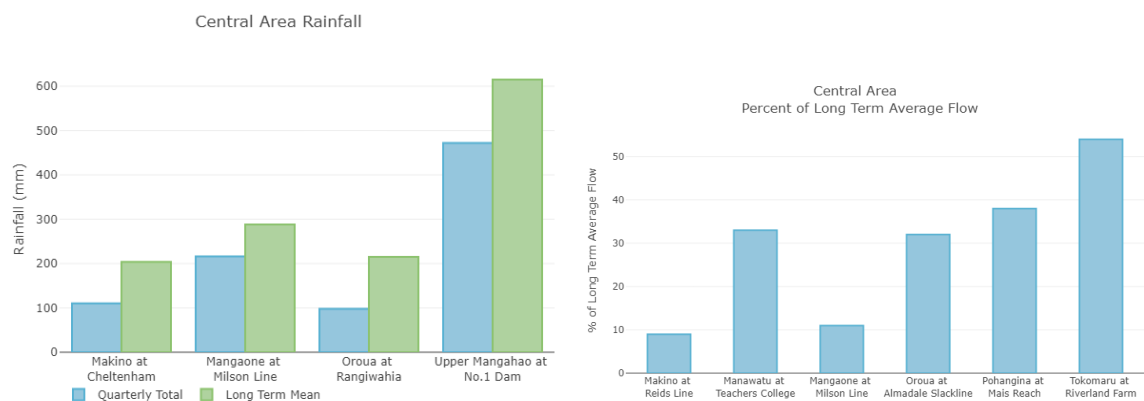
7.1. February Rainfall/Flow



7.2. March Rainfall/Flow



7.3. April Rainfall/Flow



7.4. This reporting period has seen very little rain through the system, with only a few periods of rain it is still exceptionally dry for this time of year. While this weather is good for earthworks, going into Level 4 lockdown due to Covid-19 means some work for this year has been reprogrammed into next year. There were no flood events of note over the period.

7.5. The **River Asset and Amenity Partnership (RAAP)** meetings between Scheme staff and **Palmerston North City Council (PNCC)** was held in late February with the next meeting

planned for June. These meetings provide a valuable opportunity for staff of both councils to stay up to date with activities planned for the city area, particularly those happening in and around the river corridors. They provide opportunity to meet with different staff members and build effective working relationships to assist both councils in undertaking their work successfully.

- 7.6. Enquires received from the public around various topics has continued throughout this reporting period. These have included information requests around the city willow mulching programme, black berry and weed control, pest control, fencing, tree removal requests and works near or on the secondary stopbank, as well as supporting the PNCC with their development plans within the city.

LOWER MANAWATU SCHEME

- 7.7. Works undertaken on the various rivers within the Scheme this period include the following:

MANAWATU RIVER

- 7.8. Vegetation mulching and layering of the true left bank between ANZAC Cliffs and Staces Road in Aokautere commenced before lockdown and will be completed by the end of May. A section of tied tree works was constructed along a short section at ANZAC Cliffs where the gravel bund was located during construction of the rock lining. Previous willow pole plantings had not been successful.
- 7.9. The city rock spraying programme that saw delays earlier in the year has caught up, with only the rock at ANZAC cliffs remaining to be completed. This is planned to be completed in the coming weeks.
- 7.10. The spray programme that keeps the vegetation off the inside of the bends and keeps the beaches clear of vegetation commenced one week prior to lockdown. Unfortunately the programme was cut short due to the Covid-19 shutdown and has been reprogrammed for next year.
- 7.11. Several rope, rail and tree groynes have been constructed on the Manawatu River adjacent to the Ashhurst Domain, complementing the other works constructed since 2017, funded jointly by Horizons, PNCC and NZTA. While onsite, steel debris from the old Ashhurst Bridge were removed. These navigational obstructions had reappeared as a result of low water levels and changing beach topography in the area. That work is funded by the Regional River and Drainage rate.
- 7.12. PNCC have completed their works to replace the lime pathway along the river berm at Dittmer Drive with concrete. Scheme staff visited the site for monitoring and continue to do so for the construction of a new path downstream of Albert Street. A further area of river pathway that is in line for some improvement is the area above the Fitzherbert Bridge. This will be widened to provide a larger hard faced surface for the weekly Park Run events that start and finish there.
- 7.13. PNCC have begun the resource consent process for the entranceway development at the Victoria Esplanade with Scheme staff assisting with preliminary mitigation advice.
- 7.14. The small remaining amount of the rural willow mulching and vegetation maintenance programme along the Manawatu River was completed early this reporting period. Mulching then commenced and continued within the city reaches. 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.

OROUA RIVER

- 7.15. No issues to report.

MANGAONE STREAM

- 7.16. Upgrade works involving the extension of existing culverts, new drainage pipes and the Stopbank along the rear of the houses on Benmore Avenue Palmerston North was completed. This work was necessary to prevent the floodwater which is discharged from the Mangaone Stream down the floodway, from entering the city from the Benmore Avenue location.
- 7.17. A section of slumping above Pioneer Highway has been repaired with rock rip rap and rock material has been placed in a hole that had formed behind the adjacent timber retaining wall.
- 7.18. Efforts to eradicate or reduce the rabbit population above Rangitikei Line are still continuing. The number of rabbits this year is significantly higher than in recent years. Repairs and fumigation of the burrows were initially undertaken in August and more recently in early May. Poisoning has continued throughout. There have also been recent reports of a rabbit population boom near the Awapuni greyhound track.

MAKINO STREAM

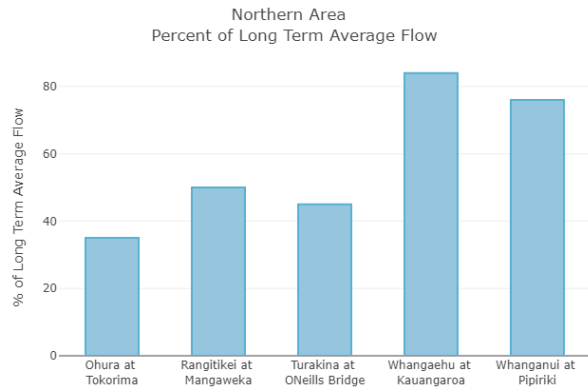
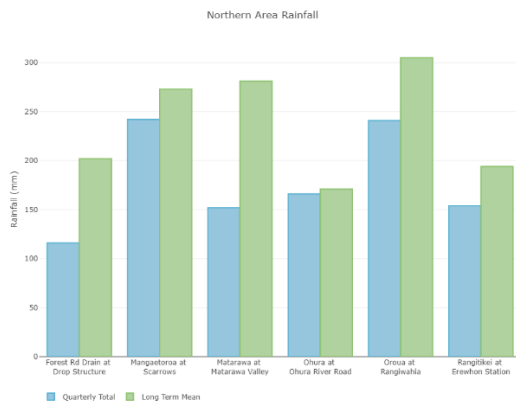
- 7.19. Gravel was extracted from the Makino Stream at the Duke Street Bridge to allow the design flood flow to pass, remaining within the stream channel.
- 7.20. The annual channel maintenance programme on the Makino Stream was also completed. Works commenced South of Boness Road and continued upstream to South Street, Feilding. Feilding Township was by-passed, with works commencing again at North Street, continuing upstream to Port Street, Root Street, Reids Line West and finishing at the upper reach of the scheme responsibility. Works consisted of either layering or mulching of existing vegetation, and the re-locating of gravel build up or point bars which were causing poor stream alignment and / or erosion problems.
- 7.21. Due to the shutdown for Covid-19 the programmed maintenance works could not be completed by 1 May, the trout spawning period when machinery is not permitted within the channel. An application was made to the Wellington Fish and Game Council, to postpone the start of the trout spawning period restrictions by three weeks to allow us to complete the programmed works. This was granted.
- 7.22. Discussions held with **Manawatu District Council (MDC)** regarding the proposed walkway along the Makino Stream in the vicinity of Rata Street Feilding are on-going.

LOWER KIWITEA STREAM SCHEME

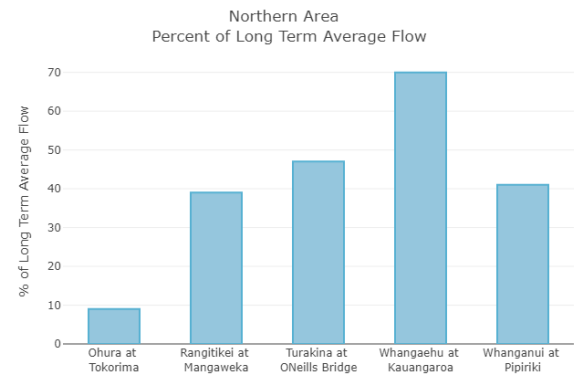
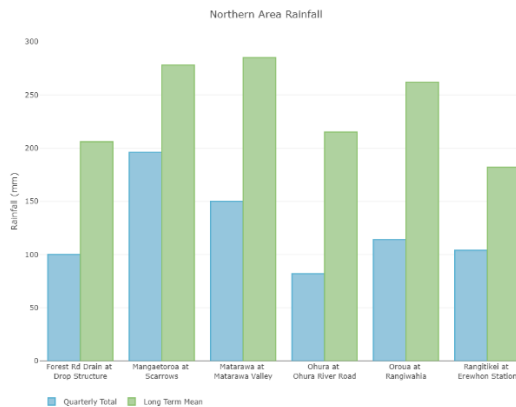
- 7.23. The Scheme Annual General Meeting was held on 18 March 2020. Attendance at this meeting was poor. This is likely to be an indication that rate payers are happy with how the scheme is performing, with no problems or demands to attend to. Last year's works programme and the closing scheme balance was discussed. The current year's programme of works and costs to date were explained. No major floods over the last twelve months has meant more funds available to undertake maintenance type works. The stream channel is in excellent condition ready to cope with most floods which may eventuate this winter

8. NORTHERN AREA

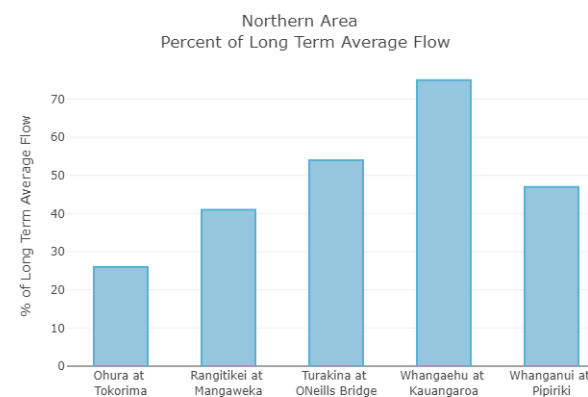
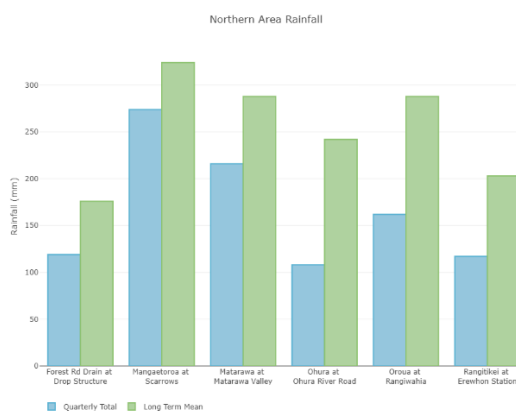
8.1. February Rainfall/Flow



8.2. March Rainfall/Flow



8.3. April Rainfall/Flow



8.4. Work programming and implementation was severely interrupted during the COVID-19 lockdown period with staff operating from home to the best of their ability. Good stable weather conditions as we come out of our restrictive environment is enabling progress on scheme maintenance tasks, with their completion being seen as essential to ensure we enter the winter period with confidence our assets are effective against expected high river flows.

- 8.5. Noting the following staff training and development:

In late February a group (Melissa Churchouse, Julia Jung, Wayne Spencer & Jordan Taylor) attended a three-day technical workshop on the West Coast of the South Island run by West Coast Regional Council with a range of invited speakers.

Targeted specifically at Regional Council River Management Technical Staff the workshop included two field trips one around Greymouth to look at the Cobden concrete flood wall, and coastal erosion at the Cobden Rubbish Dump and Jellyman Park. The other south along the coast to Franz Josef, the Waiho River and in particular the Waiho Bridge Bailey Bridge reconstruction project, the Milton stopbank, and Fox River rubbish dump.

RANGITIKEI RIVER CONTROL SCHEME

- 8.6. The aerial spray of the entire Rangitikei River scheme was completed in early March.

POHANGINA-OROUA RIVER CONTROL SCHEME

- 8.7. Work has concentrated on completing landowner subsidized river bank erosion repair work before winter. A 40m tree bank erosion job has been completed at the Eales property with an upstream section still to finish. These works involve rope and rail groyne installation and some tree work. The site at the Eales repair has also been planted with 300 willow poles to consolidate the erosion repair works.

OROUA RIVER

- 8.8. Work on the Oroua is complete for the year.

TOTARA RESERVE

- 8.9. Nothing to report at Totara Reserve.

MATARAWA URBAN

- 8.10. A combined vegetation removal project with Whanganui District Council was completed on the Matarawa stream through Kowhai Park.
- 8.11. Willow regrowth on a few properties were sprayed and there have been numerous phone calls regarding engineering advice for bank protection and tree blockages and weed growth following the clearance of many over storey cover trees.

WHANGAEHU MANGAWHERO RIVER MANAGEMENT SCHEME

- 8.12. Strong winds throughout the latter summer period prevented the commencement of the planned aerial spraying programme. Calm weather conditions are required to enable the precise and accurate placement of spot spraying from a helicopter that is essential for a successful operation. Unspent funds this year will divert to scheme reserves at year end to allow for an extended spray programme in February 2021.
- 8.13. Spray trials have been done via ground spraying at two sites, targeting Acacia trees. This is to gain some knowledge about the best practice for spraying Acacia trees should the scheme decide to more actively control Acacia trees in the future.

LOWER WHANGANUI RIVER TRAINING STRUCTURES

8.14. The North Mole and South Spit Interface Wall investigations have been completed with design of both commencing in July 2018. PGF funding is still uncertain but project work is continuing as if construction were to occur in summer 2020 – 21. To that end:

- Investigation and surveying of existing rock structure 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 in 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;
- A PGF funding application has been submitted with an update expected from the Ministry in June.

Tasks that will continue to be progressed over the next two months include:

- Progressing the development of the Waitahinga Quarry with WDC;
- Notification of identified claimants for customary marine title and seek opinions.

OHAKUNE SCHEME

8.15. Work this year will largely focus on a resource consent application to allow scheme work to be undertaken.

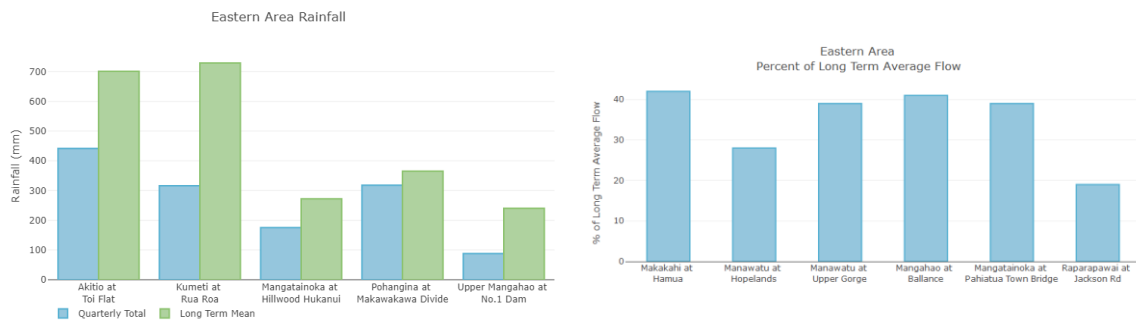
8.16. Channel clearance along the urban section of the Mangawhero River through Ohakune was completed in partnership with the Ohakune Community Group to ensure flood flow capacity for the coming winter months.

RUAPEHU DISTRICT WIDE SCHEME

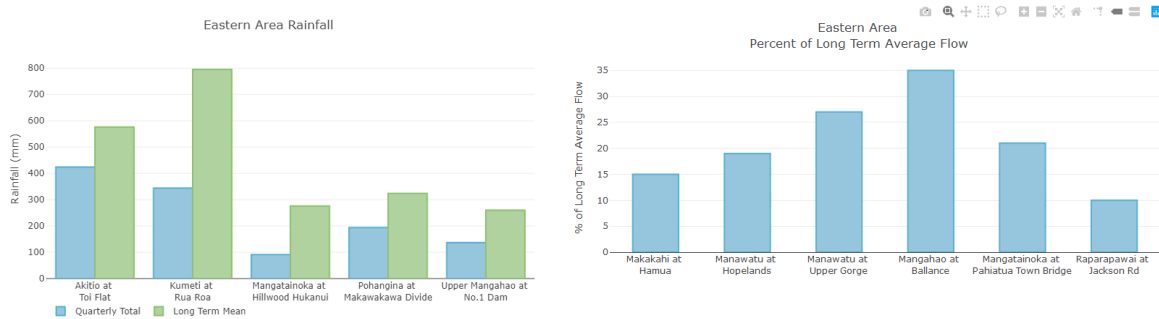
8.17. Work this year will largely focus on a resource consent application to allow scheme work to be undertaken.

EASTERN AREA

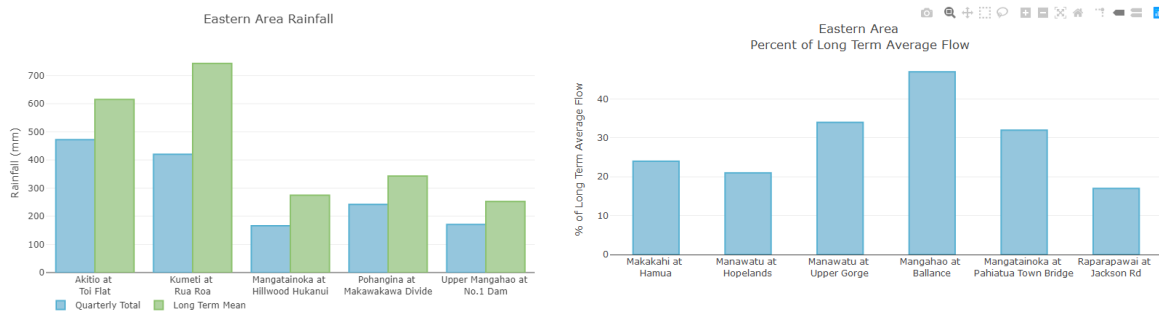
8.18. February Rainfall/Flow



8.19. March Rainfall/Flow



8.20. April Rainfall/Flow



- 8.21. The start of this period saw a continuation of the extremely dry weather which has been a feature of the Tararua District for the last few months. River levels have been extremely low and all municipal water supply zones started the period with heavy water use restrictions.
- 8.22. Towards the end of March, the region saw a change in weather patterns with regular weekly rainfall events becoming normal. This has led to a marked 'greening' of the area and significant grass growth. River levels have come up – not to that normally experienced for this time of the year – but enough that water use restrictions have ended in all municipal supply zones.
- 8.23. The COVID-19 Level 4 and Level 3 restrictions to movement have had a significant effect on the works programmes for all schemes during this period. Work, when it restarted has been focused on those areas which had trout spawning restriction, which started at the beginning of May.

- 8.24. The Annual Catchment meetings for the Mangatainoka, South Eastern Ruahine and Upper Manawatū – Lower Mangahao Schemes were held in Mid-March, just ahead of the COVID-19 Level 4 restrictions. These were generally well attended, though mostly by members of the scheme committees. Good discussion was had on a range of topics that were applicable to each scheme and a number of actions were generated for follow-up.
- 8.25. Requests for miscellaneous issues and engineering advice has continued over the period, with significant request for advice around well and water management prior to the rainfall in March. Staff received very few requests during the Level 3 and 4 restrictions.

TARARUA DISTRICT RIVER MANAGEMENT SCHEME

- 8.26. A number of works were in planning stage when the Level 4 restrictions came into effect, and as such essentially no work was progressed on this scheme during that period.
- 8.27. Channel clearance works were undertaken at Tautane Station on the Tautane Stream, north east of Herbertville, over a 500m distance, as soon as contractors were available in April. The stream bed was blocked by willows growing within the bed of the stream slowing down water flow and increasing flooding around the station house.

MANGATAINOKA SCHEME

- 8.28. The Covid-19 lockdown saw all scheme works shut down for several weeks. Works that were able to be deemed essential commenced again just before Level 3 restrictions were reintroduced. These works include finishing off reinforcing several sections of tied tree works in the Hamua-Nireaha area of the scheme, as well as bank strengthening works and channel clearing along the Makakahi.
- 8.29. Due to the pause in the works programme, this scheme will end the financial year with a large surplus that can be put into emergency reserves.
- 8.30. We were fortunate through the shut-down period to have very little rainfall for this time of year. This has kept the rivers at levels that make work possible.
- 8.31. The scheme drains are still in line to be mechanically cleaned this financial year.

SOUTH EASTERN RUAHINE SCHEME

- 8.32. Extensive channel clearing was undertaken on the Tapuata Stream as it runs through Dannevirke Township. This is probably the largest clearing work this stream has seen in many years and the extent of work required was not able to accurately predict at the time of planning.
- 8.33. Due to COVID-19 Alert Level 4 works planned for channel clearing on the Mangatera were unable to start. With the Alert Level 3 change, and only three business days before Trout Spawning period was to begin on this stream, a small amount of channel clearing was undertaken to remove the biggest blockages (fallen trees across stream).
- 8.34. Drain spraying has not been undertaken on the scheme due to COVID-19 delays.
- 8.35. Preparation is underway for an Environment Grant work on the Tapuata Stream – this may be completed in the next financial year.

TAWATAIA - MANGAONE SCHEME

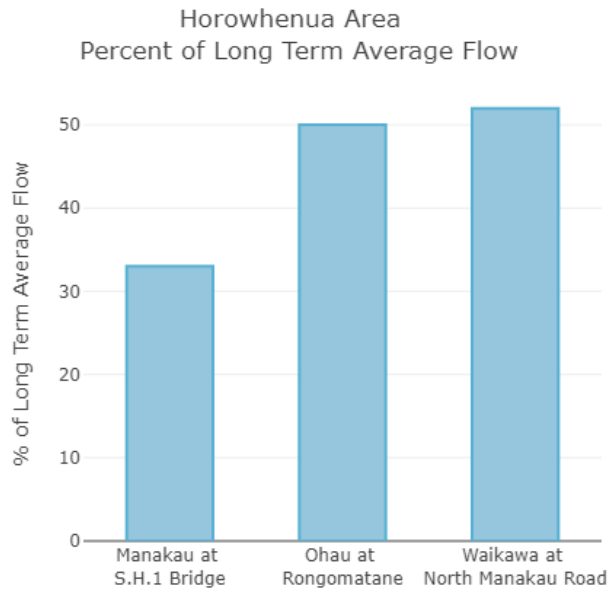
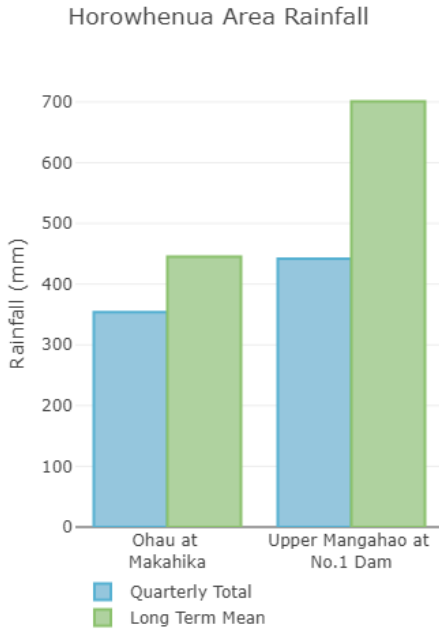
- 8.36. Monthly dam inspections are continuing, however, due to the shutdown period planned overflow channel maintenance has had to be postponed until next financial year. This means we will have surplus budget at the end of this year but it should mean that we have a slightly larger budget to get the works completed next year.

UPPER MANAWATŪ– LOWER MANGAHAO SCHEME

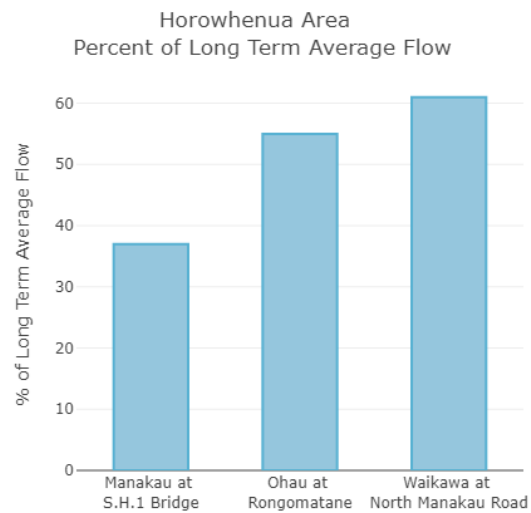
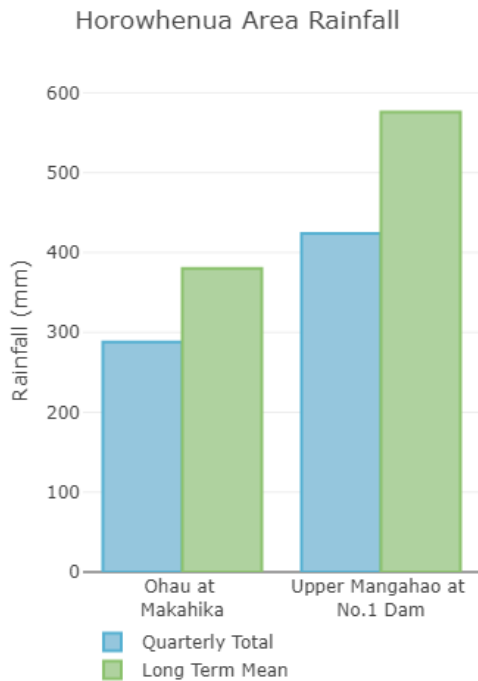
- 8.37. The majority of works haven't been undertaken on this scheme due to the Lockdown period interrupting the start of works. There are no fish spawning restrictions on the Upper Manawatū, so works are able to progress until the end of the financial year, weather permitting.
- 8.38. Preparations are underway to start a new rock lining to protect the Haukupuapua Reserve entrance at Oete Road, with the outer bend encroaching on the road. A total of 450 tonne of rock has been delivered to site in preparation for this work.
- 8.39. Further works are planned in the Managahao River for May and bank protection work in the upper scheme area of the Manawatū River will be completed once this work has finished.

SOUTHERN AREA

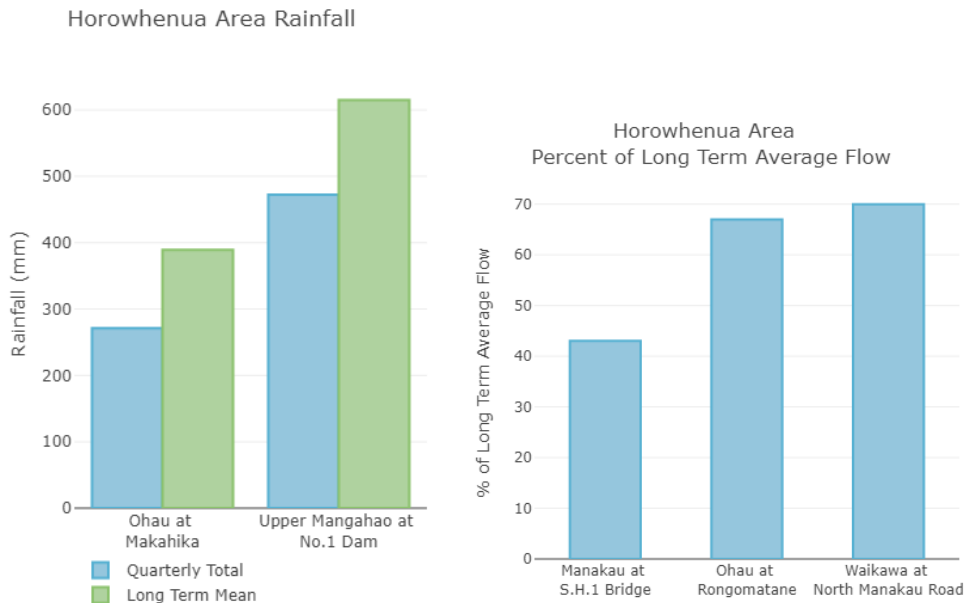
8.40. February Rainfall/Flow.



8.41. March Rainfall/Flow



8.42. April Rainfall/Flow



- 8.43. Settled weather and good ground conditions have allowed our spray contractors complete the majority of the autumn spray programme for both the Makerua, Manawatū, Foxton East, Himatangi and Te Kawau Schemes. With most of the drains on their second spray of the season. Some isolated section of drains where access had been problematic still need to be completed but we are working with the landowners in these areas and these should be completed
- 8.44. The dry warm weather has seen a substantial increase in the growth of submerged weed in a numbers of the schemes larger drains. Failure to remove the submerged weed would adversely impact both gravity and pumped drainage and ultimately it could be washed down stream into the floodgates potentially impacting on the gates ability to close during flood events. As a result a long reach machine has been operating in a number of schemes to remove this weed build-up.

OHOU-MANAKAU SCHEME

- 8.45. This period has been very mild with only small flows through all the channels. With no high flows there has been very little erosion in the rivers and streams, this has enabled work to focus on the maintenance of the drainage channels with 6km machine cleaned and 6km sprayed.

MANAWATU DRAINAGE SCHEME

- 8.46. In February this year staff worked with the Freshwater Team to sign off a fencing and planting project for a section of Chittack's drain overgrown with pampas and willows. The section runs through Fonterra's new farm in Longburn with Fonterra staff working alongside Horizons staff. This will make a big difference in the maintenance of the scheme drain and will be a great example of a native planting plan. The plants will be planted this winter.
- 8.47. A long reach machine has been cleaning Burkes Drain from the pumpstation up to Lockwood Road Bridge.
- 8.48. Staff have had preliminary discussions with the Environmental Data team and a consultant regarding the potential installation of a "Scada PLC system" into Burkes Pumpstation which

will enable data from the pump station to be accessed live from the councils Hilltop Telemetry System, with the ability for the public to access the data via the website.

MAKERUA DRAINAGE SCHEME

8.49. 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

8.50. The No.2 pump at Koputaroa No.1 pump station was removed for servicing and has since been reinstalled after replacing all of the bearings and seals which is common for this type of servicing.

8.51. This period saw 22km of drain sprayed and 2km machine cleaned.

MOUTOA - WHIROKINO DRAINAGE SCHEME

8.52. A long reach excavator has machine cleaned Cooks Drain and the Main Floodway Drain.

TE KAWAU DRAINAGE SCHEME

8.53. Nothing to report.

HŌKIO CATCHMENT DRAINAGE SCHEME

8.54. Nothing to report.

9. ENVIRONMENTAL GRANT WORKS AND ENGINEERING ADVICE

9.1. The status of all Environmental Grant works is as follows:

2019 – 2020 Environmental Grant work

Name	River or Stream	Job No.	Type of work	Work status	Estimated work cost (\$)	Value of grant (\$)
D Lyons	Tapuata Stream	IN1506	Bank Protection through the construction of a timber wall on the Tapuata Stream	Completed September 2019 and Invoiced	\$6,323	\$1,896.9
Manning	Kiwitea		Tree work groynes	Approved	\$15,304	\$4,592
Cvitanovech	Makiriki		Tree work groynes	Pending approval	\$20,572	\$6,172
Turakina Church	Kahuraponga		Retaining Wall	Pending Approval	\$9,115	\$2,735
Murphy	Ohakune		Retaining Wall	Declined	\$7,720	\$2,316
Tripe	Mangatipona		Grade Control	Approved	\$25,000	\$7,500
Waller	Taringamotu		Rock Lining	Cancelled		
Te Rongaroa Marae	Ongarue		Rock Lining, Layering Planting	Approved		
Morrison	Mangara		Vege Clearance	Application being prepared		
Palmer	Okahukura Saddle Road		Vege Clearance	Application being prepared		
RuDC	Mangahowhi			Application being prepared	\$11,600	\$3,480
RuDC	Mangateitei		Erosion Repair	Application being prepared	\$7,000	\$2,100
Hilton Shane	Tapuata Stream		Bank Protection	Approved	\$4600	\$1380

10. SIGNIFICANCE

10.1. 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.	20-74
Information Only - No Decision Required	

MOUTOA FLOODWAY

1. PRESENTATION

- 1.1. Staff will make a presentation to Committee members on the analysis of survey data from the Moutoa Floodway, focusing on the capacity and future operation of the Floodway.

2. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in the presentation.

3. SIGNIFICANCE

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

Jon Bell
INVESTIGATIONS & DESIGN MANAGER

ANNEXES

There are no attachments for this report.

Report No.	20-75
Information Only - No Decision Required	

RANGITIKEI STOPBANK UPGRADE PROJECT UPDATE

1. PURPOSE

- 1.1. This item provides members with an update on the Rangitikei Stopbank Upgrade project.

2. EXECUTIVE SUMMARY

- 2.1. Council has, over a number of years, been progressively upgrading stopbanking along the lower reaches of the Rangitikei River as part of Rangitikei River Scheme operational activity. The work is a direct response to the February 2004 flood event, raising / strengthening the network to provide both a higher level of service but also a higher level of reliability under operation.
- 2.2. The work programme is long relative to the size of the upgrade, a function of both the funding challenges that underpin much of the Rangitikei Scheme's operational activity but also the sheer volume of activity in the river management area post 2004. Delays have been incurred due to flood events but more recently around ensuring a precise design approach to raising the stopbank over the lower North Island gas main.
- 2.3. The work programme is nearing completion and is at present forecast to be within the original budget.

3. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 20-75 and Annex.

4. FINANCIAL IMPACT

- 4.1. Funding for the outstanding work identified in this item is provided for in the Long-term Plan.

5. COMMUNITY ENGAGEMENT

- 5.1. Ongoing community engagement around this programme of work is through the Rangitikei Scheme Liaison Committee and the annual Scheme meeting.

6. SIGNIFICANT BUSINESS RISK IMPACT

- 6.1. The raised / strengthened stopbanks this project delivers will have a positive impact on business risk but one that is not significant.

7. BACKGROUND

- 7.1. The Rangitikei-Whanganui Catchment Board first approved the Rangitikei River Scheme in 1952, with subsequent amendments in 1965 and 1994. A revised targeted rate classification was implemented in 1995. The Scheme was further reviewed following the February 2004 flood event; recorded peak flow for the February 2004 flood was 1,550

cubic metres per second (cumecs) as measured at Mangaweka, the third largest flood in 107 years of record at that time. More than 1,500 hectares of productive land was flooded in addition to extensive flooding of houses in Tangimoana and Scotts Ferry.

- 7.2. Flood protection standards were found to be well short of a 50 year Return Period (RP) event, instead estimated to only be able to contain a 20 year RP event (a 5% chance of overtopping in any given year). Council resolved through the 2006-16 Long-term Plan to raise flood protection standards through a programme of stopbank upgrade work. Work to provide an 'enhanced' 50 year RP standard for Tangimoana was completed at an early stage, followed by work to provide a 100 year RP standard of flood protection for the Parewanui to Scotts Ferry section.
- 7.8. The work programme commenced in 2006 with an original budget for the project of \$6.1 million, drawn from a loan. Note that the proposal for the 2020-21 Annual Plan includes extending the repayment period for that loan, part of the response to the economic impacts of COVID-19.

8. DISCUSSION

- 8.1. Summary of work completed to date:

1. 10,030m of Parewanui stopbank upgraded.
2. 690m of Scotts Ferry secondary ring bank.
3. 3,680m of Tangimoana stopbank upgraded.
4. 1,250m of Parewanui stop bank flood damage repairs completed.

- 8.2 Works outstanding:

- Construction of concrete wall over gas main.
- 2,000m of Parewanui stop bank upgrade.

- 8.3 The plan attached shows the extent of the remaining work. Cost estimates for all outstanding works have been reviewed on the basis of actual costs for recently completed works. It is likely that the project will be completed next financial year.

9. CONSULTATION

- 9.1. No consultation is envisaged with this item.

10. TIMELINE / NEXT STEPS

- 10.1. Staff are currently working on tender documents for the works outlined in Section 8.2.

11. SIGNIFICANCE

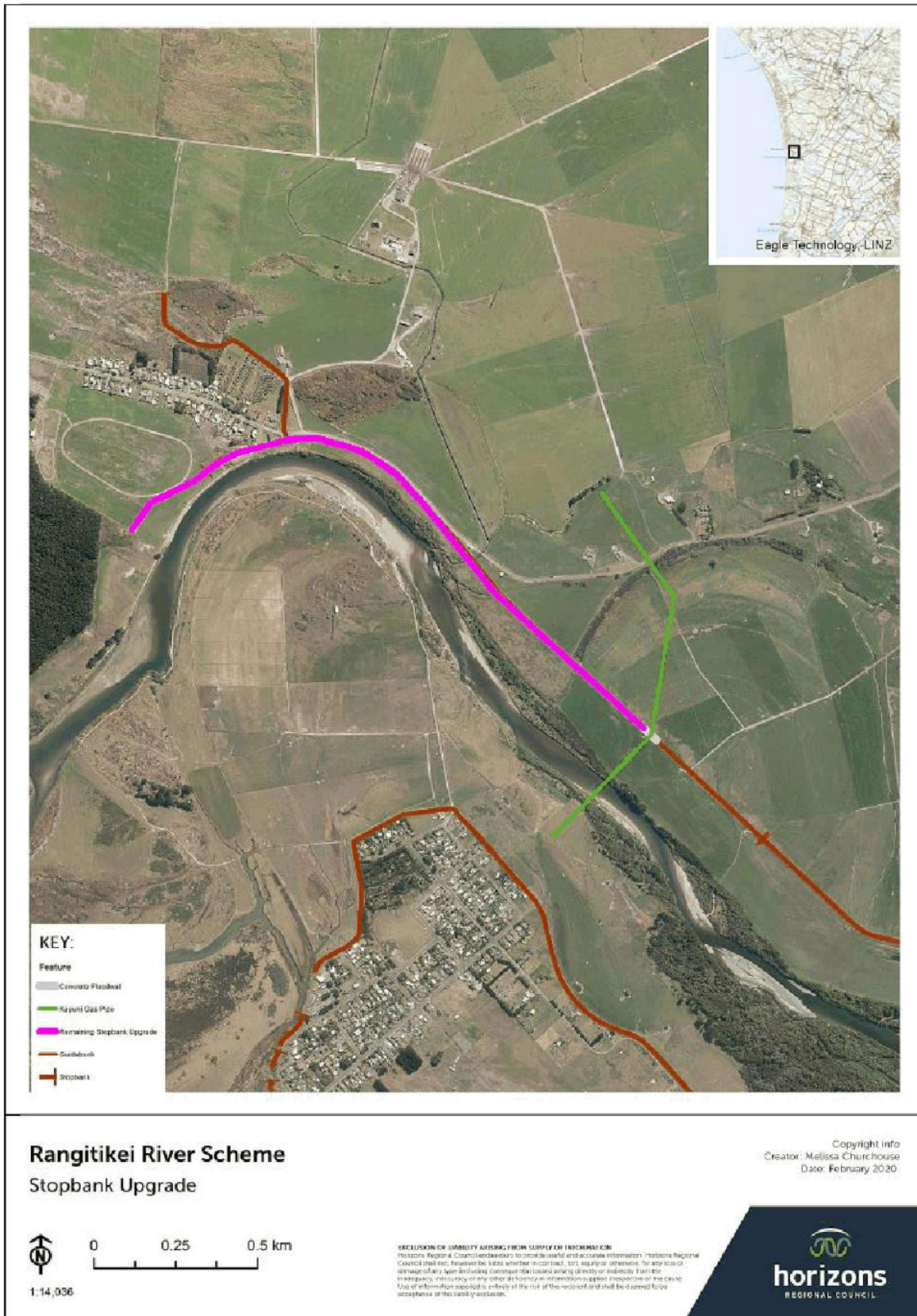
- 11.1. This is not a significant decision according to the Council's Policy on Significance and Engagement.

Wayne Spencer
AREA ENGINEER NORTHERN

Ramon Strong
GROUP MANAGER RIVER MANAGEMENT

ANNEXES

- A 2020 Parewanui Stopbank Upgrade Plan



Report No.	20-76
Information Only - No Decision Required	

LOWER MANAWATŪ SCHEME RURAL UPGRADE PROJECT UPDATE

1. PURPOSE

- 1.1. The purpose of this item is to update Committee members on progress with implementing the **Lower Manawatū Scheme (LMS) Rural Upgrade Project (RUP)**.

2. EXECUTIVE SUMMARY

- 2.1. The RUP represents the single largest direct investment in flood protection by Horizons, spanning 15 years with a total value in excess of \$50M. It's a direct response to the devastating February 2004 floods, with a focus on providing a consistent 100 year Return Period flood protection standard outside of Palmerston North.
- 2.2. The components of the project include modifications to Kopane Bridge and the construction of the Burkes pump station but the primary focus has been on stopbank raising, with the scope of work driven by freeboard deficiency; upgrading those sections more than 100mm lower than the 100 year Return Period flood level.
- 2.3. The integrity of the network is greatly improved with the upgrade work, particularly along the Oroua River where virtually the entire length from Feilding to Rangiotu has been raised / rebuilt. However around half the network has not been touched and there remain significant lengths where (notwithstanding the fact that those sections have seen a few floods) cross-sectional profile is not consistent with best practise for an engineered embankment; to height but with a less than desirable shape.
- 2.4. The RUP has, not surprisingly given the size, duration, diversity and complexity of the different components, faced a range of challenges that have ultimately seen the original budget and timeline exceeded. Arguably the most challenging component has yet to be completed – new stopbanking in the vicinity of Te Arakura Road; staff are not confident that the project will be completed next financial year. Further funding may also be required.

3. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 20-76.

4. FINANCIAL IMPACT

- 4.1. This project has been fully budgeted for through the 2019-20 and 2020-21 Annual Plans. The table below provides a summary of the key financial information:

2019-20 Budget	\$5.42M
Forecast 2019-20 Expenditure	\$3.2M
Estimated 2019-20 Carry-forward	\$2.22M
2020-21 Annual Plan Budget	\$400K
Total 2020-21 Budget	\$2.62M

5. COMMUNITY ENGAGEMENT

- 5.1. Community engagement with this project has mainly taken the form of meetings with both the scheme liaison committee and annual scheme meetings. Public meetings have been held from time to time related to specific issues (e.g. 2017 public meeting at Awahuri Hall, various meetings held at Kauwhata Marae).
- 5.2. Project completion celebrations were planned for April 2020 but those plans were put on ice early in 2020 with the issues around the Te Arakura Road section (clearly the COVID-19 lockdown would have had the final say in any event). A range of factors may make it difficult to plan any such celebrations in 2021 too far in advance.

6. SIGNIFICANT BUSINESS RISK IMPACT

- 6.1. Implementing the RUP significantly reduces business risk associated with the provision of LMS flood protection. Although much of the focus with the RUP has been on gross standards of protection, the work also strengthens a significant proportion of the network ultimately providing a higher level of operating reliability. This in turn, translates to a tangible and substantial (but not quantified) reduction in expected damage costs across a significant portion of the lower Manawatū River floodplain.

7. BACKGROUND

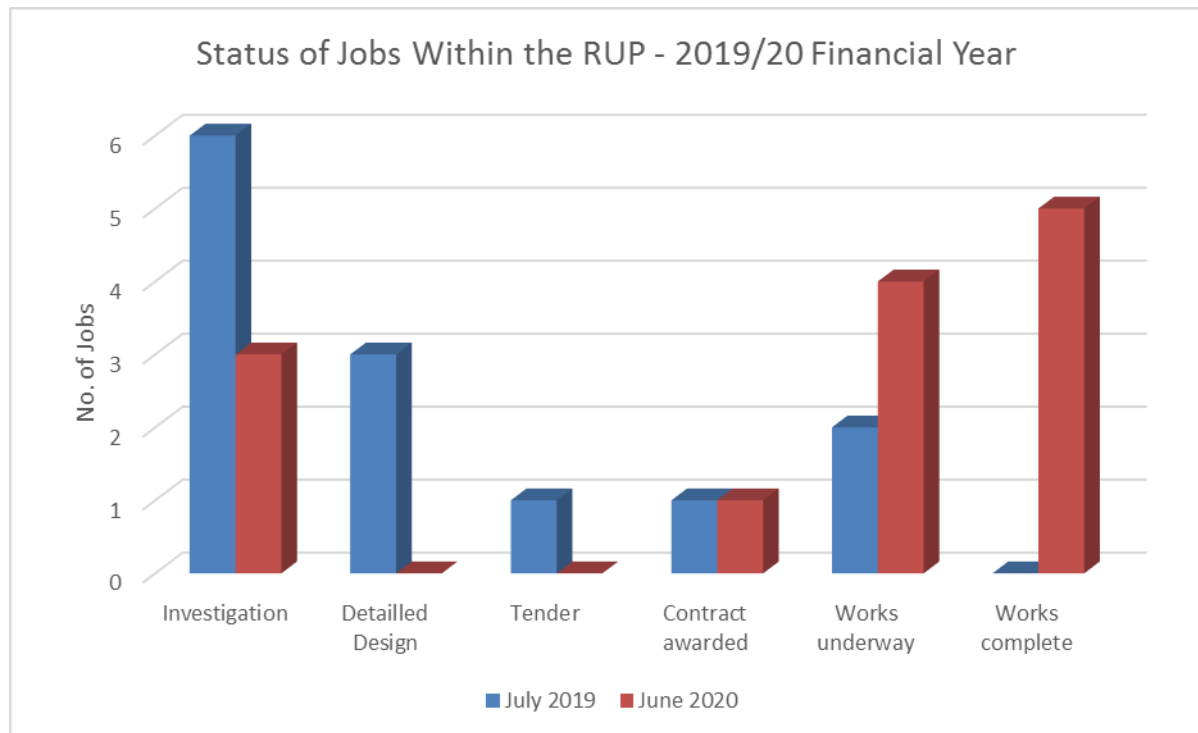
- 7.1. The RUP forms part of Council's response to the February 2004 floods, with the intent of providing a higher and more uniform standard of flood protection to those on the Manawatū floodplain outside of Palmerston North. Consultation took place in 2008 with the project formally adopted through the 2009-19 Long-Term Plan. Project scope has largely been determined using freeboard deficit criteria – where a section of stopbank has a freeboard deficit exceeding 100mm.
- 7.2. Delivering a project of this size and duration has provided a range of challenges. The scope of the project has evolved as it has progressed, requiring a range of value judgements to be made along the way. It has also been subject to a range of delays relating to consenting, the occasional poor construction season (wet summer) and accommodating the diverting of resources to address flood damage repairs. The project has also had to manage a range of weather-related risks, primarily a large flood event occurring at an inopportune time.
- 7.3. As we approach the end of this programme of work resource planning, stakeholder engagement and risk management are paramount to ensuring a successful delivery of the final projects in the 2020-21 construction season.

8. 2019-20 CONSTRUCTION SEASON

- 8.1. The budget at the start of the 2019-20 financial year was comprised as follows:

2019-20 Annual Plan Budget	\$231k
2018-19 Carry-forward	\$5.19M
Total 2019-20 Budget	\$5.42M
Forecast 2019-20 Expenditure	\$3.2M

- 8.2. At the start of the 2019-20 financial year there were 13 work packages to be completed. These jobs were at various stages between investigation and construction. The chart below illustrates the progress that has been made over the 2019-20 year.



- 8.3. The construction season started well for the delivery of the RUP. With contracts being let early in the financial year and settled weather before the Christmas break good progress was able to be made.
- 8.4. The relatively dry construction season has meant that, even with a number of contracts being temporarily suspended due to COVID-19, the upgrade work for the Manawatu and Tokomaru Rivers is now complete.
- 8.5. Although work to raise stopbanks along the Kara and Mangapuketea Streams (tributaries of the Tokomaru River – work visible from State Highway 57 heading north out of Shannon) started relatively late in the season that work would have been completed but for the COVID-19 lockdown. That work has been suspended for the winter and will recommence later in the 2020 calendar year when conditions permit.
- 8.6. Work to raise / rebuild the section of Oroua stopbank that protects Feilding (Johnston Park to the Railway Bridge) was also initially halted with the late March nation-wide lockdown but restarted toward the end of Level 4. That work has been completed.
- 8.7. The most notable event of the season related to the section of new stopbank intended to be constructed on the true (facing downstream) left side of the Oroua River between Feilding and Awahuri. Work over previous seasons had seen the upstream section of the structure built; protracted negotiations required a formal process to be followed with the southern section, with construction of that section completed early in the season.
- 8.8. The gap between those sections is broadly centred on Te Arakura Road, crossing a number of relatively small land parcels with very complex ownership. Discussions with the trustees of those land parcels began well in advance of the work programme and while concerns appeared to be resolved work was halted (and subsequently abandoned for the season) in January due to protest action.

9. REMAINING WORK PROGRAMME

- 9.1. The single largest package of works remaining to be completed in the RUP is the Te Arakura Road section of Oroua stopbanking. The January protests appear to be in part based on incorrect information provided by an adjoining landowner around alignment

options / alternatives available to Horizons. Staff have commissioned some detailed hydraulic modelling for this reach and that work will be digested along with other information before discussions with trustees around the available options takes place.

- 9.2. Other than the work on the Oroua River, much of the remainder of the RUP is made up of a number of relatively small packages of work. These include completing the Kara / Mangapuketea upgrade and the construction of bunds around two houses in the Taonui Basin, completing the mitigation work captured in resource consent conditions associated with the expanded basin floodwater storage.
- 9.3. With the aim of completing the RUP in the coming financial year staff will also be working to ensure that the project is fully closed out. This vital work will essentially form an audit of the RUP, to confirm that all of the upgrades have been carried out and that all relevant consent conditions and requirements have been met.

10. COMMENT

- 10.1. As noted earlier there have been a range of additions and deletions to scope during the latter stages of this project. Additions include land purchase at Rangiotu to enable the rebuilt stopbank to be set back from the Oroua River.
- 10.2. Deletions (deferrals) include the Te Matai Road section of stopbank east of Palmerston North, where the overlap between the Manawatu and Stoney Creek floodplains requires specific / detailed investigation and analysis. Upgrade of a section of the Tokomaru stopbank adjacent to the Makuerua Swamp (proper name) was also deferred pending the development of a plan for enhancing the health of the wetland (the wetland borders the Tokomaru River), a joint Horizons, Department of Conservation, Rangitaane and Raukawa initiative.

11. SIGNIFICANCE

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

Kyle Russell
OPERATIONS MANAGER

Jon Bell
MANAGER INVESTIGATIONS AND DESIGN

Ramon Strong
GROUP MANAGER RIVER MANAGEMENT

ANNEXES

There are no attachments for this report.

Report No.	20-77
Information Only - No Decision Required	

POHANGINA GRAVEL RESOURCE STUDY

1. PURPOSE

- 1.1. The purpose of this report is to inform members of the findings of an updated assessment of the gravel resource of the Pohangina River (from just above the confluence with the Makawakawa Stream to the Manawatū River confluence).

2. EXECUTIVE SUMMARY

- 2.1. The study concludes that the gravel resource in the Pohangina River has aggraded by approximately 147,100 cubic metres since it was last surveyed in 2012, which equates to around 24,500 cubic metres per annum.
- 2.2. While the study has concluded that overall the river has aggraded there are sections of the river which also display a loss of gravel. It also notes that in the lower part of the reach between Hanlon Road and the Manawatū River confluence the river was in a significant degradation state in the previous study. The resource is currently in a recovery phase and has not yet returned to pre-2012 levels and as such, a continuation of the current management regime is recommended.
- 2.3. Recommended limits that were set in the previous study have been revised and while most of the conclusions are to retain those limits in the lower reaches of the river, there is potential to increase extraction above Raumai Bridge.

3. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 20-77.

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.

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 Pohangina River was last surveyed in 2012 with the study completed in 2013. This study builds upon those findings with information gathered by cross sectional survey carried out in October-November 2018.
- 7.2. The Pohangina 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 which include informing the management of the river and its gravel resource.
- 7.3. Historically, the Pohangina River between the 21 and 1 mile marks has been frequently surveyed. Gravel extraction has necessitated the need to understand how this activity has affected the physical characteristics of the river. Over recent years the river survey has formed part of the fluvial programme, funded through levies associated with gravel extraction consents.

8. DISCUSSION

- 8.1. The study examined the gravel resource of the Pohangina River based on an analysis of river cross section information and gravel extraction records. It covers the 21 mile reach of the River just upstream of the confluence with the Makawakawa Stream downstream to the confluence with the Manawatū River.
- 8.2. Data comparison found that between 2012 and 2018 overall the gravel resource of the river has aggraded by approximately 147,100 cubic metres. This equates to approximately 24,500 cubic metres per annum.
- 8.3. The study has found that between 2012 and 2018 there were two consents for gravel extraction from the Pohangina River, one of which expired during the study period, leaving the global consent held by Horizons Regional Council's River Management Group remaining current as of 2020. A majority of the gravel extraction occurred under this consent over the study period.
- 8.4. The One Plan (Table 17.1 – Long term average annual allocable volumes of gravel) considers the Pohangina River as one gravel extraction reach with an allocable volume of 25,000 cubic metre per annum. Following on from the recommendations of the 2013 study gravel extraction occurred at a rate of around 15,000 cubic metres per annum between 2012 and 2018. The findings of this study have found that gravel extraction could occur at a rate of 20,000 cubic metres per annum as long as areas of aggradation are targeted.
- 8.5. The study recommends that the Pohangina River should be resurveyed in 2023-2024 so the gravel trends can be re-analysed.
- 8.6. The study looked at how recent trends compare with those observed in the 2013 study. It found that the trend of degradation noticed between Hanlon Road and the Manawatū River confluence, which includes the Rail Bridge, has reversed and aggradation of the gravel resource is occurring in this section, evident with the piles that support the Rail Bridge piers less visible than they were. As such, the recommendation is to continue the current management regime in this reach of the river unless there is a specific river management requirement for gravel extraction.
- 8.7. It was also found that with the reach from Pohangina township to the Makawakawa Stream the aggradation trend identified with the last assessment has reversed with a small amount of degradation occurring. This is likely due to the dynamic nature of the river and a trend that could reverse again with the next assessment.
- 8.8. The 2013 study recommended setting limits for gravel extraction for different sections of the gravel reach. This study suggests that some of these limits should remain as per the 2013 assessment but noting that due to the dynamic nature of the river these recommended limits. Increased extraction outside the recommended limits should only

occur if there is a river management requirement with the overall extraction amount not exceeding what is provided for in the One Plan.

9. SIGNIFICANCE

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

Ella Whale
RIVER MANAGEMENT ANALYST

Jon Bell
MANAGER INVESTIGATIONS AND DESIGN

ANNEXES

There are no attachments for this report.

Report No.	20-78
Information Only - No Decision Required	

LAND MANAGEMENT PROGRESS REPORT

1. PURPOSE

- 1.1. This report covers work carried out by the Natural Resources and Partnership – Land Management team for the period 1 February to 30 April 2020, and proposed work up until 30 June 2020. It includes the activity areas of **Sustainable Land Management Initiative** (SLUI), Regional Land and Coast, and Nursery.

2. EXECUTIVE SUMMARY

- 2.1. This report focusses on the operational targets of the Annual Plan 2019-20 Land Management Activity for SLUI, Regional and Coast, and Nursery budget activity areas. It also provides updates on the contract targets with **Te Uru Rakau** (TUR) regarding delivery of the SLUI programme. The annex provides a more detailed update on progress.
- 2.2. At the time of writing this report autumn rains and mild conditions had helped stimulate pasture growth but more rain was needed, especially to fill dams and boost stream flows. The dry conditions and Covid 19 lockdown had impacted on farmers ability to sell stock and concentrate on building up reserves of winter feed.

SLUI

- 2.3. The SLUI programme has entered into a new four year funding contract with TUR. The Hill Country Erosion Fund contract provides for over \$6.4 million in funding over four years. This year is year one with the TUR contribution being \$1.734 million, the Horizons' contribution \$3.677 million, and an estimated landowner contribution of \$2.390 million in cash, and \$0.428 million in-kind providing a total estimated budget of \$8.229 million.
- 2.4. The **Whole Farm Plan** (WFP) programme is contracted to complete 22,500 ha of new plans plus another 1,000 ha of one off paddock maps. At present 57 plans covering 25,932 ha are allocated for the year. We are awaiting information from a further 55 farms (over 35,000 ha) who have progressed in the process of obtaining a farm plan. The interest in farm plans has increased following the governments release of consultation documents around freshwater management.
- 2.5. The environmental works programme is contracted to complete 3,440 ha of "on the ground" works. The programme currently has 4,625 ha of works allocated for the year and experience shows not all of this will be delivered within the year. The expanded budget for grants this year is \$2.337 million, allocation levels indicate up to \$3.701 million of grants of Ministry of Primary Industry and Horizons funding indicating that Horizons SLUI reserves will be used during the year. Staff have worked hard during Level 3 and 4 lockdowns to contact landowners and obtain a clearer picture of likely work completion.

Regional and Coast

- 2.6. The Regional and Coast programme is funded via general rate, it targets advice and grants for erosion control works on a one off basis largely outside of the SLUI contracted area and in funding partnership with the **Whanganui River Enhancement Trust** (WRET) within the Whanganui River Catchment. In total 175 ha of land is targeted for erosion control works. At this point in the year 202 ha of works have been allocated between the combined programmes, with 41 ha of work completed within the Whanganui Catchment Strategy programme and 90 ha in the wider environmental grant programme.

- 2.7. The Industry Partnership programme proposes supporting five initiatives promoting sustainable land use and good management practice on farms within the region. Funding partnerships exist with the New Zealand Farm Environmental Trust and the Poplar and Willow Research Trust. Other programmes are supported as funding and opportunities allow.
- 2.8. The Soil Health programme maintains the Regional State of the Environment soil quality monitoring programme through a regional network of soil health assessments, and a general advice programme around soils and soil health.
- 2.9. This programme is well underway, with the major partnership programme involving funding for the regional Ballance Farm Environment Awards, with 2019-20 being completed through an online video after the awards dinner set for the 19th of March was cancelled due to Covid 19. Woodhaven Gardens has been named 2020 Regional Supreme Winner.

Nurseries

- 2.10. Council operate a number of poplar and willow pole nurseries to produce planting material for erosion control programmes. The aim is to produce or source 30,000 poles.
- 2.11. The 2019 winter pole season has been completed, with provisional numbers showing 31,732 poles distributed to landowners.
- 2.12. Dry conditions in the nurseries are affecting pole growth, this along with an anticipated drop in pole supply will impact on the number of poles able to be harvested in winter 2020.

3. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 20-78 and Annex.

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. Te Uru Rakau (TUR) has a key role in part-funding and overseeing the SLUI section of this activity. The year end level of delivery for this programme and budget projection remain difficult to project due to changing situational conditions including contractor availability, lack of autumn pasture growth, delays due to Covid-19 restrictions and potential new government legislation.

6. SIGNIFICANT BUSINESS RISK IMPACT

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

7. SIGNIFICANCE

- 7.1. 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 Land Management progress report



LAND MANAGEMENT ACTIVITY – 1 FEBRUARY 2020 TO 30 APRIL 2020

1. OVERVIEW

- 1.1.1 The purpose of this report is to update Council on the Land Management activity within the **Sustainable Land Use Initiative** (SLUI), Regional and Coast, and Nursery activities carried out under the Annual Plan, the **Te Uru Rakau** (TUR) contract, and the Operational Plan for the year to date. The report is presented in five sections:
1. Activity over the last reporting period and upcoming activity;
 2. Report on progress against the Annual Plan, and contract outputs;
 3. SLUI activity by Whole Farm Plan production, work completed life-to-date and year-to-date, and against Operational Plan targets;
 4. Regional and Coast work completed against year-to-date and Operational Plan targets; and
 5. Nursery activity.
- 1.1.2 The Land Management programme's primary activity is to reduce hill country erosion in order to increase the resilience of the region to storm events and improve water quality. The **Sustainable Land Use Initiative** (SLUI) is the main component of the programme. It has more than 557,000 ha of farm plans across 764 farms and aims to complete approximately 3,440 ha of erosion control works and 22,500 ha of new farm plans in the 2019-20 year.
- 1.1.3 Beyond hill country erosion control, the Land programme also supports industry partnerships, including the Ballance Farm Environment Awards and events that enable discussion among industry professionals and farmers around land management activity. The Land Management team also provides support to the regulatory teams around the implementation of the **National Environmental Standard for Plantation Forestry** (NES-PF) and the implementation of One Plan policies and rules around land disturbance and vegetation clearance.
- 1.1.4 Management of poplar and willow nurseries in order to provide the necessary materials for the hill country erosion work is the final component of the Land activity. Upgrades to Horizons' Woodville nursery will continue this year. The programme aims to produce and plant more than 30,000 poplar poles

- 1.1.5 The Annual Plan and contract targets are agreed, with the latest **Ministry of Primary Industries** (MPI) contract signed in August 2019. This commits MPI funding of more than \$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.
- 1.1.6 Operational Plan targets for 2019-20 were approved by Council at a Strategy & Policy Committee meeting on 10 September 2019. 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 & 5-5).

2 ACTIVITY

2.1 ACTIVITY DURING LAST REPORTING PERIOD

- 2.1.1 This activity report relates to the period 1 February 2020 - 30 April 2020 and includes the initial part of the Covid-19 lockdown which began on 25 March. Land Management staff were set up to work from home with varying standards of computer equipment and internet access. While in lockdown, staff concentrated on contacting landowners and updating progress with outstanding works to be completed this financial year along with proposed winter planting programmes. A paperless electronic claim system was instituted with staff being able to enter 80 claims on jobs they had completed before lockdown.
- 2.1.2 An email was sent to SLUI WFP landowners at the early stage of lockdown, advising them of our work plans and asking that if they had any queries or work completed to get in touch.
- 2.1.3 A number of scheduled events and programmes were disrupted during lockdown, including the Land Managers' **Special Interest Group** (SIG) meeting in Wellington (since held virtually in three sessions), a Te Ao Māori and Mātauranga Māori workshop, the Ballance Farm Environment Awards dinner and subsequent field day on the regional winner's farm. The field trip for the Massey Advanced Soil Conservation Certificate was changed to a virtual field trip with support from staff, and the Technical Advisory Group meeting for the Poplar and Willow Research Trust was postponed until September.
- 2.1.4 February and most of March continued to be warm and dry. Staff in Taumarunui report the driest summer since 2008, and in Tararua the dry conditions were similar to the late 1990s. Late March and April saw good rainfall over most of the region and this was combined with warm conditions, promoting grass growth. Farmers remain concerned over winter feed levels and dry dams, especially as Covid-19 lockdown has resulted in lower meat works capacity and only online stock sales. Many farmers have more stock on hand than normal and are very concerned about winter feed levels. This has prompted some farmers to postpone winter afforestation projects as they feel they will need all the grass areas they can get to use for winter grazing.
- 2.1.5 Despite the dry conditions we are still reporting reasonable establishment of poles, however survival rates as low as 50% are being reported in Tararua District and on sunny faces in the lower Whanganui and Rangitikei areas, but generally up around 80% elsewhere. As always, poles that are well sited, well planted and have had follow up ramming are doing well.
- 2.1.6 Staff were visiting landowners before lockdown and phoning landowners during lockdown. Generally, landowners had been over-optimistic about the amount of fencing they could

complete and a shortage of posts, fencers and six weeks of little to no work will mean a number of jobs will be carried over into the next financial year.

2.1.7 Work with **Te Uru Rākau** (TUR) on the SLUI contract has included completion of one milestone report noting progress with the programme, and in a wider sense with the **One Billion Trees** (1BT) programme. Horizons is continuing to support a proposal to agree on a “green lane” process for regional councils where councils could offer support to landowners in their 1BT applications. Other work with TUR has included putting together a proposal for staff support for some councils and an investment in capability and capacity (training programmes) for land management. These proposals are continuing to be worked on and progress is largely dependent on the processes and level of priority that TUR place on them.

2.1.8 Three site visits have been completed by the Land Management Advisor (Forestry) and the local Land Management Advisor to assess on-farm forestry proposals. Two have been delayed under Covid-19 lockdown.

2.1.9 Staff have assisted with input into possible “shovel ready” environmental projects for consideration by central government. This includes a proposal to expand SLUI from a 4,440 ha per year programme to a 5,000 ha per year work programme.

2.1.10 The autumn sampling round of soil health monitoring may not get completed. At this stage 75 of the proposed 100 sites have been established.

2.2 ACTIVITY OVER THE NEXT THREE MONTHS

2.2.1 During May - July staff will:

- Continue to keep in touch with landowners regarding grant work. Programmes that were over-allocated are likely to come in closer to budget;
- Work through claim processing, visiting farms and inspecting works;
- Complete Milestone reporting to TUR for the SLUI programme (May and June);
- Finalise a new time for SLUI Advisory Group meeting (this was originally planned for June but has been postponed until Covid 19 restrictions are eased further);
- Discuss work programmes for winter 2020, including on-farm inspections;
- Deliver completed farm plans;
- Liaise with local Balance Farm Environment Awards Committee over winner’s field day at appropriate time;
- Liaise with **Poplar and Willow Research Trust** (PWRT) to update pole trial sites in our region;
- Continue to liaise with **Ministry for the Environment** (MfE) over the government’s Freshwater proposals, with some expectation of progress before parliament rises in August;
- Continue monitoring/audit programme for SLUI plans, with the aim of having a report available to meet the TUR contract target of August 2020. Fewer inspections have been

carried out than planned but two more inspections will be enough to complete the programme for the year;

- Potentially continue silviculture programme in joint venture forests. Contractors had not returned to the site by early May as our SOPs for work under Level 3 limited options for getting staff on site. This work may not re-start until next year.

3 REPORT ON PROGRESS

3.1 ANNUAL PLAN AND CONTRACT TARGETS (2019-20)

3.1.1 The Annual Plan and **Hill Country Erosion Fund** (HCEF) contract targets for 2019-20 are shown in the table below.

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

MEASURE	ANNUAL PLAN	HCEF CONTRACT	TARGET	YTD	PREDICTED RESULT
Sustainable Land Use Initiative					
Erosion reduction works programmes in targeted SLUI catchments (ha)	3,100	3,440	3,440	1,707	On track to achieve target
Whole Farm Plan properties mapped per year (ha)	20,000	22,500	22,500	7,535	May not achieve target
Farm or paddock assessments mapped per year (ha)	-	1,000	1,000	0	Probably achieve target
Case study completed (number)	-	1	1	0	No action at this stage
Feasibility reports (number)	-	6	6	0	On track to achieve target
Regional and Coast					
Manage grant programmes to deliver erosion reduction works (ha)	175	-	175	131	Probably achieve target
Support industry initiatives that promote sustainable land use (number)	5	-	5	underway	Provisionally achieved target in modified manner
Nurseries					
Operate council nurseries and source additional commercial pole material to deliver poplar and willow poles to control erosion (number of poles)	30,000	28,000	30,000	31,732	Provisionally achieved, 31,732 poles sourced for farmers

COMMENT ON TARGETS

3.1.2 It is unclear if all targets will be met and much will depend upon how quickly work can be achieved following the change to Covid Level 2 and with on-farm work like mapping and property inspections, continued settled weather would be an advantage.

- 3.1.3 SLUI work claims are progressing and although Levels 3 and 4 slowed progress, 382 claims had been completed by the end of April compared with 324 at the same time last year. The largest number of claims by work type (178) has been for space planting (poplar and willow claims). The largest amount of work by work type has been afforestation with 971 ha claimed across 50 claims. The bulk of the afforestation has been radiata pine.

4 SLUI ACTIVITY

4.1 WHOLE FARM PLAN (WFP) PRODUCTION

4.1.1 WFPs are a tool for bringing new land into the programme and for allocating grants to farms on 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 into the programme.

Table 2: WFP production (life-to-date)

No. of Plans	Hectares	Comments
745	552,067	WFPs completed in SLUI to 30 June 2019
11	3,472	Plans completed in 2019-20 and delivered to landowners
8	4,063	Plans/ha mapped in 2019-20 but yet to be delivered to landowners
38	18,397	Plans on the list in 2019-20, and with contractor to complete
57	25,932	Equals (11 + 8 + 38) Plans on list to be mapped 2019-20 financial year
55	35,493	Information with landowner who is still to finally commit to a plan

4.1.2 All plans from last year's programme have been delivered to landowners.

4.1.3 There are 57 (25,932 ha) of plans allocated to the contractor in 2019-20. This exceeds the target for new WFP for the year. No new plans will be allocated unless they are deemed top priority, and this may be at the expense of a lower priority plan currently allocated.

4.1.4 Our contractor was unable to complete any field mapping under Level 4, and under Level 3 used a staff member based in Dannevirke to work only within the Tararua District. Under Level 2, with travel restrictions eased, another mapper will work out of Taihape or Feilding. The aim was to meet the target of 22,500 ha mapped by the end of June.

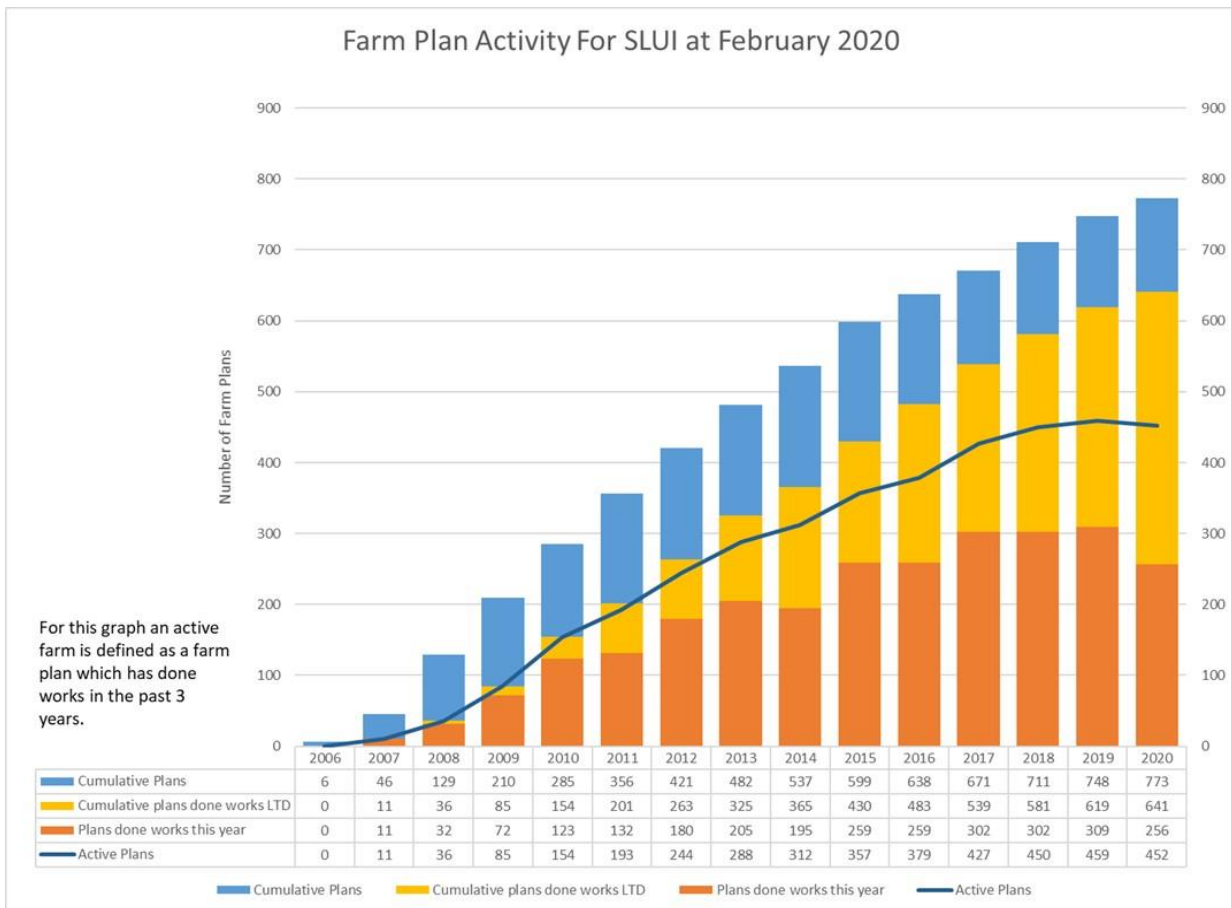
4.1.5 We are awaiting the return of information/documents from a further 55 farms accounting for 35,493 ha. Those with paperwork outstanding have been prioritised by: 1. having existing plans, 2. being on top priority and high priority land, 3. being in the Oroua Catchment, and 4. the likelihood of doing works. Some of those on the list who have had the information from Horizons for some time will be followed up with a reminder to provide the information, and if this is not provided by a certain date they will be removed.

4.2 WHOLE FARM PLAN ACTIVITY

4.2.1 The contract targets focus on the number of plans completed. The activity of individual plans over the life of the programme and on an annual basis is another measure of SLUI activity. The number of plans active in any one year can and does change.

4.2.2 Graph 3 is a new way of looking at the farm plan activity as a whole, and in any particular year. It is a "stacked column graph" where the orange, yellow and blue components of the column add up to the total number of plans in SLUI at the end of any given year. For example, in 2018-19

there were 746 plans completed over the life of SLUI, 619 plans had completed some works (83% active), 309 plans had completed some work in that year (41% of plans active in 2018-19). The blue line tracks "active" farm plans, where active is taken to be "has completed works in the last three years". In this instance the number of plans at the end of 2018-19 with some works completed in the last three years was 459 (62%). It is noted that the lower number of farms completing works in this year in the graph reflects the year only being partially completed at this stage.



Graph 1: Farm Plan Activity at April 2020.

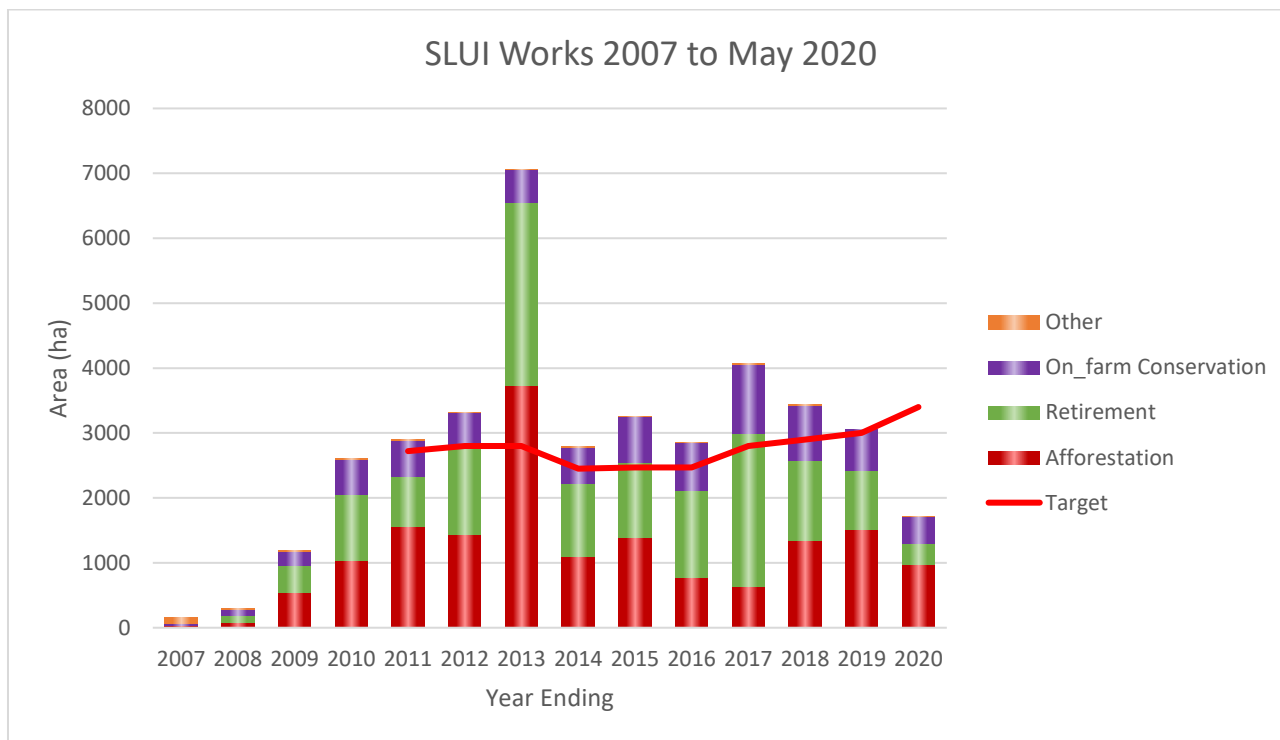
Table 3: Trend of active vs. inactive plans over the life of SLUI

Age of Plan	Total Plans	Active	Inactive	% Active
<2 years	62	24	38	39%
2-5 years	112	88	24	79%
>5 years	599	529	70	88%
Total	773	641	132	83%

- 4.2.3 The data in Graph 1 shows a trend of more active plans (yellow stacked column) it also shows that the number of plans active in any given three-year period (blue line) has grown, but has slowed over the last two years. There are a number of reasons for this, e.g older plans will have completed priority works and may be less motivated, landowners with more than one plan may be concentrating on one farm at a time, and if ownership changes or circumstances change plan works may be a lower priority. The blue line also shows a decrease for 2020. This is expected as this is a partial year at this stage. At present 382 claims have come to charge on 324 plans and we expect up to at least another 200 claims to be completed on approximately 130 plans. Some of these will be new plans undertaking their first works.
- 4.2.4 Table 3 shows the trend of plan activity, where the activity rate for plans more than five years old remains at 88%. There are 12 newly active plans Table 3 (641 vs 629 active plans) since the last report to the Catchment Operations Committee in March 2020.
- 4.2.5 Thirty-eight inactive plans are less than two years old, up from 23 in the March report, and this reflects the new plans completed late last financial year and this financial year being delivered to farmers. We expect the majority of these plans to become active over the next 12 months.
- 4.2.6 There has been no change in the activity rate of older plans in this report with 529 active plans at a rate of 88%.
- 4.2.7 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.
- 4.2.8 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.

4.3 SLUI LIFE TO DATE AND OUTCOMES

4.3.1 SLUI Life-to-date



Graph2: SLUI works completed by work type during the life of the programme against annual contract targets (red line). Note 2020 is a partial year at this stage. See Graph 3 for the change in job status through the year.

4.3.2 Each year since 2010 the contract target for hectares of works completed has been exceeded.

4.3.3 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 primarily due to uptake of the Afforestation Grant Scheme and retirement projects in association with Ngā Whenua Rāhui.

4.3.4 The 2017-18 year was the third largest work year, largely due to an increase in the afforestation category with more mānuka planted.

4.3.5 Until June 2019 afforestation (red) made up approximately 41 percent (15,540 ha) of the work completed and retirement/riparian retirement (green) was 39 percent (14,704 ha). These two work types account for the bulk of the hectares of work completed during the life of the programme.

4.3.6 On-farm conservation (purple) is predominantly space planting and gully planting with poplar and willow poles but also includes structures and earthworks. It makes up 19 percent (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.

4.3.7 The total hectares of work completed is around 38,000 ha, with 32% on top priority land, 31% on high priority land, 33% on erodible land and the remaining 4% on non-erodible land and 14,073 ha on erodible or non-erodible land.

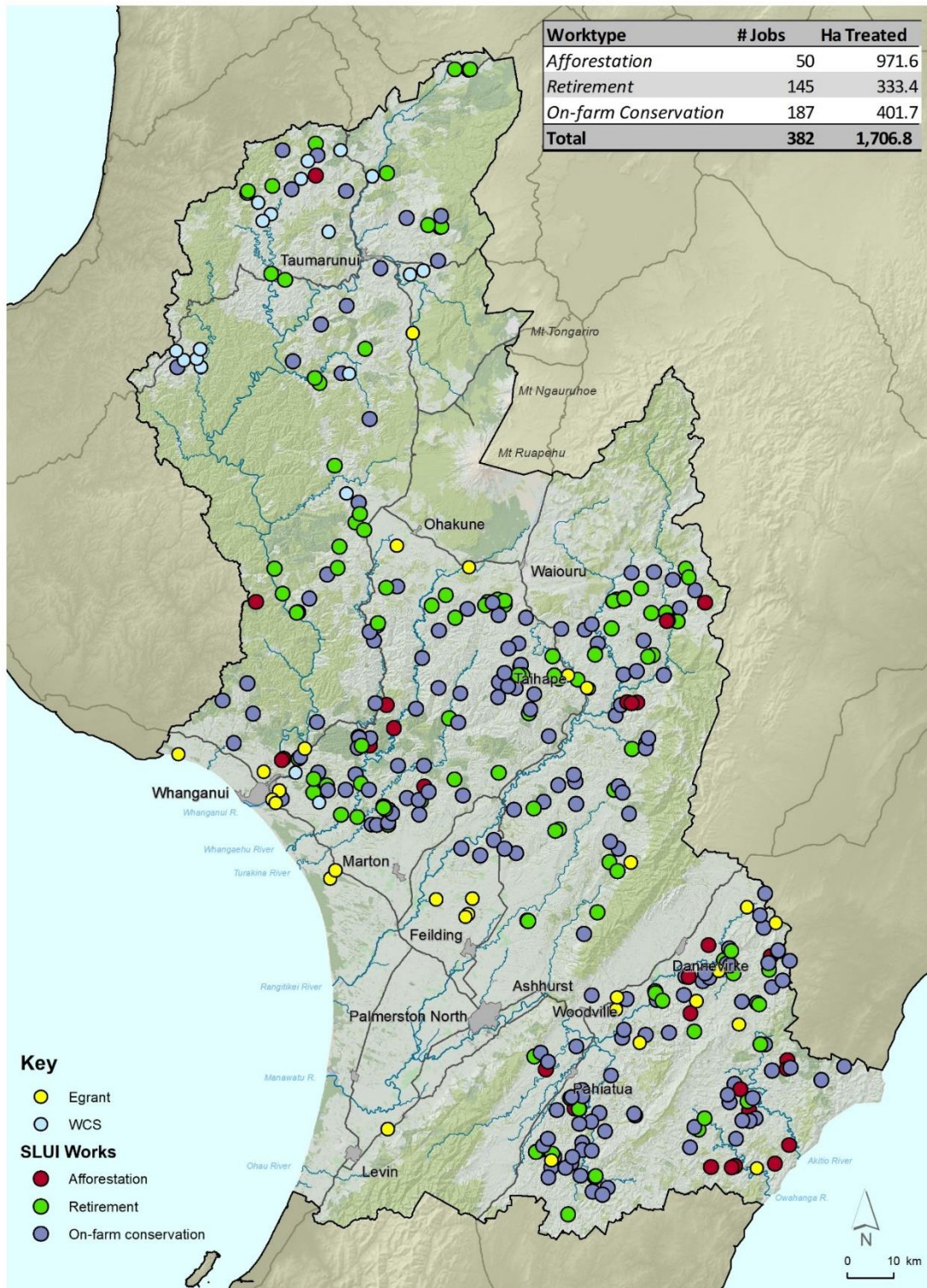
4.3.8 At the current rate of progress analysis suggests it will take 112 years to carry out works on all the top priority land that is currently in pasture (based on completing approximately 3,000 ha of work per year with 1,000ha on top priority land and around 500 of that in pasture. The other 500 ha being retirement of existing tree-covered land), and 252 years for all the high priority land that is currently in pasture. Current progress is slightly in excess of 3,000 ha per year, with this year estimated to be around 4,500 ha.

Outcomes for SLUI have been modelled by **Manaaki Whenua Landcare Research** (MWLCR) and this work was reported in the 2019 State of Environment Report (SOE) at page 19.

<https://www.horizons.govt.nz/CMSPages/GetFile.aspx?guid=a77bc2a4-381f-4660-8ef9-4e2486ac7165>

4.3.9 The MWLCR modelling reports:

- That SLUI works to date (June 2018) are estimated to have reduced sediment load in rivers by 835,000 tonnes (6%) with the greatest reductions (up to 19%) in the Kai Iwi, East Coast and Lower Rangitikei areas.
- With ongoing implementation of SLUI works at approximately the current pace, the average annual sediment load could be decreased by 27 percent and water clarity improved by 29 percent by 2043.
- Climate change, however, is likely to alter annual rainfall patterns and impact rates of hill slope erosion and river sedimentation, particularly in the northern and western areas of the region. Modelling suggests that this could result in a potential change to the predicted reduction in sediment load from 27 percent by 2043 to just 19, 12 or 5 percent under minor, moderate and major climate change scenarios, with the amounts varying across the region.
- Modelling also shows that New Zealand's largest hill country erosion programme, SLUI, may not offset the increases in sediment load from climate change in the longer term, as sediment loads in the river could increase by between 40 and 180 percent by 2090. This suggest the long-term effectiveness of work already undertaken through SLUI is expected to reduce under climate change, as heavier rainfall events increase sediment loading in the region's rivers.



2020 Worktype Locations

Map prepared by W McKay, NRP Group on 12/05/2020

Map 1: Location of all grant works completed this financial year to 30 April 2020 (SLUI and Regional and Coast).

4.4 YEAR-TO-DATE ACHIEVEMENTS

4.4.1 The table below shows the types of works completed and claimed this financial year.

Table 4: Works year-to-date (completed and claimed, by grant amount and land priority)

WorkType	2019-20				Priority Land Type (ha)			
	Claims	Farms	Grant \$	Total Ha	Not Erodible	Erodible	High Priority	Top Priority
Afforestation	50	27	521,006.78	971.6	51.3	198.8	500.2	221.3
Retirement	48	45	351,488.39	242.5	18.3	57.6	79.8	71.2
Riparian Retirement	78	52	406,199.89	71.7	14.0	21.1	23.5	13.2
Wetland Retirement	15	12	53,720.30	7.2	3.2	3.9	0.1	
Managed Retirement	4	4	16,584.13	12.1	0.3	1.4	4.9	5.4
Pole Planting	178	175	240,073.70	400.7	31.0	208.3	118.2	43.2
Structures/Earthworks	5	5	18,822.70	0.3		0.2	0.1	
Other	4	4	11,308.38	0.8	0.3	0.2	0.3	
Grand Total	382	324	1,619,204.27	1,706.8	118.4	491.4	727.2	354.2

4.4.2 The 1,707 ha of works completed and claimed is 50% of the full year target of 3,440 ha.

4.4.3 Hectares completed by land type shows 1,081 ha (63%) of work claimed to date is on high priority and top priority land. The bulk of this work has been completed on afforestation projects.

4.4.4 There have been 382 claims completed to date on 324 farms and we have allocated 618 claims (down from 671 earlier in the year).

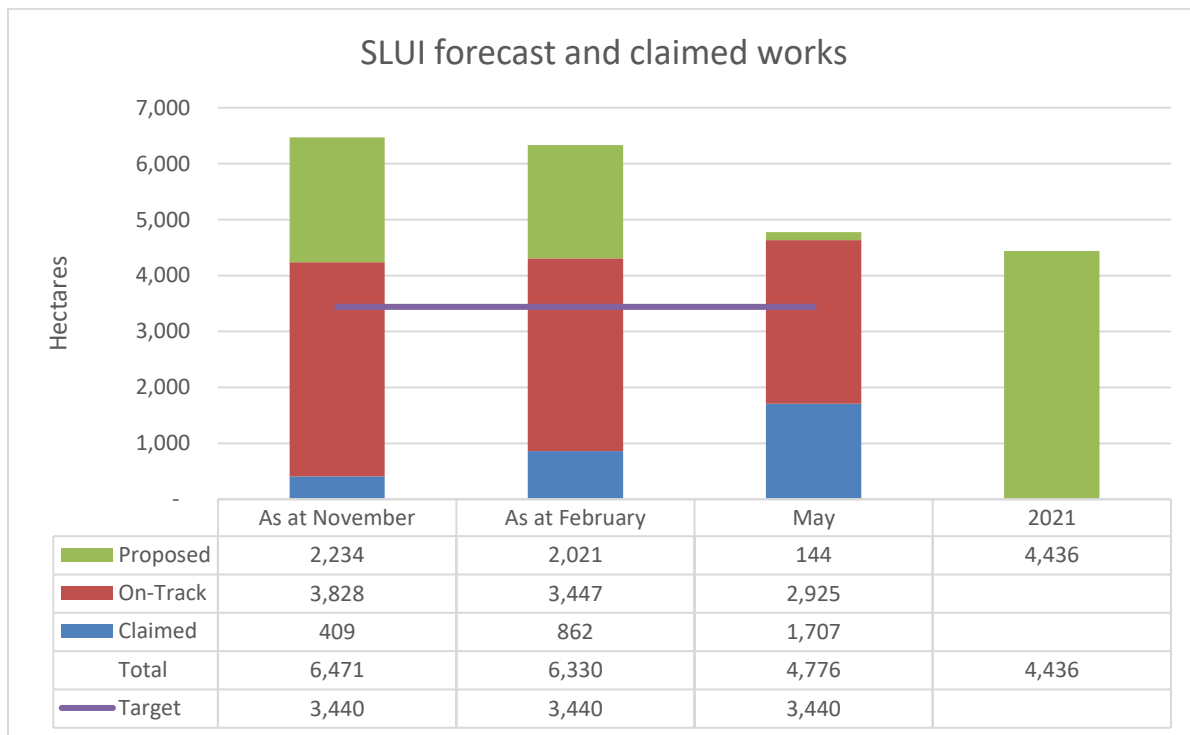
4.5 FORECAST VS ACTUAL (TARGETS VS ACTUAL BY WORK TYPE)

4.5.1 Table 5 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. The dollars shown in the table are the grant cost. Covid-19 impacts add considerable uncertainty to forecasts for works completed by the end of the financial year.

Table 5: Work this financial year (contract vs forecast vs actual by hectares and dollars).

Work Type	Hectares				Dollars \$ x 1000			
	Contract Target	Forecast	Actual	Actual vs Contract	Contract Target	Forecast	Actual	Actual Vs contract
Afforestation	1,460	1,836	971	-484	1,097	1,396	521	-576
Retirement	850	1,811	243	-607	426	856	351	-75
Riparian Retirement ^{*A}	220	404	72	-148	358	997	406	+48
Wetland Retirement	See above	27	7	-		55	54	-
Managed Retirement	90	66	12	-78	26	53	17	-9
Space Planting & Gully Planting	810	474	401	-409	340	297	240	-100
Structures/Earthworks	10	1	1	-9	30	19	19	-11
Other (inc. blank)	-	6	1	-	60	53	11	-49
Total	3,440	4,625	1,707	-1,733	2,337	3,701	1,619	-718

*A – includes wetland



Graph3: Changes to SLUI job status through the year and the works allocated for the next financial year. On track is where the Land Management Advisor has re confirmed the work with the landowner or is confident the work will proceed. Graph 3 updates Table 5 with more recent forecasts.

- 4.5.2 Table 5 compares contract target (ha and \$) to forecast and actual. There can be wide variation in individual work targets, in reality the contract is to deliver 3,440ha and the mix of work type will change from year to year. Graph 3 tracks the changes in amount of work and the certainty of that work being completed over the course of the year as understood through conversations with landowners, and into next financial year.
- 4.5.3 Graph 3 shows that the jobs allocated at the start of the year include a high proportion of "proposed" works. These are often fencing projects planned for summer and autumn. The "On-Track" jobs are primarily jobs associated with winter afforestation or space planting. As the year progresses the ratio of proposed, on-track and claimed works changes.
- 4.5.4 Current allocation includes jobs recorded as claimed, on-track and proposed. We expect very little of the proposed work will come to charge, however there is still a large amount of on-track work. In these cases, landowners have been contacted and remain committed to completing the works. However, past experience tells us there will still be a proportion of this work not completed in time to claim by 30 June. There is \$331,000 of proposed work which we would think is unlikely to be completed. There is another \$1,606,000 of on track work which if all came to charge would total \$3,313,000. This amount is in excess of the contract target of \$2,337,000 but can be accommodated through approved reserves use.
- 4.5.5 The hectares of work allocated for completion has also dropped from 6,471 ha in November to 4,776 ha in May. This is still well over the contract target of 3,440 ha
- 4.5.6 In order to meet these work targets staff will have to complete more than 200 claims on 130 farms between mid-May and the end of June. Some work and funding will need to be carried over into the 2020-21 financial year.
- 4.5.7 We have already allocated approximately \$3.2 million of grant spending (4,436 ha) to the 2020-21 financial year.

4.6 JOINT VENTURE FORESTRY OPERATIONS

- 4.6.1 Horizons has interests in 10 **joint venture** (JV) forests (under a registered Forestry Right) with a net stocked area of 1,387 hectares. A report on these forests was provided to Council in April 2017 and another report is planned for early next financial year. Work and expenditure in the forests includes rates and insurance payments, maintenance of tracks and fences, pest control, audits and inspections, monitoring and measurements, arranging silviculture, valuations for external audit, maintaining Emission Trading Scheme registration and reporting, and liaising with landowners.
- 4.6.2 An independent forestry consultant has completed the annual forestry valuation as required by our auditors. This year the valuation included an update of the growth models using plot data taken in the forests. The valuation was completed in March and made some assumptions

regarding log value from March through to June, but overall uses a 36-month rolling average of log prices. The valuation increased over the year due to:

- The forests are one year closer to harvest, thus reducing the discounting effect on current net value,
- The expected harvest yields have been re-run using recent growth measurements,
- A new three-year average log price at March 2020 (32 of 36 months with assumption that for April 2020 to June 2020 prices would be in line with March),
- Decreased rail process assuming rail to New Plymouth rather than Napier or Wellington.
- These increases have offset:
 - An increase in insurance cost,
 - The recent downturn in log prices (January to March 2020),
 - Increased internal roading and infrastructure costs.

4.6.3 At the March Committee meeting we reported on a fire in the Wickham (now Roswick) JV forest on the Whanganui River Road. Follow up assessments and access track maintenance have been completed and damage is limited to approximately 1.0-2.0 ha. This was assessed and accounted for in the forestry valuation.

4.6.4 Thinning to waste and quality control plots have been completed on Wright's forest and a small amount on Roswick's.

4.6.5 Maintenance of access tracking has been completed on Thompson's forest. This has included pruning and removal of some edge trees. The maintenance will improve access for weed control (areas of old man's beard were discovered and reported to the Biosecurity team), silviculture and any potential fire suppression.



Photo 1: Track maintenance with excavator on Thompsons JV forest. Photo Josh Penn.

4.7 SLUI OPERATIONAL PLAN TARGETS

The SLUI operational plan targets were presented to the Strategy and Policy Committee of Council in the Operational Plan 2019-20 by Natural Resources and Partnerships on 10 September 2019. The SLUI Operational targets made up section 2.2 of that plan.

COMMENTS ON OPERATIONAL PLAN TARGETS

- 4.7.1 Contract management is on track with Milestone reports completed until the end of March and two reports due at the end of May and end of June.
- 4.7.2 Farm Plans are fully allocated for the year. Staff do have the ability to move any “top priority” farms forward and these will be added to the work programme for the year.
- 4.7.3 Grant administration is on track and staff have a new grant document for making grant allocations. Under Covid Level 4 staff moved to electronic grant claims. This has worked reasonably well but involves a little more administration at the approval level.
- 4.7.4 Upgrading of the SLUI database has fallen behind schedule due to the Covid lockdown. The aim of having a new system for staff to use in the field by 1 July will not be achieved. Staff are hoping to re-start work once under Level 2 and still get improvements to the reporting functionality completed this financial year.
- 4.7.5 Entering the joint venture forestry data into the new **Asset Management Information System** (AMIS) and user analysis data testing is complete. The system still requires more development.
- 4.7.6 There were six SLUI scholarship applications this year. Assessment of these has been delayed and a final decision on successful applicants will be made before the end of May.

5 REGIONAL AND COAST ACTIVITY

5.1 PROGRESS ON ENVIRONMENTAL GRANT AND ADVICE

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 **Whanganui Catchment Strategy** (WCS) grant. Under the WCS, support from **Whanganui River Environmental Trust** (WRET) enables a greater variety of work to be funded and at higher grant rates in some areas.

Table 6: Work area and budget expenditure for the year to date

Grant Type	WORK AREA (ha)				BUDGET (\$)			
	AP Target	Allocated	Complete	AP % Complete	AP Budget	Allocated	Complete	AP % Complete
WCS	75	75	41	55	113,000*1	157,387	129,759	115
RL&C	100	154	90	90	80,000	125,993	54,861	69
Total	175	214	131	75	193,000	283,380	184,620	96

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

- 5.1.2 A total of 134 projects (130 last reporting period) have been allocated to date (78 in Land and 56 WCS). Fourteen of these projects have been cancelled or transferred into the next financial year, leaving 57 projects to be completed at the end of April. Both the Land and WCS grant budgets are over-allocated and the new SLUI contract enables these works to be charged (and accounted for) in SLUI. Some of these jobs will be transferred to SLUI.
- 5.1.3 Space planting accounts for 61 of the 134 projects, riparian retirement 40 and retirement six.
- 5.1.4 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.
- 5.1.5 One Environmental Property Plan has been completed and one is proposed. These plans are a low priority, usually with small holdings and are completed as and when staff have time. They are a good way of training staff in land mapping and plan writing.

5.2 INDUSTRY PARTNERSHIPS

BALANCE FARM ENVIRONMENT AWARDS

- 5.2.1 The Ballance Farm Environment Awards Regional Supreme Winner evening was to be held on 19 March with the winner's field day set for April. Unfortunately, the awards evening was cancelled and replaced by a video presentation which outlined the entrants and winners for the year.
- 5.2.2 Woodhaven Gardens has been named 2020 Regional Supreme Winner, the first vegetable growing enterprise to win the supreme award in our region. In addition to the supreme award Woodhaven received the following:

- Hill Laboratories Agri-Science Award;
- Norwood Agri-Business Management Award;
- Synlait Climate Stewardship Award;
- WaterForce Wise with Water Award.



Photo 2 John and Jay Clarke, Woodhaven Gardens, Photo courtesy BFEA

The 2019-20 regional awards video can be found on the following link:
<https://www.nzfeatrust.org.nz/horizons-award-winners-2020>

5.2.3 Other Horizons 2020 award winners were:

- Brendon & Rachel Williams, Pencoed Trust – Marton;
- Tony & Lynda Gray, Kinross Partnership – Apiti;
- Mark Johnston & Rebecca Jeffery, Ruahine Range Views – Dannevirke;
- Chalky & Lesley Leary, Onga – Hunterville;
- Dave Milne, Lakeview Farm – Levin (winner of the Margaret Matthews Trophy for Commitment to Sustainability).

5.2.4 The Trust is still planning to run the regional winner's field day and the national showcase event in the next financial year.

POPLAR AND WILLOW RESEARCH TRUST

5.2.5 A new funding agreement was signed with the **Poplar and Willow Research Trust** (PWRT). This commits Horizons to supporting the Trust with funding of \$25,000 per year over the next three years.

5.2.6 PWRT have produced a draft Nursery Managers' Manual.

BEEF AND LAMB NEW ZEALAND

- 5.2.7 Staff discussed with Beef and Lamb NZ the potential to make Visual Soil Assessment an on-line tool.
- 5.2.8 Horizons are contributing to the winter grazing campaign coordinated by Beef and Lamb NZ. This campaign, which has run over the previous two winters and has support from industry players as well as Regional Councils, targets farmer publications and social media.
- <https://beeflambnz.com/wintergrazing>

HORIZONS REPRESENTATION AT EVENTS

- 5.2.9 Staff have attended and presented at a number of events, either in person before Level 4 lockdown or virtually since. They include:
- Support with soils information to the new agriculture teacher at Taihape Area School,
 - Input into the One Billion Trees government-funded study for integration of trees on-farm in the Rangitikei area and input as part of the Land Managers' Special Interest Group to a funding application led by **Beef & Lamb NZ** (B&L NZ) for workshops supporting trees on farm,
 - Support for the Rangitikei Catchment Group, providing maps and advice,
 - Attended the Vinegar Hill water reticulation group meeting, potentially supplying more maps to help in planning of the project,
 - Attended and spoke at Taumarunui Rural Professionals' breakfast,
 - Attended B&L NZ Land and Environment Plan workshop at Ongarue (Ruapehu District) with a follow up request for a SLUI plan, and an Indigenous Biodiversity workshop at Hunterville,
 - Attended a Red Meat Profit Partnership meeting at Te Uri (Taranaki District) and spoke about SLUI funding,
 - Attended proposed Pohangina Catchment group meeting,
 - Attended a Farm Forestry Association cypress field day at Okota forest near Hunterville, and
 - Attended a Dairy NZ / NIWA constructed wetland Webinar, a native plant identification workshop, and NZ Institute of Primary Industry Management seminar on greenhouse gas emissions.

5.3 SOIL HEALTH

- 5.3.1 The autumn programme was planned to commence in May but was prevented due to Covid-19 limitations. It is unlikely the 10 sites proposed will be completed this autumn due to time constraints and other priorities.

5.4 WHANGANUI CATCHMENT STRATEGY (WCS) AND WHANGANUI RIVER ENVIRONMENTAL TRUST (WRET)

5.4.1 Work programmes in the upper Whanganui-Ruapehu area are slightly behind target and farmers in the area have had to deal with a very dry summer. Environmental work programmes generally become lower priority when feeding and getting water to stock, and finding space at meat works are priorities. During lockdown staff have been in touch with landowners with work programmes, and by the end of April, 29 of the 56 projects had been completed and only two cancelled. The bulk of the projects left to complete involve fencing and riparian retirement. There will be a rush to get projects finished by the end of the financial year on June 30 and it is likely some will transfer to the next financial year and a few additional jobs may be cancelled.

5.4.2 Staff have continued to liaise with WRET regarding funding of the works programme.

5.5 SUPPORT FOR CONSENTS AND COMPLIANCE

5.5.1 Advice to landowners regarding the need for consents or compliance for a number of activities which may be permitted or require consent, including:

- Two on vegetation clearance, culverts and complaints regarding cattle in a river;
- One tracking;
- One consent for four-wheel drive activities;
- One soil interpretation regarding siting of a new dairy shed;
- One erosion mapping regarding proposed vegetation clearance; and
- One complaint regarding burning received during lockdown.

6 NURSERY

6.1 WORK PROGRAMME TO DATE

6.1.1 WRET-supported nurseries in the Ruapehu District:

- Thinning and pruning, and copper and ground spraying, were completed before Level 4 lockdown;
- Pole counts were completed at the end of April and there are six sites to harvest this year with approximately 2,200 poles to be produced;
- Plans to replant the leased Ohura nursery site have been put on hold;
- Whio (Blue Duck) nursery has plans to expand this winter.

6.1.2 Woodville:

- Pruning began in mid-February but was interrupted by lockdown, and will now be completed after winter pole harvest as contractors are committed elsewhere;

- Nursery work recommenced on 29 April at Alert Level 3 with mowing and tidying while some aphid and rust spraying was missed during lockdown;
- Preparations are now concentrating on harvest which should commence early to mid-June;
- An initial pre-harvest stock take was completed in February, indicating around 17,600 poles for harvest. This is lower than previous years due primarily to a low point in the three-year pole production cycle. New areas planted after the nursery purchase will not be available for harvest until next year.

6.1.3 Bulls nursery:

- Contractors almost completed pruning before Level 4 lockdown and the remaining work will be completed by the nursery manager;
- Pole production will be low at Bulls this year as dry conditions have meant fewer poles are suitable for harvest.

6.1.4 Overall pole numbers will be lower this year than for the last 3-4 years due to an anticipated gap in the harvest cycle at both Bulls and Woodville nurseries as new areas are brought into production. The low numbers have been exacerbated by the dry conditions affecting harvest volumes in Horizons, commercial and farmer nurseries.

6.1.5 Horizons hosted the nursery managers' meeting in March. Regional Council and a small number of commercial nursery managers attended and the programme focused on information sharing around pole production. The overall comment from all nurseries is that supply will be down on last year. Irrigation systems were a major topic of discussion.

6.1.6 Work is underway to get further information on potential design for the Woodville nursery irrigation that has been budgeted for next year.



Photo 3 Nursery Managers' Meeting – Observing contractors using electric pruners at Woodville Nursery. Photo Sara Mathieson - 16 March 2020

6.2 WORK PROGRAMME OVER EARLY WINTER

- 6.2.1 Work is geared up for harvest in early June at Woodville and later for other nurseries.
- 6.2.2 Contractors are confirmed for all sites.
- 6.2.3 Begin pole distribution and planting programmes.
- 6.2.4 Investigate water supply options for irrigation at Woodville nursery.
- 6.2.5 Confirm pole supply from commercial growers.

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 Infrastructure Industry Reference Group Request For Shovel-Ready Infrastructure Projects	<p>s7(2)(h) - the withholding of the information is necessary to enable the local authority to carry out, without prejudice or disadvantage, commercial activities.</p> <p>The Kumeroa Quarry proposal has a degree of confidentiality to it and debate in a public arena might not aid it's development. Improper gain or advantage refers to the land purchase components particularly the Mangaone stopbank rebuild/setback.</p> <p>s7(2)(j) - the withholding of the information is necessary to prevent the disclosure or use of official information for improper gain or improper advantage.</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		