

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

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

ENVIRONMENT COMMITTEE

AGENDA

MEMBERSHIP

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

Michael McCartney
Chief Executive

Contact Telephone: 0508 800 800
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Palmerston North 4442

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

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REGIONAL HOUSES	Palmerston North 11-15 Victoria Avenue	Whanganui 181 Guyton Street		
DEPOTS	Levin 120-122 Hokio Beach Rd	Taihape 243 Wairanu Rd		
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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 fourth meeting of the eleventh triennium of the Environment Committee held at 9.30am on Wednesday 12 August 2020, in the Tararua Room, Horizons Regional Council, 11-15 Victoria Avenue, Palmerston North.

PRESENT Crs NJ Patrick (Chair), AL Benbow, EM Clarke, DB Cotton (via audio visual link), SD Ferguson, EB Gordon, FJT Gordon (via audio visual link), RJ Keedwell, WM Kirton, JM Naylor, WK Te Awe Awe, and GJ Turkington.

IN ATTENDANCE Chief Executive Mr MJ McCartney
Committee Secretary Mrs JA Kennedy

ALSO PRESENT At various times during the meeting:
Dr J Roygard (Group Manager Natural Resources & Partnerships), Dr N Peet (Group Manager Strategy & Regulation), Mr R Strong (Group Manager River Management), Mr R Smillie (Biodiversity, Biosecurity & Partnerships Manager), Mr G Bevin (Regulatory Manager), Ms C Morrison (Media & Communications Manager), Mr G Kane and Farm Trustees (Deputation), Mr T Gray and Mr M McCord (NZ Deer Farmers Association), Mr P McKenzie and Mr L Fung (Deer Industry NZ).

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

APOLOGIES

There were no apologies.

PUBLIC FORUMS / DEPUTATIONS / PETITIONS

Mr Geoff Kane had been granted a deputation.
He highlighted the aims of the Arawhata Wetland Project and outlined the effect it had on his farming operation.

SUPPLEMENTARY ITEMS

There were no supplementary items to be considered.

MEMBERS' CONFLICTS OF INTEREST

Cr Turkington noted a potential conflict of interest in Item 9, Regulatory Management Report.

During discussion of Item 9, Regulatory Management Report, Cr Clarke noted a conflict of interest to the proposed additional recommendation as she had a consent with Horizons which was currently being processed.

CONFIRMATION OF MINUTES

ENV 20-18 *Moved* *Turkington/Keedwell*

That the Committee:

confirms the minutes of the Environment Committee meeting held on 9 June 2020 as a correct record, and notes that the recommendations were adopted by the Council on 23 June 2020.

CARRIED

TE KĀURU PLANTING ACTIVITY

Report No 20-96

This item was rescheduled to a future date.

REGULATORY MANAGEMENT REPORT - MAY TO JULY 2020

Report No 20-98

This report updated Members on regulatory activity, for the period May to July 2020. Dr Peet (Group Manager Strategy & Regulation) and Mr Bevin (Regulatory Manager) summarised outputs from the 2019-2020 year, gave an update on the regulatory programme and key operational issues for the 2020-2021 year, presented a review of compliance and enforcement across the regional sector, and clarified Members' questions.

In discussing Horizons consenting processes, Cr Cotton (via audio visual link) proposed a new motion and explained its intent. Members expressed their views around the proposed motion and their preferences for a way forward. A division was requested for the proposed recommendation.

ENV 20-19 **Moved** **Cotton/Kirton**

That the Committee recommends that Council:

a. *receives the information contained in Report No. 20-98 and Annexes.*

CARRIED

b. *requests that the Chief Executive urgently undertakes a review of Horizons consenting processes and identifies areas in agreement with Council that need an external peer review (suggesting starting with water take consents).*

For: Crs Cotton, Kirton, Turkington, B Gordon, Te Awe Awe, Benbow

Against: Crs Patrick, Keedwell, F Gordon, Ferguson, Naylor

Abstain: Cr Clarke

CARRIED

A further recommendation was then proposed to instigate a workshop with elected members as below.

ENV 20-20 **Moved** **Naylor/Benbow**

That the Committee recommends that Council:

requests the Chief Executive to instigate a workshop with elected members to improve their understanding of consenting processes, and to identify the scope and purpose of the review.

CARRIED

SUSPENSION OF STANDING ORDER 4.2

ENV 20-21 **Moved** **Naylor/Keedwell**

That the Committee suspends Standing Order 4.2 in order that the meeting can continue to sit beyond the two hour limit, without a ten minute break.

CARRIED

The meeting adjourned at 11.36am

The meeting reconvened at 11.40am.

DEER INDUSTRY ENVIRONMENTAL STEWARDSHIP IN THE MANAWATŪ-WHANGANUI REGION

Report No 20-99

Dr Peet (Group Manager Strategy & Regulation) introduced representatives from Deer Industry New Zealand and the New Zealand Deer Farm Association who presented on the New Zealand Deer Industry presence in the Manawatū-Whanganui region, environmental issues and awareness, and the industry collaboration.

ENV 20-22 Moved B Gordon/Te Awe Awe

That the Committee recommends that Council:

- a. *receives the presentation from Deer Industry New Zealand and the New Zealand Deer Farm Association.*

CARRIED

The meeting adjourned at 12.10pm

The meeting reconvened at 12.24pm.

NATURAL RESOURCES & PARTNERSHIPS PROGRESS REPORT

Report No 20-97

This item updated Members on the progress made in the Natural Resources & Partnership Group's activity over the period 1 April to 30 June 2020. Dr Roygard (Group Manager Natural Resources & Partnerships) provided an update on progress against the Annual Plan targets and aspects of the Natural Resources & Partnerships Group Operational Plan 2019-20. He also provided some updates on work that would be completed or underway as a part of the new financial year.

ENV 20-23 Moved Naylor/Te Awe Awe

That the Committee recommends that Council:

- a. *receives the information contained in Report No. 20-97 and Annexes.*

CARRIED

The meeting closed at 12.48pm.

Confirmed

CHAIR

GROUP MANAGER STRATEGY & REGULATION

GROUP MANAGER NATURAL RESOURCES
& PARTNERSHIPS

Report No.	20-150
Information Only - No Decision Required	

ENVIRONMENTAL EDUCATION

1. PURPOSE

- 1.1. The purpose of this item is to provide members of Council's Environment Committee with an Environmental Education progress report for the period from 1 July 2020 – 30 October 2020.
- 1.2. For the purpose of this report, the Environmental Educator role is split. 0.5FTE of the role is regional coordination of the Enviroschools Programme, with the remaining 0.5FTE of the role delivering Horizons Environmental Education programmes.

2. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 20-150.

3. FINANCIAL IMPACT

- 3.1. There is no financial impact associated with recommendations in this paper.

4. COMMUNITY ENGAGEMENT

- 4.1. This is a public item and therefore Council may deem this sufficient to inform the public.

5. SIGNIFICANT BUSINESS RISK IMPACT

- 5.1. There is no significant business risk associated with recommendations in this paper.

6. CLIMATE IMPACT STATEMENT

- 6.1. This report is for information only so there is no or minimal climate change impact. However, our environmental education programmes provide support on sustainability issues of which climate change is a part.

7. ANNUAL PLAN TARGETS

Measure	Reporting Period		YTD Actual	Target	%
	1 st	2 nd			
Number of Enviroschools	75		75	50	150
Waiora sessions conducted	15		15	34	44
Community engagements	22		22	33	66

- 7.1. The measure for Waiora sessions conducted includes only sessions run by Mrs Williams. Sessions conducted using Horizons' kits without Mrs Williams are not included.
- 7.2. The measure for community engagements does not include Waiora sessions. This measure tracks all other events and activities that fall within Environmental Education. If a

school has multiple classes completing set activities then these are counted as individual sessions.

8. ENVIROSCHOOLS DATA

- 8.1. In addition to the official 75 Enviroschools, there are 10 school/centres on the Friends of Enviroschools list in the region. The Friends list allows schools/centres to try out the programme to see how it fits within their own context before taking the next step to become an official Enviroschool. We also use this list to determine who will be our next Enviroschools when funding becomes available. Periodically this list is revised depending on the commitment shown from the schools/centres.

9. ACTIVITY REPORT – WAIORA

- 9.1. Mrs Williams conducted the following Waiora sessions: six sessions with Dannevirke High School on the Tapuata Stream; one session with Pongaroa School on the Pongaroa River; one session with Linton Camp School on the Kahuterawa Stream; one session with Ballance School on the Manawatū River at Ferry Reserve; five sessions with Ross Intermediate School on the Manawatū River at Ahimate Reserve; and one session with Ohakune Primary School on the Mangawhero Stream.

10. ACTIVITY REPORT – ENVIROSCHOOLS

- 10.1. We would like to thank two district councils who have both increased funding for Enviroschools from this financial year. Manawatū District Council have increased their funding from \$13,000 to \$20,000 per year, and Rangitīkei District Council have increased theirs from \$10,000 to \$15,000. This increase in funding means that across both districts we have places on the programme for 12 new Enviroschools.
- 10.2. Mrs Williams and the Enviroschools regional facilitation team held their annual regional Early Childhood Education (ECE) wānanga on Wednesday 7 October 2020 at Manchester Street School. 57 teachers from 21 Enviroschools from across the region attended this day which focused on 'Māori Perspectives through the Water for Life theme area'. Two kindergartens shared mahi on how they have explored water with their tamariki, and how they have kept the Enviroschools journey going when there are numerous staff changes at the centre. Attendees also had the opportunity to explore the landscape of both the host Enviroschool and a kindergarten. An article about this hui has been submitted to the national Enviroschools team for publication on their website.
- 10.3. On Wednesday 21 October we ran our first primary Enviroschools hui for student enviro-leaders in Manawatū and Rangitīkei at Mt Lees Reserve, Feilding. 60 students and 13 teachers from 10 Enviroschools attended the hui called 'Forgotten Fauna' which focused on some of our lesser known animal groups; native fish, lizards and bats. This was supported by presentations from Wildlife Foxton Trust, Wildbase Recovery and Horizons Biodiversity Officer Neil Gallagher. Manawatū District Council, whose reserve we used to hold the hui, also supported the event by providing a BBQ for attendees. Feedback has been overwhelmingly positive including comments enquiring when the next one would be held and presenters asking if we could hold the same hui in other districts such as Horowhenua and Palmerston North.

Financial support to run both of these hui has been provided by the Toimata Foundation, and articles about both of these hui have been submitted to the national Enviroschools team for publication on their website.

- 10.4. Mrs Williams attended the blessing of Palmerston North Girls High School's māra kai food garden on Friday 23 October 2020. This Enviroschool have been working hard over the past few years to revamp and expand their old hort space into a māra kai garden, with the growing of produce being integrated into the food technology curriculum. This collaboration

between departments has taken some time to come together but is now an example of how you can integrate sustainability across different curriculum areas.

- 10.5. Congratulations to two EnviroSchools who have held holistic reflections. Linton Kindergarten reflected to Silver and Roslyn Kindergarten reflected to Bronze.
- 10.6. Mrs Williams attended the annual EnviroSchools Regional Coordinator Hui in Wellington in 14-16 October 2020.

11. ACTIVITY REPORT – ENVIRONMENTAL EDUCATION

- 11.1. Mrs Williams organised a day in the Pohangina Valley for Year 12 Agriculture Feilding High School who were investigating the environmental impacts of hill country farming on water quality. Students collected water quality data at two sites on the Pohangina River, and heard from a local farmer who talked about what they are doing to mitigate the effects of farming on both their dairy operation on the flats, and in hill country where they farm beef, sheep and deer. The teachers found this day highly valuable for the students and are really keen to make this day a regular part of their agriculture curriculum.
- 11.2. Mrs Williams ran a short presentation on water quality to students from Lytton Street School before they ran a self-directed trip to their local river.
- 11.3. Animal tracking and trapping activities involve students learning about what animal pests are in our landscape, and what traps can be used to humanely dispatch them to protect our native wildlife.

Mrs Williams conducted the following sessions: one session with Hokowhitu School; one session with Tokirima School; two sessions with Kairanga School
- 11.4. Bushy Park Tarapurahi invited Mrs Williams to run wetland themed activities for Conservation Week 2020. Horizons supported this event by sponsoring a bus.
- 11.5. Mrs Williams organised a day measuring water quality on the Manawatū River for Year 13 Geography students from Dannevirke High School. Students collected data from three sites on the river; Norsewood, Ferry Reserve and Ahimate Reserve, for their NCEA Level 3 assessments.
- 11.6. Year 2/3 students from Our Lady of Lourdes School, Palmerston North have been doing an inquiry about invertebrates. Mrs Williams helped them to look for invertebrates in the school grounds.
- 11.7. Mrs Williams conducted a waste audit with Year 9/10 students from Dannevirke High School through their sustainability unit. The school is looking at ways in which the school could reduce the amount of rubbish going to landfill; conducting a waste audit is the first step on this journey.
- 11.8. Mrs Williams met with students from Ruapehu College twice in this reporting period to support them in their long-term water monitoring project on the Makaranui Stream, Ohakune.
- 11.9. Mrs Williams represented Horizons at Feilding's Rural Day on Friday 9 October 2020. She took along some macroinvertebrates for families to look at, and talked about water quality of our streams and rivers.
- 11.10. Mrs Williams conducted a mini-Waiora stream study session on the Pohangina River at Tōtara Reserve with students from Waituna West School who were on camp at Highland Home.
- 11.11. EnviroScapes® is a water catchment model which explores non-point source pollution. This class-based resource has a range of activities which help students to identify the types of non-point source or run off pollution, coming from both urban and rural areas. Students can also discuss ways to mitigate the pollution to keep our waterways healthy.

Mrs Williams conducted the following sessions: four sessions with Dannevirke High School; two sessions with Linton Camp School.

12. The following activities were also undertaken in this reporting period however are not counted as community engagements in the Table under Section 6.

12.1. Mrs Williams supported the Freshwater team at a riparian planting day with Glen Ōroua School in Rongotea.



Regional ECE Hui held on 7 October 2020



Regional ECE hui held on 7 October 2020



First Enviro-schools Primary Student Enviro-leader hui at Mt Lees Reserve



First Enviro-schools Primary Student Enviro-leader hui at Mt Lees Reserve



Year 12 students from Feilding High School hearing from a farmer about hill country erosion



Year 12 students from Feilding High School taking water samples from the Pohangina River at Piripiri

13. SIGNIFICANCE

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

Sarah Williams

ENVIRONMENTAL EDUCATOR

Chrissie Morrison

MEDIA AND COMMUNICATIONS MANAGER

ANNEXES

There are no attachments to this report.

Report No.	20-151
Information Only - No Decision Required	

DISTRICT ADVICE UPDATE

1. PURPOSE

- 1.1. This report is to inform Members of the District Advice activities carried out over the last financial year 2019-20 and the five month period from 1 May to 30 September 2020.

2. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 20-151.

3. FINANCIAL IMPACT

- 3.1. The coordination of this function is part of the role of the Coordinator District Advice and is included in the 2018-28 Long Term Plan under the Community Relationships Activity.

4. COMMUNITY ENGAGEMENT

- 4.1. This is a public item, therefore Council may deem this sufficient to inform the public.

5. CLIMATE IMPACT STATEMENT

- 5.1. This report deals with administrative matters only so there is no direct climate change impact as a result. However, advice provided to the public and **Territorial Authorities (TAs)** on natural hazards helps the community to understand climate change and build resilience in our Region.

6. BACKGROUND

- 6.1. The District Advice Service is responsible for responding to requests for information from the general public and territorial authorities for properties in our Region.
- 6.2. It provides information to the public to inform on land valuations, insurance matters, prospective purchases and hazard risk for new developments and activities.
- 6.3. It also provides comments and advice to the Region's TAs to assist with their assessments of building consents, land use consents, and subdivision decisions. Comments and advice include any relevant information that **Horizons Regional Council (Horizons)** may hold on the property, particularly natural hazard information, and information on One Plan policies and rules.
- 6.4. The **Coordinator District Advice (CDA)** manages Horizons' obligations to the Building Act in relation to dams.
- 6.5. The CDA contributes to Horizons' responses to draft and proposed plan changes that are notified by TAs within our Region and provides relevant knowledge on urban growth.

7. LAND DEVELOPMENT INFORMATION REQUESTS

- 7.1. The total District Advice responses for 2019-20 financial year was confirmed at **1073**. This compares to a total of **1062** responses during the 2018-19 financial year. This shows

that the trend for information requests was a 1% increase in volume on the previous year. 692 of these requests were for the general public and 381 were for the TAs. The main type of enquiry was for flooding (419) and subdivisions (322).

7.2. The number of District Advice responses for the 2019-20 financial year by property location:

- Manawatū	454
- Palmerston North	165
- Horowhenua	143
- Rangitīkei	115
- Tararua	84
- Whanganui	68
- Ruapehu	44

7.3. This Report provides the summary of statistics for the five months from 1 May to 30 September 2020.

7.4. The District Advice Service responded to a total of **450** requests. **306** of these requests were for the general public and **144** for the TAs.

7.5. The total requests received for the same time last year (1 May to 30 September 2019) were 517. This shows that the trend for requests is a 15% decrease compared to the same time period last year. The decrease will likely be an impact of COVID-19, as the percentage was tracking at a 16% increase prior to COVID-19 alert level 4 lockdown.

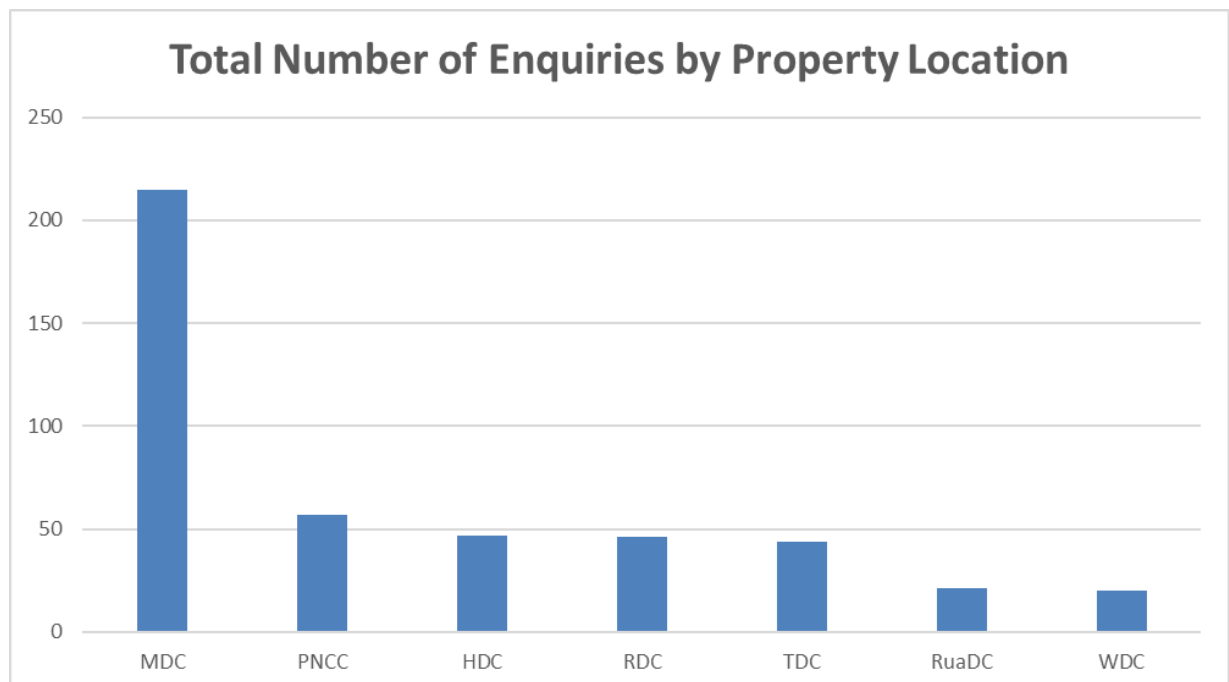


Figure 1

7.6. Figure 1 above illustrates the number of enquiries responded to in the five month period by property location.

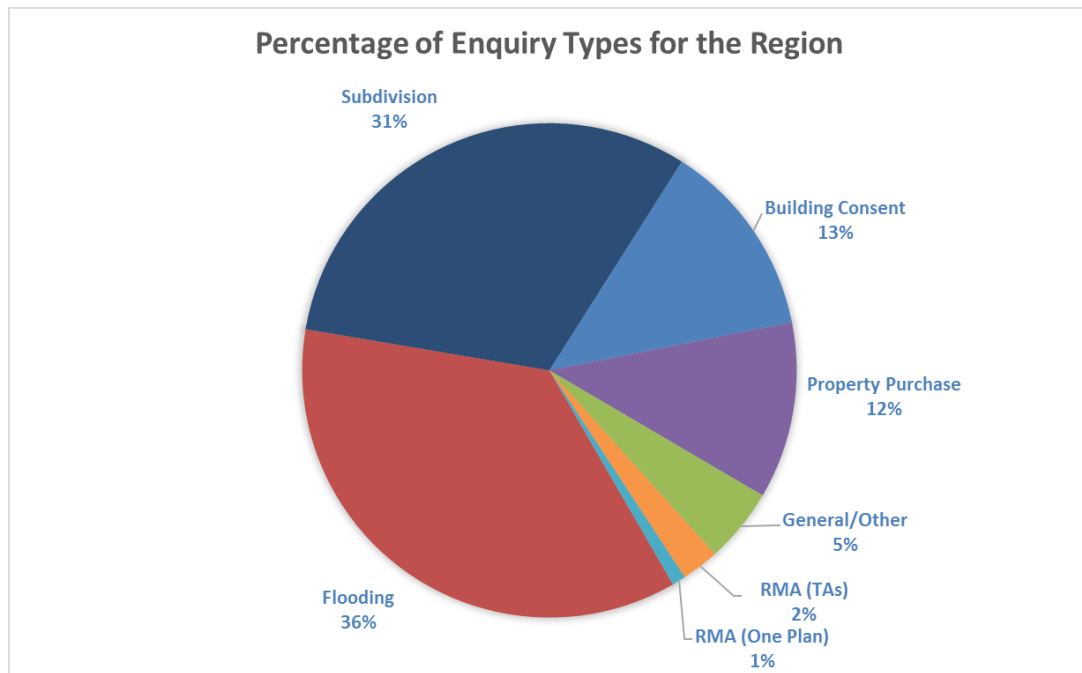


Figure 2

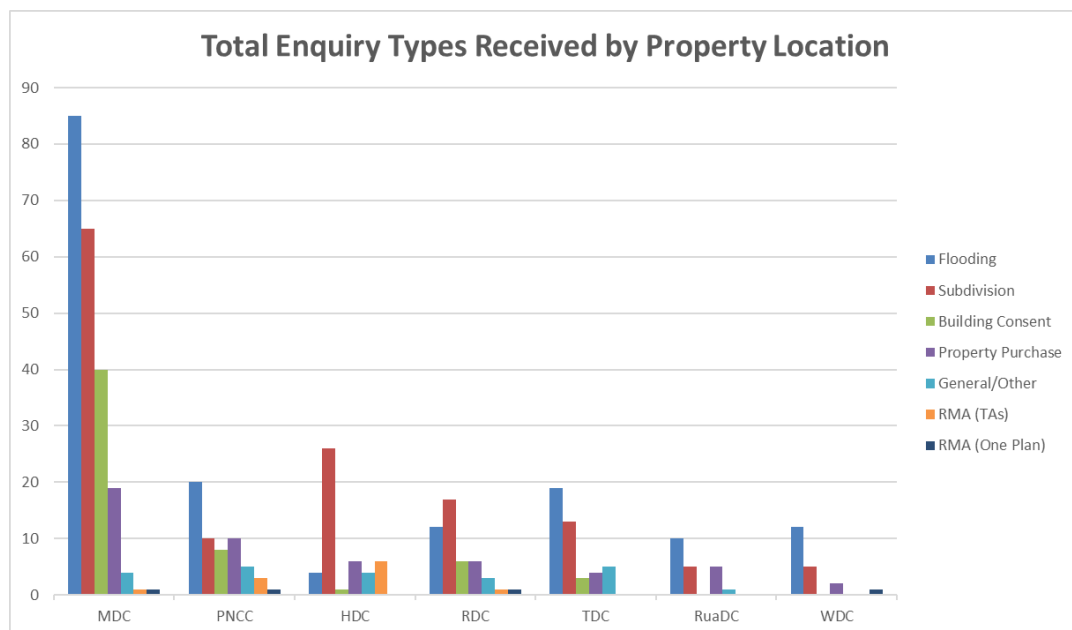


Figure 3

- 7.7. Figure 2 shows the total enquiry type by percentage that the District Advice Team has received for the Region.
- 7.8. Figure 3 shows the enquiry types that the District Advice Team has received by property location.
- 7.9. The main type of enquiry was for flooding (162), and this is consistent across most districts. This is followed by subdivisions (141), building consents (58), property purchases (52) and the remaining are general or other RMA related requests (37).
- 7.10. Given the uncertainty of COVID-19, we are unsure what the trend will be for the next reporting period.

8. IMPROVEMENT INITIATIVES (INCLUDES PRESENTATION)

- 8.1. With support from the Information Management and Infrastructure Technology Teams, the District Advice Team have implemented initiatives to improve efficiencies and quality of information provided to customers. These include continued improvements to the public gallery of Horizons' maps, which includes a District Advice map especially tailored for District Advice enquiries. The District Advice online property request form which has been implemented initially with the Manawatū District Council staff and recently it has been extended to the Horowhenua District Council staff. The next stage is to implement it for the remaining TAs, key stakeholders and agents. The final stage is for the form to be linked to Horizons' website so it's accessible to the public.
- 8.2. The CDA continues to chair the HazMap Working Group, a forum that shares hazard and mapping information to improve capability and relationships across teams in Horizons. Over this period there have been monthly meetings covering natural hazard information on Pohangina, Ashhurst, Palmerston North, Tangimoana and Scotts Ferry.

9. DAMS - BUILDING CONSENTS

- 9.1. There were six general dam enquiries in 2019-20 financial year. There has been three general dam enquiries during this five month reporting period. For 2019-20 financial year and for this reporting period there were no dam proposals received to assess if a building consent is required and no **Project information Memorandums (PIMs)** were issued.
- 9.2. In 2019 the **Ministry of Business, Innovation and Employment (MBIE)** published a proposed regulatory framework for dam safety (post-construction regulatory requirements). There has not been a decision made and due to COVID-19 and the timeframes are still unknown at this stage.

10. DISTRICT ENGAGEMENT UPDATE

- 10.1. The following is a brief update on the CDA's involvement and contribution to proposed Plan Changes, notice of requirements and other TA engagements during this reporting period from 1 May to 30 September 2020. This also includes coordinating Horizons feedback and comments on potential growth areas.

Horowhenua District Council

- 10.2. The CDA has been coordinating information requests for staff and agents / consultants that are working on the **Otaki to North of Levin (O2NL)** Highway Project.

Manawatū District Council

- 10.3. In June Horizons staff (River Management Analyst and CDA) met with Manawatū District Council Planners and Building Officers in regards to the development in the Taonui Floodway.
- 10.4. In July the CDA hosted a joint workshop with relevant Horizons staff and Manawatū District Council's Planning, Regulatory and GIS teams to discuss and share information about natural hazards, potential growth areas, plan changes, on-site domestic wastewater disposal and proposed subdivisions.
- 10.5. In September the CDA invited Manawatū District Council staff to Horizons HazMap Working Group visit to Tangimoana, to discuss flooding and future development.

Palmerston North City Council

- 10.6. On advice from Palmerston North City Council the CDA coordinated a submission on the resource consent application for the All Saints Church which was publicly notified in August.

Tararua District Council

- 10.7. The CDA and Horizons River Management staff continue to work with Tararua District Council and their agents to provide any relevant information on Woodville and Pahiatua potential growth areas.

Remaining Territorial Authorities

- 10.8. No new notifications were received during this reporting period from 1 May to 30 September 2020 for Rangitikei, Ruapehu and Whanganui District Councils.

SIGNIFICANCE

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

Sarah Carswell
CO-ORDINATOR DISTRICT ADVICE

Ged Shirley
**GROUP MANAGER
REGIONAL SERVICES & INFORMATION**

ANNEXES

There are no attachments to this report.

Report No.	20-152
Decision Required	

RANGITIKEI DISTRICT COUNCIL - THREE WATERS

1. PRESENTATION

- 1.1 Peter Beggs and Arno Benadie will make a presentation to the Environment Committee on Three Waters.

2. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the presentation from Peter Beggs and Arno Benadie, Rangitikei District Council.

3. SIGNIFICANCE

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

Nic Peet

GROUP MANAGER STRATEGY & REGULATION

ANNEXES

There are no attachments for this report.

Report No.	20-153
Information Only - No Decision Required	

NATURAL RESOURCES & PARTNERSHIPS PROGRESS REPORT

1. PURPOSE

- 1.1. The purpose of this item is update members of Council's Environment Committee on the progress made in the Natural Resources & Partnership Group's activity over the period 1 July to 30 September 2020. The item provides updates on progress against the annual plan targets and aspects of the Natural Resources & Partnerships Group Operational Plan 2019-20.

2. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 20-153 and Annexes.

3. FINANCIAL IMPACT

- 3.1. There is no financial impact associated with recommendations in this paper.

4. COMMUNITY ENGAGEMENT

- 4.1. This is a public item and therefore Council may deem this sufficient to inform the public.

5. SIGNIFICANT BUSINESS RISK IMPACT

- 5.1. It is considered that there is no significant risk impact of this item

6. CLIMATE IMPACT STATEMENT

- 6.1. This item reports on Horizons' activity in relation to Horizons' Annual Plan targets and is not considered to have a climate change impact.

7. SUMMARY AND HIGHLIGHTS

- 7.1. The Natural Resources & Partnerships Group activity includes the non-regulatory and science programmes across the land and water management, biosecurity, biodiversity and environmental reporting activities of the Long-term Plan. The group also delivers regulatory functions for biosecurity and supports Horizons' regulatory programmes.
- 7.2. Over the reporting period the Natural Resources and Partnerships group prepared and presented a range of Council Papers including:
 - Jobs for Nature Funding;
 - Tōtara Reserve Poplars;
 - Tōtara Reserve Poplar Removal Procurement;
 - National Wilding Conifer Programme;
 - Wilding Conifer Procurement;
 - Lake Rākau Hamama;
 - Implementation of Government's Freshwater Reform Package.

- 7.3. Progress on the Land Management Activity within the Group was reported to the Catchment Operations in September.
- 7.4. Progress on the Water Quantity and Quality activity is updated on in Annex A. the progress report overviews the status of the water resources for rainfall and groundwater levels. Further it updates on the readiness of the regional water metering programme for the upcoming summer and the new water metering regulations. The annex also overviews the review of the lakes monitoring programme in relation to new freshwater regulation requirements and updates on the activity of the Freshwater and Partnerships Team across the range of non-regulatory implementation work that is underway.
- 7.5. The Biosecurity Animals programme (Annex B) made good progress over the reporting period with external contractors starting earlier than usual. Twelve of the planned 38 monitors were completed with an average result of 3.1 Residual Trap Catch (RTC) well below the Annual Plan target of 10%. There was one monitoring result that was above the 10% target and staff have followed up on this. Overall the programme is on track to deliver for the year with 13,820 ha of new land added to the programme this year already compared to a target 6,217 ha. Overall 21,125 (19% of the annual target) bait stations have been filled in the first three months of the year. Staff have completed preparation for the rook control season which will get underway in in the next reporting period.
- 7.6. The Biosecurity Plants programme (Annex C) presented an item to Council on progress against the pest plan goals in October. Further the team have been following up on the alligator weed incursion and other pest plan related activity. This includes work with territorial authorities and crown agencies around their pest management plan obligations and this is reported on further in the progress report.
- 7.7. The Biodiversity Programme (Annex D) overviews progress for the priority habitats programme which has recently been reviewed and will be reported on to Council at the Strategy and Policy Committee in November. The annex also updates on the biodiversity partnerships programme that was reviewed by Council during the reporting period. Further it updates on activity at Tōtara Reserve including the removal of poplars which Council resolved to do in July.
- 7.8. The Environmental Reporting programme (Annex E) provides updated reporting on water quality results for the region over the last 10 years based on the recent updates to the LAWA website (www.lawa.org.nz). Further the annex updates on the recent activity around climate change including the recent social media campaign called #ClimateChangeinOurRegion.

8. SIGNIFICANCE

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

Logan Brown
FRESHWATER & PARTNERSHIPS MANAGER

Rod Smillie
BIODIVERSITY, BIOSECURITY & PARTNERSHIPS MANAGER

Abby Matthews
SCIENCE & INNOVATION MANAGER

Jon Roygard
GROUP MANAGER NATURAL RESOURCES & PARTNERSHIPS

ANNEXES

- A Water Quality and Quantity Progress Report
- B Biosecurity Animals Progress Report
- C Biosecurity Plants Progress Report
- D Biodiversity Progress Report
- E Environmental Reporting and Air Quality Monitoring Progress Report



WATER QUALITY AND QUANTITY

1 ACTIVITY OVERVIEW

The Water Quality and Quantity Activity of the Annual Plan includes the work programmes of Horizons' Freshwater & Partnerships Team and the Science and Innovation Team.

Horizons' Freshwater & Partnerships Team works closely with other Horizons teams, and people external to the organisation, to implement water quality and aquatic habitat improvement works. This work draws on monitoring and research undertaken by Horizons' Science and Innovation, and Environmental Data teams, along with that of other agencies, to prioritise and focus implementation efforts.

Both programmes actively seek funding from other sources, to provide external science advice and facilitate the acceleration of works. This includes **Freshwater Improvement Fund** (FIF) grants administered through the **Ministry for the Environment** (MfE) for the Manawatū, Whangaehu, and Lake Waipu/Rātana catchments, and the Community Environmental Fund for the Waikawa catchment. Funding of science advice through the **Ministry of Innovation, Business and Employment's** (MBIE) Envirolink fund totals approximately \$120,000 per annum.

Implementation activities include riparian fencing and planting for water quality improvement and fish habitat enhancement, identification and enhancement of whitebait spawning habitat and fish passage improvement, sewage treatment plant upgrades, work with horticulture growers, and harvesting of lake weed.

Science activities include monitoring and reporting of water quantity for both surface water and groundwater, and the quality of groundwater, rivers, lakes, estuaries, and the coast. More than 80 popular swim spots are monitored weekly throughout the bathing season (November – April). In addition to guiding implementation programmes, science and research also informs consent decision-making, and policy development and implementation. Communication of science data and information is primarily covered in the Environmental Reporting and Air Quality Monitoring section of this report.

This item presents the Water Quality and Quantity Activity regionally (where appropriate) and/or for each of the **Freshwater Management Units (FMUs)** that make up the Manawatū-Whanganui region, integrating the implementation work of the Freshwater & Partnerships Team, and the water quality and quantity activities of the Science and Innovation and Environmental Data teams. This includes the:

- Regional Water Quality and Quantity Programme;
- Whanganui & Kai Iwi;
- Whangaehu – including the Whangaehu FIF projects;
- Rangitīkei-Turakina – including the Lake Waipu (Rātana) FIF project;

- Manawatū – including the Manawatū River Accord and FIF project;
- Horowhenua – including the Lake Horowhenua Accord and FIF project, as well as freshwater improvement work with horticulture growers; and
- Coastal Taranua.

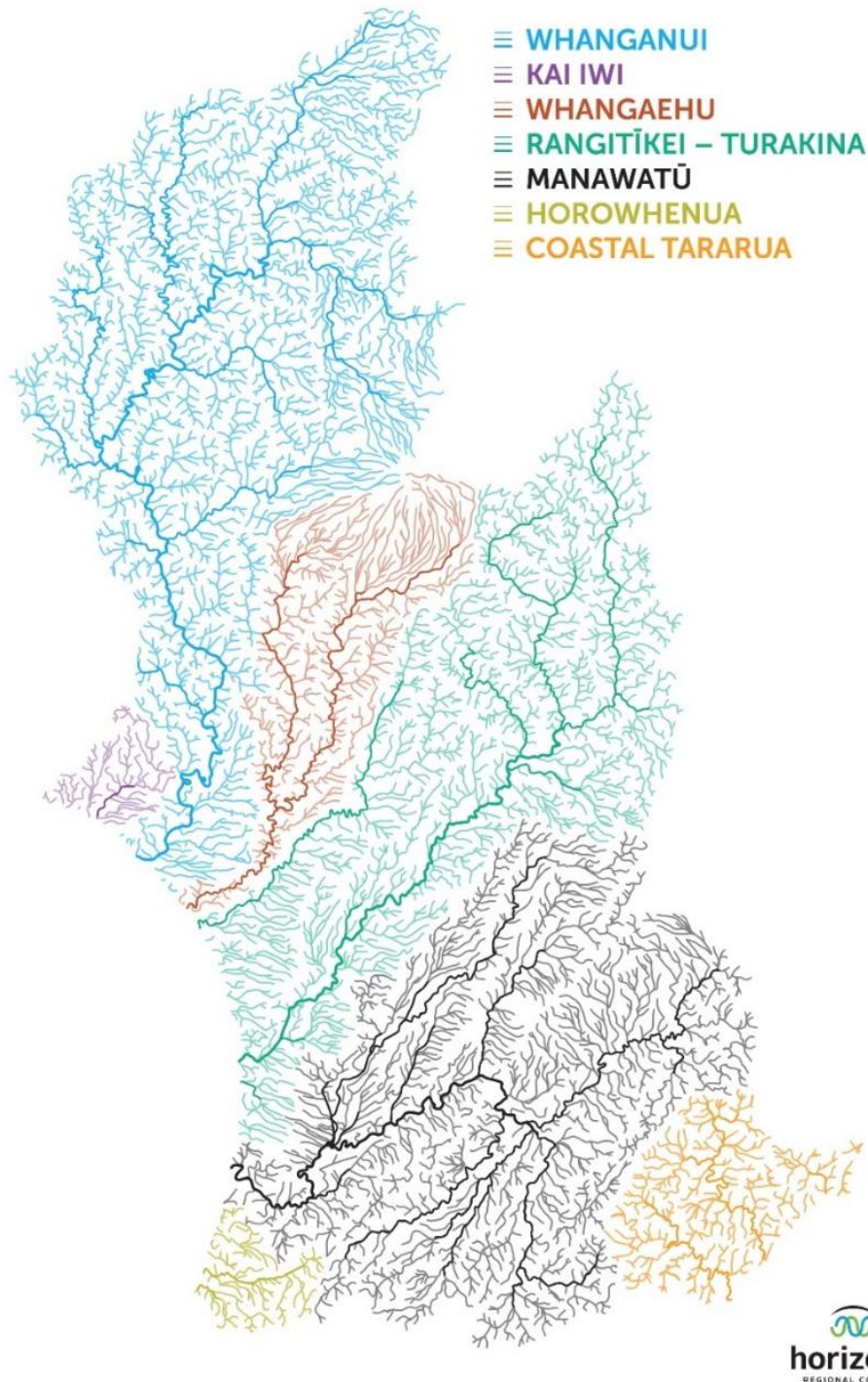


Figure 1: Freshwater Management Units in the Horizons Region

2 REGIONAL WATER QUALITY AND QUANTITY PROGRAMME

2.1 Regional Freshwater & Partnerships Overview

PROGRESS AGAINST ANNUAL PLAN TARGETS

2.1.1 The Freshwater & Partnerships programme links with a range of national and regional policies and strategies. The programme aims to deliver freshwater enhancement work in partnership with others to improve water quality and aquatic health outcomes, and facilitating community involvement. Some of the work also informs restoration options and seeks to build capacity. The programme delivers work across five key components:

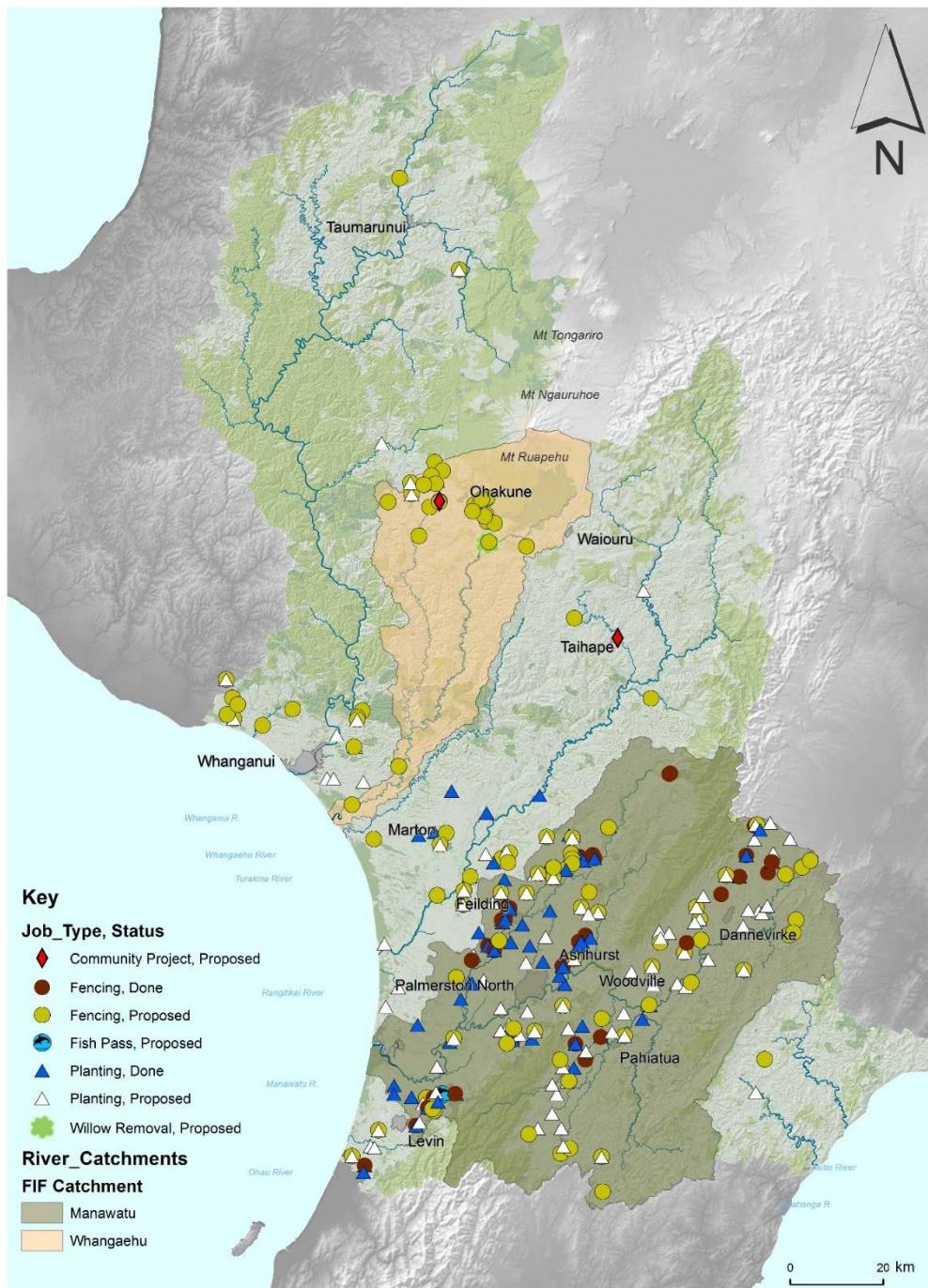
- Regional freshwater programme, outside the Manawatū and Whangaeahu Catchments;
- Manawatū Accord and Freshwater Improvement Fund project;
- Whangaeahu Catchment Freshwater Improvement Fund project;
- Waipu Catchment Freshwater Improvement Fund project to remove the Rātana WWTP discharge from Lake Waipu and irrigate to land and develop a restoration plan for Lake Waipu; and
- Lake Horowhenua Accord and Freshwater Improvement Fund project.

2.1.2 A summary of progress against Annual Plan targets is presented in this section of the report, and project updates on specific works are presented in the relevant FMU summary.

Table 1: Freshwater & Partnerships programme progress on the 2020-21 Annual Plan targets as at 30 September 2020.

	Riparian fencing (km)				Riparian planting			
	Target	Allocated	Complete	% complete	Target	Allocated	Complete	% complete
Regional	12	26.3	0.185	1.5%	20,000	34,095	10,600	53%
Manawatū	50	92.5	33.7	67%	40,000	114,500	44,477	111%
Whangaeahu	17	25.7	0	0%	3,333	4,416	0	0%
Total¹	79	144.5	33.885	43%	63,333	153,011	55,077	87%
	Fish passes				Community projects			
	Target	Allocated	Complete	% complete	Target	Allocated	Complete	% complete
Regional	1	0	0	0%	1	1	1	100%
Manawatū	4	0	0	0%	9	0	2	22%
Whangaeahu	2	0	0	0%	3	8	0	0%
Total³	7	0	0	0%	13	9	3	23%

¹ NB: The totals in these target tables represent an overall total and achieving these totals does not necessarily mean all targets have been met, as it is the individual targets that are in the Annual Plan.



Freshwater Grant Projects

Map prepared by L Ferguson, NRP. 12 October 2020

Figure 2: Freshwater implementation projects for stream fencing, riparian planting, community projects, and fish passes for the 2020-21 financial year.

JOBS FOR NATURE PROJECTS

2.1.3 In July 2020 Council resolved to enter into three Jobs for Nature “Quick-start” projects. These projects are funded through the broad Jobs for Nature Fund, and more specifically are referred

to by the Ministry for the Environment (MfE) as Public Waterway Ecosystem Restoration Fund projects.

2.1.4 During the reporting period, the project work programmes, annual work plans, and Deeds of Funding for the Regional Stream Fencing and Riparian Planting, and Enhancing fish populations through fish passage remediation have been completed with the MfE. The Deeds of Funding for both projects have been signed and the first meetings of the Governance Groups was set for 20 October 2020.

2.1.5 During the reporting period the following recruitment for the currently signed-up projects was completed:

- Three Freshwater Advisors have been recruited for the Regional Stream Fencing and Riparian Planting programme, with all three due to join the team during October. The additional winter staff recruitment will commence early next calendar year;
- Recruitment for the Fish Passage Coordinator role has been completed, with a start date of late October;
- Recruitment has been completed for the four research assistants on the fixed four-year contracts, and the four summer students, with the majority of the team starting on 27 October and a few in November 2020.

2.1.6 With the number of people starting working at Horizons at the same time, a number of programmes and courses are being specially organised for the team to enable them to become fully operational as quickly as possible.

2.2 Regional Water Quality & Quantity Science Programme Overview

MONITORING PROGRAMMES

2.2.1 Water quality and quantity monitoring is overseen by Horizons Science & Innovation Team, but delivered in partnership with the Environmental Data, Consents Monitoring and Freshwater & Partnerships teams. Much of this activity focusses on improving knowledge and understanding of the region's freshwater and coastal environments by monitoring the state of the environment, tracking changes over time, and identifying areas of emerging pressure. Water quantity, quality monitoring, and biomonitoring programmes currently encompass:

- River flow at 65 sites, groundwater levels at 192 sites, and measurement of water use at more than 350 sites across the region;
- River water quality at 90 state of environment sites, 32 discharges and 52 sites located upstream and downstream of discharges;
- Water quality at 11 coastal and estuary sites, and ecological condition and/or sedimentation of five estuaries;
- Groundwater quality at 35 sites;
- Water quality in 15 lakes and submerged plants in approximately 10 lakes;

- 82 popular swim spots throughout the bathing season (November to April);
- Macroinvertebrates at 74 sites and periphyton at 63 sites.

2.2.2 The monitoring network is undergoing a review in response to national policy requirements, and to better inform decision-making and implementation programmes.

STATE OF THE REGIONAL WATER RESOURCE

2.2.3 NIWA reports that winter 2020 was the warmest winter on record with above average temperatures across the country. Rainfall has been average or below average over much of the Horizons region for the past four months (Figure 3). Rainfall has been particularly low in the Rangitikei District, but is currently about 78% of median rainfall. This has led to drier than normal soil moisture levels in parts of the region, affecting groundwater levels. Approximately 50% of the bores we monitor for water levels are currently low or below average (Figure 4), particularly in Tararua, Manawatū, Rangitikei and Turakina. Whereas in Horowhenua and Whanganui, average rainfall over the previous four months has helped to support groundwater levels. Groundwater levels are generally at their highest during spring but as they are already low, it is unlikely that these will replenish prior to summer. This may result in groundwater users experiencing lower pressure and water levels throughout summer.

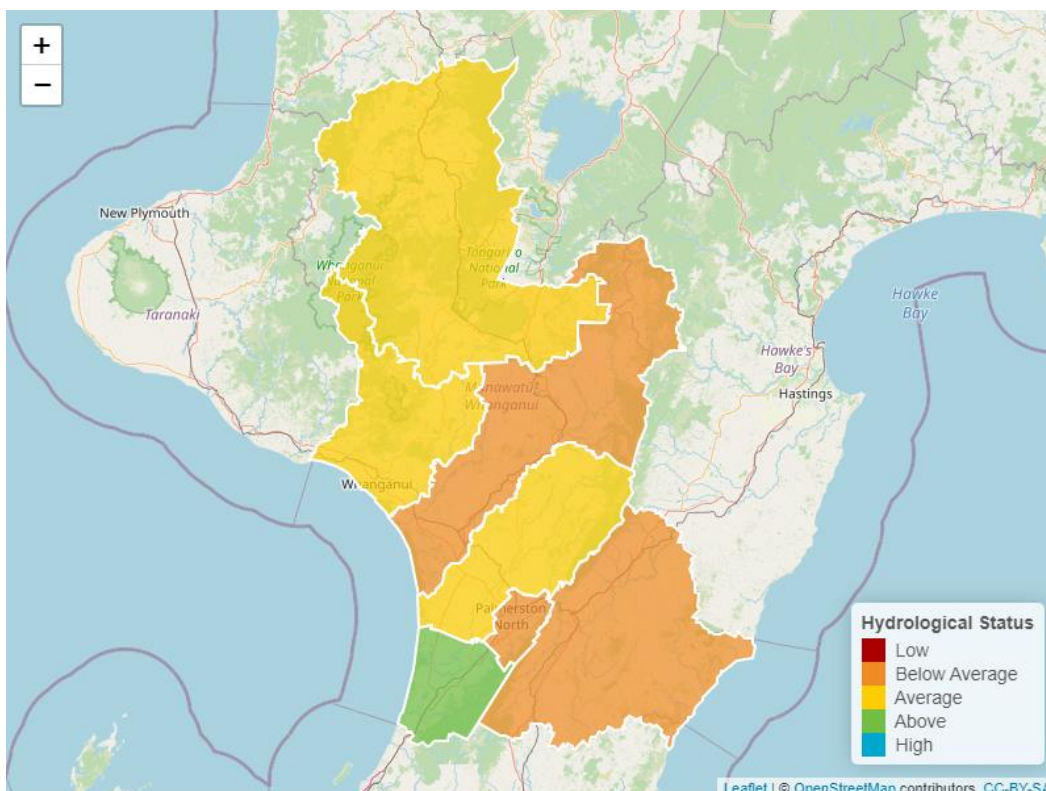


Figure 3: Hydrological status as determined by rainfall quantities over the preceding four months at seven representative sites, October 2020.

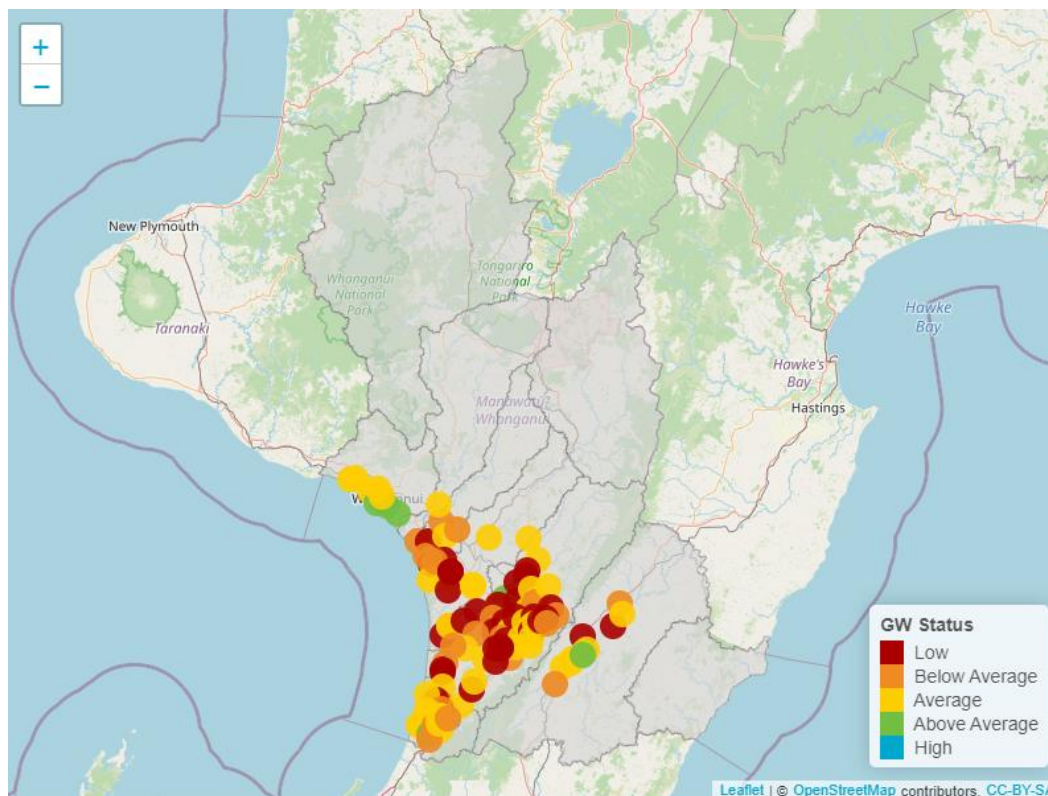


Figure 4: Groundwater level status as determined by monthly monitoring at 130 bores, September 2020.

WATER METERING PROGRAMME AND THE NEW NPS-FM REQUIREMENTS

- 2.2.4 Horizons' water metering programme uses technology known as "telemetry" to automatically report water use to Horizons. This automated reporting was trialed in the region by Horizons in 2003 and the programme has grown over time with Horizons providing and servicing the equipment. Formal requirements for telemetry were established in the One Plan for both ground water and surface water consents. The automated supplied data is processed daily by Horizons Watermatters system that reports to Horizons' website and was established in 2007.
- 2.2.5 The National Regulations on Water Use Measurement and Reporting first came into effect in 2010. These regulations required all water abstractions of greater than 5 litres per second (l/s) to be measured by water meter, and that daily abstraction data be returned to the relevant regional council annually.
- 2.2.6 In 2020, Central Government released revisions to the national water metering regulations as part of the Essential Freshwater package. The primary change is the requirement for water takes to provide data automatically to councils, with takes of different sizes phased in over a period of six years. At the end of six years, all takes greater than 5 litres per second (5 l/s) will require telemetry. Takes of 5 l/s equate to approximately 432 m³/day. This equates approximately to

the amount required to irrigate 8.6 ha of land or provide stock drinking water for 300 dairy cattle.

2.2.7 Horizons was one of a small group of councils that the MfE consulted with to ensure the practicality of these changes, prior to recommending them. The changes come about as a recognition of the importance of consistent and timely access to water use data in effectively managing the water resource, which was not previously provided by the 2010 Regulations.

2.2.8 An assessment of Horizons' current water metering programme against these requirements shows that Horizons are well placed to meet the new requirements within the timeframes set out in the regulations. Table 3 summarises Horizons' current position in relation to the revised regulations.

Table 2: Status of Horizons' Water Metering programme against revised regulations (abstractions >5 l/s)

Rate of abstraction	Currently consented abstractions*	Number of automated measuring data streams (FTP and telemetry)	Abstraction data streams to be connected/installed
>20 l/s	381	368	13
10-20 l/s	117	108	9
5-10 l/s	75	51	24
Total	573	527	46

*includes some diversions for hydroelectricity generation that may not be able to be captured by standard methods

2.2.9 Of the 573 currently consented abstractions to which the regulations apply, 527 already meet the requirements of the revised regulations in terms of metering and telemetry (i.e. water meter installed and abstraction data returned daily via electronic means). Of those 527 electronic data streams, almost all are collecting data at 15-minute intervals as required under the revised regulations. The remaining sites will be converted to 15-minute data as and when they are visited during the 2020-21 summer season. All new installations or replacements will be defaulted to 15-minute data.

2.2.10 At the time of writing, 64 consented abstractions require telemetry installation or confirmation of FTP data provision. The majority, if not all, of these are intended to be resolved over the 2020-21 season, subject to the consent holders installing and verifying water meters as required by consent, with this needing to be done prior to telemetry installation. These meter installations are to be followed up by the Consents Monitoring team and, once confirmed as completed, the task is handed to the telemetry team for installation of telemetry gear.

2.2.11 The field team is sufficiently resourced to achieve the telemetry installations required. The replacement of faulty or problematic telemetry units will also continue.

WATERMATTERS AND SUMMER SEASON WATER USE MONITORING

- 2.2.12 Horizons' Watermatters webpages provide water use information publicly and back to registered consent holders from whom we receive telemetered water use data, allowing them to manage their water takes in accordance with their consent conditions.
- 2.2.13 Registered consent holders are able to access their individual water use records against the specific consent limits in terms of volume and rate allowed by the consent, and also in terms of the relevant minimum flow restrictions for that abstraction. The pages also allow the download of data by the consent holder, to analyse or feed into on-farm management systems. Most of the 70 registered users of these pages are irrigators, or large industrial abstractors.
- 2.2.14 The Watermatters web pages are ready for the upcoming irrigation season, and are fully integrated with the IRIS/Hilltop data systems used by Horizons to store water use, flow and consent information. The Watermatters system allows timely and accurate data provision, and automated compliance checking. Regular checking will take place throughout the season, or as issues arise. The publicly available Watermatters pages show a regional overview, via a map and list, of where restrictions apply are also ready. By the end of November, work on re-aligning the regional and catchment-based overview allocation pages, which were not available last season due to system changes, to the appropriate internal data plus sources and mapping software will be complete. In the longer term, it is intended that these pages will form the basis for Horizons' surface water accounting reports.
- 2.2.15 Heading into summer, the water metering field team will continue with telemetry inspections, installations and replacement of old gear with improved technology.

LAKES PROGRAMME REVIEW

- 2.2.16 In September 2020 Central Government launched the National Policy Statement for **Freshwater Management** (NPS-FM) and the **National Environmental Standards for Freshwater** (NES-FW). Under the NPS-FM regional councils are required to monitor a set of lake sites that adequately represent each of the regions' Freshwater Management Units (FMUs). The current lake water quality monitoring programme does not meet this requirement.
- 2.2.17 A review of the lakes monitoring network in light of NPS-FM requirements and other recommendations has been drafted. Recommendations in the draft report also address needs from the 2019 **State of Environment** (SoE) report and the One Plan water quality targets. The review outlines the rationale for the selection of long-term lake monitoring sites to represent all five FMUs with natural geomorphic lake types in the Horizons region, to ensure Council meets requirements under the NPS-FM. While the report focusses on SoE monitoring, consideration will also need to be given to monitoring that is required to inform potential lake restoration.

- 2.2.18 Three options for future State of Environment monitoring are presented in the report, and all options retain the current SoE monitoring of 15 aeolian/dune lakes. Recommended changes include:
- Changes to ensure Horizons meets requirements under NPS-FM including options for additional lakes to be added to the programme and an increase in frequency of monitoring to monitor lakes that are currently part of the programme and any added lakes on a monthly basis. This frequency is an increase over the current quarterly sampling of the majority of lakes in the current programme.
 - Adjustments to the in-lake locations of sampling sites to better reflect inflows and outflows.
- 2.2.19 Recommended changes would improve overall reporting on lakes in relation to the national and regional policies and to provide information to inform potential restoration work. Council will have the opportunity to review funding decisions relating to the lake monitoring programme through the Long-term Plan process.

CONTACT RECREATION WATER QUALITY MONITORING

- 2.2.20 Monitoring of more than 80 popular swim spots around the region begins from 1 November 2020 and the programme is delivered in collaboration with MidCentral Public Health Service, local councils and Ngā Waihua o Paerangi Trust. Recruitment of swim spot monitoring staff is now complete with monitoring results reported weekly, as they become available, via both Horizons (<http://www.horizons.govt.nz>) and the LAWA (<http://www.LAWA.org.nz>) websites.
- The 2019-20 swim season showed that 58 river and seven estuary sites were, on average, swimmable 61% of the time with caution advised 16% of the time. Sites were considered unsuitable for swimming 23% of the time.
 - Overall, the 11 coastal sites were swimmable 96% of the time. Caution was advised 2% of the time, and sites were considered not suitable for swimming 2% of the time.
 - Of the five lakes monitored these were, on average, swimmable 61% of the time with caution advised 28% of the time and they were deemed unsuitable for swimming 10% of the time.
- 2.2.21 Lake Dudding was briefly closed from 27 November to the 20 December 2019 due to algae cell density and bio volume exceeding the recreational guidelines, and on the advice of public health officers. There were no closures of other monitored lakes.
- 2.2.22 Kaikokopu Stream at Himitangi Beach had cautionary signage erected by public health officers on 12 December 2019 due to high *E.coli* results (Figure 5). This site was planned to have a faecal source investigation to determine the source of any *E. coli*. However, this was postponed to the 2020-21 season due to Covid-19 lockdown.



Figure 5 Cautionary signage at Kaikokopu Stream at Himitangi Beach during the 2019-20 season

MUDFISH MONITORING

- 2.2.23 Brown Mudfish (*Neochanna apoda*) are one of five mudfish species found in New Zealand, and the only species of mudfish in the Horizons Region (Figure 6). Mudfish are highly cryptic (camouflaged) and secretive fish that live in very specific habitat types – typically wetlands, drains, and forest pools. They are the only New Zealand fish species able to aestivate – a process similar to hibernation – which means they are able to survive out of water when their habitat dries up. They do this by remaining buried in gaps beside roots, in mud or similar cover, until their habitat is inundated during rainfall. Given this unusual life cycle, mudfish monitoring is undertaken during the wetter months of the year (generally June to October) when mudfish are active.
- 2.2.24 Historically, it is likely that mudfish habitat in the Horizons Region, particularly in the Horowhenua, Lower Manawatū and coastal Rangitikei, was extensive. With clearance and drainage of wetlands and wetland forests, available habitat for these species has been substantially reduced. At the time of development of the One Plan in the early 2000s, there were only 10 sites known to contain these fish within our region.

- 2.2.25 Horizons Regional Council staff undertake surveys within known mudfish habitat to monitor fish populations, and do exploratory surveys to establish the presence of previously unknown populations. Monitoring for the 2020 calendar year is now complete with eight sites visited, including one site at which brown mudfish were caught for the first time. This brings the total of known and exploratory sites within the region to approximately 22, depending on how sites are aggregated.



Figure 6: Brown Mudfish – Lake Herbert. September 2020.

LAND-USE MAPPING

- 2.2.26 Land-use information is important for a range of purposes including investigating links between land use and outcomes for water quality. This has been identified as a significant information gap nationally ([MfE, 2019](#)). Previous land-use maps for the Horizons region have been limited in their static nature and were infrequently reproduced due to being both cost and time-intensive. The last complete map of land-use in the region was compiled by Horizons in 2008 to inform development of the One Plan.
- 2.2.27 To update land-use information for the region, Horizons commissioned Manaaki Whenua – Landcare Research to provide an updated land-use map as well as the provision of a tool to enable Horizons to update land-use information on a regular basis.
- 2.2.28 The land-use classification combines multiple classifications from a range of sources including AgriBase, Land Cover Database v5.0, Horizons Regulatory data, the **Sustainable Land Use Initiative** (SLUI) Whole Farm Plans, and Valuation and ratings data. **A Land Use Management**

Support System (LUMASS, an open source spatial modelling tool) model for the automatic update of the land-use classification was developed, which allows us to update the land-use layer as updated input datasets become available. Some of these data sources are static, for example the Land Cover Database is a 2018 dataset and will not be reproduced for several years, whereas the SLUI Whole Farm Plan dataset is updated regularly and an updated AgriBase dataset is provided every six months. Horizons will aim to use the LUMASS tool to produce a map annually to provide a snapshot in time of land use each year. This layer will be made available at the Water Management Subzone level on both the internal and external Local Maps electronic mapping tools in the coming months.

- 2.2.29 A primary and secondary classification were provided with finer detail than previous land-use maps used by Horizons. There are 11 primary classifications and 30 secondary classifications and the top three land uses across the region at the secondary classification level are sheep, beef and/or deer (44 per cent), native forest on non-agricultural land (18 per cent) and pasture grazed by dairy cows (8 per cent) (Figure 7). Though classified differently and not directly comparable, these numbers at a regional or FMU scale are very similar to those reported in the 2018 State of Environment report and 2019 Catchment Report Cards, which used AgriBase as the main data source. In the SoE report, 45 per cent of the region was described as sheep and beef while pasture grazed by dairy cows was also 8 per cent.

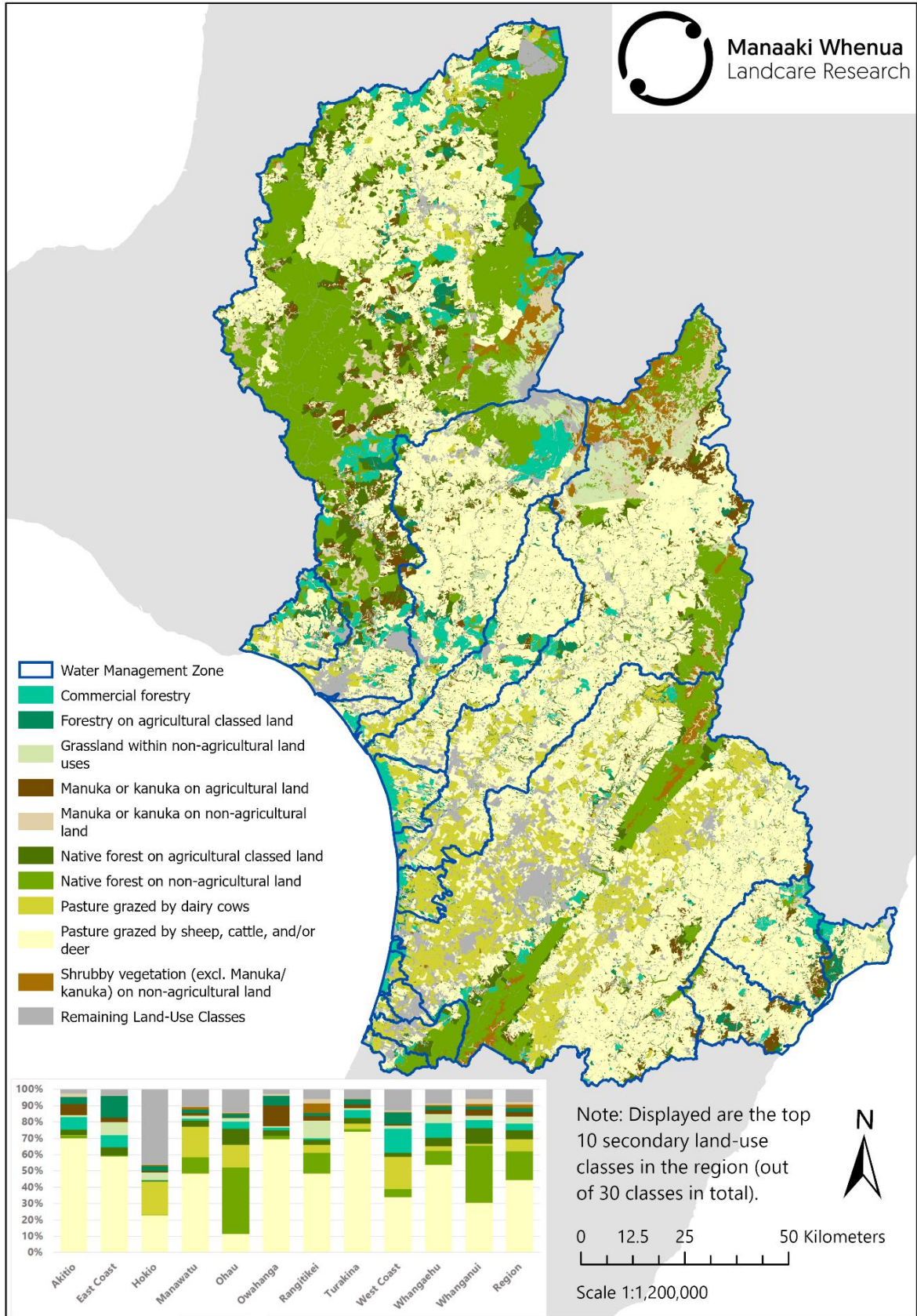


Figure 7: Distribution of the 10 largest secondary land-use classes across the Horizons Region.

ORTHORECTIFICATION OF HISTORIC IMAGERY

- 2.2.30 Spatial datasets and digital elevation models are an essential part of our research programmes and play a key role in understanding spatial changes in the environment. This financial year, the fluvial programme will fund the orthorectification of historic imagery across Rangitikei and Manawatū. Orthorectification is a process of correcting optical distortions of aerial imagery to enable production of digital elevation models. This imagery is available for decadal time periods from the 1940s to the 1980s. From a fluvial programme perspective this means we can use the digital elevation models produced from this process to better quantify how our river systems and gravel resources have moved and changed over time in a more quantitative way, and therefore inform how they might change in the future. In a wider context, this product could have applications across the organisation, e.g understanding historic landslide movement.

2.3 Whanganui and Kai Iwi FMU

- 2.3.1 During this reporting period, 6.5 km of stream fencing and 3,525 riparian plants have been allocated within the Whanganui Catchment with the focus on getting plants in the ground. Some 5.3 kilometres of stream fencing and 1,500 riparian plants have been allocated along the Kai Iwi and Ototoke Streams within the Kai Iwi catchment and South Taranaki iwi Ngaa Rauru have been engaged to supply riparian plants for next winter from their Kii Tahi nursery based in Patea.

2.4 Whangaehu FMU

WHANGAEHU FRESHWATER IMPROVEMENT FUND PROJECT

- 2.4.1 This programme focuses on the delivery of the Ngā Wai Ora o Te Whangaehu FIF project, which focuses on the protection and enhancement of waterways within the Whangaehu Catchment. The main components of the programme are supporting stock exclusion from waterways, riparian enhancement and planting where desirable, aquatic habitat enhancement, supporting industry and community-led initiatives, and a joint project with Ngati Rangī.
- 2.4.2 With stream fencing and riparian planting allocations in this project now being fully allocated and landowners in this catchment are being signed up under the Jobs for Nature (previously the Regional Growth Fund Programme) fund to enable works to be completed. Given the harsher winter conditions in the upper Whangaehu Catchment, the planting season starts later and was underway in October.
- 2.4.3 The Community Grants project was open to applications on 20 June 2020, with a press release circulated on 25 June 2020. Applications were open until 7 August 2020 with nine applications being received seeking \$69,242.31 though only \$66,824.54 was available to be allocated. The panel met on 28 August 2020 to discuss the applications and agreed to fund eight applications

(i.e not including the Makaranui Whanau and Winiata Campsite Trust project which was funded for two years in year two of the FIF project). All applicants had been advised of their success (or otherwise) by 4 September 2020 and staff are in the process of contracting parties for completion of the work. The eight successful projects are:

- Ethical Waste – Waimarino Recycling Centre Storm Water Clean Up to raise community awareness of waste water pollution;
- Friends of the Mangawhero Walkway, Ohakune 2000 – including Mangawhero Willow Removal;
- Lower Whangaehu Catchment Group – Lower Whangaehu Wetland Establishment;
- Mo Te Katoa Marae Trust – Nga Manakitanga o te Makotuku;
- Papakinga Marae – Nga Mokai Tokiahuru;
- Pauro Marino Trust – Pauro Marino Fencing and Walkway Project;
- Raetihi Promotions Charitable Trust – Makotuku Walkway establishment;
- Ruapehu College – Makaranui Monitoring and Restoration Education Programme; and
- The continuation of Moana Ellis and Makaranui Whanau and Winiata Campsite Trust – Restoration and protection of Taonui stream and tuna reserve at Makaranui.

2.5 Rangitikei-Turakina FMU

PFAS MONITORING FOR OHAKEA

2.5.1 Horizons has been working with the **New Zealand Defence Force** (NZDF) on the ongoing monitoring of **per- and ploy-fluoroalkyl substances** (PFAS) and related compounds around Air Force Base Ohakea. PFAS are a large group of manufactured compounds that have industrial and consumer applications. A monitoring programme was specially designed by Pattle Delamore Partners Ltd this year to monitor the movement of the PFAS plume over time². Four piezometers were drilled in the Ohakea area to enable groundwater sampling in addition to four existing water supply wells and three surface water sites that will also be sampled as part of the programme. The first round of monitoring began in September 2020 with another round of monitoring planned for early 2021. Results will be reported to Horizons after each sampling run has been finalised.

FLUVIAL PROGRAMME

2.5.2 Fluvial surveying will focus on the Kawhatau River this financial year as it is a key gravel source for the Rangitikei River. This survey will extend beyond previous surveys in the Kawhatau that

² PDP (2020) RNZAF Base Ohakea PFAS Investigation: Long Term Monitoring Plan

focussed on the gravel beaches only, to further our understanding of the fluvial processes occurring.

STREAM FENCING AND RIPARIAN PLANTING

- 2.5.3 The Freshwater & Partnerships team lead a Horizons staff planting day with the local schools and community upstream of the SH3 bridge at Bulls on 3 July 2020, planting 1,000 native trees to enhance Horizons Regional Council land cared for by the Bulls River Users Group.



Figure 8: Staff planting day next to the Rangitīkei River near the SH1 bridge in Bulls.

- 2.5.4 In this reporting period 15.392 km of stream fencing and 20,960 riparian plants have been allocated within the Rangitīkei – Turakina FMU, with the focus during the reporting period on getting plants in the ground during the planting season.

LAKE WAIPU/RĀTANA FRESHWATER IMPROVEMENT FUND PROJECT

- 2.5.5 NIWA have been engaged to undertake a native and pest fish survey of Lake Waipu which has been programmed for December 2020 although its completion depends on weather. This work is important to understand the availability of host species for kakahi recruitment within the lake and the on-going sustainability of the kakahi population.
- 2.5.6 Horizons' staff have been working with Rangitikei District Council and Manawatū District Council to update the project plan for the wastewater management component of this project which is seeking to cease the discharge to water (to Lake Waipu) and to fully land apply the

wastewater. Rangitikei District Council are focusing on two potential land areas and are undertaking further technical work on these options. A report on the options to inform a decision on which option to proceed with and what the revised project plan for the remaining few years of the project is expected to be finalised by Rangitikei District Council in November 2020. This will then be discussed with the Ministry for the Environment.

2.6 Manawatū FMU

MANAWATU FRESHWATER IMPROVEMENT FUND PROJECT

- 2.6.1 The first quarter of year three has been a busy one with the riparian planting season coming to an end, the third round of community led projects have been received and enquiries for stream fencing and riparian planting continue to come in with an increase noted around the time of the new stock exclusion regulations being introduced. With current allocation for stream fencing and riparian planting new applications are no longer being sought for this financial year and are being allocated to next financial year.
- 2.6.2 After a resource consent hearing during July 2020, Horowhenua District Council have been granted a short term resource consent (from Horizons Regional Council) to continue with the discharge from the Tokomaru waste water treatment plant (WWTP) to water until the upgrade project is completed in 2023. This upgrade will see the treated waste water removed from the river and being irrigated to land.
- 2.6.3 The urban streams project continues to progress with further planting and an extension of the walkway. The urban eel's project was completed in quarter four of last financial year and a dawn ceremony was held to bless the site on the Turitea Stream near the confluence with the Manawatū River on the 31st July 2020.



Figure 9: Dawn blessing of the eel observation platform on the Turitea Stream in early July 2020. Photo provided by Palmerston North City Council.

2.7 Horowhenua FMU

2.7.1 Several research and monitoring programmes have been carried out in the Horowhenua FMU but there are still research gaps that need to be remedied to enable us to prepare for implementation of the 'Action for Healthy Waterways' package, inform the ten-year review of Horizons' One Plan, and inform interventions for water quality improvement in the FMU. This programme will take stock of all previous and ongoing work and address gaps in our knowledge. Work in this space either underway or recently completed includes:

- Integrated sediment and drainage management plan for the Arawhata catchment (contracted to Tonkin + Taylor; due for completion November 2020). More information below;
- Land-use map (Manaaki Whenua, completed July 2020).
- Sustainable Farming Fund – Future Proofing Vegetable Production (LandWISE – three-year project to end June 2021).
- Work has continued in preparation for the commencement of the construction of the boat ramp. Staff and contractors that are involved in the project and some councillors attended a wananga held at Kohuturoa marae in early October. This wananga was the continuation of the sharing of information between the parties to the project and laying some foundations to ensure that the works are undertaken in a culturally appropriate manner.

2.7.2 The following are planned projects and monitoring programmes for 2020-21 in the Horowhenua FMU to further address knowledge gaps:

- Conceptual model for the Horowhenua FMU to provide the baseline for our understanding of groundwater movement in the FMU.
- S-Map soil mapping to inform contaminant models and catchment analysis, and improve OVERSEER inputs.
- Summer monitoring survey to address any immediate gaps in spatial coverage for water quality and quantity, to inform catchment characterisation.
- Implementation of a new monitoring programme to provide sufficient information for consent decision-making, the development of catchment interventions and NPS-FM implementation.

2.7.3 The above programme for the 2020-21 year will align with, support or be part of the recent “Jobs for Nature” funding for the development of interventions within the Horowhenua catchment.

JOBS FOR NATURE

2.7.4 Work continues with the MfE and other partners, stakeholders, and parties around progressing the Jobs for Nature project in the Lake Horowhenua catchment. A key part of the work to date on this project is establishing a contract with MfE. HRC and MfE staff are working to establish the contract as soon as possible aiming for completion of this part of project establishment in November 2020. Work is occurring on pulling together the project work programme for the four year project and the annual work plan into a Deed of Funding.

2.7.5 Part of the origin of the Jobs for Nature project was a project Horizons already had underway to develop an integrated sediment and drainage management plan for the Arawhata Catchment. This project was commissioned in 2019-20 to develop interventions throughout the catchment, to reduce sediment loss to the Arawhata Stream and improve drainage. With the introduction of the Jobs for Nature funding, an additional module for interventions for nutrient loss has been added to the project. Initial high-level interventions were analysed and reviewed using a multi-criteria analysis (MCA) framework. Site visits have also been conducted to ground-truth understanding of flow and sediment loss pathways. The final report is due in November 2020.

2.7.6 Through the Jobs for Nature funding, the Lake Horowhenua Wetlands Project seeks to establish a wetlands complex and an associated works programme of other water quality interventions around the lake to improve water quality and aquatic health in the catchment and the lake. A wetland feasibility study to scope potential designs for a wetland complex in the Horowhenua catchment was commissioned to Jacobs. Conceptual draft designs are in progress and the final report is due in November. This project works alongside and in collaboration with the T+T project in this sub-catchment.

2.7.7 The development of a new monitoring and science programme to support the Jobs for Nature activities and NPS-FM implementation in the Horowhenua is underway with a focus on informing potential wetland design and refining our understanding of nutrient and sediment load and flow pathways. This will include a conceptual model of the Horowhenua FMU, new groundwater monitoring sites and summer monitoring surveys to address any immediate gaps in spatial coverage for water quality and quantity to inform catchment characterisation to begin in the 2020-21 summer. Lake nutrient budgets and improved understanding of the relative contributions of contaminants to the lake are also planned as a part of the project.

WAIKAWA STREAM COMMUNITY CATCHMENT PROJECT

2.7.8 In 2019 the Community Environment Fund, administered through the MfE, announced the success of an application led by Landcare Trust for the Waikawa catchment. The programme is to be delivered over a three-year period and involves:

- Forming a project group representing all interests, to help guide the direction of the project.
- Build a 'whole of catchment' strategy and action plan together with the wider community, with leadership, guidance and co-development with local iwi/hapū.
- Bringing farmers together and supporting them to help lead the way. Providing additional resources and incentives for environmental enhancement to farmers and other landowners, above and beyond what was on offer from local authorities.
- Bring all groups within the community together to have a wider conversation than has been occurring to date.

2.7.9 The project has a stream fencing and riparian planting component to it which is being led by Horizons. Over the life of the project to date, 1,371 km of stream fencing and planting of 1,766 riparian plants has been achieved with co-funding between landowners, Horizons, and the MfE.

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BIOSECURITY ANIMALS

1 ACTIVITY OVERVIEW

1.1.1 The Biosecurity Animals Activity delivers work across programmes to protect both production and biodiversity values including:

- The Possum Control Programme;
- The Rook Control Programme; and
- The Amenity Pests Programme

1.1.2 The Activity links with a range of national and regional policies and strategies including the Biosecurity Act 1993, National Policy Direction 2015 and Regional Pest Management Plan 2017-37.

2 ANNUAL PLAN TARGETS

2.1.1 A summary of the Annual Plan targets and progress to date is provided in Table 1

Table 1 Progress reporting for the Biosecurity Animals Annual Plan targets for 2020-21.

Performance measure/ contract target	Target	Progress
Possum densities are maintained at/below 10% residual trap catch (RTC) in all existing and new possum control operations. This is to enhance production, biodiversity, disease protection, and amenity values.	<10% RTC	12 of the planned 38 monitors were completed during the year. The average result for the 12 monitors was 3.1% RTC (+/-1.3%).
Additional hectares included in [the Possum] Control Programme	6,217 ha	13,820 new hectares were completed during the reporting period.
All known rookeries are treated annually to reduce crop losses and damage.	100%	Surveillance and baiting preparation underway
Provide an urban/peri-urban animal pest management service to assist ratepayers with specialist advice and equipment. All enquiries responded to within two working days.	100%	319 enquiries were received during the reporting period. All enquiries were followed up within the agreed timeframes.

3 POSSUM CONTROL PROGRAMME

3.1 Programme overview

3.1.1 The Manawatū-Whanganui Region Possum Control Programme aims to maintain the possum population below a target of 10% **residual trap catch** (RTC) within the area of the programme, consistent with the Regional Pest Management Plan targets. The possum programme started in 2006, covering 110,000 ha, and has grown every year to include more land. Horizons has initiated control in some areas and in others has taken on new areas where the previous possum control organization, OSPRI, had initiated work for the control and eradication of Bovine TB. Horizons has, and continues to absorb the areas into its possum control programme following OSPRI ceasing control of particular areas. The Horizons programme is delivered by a combination of council staff (approximately 65%) and external contractors (approximately 35%).

3.1.2 In 2020-21 the voluntary possum control programme spans a total area of 1,574,465 ha (approximately 70% of Horizons' region). The total possum control area continues to grow annually as Horizons takes over where OSPRI achieves freedom from Bovine TB in areas it has previously controlled, and then ceases further pest control. Within the area of the programme in 2020-21:

- Landowners have opted out of 79,174 ha (5%) of the programme;
- 6,217 ha not previously controlled by Horizons (ex-OSPRI) is being added to the programme.
- 865,655 ha (55.2% of the total area) is scheduled for maintenance control, i.e. areas that previously have been under Horizons control and will receive bait station fills this year;
- 556,701 ha (35.5%) of the programme area is being deferred from control due to low possum numbers indicated by the monitoring programme and the projected numbers derived from a population modelling app (PosSim) that assists programme management decision-making.

3.1.3 The 2020-21 possum control programme is made up of a total of 153 **Possum Control Operations** (PCOs). The monitoring programme measures possum abundance in 25% of the PCOs to inform decision-making about areas for control, and over a four-year period each of the PCOs is monitored at least once. The growing area of the programme also increases the monitoring programme requirements to ensure each PCO is monitored at least once every four years.

3.1.4 Of a possible 153 PCOs, 87 are being worked this year (2020-21) with 66 deferred due to low possum abundance. Of the 87 PCOs being worked, 57 are being completed by Horizons staff and 30 by external contractors.

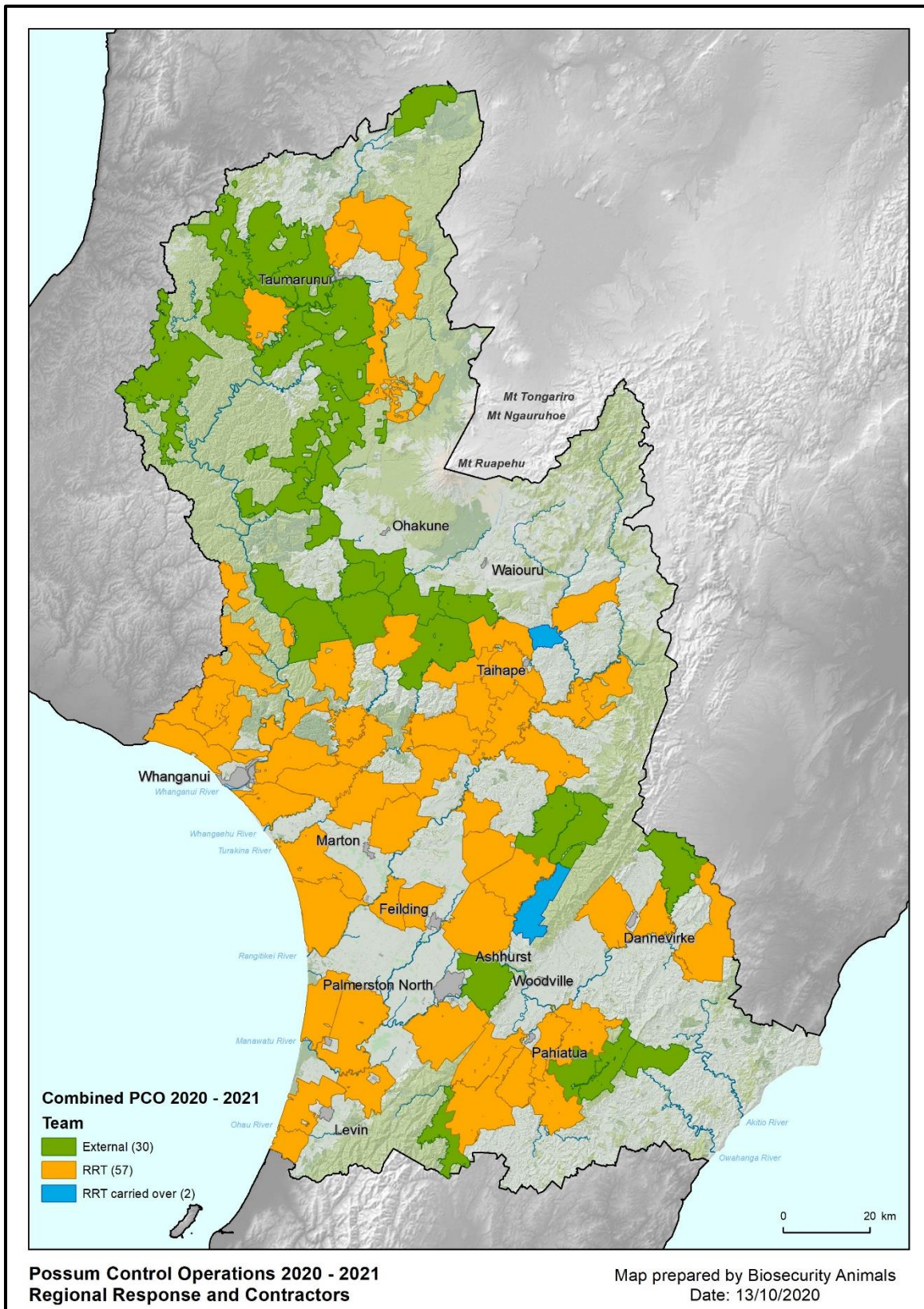
- 3.1.5 As outlined in the Operational Plan the team are reviewing each PCO being worked this year, analysing results and installing further bait stations where required. The team are also seeking landowners who have previously opted out of the voluntary programme to persuade them to opt in and provide more complete coverage of the region. Following on from last year the programme enables the team to identify and action second fills of bait stations where high possum abundance is encountered.
- 3.1.6 Landcare Research has been engaged to provide advice regarding the thresholds of possum abundance linked with the size and type of habitat that could trigger Good Neighbour Rules in Horizons' **Regional Pest Management Plan** (RPMP) 2017-37. This will provide guidelines that will assist when assessing landowners with higher possum abundance than their adjoining neighbouring properties, and the level that will trigger a regulatory response. This advice has been received and is being considered by staff, and a summary of the report will be presented to Council at a future date.

3.2 Activity update

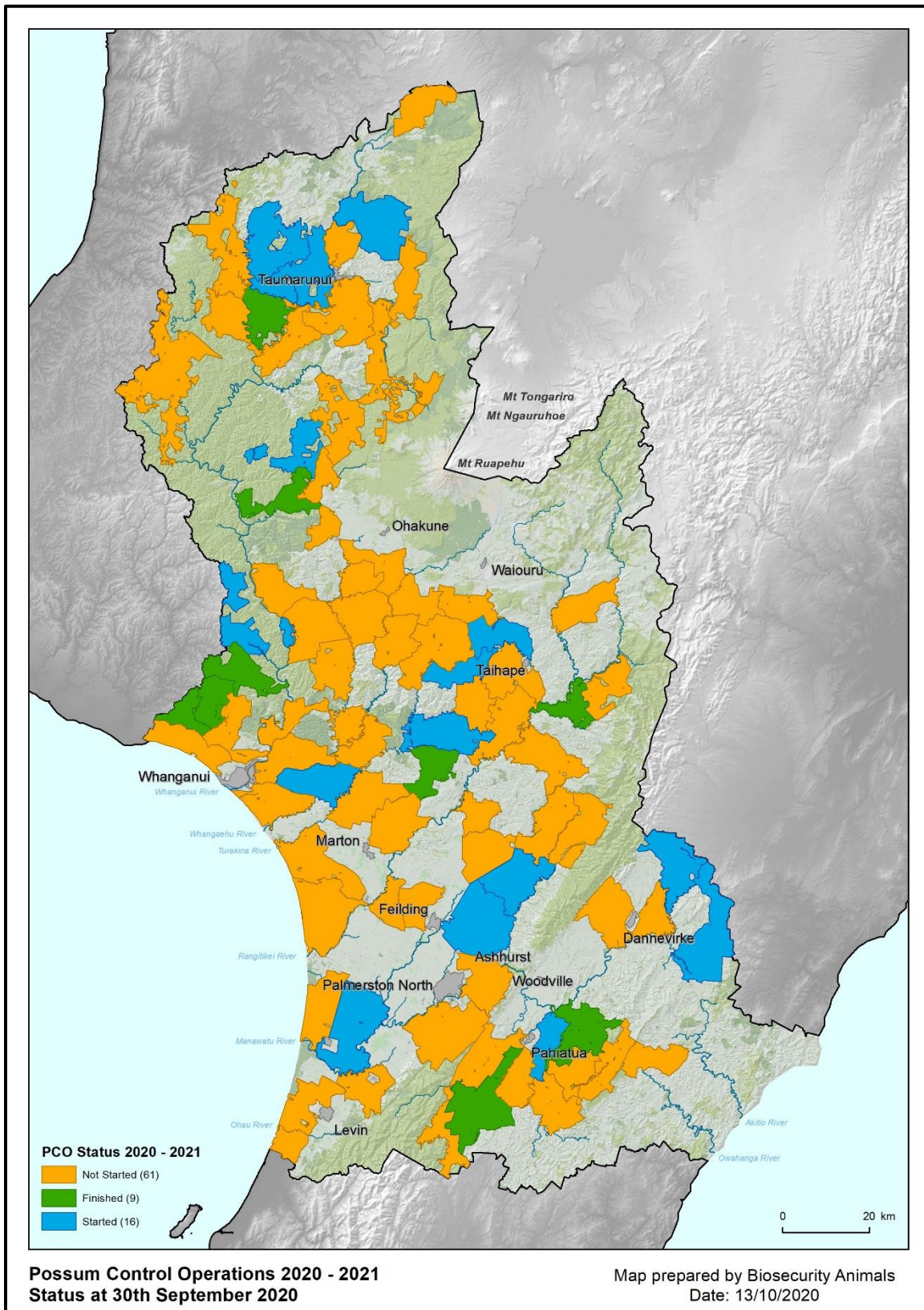
- 3.2.1 The Regional Response Team (RRT) have carried forward two PCOs planned for last financial year that are almost completed and awaiting a couple of properties to finish lambing to enable access.
- 3.2.2 Of the 57 PCOs planned for RRT this year, eight are completed with another 12 started, most of which have almost completed treatment. As expected at this time of the year, lambing means some PCOs cannot be completed in a single attempt and return visits to later lambing properties are required.
- 3.2.3 The external contractors have made a good start to the year, with operational work commencing a lot earlier than in previous years. One new PCO (Ruatiti Stage One) has been completed and work is approximately 50% complete in another PCO.
- 3.2.4 Work is also underway in three maintenance PCOs – Norsewood, Taumarunui Rollback South and Niho Niho.
- 3.2.5 The procurement process to select the contractors for the next three years of PCO work is about to commence. Staff aim to have this process completed in March-April 2021.
- 3.2.6 Horizons have met with the Department of Conservation on several occasions and are encouraging further possum control on conservation land via the Kaimahi for Nature programme that has Covid-19 recovery funding allocated to it for additional work in the region.

Table 2 Progress reporting for the Possum Control Programme against Operational Plan targets.

Measure Hectares	Reporting Period				Total	Operational Plan Target	% Complete	Comment
	Period 1 July – Sept	Period 2	Period 3	Period 4				
Regional Response Team								
PCOs completed	8				8	57	14%	On track
New hectares completed	1,620				1,620	41,423	4%	On track
Bait stations	14,158				14,158	62,014	23%	On track
External Contractors								
PCOs completed	1				1	30	3%	On track
New hectares completed	12,200				12,200	40,462	30%	On track
Bait stations	6,967				6,967	49,362	14%	On track
Total PCO Programme								
PCOs completed	8				8	87	9%	On track
New hectares completed	13,820				13,820	81,885	17%	On track, Annual Plan target of 6,217 ha met
Bait stations	21,125				21,125	111,376	19%	On track



Map 1 Possum Control Combined Operations



Map 2 Status of Possum Control Operations

4 MONITORING

4.1 Possum Monitoring

4.1.1 The Possum Monitoring Programme aims to monitor all PCOs during a four-year period to provide an index of possum abundance; this is year three of the programme.

4.1.2 The monitoring programme operators put out 25 lines of 10 wax-tags (250 wax-tags) per PCO and the number of bite marks gives an index of the possum abundance as a percentage. The monitoring lines are randomly selected to remove bias and to provide a robust estimate. (The results are presented with a 95% confidence interval which is the range of values that provide 95% certainty it contains the true mean of the population).

4.1.3 The monitoring is predominately done by an independent contractor who is not involved in any of the control work. Some internal team members monitor the possum control work completed by external contractors.

4.2 Activity Update

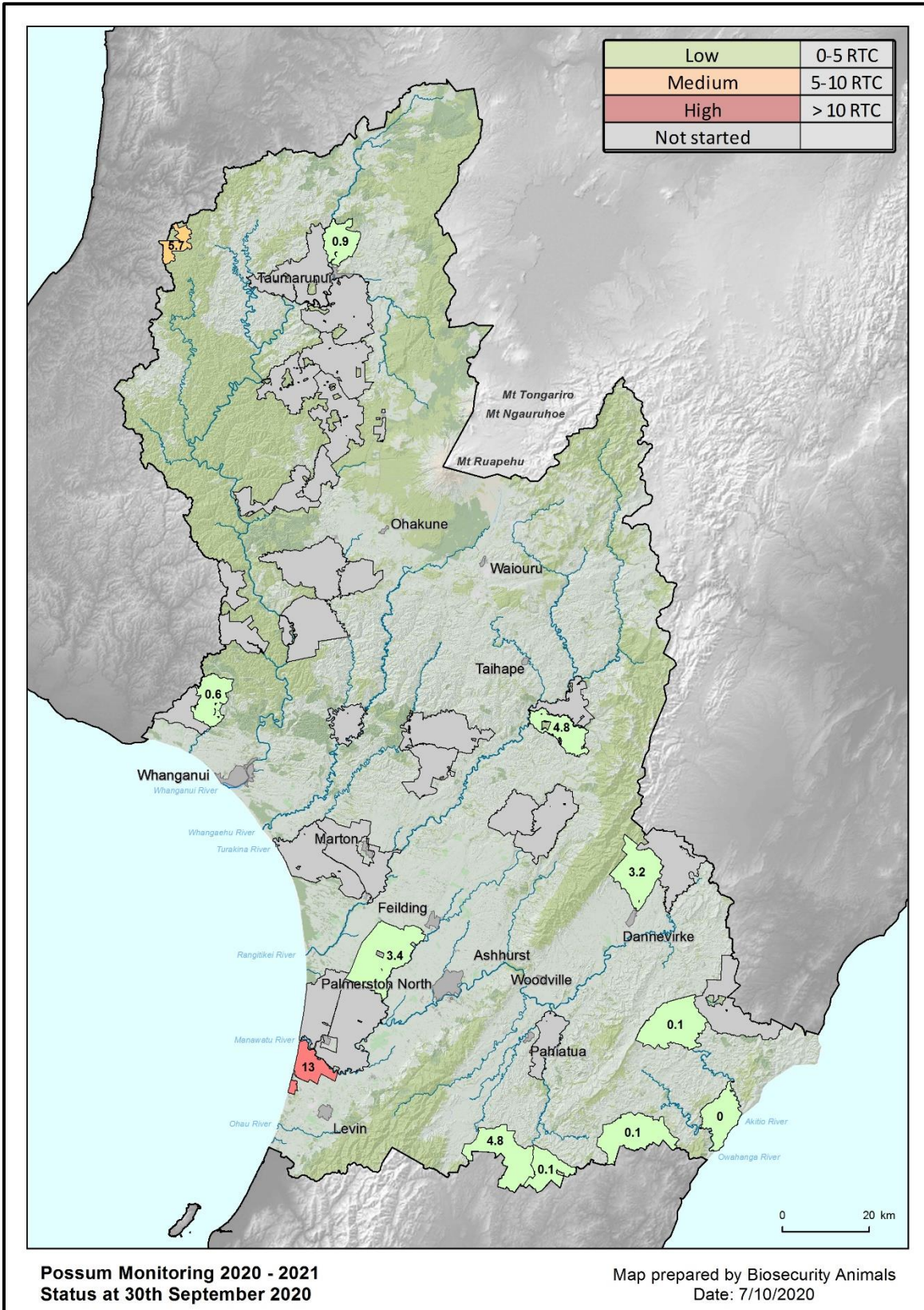
4.2.1 The first 12 of the programmed 38 PCO monitors were completed during the reporting period with the RTC results ranging from 0.0% to 13.0% RTC. The average result over the 12 monitors was 3.1% \pm 1.3%. Please refer to table 4 for the full list of PCOs monitored to date.

4.2.2 The Waiterere PCO returned a 13% RTC result and staff have investigated to determine factors that may have contributed to this higher-than-expected result. It has been concluded that the significant area of untreated possum habitat in the PCO has led to high populations in habitat adjacent to treated areas. Staff will contact the owners of the untreated land to encourage them to opt into the possum control programme.

Table 4 Monitors completed in this period

Possum Control Operation	RTC % \pm 95%CI
Branscombe Coast	0 \pm 0
East Alfredton	0.1 \pm 0.1
Oporae East	0.1 \pm 0.1
Waihoki	0.1 \pm 0.1
Kai Iwi	0.6 \pm 0.4
Taringamotu	0.9 \pm 1.2
Matamau West	3.2 \pm 1.5
Rongotea	3.4 \pm 2.6
Eketahuna South	4.8 \pm 3.2
Kawhatau	4.8 \pm 1.2
Waiaanga	5.7 \pm 1.8
Waitarere	13 \pm 3.2
Year to date average	3.1 \pm 1.3

4.2.3 We will be undertaking the procurement process to select the contractor(s) for the next three years of monitoring at the same time as the PCO control contractor's procurement is being undertaken. Again, the aim is to have the selection process completed by March-April 2021.



Map 3 Status of Possum Monitoring

5 ROOK CONTROL PROGRAMME

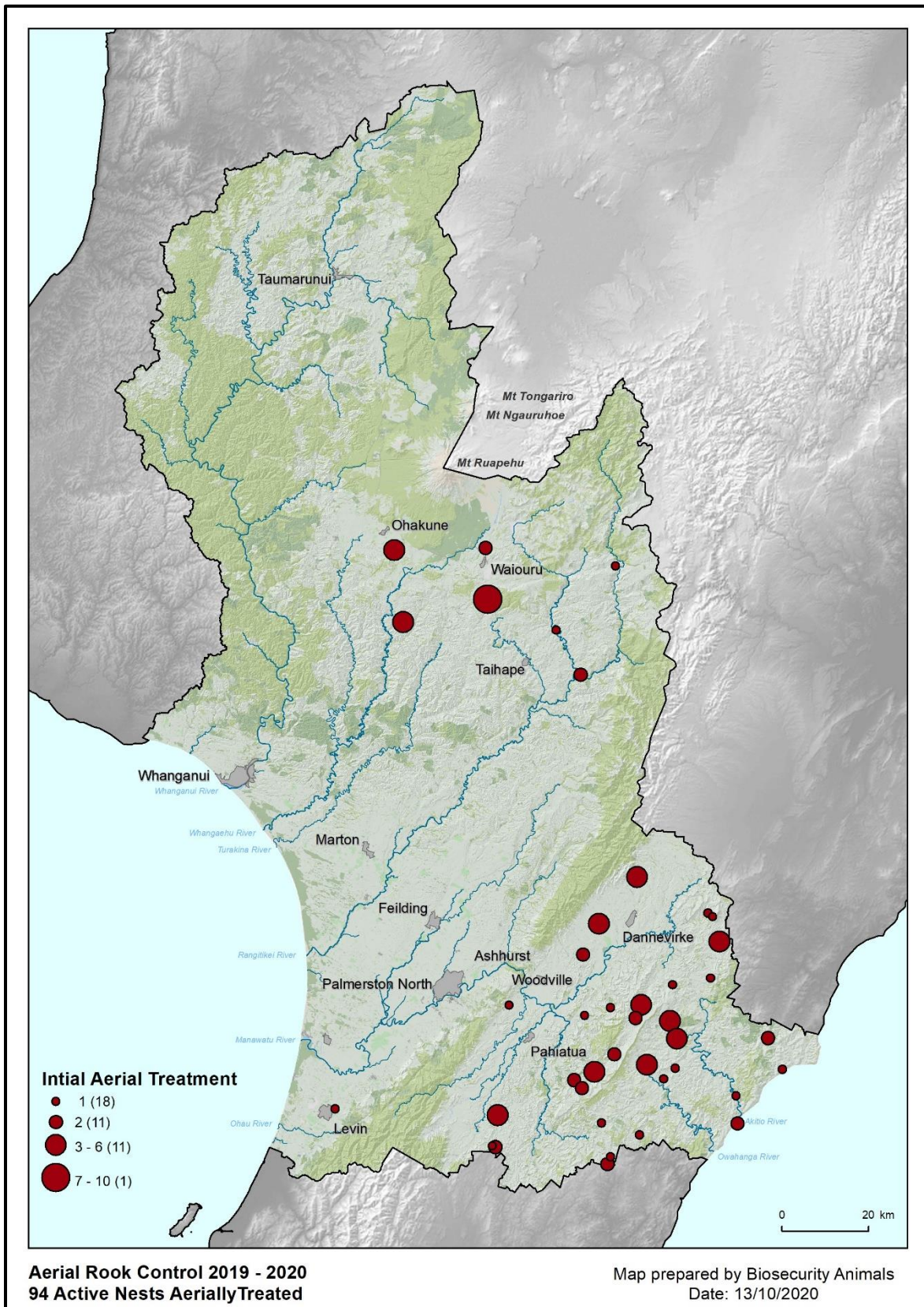
5.1 Programme overview

5.1.1 Rooks are an eradication species in Horizons' **Regional Pest Management Programme** (RPMP) 2017-37 and the region is surveyed annually for active rookeries. A contractor is engaged to aerially poison the nests to control both chicks and adult rooks.

5.2 Activity update

5.2.1 Surveillance for rookeries with nests was undertaken in September and further surveys will be completed in October, prior to the aerial control programme which will likely start in mid-October. Nests will be treated with a contact toxin by an operator slung from a helicopter. Last year 94 active nests spread over 56 active rookeries were treated (See map below).

5.2.2 As part of the Annual Plan process, additional budget has been provided for a limited second check of rookeries later in the season. This aligns with rooks' ability to sometimes breed following control of the initial nest.



Map 4 Previous years control work.

6 AMENITY PEST PROGRAMME

6.1 Programme overview

6.1.1 The amenity pest programme provides a pest animal advisory service for ratepayers with pest animal issues. Horizons provides advice and in some cases loans equipment (traps) and supplies bait to enable landowners to undertake their own control. Enquiries are responded to within two working days of being lodged and usually involve pests such as possums, rabbits, mustelids, rats, and magpies.

6.2 Activity update

6.2.1 The amenity pest programme received 319 enquiries during the reporting period. The greatest number of enquiries related to rabbits, followed by possums and mustelids (ferrets, stoats and weasels).

6.2.2 All enquiries were responded to within the agreed timeframes.

6.2.3 Horizons staff are assisting a group consisting of farmers, Pukaha Mt Bruce Wildlife Centre and Greater Wellington Regional Council with advice on rabbit control in the area surrounding the Wildlife Centre. The area has had issues with rabbits in the past and the group are investigating how, with a collaborative approach, they can achieve the most effective control. Horizons already provides a predator trapping service on this land.

7 REGIONAL PEST MANAGEMENT PLAN (RPMP)

7.1 Programme overview

WALLABIES

7.1.1 As part of the Operational Plan for 2019-20 a project was included to investigate monitoring for wallabies in the region, to enable early detection of this exclusion pest (as identified in Horizons Regional Pest Management Plan 2017-37). This has not advanced due to the Covid-19 lockdown; however, discussions with Landcare Research have taken place. They are currently undertaking research into detection strategies for wallabies and will be reporting back to stakeholders with advice. When this advice is available, staff will present to Council options for keeping this exclusion pest out of our region.

7.1.2 Just prior to the Covid-19 lockdown a report of a wallaby sighting on the Desert Road north of Waiouru was received from the public. Horizons is liaising with Defence Force managers to

carry out an investigation across the nearby Defence land. Council will receive a report of the findings once the investigation is complete.

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BIOSECURITY PLANTS

1 ACTIVITY OVERVIEW

1.1.1 The Biosecurity Plants programme seeks to safeguard the regional economy and environment from damage caused by harmful pest plants, and to prevent the transformation of productive land and the region's natural biodiversity by invasive plants. This is achieved by delivering the following four programmes:

- Incursion response – Responding to 'new to the region' incursions and assisting in transitioning to long-term management if appropriate;
- Regional Pest Management Plan implementation – Implementing pest plant management programmes described in Horizons' **Regional Pest Management Plan (2017)** (RPMP);
- Biological Control Programme – Undertaking biological control agent programmes including supporting community-led projects, and distribution and monitoring of agent populations across a wide range of pest plant species; and
- Advice, promotion and awareness – Providing advice and information to the public about best-practice pest plant control and behaviour to prevent the spread of pest plants.

1.1.2 The pest plant management activity links with a range of national and regional policies and strategies as further outlined in the Natural Resources and Partnerships Group's Operational Plan.

2 ANNUAL PLAN TARGETS

2.1.1 A summary of the Annual Plan targets and progress to date is provided in Table 1 below. Progress reporting for the zero-level goal is limited to an annual tandem summation of all managed sites against their previous status (age, risk class) and the physical number and area of plants.

Table 1: Biosecurity Plants Annual Plan targets for 2020-21.

Performance Measures for Levels of Service	2020-21	Progress to Date
Any exclusion category pest plants that are found in the region are promptly managed with an initial response plan completed within two weeks and then enacted (if not enacted before two weeks).	Number of response plans required. Percentage where a response plan has been produced within two weeks (target 100%) Number of response plans enacted with their specified timeframes (target 100%)	No plants programmed for surveillance at this time of the year.
Number of managed sites at zero-levels increases for pest plants identified for eradication in the Regional Pest Management Plan.	Overall percentage of managed sites at zero-levels (ZL) increases by 10% per annum, from the start date of the RPMP. The 2020-21 target is 71%.	ZL% at start of the year ³ 84%; 2019-20 result: 84%
Number of managed sites at zero-levels increases for pest plants identified as progressive containment – mapped in the Regional Pest Management Plan.	Overall % of managed sites at zero-levels increases by 10% per annum from the start date of the RPMP. 2020-21 target = 70%	ZL% at the start of the year, 73%. 2019-20 result: 73%
Financially support the national bio-control agent development programme and report annually to Council on this programme.	Financial support provided and annual report to Council	Work in progress.
Monitoring of some released biological agents will be completed to assess establishment and host damage (using the national protocol).	20 assessment plots will be monitored	No sites assessed through this period.
Pest plant enquiries received are responded to within three working days.	95% of enquiries will be responded to within three working days	100% of enquiries responded to within three working days. Achieved.

3 INCURSION RESPONSE

3.1 Programme overview

3.1.1 The Incursion Response programme aims to provide immediate and effective assistance for all national or regional biosecurity incursions and any transitions to long-term management. This is a function detailed by a Memorandum of Understanding between the **Ministry for Primary Industries** (MPI) and regional councils.

3.2 Activity Update

3.2.1 The sea spurge (*Euphorbia paralias*) incursion at Himatangi is now one of five locations along the west coast of New Zealand. Horizons staff were recently involved in a workshop with MPI and other regional councils to talk through next steps after a new population was discovered at

³ The Annual Report to Environment Committee is available at: <http://www.horizons.govt.nz/HRC/media/Media/Agenda-Reports/Environment-Committee-2019-14-08/19118%20Annex%20C%20Biosecurity%20Activity%20Plants.pdf>

Karamea on the West Coast during winter. This was followed by another, the fifth find, at Karekare, Auckland, at the end of September.

3.2.2 Sea spurge surveillance is required through early spring, and Horizons is liaising with other agencies and beach communities to highlight the need to for interested people to know what to look for and how to report possible detections to MPI. This beach plant, which grows to 70 cm tall, is widely naturalised in Australia and invades coastal areas, displacing local species and colonizing open sand areas favoured by nesting birds.

3.2.3 Contact with landowners regards paddock cover or crop changes to the velvetleaf infection zones is underway. We use this information to remind farmers of the need to practice good equipment hygiene and to justify surveillance using the sniffer dog.

4 REGIONAL PEST PLAN IMPLEMENTATION

4.1 Programme overview

4.1.1 The Biosecurity Plants activity is strongly linked to the delivery of Horizons' Regional Pest Management Plan 2017-37, which can be reached via the following link⁴. The activity reporting is arranged in sections as per the RPMP groupings for pest management programmes as outlined in Table 2. More information on these groupings is on page 25 of the RPMP.

Table 2: Activity Summary for Biosecurity Plants.

Aim	Programme	Key Deliverables	YTD Progress
Preventing establishment	Exclusion Programme	Keep unwanted pest plants that are not present out of the region.	Searching for: No locations/plants this period.
Eradicating	Eradication Programme	Controlling and reducing the prevalence and extent of Eradication species.	Species targeted for control this period are alligator weed, climbing alstromeria and woolly nightshade.
Rolling back	Progressive Containment Programme	To contain and reduce the geographic distribution of the pest to an area over time.	Species controlled this period are banana passionfruit, boneseed, Darwin's barberry and pest pines.
Maintaining low densities	Progressive Containment – un-mapped.	Ongoing control to reduce its impact and spread to other properties.	Site inspections for production plants and responding to boundary complaints.

4.2 Activity Update

4.2.1 A paper updating Council on the progress of the regional **Pest Management Plan 2017-37** (RPMP) was presented on 13 October. The update identified that nine of the 55 species in the RPMP are not likely to meet the control objectives set out in the plan. The table below

⁴ <http://www.horizons.govt.nz/HRC/media/Media/Pests/2017-2037-Regional-Pest-Management-Plan.pdf>

summarises those species not likely to meet their objectives. Council resolved to consider the management of these weeds as a part of the Long-term Plan process.

Table 3: Species not likely to meet RMP objectives.

Designation	Species with objectives unlikely to be met	Notes
Eradication	Chinese pennisetum	Grass pest in pasture, low numbers so theoretically achievable, total elimination will require more farmer responsibility and staff resource. Land use change from pasture to retirement is a risk.
	Purple loosestrife	Eradication is theoretically achievable with low numbers of sites and a weed that is easily found. The main issue is safe access to sites around Lake Horowhenua and other land holdings in the area, as well as limited herbicide tools for use in wetlands.
Progressive containment - mapped	Evergreen buckthorn	Species is difficult to find as seeds are dispersed by birds and mixed with other vegetation over a large area. Hot spots are Levin, Waiterere Beach, and Whanganui rural areas. Surveillance post RPMP designation has discovered a larger than expected regional population.
	Old Man's Beard	Suppression more likely as spill over from Good Neighbour Process Zone (GNPZ), other agency programmes and infected terrain will make eradication costly.
Progressive containment-unmapped	Eelgrass, Egeria, hornwort, lagarosiphon, reed sweetgrass	Eradication of aquatic weeds at sites is difficult to achieve due to late discovery and low probability of success. There are challenges with control operations in freshwater environments including cost and restricted methodologies available for use in aquatic environments.

Preventing establishment - Exclusion programme

- 4.2.2 For those pest plants that are in New Zealand but not in our region, our goal is to prevent establishment. We aim to detect these plants before they become widely established in the region and facilitate a quick response through appropriate funding that will enable the control or management of these species on ratable land. There are 11 species in this category and Chilean needle grass is an example.
- 4.2.3 Update of inspection register and interrogation of the iNaturalist online network for any possible detections.

Eradicating – Eradication Programme

- 4.2.4 High-risk species that should be totally removed from the region are managed via the Eradication programme. There are 18 species in this category and at the start of the year our information reported that 84% of the 1,624 sites were at zero levels.

- 4.2.5 The team continue to focus on alligator weed. We sent flyers to households and land owners across the broader Mangaone and downstream Manawatū River catchment, as well as targeted letters to 70 land occupiers directly in the historic inundation zone of the lower Manawatū; in an effort to seek any new sites and the source of the current infestation.
- 4.2.6 These enquiries resulted in members of the public sending in photos to be checked, and a few physical inspections were undertaken but none were alligator weed. Alligator weed being prioritised has impacts on other programmes.



Figure 1 Palmerston North Tramping Club surveying the Kawau Stream, Palmerston North. (K. Hoggard)

- 4.2.7 We inspected 30 likely deposition areas along the Manawatū River over two weeks, and given the river is tidal we inspected the bottom section of drains and streams feeding into the river. We also changed the surveillance technique in the Mangaone Stream from walking along the high banks of the stream to wading the full length, except for the lower section which we accessed via canoe. The change in technique was due to dense vegetation at the water level preventing a thorough and reliable survey result. We now spend approximately 80 hours surveying the 10 km stretch of the Mangaone and the next inspection wade will occur in November, followed by 2 -3 more inspections before May.

- 4.2.8 The team have been buoyed by strong community support from environmental and farmer groups in the area. We have attended meetings and provided flyers and information for dissemination. The Palmerston North tramping club offered to help with surveillance and we were very grateful for their assistance along the Kawau Stream.
- 4.2.9 The next surveillance focus will be upstream of Palmerston North and through Bunnythorpe towards Colyton. We are monitoring historic sites for signs of regrowth to give us an indication on control and publicity timeliness.
- 4.2.10 The vegetation removed from the Mangaone stream in May 2020 was composted at Horizon' poplar nursery in Bulls over winter and was collected and dumped at Bonny Glenn landfill in late August. The plants were at various levels of decay and composting was beginning but was slow given the large amount of soil in the bags. Bonny Glen operators dug a hole at the bottom of a pit which was to be covered by 20 metres of refuse.

Rolling back – Progressive Containment Programme

- 4.2.11 Where population levels or difficulty and expense of control prevent achievement of a region-wide zero-density objective, high-threat pest plant species will be managed under a Progressive Containment objective. For each species managed this way, an active management zone is defined within which the pest plant species will be controlled wherever it is found, as in the Eradication designation
- 4.2.12 The Progressive Containment Programme is split into the species that are mapped (e.g old man's beard and banana passionfruit) and the species that are unmapped (e.g gorse and tutsan).

Progressive Containment - Mapped Species

- 4.2.13 Eleven Progressive Containment species fall into the mapped category (e.g. old man's beard). At the start of the year the data showed 73% of 2,721 sites were at zero levels in the actively managed zones for these species. A more robust method of defining sites has been enabled by the new version of the WEEDS software that the team use to track and report activity and as a result, the number of individual sites was altered to combine search areas with multiple smaller sites within an homogenous operational area and count them as one site; this meant a reduction in site numbers. The measure of the percentage of our sites at zero levels remains a sound interpretation of the progress towards our targets, and the newer data measures of "Extent" and "Area" allow the team to better communicate the hectares of land to be searched for pest plants, which should decrease over time.

- 4.2.14 Boneseed is targeted during the late winter months when it is flowering. A weed of coastal and urban areas predominantly, it is also a plant occasionally taken by gardeners for its flowers and has turned up in some inland places.
- 4.2.15 Boneseed is known to stretch from Whanganui to Hokio beach on the west coast. A larger than expected amount was found in forests around Waitarere after an intensive inspection period this winter. Good control has been established in the town but the dune land and forest edges will require many years of contractor intervention to maintain zero-levels.



Figure 3 Peri-urban boneseed, Whanganui city. (R.Sicely)

Progressive Containment – Unmapped species

- 4.2.16 Fifteen Progressive Containment species fall into the unmapped category (e.g gorse). These species are generally widespread but some parts of the region are clear and it is desirable to keep them clear. This programme does not have a strong information base to report on progress against these weeds. Horizons' involvement is primarily through regulation via the Good Neighbour or Clear Land rules of the Regional Pest Management Plan 2017-37 (RPMP) and through non-regulatory advice or in some cases by biological control. For occupiers of large land areas, farmers, and other organisations we have the ability to allow responsibility to be acknowledged and actions planned via Approved Management Plans. The intent of these plans is to meet the objectives of rules and contribute to the outcomes of the RPMP by

eradicating or reducing the spread of pests from the place(s) occupied or managed by the plan-maker.

- 4.2.17 Species we dealt with during the June to August reporting period included blackberry and gorse. A small number of Good Neighbour complaints were received.

Table 3: Summary of Good Neighbour Rule activity for the period July 2020 through June 2021.

Description	Reporting Period				2020-21 totals
	1	2	3	4	
Boundary complaints received and actioned outside of compliance	2	0	0	0	2
Required to Clear notices (RTCs) issued	0	0	0		0
Notices of Direction (NODs) issued	0	0	0	0	0
Notices resolved in this period	0	0	0	0	0

4.2.18 Staff have spoken to territorial authorities and Crown agencies in Horizons' Region about their Pest Management Plan obligations and agreement has been reached on pest programmes with five of the seven councils. The agreements are in the form of Approved Management Plans which set out how the entity will achieve their RPMP obligations. The Crown entities (DOC, KiwiRail, LINZ, NZTA) are engaged and at various stages of reaching an agreement.

TLA/ Crown Agency	Approved Management Plan	Memorandum of understanding	Notes
Ruapehu District Council	27/08/2020		
Rangitikei District Council			Rangitikei District Council using external consultant to develop AMP
Whanganui District Council	27/08/2020		
Manawatu District Council	30/09/2020	Consultation	
Tararua District Council	3/09/2020		
Palmerston North City Council			Waiting to receive AMP
Horowhenua District Council	1/09/2020	Consultation	
NZTA – Southern	27/08/2020		
NZTA - Northern			Consultation staff dependant
Kiwirail			Being worked on.
DOC			Consultation - ongoing
LINZ			Consultation - ongoing

4.2.19 Horizons has drawn up a Memorandum of Understanding template for use with, district councils. This was deemed necessary to ensure we were giving due recognition to the requirements within the RPMP and utilising a robust document which sets out long-term expectations of operating under the RPMP and pest plant management for all parties. The document is with two councils for consultation, and following feedback the remaining councils will be offered copies through ongoing RPMP engagement.

Progressive Containment – Unmapped aquatic species

4.2.20 Aquatic pest plants are also part of the Progressive Containment – Unmapped grouping of the RPMP and are grouped together on the basis that they are aquatic pests managed the same way for the same objectives. Eel grass, egeria, hornwort, lagarosiphon and reed sweetgrass are aquatic pest plants included in the Progressive Containment section of the RPMP 2017-37. Their distributions are not yet mapped with any certainty and our aim is to progressively contain or reduce the number of sites affected across the region, to prevent further spread and to reduce adverse effects on the environment.

5 BIOLOGICAL CONTROL

5.1 Programme overview

5.1.1 Many entrenched pest plants in the region are now the target of our Biological Control programme, which aims to assist the development of insects and diseases to control a wide range of pest plants and to release, distribute and monitor those agents within the region.

5.2 Activity Update

Tradescantia rust has been released for the second year in a row. Requiring a number of unusual conditions at introduction, this is the fourth bio-agent released against the pest, the other three being plant eating insects.



Figure 4 Planting infected material amongst a healthy population of tradescantia. (R.Sicely)

- 5.2.1 We made this release in what should be a prime location for the fungus to establish. For successful establishment it needs a shady, low wind, high humidity climate, and staff hope this site in Whanganui satisfies the requirements and that the weather plays its part to encourage establishment.
- 5.2.2 Staff will monitor progress of the release and will report back as part of the 20 sites included in the Biocontrol Annual Plan monitoring target.

6 INVESTIGATION

6.1 Programme overview

- 6.1.1 A number of plants present in the region may have the potential to become economically and ecologically damaging. This output contains the Pest Plant Investigation programme and the **National Pest Plant Accord** (NPPA).

6.2 Activity Update

6.2.1 Nothing to date.

7 ADVICE, PROMOTION AND AWARENESS

7.1 Programme overview

7.1.1 The aim of the Awareness Programme is to alert the community to the issues, threats and solutions of weed management, to ensure region-wide best-practice pest plant management. This includes responding to enquiries from the community and undertaking collaborative projects.

7.2 Activity Update

7.2.1 The pest plant team received 24 enquires during July through September and all were attended to within three working days.

8 COLLABORATIVE PEST PLANT CONTROL

8.1 Programme overview

8.1.1 Collaborative projects undertaken by Horizons staff and external stakeholders provide a team approach to managing weeds in some challenging environments. Working with others and providing advice and leadership has delivered some excellent results that otherwise would not have eventuated. A summary of this activity is provided in Table 4.

8.1.2 In September 2020 Council received a paper outlining the enlarged National Wilding Conifer Programme and resolved to be the fund manager for the Central North Island. This role involves Horizons staff providing leadership and secretariat services for the steering group, receiving and managing the funds for the programme from MPI, and disbursing funding to stakeholders once surveillance and control operations are completed. This programme has significantly increased in scale and activity and is aimed at eradicating wilding conifers from the landscape. Horizons share of the programme funding is \$329,000 for the 2020-21 year, and up to \$1.2 million over the next four years.

Table 4: Collaborative Pest Plant Control Projects.

Project	Key Deliverables	YTD Progress	Horizons Role
Wilding Conifer – Central North Island Regional Coordination Group (RCG) – Fundholder and Chair	Work with partners and other stakeholders re: <ul style="list-style-type: none"> Planning for management unit activity and reporting Managing the budget Annual meeting scheduled 	Ministry of Primary Industries - Horizons contract agreed to be signed by council; partners' new contracts prepped.	Contracted to Government as the agency for managing Central Government funding for this activity in the broader area.
Waimarino-Tongariro National Park Darwin's barberry control programme	Coordinated control across public and private land to increase the protection of previously cleared areas.	Programme underway.	Organiser of control programmes on private land.
Rangitikei Horsetail Group	Support group activity with population releases and monitoring.	Meeting held and planning for release of more weevils this spring and final field day for SFFF funding planned for summer.	Partner to group and access to weevils and advice.
Desert Road Invasive Legume Control Group	<ul style="list-style-type: none"> Relationship between parties maintained. Memorandum of Understanding maintained and implemented. Coordinated action in priority areas is undertaken against the target species. 	Meeting held and collaboration agreements progressed with the intention for multiple parties to use a single contractor. Gorse distribution and abundance map endorsed for creating. Flights this October.	Coordinate meetings and collaborative activities.
Freshwater Biosecurity Partnership Programme and Check, Clean, Dry (CCD) advocacy programme.	Representing Horizons at a national forum to champion behaviour change and freshwater protection. Attendance at high-risk events and strong advocacy with the main users of waterways in our headwater areas.		Provide and manage the programme in the greater region.

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BIOSECURITY PLANTS COORDINATOR

Rod Smillie
BIODIVERSITY, BIOSECURITY & PARTNERSHIPS MANAGER

Jon Roygard
GROUP MANAGER NATURAL RESOURCES AND PARTNERSHIPS



BIODIVERSITY

1 ACTIVITY OVERVIEW

- 1.1.1 Manawatū-Whanganui Regional Council (Horizons) has statutory obligations to maintain and sustainably manage the region's biodiversity under the Resource Management Act (1991). Horizons' strategy is set out in the One Plan and includes both regulatory and non-regulatory approaches. This item reports on the non-regulatory biodiversity programme.
- 1.1.2 Horizons' Biodiversity team works closely with other council teams and external organisations to enhance biodiversity and engage the community in biodiversity enhancement. This work is supported by research, additional labour and monitoring undertaken by the Horizons' Science & Innovation and Biosecurity teams, along with other agencies, to prioritise and focus implementation efforts. This item reports on the collective biodiversity activity of the implementation and science programmes. Other non-regulatory programmes, particularly the freshwater programme, also contribute to biodiversity outcomes.
- 1.1.3 A key challenge in biodiversity management is allocating resources in a way that provides the greatest ecological benefit. This has been a significant area of focus within the biodiversity programme review. The review aims to improve processes and subsequent biodiversity outcomes across the region, while working to bring Horizons closer to meeting requirements under the proposed **National Policy Statement for Indigenous Biodiversity** (NPSIB). The proposed NPSIB requires councils to identify areas where there is significant vegetation and habitats of indigenous fauna, and to manage their protection through plans and consent processes under the **Resource Management Act** (RMA).
- 1.1.4 National policy direction is changing with Central Government releasing the National Biodiversity Strategy, Te Mana o te Taiao, on 10 August 2020. The regional sector and Horizons staff were involved in the development of the strategy. The NPSIB has been delayed due to Central Government's Covid-19 response and is now signaled for release in April 2021. These documents will influence the way that Horizons manages biodiversity within the region.

- 1.1.5 Work across the non-regulatory biodiversity programme supports the goal for the priority sites to *"maintain or restore the full range of the region's indigenous ecosystems to a healthy and functioning level"*.
- 1.1.6 Biodiversity Activity is presented regionally (where appropriate) and/or for each of the programmes that make up the Non-regulatory Biodiversity Programme, integrating the implementation work of the Biodiversity team and the activities of the Science & Innovation and Biosecurity teams. This includes:
- The regional activity update and progress against Annual Plan targets;
 - The priority biodiversity sites programme, a site-led programme working with landowners to maintain and enhance priority sites on private land;
 - The biodiversity partnerships programme, where projects extend beyond the boundary of a single landowner and/or involve community groups or external agencies; and
 - Management of Tōtara Reserve, our Regional Park.

2 ANNUAL PLAN TARGETS

- 2.1.1 Progress against the Annual Plan targets for the 2020-21 year are shown in Table 1 below.
- 2.1.2 The project listed as completed in the community-based biodiversity projects supported row was the July planting day at Bettie Tripe Reserve in the Rangitikei.

Table 1 Progress reporting for the Biodiversity Activity Annual Plan targets for 2020-21.

Long-term Plan Target	Target	Allocated	Completed or supported	% of target completed
Protect/enhance priority habitat remnants				
Additional top 100 wetlands actively managed	4	1	0	0%
Additional top 200 bush remnants actively managed	7	5	0	0%
Support community involvement in biodiversity protection				
Support existing community-based biodiversity improvement projects	12	18	1	8%
Tōtara Reserve Regional Park				
Annual report on the management of Tōtara Reserve Regional Park for biodiversity and recreational values, including managing the camping facility.	1	-	0	To be presented at the end of the financial year
Science & Innovation - Biodiversity Long-term Plan targets for 2019-20.				
Performance Measures for Levels of Service	Target 2020-21	Target achieved	Progress update	
Annual report on biodiversity monitoring and research activity.	1	0	To be presented at the end of the financial year	

3 PRIORITY SITES PROGRAMME

3.1 Programme overview

- 3.1.1 The Priority Biodiversity Sites Programme is a habitat-focused programme aiming to maintain or restore the full range of the region's indigenous ecosystems to a healthy and functioning level. Staff identify and assess priority sites for their eligibility for management. Once sites are found to be eligible, staff work alongside the landowner and sometimes the QEII National Trust to manage them by interventions such as animal exclusion and pest plant control.
- 3.1.2 The Biodiversity Activity has been through a review involving developing a prioritisation process to identify and select sites for further management. Once sites are selected from site summary information, site management prescriptions are written and costed, and will be added to the

prioritisation list for work that is required at management sites. The budget available for this work will then be allocated according to the assessed priorities. A paper will be presented to Council in November on the new goal to maintain or restore the full range of the region's indigenous ecosystems to a healthy and functioning level and the approach to working toward this goal via this year's work programme.

3.2 Activity Update

IDENTIFYING AND ASSESSING SITES

- 3.2.1 **Rapid Ecological Assessments** (REAs) involve visiting a site to collect inventory data on the ecosystem types present and the threats that would need to be managed if the site was included in the Priority Sites Programme. As well as increasing our knowledge of remaining biodiversity in the region, REAs identify sites that are eligible for management in the following year.
- 3.2.2 To create the list of sites outlined for REAs in the coming year, a subset of regionally critically endangered ecosystems has been shortlisted based on four factors: predicted remaining habitat, extent of habitat decline, area of remaining habitat in the conservation estate, and proportion of remaining habitat outside the conservation estate. Sites identified by prioritisation modelling from these shortlisted ecosystems will be targeted for REAs in the coming year. By being selective about the location of next year's REAs, we are targeting the most threatened sites for management in the 2021-22 financial year.
- 3.2.3 For the 2020-21 financial year the Biodiversity Team has set an internal target of undertaking 80 REAs. The list of 150-200 potential sites is considerably greater than the number of REAs expected to be completed, allowing for redundancy due to factors such as lack of access.
- 3.2.4 Table 2 below provides a summary of the management level index status for all sites on the managed list to the end of September 2020. The current assessment identifies that 10 sites are at management level 4, i.e. have been assessed and priority works are being carried out as required.

Table 2 Priority Sites Management Level Index (0.5: site may have received management from Horizons but has not been assessed, 1: REA completed within the last 10 years, 2: site has received Horizons contribution to management, 3: site receives ongoing management input from Horizons, 4: site receives a higher level of management inputs, 5: receives significant inputs from stakeholders, 6: receives management inputs for all animal pests.

Management level	Bush sites	Wetland sites	All sites
6	1	0	1
5	1	2	3
4	7	3	10
3	40	14	54
2	100	51	151
Sub-total for Level 2+	149	70	219
1	350	69	419
0.5	4	6	10
Total	503	145	648

SITE MANAGEMENT IN 2020-21

- 3.2.5 Management actions in the 2020-21 year are being prioritised to fit the available budget through a process that is focusing firstly on the 68 sites currently at Management Level 3 and above. The process includes all of these sites having full site summaries and management prescriptions prepared. These: a) identify ecological integrity targets, b) identify pressures required to be managed to meet targets and c) develop prescriptions and indicative cost information to reduce pressures to required levels over a five-year period. Costings are based on prescriptions designed to restore ecosystem function and viability, not to maximise populations of charismatic species or ensure the persistence of threatened species. Where charismatic or threatened species are present it may be appropriate to provide additional management in collaboration with the Department of Conservation.
- 3.2.6 Of the 68 sites currently at Management Level 3 and above, 50 have had site summaries prepared this financial year and 48 of those have had management prescriptions approved.
- 3.2.7 In addition, 23 sites currently lower than Management Level 3 have had site summaries prepared and 14 of those have had management prescriptions approved. These are sites that will be considered for funding assistance to bring them up to Management Level 3 in this financial year or the next.

4 BIODIVERSITY PARTNERSHIPS

4.1 Programme Overview

4.1.1 The Biodiversity Partnerships Programme funds biodiversity-related projects that extend beyond the property boundary of a single landowner and/or involve community groups or external agencies. The current suite of projects includes target sites or areas with environmental, social and cultural values.

4.1.2 The 18 projects approved in 2020-21 are made up of six Biodiversity Collaborations (four “icon” and two targeted rate projects), nine Contestable Biodiversity Fund projects, Weedbusters and, so far, two Community Engagement projects.

4.2 Programme Activity

SEEKING GOVERNMENT FUNDING

4.2.1 During the 2020 year Horizons has made a range of applications to Central Government for funding from the Jobs for Nature fund. These applications aimed to provide employment opportunities with biodiversity enhancement outcomes, and included Iwi Environmental Management Plans, Regional Biodiversity enhancement, Kia Whārite expansion, and supported two projects proposed by the Unenuku Charitable Trust for the Pōkākā Eco-sanctuary Trust in Ruapehu District. None of these biodiversity or biosecurity based applications have been successful.

4.2.2 During the reporting period, staff have engaged with the Department of Conservation and some iwi regarding the DOC “Kaimahi for Nature” funding which has an allocation of approximately \$11 million for work in the region. Staff have sought clarity about the regional council role and process around funding distribution from DOC, and are working to support further discussion with iwi and the formation of the alliance structures that will enable projects to be determined and rolled out. The rollout of this programme is being led by the DOC.

SELECTION OF PARTNERSHIP PROJECTS FOR HORIZONS FUNDING

4.2.3 Council approved the revised structure for the Biodiversity Partnerships Programme and adopted “*Empowering communities to reconnect with and improve biodiversity*” as the programme’s goal, after the Strategy and Policy Committee meeting in August 2020.

The new structure includes:

- Biodiversity collaborations: A small number of “icon” projects are able to be funded on a longer-term basis at Council’s discretion to be funded through targeted rates. Table 3 below overviews projects and funding allocations for these projects.
- Contestable biodiversity grants fund: This fund enables a more contestable approach to the funding of community projects supported by clear assessment criteria. The contestable fund is not available this year and the contestable process will run from the 2021-22 financial year. Table 4 shows projects and funding allocation for the current financial year.
- Community engagement programme: An increase in staff capacity and reallocation of budget to further support community engagement and mobilise community groups and members around biodiversity was approved by Council as part of Annual Plan consultation. This aims to provide opportunities to engage and mobilise community members at an individual or household level through a calendar of community events and activities, e.g. BioBlitz, planting days, trapping workshops etc.

4.2.4 **Rangitikei Environment Group** (REG) and Waiterere Beach Community Project works are funded through targeted rates. No changes were made to these projects. Options to make changes to the funding structure of these projects could be made through the Long-term Plan process.

Table 3 Council has approved the following as Biodiversity Partnerships icon projects and funding allocations for the 2020-21 year as follows:

Icon projects	2020-21 FY (excluding GST)
Te Āpiti Manawatu Gorge	\$244,856
Kia Whārite	\$150,000
Rangitikei Environment Group (REG)*	\$95,000
Pūkaha Mt. Bruce	\$37,292
Bushy Park	\$20,000
Waiterere Beach Community Project*	\$7,000
Total	\$554,148

**These projects are funded through targeted rates.*

Table 4 "Biodiversity Grants" projects for the 2020-21 financial year.

Partnership Projects	2020-21 FY (excluding GST)
Manawatū Estuary	\$25,000
Turitea Reserve	\$20,000
Tawata Eco-sanctuary	\$15,000
Te Pōtae o Awarua Predator Control	\$15,000
Cape Turnagain	\$10,000
Awahuri Forest – Kitchener	\$8,000
Kahutarawa Stream	\$8,000
Ahimate Reserve	\$5,000
Massey Hill	\$3,500
Total	\$109,500

4.3 Project Updates – 2020-21

This section provides updates on the activity of the projects funded in 2020-21.

RANGITIKEI ENVIRONMENT GROUP (REG)

- 4.3.1 Old man's beard (OMB) is the main focus for REG and work is split between urban, rural and public reserves in the Rangitikei District, mostly around Taihape. In rural areas, REG encourages and assists OMB self-help groups with control works. The REG programme will commence immediately after Labour Weekend, following the guidelines of their operational plan. Financial support comes from Horizons, Rangitikei District Council and WINZ. This project is funded by a targeted rate and Horizons' contribution is \$95,004 this year.

WAITARERE BEACH COMMUNITY PROJECT

- 4.3.2 The **Waitarere Beach Progressive & Ratepayers Association** (WBPRA) approached Horizons in 2010 about a problem with coastal wattle and other exotics invading the dunes and affecting views and the aesthetic appeal of the beach. Most of the weeds present were not among the plants that Horizons dealt with under the Regional Pest Plant Management Strategy; therefore the Council had no mandate to control them.
- 4.3.3 Horizons commissioned an independent report and presented the findings to a public meeting with the Waitarere Beach community. The community agreed to pay a targeted rate to Horizons for the purposes of controlling the exotic plants and restoring the native plants on the dunes.

- 4.3.4 The targeted rate has been used to control coastal wattle, yucca, cape ivy, lupin and other unwanted plants, and to propagate native spinifex grass for replanting cleared areas of the dunes. This project is funded by a targeted rate and the budget is \$7,000 this year. Most of the weed control work is undertaken during summer.

TE ĀPITI MANAWATŪ GORGE

- 4.3.5 The Te Apiti Manawatu Governance Group met via video link on May 5, 2020. Key Topics of discussion included:
- An updated Terms of Reference which was approved in principle, providing the process around addition of a further iwi group be followed.
 - A presentation by Waka Kotahi NZ Transport Agency (NZTA) on the new gorge road process.
 - An overview of the work by Central Economic Development Agency (CEDA) on tourism opportunities for the area.
 - An update by Palmerston North City Council on the development of a Master Plan for the area and discussion of how this relates to other potential plans for the area including a destination management plan being prepared by the Department of Conservation and other plans being prepared by NZTA.
 - An update on progress on the new animal pest control work being funded through additional investment by Horizons Regional Council and NZTA.
 - The next Governance Group meeting is scheduled for December 10, 2020 and will focus on the Master Plan including the vision and goals for the project, an operational update (including pest control, improving communication and planned track upgrades) updates on the tourism opportunities work by CEDA and an NZTA update on the new road project are also planned.
- 4.3.6 Activity in the first quarter of the financial year has included the following:
- The weed control contract has been signed and the contractor will start in October.
 - A working group comprising Horizons, NZTA, and DOC are working collaboratively to deliver a significant increase in pest control in Te Āpiti. This will provide complete coverage over the Te Āpiti site and bring much more protection to the species that inhabit the site.

- The Te Āpiti Biodiversity Management Plan 2017 is being reviewed to develop an increased monitoring programme to measure progress in improving the biodiversity activity at Te Apiti.
- Additional memorial plantings, in association with the Woodville Domain Board and RSA, were undertaken at Ferry Reserve. The original plan was to include the greater Woodville community, schools, NZ Defence Force, and Te Apiti stakeholders; however, Covid-19 Level 2 restrictions caused the planned event to be postponed. Instead, there will be a celebration of the living memorial planting in early November involving all who would have been at the planting event. This will be much the same as our previously planned event, i.e. welcome and blessing, mulching around all the trees, educational walk for the school children and ending with a BBQ. Date to be confirmed.



Photo 1 The RSA memorial planting at Ferry Reserve, August 2020.

KIA WHĀRITE

- 4.3.7 Predator trapping has continued in the Rētāruke, Manganui o te Ao and Whanganui River Catchments for whio (blue duck) protection and in the Waimarino area for North Island brown kiwi protection. Ground and aerial goat control operations were also undertaken in the Waimarino area. Horizons' activity for this year has been contracted and is underway.
- 4.3.8 DOC is currently undertaking a review of the Manganui o te Ao whio security site to refine the requirements for ongoing protection and enhancement of this taonga species. The review will

include consideration of DOC's ongoing funding of the project. An update of the review will be provided to Council later this financial year.

BUSHY PARK

- 4.3.9 Horizons contributes \$20,000 per year to pest control within the 100 ha Bushy Park site, near Whanganui. Additionally, staff from our Biodiversity and Science teams occasionally assist by spending a day servicing rodent monitoring lines through the forest.
- 4.3.10 The Bushy Park board has approved the retirement from grazing of land within the predator fence at the eastern end of the site. This area will be replanted with species that will create habitat suitable for the reintroduction of native skinks.
- 4.3.11 A translocation project for whitehead/pōpokotea birds is underway. Establishing whitehead in Bushy Park may have the added advantage of attracting any nearby long-tailed cuckoo/koekoeā as they only lay their eggs in the nests of whitehead, brown creeper or yellowhead.

PŪKAHA MOUNT BRUCE

- 4.3.12 Pūkaha Mount Bruce is a community project involving Horizons, Greater Wellington, DOC, iwi, and local landowners. The 942ha reserve straddles the boundary of the Horizons and Greater Wellington regions just south of Eketahuna. Pūkaha has thriving wild kokako, kiwi and kaka populations, native lizards, longfin eels, and other special inhabitants. The forest itself is a dense lowland podocarp remnant of Seventy Mile Bush. Pūkaha is managed as a "mainland island" without predator-proof fencing, which means pest control in and around the reserve is essential to protect its vulnerable wildlife.
- 4.3.13 Environmental pest plants such as old man's beard and Darwin's barberry have the ability to destroy and replace native vegetation and habitats. Both of these are in Pūkaha and the surrounding landscape. To tackle these issues, a Technical Advisory Group including Pūkaha National Wildlife Centre, DOC, Horizons, Greater Wellington, and landowners was formed to assist with providing guidance on best practice control for these plant pests.
- 4.3.14 Currently, Horizons Regional Response Team is servicing perimeter mustelid traps every two weeks and continuing the landscape-scale possum control operations. The budget for trap servicing is \$27,292 this year. Trap catch data is presented below.

Table 5 Pukaha trap catch results for the reporting period.

	July	August	September	Year to date
Ferret	3	1	-	4
Stoat	6	-	-	6
Weasel	1	-	-	1
Rat	21	14	10	45
Cat	8	6	1	15
Hedgehog	13	3	4	20
Other	-	-	13	13
Sprung	-	9	11	20

4.3.15 The Biodiversity Team, alongside DOC, is managing the environmental pest plants within the reserve and the buffer. This contracted work is done during summer. Horizons is currently spending \$10,000 per season on pest plant work this site.

COMMUNITY ENGAGEMENT

4.3.16 Community engagement is a priority and through the 2020-21 Annual Plan process, Council resolved to fund an additional position to add capacity and grow the current programme of community participation in biodiversity projects across the region. As part of the Biodiversity Review, Neil Gallagher was appointed to the new Community Biodiversity Advisor role and will begin the new role in November 2020.

4.3.17 Bettie Tripe Reserve is a 4.5 ha native forest remnant in Rangitikei and is part of our Priority Sites Programme. Tall mature trees in the remnant include kahikatea, tōtara and matai. The Tripe family received funding from the DOC Community Fund to replant areas of rank grassland around the existing native forest remnant in natives, and help protect the Mangatipona Stream that runs through the reserve. The family didn't have the resources to plant the site so they came to Horizons for assistance and we made the project into one of our Big 5 staff planting days. On 24 July 2020, 4000 native plants were planted at the site on the northern side of the forest remnant in a Horizons community planting day with assistance from Ngāti Apa and Rangitikei Forest and Bird.



Photo 2 Planting day at Bettie Tripe Reserve, July 2020.

- 4.3.18 Horizons is supporting the next Coastal Restoration Trust NZ conference to be held in Whanganui on 10-12 March 2021. The conference brings together experts and community groups from all over the country and is an opportunity for Horizons to highlight some of the work we are doing in the coastal environment.

WEEDBUSTERS PALMERSTON NORTH

- 4.3.19 This program involves the public who are our eyes and ears when it comes to pest plant sites that are hidden away in back yards and other places. It operates during the spring and summer period. The areas covered include all of the PNCC TLA and the Feilding urban area. The programme includes the follow up of previous pest sites treated to make sure we have eradicated those plants and on-going treatment until we do. All these sites are GPS recorded so they can be revisited the following year. It also includes advice and information on other plants and herbicide treatment options. Weedbusters is a partnership between PNCC, MDC, and the Community. A 56% decrease in the size of the Weedbusters budget this year will result in a reduction in the level of service that can be provided under this project.

CAPE TURNAGAIN

- 4.3.20 Cape Turnagain is a significant natural landscape on the East Coast north of Herbertville. Covering 121 hectares, it is home to many rare and threatened plants and animals, some of which are found nowhere else. Most of it is protected by a QEII covenant, however this doesn't address the pest issues that threaten the vulnerable flora and fauna.
- 4.3.21 In 2018, QEII National Trust with Horizons were successful in applying for Lotteries Commission funding to embark on a three-year protection project. We are currently in the third and final year of the project. Horizons has contributed \$10,000 per year and Biodiversity staff time. The total project budget across the three years is \$144,000.
- 4.3.22 Work includes contracted goat, possum, rat, cat, and mustelid control, pest plant control (specifically pampas and marram), population monitoring of the nationally critical "Cape Turnagain" day-flying moth (*Notoreas perornata*), revegetation planting of the sand daphne it lives on, and community engagement with Weber School and Herbertville residents.
- 4.3.23 Trapping and baiting is occurring monthly and pest plant work is seasonal, mostly during summer. Horizons has increased the number of possum bait stations around the perimeter. Monitoring protocols were established at the beginning and will be run again at the end to measure what has been achieved.

MANAWATŪ ESTUARY

- 4.3.24 Horizons is currently undertaking work to get operational plan(s) prepared for the 558 ha estuary site. The Manawatū Estuary Management Plan requires the production of plans for weeds, pest animals, flora and habitat management. Horizons is engaging with iwi, Horowhenua District Council and DOC about undertaking this work. We will be engaging with community groups and the general community once work is underway.
- 4.3.25 Migratory adult bar-tailed godwits/kuaka started arriving in mid-September with juvenile birds over-wintering at the Manawatū Estuary.
- 4.3.26 Monthly checks of the DOC 200 series traps targeting mustelids continues. Although there were 40 traps, currently only 34 are usable as others have been stolen or vandalised. Replacement traps are being purchased. Trap catch data is presented below.

Table 6 Manawatū Estuary trap catch data for the reporting period.

	July	August	September	Year to date
Stoats	8	4	5	17
Weasels	-	-	-	0
Ferrets	-	-	-	0
Rats	4	5	4	13
Hedgehogs	-	-	-	0
Other	-	1	-	1

TE PŌTAE O AWARUA PREDATOR CONTROL

- 4.3.27 Horizons' funding supports the Aorangi Awarua Trust with the costs of servicing remote predator traplines on their land and also with the cost of transporting volunteers from the Ruahine Whio Protectors Trust to service the traplines on public land. This project of servicing predator traps in a remote location supports and enhances a large whio and North Island Eastern Brown Kiwi protection project on the adjoining DOC estate in the Northern Ruahine Forest Park. Recent monitoring in the project area has detected more kiwi than initially thought to be present, and DOC have expanded the predator trapping network. Currently the Ruahine Whio Protectors Trust service more than 2,500 predator traps in the Ruahine Forest Park.

TURITEA RESERVE

- 4.3.28 This project has an over-arching strategy to protect and enhance biodiversity values in Palmerston North's water supply catchment. It is a partnership with Palmerston North City Council and Horizons provides funding assistance for pest plant and animal control, and outcome monitoring within the reserve. Monitoring trends for pest levels and bird recovery have been very encouraging for the reintroduction of bird species. Horizons will contribute \$20,000 to the work within this 3,500ha reserve this year. Animal pest control is ongoing and pest plant control is likely to begin in November.

AWAHURI FOREST – KITCHENER PARK

- 4.3.29 Awahuri Forest-Kitchener Park is a valuable wetland forest remnant with strategic importance for the future walkway network and recreational opportunities in and around Feilding. It is also one of Horizons' managed Priority Sites, a critically endangered kahikatea pukatea forest ecosystem type. Horizons provides advice on ecological matters to the Awahuri Forest-

Kitchener Park Trust and \$8,000 of funding for revegetation planting and pest plant control in this 14 ha reserve.

- 4.3.30 In the last week of July, more than 2,600 natives were planted in gaps created by tree deaths caused by thick silt deposits from the February 2004 flood event. Willow removal, mostly along the edge of the oxbows on the northern side of the park, was also undertaken in preparation for future native planting work.

AHIMATE RESERVE

- 4.3.31 This 22ha Palmerston North reserve beside the Manawatū River was formerly called Waitoetoe Park. Horizons supports the Ahimate Reserve community with planting days, plant maintenance and weed control. Rangitāne and Palmerston North City Council are partners in the project. Horizons' contribution in 2020-21 is \$5,000.
- 4.3.32 This area continues to grow and develop with visitor numbers increasing every month. Walkers, runners, cyclists, families and dog owners make it the place to go. We planted out more than 1,000 native trees during the planting season with the community heavily involved.



Photo 3 Planting day at Ahimate Reserve, 18 July 2020.

- 4.3.33 Horizons is part of the PNCC stakeholder group involved with the development of the old Higgins metal crushing plant site further downstream. Plans are being considered to connect the site to Ahimate Reserve.

TAWATA MAINLAND ISLAND

- 4.3.34 After a year of no work being carried out due to changing personnel at Tawata Whanau Trust, work has resumed in the 360 ha sanctuary area with bait stations filled for possum and rat control, and goat control undertaken to allow the continued regeneration of the forest. The Covid-19 lockdown curtailed activities and only \$17,400 of the \$50,000 allocated was spent. The Trust is very keen to progress this project and is reviewing and updating their operational plans to move forward successfully. This year (2020-21) Horizons will contribute \$15,000 towards the project and will also treat the bait stations as it is part of our possum control programme.

KAHUTERAWA STREAM BIODIVERSITY RESTORATION

- 4.3.35 The project aims to enhance the biodiversity values of the Kahuterawa Stream site of approximately 65 ha, from the bridge at Linton to the confluence with the Manawatū River. Horizons contributes to revegetating the stream corridor with eco-sourced native plants and removing willows and other weeds. Massey University and New Zealand Defence Force are partners in this project, with each of the three partners contributing \$8,000 this year. The new walkway/cycle way between Palmerston North and Linton passes through the project area and the revegetation work has made a positive contribution to making the route popular with Manawatū residents and visitors alike.
- 4.3.36 Massey University supplied 1,200 eco-sourced plants and that was matched by the Keebles Bush Trust. Between community working bees and our contractors, 8,000 plants were planted this season.
- 4.3.37 Palmerston North Rotary Club have approached the project and wish to develop and fund an area within the reserve adjacent to the stream with seating and educational signage. Staff are presently working with Rotary on the plan and signage, hoping to have this recreation area for picnics and swimming completed by February.

MASSEY HILL

- 4.3.38 This project is a partnership between Ferguson Hall, PNCC, Massey University and Horizons. This site has expanded from its original 4 ha to link in with Green Corridors, Summerhill green belts and the development of the Massey University Arboretum. Weed control here is ongoing.

The budget for this year is \$3,500 and is focused on treating weeds where access is available, noting not all of the area is available for weed control due to the multiple ownership of land parcels.

5 TŌTARA RESERVE REGIONAL PARK MANAGEMENT

5.1 Programme Overview

5.1.1 Tōtara Reserve Regional Park is focused on providing visitors with enjoyable biodiversity and recreational experiences. The work includes plant and animal pest control, flood protection, walking tracks and campground management and maintenance. Tōtara Reserve is one of the last and best remaining examples of lowland forest ecosystems in the Pohangina Valley and is also valued as an important site under the Biodiversity Priority Sites Programme

5.2 Activity Update

REMOVAL OF POPLARS

5.2.1 During a wind event in January 2020 a camper was seriously injured by a poplar tree falling on her. The area of the Kererū campground has been closed since the incident due to the risk of the trees falling.

5.2.2 Council received an item in July 2020 and resolved to remove all the poplars bordering the stopbank at the Kererū Campground. The procurement process has been completed and the contract approved by Council. The work will begin in October and will be finished in time for the summer camping season, however there will be a delay in opening part of the campground.

PEST ANIMAL CONTROL

5.2.3 Horizons' Annual Plan provided additional funding to substantially upgrade animal pest control programme for the entire reserve. The pest control operations will be targeting possums, rats and mustelids to improve ecological biodiversity and visitor experience in the reserve, which contains two campgrounds. A plan has been developed to be implemented this spring by the Regional Response Team. The pest targets are to reduce possum abundance to <5% **residual trap catch** (RTC), and rat abundance to < 10%, to enhance the reserve's biodiversity and amenity values.

5.2.4 The bait station network has been installed by Horizons Regional Response Team and pre-control pest monitoring is underway. The baiting is planned for November and a new toxin called Double Tap is being trialed. It is designed to be less persistent in the environment. This

trial will help evaluate the performance of the toxin and should it prove effective wider trials within the Horizons Possum Control Programme will be considered to evaluate its appropriateness and cost-effectiveness.

PEST PLANT CONTROL

- 5.2.5 A stocktake on the progress made by the weed control programme is planned for 2021-22. This work will review progress to date and provide direction to ensure we continue to build on the results achieved so far.

COMMUNICATION

- 5.2.6 Staff are working on several aspects of improving communication around the work at the site including a regular update to the Advisory Group, on-site signage about activities and further information through social media and Horizons' website.

CAPITAL PROJECTS

- 5.2.7 Planning has progressed for the approved capex spending in the 2020-21 financial year. Priorities for the capex projects include a platform with safety rails around the septic system inspection point, and water storage and treatment upgrades to provide drinking water along with reliable source of water. Once these two projects are costed, further allocation of unspent capital for remaining projects will occur. Options for additional capital spending (in no particular order) include an upgrade of the Kahikatea campground ablution block, sealing of the entranceways to both campgrounds and the caretaker's house, a website booking and payment system for the campgrounds, and electrical upgrades at the powered camping sites. There is a capex allocation of \$157,930 for the 2020-21 year and work is underway to prioritise projects and undertake procurement and implementation.

TŌTARA RESERVE ADVISORY GROUP

- 5.2.8 The development of Terms of Reference for the group and a strategy for Tōtara Reserve are tasks to be undertaken once the priority work of poplar removal and remediation of the site water supply upgrades and other health and safety actions are completed.

Item 10

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ENVIRONMENTAL COORDINATOR – BIODIVERSITY

Lizzie Daly
SENIOR SCIENTIST - ECOLOGY

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Annex D



ENVIRONMENTAL REPORTING & AIR QUALITY MONITORING

1 ACTIVITY OVERVIEW

The science and Innovation team serves a range of environmental reporting functions including research into the effects of climate change and drinking water security, and ongoing development of data management tools to support environmental reporting. The team works closely with Horizons Communications team to share data and information via the Horizons and **Land, Air, Water Aotearoa (LAWA)** websites, as well as provide annual **State of Environment (SOE)** reporting, and a summer swim spot campaign. The team also monitors air quality in Taihape and Taumarunui and works alongside the Communications team to run public information campaigns about good wood-burning practices.

The activity update below reports on progress on environmental reporting and air quality activities during the reporting period (1 July 2020 to 30 September 2020).

2 ANNUAL PLAN TARGETS

2.1.1 The Annual Plan targets for Environmental Reporting and Air Quality Monitoring are aggregated in Table 1 below.

Table 1 Progress reporting for Environmental Reporting and Air Quality Monitoring Annual Plan targets for 2020-2021.

Performance Measures for Levels of Service	Target 2020-21	Progress Update
Environmental Reporting and Air Quality Monitoring Activity		
Provide an annual summary report on the state of the environment.	1	Catchment summary reports are due to be finalised in December 2020
Develop and implement a science communication strategy.	Report progress to Council annually	The strategy and action plans for science communication will be implemented throughout the year
Complete drinking water supply research with a focus on Council-operated drinking water supplies and complete an annual report on this to Council.	1	This year the drinking water programme will be funding the groundwater bore inspections in priority source protection zones and this will be reported on to territorial authorities and to council.

Performance Measures for Levels of Service	Target 2020-21	Progress Update
Investigate one aspect of climate change impact in the Region and report on this to Council.	1	This year the climate change research budget will be used fund a Regional Climate Change Risk Assessment. Community engagement has is underway and contracting for project management is in the final stages.
Air quality is monitored in Taihape and Taumarunui and reporting is made available to the public via LAWA and the annual State of Environment report.	Completed	Monitoring is ongoing and data is made available to the public via the Horizons and LAWA websites. New air quality monitoring equipment (5014i BAMS) for the Taihape and Taumarunui sites will be installed by December 2020.
Undertake an annual public education campaign on air quality.	1	A public awareness campaign was completed in March-April 2020 and guidance information on 'good' burning was shared via social media through winter. A similar campaign will be commence in the summer 2021.

3 ACTIVITY UPDATE

STATE OF ENVIRONMENT REPORTING

- 3.1.1 The previous **State of Environment (SOE)** report was published in May 2019 and a framework for annual reporting, in the form of catchment summary report cards, was developed. In September 2019, we published a suite of SoE summary report cards for each major catchment or **Freshwater Management Unit (FMU)** in the region.
- 3.1.2 Staff are currently working on updating the catchment summary report cards, with a view to publishing these in the latter half of 2020.

LAWA

- 3.1.3 The LAWA website is a regional sector-driven initiative, working with a range of partners to present information about the state and trends of New Zealand's natural resources. It now hosts surface and groundwater quality, quantity, lakes, swim spot monitoring, and air monitoring information, including for Horizons.
- 3.1.4 Data to the end of 2019 for surface and groundwater quality, water quantity, lakes and macroinvertebrates was released on World Rivers Day (27 September 2020) alongside a national picture of water quality which focused on land use and urban streams, in particular. At the national scale there are now around 1,500 monitoring sites displayed on the Rivers Water Quality section alone, with around 1.2 million data points. This reflects the collective effort and investment by the sector. The remainder of this section focuses on the results from Horizons River water quality network.

3.1.5 A summary of LAWA NOF (National Objectives Framework) grades at SOE sites within the region can be seen in Figure 1. All chemical and microbiological parameters are presented for 109 sites. MCI (Macroinvertebrate Community Index) is presented for 82 sites with data. State of river sites analysed for these measurements are based on data from January 2015 – December 2019.

3.1.6 At the majority of State of the Environment sites in our region, Ammoniacal-N (NH₄) toxicity is not an issue, a few sites fail to achieve the national bottom line of Band C. Both Dissolved Reactive Phosphorus (DRP) and MCI vary across sites from Band A to Band D. *E.coli* frequently breaches contact recreation values across the region. A few SOE sites within the region are below the national bottom line (Band C) for Nitrate concentrations (Figure 1). Noting that the national bottom line for Ammoniacal-N and Nitrate has recently changed from a Band D (NPSFM 2017) to Band C in the new NPSFM 2020.

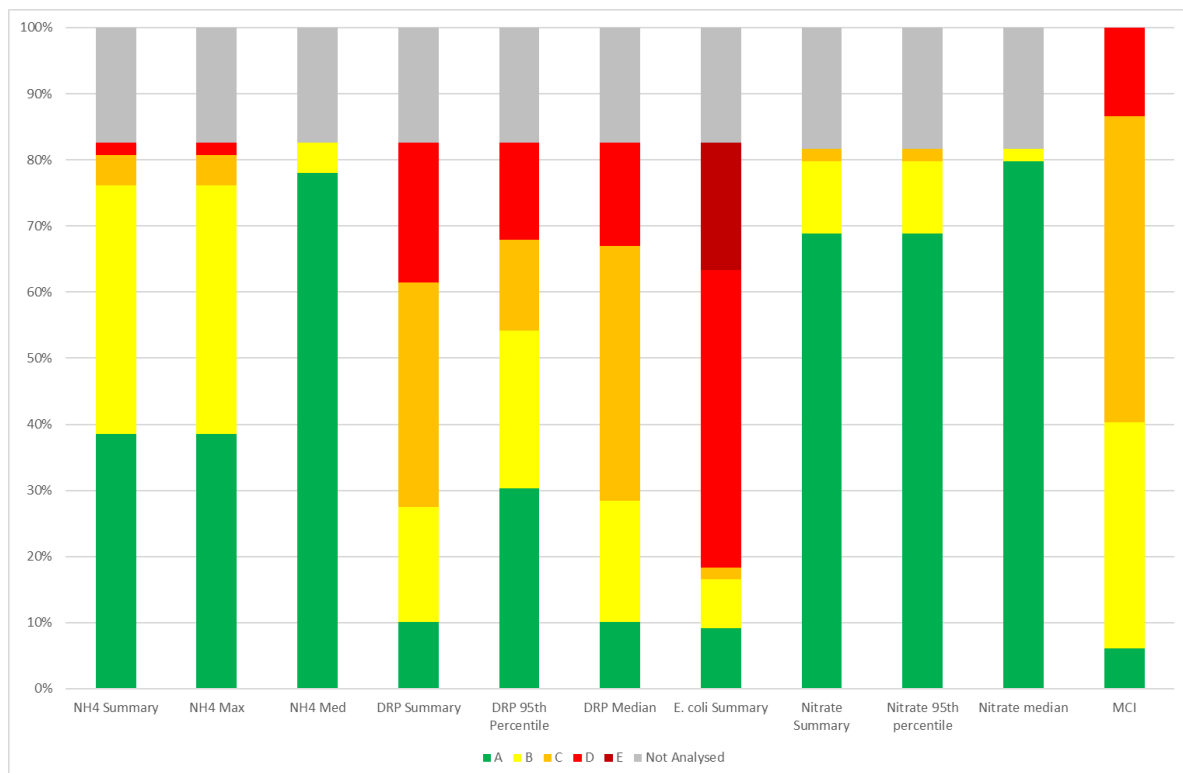


Figure 1 Summary of LAWA NOF grades at SOE sites in the Horizons Region. Data is from January 2015 – December 2019. Not analysed indicates insufficient data.

3.1.7 A summary of LAWA NOF grades at impact sites within the region can be seen in Figure 2. Impact sites within the Horizons region are those sites that are monitored downstream of a known point source discharge. All chemical and microbiological parameters are presented for

29 sites. MCI is presented for 8 sites with data. State of river sites analyzed for these measurements are based on data from January 2015 – December 2019.

- 3.1.8 The proportion of sites that fall below the national bottom line for DRP is greater than for SOE sites (refer to Figure 1), with the majority of sites in Band D for all measures of DRP.
- 3.1.9 Ammoniacal-N (NH₄) toxicity is an issue, with nearly half of the sites failing to achieve the national bottom line of Band C. MCI is mostly in band C with around 25 per cent of sites falling below the national bottom line. *E.coli* generally falls below the national bottom line, within Band D and Band E. Impact sites have a greater proportion in Band E than SOE sites. Nitrate concentrations are largely Band A for all measures, a few impact sites fall below the national bottom line (Band C).

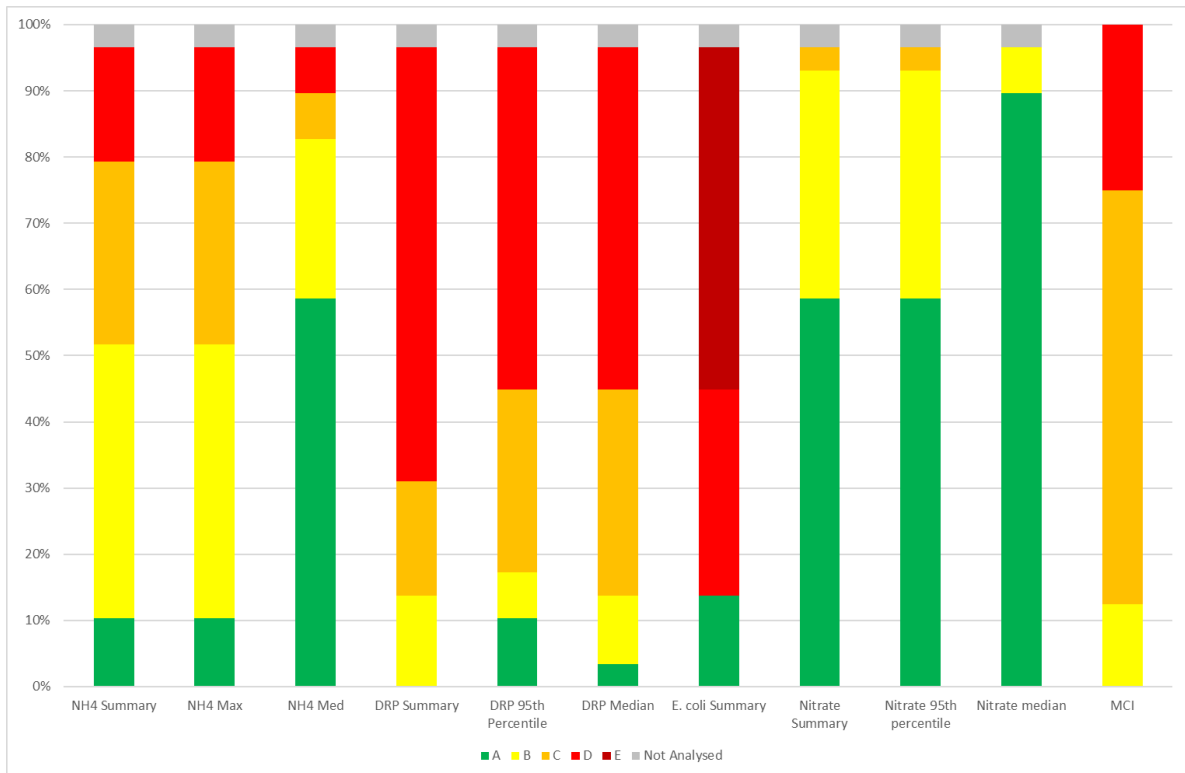


Figure 2 Summary of LAWA NOF grades for impact sites in the Horizons Region. Data is from January 2015 – December 2019. Note NA indicates insufficient data.

- 3.1.10 A breakdown of the LAWA NOF bands for DRP, *E. coli*, MCI and Nitrate Toxicity can be seen in Figure 3 through to Figure 6 below.

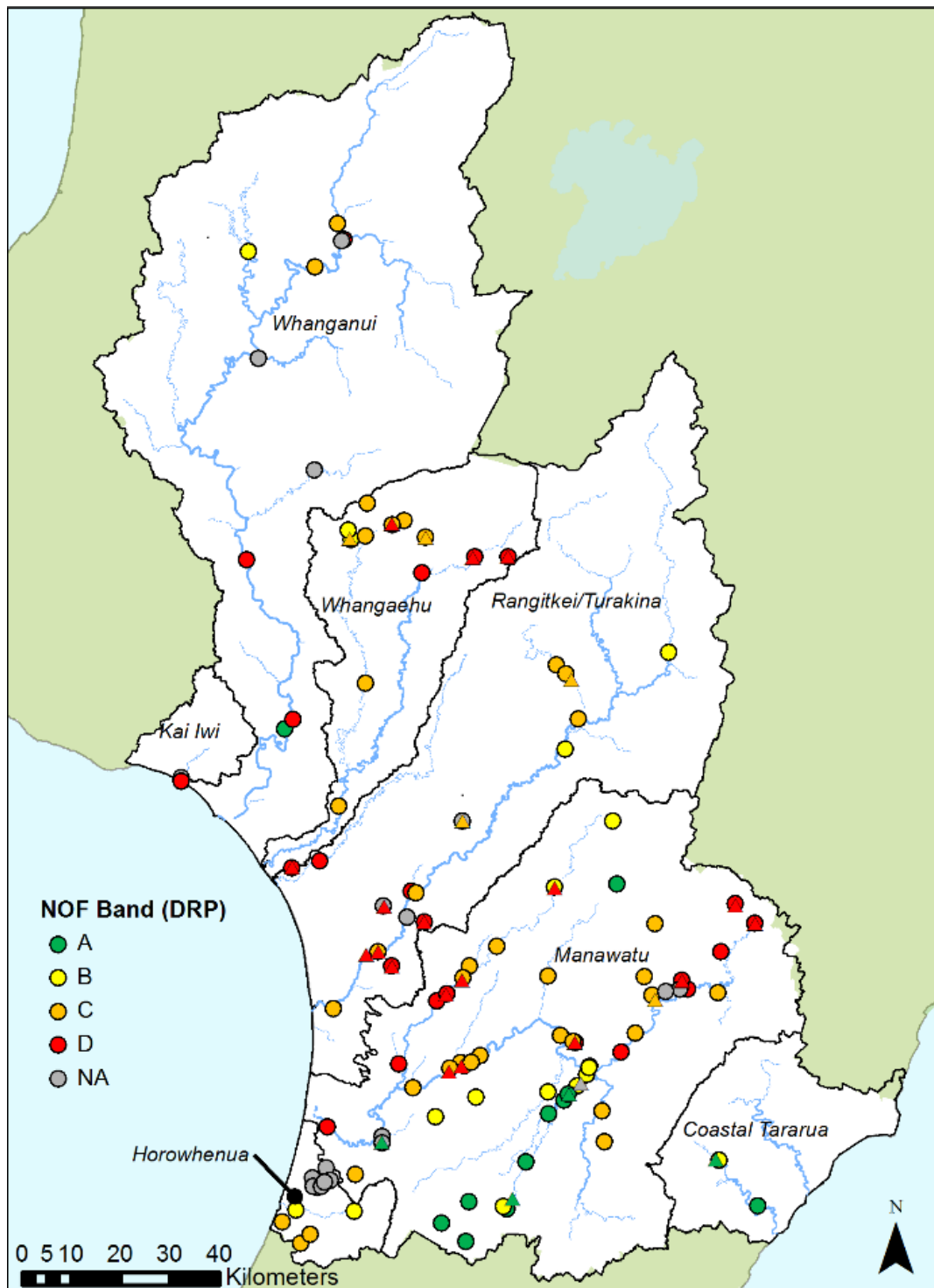


Figure 3 Summary of NOF bands for DRP concentrations across the region (January 2015–December 2019). Where circles represent SOE sites, and triangles represent impact sites. Note NA indicates insufficient data.

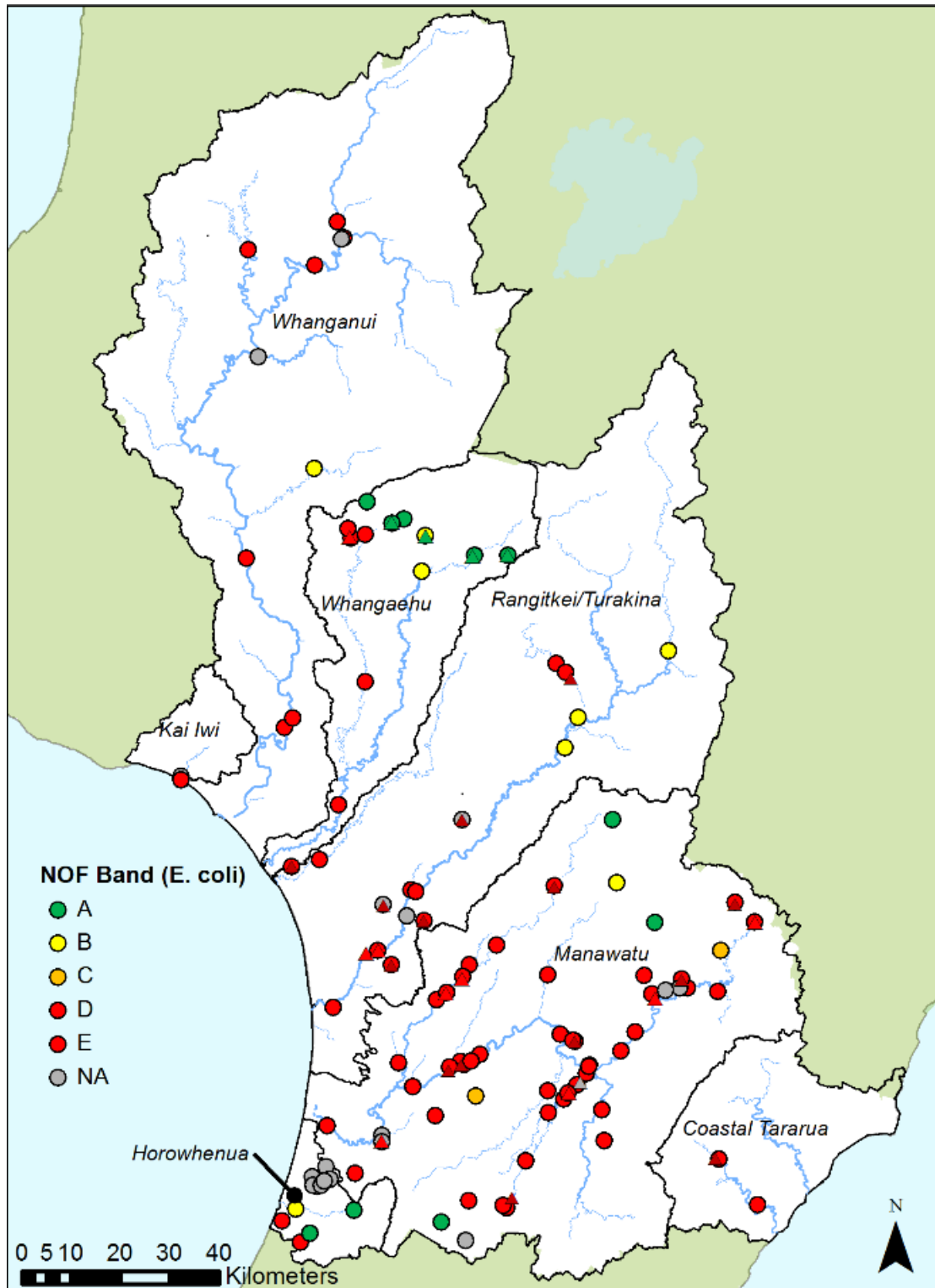


Figure 4 Summary of NOF bands for *E. coli* across the region (January 2015–December 2019). Where circles represent SOE sites, and triangles represent impact sites. Note NA indicates insufficient data.

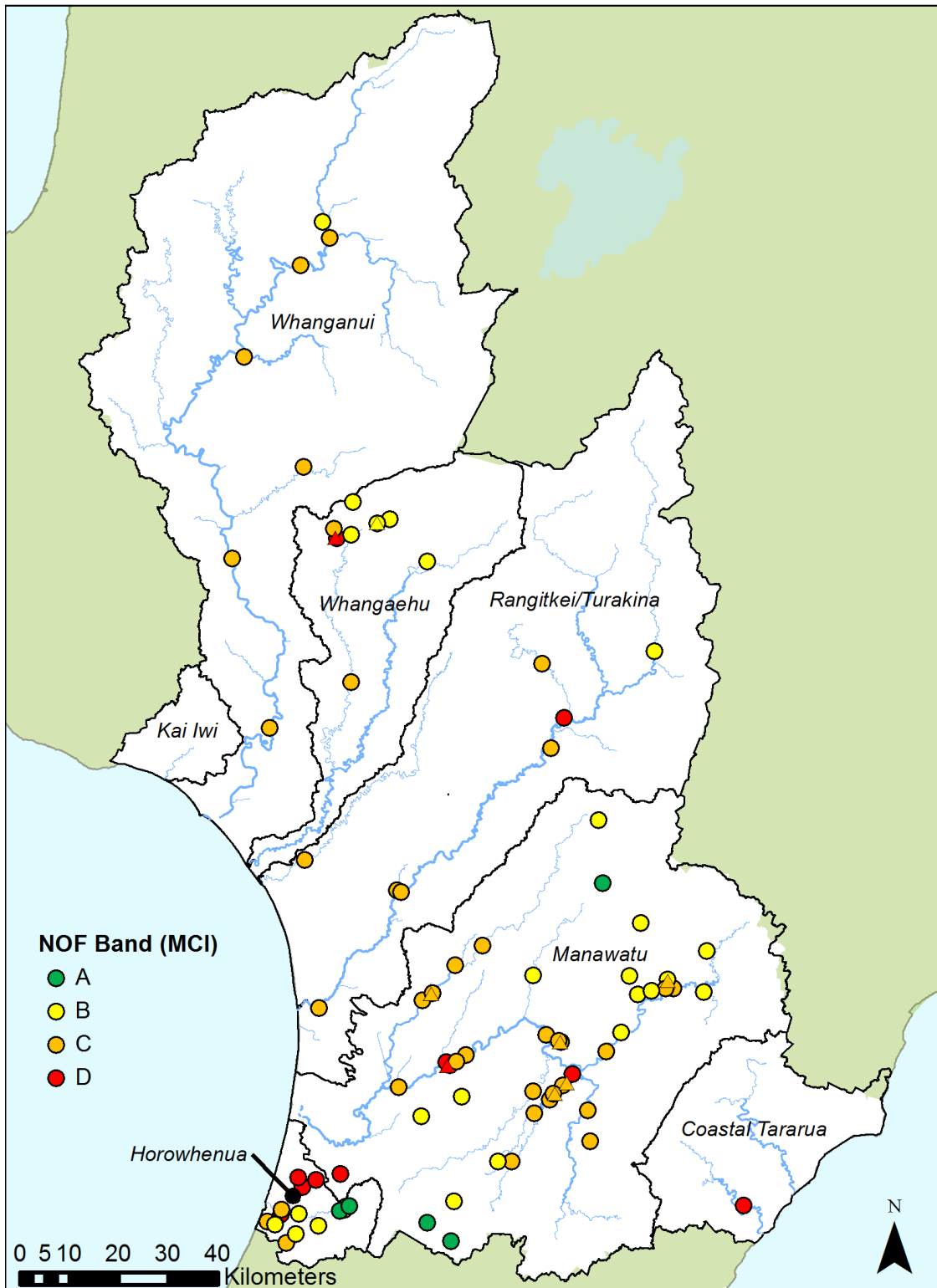


Figure 5 Summary of NOF bands for MCI across the region (January 2015–December 2019). Where circles represent SOE sites, and triangles represent impact sites. Note NA indicates insufficient data.

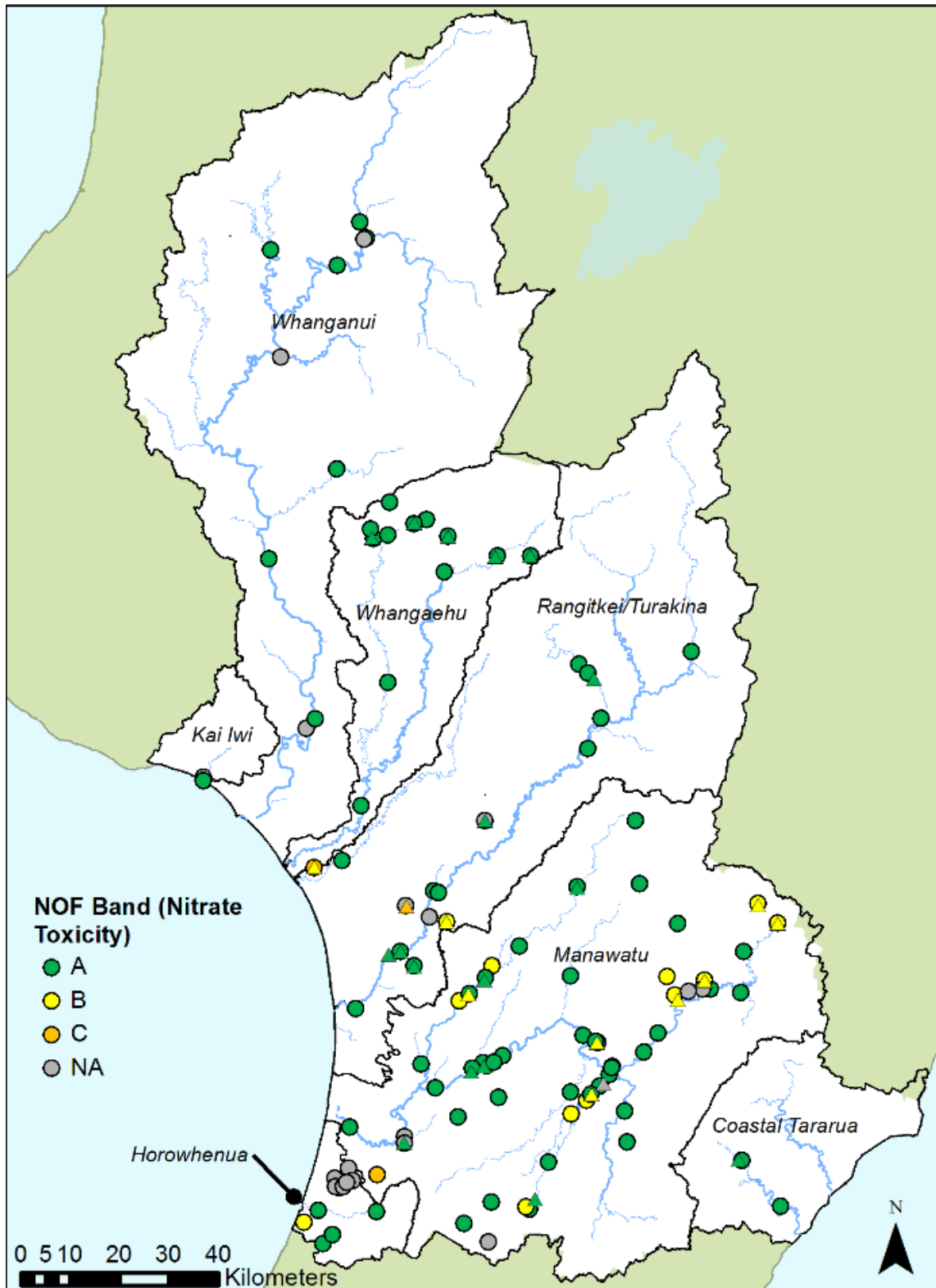


Figure 6 Summary of NOF bands for Nitrate Toxicity across the region (January 2015–December 2019). Where circles represent SOE sites, and triangles represent impact sites.

- 3.1.11 A summary of LAWA State (median contaminant concentration) at SOE sites within the region compared to the quartiles for all sites nationally can be seen in Figure 7. The total number of sites reported for Clarity is 82, for Turbidity, *E. coli* and Total Oxidized Nitrogen is 105 and for Ammoniacal-N (NH₄), Total Nitrogen, DRP and Total Phosphorus is 106. State of river sites analyzed for these measurements are based on data from January 2015 – December 2019.
- 3.1.12 When compared with the larger national dataset more than half of the SOE sites are in the worst 50% of sites nationally (i.e. in the worst 50 and worst 25 percent categories) for Clarity, Turbidity, *E.coli*, Total Nitrogen, DRP and Total Phosphorus . Conversely, nearly 70% of SOE sites are within the best 25% of sites nationally for Ammoniacal-N (NH₄) and just over 50% of sites for Total Oxidized Nitrogen are within the best 50% of sites nationally.

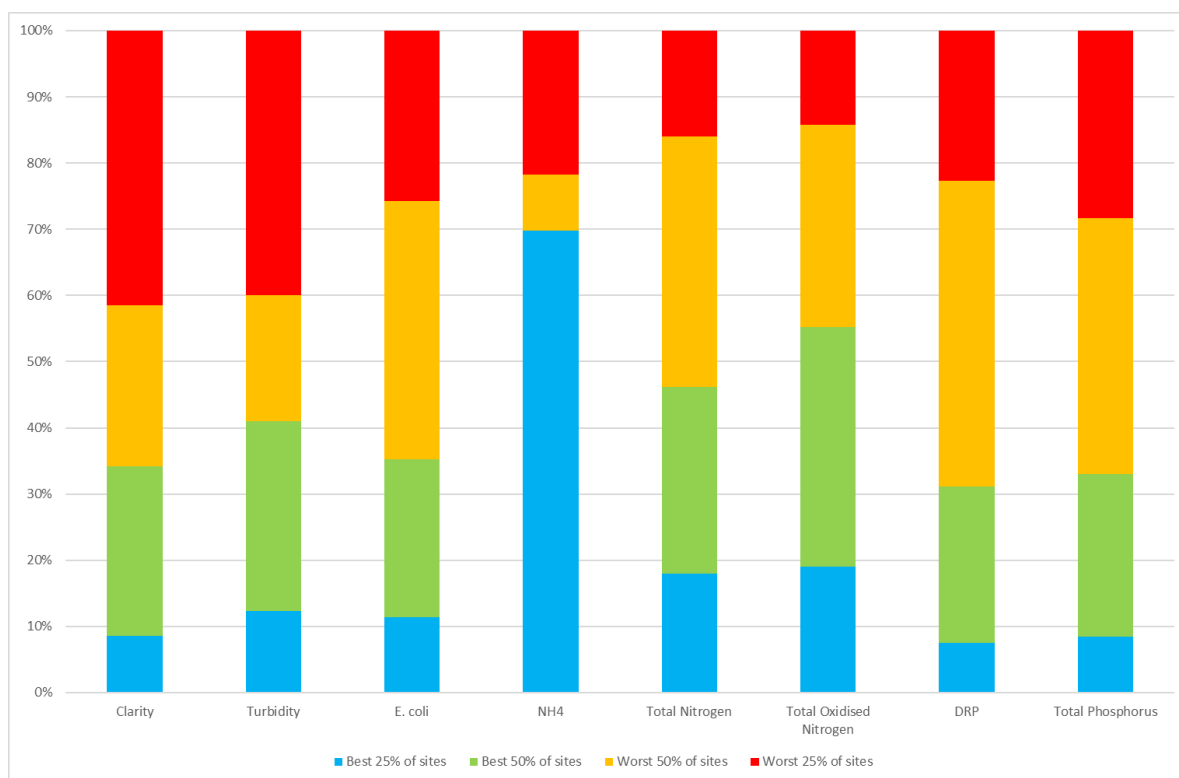


Figure 7 Summary of LAWA state at SOE sites in the Horizons Region

- 3.1.13 A summary of LAWA State (median contaminant concentration) at impact sites within the region compared to the quartiles for all sites nationally can be seen in Figure 8. The total number of sites reported for clarity is 19, and all other parameters, 29. State of river sites analyzed for these measurements are based on data from January 2015 – December 2019.

3.1.14 More than half of sites monitored for Clarity, Total Nitrogen and Total Oxidized Nitrogen are within the worst 50% of sites (i.e. in the worst 50 and worst 25 percent categories). Almost 50% of sites monitored for Turbidity, *E.coli*, and DRP fall within the worst 25% of all sites. More than half of sites monitored for Ammoniacal-N (NH₄) and Total phosphorus are in the worst 25% of all sites.

3.1.15 Impact sites within the Horizons Region will be proportionally worse as they are compared to all other sites submitted by councils, and Horizons are the only council to submit impact site data. Therefore, these sites are being compared against all SOE sites nationwide.

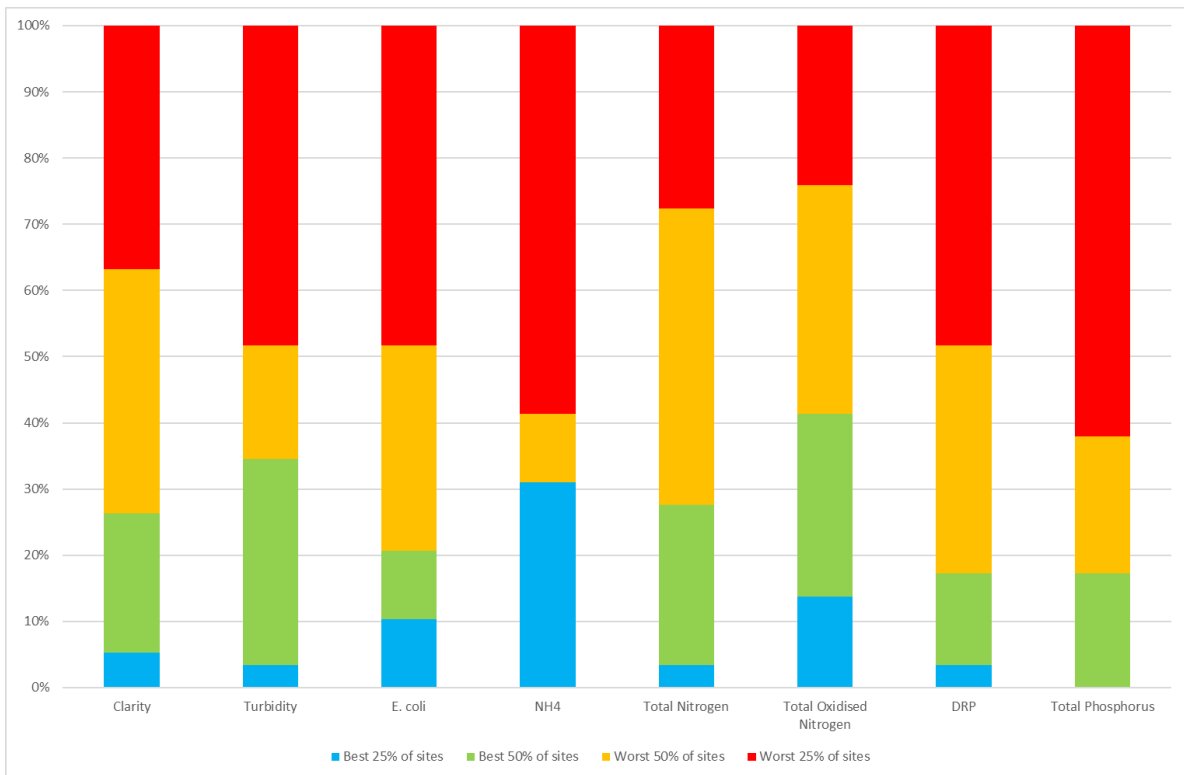


Figure 8 Summary of LAWA state at impact sites within the Horizons Region

3.1.16 A 15-year trend analysis for all SOE sites with sufficient data is presented in Figure 9. More than half of all SOE sites are showing improvement in *E. coli* and Ammoniacal-N (NH₄) whereas more than half of the monitored sites are showing degradation in clarity and approximately half in Total Nitrogen. Trends in Turbidity, *E.coli*, Total Oxidized Nitrogen, DRP and Total Phosphorus are a mixed bag. The majority of MCI sites have an indeterminate trend.

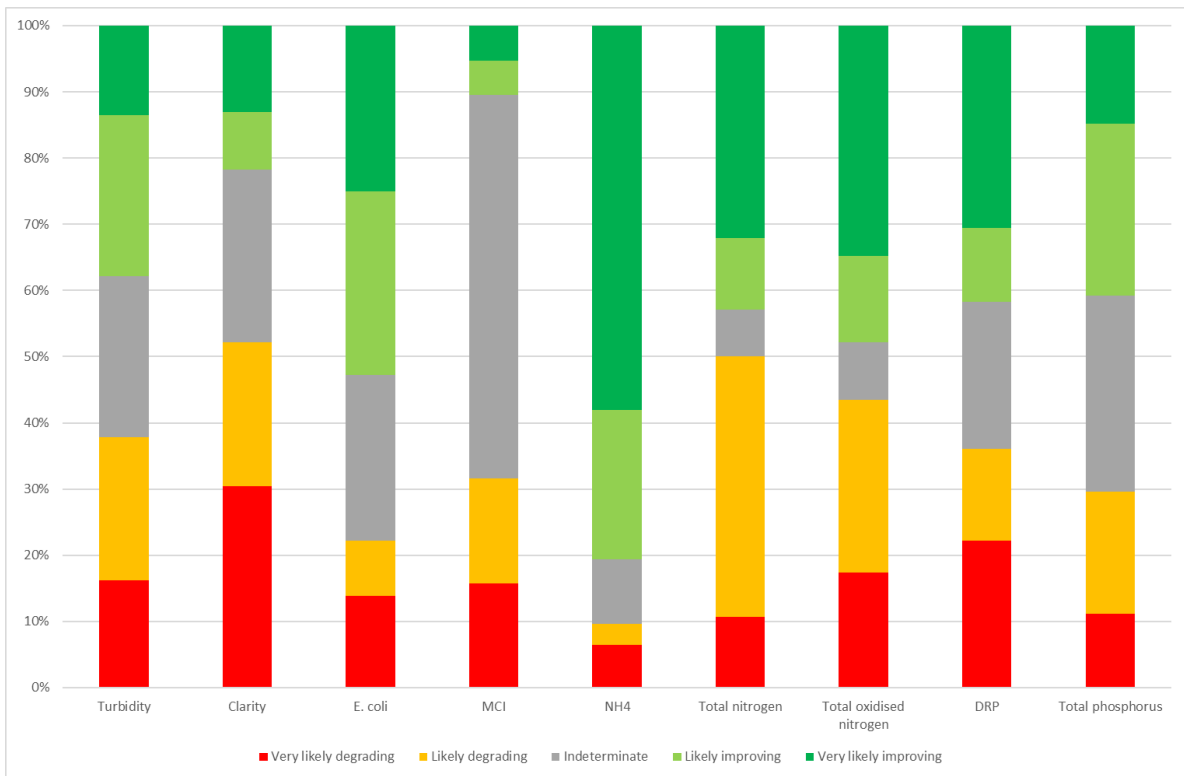


Figure 9 Summary of 15-year raw trends (January 2005 – December 2019) at SOE sites within the Horizons Region.

3.1.17 A 10-year (January 2010 – December 2019) trend analysis for all SOE sites with sufficient data is presented in Figure 10. More than half of the sites with sufficient data are degrading for Turbidity, Clarity, MCI, and Total Phosphorus. More than half of all SOE sites monitored for Ammoniacal-N (NH₄) are very likely improving and more than half of all SOE sites with sufficient data for Total Nitrogen are improving. More than half of all SOE sites monitored for DRP are very likely degrading. Trends in Total Oxidized Nitrogen and *E. coli* are a mixed bag for this time period.

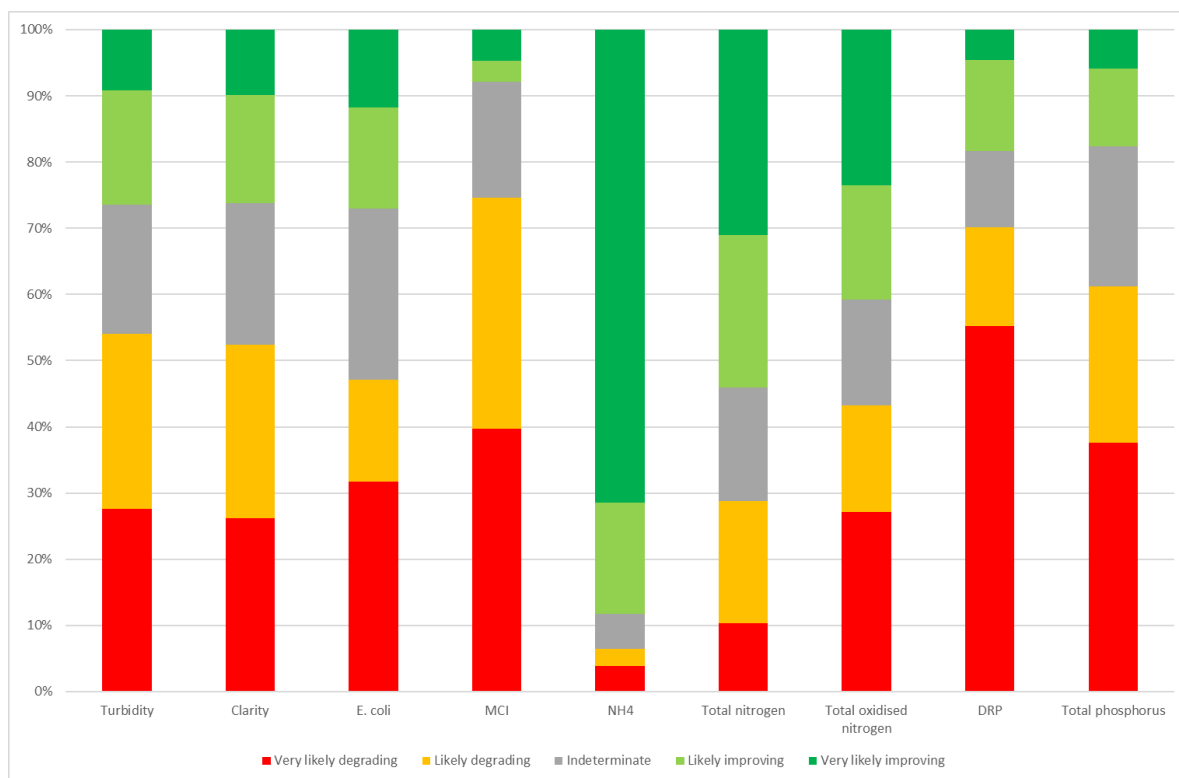


Figure 10 Summary of 10-year raw trends (January 2010 – December 2019) at SOE sites within the Horizons Region.

3.1.18 A 10-year trend analysis for all impact sites with sufficient data is presented in Figure 11. More than half of impact sites with sufficient data are degrading for Clarity, and DRP. More than half of are very likely degrading for Total Phosphorus. More than half of impact sites with sufficient data are improving for Ammoniacal –N (NH₄). *E. coli*. Total Nitrogen, and Total Oxidized Nitrogen are a mixed bag. Around half of all impact sites monitored for MCI are likely degrading.

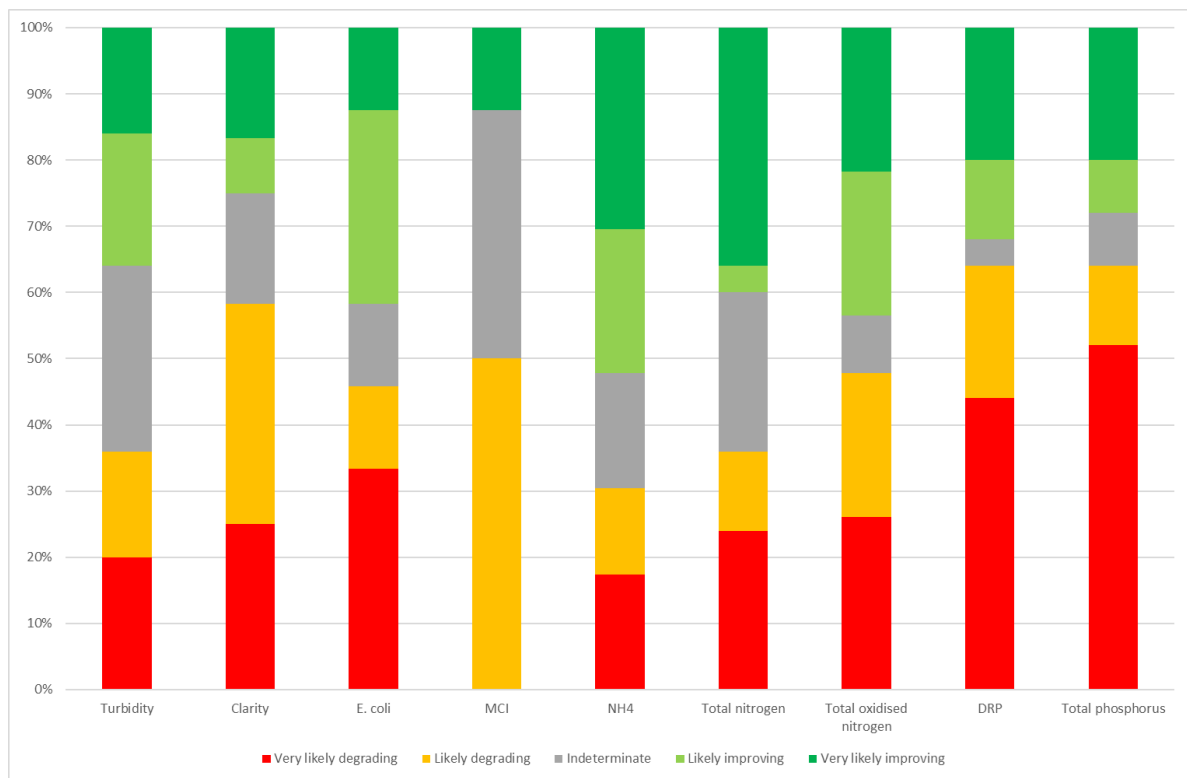


Figure 11 Summary of 10-year raw trends (January 2010 – December 2019) at impact sites within the Horizons Region.

3.1.19 A breakdown of the 10-year raw trends for DRP, *E. coli*, MCI and Total Oxidised Nitrogen can be seen in Figure 12 through to Figure 15 below.

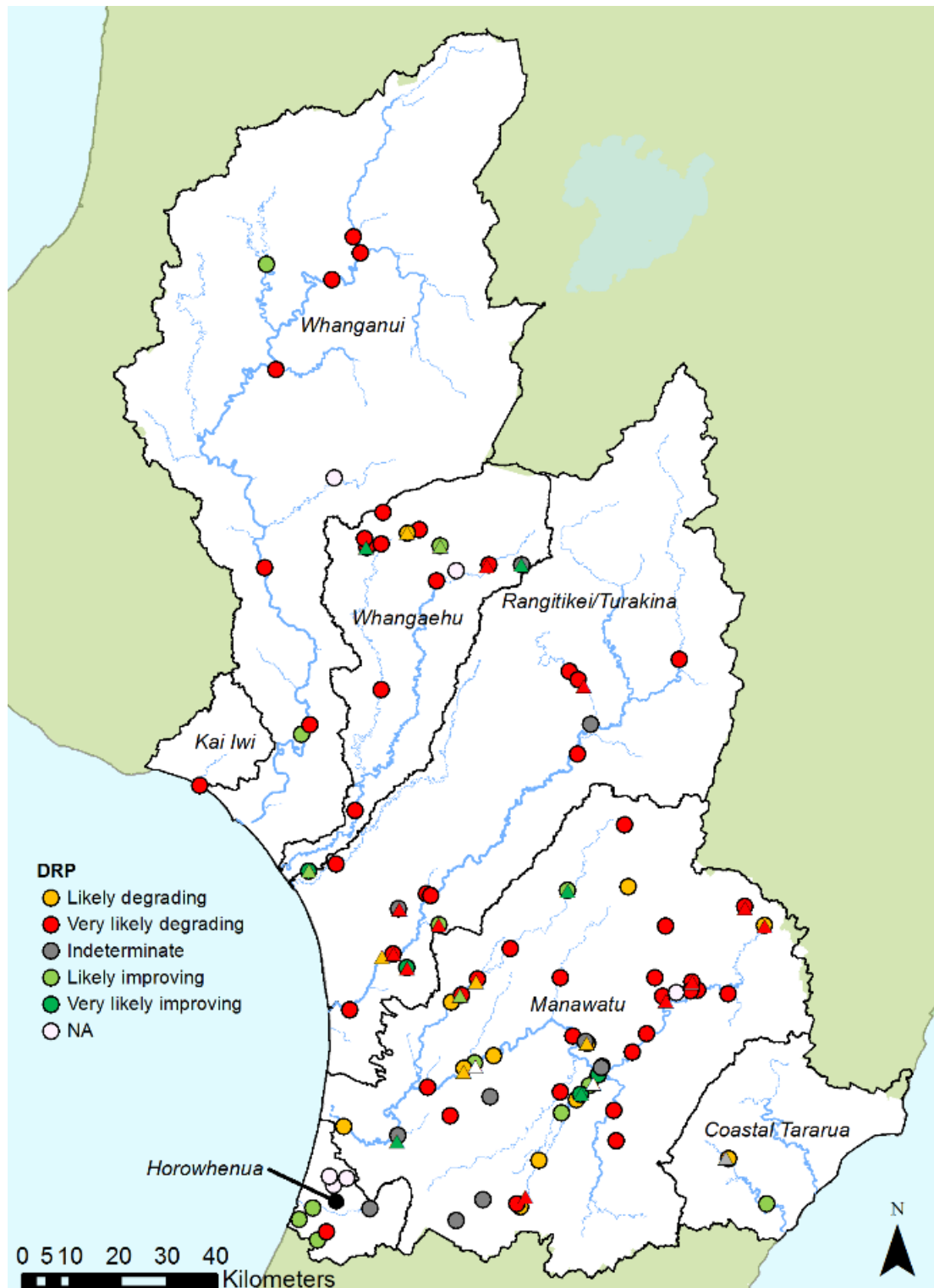


Figure 12 Summary of 10-year raw trends for DRP concentrations across the region (January 2010–December 2019). Where circles represent SOE sites, and triangles represent impact sites. Note NA indicates insufficient data.

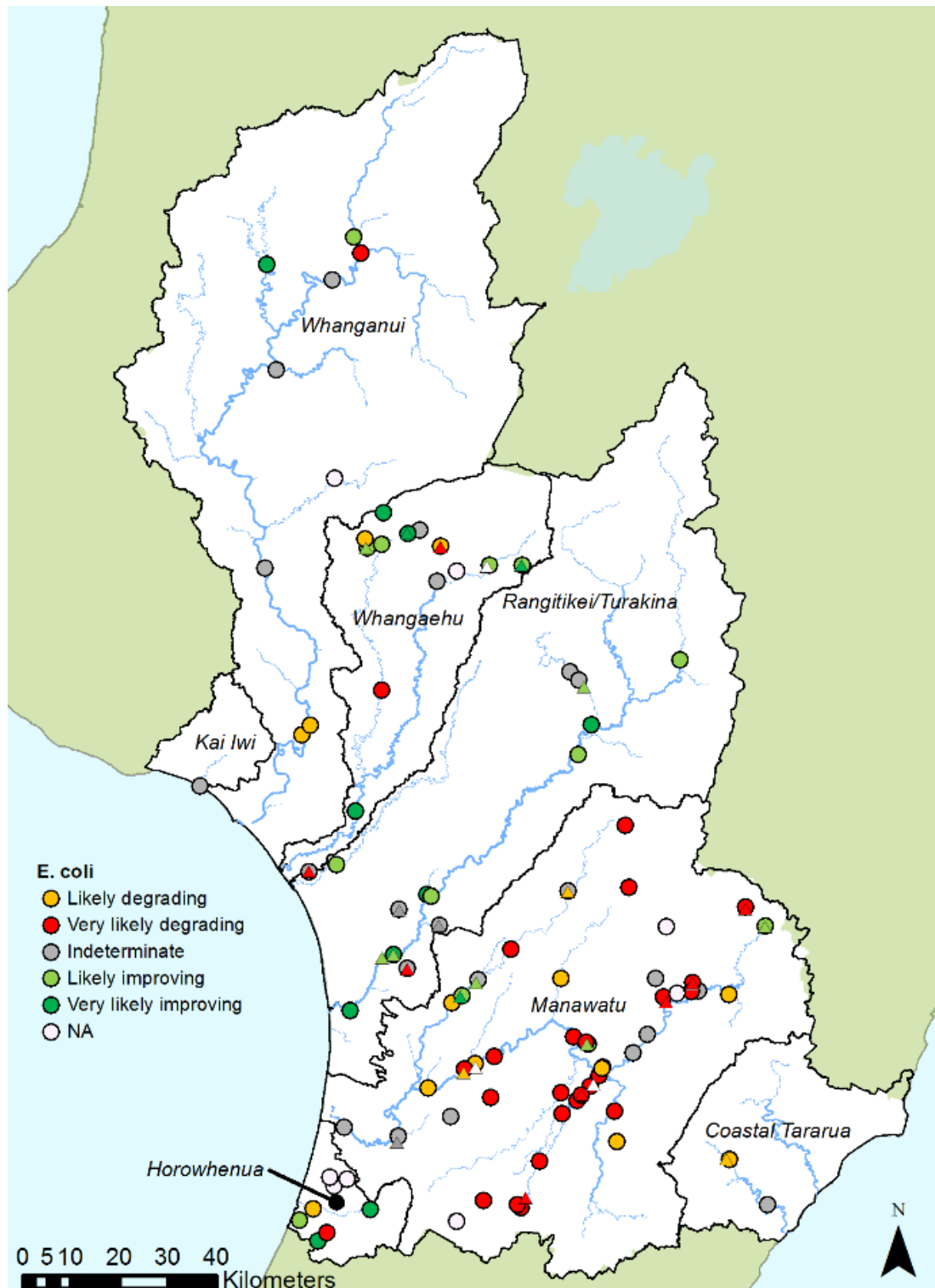


Figure 13 Summary of 10-year raw trends for *E. coli* concentrations across the region (January 2010–December 2019). Where circles represent SOE sites, and triangles represent impact sites. Note NA indicates insufficient data. Note NA indicates insufficient data.

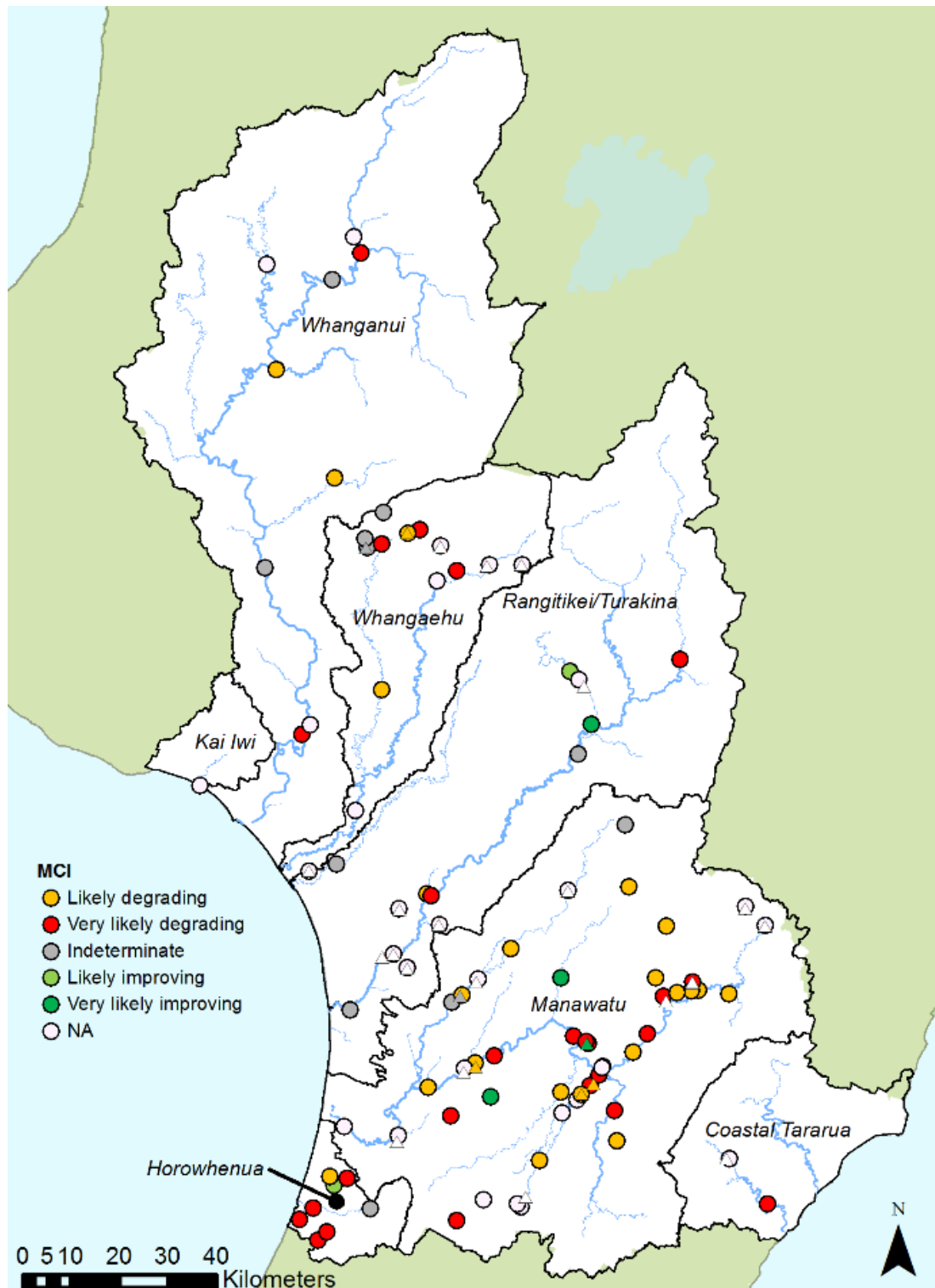


Figure 14 Summary of 10-year raw trends for MCI across the region (January 2010–December 2019). Where circles represent SOE sites, and triangles represent impact sites. Note NA indicates insufficient data.

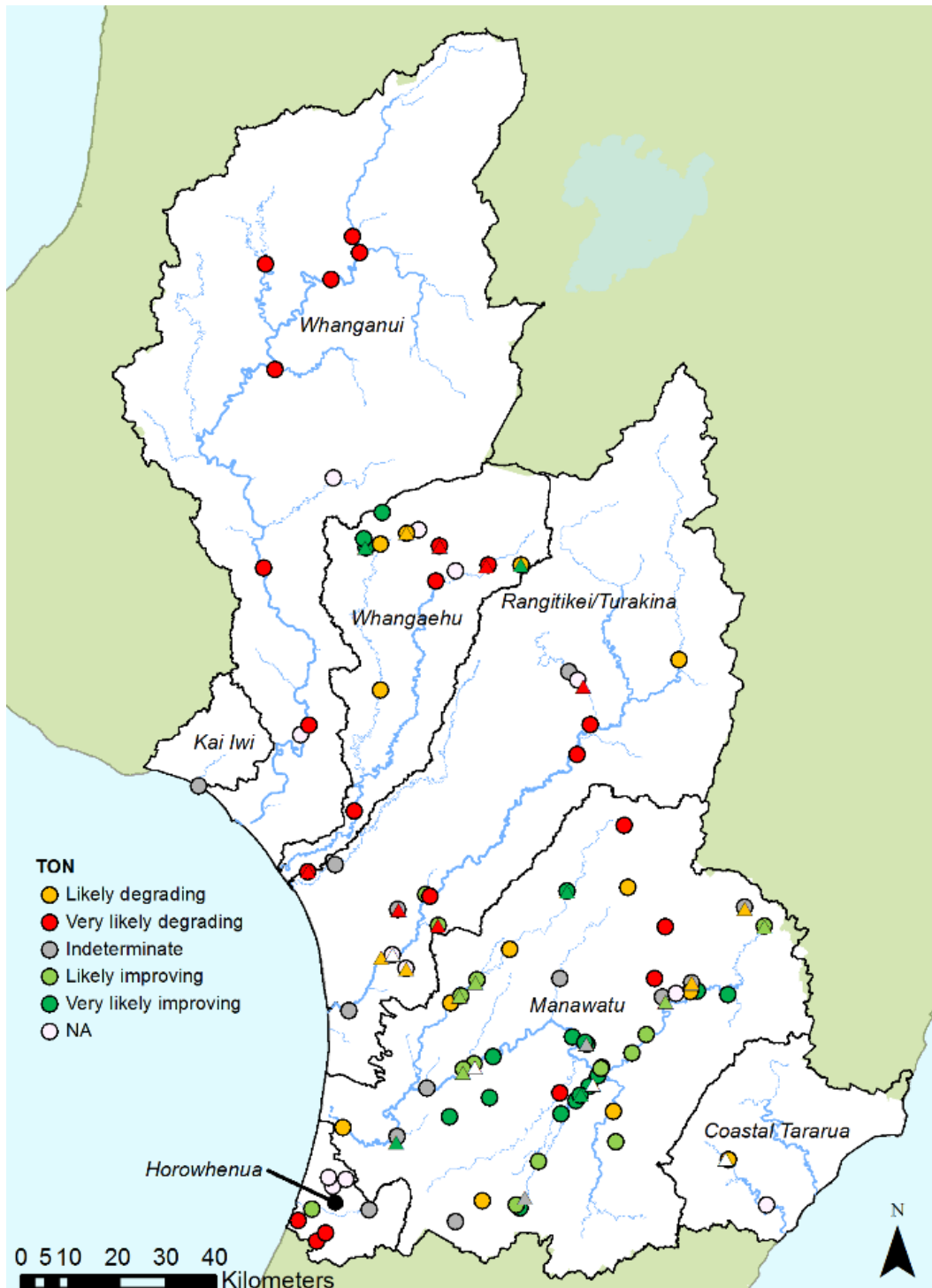


Figure 15 Summary of 10-year raw trends for Total Oxidised Nitrogen (TON) across the region (January 2010–December 2019). Where circles represent SOE sites, and triangles represent impact sites. Note NA indicates insufficient data.

- 3.1.20 Monitoring of point source discharges as a part of Horizons State of the Environment program commenced in July 2007, as such no impact sites have sufficient data for a 15-year trend analysis.
- 3.1.21 Further updates to LAWA in the next few months include a new release of contact recreation data and land cover data. Contact recreation data is currently being compiled and is due to be released late October, ahead of the 2020-21 contact recreation season which begins Nov 1 2020.
- 3.1.22 Land cover at regional and catchment level boundaries is processed using the national dataset Land Cover Database 5 (LCDB5), developed by Manaaki Whenua using satellite imagery. Waikato Regional Council are leading the update for the land cover data release. This most recent update was completed by Manaaki Whenua earlier this year and is a snapshot representing the 2018 year. The current land cover map on LAWA displays the previous 2012 dataset (LCDB4).
- 3.1.23 LAWA can be accessed through www.lawa.org.nz

AIR QUALITY

- 3.1.24 Air quality monitoring at Horizons designated airsheds, Taihape and Taumarunui, continues. Existing BAM units have had their pre-winter independent annual calibration checks and at present are operating adequately. There have been no verified exceedances of the Air Quality National Environmental Standards (NES) recorded at either location this year.
- 3.1.25 We have two new 5014i BAM units that are capable of monitoring both coarse and fine particles, PM₁₀ and PM_{2.5}. These units have been trialed in the office and the new housings have been delivered – they will now be installed at Taihape and Taumarunui by December 2020. The new BAM units will enable us to maintain a long-term record for PM₁₀ at the sites and will also allow us to comply with the proposed change to PM_{2.5} monitoring under the proposed National Environmental Standards for Air Quality.
- 3.1.26 Further details on our air quality monitoring and reporting, including the new requirements, will be presented to Council's Strategy and Policy Committee in November.

CLIMATE CHANGE RESEARCH

- 3.1.27 The Regional climate change action plan was finalised and released in September and is available on our [website](#) (along with all other climate change reports including the recently published greenhouse gas inventory). This document has been developed between Horizons and the territorial authorities. It outlines local government's role in the climate change response and summarises some of the actions taken to date across the region.
- 3.1.28 This financial year, Horizons is leading the development of the Region's first Regional Climate Change Risk Assessment (RCCRA). The RCCRA aims to identify community risks, prioritise those risks for action, and share information about vulnerabilities and the approach we are taking with communities. A high-level risk assessment will allow decision-makers to identify hotspots, raise awareness and prioritise action. It is a preliminary step to a more in-depth consideration of what actions could be taken in a particular place, utilising existing datasets, reports, information and expert knowledge.
- 3.1.29 This project is a collaboration led by Horizons, with a Steering Group representing the District Councils, facilitation by an external consultant and a project team across the Councils in the Region.
- 3.1.30 The project is divided into two stages, Stage One: Exposure and Stage Two: Vulnerability and Consequence. The first stage considers hazards and consequences in terms of community values. This is currently underway. An online interactive survey has been used as a key engagement tool to allow for wider participation across the region. This survey was live for the month of September and received approximately 200 contributions from the public. More detail on this is available below in the Science Communication section.
- 3.1.31 A final report and presentation of the RCCRA to Council is planned for delivery in July 2021.

SCIENCE COMMUNICATION

- 3.1.32 To support Phase One of the Regional Climate Change Risk Assessment, for the month of September, Horizons launched the Social Pinpoint interactive map and ran a social media campaign called #ClimateChangeInOurRegion. The purpose of this campaign was to identify and confirm community values that may be affected by climate change in the Region. The tool enabled people to drop 'pins' on a map of the Region in areas that they are worried about being affected by climate change (Figure 8) and allowed participants to interact with each other and support or discuss ideas. It also provided a survey option as an alternative or additional option. 127 pins were dropped on the map and 80 online surveys were completed during September in addition to discussion held on the Horizons Facebook posts.

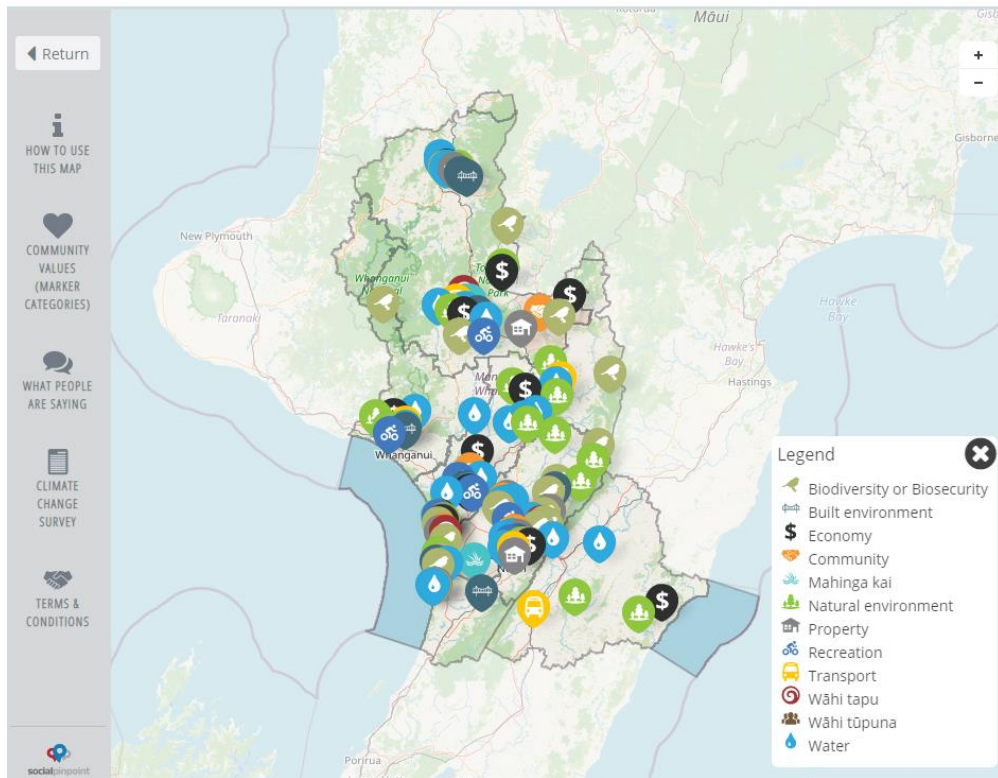


Figure 16. A screenshot of the Social Pinpoint webpage on the Horizons website

3.1.33 The graph below (Figure 9) shows the breakdown of comments by pin category and the word cloud illustrates the most commonly used words in the responses provided (Figure 10). The process is currently underway to collate responses across social media and Social Pinpoint to integrate into the stage one analysis. A more detailed report to Council will be provided by the risk assessment project team in due course.

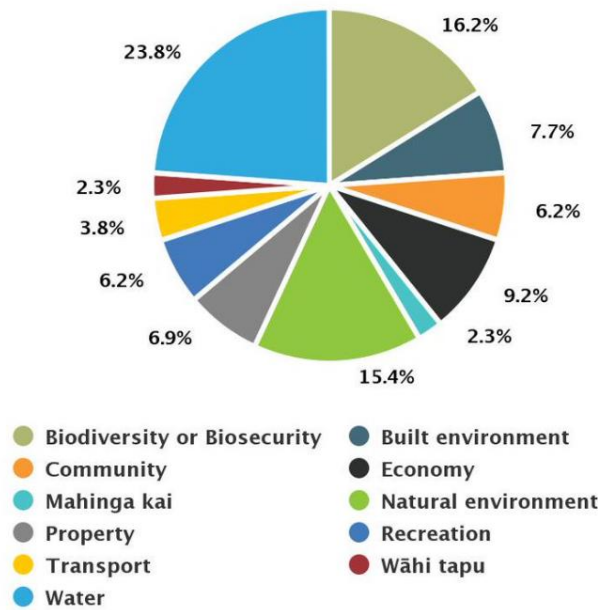


Figure 17. The proportion of responses by each pin category on Social Pinpoint

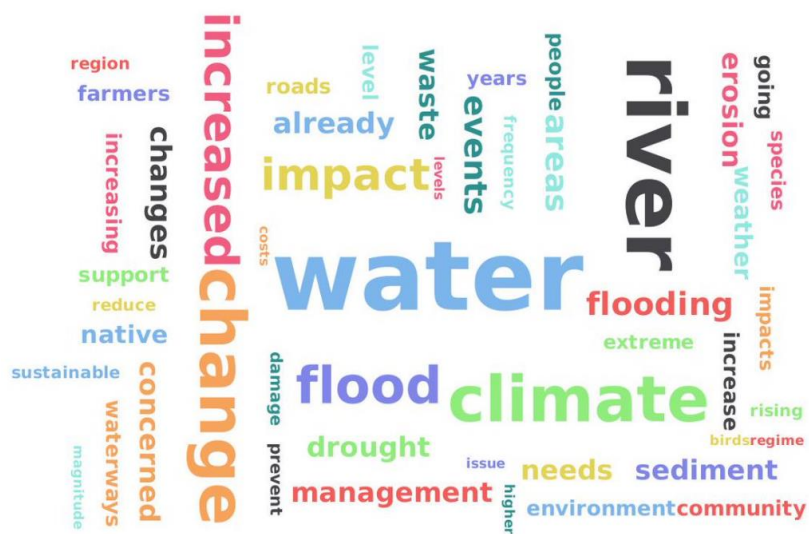


Figure 18. A word cloud illustrating the most used words in the comments made on the Social Pinpoint map

COMMUNITY AND NATIONAL ENGAGEMENT

3.1.34 An important part of our role is to ensure up-to-date and relevant scientific information is effectively communicated to Horizons' staff, Councillors, consent holders, iwi, the public, and any other parties interested in aspects of natural resource management.

- 3.1.35 In October, our Ecology Scientist Dr. Lizzie Daly attended a National Policy Statement for Indigenous Biodiversity (NPSIB) workshop hosted by MfE and DoC. The aim of the workshop was to clarify issues raised in submissions and test practicalities of some proposed policy changes considered in response to submissions.
- 3.1.36 A discussion document and the draft NPSIB was released for consultation on 26 November 2019. The draft NPSIB aimed to provide a comprehensive, nationally consistent approach to addressing the decline of indigenous biodiversity. The draft NPSIB could have a significant impact on how we manage and regulate indigenous biodiversity in the Horizons Region, changing the way we manage biodiversity through the One Plan.
- 3.1.37 Staff have been increasingly engaging with regional sector special interest groups (SIGs) involved in the implementation of Government's Essential Freshwater package, through SIG meetings and workshops. A freshwater implementation group comprised of council key contacts (Abby Matthews for Horizons), implementation directors (Nic Peet) and SIG Conveners with connections to freshwater implementation has been established and will convene in October 2020. Further to this, a separate implementation SIG focused on delivery of the Jobs for Nature projects has been formed with representation across the regional sector. Jon Roygard is a co-convenor of the group.

Staci Boyte
SCIENTIST - LAND

Amber Garnett
ENVIRONMENTAL SCIENTIST – NATURAL RESOURCES

-
Harold Barnett
ENVIRONMENTAL SCIENTIST

Abby Matthews
SCIENCE AND INNOVATION MANAGER

Jon Roygard
GROUP MANAGER NATURAL RESOURCES AND PARTNERSHIPS

Report No.	20-154
Information Only - No Decision Required	

REGULATORY MANAGEMENT REPORT - AUGUST TO OCTOBER 2020

1. PURPOSE

- 1.1. This report updates Members on regulatory activity, for the period August to October 2020. It also provides a summary of compliance with municipal **Wastewater Treatment Plants (WWTP)** and summarises the current work that is taking place in relation to the implementation of the Resource Management (**National Environmental Standards for Freshwater) Regulations 2020 (NES-FW)**.

2. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 20-154 and Annexes.

3. FINANCIAL IMPACT

- 3.1. As with previous years, we are still anticipating there will be significant costs associated with processing large and complex applications, which may in turn be subject to appeal. On-going investigations and prosecutions within the compliance monitoring programme are likely to have an impact on both expenditure and revenue. In addition to the above, we are also anticipating costs to be incurred in relation to the implementation of **National Environmental Standard – Freshwater (NES-FW)**

4. COMMUNITY ENGAGEMENT

- 4.1. This is a public item and therefore Council may deem this sufficient to inform the public.

5. SIGNIFICANT BUSINESS RISK IMPACT

- 5.1. There is no significant business risk associated with this item.

6. CLIMATE IMPACT STATEMENT

- 6.1. As this report relates to statutory functions there is no climate change impact.

7. REGULATORY ACTIVITY 2019-2020

Consent Processing

- 7.1. Year to date 107 applications have been lodged, resulting in 74 applications being granted and 240 activities being authorised. Eighty eight percent (88%) of applications were processed within the required statutory timeframes and 11 administrative discounts have been applied as required under the **Resource Management (Discount on Administrative Charges) Regulations 2010 (Discount Regulations)**.

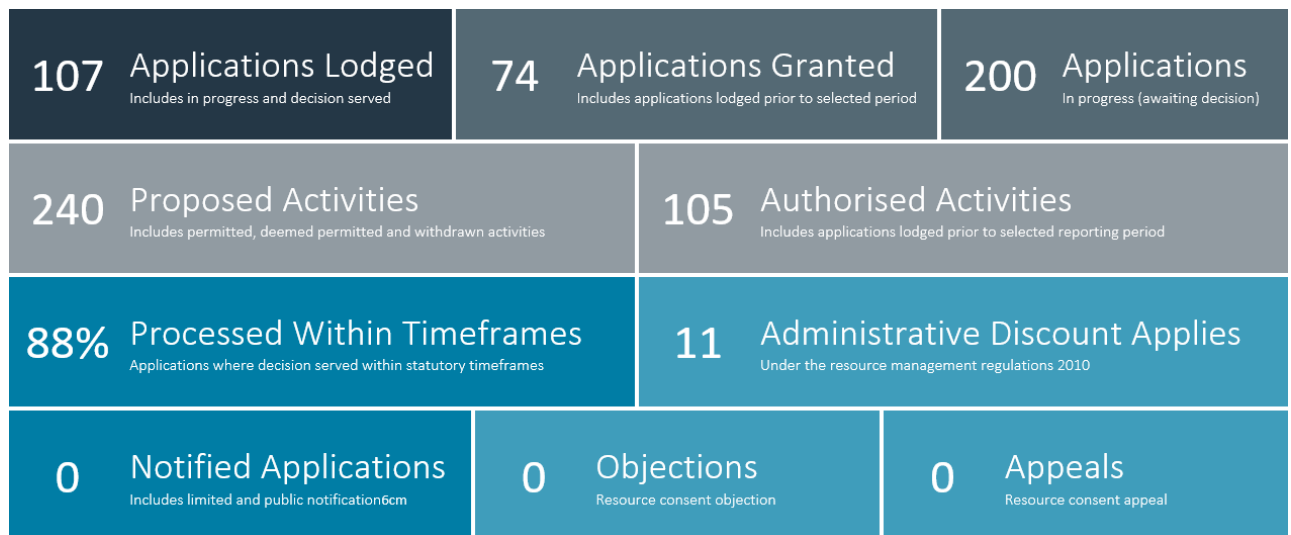


Figure 1. Resource consent processing year to date.

7.2. During the reporting period progress continues to be made on a number of significant applications. These are reported to Council on a regular basis and the following provides an update on these:

7.2.1. Department of Conservation

- i. The **Department of Conservation (DOC)** is progressing the Whakapapa **Wastewater Treatment Plant (WWTP)** application. DOC has now moved to plan for the relocation of the wastewater treatment plant out of the Tongariro National Park to a less sensitive (both culturally and environmentally) receiving environment. This is a positive move and one Horizons has advocated. A move outside the park will take 2-4 years to go through consenting and construction. In the meantime, Horizons is requiring investment into the existing plant to improve, as far as possible, its environmental performance.
- ii. DOC has confirmed that it will be lodging a resource consent application for the new proposal in December 2020. With this in mind, Horizons has suspended work on seeking an Enforcement Order. However, if the timeframes slip then the Enforcement Order will be lodged with the Court.

7.2.2. Tararua District Council

- i. The appeals regarding the Pahiatua and Eketahuna WWTP have now been resolved and we are now waiting on decisions from the Environment Court.
- ii. Regarding the Woodville WWTP, we are also awaiting a response from **Tararua District Council (TDC)** in relation to a section 92 request in relation to groundwater monitoring information. At this stage we are still anticipating a hearing will be required.

7.2.3. Horowhenua District Council

- i. The Tokomaru WWTP consent application was granted for a term of 5 years. The consent authorises the discharge of treated wastewater into land via a wetland and to water, namely the Centre Drain.
- ii. The application seeking to discharge stormwater into Koputaroa Stream catchment is preceding to a pre-hearing in November and at this stage we are anticipating a hearing in February 2021.
- iii. Regarding the application seeking to discharge stormwater from the Levin Township into Lake Horowhenua, further information has been requested and HDC has asked for time to engage with the relevant parties. The COVID-19 pandemic has impacted on when HDC will be providing the further information requested and HDC is to

provide an updated timeframe for provision of this information. Given the values of Lake Horowhenua, this is not expected to be a simple process.

- iv. HDC is preparing a consent application seeking to discharge stormwater from the Foxton Township to the Manawatū River.

7.2.4. Ruapehu District Council

- i. **Ruapehu District Council (RDC)** has lodged a consent application in relation to the National Park WWTP. RDC are currently consulting with the Wai Group in relation to the proposed activity and is considering growth implications on the existing consent. RDC is proposing to re-submit a revised set of conditions for consideration.
- ii. Ohakune and Raetihi WWTP applications may be impacted by the submission of an additional **Tourism Infrastructure Fund (TIF)** application to **Ministry of Business Innovation and Employment (MBIE)**. RDC is looking to provide an update on the applications and the impact growth implications may have on these applications.
- iii. The application associated with the Taumarunui water supply is currently on hold for further information, including assessing water efficiency.
- iv. Rangataua WWTP application was publically notified during the week commencing 26 October 2020.

7.2.5. Manawatu District Council

- i. As previously reported, the **Manawatu District Council (MDC)** have a number of WWTP whose discharges are currently authorised under the existing use rights of the RMA; including the Sanson, Cheltenham, Halcombe, Awahuri and Kimbolton. The applications relating to these WWTP have been placed on hold as MDC progresses its centralisation project, which is aiming to have discharges from these and other WWTP centralised into the Feilding WWTP. To this end, MDC lodged a consent application that is seeking to amend the Feilding WWTP consents to allow for centralisation of these discharges into the Feilding WWTP. A decision has now been made on the application; however, MDC have objected to a number of the conditions. This is currently being worked through with MDC
- ii. The MDC consent application to enable expansion of the current land disposal area for the Feilding WWTP has now been granted for term of 26 years to align with the existing resource consents that authorise the discharge of treated wastewater to land.

7.2.6. Te Ahu a Turanga

- i. The Manawatu Gorge replacement project “Te Ahu a Turanga” is progressing.
- ii. The project is being processed via the Direct Referral Process allowed for under the RMA.
- iii. Over the reporting period a hearing occurred before the court and we are now waiting on the decision.
- iv. In addition to the direct referral process, a number of enabling consents have been and are to be lodged. These enabling consents include activities such as construction of access roads into the main alignment and extraction of gravel from the Pohangina River.
- v. The **Special Projects Team (SPT)** has been established and is now operational. The focus of the SPT over the period has been undertaking compliance inspections and reporting of activities occurring under the granted enabling consents, and working with the Alliance in relation to the preparation of several **Site Specific Environmental Management Plans (SSEMP)** and the draft **Ecological Management Plan (EMP)**.

Implementation of NES-FW

- 7.3. The National Environmental Standard – Freshwater (NES-FW) and **Resource Management (Stock Exclusion) Regulations 2020 (Regulations)** came into effect on 3 September 2020.
- 7.4. The NES-FW provides a national regulatory framework in relation to a number of activities including farming activities (e.g. stock holding areas and feedlots, intensive winter grazing etc) and regulating other activities that relate to freshwater, including structures that effect fish passage (e.g. installation, operation and maintenance of culverts, weirs etc).
- 7.5. The stock exclusion regulations provide for the exclusion of stock from waterways in a staged manner. The regulations also provide for the issuing of infringement notices with offences for a natural person, non-natural person or per animal. The infringement offence fees being \$2,000, \$4,000 and \$100 (per animal), respectively. The infringement offence fees relate to Regulations 9 to 18.
- 7.6. Regarding the NES-FW and regulations certain matters come into effect over a period time. In summary:
- Intensive winter grazing regulations come into effect on 1 May 2021 and apply to farms comprising 5 hectares or more of horticulture, 20 hectares of pasture or arable crops or 20 hectares or more of a combination of any of these ;
 - Feedlot regulations came into effect on 3 September 2020 with regulations relating to stockholding areas coming into force on 1 July 2021.
 - Regarding exclusion of stock from lakes and rivers the regulations came into effect for any new pastoral system as of 3 September 2020; dairy cattle and pigs regardless of slope and beef cattle and deer on low slope land by 1 July 2023 and dairy support cattle regardless of slope by 1 July 2025.
 - Fish passage and natural wetlands regulations came into effect on 3 September 2020.
- 7.7. Work continues at a national level in relation to implementation. The main focus is to ensure how the NES-FW and regulations are implemented is consistent, whilst allowing for regional variations. At present this work has focused on looking at how councils can develop a consistent approach to consent processing and interpretation of key terms within the NES-FW.
- 7.8. At the same time as this work is occurring, Horizons is actively pursuing implementation of the NES-FW by taking a risk based approach. This has resulted in Horizons focussing its initial regulatory implementation on intensive winter grazing as this is an area which is causing the most immediate concern in the rural community has been identified as resulting in a significant increase in consent applications. Implementation focus will move onto other areas, such as stock holding areas and feedlots in the new year.
- 7.9. Horizons implementation is currently focused on preparing for a workshop with the sector (and at the time of writing this report, other regional councils) in relation to IWG. The purpose of the workshop is to assess how a resource consent process will run for particular farming operations, identify any gaps in the process and then work with the sector to address, where possible, these gaps. This is seen as an important step as we prepare for receiving and processing applications by 1 May 2021.
- 7.10. Horizons has also established a designated page on its website where information on the NES-FW and regulations are held. This is being constantly updated and added to as new information comes available. The page can be accessed at:
<https://www.horizons.govt.nz/managing-natural-resources/water/freshwater-policy>
- 7.11. In addition to this the Ministry for the Environment has also made available a number of fact sheets and guides. This information can be accessed at:
<https://www.mfe.govt.nz/fresh-water/freshwater-guidance/factsheets-policies-and-regulations-essential-freshwater>

8. Compliance Monitoring and Enforcement

The intention of this section is to focus on one key part of the compliance programme and also provide an overall summary of the programme for the reporting period. The focus for this report is to provide a summary of the municipal WWTP programme.

Municipal WWTP programme

- 8.1.1. There are 46 municipal WWTPs in the region that are consented. Nineteen of these are currently operating under the existing use provisions of the **Resource Management Act 1991 (RMA)**, whilst the remainder are operating under current resource consents. As previously reported, those WWTP operating under existing use provisions are still required to comply with their resource consents.
- 8.1.2. The WWTP programme is categorised, based on a number of factors that include; the potential environmental risk the site poses, its compliance history, nature of the receiving environment and the complexity and public interest of the consent. There are 7, 20, 18 and 1 category 1, 2, 3 and 4 sites, respectively. Given a site can encompass a number of consents, the current programme currently focus' on assessing compliance with 92 consents. The current programme is focused on proactively assessing compliance with category 1 and 2 sites. Category three sites are generally assessed only if a complaint is received.
- 8.1.3. Since 1 July 2020, Horizons has undertaken ten assessments of WWTP. These assessments are a combination of both site inspections and data assessments. The latter effectively assesses information provided by the consent holder, as required by their resource consent. It is important to note that data assessments can take some time, as the information provided by consent holders can be long, complex and require significant analysis.
- 8.1.4. Of the ten assessments completed since 1 July 2020, four WWTP are complying whilst one and five are non-complying and significant non-complying, respectively.
- 8.1.5. Notwithstanding the above, **Annex A** summarises the current compliance status of the WWTP in the programme and where a significant non-compliance has been identified, what action has been taken. It is important to note, the compliance status of a number of WWTP is based on assessments done outside of the reporting period and that a number of these sites are currently being assessed, such as the Feilding WWTP. Therefore, the compliance grading for some of the WWTP may change in the next couple of months.
- 8.1.6. Non-compliances generally relate to issues associated with reporting and maintenance, whilst significant non-compliances typically relate to non-compliance with those conditions of consent that directly control adverse environmental effects, such as discharge standards; or there has been a repeated non-compliance, such as a continued failure to provide information.
- 8.1.7. Where a significant non-compliance occurs, Horizons will in the first instance typically seek an explanation for the significant non-compliance and a timeframe by which the non-compliance will be resolved. If the significant non-compliance continues, and/or is having an actual or potential adverse effect, which is more than minor on the environment, Horizons would typically consider taking more formal enforcement action, such as issuing abatement and infringement Notices.

COMPLIANCE PROGRAMME SUMMARY FOR AUGUST TO OCTOBER 2020

- 8.2. This section of the report provides a summary on the compliance programme for the period.
- 8.3. During the reporting period, there were 150 compliance monitoring assessments completed. Of the completed assessments, 80 Comply Full, 32 Comply At-Risk, 17 Low

Risk Non-Compliance, 11 Moderate Non-Compliance and 10 Significant Non-compliance gradings were issued. Overall, this equates to a 75% compliance rate across the entire programme for the reporting period.

- 8.4. Below is a breakdown of the non-compliances by consent area, for the reporting period:
Industry: Nine Low risk non-compliance, five moderate non-compliance and eight significant non-compliances; and
Rural: Eight Low risk non-compliance, six moderate non-compliance and two significant non-compliances.
- 8.5. Horizons currently has five prosecutions and one sentencing matter before the District Court. One prosecution cannot be named at this stage. There is also one significant investigation underway. Table 1 provides a summary of the prosecutions currently before the Court.

Defendant	Summary
Huka View Dairies and Derek Berendt	Sentencing to occur on 9 November 2020
John Turkington Limited and Mr Kim Speedy	Charges laid before the Court
John Turkington Limited	Charges laid and before the Court.
NZL Forestry Limited	Sentencing completed
Mr Leslie Fugle, Mr Kane Davidson and Pacific Farms Development Limited	Charges laid before the Court

Table 1. Summary of Court proceedings

9. INCIDENTS

- 9.1. Over the reporting period, a total of 268 complaints were received. For this reporting period, the majority of these complaints related to discharges to air (163). The remainder of the complaints related to discharges to land (61) and water (66).
- 9.2. All complaints are categorised and responded to accordingly. A response can include an immediate or planned inspection, a phone call, or being referred to another agency such as a territorial authority or Civil Aviation

10. REGULATORY ACTION

- 10.1. During the reporting period, 16 abatement and 21 infringement notices were issued. Table 2 below provides a summary of the formal regulatory action taken during the reporting period.

Recipient	Enforcement	District	Date Notice Served	Section of Act contravened	Nature of Offence
Wayne Bishop Group Limited	Infringement Notice	Horowhenua	3/07/2020	15(2A)	Burning of Prohibited Items
Forest 360	Infringement Notice	Ruapehu	3/07/2020	338 (1)(c)	Breach of Abatement Notice
Eastown Timber Processors Limited	Infringement Notice	Whanganui	15/07/2020	338 (1)(c)	Breach of abatement notice

Eastown Timber Processors Limited	Infringement Notice	Whanganui	15/07/2020	15(1) (c)	Discharge of contaminant to air from industrial trade premise
Craig Barber	Infringement Notice	Palmerston North	31/07/2020	338 (1) (c)	Breach of Abatement notice
Craig Barber	Infringement Notice	Palmerston North	31/07/2020	9(2)	Earthworks exceeding 2500 m ²
Hones Family Trust	Infringement Notice	Dannevirke	7/08/2020	15(1)(b)	Exceeding irrigation area
Hones Family Trust	Infringement Notice	Dannevirke	7/08/2020	338 (1) (c)	Breach of Abatement Notice
Siteworx (2006) Limited	Infringement Notice	Manawatu	8/09/2020	15(2A)	Burning prohibited materials
Manawatu District Council	Infringement Notice	Manawatu	12/08/2020	338 (1) (c)	Breach of abatement notice
Manawatu District Council	Infringement Notice	Manawatu	12/08/2020	15 (1)(b)	discharge of contaminant to land where it may enter water
Palmerston North Industrial & Residential Developments Limited	Infringement Notice	Palmerston North	24/09/2020	9(2)	Multiple SNC's against consents - did not stabilise prior to winter
Palmerston North Industrial & Residential Developments Limited	Infringement Notice	Palmerston North	24/09/2020	15(1)(b)	Multiple SNC's against consents - did not stabilise prior to winter
Natural Bark and Compost Limited	Infringement Notice	Horowhenua	2/10/2020	338(1) (c)	Breach of abatement notice
Natural Bark and Compost Limited	Infringement Notice	Horowhenua	2/10/2020	15(1) (c)	Offensive Odour Beyond Boundary
High Spec Forestry	Infringement Notice	Tararua	25/08/2020	338(1)(c)	Breach of Abatement Notice 1120
High Spec Forestry	Infringement Notice	Tararua	25/08/2020	9(1)	Breaching National Environmental Standard for plantation forestry.
AB Roofing Ltd	Infringement Notice	Palmerston North	22/09/2020	15(1)(c)	Burning prohibited materials on industrial and trade premise
AFFCO	Infringement Notice	Whanganui	7/10/2020	15(1)(b)	Unauthorised discharge of stormwater

Lyndon Currie (LC Bulders)	Infringement Notice	PNCC	7/10/2020	15(1)(c)	Burning prohibited materials on industrial and trade premise
Rangitikei District Council	Infringement Notice	Rangitikei	7/10/2020	15(1)(a)	Ongoing water quality exceedances at Hunterville WWTP
Dhalson Halidone	Abatement notice	Horowhenua	2-Jul-20	9(2), 15(1)(a) and 15(1)(b)	Cease unauthorised earthworks
Dhalson Halidone	Abatement notice	Horowhenua	2-Jul-20	9(2), 15(1)(a) and 15(1)(b)	Stabilise unauthorised earthworks
Rangitikei District Council	Abatement notice	Rangitikei	6-Oct-20	15(1)(a)	Undertake monitoring required by resource consent for Bulls WWTP
Rangitikei District Council	Abatement notice	Rangitikei	6-Oct-20	15(1)(a)	Undertake monitoring required by resource consent for Marton WWTP
Wayne Bishop Group Limited	Abatement notice	Horowhenua	3-Jul-20	15 (2A)	Cease burning of prohibited materials
Eastown Timber Processors	Abatement notice	Whanganui	14-Jul-20	15(1) (c)	Provide management plan
James Robert and William John McVitty	Abatement notice	Manawatu	17-Aug-20	9(2), 13(1)(d), 14(3)(a), 15(1)(a) & 15(1)(b)	Cease unauthorised tracking and associated diversion, damming of watercourse. Discharge of contaminants to water and land where it may enter water
Brendon Cole	Abatement notice	Ruapehu	31-Jul-20	9(2)	Stabilise unauthorised earthworks
Siteworx (2006) Ltd	Abatement notice	Manawatu	7-Sep-20	15(2A)	Burning demolition waste - 402-406 Pohangina Road
Palmerston North Industrial & Residential Developments Ltd	Abatement notice	Palmerston North	24-Sep-20	9(2), 13(1) & (15(1)(b)	Undertake to confirm fish passage. Failure to stabilise site before winter. Fish passage not provided. SNC's with consent in general.
Palmerston North Industrial & Residential Developments Ltd	Abatement notice	Palmerston North	24-Sep-20	9(2), 13(1) & (15(1)(b)	Cease unauthorised earthworks
Glenn Martin Ltd	Abatement notice	Taumararui	10-Sep-20	15(1)(b) & 9(1)	Under take stabilisation and remedial works relating to forestry
Malcolm Govenlock	Abatement notice	Rangitikei	2-Sep-20	15(1)(b)	Cease unauthorised truck wash

Malcolm Govenlock	Abatement notice	Rangitikei	2-Sep-20	15(1)(b)	Undertake remedial works to clean up effluent and disposal of at authorised facility
Kakariki Proteins Limited	Abatement notice	Horowhenua	23-Sep-20	15 (2A)	Cease excess nitrogen loading
PF Olsen Limited	Abatement notice	Rangitikei/Wanganui	15-Oct-20	9(1) and 15(1)(b)	Under take stabilisation and remedial works relating to forestry

Table 2. Regulatory action taken during reporting period.

11. SIGNIFICANCE

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

Greg Bevin
REGULATORY MANAGER

Nic Peet
GROUP MANAGER STRATEGY & REGULATION

ANNEXES

A Wastewater Reporting

Wastewater Reporting as of 23 October 2020 (note * = not included in this year's programme; yellow highlighted are due assessment before end of financial year; ^=needs follow up)

Rangitikei District Council	Category	Operating under existing use rights	Stage in the consent renewal process	Current compliance status	Date of recent Assessment	Description of non-compliance	Action	Under assessment	Timeframe for Assessment Completion
Taihape	2			Significant Non Comply	2/10/20	Discharge Volume exceedance and water quality exceedances for SIN and E.coli	RDC are preparing an application to either seek a variation to existing consent or seeking a new consent.		
Marion	1	Y	Application currently subject to section-37 time extension. RDC is considering options to centralise discharge into the Bulls WWTP	Significant non comply	30/06/20	Water Quality and some monitoring not done	An abatement notice has been issued to RDC requiring it to carry out all the monitoring required by the resource consent.		
Hunterville	2		Application currently being considered.	Significant non comply	2/10/20	Volumes, Records and Water quality (Aluminium)	A consent variation application is being processed. An Infringement Notice has been issued to RDC for exceeding the instream levels of aluminium.		
Bulls	2	Y	Application currently subject to section 92 hold. RDC is considering option to centralise discharges from Marion and Ohakea into the Bulls WWTP	Significant non Comply	30/06/20	Exceeding daily volume, missing parameters required to be monitored	An abatement notice has been issued to RDC regarding the need to carry out all the monitoring required by the resource consent.		
Ratana	2	Y	Application currently subject to section 92 hold. RDC are now looking at alternate disposal options as land identified for land disposal is no longer available.	Significant non Comply	18/06/19	Discharge Volume exceedance	An explanation has been requested as to why the discharge has been consistently exceeding the maximum daily volume up until 7 September 2018 and why the discharge has not fluctuated since this date by 1 July 2019. RDC have failed to provide this information and this will be followed up during November 2020.		
Mangaweka*	3			Low Risk Non – Comply	1/02/2019	Maintenance information and site inspection information has not been provided.	Information request has been complied with.		
Koitiata*	3			Significant non Comply	13/06/19	Ongoing non-compliance with providing Revegetation and weed control plan and Operation and maintenance / monitoring plan.	Plans requested by 1/07/19. RDC have failed to provide this information and this will be followed up on November 2020.		
Duddings Lake*	3			Comply Full	5/12/2019	NA	NA		

Horowhenua District Council	Category	Operating under existing use rights	Stage in the consent renewal process	Current compliance status	Date of recent Assessment	Description of non-compliance	Action	Under assessment	Timeframe for Assessment Completion
Shannon WWTP	2			Moderate non compliance	26/09/19	Records/data not provided and Annual report not provided to TMI.	HDC have rectified these issues.		
Shannon Land Irrigation	2			Moderate non compliance	26/09/19	Minor exceedances of total suspended solids; Not all the required signage was in place; Seven instances of data not being provided.	HDC have rectified these issues.		
Waitarere*	3			Comply – At risk	29/05/18	Minor ponding in irrigation area	No further action required		
Levin Pot	2	Y		Moderate non compliance	24/01/20	Failure to implement recommendations of report. The accidental discharge over boundary of the consented area	No further action required		
Levin WWTP	1			Low Risk non compliance	24/01/20	Annual report provided late. Failure to sample within timeframes and failure to update management plan	No further action required		
Foxton	2			Significant Non- Comply	25/06/20	Exceedance of the scBOD parameters	An infringement notice was issued to HDC in regard to these exceedances. HDC have provided a plan as to how they would like to address these issues (received 2/08/20).		
Tokomaru	3	Y		Significant Non Comply	28/05/2018	Discharge Volume	The compliance status relates to the old consent with the new consent granted recently.		
Foxton Beach	3			Low Risk Non Comply	8/10/19	Failure to notify Horizons of all non-compliant dissolved oxygen results.	No further action required		
Palmerston North	Category	Operating under existing use rights	Stage in the consent renewal process	Current compliance status	Date of recent Assessment	Description of non-compliance	Action	Under assessment	Timeframe for Assessment Completion
Palmerston North	1			Comply	15/10/2020 Approval of summer monitoring programme	NA	NA	Y (assessment of discharge consent)	6/11/2020
Whanganui District Council (JC)	Category	Operating under existing use rights	Stage in the consent renewal process	Current compliance status	Date of recent Assessment	Description of non-compliance	Action	Under assessment	Timeframe for Assessment Completion
Mary Bank*	3			Comply at risk	16/04/19	Discharge volumes not being accurately assessed	WDC are installing meters to rectify this		
Mowhanau	2			Low Risk Non-Compliance	17/09/19	Sampling frequency incorrect. Flow meter calibration certificate required.	WDC have adjusted their sampling frequency for coming summer and the flow meter calibration is due 15/11/2019.		

Manawatu District Council (DH)	Category	Operating under existing use rights	Stage in the consent renewal process	Current compliance status	Date of recent Assessment	Description of non-compliance	Action	Under assessment	Timeframe for Assessment Completion
Whanganui District Council	1			Low Risk Non-Compliance	11/02/20	Effluent discharge rates exceeded with some sampling parameters being missed.	WDC have adjusted their monitoring parameters accordingly.		
Feilding	1			Significant non Comply	2/03/2020	Limit breaches for SIN, information on compliance with NES for Air Quality not provided and the construction of the cut off drain completed without approval.	No further action taken as the SIN levels are now trending in the right direction. MDC have provided an explanation around the NES.		
Himatangi Beach*	3			Comply	6/04/2018	NA	NA		
Halcombe	2	Y	Subject to section 37 time extension. MDC are currently preparing an application that will seek to centralise discharges from this plant into the Feilding WWTP.	Significant Non comply	3/05/19	Daily discharge volume exceeded to land regularly exceeded.	At the time of issuing the SNC report the problems with the system had been rectified to ensure discharge volumes would no longer be exceeded. No further action required at this stage.		
Cheltenham*	3	Y	Subject to section 37 time extension. MDC are currently preparing an application that will seek to centralise discharges from this plant into the Feilding WWTP.	Significant Non comply	6/11/18	SNC with discharge volumes / not supplying inflow data / groundwater sampling not completed.	MDC are going through consent renewal application process. Due to staff turnover this SNC was not followed up and will be followed-up in 2020/21.		
Rongotea	3	y	Subject to section 37 time extension. MDC are currently preparing an application that will seek to centralise discharges from this plant into the Feilding WWTP.	Significant Non Comply	29/02/20	Abatement Notice issued to MDC requiring it to cease the discharge of untreated human effluent and to provide a report detailing the actions, processes and procedures that will be implemented to ensure compliance.	MDC have provided the required report.		
Sanson	3	y	Subject to section 92 hold. MDC are currently preparing an application that will seek to centralise discharges from this plant into the Feilding WWTP.	Significant Non Comply	13/01/20	Turbidity, ammonia and cBOD exceeded in the Piakatutu Stream	Report provided by MDC detailing the actions they are taking to address these issues.		
Kimbolton	3	y	Subject to section 92 hold. MDC are currently preparing an application that will seek to centralise discharges from this plant into the Feilding WWTP.	Significant Non Comply	2/05/19	Exceedances of NH4 and DRP + water budget outstanding.	An Abatement Notice has been served requiring water budget to be provided, which MDC have done. Regarding NH4 and DRP non-compliances recent sampling shows concentrations are within consented limits. Future non-compliances may result in enforcement action being considered.		

Ruapehu District (DH)	Category	Operating under existing use rights	Stage in the consent renewal process	Current compliance status	Date of recent Assessment	Description of non-compliance	Action	Under assessment	Timeframe for Assessment Completion
Awahuri*	3			Moderate Non Comply	6/11/18	2 results outside discharge standard / NC with monitoring conditions / reporting Timeframes	Consent holder advised of non-compliances		
Taumarunui (Hikumutu)	2			Significant Non Compliance	22/05/20	Discharge volumes exceeded and the correct parameters have not been measured in river and some reporting has not occurred	An explanation and how they intend to address these issues has been requested from RDC. This is now overdue and will be followed up with RDC.		
National Park	2	y	Subject to section 37 timeframe extension. RDC currently reviewing impact of growth implications on load on draft conditions	Significant Non Comply	14/01/20	Discharge volumes exceeded and flow monitoring of the stream have not occurred	An explanation and how they intend to address these issues has been provided by RDC.		
Rangataua*	3	Y	Application has been notified.	Comply	31/05/18	Comply	NA		
Pipiriki*	4			Comply	2/06/17	Comply	NA		
Raetihi	2	Y	Subject to section 37 timeframe extension as RuaDC wait outcome of TIF application	Significant Non Comply	5/05/20	Exceedance of volumes, failure to provide dissolved oxygen readings	An explanation and how they intend to address these issues has been provided by RDC.		
Ohakune	2	Y	Subject to section 37 timeframe extension as RuaDC wait outcome of TIF application	Significant Non Comply	5/05/20	Exceedance of effluent suspended solid and ammonia limits	An explanation and how they intend to address these issues has been provided by RDC.		
Ruatiti*	4			Comply	31/05/17	Not applicable	NA		
Tararua District Council (GB)	Category	Operating under existing use rights	Stage in the consent renewal process	Current compliance status	Date of recent Assessment	Description of non-compliance	Action	Under assessment	Timeframe for Assessment Completion
Pahiatua	2	Y	Subject to Environment Court appeal	Significant Non Comply	6/03/20	Discharge volume exceedances	Being addressed via consenting process. Hearing decision appealed. No further action at this stage.		
Eketāhuna	2	Y	Subject to Environment Court Appeal	Significant Non Comply	30/06/20	Upgrades did not occur due to prioritisation of the upgrades at other WWTP. Also DRP , ammonia and E.coli exceedances occurred.	Being addressed via consenting process. Hearing decision has been appealed. No further action at this stage		
Woodville	2	Y	Subject to section 92 request. TDC are commencing process to investigation impacts on groundwater	Significant Non Comply	20/09/20	Annual reports provided six months after timeframe and dissolved oxygen readings on 33 days were below consented limits	TDC have been requested to advise on how they plan to address the issues. This will be discussed with TDC when meet once the Pahiatua and Eketahuna consents are granted.		

Norsewood*	3	Y	Subject to section 92 request.	Non Comply	11/01/18	A number of monitoring conditions have not been complied with and the installation of the clarifier and Tephra filters and pond level alarm weren't completed within the required timeframes	No further action.		
Pongaroa*	3			Significant Non Comply	3/05/2019	Installation of infrastructure at the treatment plant, specifically the U.V. disinfection unit and the installation of "Aqua-Mats has not occurred	These have been included in TDCs long term plan.		
Ormondville*	3			Moderate non comply	13/05/19	Seepage location plan not provided and minor water quality exceedances	Seepage location plan has been actioned by TDC.		
Dannevirke	1			Significant Non Comply	15/07/19	DRP exceedance; no community meeting minutes; no monitoring of DO	Explanations provided, DO monitoring now occurring and with the tephra plant now being in place an improvement in DRP in the effluent should occur this summer. Community meeting set for December 2019.		
Site	Category	Operating under existing use rights	Stage in the consent renewal process	Current compliance status	Date of recent Assessment	Description of non-compliance	Action	Under assessment	Timeframe for Assessment Completion
Whakapapa	1	Y	Subject to section 37 extension as DOC work towards long term solution	Significant Non Comply	2/10/20	Ponding in discharge area and exceedances , Volumes and rate	DOC are working on a new application to relocate the discharge area outside of the national park. This application is due to be lodged in December 2020.		
NZDF Ohakea WWTP	2	Y	Subject to section 37 timeframe extension pending NZDF and RDC agreement over centralisation into the Bulls WWTP	Low Risk Non Comply	9/10/20	Flow meter out of calibration.	Calibration certificate provided		
Whanganui Prison	2	Y	Subject to section 92 request. Corrections are looking at options to centralise discharge to Whanganui WWTP	Comply Full	10/09/20	NA	NA		
NZDF Waiouru	2			Moderate Non compliance	2/06/20	Water quality exceedances	NZDF are currently working through the issues which may have been related to timing of monitoring		
Hato Paora College*	4	Y	Subject to section 37 time extension. It is part of the MDC Centralisation project.	Moderate Non-Comply	18/09/2018	Insufficient monitoring	Monitoring now occurring		