

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

Date: Wednesday, 14 August 2019
Time: 9.00am
Venue: Tararua Room
Horizons Regional Council
11-15 Victoria Avenue, Palmerston North

ENVIRONMENT COMMITTEE

AGENDA

MEMBERSHIP

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

Michael McCartney
Chief Executive

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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 fourteenth meeting of the tenth triennium of the Environment Committee held at 11.30am on Tuesday 14 May 2019, in the Tararua Room, Horizons Regional Council, 11-15 Victoria Avenue, Palmerston North.

PRESENT Crs GM McKellar (Chair), LR Burnell, DB Cotton, EB Gordon JP (ex officio), RJ Keedwell (to 12.40pm and from 1.18pm), JM Naylor, NJ Patrick, PW Rieger QSO JP and WK Te Awe Awe.

IN ATTENDANCE Acting Chief Executive Dr N Peet
Committee Secretary Mrs KA Tongs

ALSO PRESENT At various times during the meeting:

Mr R Strong (Group Manager River Management), Dr J Roygard (Group Manager Natural Resources & Partnerships), Mr G Shirley (Group Manager Regional Services & Information), Mr R Smillie (Environmental Manager), Ms A Matthews (Science & Innovation Manager), Mr G Bevin (Regulatory Manager), Mr L Brown (Freshwater & Partnerships Manager), Mr J Crowley (Senior Consents Monitoring Officer), Ms L Jansen (Senior Consents Planner), Mrs S Williams (Environmental Educator), Mrs S Carswell (Coordinator District Advice), Ms P Tucker (Senior Policy Analyst), Ms R Tayler (Manager Policy & Strategy), Mr B King & Mr D Watson (Tararua District Council), Mr R Dalrymple, Mr & Mrs Pearson (members of the public).

The Chair welcomed everyone to the meeting.

APOLOGIES

ENV 19-118 *Moved* **Burnell/Cotton**

That the Committee receives an apology from Cr Rollinson and Cr Sheldon and notes that Cr Barrow had Leave of Absence.

CARRIED

PUBLIC FORUMS / DEPUTATIONS / PETITIONS

Graham and Lyn Pearson had been granted public speaking rights.

SUPPLEMENTARY ITEMS

There were no supplementary items to be considered.

MEMBERS' CONFLICTS OF INTEREST

There were no conflicts of interest declared.

CONFIRMATION OF MINUTES

ENV 19-119 Moved Keedwell/Naylor

That the Committee:

confirms the minutes of the Environment Committee meeting held on 13 March 2019 as a correct record, and notes that the recommendations were adopted by the Council on 26 March 2019.

CARRIED

ENVIRONMENTAL EDUCATION

Report No 19-63

This report provided Members with an Environmental Education progress report for the period 2 March 2019 – 6 May 2019. Mrs Williams (Environmental Educator) took the report as read and highlighted that Horowhenua District Council were now on board with Enviroschools and would fund eight Enviroschools in the next financial year. She also mentioned the recent day spent with two schools near Taumarunui looking for green thistle beetles, and brought Members attention to the table on page 1 of the report which highlighted the annual plan targets and the year to date figures which were well ahead of the forecasted figures.

ENV 19-120 Moved Patrick/Keedwell

That the Committee recommends that Council:

a. receives the information contained in Report No. 19-63.

CARRIED

SCIENCE & INNOVATION PROGRESS REPORT

Report No 19-67

This item introduced the Science and Innovation Progress Report for the period 1 February to 31 March 2019. Ms Matthews (Science & Innovation Manager) summarised the report and highlighted the finalisation of the summer monitoring programmes and the work still to complete before the end of the financial year. Ms Matthews, Dr Peet (Group Manager Strategy & Regulation) and Dr Roygard (Group Manager Natural Resources & Partnerships) discussed with Members the current work in the Arawhata catchment.

ENV 19-121 Moved Burnell/Naylor

That the Committee recommends that Council:

a. receives the information contained in Report No. 19-67 and Annex.

CARRIED

FRESHWATER & PARTNERSHIPS PROGRESS REPORT

Report No 19-66

Mr Brown (Freshwater & Partnerships Manager) introduced the Freshwater & Partnerships Progress report for the period 1 February to 31 March 2019 and highlighted the fencing and planting statistics which were ahead of schedule. He updated Members on the Lake Waipu Freshwater Improvement Fund, and mentioned that contractors would have the design work on the Lake Horowhenua Boat Ramp available by the end of June. Members' questions were answered.

ENV 19-122 Moved Cotton/Gordon

That the Committee recommends that Council:

- a. *receives the information contained in Report No. 19-66 and Annex.*
- b. *receives the Annual Report for the Manawatū Catchment Freshwater Improvement Fund project.*
- c. *receives the Annual Report for the Whangaehu Catchment Freshwater Improvement Fund project.*
- d. *receives the Annual Report for the Lake Waipu Catchment Freshwater Improvement Fund project.*
- e. *receives the Annual Report for the work with the horticulture sector through the Freshwater programme.*
- f. *notes the Annual Report for the work on the lake restoration activity including the Freshwater Improvement Fund project for Lake Horowhenua was presented to Council at the Regional Council meeting on 25 September 2018.*

CARRIED

The meeting adjourned at 12.09pm.

Cr Keedwell left the meeting at 12.40pm.

The meeting reconvened at 12.40pm.

DISTRICT ADVICE UPDATE

Report No 19-64

Mr Shirley (Group Manager Regional Services & Information) and Ms Carswell (Coordinator District Advice) presented this report which informed Members of the District Advice activities carried out for the 10 month period from 1 July 2018 to 30 April 2019. Ms Carswell highlighted the increase of 9.2% for this service compared to the last financial year, the implementation of an initiative which improved efficiencies and quality of information, and the various engagements with the territorial authorities in our region.

ENV 19-123 Moved Naylor/Patrick

That the Committee recommends that Council:

- a. *receives the information contained in Report No. 19-64 and Annexes.*

CARRIED

BIODIVERSITY, BIOSECURITY & PARTNERSHIPS PROGRESS REPORT

Report No 19-65

This item introduced Members of Council's Environment Committee to the Biosecurity and Biodiversity activity over the period 1 February to 31 March 2019. Mr Smillie (Environmental Manager) highlighted the favourable weather over the reporting period which assisted targets being met by the biosecurity animals and plants and biodiversity teams, the work around Old Man's Beard and Totara die back, and discussion was had regarding the Rapid Ecological Assessment (REA) levels.

ENV 19-124 *Moved* *Te Awe Awe/Patrick*

That the Committee recommends that Council:

- a. receives the information contained in Report No. 19-65 and Annexes;*
- b. receives the Totara Reserve Regional Park Annual Report for 2018-19.*

CARRIED

WASTEWATER TREATMENT PLANTS

Report No 19-69

Mr King (Chief Executive) and Mr Watson (Group Manager Plant and Property) from Tararua District Council gave a presentation which updated Members on the wastewater treatment plants in their region and answered Members' questions.

ENV 19-125 *Moved* *Rieger/Burnell*

That the Committee recommends that Council:

- a. receives the presentation from Tararua District Council.*

CARRIED

Cr Keedwell rejoined the meeting at 1.18pm.

REGULATORY MANAGEMENT REPORT - FEBRUARY TO MARCH 2019

Report No 19-68

This report updated Members on regulatory activity for the period February 2019 to March 2019 and updated Members on significant issues and focuses on Council's investigations programme. Dr Peet (Group Manager Strategy & Regulation) introduced the report and highlighted the recent commissioned work around compliance and enforcements by Regional Councils as a sector. The report had been completed and was with Minister Parker. He also updated Members on current prosecutions.

This item was suspended to allow for a presentation by the Rangitikei Rivers Community Collective Incorporated, and public speaking rights for Graham and Lyn Pearson.

RANGITIKEI FARMING FOR THE ENVIRONMENT

Report No 19-70

Mr Roger Dalrymple and other members of the Rangitikei Rivers Community Collective Incorporated gave a presentation and updated Members on the origins of their society and progress to date.

ENV 19-126 Moved Keedwell/Rieger

That the Committee recommends that Council:

- a. *receives the presentation from Mr Roger Dalrymple.*

CARRIED

The Chairman invited Graham and Lyn Pearson to speak.

Graham and Lyn Pearson spoke to Members about how they initially got involved with both the Affco resource consenting process, and the Affco Liaison Committee. They were frustrated with the consenting process and expressed their concern about the lack of response from the Horizons compliance team in regard to messages left.

REGULATORY MANAGEMENT REPORT - FEBRUARY TO MARCH 2019

Report No 19-68 (**Continued**)

Mr Bevin (Regulatory Manager) mentioned the development of a wind farm monitoring programme and explained how complaints and incidents were tracked and the increase of these in the last couple of years. Mr Crowley (Senior Consents Monitoring Officer) and Ms Jansen (Senior Consents Planner) spoke to a presentation on the National Environmental Standards for Plantation Forestry (NES-PF).

ENV 19-127 Moved Keedwell/Te Awe Awe

That the Committee recommends that Council:

- a. *receives the information contained in Report No. 19-68.*

CARRIED

The meeting closed at 3.21pm.

Confirmed

CHAIR

GROUP MANAGER STRATEGY & REGULATION

GROUP MANAGER NATURAL RESOURCES
& PARTNERSHIPS

Report No.	19-118
Information Only - No Decision Required	

NATURAL RESOURCES & PARTNERSHIPS PROGRESS REPORT

1. PURPOSE

- 1.1. This item updates on the activity of the Natural Resources & Partnerships Group over the 2018-19 financial year. The new format of a single report for the group is to align with a focus of the Group on aligning the programmes and integrated catchment management.

2. EXECUTIVE SUMMARY

- 2.1. The Natural Resources and Partnership Groups activity includes the non-regulatory and science programmes across the Land and Water Management, Biosecurity and Biodiversity and Environmental Reporting activities of the Long-term Plan. The group also delivers regulatory functions for biosecurity and supports Horizons regulatory programmes.
- 2.2. The activity of the group was expanded over the 2018-19 year with additional resourcing and new targets provided via the Long-term Plan process and through external sources. The programme has secured over \$30 million of funding from Central Government since 2012 including the funding for the three Freshwater Improvement Fund projects established in the 2018-19 year and the over \$6.4 million secured during 2018-19 for the Sustainable Land Use Initiative for hill country erosion control over the next four years.
- 2.3. The additional funding provided for further activity on the ground and enabled further community involvement. For example, the Freshwater Improvement Fund projects contributed to over 16 community projects being completed (target 14) and the biodiversity programme completed 32 biodiversity collaborations (target 10). Landowner involvement was significant over the 2018-19 year with 578 jobs within the land programme and landowners contributing over \$2.52 million of co-funding (more than half the total cost) of the over 3,600 ha of erosion control works completed, including over 2.3 million trees being planted. The external funding also enabled more community led stewardship of projects.
- 2.4. Overall the group completed 42 of the 45 Long-term Plan targets (93%) with many targets being well exceeded. The three missed targets included two within the Freshwater programme which overall completed 114 km of stream fencing for a target of 69 km, however only achieved 14 km within the Whangaehu Catchment (target 17 km). Further the programme completed 7 fish passes for a target of 7, however achieved one more than required in the Manawatū and one less than required in the regional programme. The other missed target was a result of 94% for a target of 95% of pest plant enquiries to be responded to with three days.
- 2.5. Communication was a focus for the group in the 2018-19 year. The 2019 State of Environment report was the major output for this work. Other contributions included the development of a science communication strategy and a series of papers to council on specific issues including swimmability of the regions' rivers, state and trends of water quality, lakes management and management of hill country erosion.
- 2.6. Emerging issues during the year included responding to Central Government policy processes, additional work around contamination from fire fighting foam, some biosecurity incursion responses and response to water quality results e.g. Whanganui coastal streams.
- 2.7. Further detail on the individual programmes over the 2018-19 year is provided below and in the Annexes. A single Operational Plan for the Groups activity for the 2019-20 year is scheduled to be presented to the Strategy and Policy Committee in September.

3. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 19-118 and Annexes.

4. FINANCIAL IMPACT

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

5. COMMUNITY ENGAGEMENT

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

6. SUMMARY AND HIGHLIGHTS

- 6.1. The summary below provides an overview of the 2018-19 year for each area of activity within the Natural Resources and Partnerships Group. Further detail is provided the attached annexes. The information below includes a summary for the Land Management Activity, however this is not reported on in further detail in an annex. A more detailed report on that activity will be provided to the Catchment Operations Committee in September 2019.
- 6.2. The context for the 2018-19 years activity includes the review of many of the programmes as a part of the Long-term Plan process and the subsequent changes made to the programmes. The summaries below provide some further context to these changes along with a summary of the results for the year.

Freshwater & Partnerships

- 6.3. Through the Long-term Plan the work of the Freshwater and Partnerships Team was reorganised to align with the successful **Freshwater Improvement Fund (FIF)** project applications (over \$5 million of Central Government funding, over three to five years). The Long-term Plan targets were set to match Horizons' requirements within those programmes e.g. to match the targets for the components of those projects that Horizons was directly leading such as stream fencing, planting, fish passes and community projects. The FIF projects include other projects such as upgrades to sewage treatment plants to remove discharges to water from rivers or lakes and to apply wastewater to land, stormwater upgrades, urban streams projects etc. To provide Council with reporting on these other activities an Annual Report requirement for each of these projects was added to the Long-term Plan targets. Council provided additional funding for a regional programme (\$200 K) and specific targets were added to the Long-term Plan for this project. This additional funding was to enable works to continue to occur regionally (outside of the catchments with FIF Fund projects). Further, Council provided additional funding for work with the horticulture sector to improve water quality. This aligned with another externally funded project through the Sustainable Farming Fund called Future Proofing Vegetable Production which included a range of work with growers in the Horowhenua area and at other locations in the country. A further Long-term Plan target was added for an annual report on this project.
- 6.4. The Freshwater and Partnerships programme had 15 Long-term Plan targets and at an overall level exceeded these, achieving:
 - Over 114 km of stream fencing (target 69 km);

- 148,984 riparian plants planted (target 63,333);
 - 7 fish passes (target 7);
 - 16 community projects completed (target 14);
 - All annual reports completed.
- 6.5. Within the programmes the stream fencing target for the Whangaehu was not met (14.1 km completed for a target of 17 km, 83%). Also there was one more fish pass than the target completed in the Manawatū and one less than the target achieved in the Regional programme. Overall 13 out of 15 Long-term plan targets were achieved.
- 6.6. One of the 2018-19 years achievements for the Freshwater Team was the establishment of the Freshwater Improvement Fund projects including the cross organisational teams and the associated governance groups and the completion of the associated quarterly reports to the Ministry for the Environment.
- 6.7. In summary:
- the regional programme completed additional fencing and planting in the regional programme through Council approved use of rate reserves.
 - The year included further contributions to the Te Mana o Te Wai projects for the Rangitīkei, Manawatū and Lake Horowhenua.
 - The Manawatu River Leaders' Accord Forum held two meetings, completed a progress report, new website and holding a river festival.
 - Work to restore Lake Horowhenua was delayed through ongoing court processes with legal challenges to the election of the Lake Trust. This impacted on timeframes for legal processes around establishing the boat ramp to enable weed harvesting. Monitoring of Lake Horowhenua was significantly interrupted due to health and safety issues. An item summarising the Lake Horowhenua restoration work was presented to Council in September 2019 and the attached annexes provide and update on the legal processes.
 - Two reports on lake restoration options were completed to inform the work of the freshwater programme. Additional work on Lake Dudding was undertaken in response to observed water quality results.

Biosecurity Animals

- 6.8. Through the Long-term Plan the Biosecurity Animals programme received additional funding and targets to enable Horizons to add new area to the possum control programme to continue control in areas where OSPRI were no longer going to provide possum control. In 2018-19 the target was for an additional 135,668 ha and increase of approximately 12% of the over 1.1 million ha already in the programme.
- 6.9. The Operational Plan set out a plan to complete over 184,555 ha of new area. The approach to delivering this was based on deferring control in some areas of the programme to enable new work to be completed elsewhere. A control programme was determined using the possum modelling tool and information from the updated possum monitoring programme. Further changes to the programme included introducing new standardised protocols for bait station set ups. The programme also went through a more detailed procurement process for external contractors introducing three year contracts with an increased level of auditing.
- 6.10. Overall all of the planned new area received treatment during the year (184,555 ha) well exceeding the target of 135,668 ha and 93% of the planned maintenance possum control was delivered. The procurement process did not find a contractor for one of the possum control areas. This required some changes to delivery over the year and this contributed to

some of the planned work not being completed. Some operational areas also required more bait stations to be installed to meet the requirements of the new standardised protocols around bait station set ups. This reduced the capacity to complete all of the planned work. The monitoring programme revealed low possum numbers in some of the new Ex-Ospri area and as a result all of these will be monitored prior to any decisions to treat these areas in the future. Overall the possum density in the programme is estimated to average between 3 and 4% for a target of below 10 percent. Some areas with results greater than 10% were picked up by the new monitoring programme and these will be a focus for 2019-20.

- 6.11. All four targets were achieved in the Biosecurity Animals programme. The new hectares of possum control and possum density measures are discussed above. The other targets were for rook control and the amenity pest programme. The rook control programme found more active nests this year (152) than last year (135) and this was influenced by a single large rookery being treated that had 31 nests. The Amenity Pests programme responded to 837 enquiries, all within the Long-term Plan target timeframe for response of two working days.

Biosecurity Plants

- 6.12. As a part of the Long-term Plan process the Biosecurity Plants programme targets were aligned with the new Regional Pest Management Plan providing targets around increasing the percentage of known sites of particular pest types at zero levels by 10%. The Long-term Plan process also provided additional resourcing for control of a range of pest species to enable these targets to be met. The other targets for the Biosecurity Plant programme were around responding to pest plant incursions, supporting and monitoring of biological control programmes and responding to pest plant enquiries.
- 6.13. Overall the pest plant programme achieved six out of seven of the Long term Plan targets, narrowly missing achieving all seven. The missed target was a result of 94% for a target of 95% of pest plant enquiries being responded to within three working days. The exclusion pest targets were met as there were no new incursions to respond to. There were previous incursions that responses continued for including velvet leaf and myrtle rust. The targets for reducing the percentage of sites at zero levels were exceeded with the requirement for eradication plants being 65% of sites at zero levels and the year end result being 75%. The target for progressive containment plants was 64% of sites at zero levels and the year end result was 78%.
- 6.14. The biological control programme provided several highlights for the year and an annual report is provided in the annexes to this report. A significant milestone was achieving the approval to release a new biocontrol agent for Old Man's Beard. Staff also finished three years of monitoring for an AgResearch assessment on the effectiveness of green thistle beetle releases and began recording natural spread of this agent and the broom gall mite bioagent

Biodiversity

- 6.15. As a part of the Long-term Plan process the Biodiversity programme was aligned into three activities priority site protection, biodiversity partnerships and Totara Reserve Regional Park. This was a simplification of the previous structure and closed a programme called environmental initiatives with the funding for this being split evenly between the priority sites programme and the biodiversity partnerships programme.
- 6.16. The priority sites programme underwent a review as a part of the Long-term Plan process. Linking with the science programme, a review of the prioritisation of sites for inclusion in the programme has been undertaken and also a review of the management of sites within the programme. A new management level rating has been introduced that incorporates assessments of the level of knowledge of the biodiversity at a site through a **Rapid**

Ecological Assessment (REA) and whether Horizons has completed some restoration work at the site, which was previously the mechanism the programme used to indicate whether a site was actively managed. The programme review also introduced the requirement for site management plans, and these, along with frequency of visits, are key factors for achieving management level 3. The level of priority works in the site management plan that are being implemented are also part of the management level index with level 4 indicating all priority works are being completed. Levels 5 and 6 reflect sites receiving a greater level of management.

- 6.17. During the 2018-19 year the sites within the programme were reviewed and assigned within the management level framework. To assist with this sites that had previously received support from Horizons, however had not had an ecological assessment were prioritised for rapid ecological assessments. Seventy rapid ecological assessments were planned for 2018-19 and over the year 127 REA's were completed (122 bush remnants and 5 wetlands).
- 6.18. The number of bush remnants and wetlands in each management level as at 30 June 2019 is reported in Table 3. Overall 13 sites are above management level 4 or above, 49 sites are at management level 3 and 151 sites are at management level 2.
- 6.19. The Annual Plan target for biodiversity for four new wetlands to be added to the programme was met and the target for 7 new bush remnants to be added was exceeded with 16 new bush remnants added over the year. The addition of the four new wetlands was somewhat offset by the audit process removing three wetlands from the actively managed list as they did not meet the criteria of management level 2.
- 6.20. The Biodiversity Partnerships activity encompasses work completed in collaboration with others to deliver biodiversity and recreational benefits to the Region via projects such as the Manawatū Gorge and Pukaha Mount Bruce, and projects to support community-led initiatives such as the Rangitikei Environment Group's efforts to control Old Man's Beard. The 34 projects approved in 2018-19 included seven Biodiversity Collaborations, 13 Community Biodiversity projects and 14 Community Grant projects. Overall 32 of the 34 allocated projects were completed exceeding the target by 167%. The two projects that were not completed were the Tawata Mainland Island project where there has been some changes within the organisation Horizons partners with on this project and the Ohau Beach walkway where stakeholder support did not eventuate.
- 6.21. The work at *Tōtara* Reserve Regional Park over the 2018-19 year focused on remediation of the June 2018 flood damage, enhancing flood protection, some works around safety in the park including management of trees, additional signage and reviewing pest management.
- 6.22. The Annual Plan target for an Annual Report was met with the report provided to the Environment Committee in May 2019.

Land management

- 6.23. The Long-term Plan process increased rate funding for the Sustainable Land Use Initiative programme by approximately \$60 K to offset a similar reduction in funding from the Hill Country Erosion Fund.
- 6.24. In June 2018, \$970 K of further funding for the 2018-19 year was secured for forestry through the Provincial Growth Fund. This was followed by a successful application to a Hill Country Erosion Fund application for just over \$300 K. The additional funding from these sources did refocus the team efforts and some new projects were completed including an expression of interest process for new forestry in the region, the completion of forestry appraisal's and a storm resilience programme to support Ruapehu farmers who had been recently impacted by a storm event.

- 6.25. The new programmes and new funding required agility in their delivery as other Central Government programmes continued to evolve over the year. A programme of free manuka seedlings, and the announcement of the grant rates for the 1 billion trees programmes resulted in some work on farms in the region that were allocated to advance within Horizons programmes being funded via other programmes.
- 6.26. Work over the year included establishing supply of seedlings for the allocated forestry and further implementation of the willow and poplar nursery upgrade at Woodville. Another key task was the application to the Hill Country Erosion Fund for the contract for the next four years. This application was successful and secured over \$6.4 million over four years being a more than 55% increase on the baseline Central Government funding for the HCEF contract for the 2018-19 year. A paper on the changes to the land management and SLUI programme as a result of the new contract and other changes to the context of the programme was presented to the Catchment Operations Committee in June 2019.
- 6.27. Over the year 573 jobs were completed in the land programme (SLUI, Whanganui Catchment Strategy and environmental grant). In total over 3600 ha of erosion control works were completed with over 2.3 million trees planted. Overall this result exceeded the targets for SLUI, the Whanganui Catchment Strategy and the Regional and Coast Environmental Grant programme. A particular highlight was the increase in work within the Whanganui Catchment Strategy where the additional Government funding and changes to the SLUI programme enabled 319 ha of work to be completed more than double the 117 ha of work in this programme in the previous year.
- 6.28. While all targets were met, it was notable that a considerable amount of further works were allocated during the year with total allocation levels being over 5000 ha. Further analysis of the works that were not completed and if they are being completed this financial year is underway to inform the Catchment Operations Committee report for September.

Science and Innovation

- 6.29. As a part of the Long-term Plan process the targets for the Science and Innovation team were revised with an increased requirement for annual reporting on activity. The Annual Plan process also provided additional funding for climate change research, drinking water research and for research into the issue of sedimentation of rivers. All ten Long-term Plan targets were achieved.
- 6.30. A major focus for the Science and Innovation Team in the 2018-19 year was the completion and release of the 2019 State of the Environment report. The report was released in May 2019 and provided information on a range of indicators including pressures on the environment as well as state, and trends in both of these. The report also presents some information on the response to identified issues. The chapters of the report included a regional summary, climate, air, land (including biodiversity and biosecurity) and water.
- 6.31. The water quantity and quality monitoring and research programme produced updated information on the state of water allocation for surface water and groundwater for the State of Environment report and information on water quality of the regions groundwater, rivers, lakes, estuaries and coast. Papers to Council over the year included reports on regional swimmability targets, Whanganui coastal streams, river water quality state and trends and lakes management. To inform policy development a range of studies of the drivers of water quality, periphyton and macroinvertebrate drivers were undertaken and some of these are continuing into the new financial year. The core monitoring programmes have continued over the year with some additional studies being completed including faecal source tracking work and the national pesticide monitoring programme.
- 6.32. The land monitoring and research programme worked closely with the Land Management Team and the River Management Team on the issue of sedimentation of rivers. The work programme was reported to Catchment Operations Committee in June 2019.

- 6.33. The biodiversity monitoring and research programme completed a range of work to support the review of the biodiversity implementation programme including completing an updated prioritisation process for the regions biodiversity sites with a methodology used by other agencies to provide a more nationally consistent assessment for the region.
- 6.34. The climate change research programme worked with NIWA to determine the likely impacts of climate change on the region and Horizons activity. The study was presented to Council in June 2019.
- 6.35. The drinking water research programme was considerably expanded with additional investment by the Territorial Authorities enabling an increased programme to be completed. The study in collaboration with the territorial authorities focussed on council managed water supplies for communities of over 500 people. For each of these water supplies, three source protection zones were defined and assessed for risks. The groundwater supplies were physically inspected to assess bore head security.
- 6.36. A range of other studies were completed as outlined in the annual summary report for the science team in the annex attached.

7. SIGNIFICANCE

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

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ANNEXES

- A Freshwater & Partnerships Progress Report
- B Biosecurity Animals Progress Report
- C Biosecurity Plants Progress Report
- D Biodiversity Progress Report
- E Science & Innovation Progress Report



FRESHWATER ACTIVITY

1 Waterway Enhancement & Protection

1.1 Activity Overview

Horizons' Freshwater Team is a small group that works closely with other Horizons teams and people external to the organisation, to implement water quality and aquatic habitat improvement works. The team draw on the scientific monitoring work carried out by Horizons and other agencies to prioritise and focus implementation efforts. The team also actively seeks funding from other sources, allowing the acceleration of works. The team's main activities include riparian fencing and planting for water quality improvement and fish habitat enhancement, including the identification and enhancement of whitebait spawning habitat and fish passage improvement (Table 1 and Figure 1). Other activities include a wide range of works on projects such as the Manawatū River Leaders' Accord, Lake Horowhenua Accord, and **Freshwater Improvement Fund** (FIF) projects; these works include sewage treatment plant upgrades and lake weed harvesting. In the 2018-19 financial year 13 out of 15 annual plan targets were met with targets for the Whangaehu Stream fencing (14.1 km completed for a target of 17) and the Regional programme fish pass work not being completed. At and overall level the stream fencing target of 69 km was well exceeded with over 114 km of fencing completed. Seven fish passes were completed for an overall target of 7 completed, with one not completed in the regional programme and one extra fish pass completed in the Manawatū catchment.

Table 1 Summary of riparian fencing and planting in 2018-19 financial year.

	Riparian Fencing			Riparian Planting			Fish Passes			Community Projects		
	Target	Completed (km's)	% complete to target (%)	Target	Completed (km's)	% complete to target (%)	Target	Completed	% complete to target (%)	Target	Completed	% complete to target (%)
Regional	12	26.623	222%	20,000	49,619[1]	248%	1	0	0%	1	2	200%
Manawatū	50	73.468[2]	147%	40,000	92,911[3]	232%	4	5	125%	9	9	100%
Whangaehu	17	14.11	83%	3,333	6,454	194%	2	2	100%	4	5	125%
Total	69	114.201	166%	63,333	148,984	235%	7	7	100%	14	16	114%

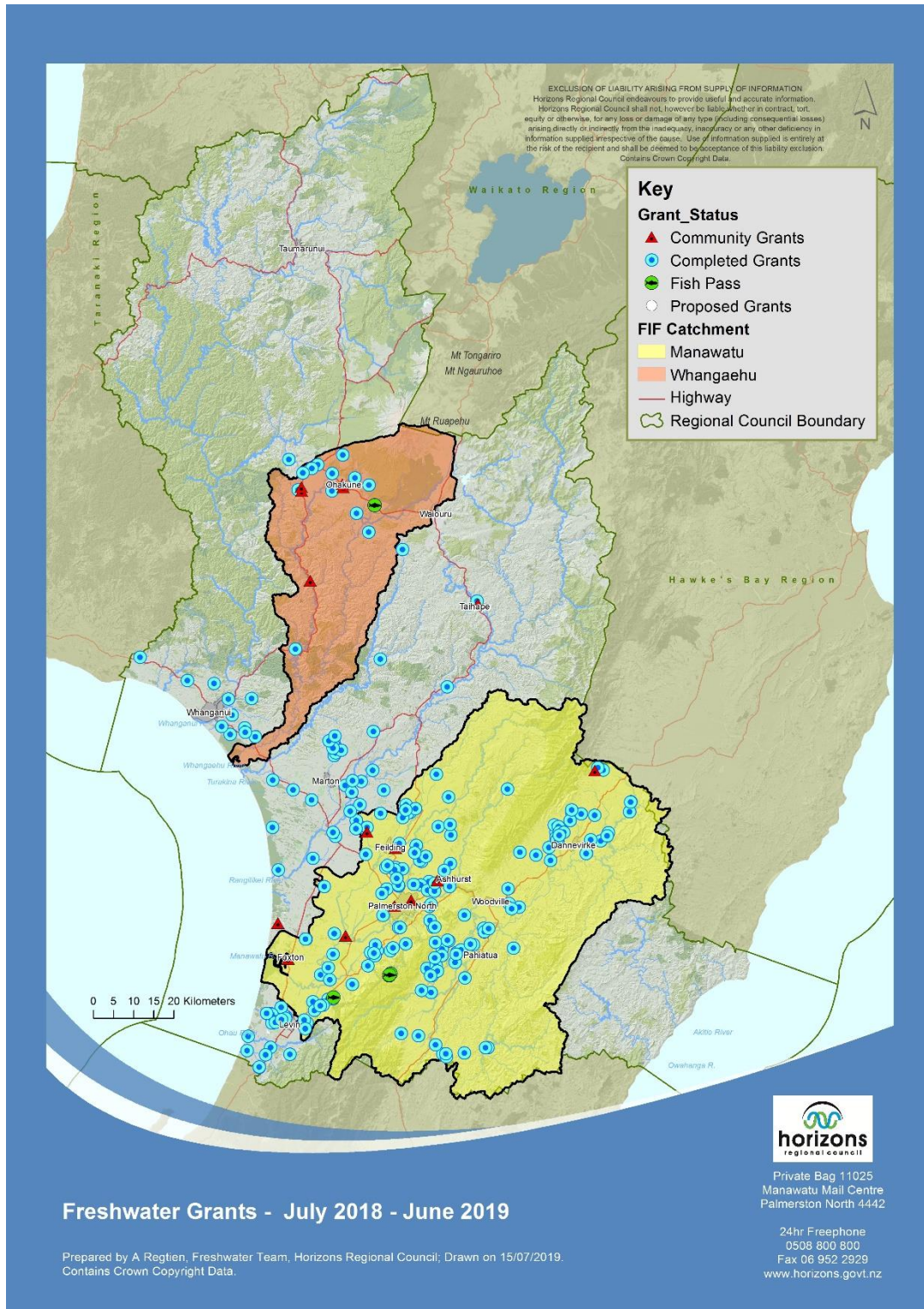


Figure 1 Location of the Freshwater Grants works completed in 2018-19, including the Regional, Manawātū and Whangaehu programmes. Each point on the map represents one fencing, planting, fish pass or community project.

2 Manawatū River Accord/Freshwater Improvement Fund

2.1 Activity Overview

2.1.1 The Manawatū River Leaders' Accord Action Plan includes an array of activities related to improving water quality, to achieve the goals of the Accord. This activity funds works to improve water quality in the Manawatū Catchment as part of the Accord, including excluding stock from streams, riparian planting, improving fish passages and supporting community projects. During this financial year and the following four years the targeted rate is to be used as Horizons' contribution to the Freshwater Improvement Fund project.

2.2 Targets

2.2.1 All Annual Plan targets were met in 2018-19 for the Manawatū Freshwater Improvement Fund project. A summary of progress against the Annual Plan targets is provided in Table 1.

Table 1 Annual Plan performance measures and assessment against the year-end for 2018-19 for the Manawatū FIF project.

Annual plan target	Year to date	Target	% Complete
Stream fencing (km)	73.468 ¹	50	147%
Riparian plants	92,911 ²	40,000	232%
Fish barrier remediation	5	4	125
Community project funded	9	9	100

2.3 Activity Highlights

Manawatū River Leaders' Accord and Action Plan

- 2.3.1 A Manawatū River Leaders' Accord Forum was held on the 7th May 2019, the next will be scheduled for November 2019.
- 2.3.2 The end of year report (2018-19) for the Manawatū River Freshwater Improvement Fund project is currently being prepared to go to the Governance Group and then to be lodged with the **Ministry for the Environment** (MfE). The end of year report is also to go through an independent audit (outside of the normal AuditNZ process).
- 2.3.3 The 2019-20 Manawatū Accord Community Fund applications were opened during June 2019, with applications closing on the 9th August 2019. Advertising is being undertaken via social media

¹ Includes 70.530 km's in the Freshwater Improvement Fund project and 2.938 km's in the Tu Te Manawa project.

² Includes 82,664 riparian plants in the Freshwater Improvement Fund project and 10,247 in the Tu Te Manawa project.

and through newspapers. Freshwater staff are available to discuss potential projects with members of the community.

2.3.4 The focus during the reporting period was on the completion of the stream fencing and riparian planting claims, and the completion of the community projects. A number of community planting days have been held throughout the Manawatū Catchment during the reporting period with further days to be held during July and August.

2.3.5 The team still continues to receive enquiries regarding riparian planting for this winter however, any planting enquiries are being pushed into next winter due to availability of suitable plants and staff capacity.

3 Regional Freshwater Programme

3.1 Activity Overview

3.1.1 This programme focuses on the protection and enhancement of waterways across the Region, excluding the Manawatū and Whangaehu FIF projects. The main component of the Regional Freshwater Programme is supporting stock exclusion from waterways via Freshwater Grants, advice and education, riparian enhancement and planting where desirable, aquatic habitat enhancement, and supporting industry and community-led initiatives.

3.1.2 Three of the four Annual Plan targets were met in 2018-19 for the Regional Freshwater programme with the fish pass target not being met (Table 2). For the fish passes two projects had been allocated for this target, one was commenced prior to the end of the financial year but was not completed and the other was not started. A summary of progress against the Annual Plan targets is provided in Table 2.

Table 2 Annual Plan performance measures and assessment against year-end 2018-19 for the Regional Freshwater Programme, excluding the Manawatū and Whangaehu FIF projects.

Annual plan target	Year to date	Target	% Complete
Stream fencing (km)	26.623	12	222%
Riparian plants	49,619 ³	20,000	248%
Fish barrier remediation	0	1	0%
Community project supported	2	1	200%

³ Includes 32,919 in the regional programme and 16,700 through the Ngā Pau Rau o Rangitīkei

3.2 Activity Highlights

Work with individuals, community groups and iwi to improve waterways

3.2.1 The focus during the reporting period was on the completion of the stream fencing and riparian planting claims. The team still continues to receive enquiries regarding fencing and planting however, any planting enquiries are being pushed into next winter due to availability of suitable plants and staff capacity.

Te Mana o te Wai, Nga Puna Rau o Rangitikei

3.2.2 The 30th June 2019 saw the completion of the Ngā Puna Rau o Rangitikei project with a large amount of work being completed in the last few months of the 2018-19 financial year to see the riparian fencing and planting projects completed. During the 2018-19 the following works led by Horizons were completed:

- 430 metres of stream fencing and planting 1,000 riparian plants along the Hautapu River;
- The poisoning of poplars and planting 13,000 native plants in the Lake Oporoa Catchment;
- 200 metres of stream fencing and planting of 1,700 riparian plants along the Pourewa Stream;
- Infill planting of 1,000 riparian planting along the Makowhai Stream; and
- Installation of five signs in project locations to show the areas of works.

3.2.3 In July 2019, the Governance Group presented the Ngā Puna Rau o Rangitikei catchment strategy produced as a part of the project to Central Government officials.

Lake Dudding

3.2.4 In November 2018 monitoring of Lake Dudding showed water quality results which resulted in staff seeking external advice as there is concern that the lake may be in the process of flipping. Those concerns were confirmed by Max Gibbs from NIWA that the lake was likely to be in the process of flipping This increased risk of flipping was reported to Council via Environment Committee in December 2018 and as a part of a Strategy and Policy meeting in March 2019. The process of flipping is a lake going from a macrophyte dominated lake to an algal dominated lake.

3.2.5 This means that if the macrophytes collapsed within Dudding Lake they would unlikely be replaced and the lake system would become permanently algal dominated. Due to the increased risk of the lake flipping and needing to obtain more monitoring information Horizons began to monitor the lake on a monthly basis for water quality and the weekly contact recreation monitoring continued. Around the same time the lake experienced a toxic algal cyanobacteria bloom that resulted in Public Health closing the lake to contact recreation.

3.2.6 During September 2018 two Envirolink funded reports were completed by David Kelly from Cawthron Institute to identify information gaps in information that is available to inform the

development of restoration plans for the regions shallow and deep coastal lakes. Given the results of the water quality monitoring collecting some of this additional information from Lake Dudding was given a priority. This included monthly water quality monitoring of the lake, the commissioning and completion of a pest fish survey; and the collection of sediment cores from three locations in the lake.

- 3.2.7 During early April pest fish monitoring was undertaken in Lake William and Dudding. Lake William having no pest fish species encountered at all and Dudding Lake having both perch and goldfish. In addition, to having these two fish species large holes were encountered in the nets which could not be explained by the species found in the lake. NIWA were commissioned to undertake further work with stronger coarser nets which was booked for late May 2019.
- 3.2.8 On the 22nd and 23rd May a two day expert's workshop was held for Lake Dudding. The workshop was chaired by Dr Clive Howard-Williams from NIWA and involved staff from Horizons, Rangitikei District Council, Department of Conservation, Public Health, NIWA, Cawthorn, and Otago University. The purpose of the workshop was to develop a joint expert statement on the current condition of the lake and to identify options for its restoration. An expert conferencing statement was drafted and was in the early stages of being finalised.
- 3.2.9 During the second round of pest survey work, shortly after the workshop, a grass carp was found to be present in the lake.
- 3.2.10 The discovery of grass carp being present in the lake a week after the workshop has meant that this statement has been put on hold as some of the underlying assumptions in its development may be incorrect. At a high level the expert group had identified three scenarios for in-lake interventions (that needed to be packaged with a number of catchment level interventions). Depending on the density of grass carp that are found in the lake this is potentially reduced to two options.
- 3.2.11 A teleconference of available experts has agreement that the next stage in the process is to identify the number/density of grass carp that are currently in the lake. Once this information gathered the next steps will be decided on. This work is to be undertaken in conjunction with RDC. In addition, for this coming summer there is a high risk that the lake will experience another toxic algal bloom that may require closure to the public for contact recreation. There are flocculent options that will prevent/significantly reduce the risk of this occurring. However, no budget exists for such an operation and the addition of such an element to the lake is likely to require a resource consent from Horizons. Whether these costs should sit with Horizons or RDC as the lake owner is a decision for this Council to consider.
- 3.2.12 The discovery of grass carp within Dudding Lake has been passed onto the Department of Conservation and Ministry of Primary Industries as the regulators for any initial and continuing releases of grass carp into waterways.

3.2.13 During this second pest fish survey, questions were raised around Horizons permissions to sample the lake. Permissions were subsequently granted on behalf of Rangitikei District Council to continue with the second pest fish survey. After this survey, Horizons were requested to cease monitoring of the lake. Horizons sought permissions to continue sampling and Rangitikei District Council provided permissions to allow monitoring that did not capture biota, this caveat meant that no water samples could be collected due to biota being present in the water. Horizons continued to seek permissions to undertake sampling at the lake and subsequently in July, permissions have been granted for sampling to resume. There is a two month gap in the data as sampling was not able to be completed during June and July 2019. Sampling will resume in August.

Ototoka Stream Community Planting

3.2.14 Te Kaahui o Rauru has purchased and supplied 4,800 riparian plants for the enhancement of water quality at two sites in the Ototoka Catchment, Horizons staff are contributing with technical advice and logistics. One site is situated on private and Whanganui District Council (WDC) land upstream from SH1 and William Birch Pool, and the other on Crown land administered by WDC at the waterfall above the steam mouth at Ototoka Beach. The majority of the planting is being undertaken by staff from Kii Tahi Nursery.

3.2.15 An iwi and community planting day has been tentatively planned for Saturday 10 August at the Waterfall site.

3.2.16 Information flyers have been sent to all landowners within the Ototoka Catchment, the flyer provides information on the water quality issues that the catchment is experiencing, the causes of this, and the grants that Horizons has available to incentivize stock exclusion and riparian planting in the catchment. Flyers will continue to be sent to these landowners as a focus catchment for the Regional programme in the new financial year (2019-20).

4 Whangaehu Freshwater Improvement Fund

4.1 Activity Overview

This programme focuses on the delivery of the Ngā Wai Ora o Te Whangaehu Freshwater Improvement Fund 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 and supporting industry and community-led initiatives. The following report provides the annual summary to Council on the Ngā Wai Ora o te Whangaehu Awa Freshwater Improvement Fund project as required by a Long Term Plan target.

4.2 Targets

4.2.1 Three of the four Annual Plan targets were met in 2018-19 for the Whangaehu Freshwater Improvement Fund project with the stream fencing target not being met (Table 3). Over 22 kilometres of stream fencing was allocated of the 2018-19 financial year however only 14.1 km was completed. The allocated yet uncompleted work will transfer to the new financial year and staff are now working to ensure that over the three years of the Freshwater Improvement Project the overall targets for the project are met.

Table 3. Annual Plan performance measures and assessment against year-end 2018-19 for the Whangaehu FIF project.

Annual plan target	Year to date	Target	% Complete
Stream fencing (km)	14.11 kms	17	83%
Riparian plants	6,454	3,333	194%
Fish barrier remediation	2	2	100%
Community project funded	5	4	125%

4.2.2 A Governance Group meeting was held on 17 April 2019 which approved the quarter three report and the work programme for 2019-20. The next Governance Group meeting is programmed for the 25th July 2019 to receive the annual work report.

4.2.3 The 2019-20 Whangaehu Community Fund applications were opened during June 2019, with applications closing on the 9th August 2019. Advertising is being undertaken via social media and through newspapers. Freshwater staff are available to discuss potential projects with members of the community.

4.2.4 The focus during the reporting period was on the completion of the stream fencing and riparian planting claims, and the completion of the community projects. Two community planting days were held as part of the funded community projects. One planting day as part of the Makotuku Walkway project and another along the Makotuku Stream at Mote Katoa.

5 Lake Waipu Freshwater Improvement Fund

5.1 Activity Overview

The Lake Waipu Freshwater Improvement Fund project specifically seeks to remove the discharge into the lake from the Rātana Wastewater Treatment Plant. This is to be led by Rangitikei District Council (RDC) as the consent holder and Horizons' project relates to monitoring the effect of the removal of discharge from the lake and to understand the lake's internal processes. The aim is to develop a restoration plan that deals with the legacy issue resulting from the current discharge. The following report provides the annual

summary to Council on the Lake Waipu Freshwater Improvement Fund project as required by a Long Term Plan target.

Table 4. Annual Plan performance measures and assessment against year-end 2018-19 for the Lake Horowhenua Accord, including the Freshwater Improvement Fund project.

Annual plan target	Year to date	Target	% Complete
Annual report to Council on the Waipu Catchment Freshwater Improvement Fund project.	1	1	100%

5.1.1 The Deed of Funding has been finalised with the Ministry for the Environment with the project officially commencing on the 1st July 2019. A sub-contract between Rangitikei District Council (RDC) and Horizons is currently being drafted for the delivery of the RDC part of the project.

5.1.2 Horizons Catchment Data team has installed a continuous monitoring buoy on the lake and is collecting data on temperature, dissolved oxygen, pH, conductivity, and turbidity at 15 minute intervals and is being telemetered back to the Horizons office.

5.1.3 RDC are currently looking at potential discharge locations to land in close proximity to the Waste Water Treatment Plant. This may involve the purchase of land, or a long term lease of land. A working party meeting was held on the 17th May 2019 at Rātana.

6 Lake Horowhenua Accord and Lake Horowhenua Freshwater Clean-Up Fund

6.1 Activity Overview

The Accord is a partnership between the Lake Horowhenua Trust, Horowhenua Lake Domain Board, Horowhenua District Council, Horizons Regional Council and the Department of Conservation to address water quality issues in Lake Horowhenua. Several Clean-Up Fund projects have an ongoing work component. Horizons also had a role in delivering some of the Te Mana o Te Wai projects which were to be completed by October 2018, and a component of the Freshwater Improvement Fund project which started on 1 July 2018.

6.2 Targets

Table 5 Annual Plan performance measures and assessment against year-end 2018-19 for the Lake Horowhenua Accord, including the Freshwater Improvement Fund project.

Annual plan target	Year to date	Target	% Complete
Annual report to Council on lake restoration activity including the Freshwater Improvement Fund project for Lake Horowhenua.	1	1	100%

6.3 Activity Highlights

The Lake Horowhenua Accord, Te Mana o Te Wai and FIF project

- 6.3.1 A comprehensive update on lake restoration activity was provided to Council in September 2018 (Regional Council meeting). This provided the annual report identified in the LTP target.
- 6.3.2 Staff attended Governance Group meetings for the Te Mana o Te Wai project and the Freshwater Improvement Fund projects in May. The Te Mana o Te Wai meeting focussed on the final tasks for the project. The Freshwater Improvement Project was due to start in the 2018-19 year, however was delayed due to the court processes around the Lake Trust election. The Lake Trust are now working with the Ministry for the Environment around establishing the Deed for the project and a revised work programme for delivery. Horizons are in discussions with the Lake Trust around the revised timeframes and approach to the groundwater monitoring component of this project.
- 6.3.3 On the 24th June 2019 the Māori Appellate Court heard the appeal on the decision from the Maori Land Court in which Ms Taueki sought an injunction against the construction of the boat ramp on Lake Trust land. The panel made a verbal decision on the day and dismissed the appeal in its entirety with the Court finding:
- Ms Taueki did not have the necessary standing to bring the application for injunction in the first instance; and
 - The position of Horizons and the Lake Trust as to the rights afforded under ROLD and the question of alienation was correct.
- 6.3.4 Following the Māori Appellate Court decision, there has been a decision on costs where the court awarded that Ms Taueki pay \$15,000 to Horizons for costs. This is subsequently going through a further legal process as outlined in the Table below.
- 6.3.5 The table below provides a timeline of the legal processes since the resource consents were granted for the fish pass, sediment trap and weed harvesting activity at the local hearing in 2015, including the recent Maori Appellate court process. The court and HeritageNZ processes were delayed during 2018-19 due to the court processes around the election of the Lake Trust that is

still ongoing. Horizons are currently working towards undertaking the weed harvesting activity in Spring of 2020.

Table 6: Timeline of legal challenges since the local hearing resource consents were granted in 2015

Date	Description
9 December 2015	Independent Commissioners grant consents for restoration activities.
19 January 2016	Hōkio Trust file Notice of Appeal against grant of all consents.
18 October 2016	Hōkio Trust files Notice of Appeal against Environment Court decision.
22 September 2016	Decision of Environment Court - [2016] NZEnvC 185. Appeal of Hōkio Trusts denied and consents confirmed (subject to conditions).
21 April 2017	Environment Court confirms amended conditions lodged by MWRC.
21 June 2017	Decision of the High Court – [2017] NZHC 1355, dismissing Hōkio Trust appeal of the Environment Court decision.
27 September 2017	Award of costs against Hōkio Trust, Hōkio A Trust, Hōkio Part A Trust and Hōkio Maori Township Trust: MWRC (as applicant) the sum of \$75,500; and MWRC (as respondent) the sum of \$36,500.
May 2017 - April 2018	Fish pass and sediment trap restoration activities undertaken.
24 April 2018	Application for Interlocutory Injunction filed by Vivienne Taueki - to prohibit the construction of the boat ramp and access way forming part of the weed harvesting consent.
April 2018	Discovery of Midden. Heritage New Zealand Accidental Discovery procedure initiated – need for Heritage New Zealand approval.
17 May 2018	Maori Land Court dismissed injunction application due to the statutory rights of access afforded to MWRC under the Reserves and Other Lands Disposal Act 1956 (ROLD).
16 July 2018	Notice of Appeal against the decision of the Maori Land Court filed by Vivienne Taueki.
12 September 2018	Maori Appellate Court issue a judgment quashing the order to appoint trustees on 19 May 2016. Mr Hemana appointed as Responsible Trustee in absence of any trustees officially in office, with former trustees acting as advisory trustees. The lack of trustees resulted in several adjournments of the appeal and created delays with HNZ process.
24 June 2019	Maori Appellate Court dismisses appeal on the basis that the Appellant does not have standing to seek an injunction under s 19(1)(a); and upholds the Maori Land Court decision as to among other things the statutory rights of access provided under ROLD.
8 June 2019	MWRC application for costs filed.
24 June 2019	Maori Appellate Court award \$15,000.00 in costs against Vivienne Taueki.
23 July 2019	Application for recall of Maori Appellate Court costs decision filed by Vivienne Taueki.
26 July 2019	Memorandum of MWRC filed in response to recall of judgment.
31 July 2019	Direction of the Maori Appellate Court allowing rehearing of costs decisions. Rehearing to be on the papers: Submissions for Appellant due 14 August 2018; and Submissions for MWRC due 21 August 2018.

7 Freshwater Improvement Work with the Horticultural Sector

7.1 Activity Overview

Building on previous work with the Tararua Growers Association as a part of the Freshwater Clean-Up Fund project, Horizons established new funding of \$70,000 per year for work with the horticulture sector to reduce nutrient and sediment loss from horticulture farms. This funding will be used in part to contribute to a **Sustainable Farming Fund** (SFF) project future-proofing vegetable production.

The balance of the funding will be prioritised to implementation of work to reduce nutrient and sediment losses from horticultural farms, including establishment of sediment traps etc, similar to the way freshwater grants are paid for fencing and planting of waterways. This funding may be utilised to design the proposed interventions. The following report provides the annual summary to Council on the work with the horticulture sector through the Freshwater programme as required by a Long Term Plan target.

7.2 Targets

Table 7 Annual Plan performance measures and assessment against year-end 2018-19 for Freshwater Improvement Work with the horticultural sector.

Annual plan target	Year to date	Target	% Complete
Annual report on work with the horticulture sector through the freshwater and partnerships programme to improve water quality.	1	1	100%

7.3 Activity Highlights

Future-proofing vegetable production

7.3.1 This project is mainly funded through the Sustainable Farming Fund with a number of other co-funders. The project is not specific to the Lake Horowhenua Catchment, although a lot of the ground work and trials are to occur within the catchment where the relationships have already been established through other work programmes such as the Clean-Up Fund. The intent is that once these projects have been trialled in the Lake Horowhenua Catchment they can be moved out into other parts of the Region. This project has three main deliverables:

- Guidelines for Novel Nitrogen Recapture Techniques;
- Updated Good Nutrient Management Practices;
- Common Pool Resource Management which is about getting actual change for the better happening on farms.

7.3.2 The Sustainable Farming Fund project is also being supported by Gisborne District Council, Landwise and Potatoes NZ. Horizons has asked that the work be presented to growers outside of

the Horowhenua as a part of the project. A Massey PhD study with support from Horizons Science and Innovation programme is aligned with this work.

- 7.3.3 During the reporting period the quarter four report was received from LandWise on work that had been completed during quarter four. This can be made available on request.

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FRESHWATER COORDINATOR

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Jon Roygard
GROUP MANAGER NATURAL RESOURCES AND PARTNERSHIPS

Item 7



Figure 2: Stream fencing and riparian planting in the Rangitīkei catchment.

Annex A

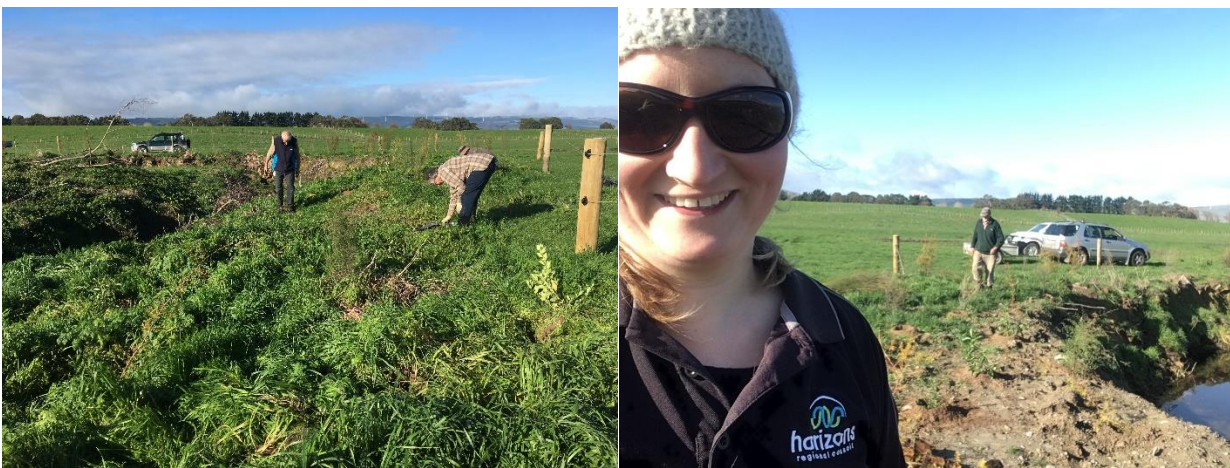


Figure 3: Stoney Creek Community planting day - project co-funded through the Manawatū Accord Community Grants.



Figure 4: Stream fencing in the Turakina catchment.



Figure 5: Kopoturoa School planting day.



Figure 6: Makotuku walkway community planting day. Funding received through the Whangaehu Freshwater Improvement Fund community project.



Figure 7: Community planting day on the Kawau Stream. Funding received through the Freshwater Improvement Fund Manawatū Accord Community Grants.



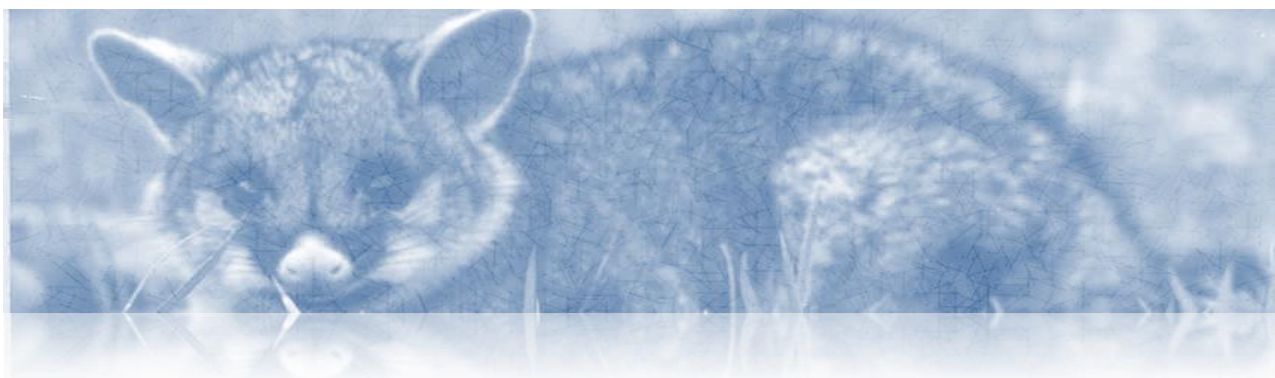
Figure 8: Community planting with Kai Iwi Stream on the Mowhanau Stream.



Figure 9: Community planting day with Feilding Ag in the Tokomaru Catchment.

Item 7

Annex A



BIOSECURITY ANIMALS ACTIVITY

1 Overview

- 1.1.1 This report is to update Council on progress of the programmes giving effect to the Biosecurity Animals Operational Plan for the period 1 April 2019 to 30 June 2019, and summarising the activity for 2018-19. The report is presented in four sections (Possum Control, Possum monitoring, Rook Control, and Amenity Pest Management).
- 1.1.2 Over the 2018-19 year all four of the Annual Pan targets were met (Table 1) including completing over 184,000 hectares of possum control in new areas for the programme, 36% more than the Annual Plan target and maintaining possum densities at an average of approximately 3.3% for a target of 10%.

Table 1 The Long-term Plan targets, and progress against them.

Long-term Plan Target	Target	Progress to date		Result 2018-19
Pest Animal Management				
Possum densities are maintained at/below 10% residual trap catch (RTC) in all existing/new possum control operations. This is to enhance production, biodiversity, disease protection and amenity values.	<10%	Maintenance PCOs 3.6% RTC Initial PCO pre & post control 3.3%RTC		Achieved
Additional hectares included in the Possum Control Operation (PCO) programme.	135,668 ha	184,555 ha allocated	184,555 ha completed	136% of target
All known rookeries are treated annually to reduce crop losses and damage.		Aerial control operation completed One ground-based operation complete		Completed
Provide an urban/peri-urban animal pest management service to assist urban ratepayers with specialist advice and equipment; animal pest control assistance/enquiries responded to within two working days.	100%	837 enquires, 100% met within timeframe.		Completed

1.1.3 Activity during the reporting period involved ongoing possum control in the **Regional Response Team's** (RRT's) **Possum Control Operations** (PCOs) and commencement of the external contractors' PCO contracts. The possum monitoring work has also commenced in the ex-Ospri and maintenance PCOs. The amenity pest programme resulted in 145 enquiries and all were replied to within the Long-term Plan target timeframe of two working days.

2 Possums

1.2 Activity Overview

1.2.1 In 2018-19 95 PCO areas were planned to receive control, including the 16 new ex-OSPRI PCO areas added to the programme (Map 1). Seventy-nine of the 120 maintenance PCO areas that were part of the programme the previous year were to receive ongoing maintenance work. Forty-one of the 120 maintenance operations 'deferred' from control. Total possum control activities in 2018-19 cover 1,292,519 hectares, an increase of 184,555 hectares on previous year. Progress against the Long-term Plan targets is presented in the section above.

1.2.2 The 2018-19 Operational Plan split operational work for the Horizons RRT and external service providers as follows (Map 2).

- Internal team delivery of 60 PCO areas, 56 maintenance PCO areas and four new ex-OSPRI PCO areas.
- External contractors will deliver 35 PCO areas, 23 maintenance PCO areas and 12 new ex-OSPRI PCO areas.

1.3 Year to date progress

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

Measure	Progress to Date	This Period	Operational Plan Target	% Completed
Regional Response Team				
PCOs completed ^{4,3}	56	19	61	91%
New hectares completed ^{5,3}	47,538	10,105	55,608	85%
External Contractors				
PCOs completed ¹	33	16	35	94%
New hectares completed ²	128,947	31,668	128,947	100%
Combined PCO				
PCOs completed ¹	89	35	95	93%
New hectares completed ²	184,555	41,773	184,555	100%

⁴ New and Maintenance PCOs

⁵ New (Ex-OSPRI) PCOs

³ Includes Papiti Stage 2

- 1.3.1 Overall during 2018-19 all Annual Plan targets were met with 1,292,519 ha of operational control delivered including 184,555 ha of new areas (136% of target, 135,668 ha). The operational plan targeted 1,283,283 ha of control over 95 PCOs, and in total 917,716 ha of control was delivered over 89 completed PCOs, and 5 started PCOs. The operational plan targeted 118,671 bait station fills and 111,709 (94%) of these were completed. The year end result reflects the difficulty in sourcing services for contracts which required some reshuffling of operational delivery. At the end of the year one PCO was not started, and some unexpected extra resources required to bring some PCO infrastructure up to standard to meet new standard specification for bait station use.

1.4 Activity Highlights

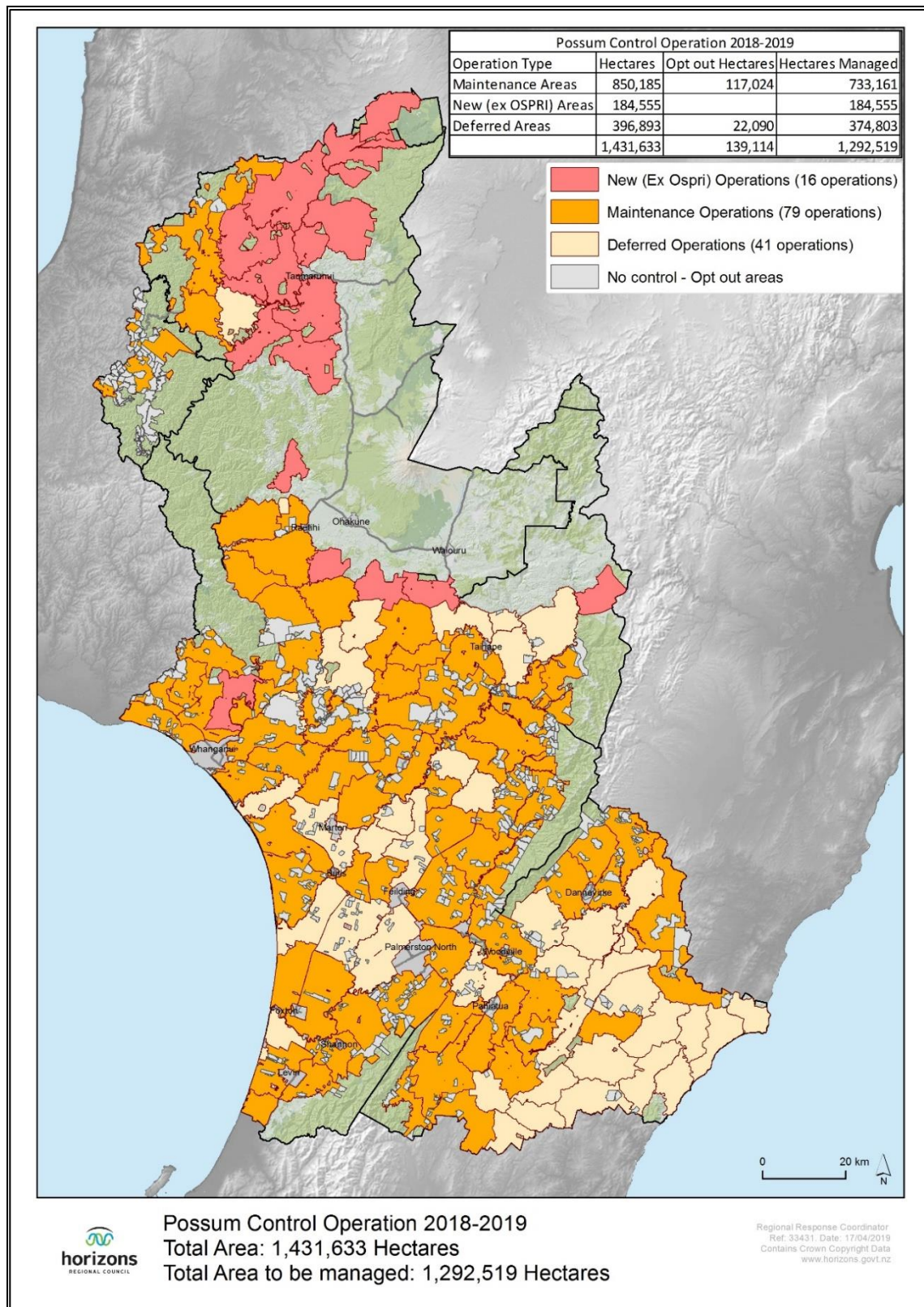
The Regional Response Team

- 1.4.1 The current status of PCOs (Map 3) highlights the operational work:
- 56 PCOs have been completed;
 - 3 PCOs have been started;
 - 1 PCO was not started; and
 - 64,680 bait stations have been filled of the 70,671 programmed (94%).
- 1.4.2 The RRT started a an ex-OSPRI PCO set Papaiti Stage 2 which originally was planned to be done by contractors. Toe Toe and Moka PCOs originally planned for the Taihape RRT were done by contractors. Papaiti Stage 2 was started with one small isolated property completed.
- 1.4.3 The RRT finished with a 94% completion of the planned work. Two PCO areas required additional time than planned as a significant number of new bait stations were installed to improve the bait station coverage. These areas had previously been worked by contractors and required additional infrastructure to meet the new specifications for bait station setup eg. How each bait station is set and where they are set in relation to each other and possum habitat.
- 1.4.4 The PCO data management project is making good progress, a meeting was held with Greater Wellington Regional Council who were happy to share information around their pest animal data system.

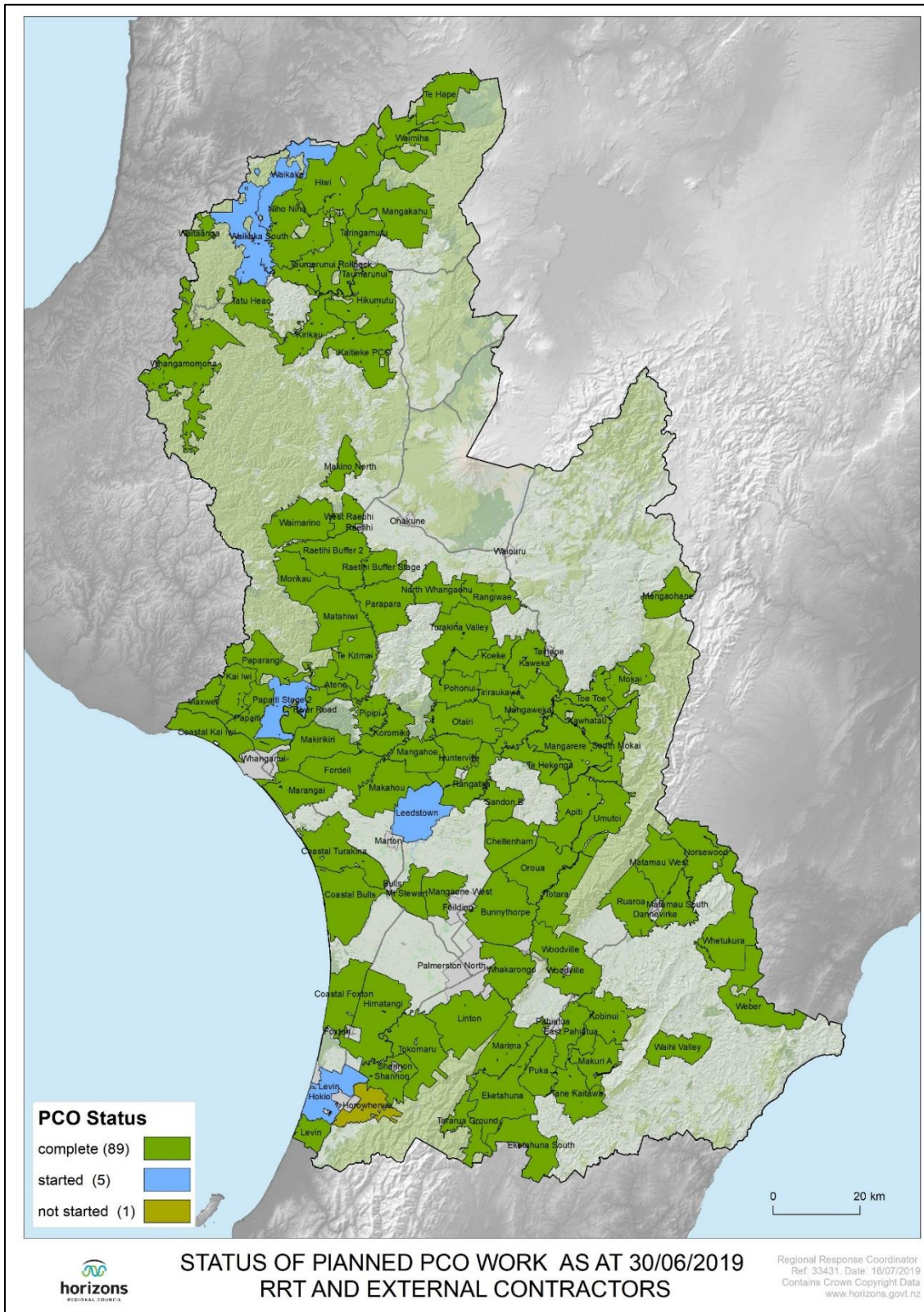
External

- 1.4.5 The current status of PCOs (Map 3) highlights the operational work:
- 33 PCOs have been completed;
 - 2 PCOs have been started;
 - 47,029 bait stations have been filled of the 48,000 programmed (98%).
- 1.4.6 Work is underway in the uncompleted operations and it is anticipated that they will be finished in early July. Map 3 shows the current status of the operational work.
- 1.4.7 Overall the programme ran very smoothly this year with all of the external contractors meeting their contractual obligations and demonstrating agility to take on extra work as required.

- 1.4.8 Staff will meet with the contractors individually in mid July to discuss the operational work in the 2018-19 programme and also to go over the tentative 2019-20 programme. The full years programme will not be confirmed until the last of the pre control monitors in the ex OSPRI areas have been completed. All going to plan this should be in early August.



Map 1 Possum Control Operation 2018-19 as planned in the Operational Plan.



Map 2 Status of current Possum Control Operations (RRT and External Contractors) as delivered (at 30 June 2019).

2 Possum Monitoring

2.1 Activity Overview

- 2.1.1 In the 2018-19 year all monitoring work was targeted to the possum control operations, with no monitoring of rabbits undertaken. Consistent with the upgraded possum monitoring programme, monitors were scheduled to be undertaken in 31 of the existing 120 maintenance PCO's and also in five of the ex OSPRI operations that were added to the PCO. In these areas pre control and post control monitors were undertaken. Two of the ex OSPRI areas returned very low pre control results, as a consequence of this we made a change to the programme by bringing a further two maintenance operations into the monitoring programme instead of post monitoring the two ex OSPRI jobs that had the low results.
- 2.1.2 Following the low pre-control monitoring results in the ex-OSPRI area, a decision was made to pre control monitor the ex OSPRI areas that are available for inclusion into the PCO in the 2019-20 year. In total, 51 PCOs were planned to be monitored, 45 by external contractors and the balance by the Regional Response Team. Note: the RRT only monitor work completed by external contractors.
- 2.1.3 The monitoring plan for the PCOs was for 25 wax-tag lines to be set up, providing there is enough possum habitat to do so, with the line positions being randomly selected. Each line to have 10 wax tags out in the field for seven nights.
- 2.1.4 The post control monitoring contributes to reporting against the Long-term Plan Target for possum densities in the possum control programme to be less than 10% Residual Trap Catch (as shown in previous sections). Reporting against the Operational Plan targets is shown in Table 3 below. The pre-control monitoring contributes to decisions on whether to carry out control in PCOs. Where pre and post control monitoring occurs, this informs the PosSim model that underpins the programme.

1.3 Year-to-date progress

Table 3 Progress reporting for the PCO monitoring programme in the 2018-19 year.

Measure	Reporting Period					YTD Average	Op Plan Target	%
	1st	2nd	3rd	4th	5th			
Number of Maintenance PCO monitors completed	0	0	11	3	9	23	33	70%
<u>Possum densities:</u> Maintenance PCOs Residual Trap Catch (RTC) result	0	0	1.5%	4.8%	4.6%	3.6 %	<10% RTC	
Number of 2018-19 Pre-/Post-PCO monitors completed	0	3	2	1	1	7	8	88%
<u>Possum densities:</u> Pre-/Post-control PCOs Residual Trap Catch (RTC) result	0	3.4%	3.3%	2.9%	14.9%	3.3%	<10% RTC	
Number of 2019-20 Pre-/Post-PCO monitors completed	0	0	0	0	7	7	13	54%
<u>Possum densities:</u> Pre-/Post-control PCOs Residual Trap Catch (RTC) result	0	0	0	0	1.9%	1.9%	<10% RTC	

2.2 Activity Highlights

- 2.2.1 The procurement process for the monitoring work (2018-21) was completed in October 2018, with the contract documentation signed in November between Horizons Regional Council and Darrin Spillane Ltd.
- 2.2.2 Nine maintenance operations were monitored during the reporting period with results ranging from 0.4% to 12.1% RTC. The average result was 4.6% RTC (see Table 4). The Umutoi PCO returned a result over the 10% target. The operational inputs for this years control will be reviewed with the contractor undertaking the work and amended as required.

Table 4 PCO maintenance monitoring completed during the reporting period.

PCO	RTC Result
Kohinui	2.6%
Linton	0.9%
Makirikiri	0.4%
Pohonui	4.3%
Tararua Ground	7.6%
Te Komai	6.0%
Turakina Valley	6.2%
Umutoi	12.1%
Whetukura	0.9%

- 2.2.3 The second of the post-control monitors (Niho Niho) was completed during the reporting period. The result of 14.9% RTC indicates that the possum populations increased post control. Control

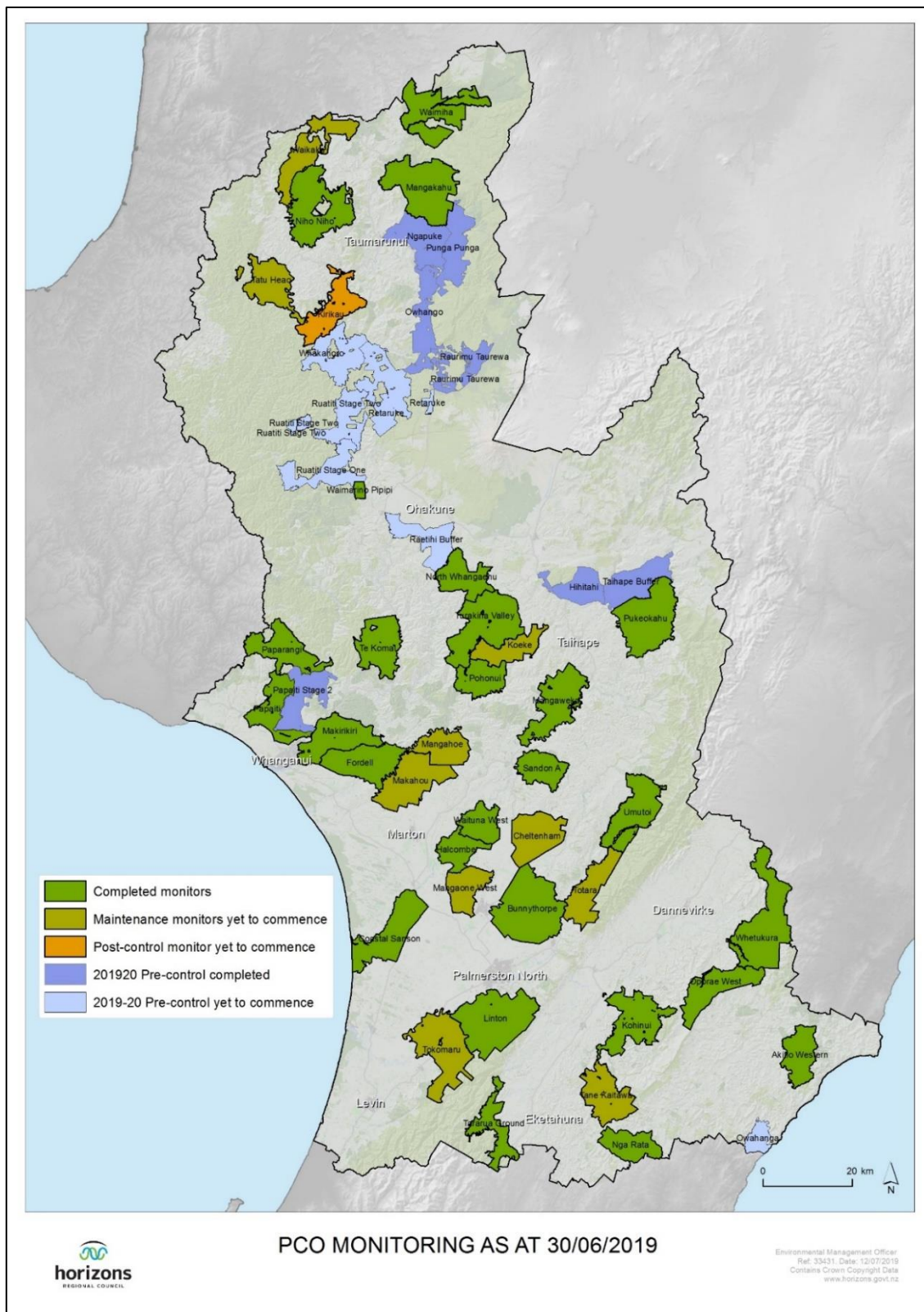
coverage vs monitoring lines locations were assessed to be well matched. The explanation for the increase is unknown, however the pre control monitor did take place during the willow bud and pine pollen season when possums are very hard to divert from feeding on these species and to have them interact with monitoring devices is difficult. This could cause the monitoring result to under estimate the population. The post control monitor was undertaken some months later and the result can be viewed with confidence that it reasonably reflects the post control possum abundance. As a result of these monitoring results Horizons will review the timing of pre-control monitoring to reduce the potential impact of seasonality on interpretation of results.

- 2.2.4 The Niho Niho PCO will be worked in 2019-20 year and discussions will be held with the contractor that works the area to develop a revised work plan for the coming year.

Table 5 Combined ex-OSPRI monitors – pre-Control.

PCO Pre-control Monitors	RTC Results	Post-control Results
Mangakahu (will not post-control monitor)	0.1%	
North Whangaehu (will not post-control monitor)	0.9%	
Kirikau	2.3%	
Waimiha	5.7%	2.9%
Niho Niho	7.9%	14.9%

- 2.2.5 As can be seen in Table 3 there are a number of monitors that didn't get completed by the end of the year. The reason for this is that our service provider had difficulty resourcing the required number of qualified staff to undertake the work. As part of the ongoing procurement process we plan to meet with the contractor in the near future to discuss the matter and develop processes to ensure that this situation doesn't occur again.
- 2.2.6 The monitors that didn't get completed by the end of the year will be added to the 2019-20 monitoring programme.



Map 3 Status of current Possum Control Operation Monitoring as at 30 June 2019

3 Rooks

3.1 Activity Overview

- 3.1.1 This report summarises the operational and management work involved in the 2018-19 regional rook programme. A more detailed overview of the programme is provided in the Biosecurity Animals Operational Plan 2018-19.
- 3.1.2 The Long-term Plan target for rook control is to treat all known rookeries annually to reduce crop losses and damage. This annual plan target was met in 2018-19. Reporting against this target and operational plan targets is shown in Table 6.

3.2 Year-to-date progress

Table 6 Progress reporting for the rook programme Operational Plan target in the 2018-19 year.

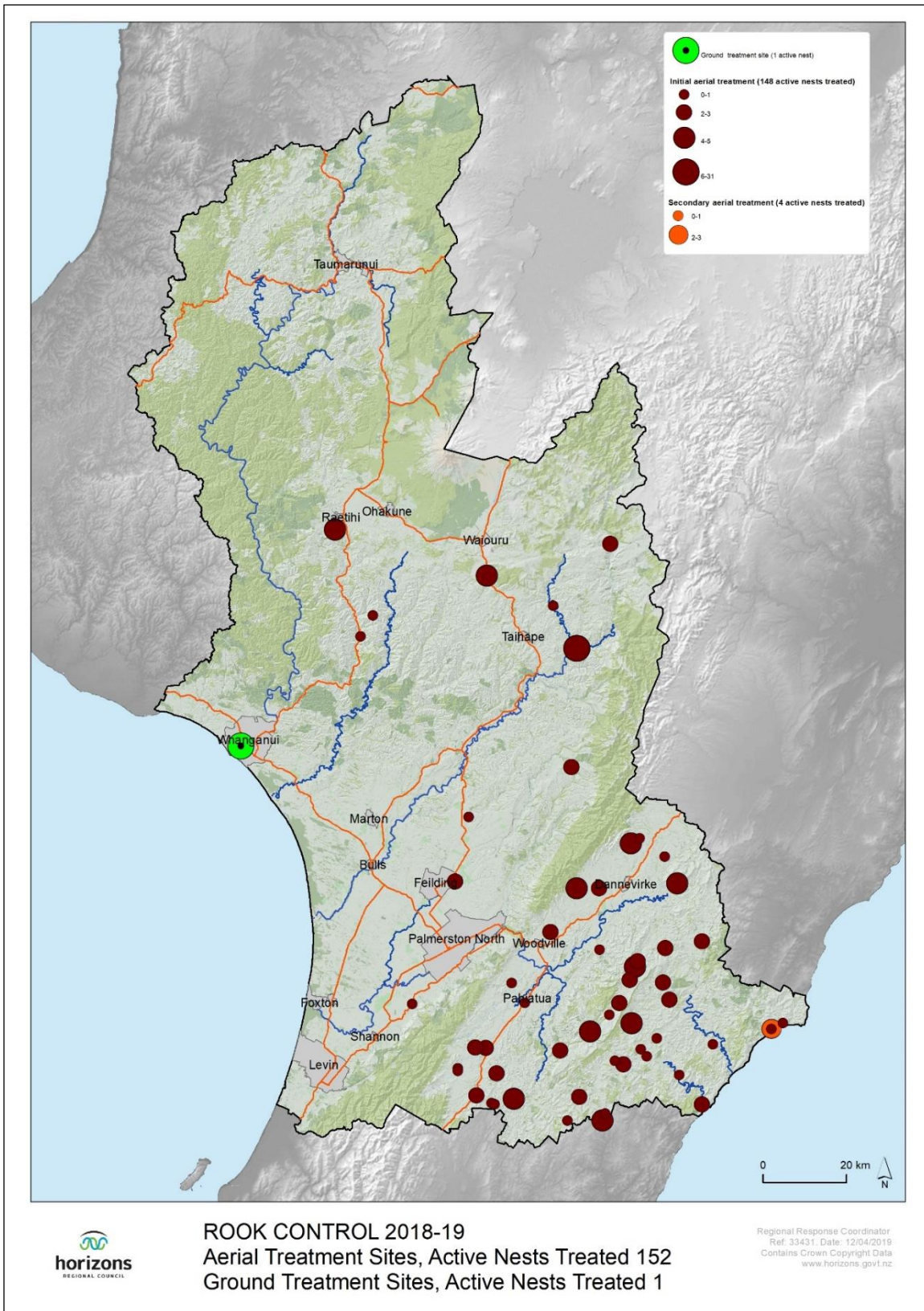
Measure	Reporting Period				Total	Operational Plan Target	Completed %
	1 st	2 nd	3 rd	4 th			
Existing rook colonies (rookeries) (a)	0	72	0	0	72	Record	100
New rookeries (b)	0	6	0	0	6	Record	100
Total rook colonies (rookeries) (a + b)	0	78	0	0	78	Record	100
All known rookeries are treated annually to reduce crop losses and damage	0	78	0	0	78	100%	100
Ground poisoning operations	0	1	0	0	1	Control attempted	100
Report ground control efficacy (% estimated kill)	0	0	0	0	0	Record	0
Breeding rookery database updated by January 2019	0	Yes	0	0	Yes	Record	100

3.3 Activity Highlights

- 3.3.1 A report of a large number rooks on freshly cultivated paddocks near Taihape was followed up but because they did not take pre-feed and then dispersing, no poisoning was attempted.
- 3.3.2 The aerial and ground control portion of the rook programme was delivered in October (Map 4 and Table 7).
- 678 nests were treated, with 152 found to be active in that they contained eggs or chicks.
 - A single large rookery at Otupae has impacted significantly on the programme's statistics with 31 active nests treated at the site.
 - One rookery within the Whanganui City boundary was inspected by an arborist, and one nest that was found to be active was treated.

Table 7 Aerial rook programme trends.

AERIAL ROOK CONTROL				
AREA	ACTIVE NESTS TREATED			
	2015-16	2016-17	2017-18	2018-19
Taumaranui	0	0	0	0
Tararua	127	117	100	98
Manawatū	33	4	3	8
Taihape	28	20	32	46
TOTAL	188	141	135	152



Map 4 Aerial and ground-based rook control for 2018-19.

4 Amenity Pests

4.1 Activity Overview

- 4.1.1 Horizons receive a large number of enquiries relating to pest animal issues from landowners across the Region. Most relate to ‘nuisance’ animals including possums, mustelids and rabbits etc in ‘amenity’-type situations, e.g., around lifestyle blocks, gardens etc. In these situations, Horizons’ animal pest management staff provide advice on control techniques and supply loan traps, and in some cases toxins, to affected landowners.
- 4.1.2 We also receive complaints about pests, mainly rabbits, spreading from neighbours’ properties and causing problems. In these situations, ground inspections and discussions with affected landowners are required and if the problem is unable to be resolved enforcement options can be used.
- 4.1.3 The Long-term Plan target is for Horizons to provide a urban/peri-urban animal pest management service to assist urban ratepayers with specialist advice and equipment, and that 100% of animal pest control assistance/enquiries are responded to within two working days.

4.2 Year-to-date progress

Table 8 Progress reporting for the amenity pest management programme in the 2018-19 year.

Measure	Reporting Period					YTD Actual	Op Plan Target	%
	1st	2nd	3rd	4th	5th			
Number of enquiries received	117	164	218	145	193	837	837	Achieved
Percentage responded to within two working days	100%	100%	100%	100%	100%	100%	100%	Achieved

4.3 Activity Highlights

- 4.3.1 A total of 193 enquiries were received during the reporting period. Figures 1 and 2 provide further information on the type of pest the enquiry related to as well as the spread of enquiries across the districts of the Region. Possums and rabbits were the predominant pest type prompting enquiries during the reporting period and the largest number of enquiries was in the Manawatū and Whanganui areas.
- 4.3.2 All landowners making enquiries were contacted and/or visited within the prescribed timeframes and provided with advice and equipment, such as traps or small amounts of toxins, to help them deal with their pest issues.
- 4.3.3 The ‘All other’ section comprised enquiries relating to rodents (4), pigeons (4), wasps (3), feral , peafowl (2), geese (1) and general enquiries (6).

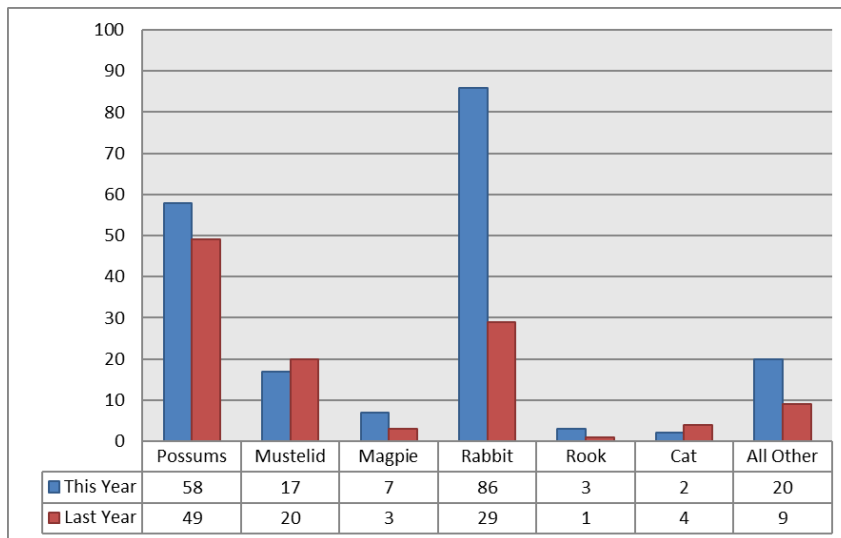


Figure 1 Pest Animal Enquiry Summary – by Pest Type – 1 April to 30 June 2019.

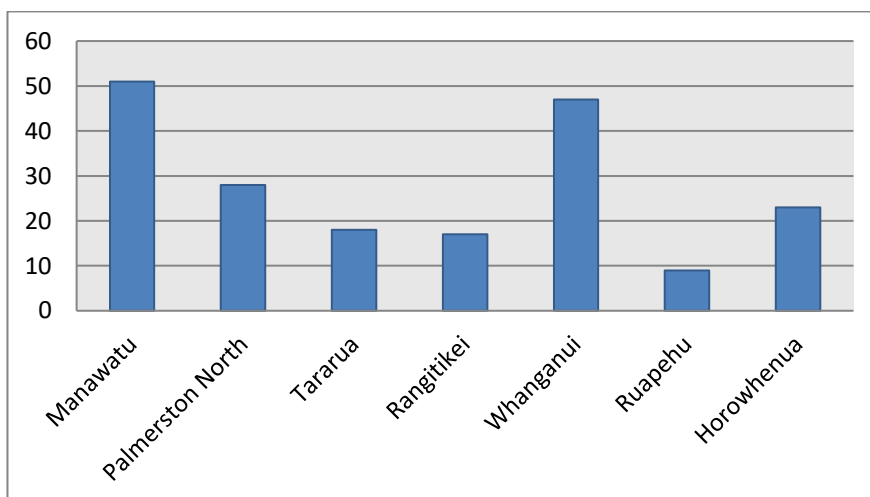


Figure 2 Pest Animal Enquiry Summary by District - 1 April 2019 to 30 June 2019.

Daniel Hurley
REGIONAL RESPONSE TEAM COORDINATOR (ANIMALS)

Eric Dodd
ENVIRONMENTAL PROGRAMME COORDINATOR (ANIMALS)

Rod Smillie
BIODIVERSITY, BIOSECURITY, AND PARTNERSHIPS MANAGER

Jon Roygard
GROUP MANAGER NATURAL RESOURCES AND PARTNERSHIPS



BIOSECURITY ACTIVITY - PLANTS

1 Biosecurity Plants

1.1 Overview

1.1.1 This report is to update Council on the progress of programmes giving effect to the **Regional Pest Management Plan** (RPMP) and other works, according to the 2018-19 Pest Plant Operational Plan approved by Council during the reporting period 1 April 2019 to 30 June 2019; and an overview of the full programme within the 2018-19 financial year.

1.1.2 The Long-term Plan (2018-28) set the Pest Plant team new performance measures, (Table 1), which are reflected throughout this document in the work programmes to which they apply. The targets were all met except for the 72 hour response time target for enquiries; 94% compared to 95%. We endeavour to address all enquires as soon as practicable given workload and staff absences.

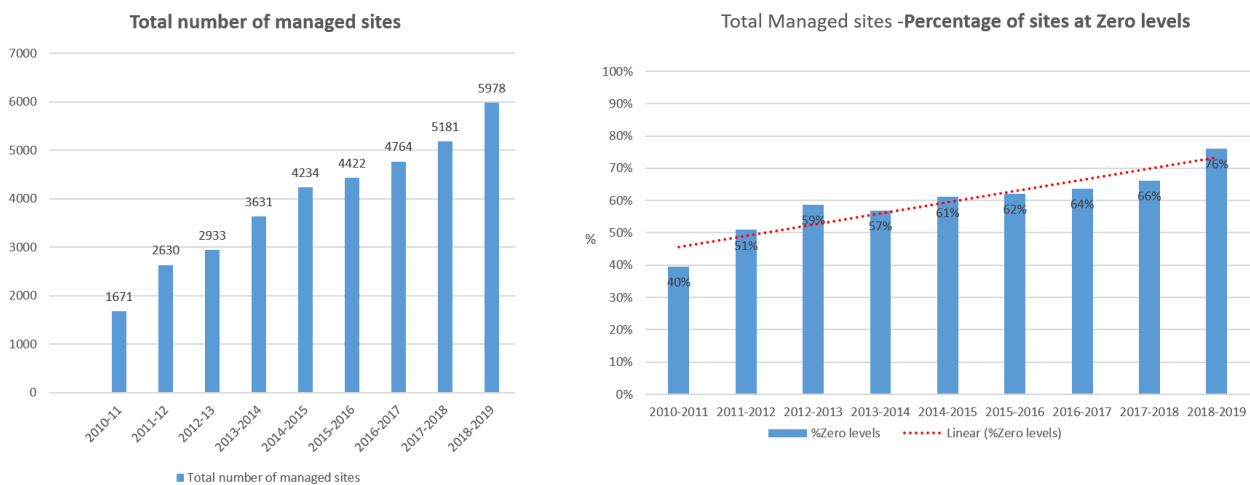


Figure 1 Weed site numbers showing total number of sites managed and 76% of these at zero-levels

- 1.1.3 Pest plant sites are usually found when adult and self-sustaining via seeding or vegetative means, the Pest Plan goal is to reduce the viability of every site to one where only regrowth or seedlings are produced i.e. zero-levels. Searching for and creating 797 new weed sites, and through effective control increasing the number of sites at zero-levels to 76% from 66%, shows progress is being made (Figure 1).
- 1.1.4 We now manage 5,978 sites of which 4,547 are at zero-levels.
- 1.1.5 Due to increased investment by Council, the 2018-19 year saw a corresponding lift in activity for our biological control programme. We also received an increase in allocation of approximately \$130,000, targeted to species identified as requiring more resource to enable achievement of the Pest Plan goals. The largest portions of this extra funding were to support the wilding conifer and Darwin's barberry programmes.

Table 1 Long-term Plan performance measures (2018)

#	PERFORMANCE MEASURES FOR LEVELS OF SERVICE	Annual Plan Target 2018-19	Result
1	Any exclusion category pest plants that are found in the Region are promptly managed.	Exclusion category pest plants are found in the Region	None found
2	Any exclusion category pest plants that are found in the Region are promptly managed.	An initial response plan will be completed within 2 weeks of finding these. Response plan enacted (if not enacted before 2 weeks).	No response plans required
2	Number of managed sites at zero-levels increases for pest plants identified for eradication in the Regional Pest Management Plan.	Overall % of managed sites at zero-levels increases by 10%	Achieved (75%, required 65%)
4	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%	Achieved (78%, required 64%)
5	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	Achieved
6	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	Achieved
7	Pest plant enquiries received are responded to within three working days.	95% of enquiries will be responded to within three working days	Not-achieved (94%)

2 Progress Report

- 2.1.1 Pest plant management is mandated under the Biosecurity Act (1993) and Horizons has chosen to undertake management via a **Regional Pest Management Plan** (RPMP) as well as activities detailed in an annual Operational Plan. These activities focus on transformative pest plants which, if left uncontrolled or unmanaged, would reduce the value of the Region's biodiversity and productive capacity by either increasing the costs of traditional production or preventing it entirely. This report overviews the work undertaken according to the Operational Plan structure which features the RPMP programmes first, followed by the other programmes.

2.2 Exclusion Pest Plants

Activity Overview

- 2.2.1 For those pests that are in New Zealand but not in our Region, our goal is to prevent establishment via the Exclusion programme. We aim to detect these pests 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 rateable land.
- 2.2.2 Staff inspect locations which may harbour our target species: Californian bulrush, Chilean needle grass, heath rush, humped bladderwort, Manchurian wild rice, Noogoora burr, *Phragmites australis*, saffron thistle, *Sagittaria platyphylla*, sweet pittosporum and tussock hawkweed.
- 2.2.3 Some of the hotspot search locations are sale yards and any holding paddocks nearby. Searches during the reporting period did not locate any target species.
- 2.2.4 The annual plan targets of responding to incursions and delivering response plans of the named species was not required as no species were found via active surveillance or as response to promotion by members of the public.
- 2.2.5 Staff are concerned about the potential movement of Chilean needle grass from established locations including recently discovered river margin areas in Waipawa as they are the closest to our region and spread can occur via many scenarios, and not all are controllable. The example of Canterbury discovering large areas of well-established Chilean needle grass in areas previously free, provides motivation for staff to ensure we are vigilant.

2.3 Eradication Pest Plants

Activity Overview

- 2.3.1 High-risk species that we believe should be totally removed from the Region are managed via the Eradication programme.
- 2.3.2 Species worked against this period: alligator weed, cathedral bells, climbing spindleberry, Queensland poplar and woolly nightshade.
- 2.3.3 Staff are always on the lookout for new sites of our target pest plants and it was during a late season aerial survey for Old Man's Beard where two large infestations of Chilean rhubarb were discovered on river cliffs of the Mangahao River. One site was located about one kilometre from the assumed parent site but hidden from view due to the cliff.



Photo 1 Chilean rhubarb (dark green plants middle of image) on cliffs above the Mangahao River, spotted while on aerial survey for Old Man's Beard. (Jack Keast)

- 2.3.4 Queensland poplar is new to the Pest Plan, and our staff are building up knowledge of its distribution. Attending an urban site in Whanganui recently, highlighted why it went from an

Investigation plant to being designated for Eradication, as a site with one adult was discovered and a quick search revealed 30+ seedlings spread through a relatively small area.

- 2.2.3 The annual plan target of increasing the zero-level percentage of the sites we manage for the Eradication species by 10% from the Pest Plans creation date was achieved. For all the species we are targeting for Eradication, 80% of all sites are at zero-levels. This is an improvement on last year's figure of 67%. Another measure of the effectiveness of staff site management is the zero-level percentage of sites managed for longer than 3 years. This moderates the snapshot view of all sites, as newly discovered sites are usually found when adult; not at zero-levels. When we look at the mean across all Eradication species 84% are at zero-levels; not producing off-spring. This metric when compared to the all site measure tends to show for most species a slowdown in the number of new sites; we are getting on top of the species distribution.

2.4 Progressive Containment – mapped Pest Plants

Activity Overview

- 2.4.1 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 per the Eradication designation.
- 2.4.2 Species worked against: Banana passionfruit, Darwin's barberry, Old Man's Beard, *Pinus contorta* and *Pinus sylvestris*.
- 2.4.3 The significant increase in Annual Plan funding targeted towards the pest pine species allowed staff to organize for the felling or chemically treat large amounts of mature trees currently creating seeding issues in the Central Plateau.
- 2.4.4 Scots pine (*Pinus sylvestris*) was the most commonly treated conifer apart from *Pinus contorta* and staff were able to identify and have removed shelter rows affecting Raketapauma wetland complex and mature trees seedling into the Whangehu River corridor.



Photo 2 Scots pine dying after stem applied herbicide application via helicopter, Whangehu River.
(R.Bashford)

- 2.4.5 The National Wilding Conifer Control Programme was fully delivered with work being undertaken right through to the last week of June. All partners undertook safe and successful control programmes across the Kaimanawa Management Unit.
- 2.4.6 The 2018/19 programme for all Partners receiving support from the National programme totaled \$651,738, of which \$554,692 was national programme expenditure. Horizons received \$64,100 of a \$100,020 spend. The rest was split across Waikato Regional Council, \$10,000 of \$18,000; Department of Conservation, \$448,000 of \$556,919; and Hawkes Bay Regional Council, \$32,592 of \$69,597.
- 2.4.7 The annual plan target of increasing the zero-level percentage of the sites we manage for the Progressive Containment-mapped species by 10% from the Pest Plans creation date was achieved. For all the species we are targeting for zero-levels in the Active Management Zone, 75% of all sites are at zero-levels. This is an improvement on last year's figure of 67%. The measure of the effectiveness of staff site management is the zero-level percentage of sites managed for longer than 3 years. This moderates the snapshot view of all sites, as newly discovered sites are usually found when adult; not at zero-levels. When we look at the mean

across all Progressive Containment-mapped species 84% are at zero-levels; not producing off-spring. This metric when compared to the all site measure and when factoring in the increase in sites for this project by 643 shows the ability of staff to effectively reduce the pest plant burden and reduce risk of future spread and effect long-term reduction over time.

2.5 Progressive Containment – un-mapped Production Pest Plants Activity Overview

- 2.5.1 Production pests are managed using a mix of a clear land rule and a good neighbour rule. These species are generally widespread but some parts of the Region are clear of them and it is desirable to keep them clear. For occupiers of large land areas, farmers and 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 objective 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.
- 2.5.2 Species we dealt with during this reporting period were blackberry, gorse and tutsan.
- 2.5.3 We have received a small number of complaints from across the Region this period, predominantly regarding weeds between neighbouring properties and roadside weeds.

Table 2 Good neighbour rule activity

Description	Report period numbers	2018-19 totals
Boundary complaints received and actioned outside of compliance	2	19
RTCs (Required to Clear) issued		1
NODs (Notice of Direction) issued		2
Notices resolved in this period	2	7

- 2.5.4 The 2018-19 year was similar to previous years in terms of total number of ‘boundary’ complaints. A few friction points have been identified where land manager obligations need to be reinforced and staff have recently re-engaged with Kiwirail, LINZ and NZTA to ensure there is a common understanding around communication protocols.

Crown and Local Territory Authority (TLA) engagement

- 2.5.5 The table below shows the progress of engagement with the local councils and the Crown, with eight out of eleven councils and Crown agencies met with, and agreement reached around pest programmes.
- 2.5.6 We have received Pest plant management annual reports from Palmerston North City Council, Manawatu, Horowhenua, Ruapehu, Tararua and Whanganui District Councils at the time of writing. We expect to receive other reports prior to July 31st.

Table 3 Progress towards an approved management plan (AMP) or other liaison

Measure	Reporting Period					YTD Actual	Target	%
	1st	2nd	3rd	4th	5th			
MOU/Liaison progress	2	1	1	4	3	11	11	100%

2.6 Progressive Containment – un-mapped Aquatic Pest Plants Activity Overview

- 2.6.1 Eelgrass, egeria, hornwort, lagarosiphon, and reed sweetgrass are grouped into the Aquatic Pest Plants category on the basis they are aquatic pests managed the same way for the same objectives. Their distributions cannot be mapped with any certainty at present. The aim is to progressively contain or reduce the number of sites across the Region affected by them to prevent further spread and reduce adverse effects on the environment.
- 2.6.2 Through 2018-19 these plants are included in the freshwater awareness program as a part of the conversation with lake users about spread prevention. All of these pests only spread between discrete water bodies by human assisted transfer, as such behaviour change by lake users is the best hope for spread prevention, apart from restricted access to all water bodies. Management of existing infestations is not undertaken by Horizons due to the ongoing nature of such operations due to regrowth and re-infestation. Control or removal of any of these species is expensive, and relies on the earliest intervention possible.

Lake Namunamu

- 2.6.3 In early May, Ian Henderson a Massey University Freshwater Scientist reported a new to the lake discovery of hornwort in Lake Namunamu. Hornwort is the worst submerged freshwater weed in the country and is able to totally transform a lake environment, un-rooted it can cover vast areas of the surface and is able to grow to 17m subsurface. This is a 13ha private lake near Hunterville, stocked with trout by Fish and Game and with public access only allowed by walking. The Manawatu Anglers Club also maintain a row boat for use by the public near a jetty and picnic area. The lake ranks highly in the region given it has only one other pest plant and is in relatively pristine condition along with its use value to the public.
- 2.6.4 Horizons firstly pulled together a team of staff along with the scientist; to seek information and general advice from organisations such as the Environmental Protection Agency, Fish and Game, National Institute of Water and Atmosphere (NIWA), Boffa Miskal, Bay of Plenty Regional Council and service providers such as AquaAg and Chisholm Associates. We have also involved the landowner in the steps and decisions we made and consulted with the Department of Conservation and local iwi as well.
- 2.6.5 The team is fortunate to have Ian Hendersons long-term data series of lake condition measures which will enable any intervention to be undertaken at the optimum time of year. The second factor was needing to find out more about the amount and distribution of hornwort within the lake. Subsequent survey by boat and a specialist diver team confirmed the existence of a

moderate infestation estimated to be about two years old with some beds at 6 m below the surface and attaining a height of 4 m.

- 2.6.6 A consent has been lodged to treat the lake with herbicide if the outcome of an independent report from NIWA gives our goal of an eradication attempt a favourable score within an acceptable cost.



Photo 3 Looking towards the boat ramp arm of Lake Namunamu with divers in shot. (C. Davey)

Lake Otamangakau

- 2.6.7 Horizons, in conjunction with Genesis and the Department of Conservation, funded a weed cordon at Lake Otamangakau in Ruapehu district a number of years ago and this 'weed net' was inspected and cleaned during June.

2.7 Response Activity

Activity Overview

- 2.7.1 The Response programme aims to provide immediate and effective assistance for all national or regional biosecurity incursions and any transitions to long-term management. Through 2018-19 there has not been any new responses within the region and staff were not needed to assist with the 2019 fruit fly find in Auckland as the size of the response did not demand it. We maintained a watch on the pea weevil controlled area programme in the southern part of the Tararua; contributed to the national velvetleaf programme, hosting the North Island facilitator and enabling infected paddocks to be searched by the detector dog; and kept an eye out for myrtle rust within our region, finding one new site in Taumarunui.

Pea Weevil

- 2.7.2 We received the latest update on the Controlled area for pea weevil, which covers the lower Tararua District and Wairarapa. The response is well on the way to eradicating pea weevil,

however the Controlled Area Notice currently in place remains in force and will continue through the 2019-20 growing season.

Velvetleaf

- 2.7.3 AgResearch met with staff to discuss the season's results and particularly the variation in genetics observed between the Koputaroa site and the rest of the fodder beet associated velvet leaf. Staff will again collect plant material to assist with AgResearch's investigation and, based on AgResearch trials engage with the affected farmers to seek proactive seed striking through crop and pasture options to expire the seedbank rather than wait and deal with it reactively.
- 2.7.4 Farmers, staff and the detector dog only discovered five plants across 19 paddocks through 2018-19, none flowering. All plants were found in one paddock located in an historic hotspot.

2.8 Investigation and surveillance

- 2.8.1 A number of plants present in the Region may have the potential to become economically and ecologically damaging. This output includes projects aimed to prevent the propagation, sale and distribution of legislated plants via the National Pest Plant Accord; determine the current extent in our Region of certain potential pest plants and investigate management options; and prevent further establishment of nationally notifiable plants.
- 2.8.2 Through 2018-19 staff assessed two pinus species, nigra and ponderosa, that were nominated as potentially able to be managed by inclusion in the Pest Plan. Both were assessed by addressing the potential risk to the region given their weediness, ability to be controlled, current distribution and likely management scenario. The investigations concluded management by rule or programme intervention would not be required and their inclusion as a target in any site management approach would deliver an appropriate result.
- 2.8.3 Staff also contributed to the AgResearch trial of giant buttercup control options as part of that species ongoing investigation. The progress report on mowing versus spraying will be available later in the year.
- 2.8.4 Staff did not undertake nurse inspections this year as the programme is on a biennial basis with the next inspections set for 2019-20.

Totara dieback

- 2.8.5 Many examples of unexplained dieback were noticed by a staff member, as well as members of the public. We have included this body of work in the Investigation section as an example of how we are sometimes called to assist with evidence and collection projects.

- 2.8.6 The Biosecurity New Zealand Incursion investigator provided a report of the soil and foliage samples collected within our region near Taumarunui earlier in the year.
- 2.8.7 Four species of fungus were isolated. Three are known to exist here already but one species was undescribed in New Zealand, though this genera of fungus has been associated with conifers in New Zealand and are widely distributed around the world. The pathogenicity on totara is unknown and its thought unlikely any of the four fungus found were the cause of the dieback observed.
- 2.8.8 In summary, it's unknown what caused the symptoms observed but in the meantime the best we can do is monitor distribution, and provide additional samples if particularly worse symptoms during the cooler, damper months are discovered. Scientists may decide to describe the new species in future, but that generally takes a number of years to complete.

2.9 Biological Control Activity

Overview

- 2.9.1 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 within the Region.

Annual Plan targets

- 2.9.2 The annual plan targets of supporting the New Zealand biocontrol collective and monitoring 20 sites was completed. We contributed \$40,000 to support projects across a range of target species prioritised nationally. Many of these are directly related to species we manage and projects we champion, such as; old man's beard, field horsetail, Darwins barberry, tutsan, and banana passionfruit as well as others which may become a problem to us in the future, such as; ginger and pampas.

Target	Agent	Completed activity
Buddleia	Buddleia weevil	We assessed spread and visited historic sites to assess the decline of plants.
Old man's beard (OMB)	OMB sawfly	Agents in the country and release made near Lincoln for best monitoring of establishment.
	OMB bud and leaf gall forming midge	Presented at the Environmental Protection Agency (EPA) hearing. Spoke to two community groups regarding the potential and engaged with Taihape iwi to seek sites for release and monitoring.
Californian Thistle	Green Thistle Beetle	Transferred less populations than desired due to nursery sites not yielding high numbers, We think this is due to natural dispersal of the agents and will try earlier in the season next year. Monitoring of 3 locations for AgResearch assessment completed this year.

Target	Agent	Completed activity
Broom	Broom gall mite	Begun recording many self-established locations. In conjunction with the Communications department we ran a hang a gall on your tree this xmas promotion and gave 15 populations to farmers.
Tutsan	Tutsan beetle and tutsan seed moth	Continued the support of the Tutsan Action Group (TAG) through to its wind up after 12 years of continued effort to deliver a biological control for tutsan to the Ruapehu. We monitored historic releases of the tutsan beetle at one release site and the seed moth at 15 sites for establishment. Both were not found. We released two more leaf beetle populations.
Field horsetail	Horsetail weevil	Horizons supported the RHG by funding another importation of the field horsetail weevil from England and staff looked for weevils at historic release sites – none found.
Privet	Privet lace bug	We released three new populations of lace bugs.
Agent progress register	All	Refine the system to provide an assessment of how individual agents are tracking through the stages of a project lifecycle. This will allow staff to plan future work against an agent and best inform others of the status of an agent's population within the Horizons Region. This will include but not be limited to descriptions of: Release, matching to suitable sites; Establishment, monitoring and site protection; Assessment, baseline metrics and monitoring; Distribution, using nursery sites and/or purchases to ensure maximum geographical distribution occurs; and, Review, assessment of impacts and long-term plant population change. See table

Table 4 Current status of biological control projects in Horizons region, 2018-19.

Species	Agent	Pre Release Work	Releasing Agents	Checking Establishment	Checking Population and Damage levels	Population Effects	Ecosystem Effects	Economic Analysis	Status
Arundo	Giant Reed Gall Forming Wasp	Y	Y	Y					Populations introduced
Boneseed	Boneseed Leaf roller	Y	Y	Y					Population introduced but establishment has not been confirmed.
Buddleia	Buddleia Leaf Weevil	Y	Y	Y	Y	Y			Self establishment occurring. Ecosystems effects need study
California Thistle	Green Thistle Beetle	Y	Y	Y	Y	Y			Self establishment occurring, staff transfers ongoing
Darwins Barberry	Darwins Barberry Seed Weevil	Y	Y	Y					Waiting to confirm establishment
Field Horsetail	Field Horsetail Weevil	Y	Y	Y					Waiting to confirm establishment
Gorse	Gorse Colonial Hard Shoot Moth	Y	Y	Y	Y	Y	Y		Widespread, no staff intervention
	Gorse Pod Moth	Y	Y	Y	Y	Y	Y		Widespread, no staff intervention
	Gorse Seed Weevil	Y	Y	Y	Y	Y	Y		Widespread, no staff intervention
	Gorse Soft Shoot Moth	Y	Y	Y	Y	Y	Y		Widespread, no staff intervention

Species	Agent	Pre Release Work	Releasing Agents	Checking Establishment	Checking Population and Damage levels	Population Effects	Ecosystem Effects	Economic Analysis	Status
	Gorse Spider Mite	Y	Y	Y	Y	Y	Y		Widespread, no staff intervention
	Gorse Thrips	Y	Y	Y	Y	Y	Y		Widespread, no staff intervention
Heather	Heather Beetle	Y	Y	Y	Y	Y			Self establishment occurring
Hemlock	Hemlock Moth	Y	Y	Y	Y				No staff intervention - natural dispersal
Japanese Honeysuckle	Honshu White Admiral	Y	Y	Y					Initial Release 2018/19
Nodding Thistle	Nodding Thistle Crown Weevil	Y	Y	Y	Y	Y	Y	Y	Widespread, no staff intervention
	Nodding Thistle Gall Fly	Y	Y	Y	Y	Y	Y	Y	Widespread, no staff intervention
	Nodding Thistle Recepticle Weevil	Y	Y	Y	Y	Y	Y	Y	Widespread, no staff intervention
Old Mans Beard	Old Mans Beard Leaf Fungus	Y	Y	Y					Did not establish - discontinued
	Old Mans Beard Leaf Miner	Y	Y	Y	Y	Y	Y		Widespread, minimal impact
	Old Mans Beard Sawfly	Y	Y	Y					Releases occurred in Canterbury
	Old Mans Beard Bark beetle	Y							Failed Host Testing. No further work
	Old Mans Beard Bud Gall Fly	Y							Waiting for MPI approval for importation
Privet	Privet Lace Bug	Y	Y						Releases just occurred
Scotch Broom	Broom Gall Mite	Y	Y	Y	Y				Self establishment occurring. Staff transfers ongoing
	Broom Leaf Beetle	Y	Y	Y	Y	Y	Y		Widespread population. Impacts need study
	Broom Psyllid	Y	Y	Y	Y	Y	Y		Widespread population. Impacts need study
	Broom Seed Beetle	Y	Y	Y	Y	Y	Y		Widespread population. Impacts need study
	Broom Shoot Moth	Y	Y	Y	Y	Y	Y		Widespread population. Impacts need study
	Broom Twig Miner	Y	Y	Y	Y	Y	Y		Widespread population. Impacts need study
Scotch Thistle	Scotch Thistle Gall Fly	Y	Y	Y	Y				
St Johns Wort	Greater St Johns Wort Beetle	Y	Y	Y	Y	Y	Y	Y	Widespread control
	Lesser St Johns Wort Beetle	Y	Y	Y	Y	Y	Y	Y	Widespread control
Tradescantia	Tradescantia Fungus	Y							To be released shortly into horizons region

Item 7

Annex C

Species	Agent	Pre Release Work	Releasing Agents	Checking Establishment	Checking Population and Damage levels	Population Effects	Ecosystem Effects	Economic Analysis	Status
	Tradescantia Leaf Beetle	Y	Y	Y					Population establishment occurring in places
	Tradescantia Stem Beetle	Y	Y	Y					Population establishment occurring in places
	Tradescantia Tip Beetle	Y	Y	Y					Population establishment occurring in places
Tutsan	Tutsan Leaf Beetle	Y	Y	Y					No populations found yet
	Tutsan Moth	Y	Y	Y					No populations found yet
Woolly Nightshade	Woolly Nightshade Lacebug	Y	Y	Y	Y				Establishment confirmed, damage occurring
Yellow Ragwort	Cinnibar Moth	Y	Y	Y	Y	Y	Y	Y	Widespread ongoing control. Economic analysis complete
	Ragwort Flea Beetle	Y	Y	Y	Y	Y	Y	Y	Widespread ongoing control. Economic analysis complete
	Ragwort Pume Moth	Y	Y	Y	Y	Y			Self-establishment occurring, staff transfers ongoing

Green Thistle Beetle

2.9.3 Staff assisted AgResearch in a survey at one of our long term monitoring farms to look for overwintering sites for the green thistle beetle. This is the second round of location based assessments conducted by Crown Research Institutes trying to better understand why not all populations establish. Factors such as aspect, soil conditions, altitude, exposure and land management practice all play a part. Other conditions such as suitable habitat for full lifecycle completion are becoming better understood as very critical for establishment success and population expansion. This particular site has a mix of deciduous and native vegetation with areas particularly suitable for the insects overwintering and as such has been our main nursery site from early in the programme.

Woolly nightshade

2.9.4 A few of our heavily infested Whanganui properties are experiencing large expansion of lace bug numbers with the insects found on nearly all plants. We are now able to harvest and relocate to other properties.



Photo 4 Woolly nightshade plants in Whanganui affected by the lace bug, left, and the gregarious clustering of lace bugs on the underside of leaves. (R.Sicely)

Yellow flag iris

- 2.9.5 Staff collected plant samples from three sites in the Whanganui area for Landcare Research. We are collaborating with the Centre of Biological Control at Rhodes University, South Africa, on a global genetic analysis of yellow flag iris and as part of this, they require samples from within New Zealand. Initially, it was believed this species predominantly spreads vegetatively through rhizomes, but recent studies from US populations show high levels of genetic diversity, indicating dispersal and spread via seed. The current research will allow us to see just how genetically diverse yellow flag is both globally and in NZ, which could help to inform on biocontrol options. These were sent away for DNA testing to work out whether they are spreading via seed or clonal reproduction.

2.10 Awareness and Promotion Activity

Activity Overview

2.10.1 The aim of the Awareness programme is to alert the community to the issues, threats and weed management solutions.

2.10.2 Media picked up stories about:

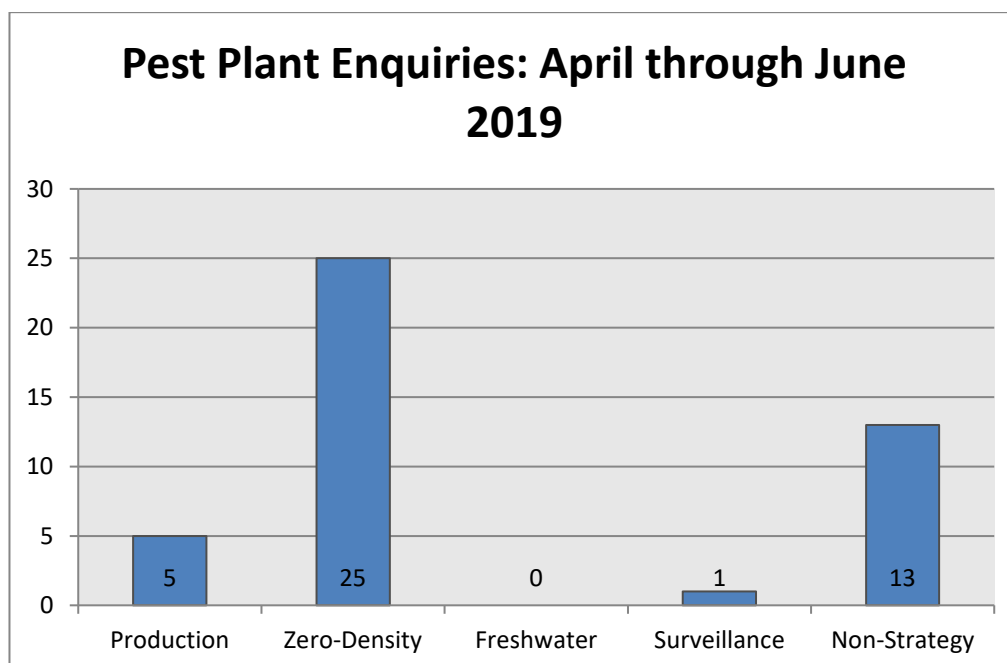
- *HRC - Duck hunters urged to keep clean - Whanganui Chronicle among others*
- *NZDF supports wilding pine survey - The News Westport*

2.10.3 Staff talked to Forest and Bird Palmerston North and Rangitikei branches about biocontrol and in particular the Old Man’s Beard gall forming mite. We also spoke at a guided field trip to look at biological control in action on site at Massey University where there are tradescantia beetles and broom infested with gall mites.

2.10.4 Staff attended the Deer Expo in Fielding to talk about pest plants.

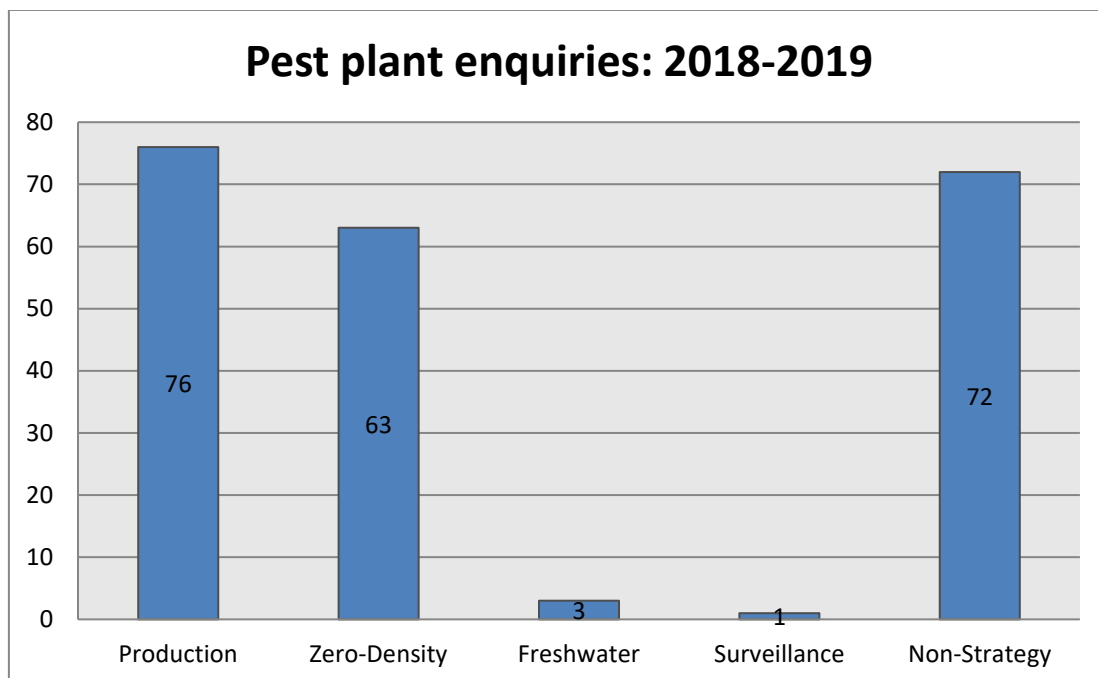
2.10.5 The pest plant team received 44 enquires this period with the main topics being:

- Production Blackberry
- Zero-Density Old Man’s Beard and banana passionfruit
 - Non-Strategy Giant willow aphids, holly, agapanthus



Graph 1 Pest plant enquiries summary - reporting period.

- 2.10.6 During 2018-19 staff were able to respond to 94% (c.f, 95% target) of all enquires logged in the Frontlines database within the expected timeframe. We endeavour to address all enquires as soon as practicable, however staff leave and out of office work programmes occasionally reduce staff availability to respond within the desired timeframes.
- 2.10.7 The 2018-19 year saw a reduction in the total number of pest plant enquiries fielded by the pest plant team from 350 last year to 215 this year. There has been a reduction in requests for information over time, in part due to no significant pest incursions driving enquiry as was observed around myrtle rust and velvetleaf as well. Urban enquiries have also reduced this year.
- 2.10.8 The enquiries this year were predominantly made up with Production pest complaints/information requests or people seeking assistance for non-pest plan species where staff are happy to provide best practice control advice. (Graph 2)



Graph 2 Pest plant enquiry by type for the 2018-19 financial year.

- 2.10.9 Our Check, Clean and Dry Summer freshwater advocate for 2018-19 was the high energy ‘Didymo Dave’. Our key audiences were users of the upper Whanganui River and we used a mix of communication vehicles – signage, events, water side, sports shops, print media, long-lead media (fishing and outdoor audience), vehicle leaflet drop, accommodation providers, campgrounds, radio talk back and social media to get the message out there.
- 2.10.10 Dave had 1177 conversations with fisher people, freedom campers and other users of the great outdoors. He screened 3000 event participants (multisport and trail-running events) as well as squeezing in impromptu lollipop quizzes in carparks and at campgrounds.

2.10.11 The main aim for the summer was to connect with locals to encourage more site guardians and to show the importance of connecting to their special places and the people who visit them.

3 Activity Summary

Project	Key Deliverables	YTD Progress
Wilding Conifer – Central North Island Regional Steering Group (RSG) – Fund holder and Chair	Work with partners and other stakeholders re: 1. Planning for management unit activity and reporting 2. Annual meeting scheduled	Ministry of Primary Industries - Horizons contract signed, partners' variations signed. Work across the programme area. No health and safety issues.
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 completed.
Rangitikei Horsetail Group	Support group activity with population releases and monitoring.	Weevil numbers from the rearing facility at Lincoln were disappointingly low this season, Horizons funded repeat collection of weevils from England in May and June.
Tutsan Action Group	Support group activity with population releases and monitoring.	The TAG wound up after twelve years. Delivering two bioagents against tutsan.
Desert Road Invasive Legume Control Group	<ul style="list-style-type: none"> ▪ Relationship between parties maintained. ▪ Memorandum of Understanding maintained and out-worked. ▪ Coordinated action in priority areas is undertaken against the target species. 	Successful meeting delivered three agencies using one contractor to undertake landscape-wide removal of target species with pro-rata payments. No update since.
Freshwater Pest Partnership Programme and Check, Clean, Dry (CCD) advocacy programme.	Representing Horizons at national forum to champion behaviour change and freshwater pest protection. Attendance at high-risk events and strong advocacy with the main users of waterways in our headwater areas.	Advocacy work started on 1 October at Lake Otamangakau and continues. Good partnership formed with Ngāti Rangi volunteers for Ohakune-based events.

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ENVIRONMENTAL COORDINATOR – PLANTS

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GROUP MANAGER NATURAL RESOURCES AND PARTNERSHIPS



BIODIVERSITY ACTIVITY

1. Overview

- 1.1.1 The purpose of this report is to update Council on the Annual Report of programmes giving effect to the 2018-19 Biodiversity Operational Plan. The report is presented in four sections: Priority site protection, Biodiversity partnerships, Tōtara Reserve Regional Park management; and Collaboration projects with the **Department of Conservation** (DOC).
- 1.1.2 Over the 2018-19 year all four annual plan targets were met. The priority sites programme met the targets for four new wetlands managed and exceeded the target of 7 new bush remnants added to the programme with a total of 16 new bush remnants added during the year. The priority sites programme continued the implementation of the biodiversity review completing 127 rapid ecological assessments at sites (more than the 70 that were originally planned) and also introducing a new reporting framework for sites to provide more transparency around levels of management at priority sites. The prioritisation of sites within the region was also refreshed. The community biodiversity programme completed 32 projects well exceeding the target of 12. Work at Totara Reserve was dominated by work to recover from the flooding event in 2018.

Table 1 Progress reporting for the Biodiversity Activity Long-term Plan targets for 2018-19.

Long-term Plan Target	Target	Allocated	Completed	Result
Protect/enhance priority habitat remnants				
Additional top 100 wetlands managed	4	4	4	100%
Additional top 200 bush remnants managed	7	n/a	16	228%
Support community involvement in biodiversity protection				
Support existing community-based biodiversity improvement projects	12	34	32	267%
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	1	1	100%

2 Priority Sites Programme

Annual Summary

- 2.1.1 This programme was initiated to deliver on a One Plan method to have 100 of the Region’s priority wetlands and 200 of its best bush remnants under active management by 2028-29.
- 2.1.2 At the start of the 2018- 19 year, the programme reported 65 priority wetlands and 131 priority bush remnants to be under active management. The annual plan targets were to add four wetlands and 7 bush remnants to the programme. Four new wetlands and 16 new bush remnants were added to the programme during the year meeting (and exceeding) the annual plan targets (Table 2)

Table 2 Results for the priority sites programme Long-term Plan targets for 2018-19.

Long-term Plan Target	Target	Allocated	Completed	Result
Protect/enhance priority habitat remnants				
Additional top 100 wetlands actively managed	4	n/a	4	100%
Additional top 200 bush remnants actively managed	7	n/a	16	228% ⁶

- 2.1.3 The priority sites programme was reviewed in 2017-18 and the Operational Plan for 2018-19 introduced some changes to the way sites are assessed and managed. Much of the 2018-19 year was dedicated to work to implement that system. The changes included the introduction of a new classification of the level of management that sites are receiving. This adds more detail to the previous reporting on sites about whether or not they are being actively managed. The management level rating (see Box 1) incorporates assessments of the level of knowledge of the biodiversity at a site through a **Rapid Ecological Assessment** (REA) and whether Horizons has completed some restoration work at the site, which was previously the mechanism the programme used to indicate whether a site was actively managed. The programme review also introduced the requirement for site management plans, and these, along with frequency of visits, will become key factors for achieving management level 3. The level of priority works in the site management plan that are being implemented are also part of the management level index with level 4 indicating all priority works are being completed. Levels 5 and 6 reflect sites receiving a greater level of management. Reporting will now cover only the new management level index for sites that have been worked on and the original prioritisation category (e.g., A, B, C, D) will no longer be reported on. Please note the management level index framework is continuing to be refined as we gain more experience with its implementation.
- 2.1.4 During the 2018-19 year the sites within the programme were reviewed and assigned within the management level framework. To assist with this sites that had previously received support from Horizons, however had not had an ecological assessment, were prioritised for rapid ecological

⁶ The number here includes bush remnants that audit information showed meet the criteria for management level 2

assessments. Seventy REA's were planned for 2018-19 and over the year 127 REA's were completed (122 bush remnants and 5 wetlands).

2.1.5 The number of bush remnants and wetlands in each management level as at 30 June 2019 is reported in Table 3. Overall 13 sites are above management level 4 or above, 49 sites are at management level 3 and 151 sites are at management level 2.

2.1.6 As shown in Table 4, at the end of the 2017-18 financial year 196 sites were considered actively managed. At the end of the 2018-19 financial year 213 sites are management level 2 or above. This is an increase of 17 sites, which is less than the 20 new sites added to the programme in the year. The difference is three wetland sites that were removed from the programme following the audit of information showing these sites that were added to the programme historically do not meet the criteria for management level 2. Similarly the nine "extra" bush remnants are a result of audit information showing these sites meet the criteria for management level 2.

Table 3 Management Level Index ratings for priority sites as at June 30, 2019.

Management Level	Bush sites	Wetland sites	All sites
6	1	0	1
5	1	2	3
4	7	2	9
3	37	12	49
2	101	50	151
Sub-total for Level 2+	147	66	213
1	249	61	310
0.5	382	168	550
Total	778	295	1073

Table 4 Status of Priority Sites within the programme over the 2017-18 and 2018-19 years as at June 30, 2019.

Priority Site	2017-18 Actively Managed	2018-19 Level 2+	2018-19 Level 3+
Wetland	65	66	16
Bush Remnant	131	147	46
Priority Indigenous Biodiversity Sites (PIBS)	196	213	62

Activity summary for the reporting period

2.1.7 During April to June the Biodiversity team completed a further 36 REAs, taking the total for this year to 127 REAs (122 bush remnants and 5 wetlands).

2.1.8 Four new high priority wetland sites were added to the managed list. They were McDowall's Wetland, Sarah Pond, Lake Heaton and Lake Bernard. This met the annual plan target of four new wetland sites.

2.1.9 No new high priority bush remnants were added to the managed list during this period. This year, 16 new bush remnants were added, exceeding the annual plan target of seven new bush remnant sites.

Box 1: Management Level Descriptions

To achieve consistency in reporting over the coming 18 months the site list has been reconciled and the number of sites at each management level will be reported. Draft management levels have been outlined below.

Management Level Zero: Sites that we know exist but have not visited yet, which will not be reported.

Management Level 0.5: A holding level for sites that have received a contribution toward management from HRC but have not yet received an REA. Many of these sites exist in the Whanganui and Ruapehu districts. The biodiversity team is planning to visit these sites and complete REA's moving these sites to a level two. In future this level will be reserved for sites with an REA greater than 10 years old.

Management Level 1: Sites at management level 1 will have been assessed using the REA process. Sites, including the GIS layer, will be included in our inventory. This management level is valid for 10 years, when a new REA must be completed or the site returns to level 0.5. Sites (and GIS layer) that were a level 1 and are returned to a level 0.5 will still exist in our inventory, but the level reflects the dated, and possibly now incorrect, data that we have on that site.

Management Level 2: Sites at management level 2 will fulfil the requirements of level 1 and have had a previous contribution to their management by Horizons. This contribution may have been a 'one-off', such as fencing or other management contribution. This would include sites that were previously managed but where support has been withdrawn for any reason. These sites will have brief site summaries which detail why management is not continuing but for historical sites this will only be possible where this information is available.

Management Level 3: Sites at management level 3 will fulfil the requirements of level 1 and have site visits to assess works required at least biannually. These sites will have a site summary and management plan. Identified works required will be prioritised. Some work may be deferred if appropriate. Landowners will be supported and encouraged to contribute to the management of these sites.

Management Level 4: Sites at management level 4 will fulfil the requirements of level 3 and have all high priority works carried out as required. Landowners will be supported and encouraged to contribute to the management of these sites. Tōtara Reserve is an example of a site at this management level.

Management Level 5: Sites at management level 5 will fulfil the requirements of level 4 management and have true management partnerships established. Alternatively, they may be managed by the landowner, iwi or community group with only surveillance and advice from Horizons. Manawatū Gorge and Cape Turnagain are examples of sites at this management level.

Management Level 6: Sites at management level 6 will meet at least management level 4 and be receiving control for all animal pests. Bushy Park is the only site that meets the criteria for this level.

3 Biodiversity Partnerships

3.1.1 The Biodiversity Partnerships activity encompasses work completed in collaboration with others to deliver biodiversity and recreational benefits to the Region via projects such as the Manawatū Gorge and Pukaha Mount Bruce, and projects to support community-led initiatives such as the **Rangitikei Environment Group's** (REG) efforts to control old man's beard. The 34 projects approved in 2018-19 included seven Biodiversity Collaborations, 13 Community Biodiversity projects and 14 Community Grant projects. Overall 32 of the 34 allocated projects were completed exceeding the target by 167%. Further detail on the projects is provided in the sections below. The two projects that were not completed were the Tawata Mainland island project where there has been some changes within the organisation Horizons partners with on this project and the Ohau Beach walkway where stakeholder support did not eventuate.

Table 5 Progress reporting for the Biosecurity Partnerships programmes Long-term Plan targets.

	Target	Allocated	Completed	Result
Support community involvement in biodiversity protection				
Support existing community-based biodiversity improvement projects*4	12	34	32	267%

Biodiversity Collaborations

3.1.2 Overall, six of the seven Biodiversity Collaborations were completed and are summarised in the table below. Highlights are the successes gained through collaborations such Te Āpiti Manawatū Gorge where significant Old Man's Beard weed control occurred. The Tawata Mainland Island project did not go ahead due to changes within the external organisation that Horizons partners with.

Table 6 Progress against Biodiversity Collaborations.

	Project	Comment	Status	Result
1	Rangitikei Environment Group (REG)	Weed control complete for this season.	Complete	100%
2	Kia Wharite	See Section 5 Collaboration Projects.	Complete	100%
3	Weedbusters Palmerston North	Weed control completed.	Complete	100%
4	Tawata Mainland Island	No pest control has occurred on this project.	Did not proceed	0%
5	Waitarere Beach Community Project	Weed control complete.	Complete	100%
6	Pukaha Mt Bruce	See Section 5 Collaboration projects.	Complete	100%
7	Te Āpiti Manawatū Gorge Enhancement	See Section 5 Collaboration projects.	Complete	100%

Community Biodiversity projects

3.1.3 Overall, 12 of the 13 Community Biodiversity projects were completed in the 2018-19 year, with the exception of the Ohau Beach Walkway due to stakeholder support not eventuating. Highlights include the Cape Turnagain restoration project where a very rare and endangered ecosystem is being restored and protected by a collaborative group including councils, landowners, and the community. Another highlight is the recently completed Palmerston North to Linton Walkway which passes through the Kahuterawa Stream Biodiversity project which Horizons has been involved with for some time. This project adds to enjoyment of the outdoor environment by the many walkers and cyclists that travel along the path.

Table 7 Progress against Community Biodiversity projects.

Community Biodiversity projects	Update	Status	Result
8 Te Potae o Awarua Predator Project	See Section 5 Collaboration projects (see Northern Ruahine Battle for our Birds).	Complete	100%
9 Massey Hill	Weed control is complete for the year.	Complete	100%
10 Turitea Reserve	Pest animal control complete.	Complete	100%
11 Bushy Park	Pest animal control complete.	Complete	100%
12 Kahuterawa Stream Biodiversity project	Regular hare control is achieving good results. Planting of the Palmerston North to Linton walkway/cycleway, which passes through the Kahuterawa project, was undertaken.	Complete	100%
13 Foxton River Loop	Save our River Trust (SoRT) are organising a planting job that will use all the budget for this project.	Complete	100%
14 Manawatū Estuary & Predator project	See Section 5 Collaboration projects.	Complete	100%
15 Awahuri Forest - Kitchener Park	Streambank protection works have been completed on a section of the Makino Stream. New solar-powered lights have been installed in the car park. As part of the Tū Te Manawa project, Ngāti Kauwhata will be erecting one of the eight educational whare in the Park.	Complete	100%
16 Ahimate Reserve (previously Waitoetoe Park)	Horizons' share of the weed control maintenance and planting of the greater park area has been spent and any additional costs will be paid by Palmerston North City Council (PNCC) as previously agreed. About 3,000 plants were planted in May-June.	Complete	100%
17 Gate Pa Bush Restoration	Weed control work has been completed.	Complete	100%
18 Ōhau Beach Walkway	Horowhenua District Council (HDC) has confirmed this project will not proceed in the current financial year. Savings have been redirected to the Cape Turnagain project.	Did not proceed	0%
19 Cape Turnagain	Horizons' stakeholder contribution has been paid for this year.	Complete	100%
20 Genesis Moawhango River Restoration	Willow removal undertaken.	Complete	100%

Community Grant projects

- 3.1.4 Community Grant projects were funded through a grants process run in April-May 2018, with 12 projects successful. A further two projects from the previous year were extended into the current year to enable their completion. Applications for the following financial year open in April and close in May.
- 3.1.5 Results of the 14 Community Grant projects is shown in the table below, and all projects have been completed with a significant input from the communities involved to deliver these projects.

Table 8 Community Grant projects completed.

Community Grant projects	Update	Status	Result
21 Bulls River Users Group	Project completed.	Complete	100%
22 Kaitieke School	Planting completed.	Complete	100%
23 Te One Bush Restoration Project	Project completed.	Complete	100%
24 Kimbolton School	Project completed.	Completed	100%
25 Mount Biggs School	Project completed.	Completed	100%
26 Progress Castlecliff, Whanganui	Project completed.	Completed	100%
27 Kai Iwi School	Planting completed.	Complete	100%
28 Puddleducks Montessori	Planting completed.	Complete	100%
29 Milson Scout Troup	Project completed.	Completed	100%
30 Timona Park Orchard Trust	Project completed.	Complete	100%
31 Matipo Community Development Charitable Trust	Project completed.	Completed	100%
32 South Makirikiri School	Project completed.	Completed	100%
33 Kairanga School (carried forward from last year)	Wetland project completed and grant claimed.	Completed	100%
34 Bushy Park community project (carried forward from last year)	Project completed.	Completed	100%

4 Regional Park Management

4.1 Activity Overview

- 4.1.1 The work at Tōtara Reserve Regional Park over the 2018-19 year focused on remediation of the June 2018 flood damage, enhancing flood protection, some works around safety in the park including management of trees, additional signage and reviewing pest management.
- 4.1.2 The Annual Plan target was met (table below) and the Annual Report was provided to the Environment Committee in May 2019.

Table 9 Progress update for the Regional Park Long-term Plan target.

LTP Performance Measure	Target	Completed	Result
Annual report on the management of Tōtara Reserve Regional Park for biodiversity and recreational values, including managing the camping facility.	1	1	Achieved

4.2 Totara Reserve Regional Park Summary

Activity in 2018-19

- 4.2.1 The budget for 2018-19 provided a similar quantum of overall rate funding to the previous year and included a forecast of increased revenue due to increases in the camp fees. This additional revenue has been utilised to fund additional expenditure to maintain the campground and facilities.
- 4.2.2 A significant flood event on 12 June 2018 sent a great deal of water through the Kahikatea campground and deposited silt over much of the camping area and in the ablution block. The flows were so strong that the water crossed Churchill Drive into the forest and exited right behind the ablution block in the Kereru campground, resulting in further water damage and silt deposition there and in the adjacent playground.
- 4.2.3 The first few months of this financial year were dedicated to repairing the damaged assets and returning the campgrounds to a fit state in time for camping season. It included replacing all the “softfall” bark mulch under and around the playground equipment and replacement of carpet and GIB® board in the Kereru ablution block. Just over \$20,000 of the clean-up and repair costs were able to be claimed back on insurance but some items, such as repairing scoured tracks and re-grassing the deposited silt, had to be taken out of the operational budget.
- 4.2.4 The budget for flood protection works was prioritised to upgrade the flood protection levels in the Kahikatea campground. Other areas of the Regional Park that required bank protection works were not able to be addressed with available budget and the river took away another section of walking track on the Gilchrist Loop. A new track has been created in the area, routed well away from the current river course and bypassing the former poplar nursery – a site that our staff and contractors assessed as becoming increasingly dangerous due to the age and instability of those trees.
- 4.2.5 Several trees and branches that posed a threat to visitors in the campground and around Camp Rangī Woods have been removed.
- 4.2.6 Campground fees were raised this year with powered sites going from \$20/night to \$35/night and unpowered sites from \$12/night to \$15/night. Despite the expected minor drop in patronage, campground income exceeded \$50,000 – up by more than \$17,000 on the previous financial year. Campground numbers were 3,464 camper nights for the 2018-19 period.
- 4.2.7 The weed control programme continued to make good progress against the highest priority weeds in and around the Regional Park. Of special note, the biological control agents for Tradescantia are showing plenty of promise. A leaf spot fungus will be added to the programme next year to go along with the three species of beetle currently in the establishment phase.
- 4.2.8 Animal pest control has primarily been targeted at possums, and staff will be looking to increase the number of bait stations through the interior of the forested areas. Wasp control has also undertaken in response to higher wasp numbers around the campgrounds later in the camping season.

- 4.2.9 The Totara Reserve Advisory Group had a strategic planning workshop in February and will follow that up with another one later in 2019. The draft strategic plan is being based on the successful Te Āpiti Manawatū Gorge Governance model of 4 pillars – Biodiversity, Cultural, Recreation and Education.
- 4.2.10 A tender process is underway for the Totara Reserve Regional Park campground maintenance contract and will be posted on the Tenderlink website. The new contract will be for a three year period.
- 4.2.11 The necessary safety upgrade to the effluent treatment area has been scheduled for the 2019-20 financial year, along with several other CAPEX items, including sealing roads.
- 4.2.12 Additional boardwalks and steps planned for the Fern Walk this year were delayed due to the flood repair costs that were not able to be claimed on our insurance.

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ENVIRONMENTAL COORDINATOR – BIODIVERSITY

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5 Collaboration Projects – Horizons / Department of Conservation (DOC)

5.1 Activity Overview

This report captures some Horizons and DOC collaborative projects that are not covered elsewhere in Environment Committee reports.

5.2 Activity Highlights

Kia Wharite

- 5.2.1 Mangapurua – Whitianga Aerial Pest Operation: The operation in the Mangapurua-Whitianga blocks has been completed. This included 28,871ha of conservation land and 2,061ha of Whitianga Trust land. Post-operation rat monitoring showed tracking rates had fallen from 67% tracking to 0% post-operation. This is a good outcome likely due to high bait uptake with a good period of fine weather after toxin application. Bite Mark Index (BMI) monitoring with waxtags for possums resulted in pre- and post-percentages of 27% and 15% respectively, well within the less than 25% BMI target. Carcass monitoring has been completed with degradation of carcasses assessed as safe. The caution period has expired. Warning signs are being removed.
- 5.2.2 Whanganui National Park (part of Kaukore Reserve) pest control: Nga Whenua Rahui was given permission through the Department to control possums in the reserves in and around Pipiriki Township. These blocks include an area of 654 hectares and are being controlled with the use of Pestoff Decal in bait stations. This operation will continue through to early 2020.
- 5.2.3 Predator trapping continues in the upper and lower Retaruke River catchment as well as the Aramahoe Reserve and on Ohorea Station. Catch rates have dropped off significantly in the Aramahoe Reserve following the ground 1080 work undertaken in the area in autumn.

Campsite Trapping

- 5.2.4 Self-resetting traps have been maintained and checked monthly at hut and campsites on the Whanganui Journey throughout the year.

Weed control

- 5.2.5 Weed control has been completed within the Whanganui River trench. This work specifically targeted control of tutsan, Japanese walnut and Brush wattle. These species were controlled from Pipiriki to Poukaria campsite. A total of 102 tutsan, 297 wattle and 2933 walnut plants were removed from the river trench.

Goat control

- 5.2.6 Goat control has been completed. Both ground and aerial control were used. The completed set of data is yet to be fully analysed.

Whio

- 5.2.7 Whio: There was a total of 30 pairs seen over the two catchments with 25 fledglings. Checks on the predator network with annual maintenance will be conducted over the winter months.
- 5.2.8 Twelve captive-bred whio were released on the Kaiwhakauka stream on 23 January 2019. It was thought best to keep this release low key to enable it to go ahead without holding the birds for too long. Members of Te Roopu Mana Whenua (TRMW) supported the day. Dan Steele attended as the adjoining landowner.
- 5.2.9 Twelve whio were released on the Manganui o Te Ao on 6 March 2019. Rangi Bristol and Aiden Gilbert, members of the TRMW were present along with DOC staff, Horizons councilors and staff and tamariki from Orautoha, Raetihi and Ohakune kura. An education programme was held with the tamariki in the afternoon. This event was well attended by the community.

Kiwi

- 5.2.10 Long-term monitoring on the kiwi population in the Whanganui National Park was conducted in May-June 2019 with acoustic recorders. This was a follow up from the previous year in which the recorders failed. These sounds recordings will be analysed over the winter months.

Te Āpiti Manawatū Gorge Project

- 5.2.11 Rat control was carried out in South side of Manawatu Gorge in April 2019. Diphacinone was laid by a contractor.
- 5.2.12 A final decision around possum control in Manawatu Gorge is still pending but it is likely there will not be aerial 1080 operation. Possum control will more likely be by a ground based method. Discussions are taking place for a collaborative approach between Council Regional Response Team and DOC.
- 5.2.13 There is a Possum fur trapper currently working in the Ballance end of Gorge.
- 5.2.14 Volunteer group predator trapping is ongoing.
- 5.2.15 In late July/August the Manawatu Gorge Loop Track on the Tararua District side of Te Apiti is being upgraded. Actual dates are still being confirmed by the contractor and will be subject to weather conditions. The planned work includes track re-formation, water table control and track re-surfacing. The works will bring the track up to a suitable standard to match its popularity and use. The track will be closed for a short 7-10 day period, for the duration of the works. Alerts will be in place and we will contact the i-Sites directly.
- 5.2.16 1 km distance markers have been installed on main walking track in June 2019.

Northern Ruahine Battle for our Birds aerial 1080 operation

- 5.2.17 Consultation is underway for the Battle for our Birds aerial 1080 operation as part of Tia kina Nga Manu, in response to the major masting event through the northern end of Ruahine Forest Park. Rodent numbers are increasing at this site.
- 5.2.18 Recent mean rat tracking index per line showed an increase from 27% in Feb 2019 to 61% in May 2019.

Monitor Event Year	Monitor Event Quarter	Monitor Event Name	Sub Survey	Number of Lines	Mean Rat tracking rate per line	SE_ Mean Rat tracking rate per line	Mean Mouse tracking rate per line	Mean Mouse tracking rate per line
2019 Feb	1	North Ruahine Q1	Rodent 1 day	16	27%	6%	16%	5%
2019 May	2	North Ruahine Q2	Rodent 1 day	16	61%	6%	11%	3%



SCIENCE & INNOVATION ACTIVITY

1 Activity Overview

Horizons' Science and Innovation team oversees delivery of monitoring and research across a broad range of Council activities including Water Quantity and Quality, Land, Biosecurity and Biodiversity, and Environmental Reporting and Air Quality Monitoring.

Programmed work for 2018/19, as set out in the Science Operational Plan, includes:

- Delivery of core monitoring programmes;
- Ongoing investigations into regional drinking water security;
- Delivery of the national groundwater pesticides survey;
- Fluvial surveying of the Pohangina and Whangaehu Rivers;
- A review of the biodiversity programme and implementation of recommended changes;
- Provision of new data on the **Land, Air, Water Aotearoa** (LAWA) website;
- Research into the impacts of climate change in the Region;
- **State of Environment** (SoE) reporting; and
- Development of a science communication strategy.

This activity report covers the reporting period from 1 April 2019 to 30 June 2019, as well as providing an annual summary of activity completed throughout the reporting year.

Performance measures, as set out in the Long-term Plan 2018-28, include the presentation of an annual report on monitoring and research activity, provision of public information via LAWA and SoE reporting, research into climate change and public drinking water security, and the development and implementation of a science communication strategy. An overview of progress against these targets is provided in Table 1 below. All 20 operational plan targets were met in the 2018/19 year. This item presents the annual report for the Science activity in the 2018/19 year.

Table 1 Year-to-date progress against performance measures set out in Horizons' Long-term Plan 2018-28.

Performance Measures for Levels of Service	Target 2018/19	Progress Update
Water Quantity and Quality		
Water quantity and water quality information is made available to the public via LAWA (www.lawa.org.nz) and Horizons' websites.	Data provided to LAWA as required	Data has been provided to LAWA and is now available on the website. Data preparation for the September 2019 refresh is also close to completion.
Annual report on water quantity and quality monitoring and research activity.	Develop an annual reporting framework and produce an annual report	An annual report on water quantity and quality activity was developed and presented to Council in August 2018.
Land Management		
Annual report on the land and fluvial monitoring and research activity.	Develop an annual reporting framework and produce an annual report	An annual report on land and fluvial activity was developed and presented to Council in August 2018.
Biodiversity and Biosecurity		
Annual report on biodiversity monitoring and research activity.	Develop an annual reporting framework and complete an annual report	An annual report on biodiversity research activity was developed and presented to Council in August 2018.
Environmental Reporting and Air Quality Monitoring		
Provide an annual summary report on the state of the environment.	Annual reporting framework is developed and a report produced	The State of Environment report was published in May 2019.
Develop and implement a science communication strategy.	Strategy and implementation plan developed	A strategy for science communication was developed.
Complete drinking water supply research with a focus on Council-operated drinking water supplies and complete an annual report on this to Council.	1	Source protection delineation and bore inspections for council-operated supplies serving 500 people (or more) were completed during 2018-19.
Investigate one aspect of climate change impact in the Region and report on this to Council.	1	A presentation by NIWA on the potential impacts of climate change on the Region was provided to Council on 14 May 2019. The report is now complete.
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 available to the public via the Horizons and LAWA websites. The State of Environment report was published in May 2019.
Undertake an annual public education air quality campaign.	1	A 2018 winter radio advertising campaign was completed and further information provided in the State of Environment report.

2 Water Quantity and Quality

Water is an important resource that provides for the cultural, environmental and economic needs of our Region. The Science and Innovation team serves the Water Quality and Quantity activity of Horizons' Annual Plans through a range of science monitoring and research programmes that track changes in the water resource and inform decision-making around water management.

2.1 Water Quantity

Surface Water

- 2.1.1 The core surface water quantity monitoring programmes continue, providing a wide range of information relating to river level, flow, rainfall, soil moisture, lake and groundwater levels and water use. This work is guided by the Catchment Data/Science Memo that describes the contents of the core hydrology programme for the year and outlines any direct requests by the Science and Innovation team for time from the Catchment Data team.
- 2.1.2 The water metering project (which is a fundamental component of managing water allocation and meeting Horizons' obligations under the National Regulations on Water Use Measurement and Reporting and NPS-FM) has progressed as well as possible within the current resourcing framework. With the implementation of the IRIS database has come an additional workload that was not anticipated. The team has worked with Consents Monitoring to prioritise telemetry installation and following up on water meter installations but with the IRIS reporting functionality still outstanding in this space, managing and reporting project progress has been challenging and remains a largely manual process.
- 2.1.3 The Accelerate25 report on water resource availability is in the final stages of completion following revision of the allocation data to May 2019 data. The reporting brief originally requested, the inclusion of draft "report cards" for surface and groundwater, summarising water availability and current use types and so on. It is recommended that these be produced as a web-based product with linkages to real-time information in addition to or as part of the SoE Annual Report cards due to the changeable nature of the data to be reported.

Groundwater and Lakes

- 2.1.4 Rainfall has been normal or above average in most parts of the region over the last 12 months. This has helped maintain groundwater levels over the year in most parts of the region, however water levels were lower than normal in the coastal Rangitikei area (Santoft) and some sites around Palmerston North.
- 2.1.5 Groundwater level trends were assessed as part of the 2019 State of Environment report recently released. It showed groundwater levels were improving at 30% of monitored bores, and declining at 14%. Those declining bores are primarily in the Santoft, Palmerston North and Rongotea areas.

- 2.1.6 Horizons also continues to monitor the water levels in several of our coastal lakes. This includes telemetered data on Lake Horowhenua and Lake Koiitiata, and manual monthly monitoring of Lakes Poroa, Dudding, Pauri, Wiritoa, Westmere and Kohata.

2.2 Water Quality

Surface Water

- 2.2.1 The SoE and Discharge monitoring programme was completed, with additional water quality parameters included from April 2018 to provide essential information for our Catchment Characterisation programme.
- 2.2.2 Results from these programmes have been analysed for the State of Environment report. A state and trend technical report of river water quality was completed and presented to Council at the Strategy and Policy meeting in November 2018.

Fraser, C. and Snelder, T. (2018). State and Trends of River Water Quality in the Manawatu-Whanganui Region, for records to up to 30th of June 2017. Land Water People Client Report prepared for Horizons Regional Council.

Patterson M, Matthews A and Roygard J. (2018) State and Trends of River Water Quality in the Horizons Region, Report No 18-197 to the Horizons Regional Council Strategy and Policy Committee, 13 November 2018.

- 2.2.3 A follow-up piece of work investigating the spatial drivers of river water quality state and trends has been drafted and received by Horizons. It will be presented to Council following its completion.

Groundwater

- 2.2.4 Groundwater monitoring network continues to be reviewed and upgraded where possible, now consisting of 35 bores in addition to three for the National Groundwater Monitoring Programme (NGMP). These are monitored on a quarterly basis and the results of which was published in the 2019 State of Environment report. One bore to the north-east of Levin shows a slight degrading trend over five years.

Thomas, N. (2019). Report on Horizons Groundwater Monitoring Data. Pattle Delamore Partners Ltd Client report prepared for Horizons Regional Council, August 2018.

- 2.2.5 The four-yearly pesticides survey was undertaken in September 2018. In addition to the usual suite of pesticides we normally test for, glyphosate and a range of emerging organic contaminants were also included. Results showed pesticide and herbicide results at two bores, while no glyphosate (or its metabolites) were detected in any bores. Emerging contaminant

results will be available later in 2019. The report is scheduled to be completed by ESR and provided to Horizons in October 2019.

Lakes

- 2.2.6 Water quality is monitored at 15 lakes in the Region. Eleven lakes have been monitored by helicopter since 2015. Lakes Dudding, Wiritoa and Pauri have been monitored quarterly by boat since 2014 and increased to monthly in late 2018 and early 2019 to further understand the in-lake processes. Lake Horowhenua has been monitored monthly by boat since 2013 and also has had a permanent monitoring buoy deployed for continuous monitoring for a range of parameters at various water depths. However, security issues since mid-2018 require the lake to be monitored by helicopter.
- 2.2.7 A comprehensive paper on lakes management was presented to Council at the Strategy and Policy meeting in March 2019. This included a summary of the results from the water quality monitoring programme and recommendations for further work in this area.

Kamke J., Daly E., Gilliland B., Matthews A., Brown L., and Roygard J., (2019), Lakes Management Update, Report No 19-29 to the Horizons Regional Council Strategy and Policy Committee, 12 March 2019

Swim Spots

- 2.2.8 Swim spot monitoring was completed at 82 popular recreation spots at lakes, rivers and beaches across the Region from early November 2018 to late April 2019. Our 'Swim Spot' public campaign was also delivered, while monitoring data was regularly published to both the Horizons and LAWA websites. A summary of results was presented in the State of Environment Report.
- 2.2.9 To identify potential sources of high bacteria levels in the Ototoka catchment a synoptic survey was undertaken. A report has been completed on the findings from this work and is available for councillors on the Hub. Following the investigation, flyers have been sent out to landowners in the catchment by the Freshwater Team targeting fencing and planting within the catchment.

Kamke J., Hurst I., and Patterson M. (2019). Faecal Source Tracking of the Ototoka Stream. Horizons Regional Council.

Swimmability

- 2.2.10 Council published swimmability targets in November 2018. A council paper presented in December 2018 provided a summary of the state of water quality in the region with respect to the swimmability targets and a detailed summary for the coastal Whanganui Streams.

Kamke J., Daly E., Gilliland B., Matthews A., Brown L., and Roygard J., (2019). Final Targets For Swimmable Lakes and Rivers, Report No 18-201 to the Horizons Regional Council Strategy and Policy Committee, 13 November 2018.

Patterson M., Matthews A., Brown L., and Roygard J., (2019). Whanganui Coastal Streams, Report No 18-233 to the Horizons Regional Council Environment Committee, 12 December 2018.

2.3 Biomonitoring

Periphyton

- 2.3.1 Periphyton monitoring is carried out at 65 sites in the Region and the programme has now been running for nine years, providing us with the largest – and most comprehensive – periphyton dataset in the country.
- 2.3.2 This dataset has been fundamental for use in a range of hearings carried out throughout this period (i.e. Pahiatua and Eketahuna Wastewater Treatment Plants), and is likely to continue being used in measures of policy effectiveness, particularly given the National Policy Statement – Freshwater Management requirements in this space.
- 2.3.3 Following on from a significant investigation of periphyton drivers and relationships in 2018, Horizons and DairyNZ co-funded a piece of work undertaken by NIWA to inform a review of the nutrient limits in the One Plan as relate to periphyton outcomes and to produce a series of look up tables which would inform decision making in catchments by indicating what would result from various changes to key drivers of periphyton growth. This report is currently being finalised.

Kilroy C. (2019). Using empirical relationships to develop nutrient targets for periphyton management – a case study from the Horizons region. Prepared for DairyNZ and Horizons Regional Council. NIWA client report: 2019092CH.

Macroinvertebrates

- 2.3.4 Macroinvertebrate communities are widely used as indicators of stream ecosystem health because they include a wide range of species, each with relatively well-known sensitivity or tolerance to stream conditions. The most common stream health indices are taxa richness, percentage of EPT taxa and the Macroinvertebrate Community Index (MCI).
- 2.3.5 Aquatic macroinvertebrate monitoring is undertaken annually in the Horizons Region and state and trends are reported following the analysis of samples. During the 2018-19 season 95 sites were sampled for state of the environment and discharge monitoring purposes. All results from our annual macroinvertebrate monitoring is fed into state and trend reporting identified in the State of Environment report and in the trend and drivers assessments carried out by Land Water People (identified in the water quality section).
- 2.3.6 Following on from the analysis carried out by NIWA on our periphyton monitoring programme, NIWA undertook analysis of our macroinvertebrate, periphyton, flow and water quality datasets, to deliver an assessment of the stressors likely responsible for changes to macroinvertebrate communities across the regional SoE network. This report increases our knowledge over drivers

of macroinvertebrate community change, and was co-funded by Horizons and DairyNZ. This report is currently being finalised.

Graham, E., Stephens, T., Wright-Stow, A., Matthews, A., Brown, L., Patterson, M. E. & Patterson, M. J. (2019). Drivers of macroinvertebrate communities in the Horizons Region. Prepared for Horizons Regional Council and DairyNZ. NIWA client report: 2019136HN.

Fish

- 2.3.7 Fish and fish pass monitoring was undertaken across the region with one fish pass monitored and 12 state of the environment fish monitoring sites monitored, and an additional six sites surveyed for mudfish populations.
- 2.3.8 One of the key outputs in this space was the consolidation of data and early scoping of a project to be carried out in the 2019/20 financial year looking at prioritising Site of Significance – Aquatic sites (as defined in Schedule B of the One Plan). This would help identify sites for additional study or prioritisation for enhancement works.

2.4 Catchment Characterisation

New Zealand Water Model and Hydrological Programme

- 2.4.1 The NIWA-led New Zealand Water Model is a national project aimed at improving the understanding of hydrological processes to help with implementing land and water policies in New Zealand. Horizons is assisting in the development of this model by collecting age and isotope tracers from the Porewa Stream and rainfall isotopes from around the catchment. These are collected as part of the monthly water quality monitoring programme. Outputs of the programme so far are a number of geospatial layers that are necessary to feed into the model. Similarly, Horizons undertakes its own hydrological programme to characterise its catchments, most recently in the Ohau and Waikawa catchments.

Regional Physiographics

- 2.4.2 The Physiographic Environments of New Zealand (PENZ) is a three-year project that uses geospatial data and water quality information to characterise water quality variability in the landscape. Horizons commissioned Land and Water Science to develop the hydrological and redox Process-Attribute Layers (PAL) necessary to apply the Physiographics Method to the Horizons region. The hydrological PAL represents the landscape controls over water source, recharge mechanism and water pathway. The redox PAL represents the combined influence of soil and geological reduction potential. The PENZ project team will be looking to validate the PALs nationally over the next year using water quality data from Regional Councils.

Massey Collaborative Research Programme

2.4.3 The collaborative research programme between Massey University and Horizons is largely to do with understanding the flux and flows of farm nutrients to waterbodies in agricultural catchments. It is known that farm nutrients travel through different pathways and undergo different processes depending on the catchment, but less is known about how and why they differ. The research programme aims to understand aspects of these questions, specific to the Horizons Region. Two PhDs and a number of Master's theses have so far been completed, and continues with an additional two PhDs started in 2019. One further PhD is still being advertised. The research undertaken as part of this programme aligns well with other projects supported by Horizons, including the physiographics work, a fluxmeter project on cropping systems (Foundation for Arable Research), and innovative drainage management technologies (Massey University).

2.5 Regional Water Resources

2.5.1 Horizons' groundwater allocation limits are undergoing a technical review with a final report soon to be finalised. Under Horizons' One Plan, groundwater allocation limits are calculated as 5% of the average annual rainfall across the area of each **Groundwater Management Zone** (GWMZ), which is generally considered a conservative approach to setting groundwater allocation limits. However, in some cases it over estimates the true volume available for abstraction. The report estimates new limits based on the rainfall recharge of the local underlying geology. It also looks at possible alternative approaches for allocation of the Rangitikei, Tararua and Horowhenua zones:

Thomas, N. (2019). Review of Groundwater Allocation Limits. Pattle Delamore Partners Ltd Client report prepared for Horizons Regional Council, July 2019.

2.6 One Plan Changes and 'Our Freshwater Future'

2.6.1 A range of work across the Science and Innovation work programme contributed to implementation and effectiveness monitoring of Horizons One Plan and National Policy Statement for Freshwater Management. In 2018/19 this included commissioning Land Water People in partnership with DairyNZ to provide an analysis and commentary on the appropriateness of different load calculation methods for translating a concentration based target into a load based limit, providing science advice and monitoring information to inform the Plan Change 3 process. This project is continuing in 2019/20 with the final report expected later in the calendar year.

2.7 Stormwater

2.7.1 Stormwater projects were delayed in the 2018/19 year due to the expanded work programme around drinking water (section 5.3) taking priority.

2.8 Lakes Research

- 2.8.1 The objective of Horizons' lake monitoring and research programme is to provide information that defines the current state of water quality and ecological condition of a selection of the Region's lakes, and measures changes in their health.

Lakes SPI

- 2.8.2 Horizons has an annual work programme in place with NIWA to learn more about the ecological condition of the Region's lakes. Lake SPI uses Submerged Plant Indicators (SPI) to assess the ecological condition of New Zealand lakes.
- 2.8.3 A Lake SPI index ranges from 0% (heavily impacted lakes) to 100% (pristine, unimpacted lakes) and provides five descriptive categories of condition. Lake SPI complements traditional water quality monitoring such as Trophic Level Index (TLI) by providing ecological information. Lake SPI field work for this year was completed in December 2018 with ten new lakes assessed. This brings the total number of lakes assessed for Lake SPI to 41. The Horizons Region has more than 220 lakes. Results for 2018/19 are overviewed in the State of Environment report and presented in more detail in the following report:

Burton, T. (2019). Assessment of 41 lakes in the Manawatū-Whanganui Region using LakeSPI. NIWA Client Report prepared for Horizons Regional Council, June 2019.

Lakes Prioritisation

- 2.8.4 A stocktake, gap identification and prioritisation for lakes in the region has been developed. The framework for the prioritisation is completed and the supporting report will be externally reviewed in August. The report will be made available to council once finalised.

Lake Dudding

- 2.8.5 A two day workshop was held in May after concerns were raised that water quality monitoring indicated that the lake may be in the process of flipping. The workshop involved lake experts from NIWA, Cawthron, Otago University, an iwi representative, as well as staff from Horizons, Rangitikei District Council, Public Health, and Department of Conservation. The aim of the workshop was to develop a joint witness statement outlining the issues at Lake Duding and identify possible interventions.
- 2.8.6 An expert conferencing statement was in the process of being finalised when grass carp were discovered at Lake Dudding. Unfortunately the discovery of grass carp in the lake has delayed the completion of the conferencing statement. Work will continue this year (FY 2019/20) to finalise the potential interventions considered suitable post grass carp discovery. Further information is available in the Freshwater team's section of this environment committee report.

2.9 Coastal and Estuarine Environments

Coast

- 2.9.1 Water quality monitoring is ongoing at 4 beach sites 1 on the east coast and 3 on the west coast. A summary of the results from this monitoring programme compared to the One Plan targets is presented in the 2019 State of Environment Report.
- 2.9.2 Envirolink funding was utilized to engage NIWA to undertake an Analysis of the marine climate of the South Taranaki coast in the Manawatū-Whanganui Region (in draft format for review) and a report on Marine Flow Patterns on the West Coast.
- 2.9.3 The main conclusions from the report on Marine Flow Patterns on the West Coast included: material entering the CMA from rivers will have bigger impact on the CMA than material originating from the western end of Cook Strait; the coastal area south of the Whanganui River is most vulnerable to impacts from oceanic and riverine inputs; material is mainly transported downstream out of the CMA at its southern border, on occasion there is transport of material out of the northern and eastern border as well.

Collins, C., and Macdonald, H. (2019). Oceanic flow patterns and their influence on receiving and transmitting material on the west coast of the Manawatū-Whanganui Region: Ocean flow and its influence on transporting material. NIWA Client Report prepared for Horizons Regional Council, June 2019.

Estuaries

- 2.9.4 Estuaries are important coastal receiving environments of high ecological and recreational value. However, increased nutrient and sediment loads can degrade these important habitats. Following an initial vulnerability assessment of all the Region's estuaries for eutrophication and sedimentation in 2016, an ongoing programme is now being delivered for several estuaries in the Region.
- 2.9.5 Monthly monitoring of water quality is ongoing at six estuary sites across the Region (1 on the East Coast and 5 on the West Coast) the results of the monitoring programme were included in the State of Environment report.
- 2.9.6 During 2018/19 the Estuary habitat work programme included the completion of the 3rd year of baseline monitoring in the Manawatū Estuary; the first year of Fine Scale baseline monitoring undertaken in the Whanganui Estuary; the installation of a sediment plate and measurement report card for the Whangaehu Estuary; the second year of synoptic baseline monitoring in the Waikawa Estuary; and inaugural synoptic baseline monitoring in the Kai Iwi and Mowhanau estuaries.
- 2.9.7 The Manawatū Estuary saw the completion of fine scale baseline monitoring. Although it is too soon for trends to be observed the surveys saw an increase in sediment mud over the three year

monitoring period and a desktop assessment to assess factors likely to explain this is recommended. Overall the environment within the estuary appears reasonably harsh and strongly influenced by low salinity water from the Manawatū River. The report recommends continued annual sediment plate monitoring and additional fine scale monitoring in approximately 5 years.

- 2.9.8 The Whanganui Estuary saw the first year of fine scale and monitoring. The species found here reflect the reasonably harsh physical conditions, with the major contributors likely to be the brackish (low salinity) water inundating the tidal flats each day reflecting the mixing of the Whanganui River with the incoming tidal waters. It is recommended that baseline monitoring continue for a further two years.
- 2.9.9 The Whangaehu Estuary was observed to have a thick deposit of fine mud. Sites showed an increase in sediment deposition from the previous year's monitoring, although there is currently not enough data available to examine trends at this point. Deposit mud is clearly due to the input of fine-sediment from catchment run-off and not from a marine source. It is recommended that further monitoring be done here to improve understanding of the extent of habitat change due to muddy sediment and to guide catchment management decisions.
- 2.9.10 Synoptic monitoring of the Kai Iwi and Mowhanau estuaries revealed neither are experiencing significant symptoms of eutrophication. This finding is consistent with water quality monitoring conducted by Horizons. The recently developed Estuary Trophic Index (ETI), which describes an estuary on a eutrophication gradient, rated both estuaries in the 'good' category.

Stevens, L. (2019). Fine scale Intertidal Monitoring of Whanganui Estuary. Salt Ecology Client Report 019 prepared for Horizons Regional Council, June 2019.

Stevens, L. (2019). Whangaehu Estuary Sediment Monitoring. Salt Ecology Client Report 014 prepared for Horizons Regional Council, June 2019.

Stevens, L. (2019). Synoptic Subtidal Monitoring of the Waikawa Estuary. Salt Ecology Client Report 015 prepared for Horizons Regional Council, June 2019.

Forrest, B., and Stevens, L. (2019). Fine Scale Intertidal Monitoring of the Manawatū Estuary. Salt Ecology Client Report 016 prepared for Horizons Regional Council, June 2019.

Stevens, L. (2019). Synoptic Subtidal Monitoring of Kai Iwi and Mowhanau Estuaries. Salt Ecology Report 018 prepared for Horizons Regional Council, June 2019.

3 Land

Land Activity covers both the Land Management and Fluvial programmes and provides technical support to Horizons’ main land-based initiatives: our **Sustainable Land Use Initiative** (SLUI) and River Management programme. Land Activity also informs One Plan implementation and policy development for both wastewater and nutrient management.

3.1 Gravel Use Monitoring and Reporting

- 3.1.1 Quarterly processing of gravel use records helps us monitor the amount of gravel being utilised and ensure that targeted rates for gravel use (gravel levies) are appropriately calculated.
- 3.1.2 Gravel use records collected over the 2018/19 financial year (Figure 1) show that more gravel has been taken this year than in recent years.

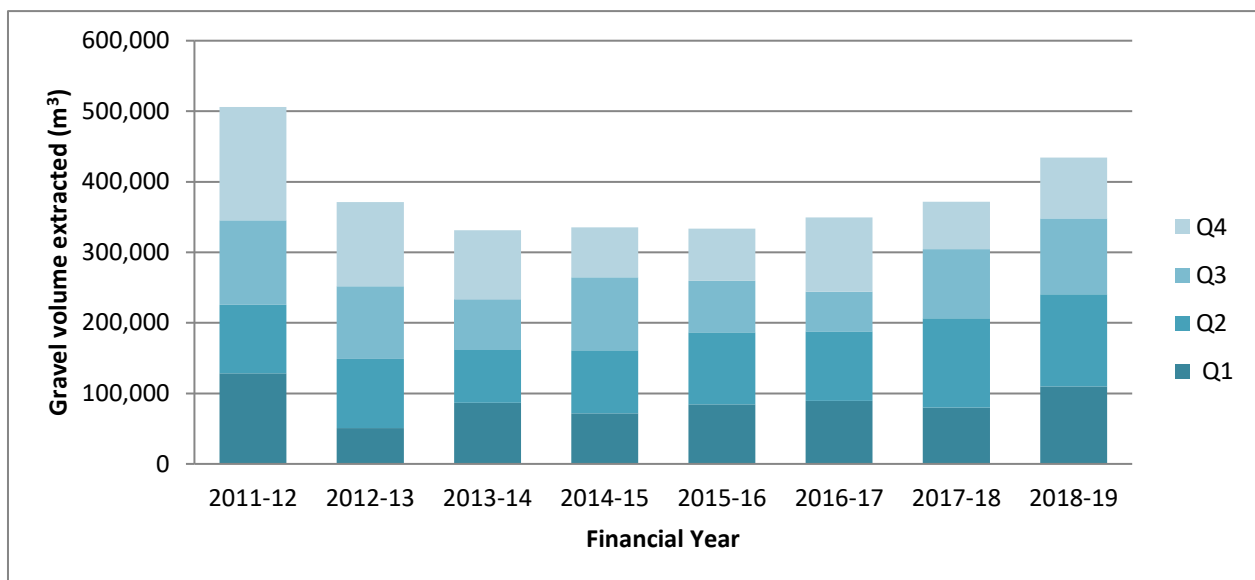


Figure 1 Plot showing the amount of gravel taken through consented takes each quarter for the last eight years. Q1 = July to September, Q2 = October to December, Q3 = January to March, Q4 = April to June.

3.2 Fluvial Surveying

- 3.2.1 The fluvial survey programme provides information on the changes in levels of aggradation or degradation of river channels and berms. During 2018/19, cross-sectional surveying was carried out on the Pohangina River and the South Eastern Ruahine rivers Kumeti, Tamaki, Otamarahu and Rokaiwhana. The surveying scheduled for the Whangaehu River has been postponed due to technical issues with appropriate survey equipment for the river.

Whale, E. & Bell, J. (2019) Manawatū and Oroua Gravel Resource Studies, Report No 19-89 to the Horizons Regional Council Catchment Operations Committee, 11 June 2019.

Whale, E., (2019). Lower Manawatū Gravel Resource Study. Horizons Regional Council.

3.3 Contaminated Land

- 3.3.1 An investigation in the contamination of the Bulls water supply by per- and poly-fluoroalkyl substances (PFAS), was started during the 2018/19 year. A paper was presented to council based on a draft report of the Bulls water supply investigation and is expected to be released in August 2019. Staff time was also put into the national response, with Abby Matthews being part of the All of Government National PFAS Programme which included meetings with other councils, the community and investigations at other sites (e.g. Palmerston North Airport).

Matthews A and Roygard J (2018) Per- and Polyfluoroalkyl Substances, Report No 18-234 to the Horizons Regional Council Environment Committee, 12 December 2018.

3.4 Innovative Land Use Mapping

- 3.4.1 This paper signalled in the operational plan was not progressed during the year with time being diverted to PFAS related response and activities.

3.5 Sediment Source and Transport

- 3.5.1 Building on the sediment fingerprinting and LiDAR analysis completed over 2017/18, this year Horizons undertook a project to better understand the fluvial geomorphology of the Lower Manawatū (Including the Oroua). Tonkin & Taylor were commissioned to carry out the Lower Manawatū Sedimentation Study. The objective of this project was to review all existing information, including the recent LiDAR flown over both rivers and the results of the sediment fingerprinting report, and provide recommendations about potential river management strategies that could be further investigated.
- 3.5.2 Tonkin & Taylor took the approach of classifying unique river types based on how they respond to different drivers of change. Thirteen river types were identified across the Manawatū and Oroua Rivers.
- 3.5.3 The analysis of all available data suggested that there was an overall degradation trend since the late 1800s that is disrupted by large rainfall events that cause widespread hillslope erosion. Different localized processes have taken place such as an increase in overbank deposition in the Oroua over the last ten years. Potential sediment management options included the revegetation of hillslopes (continuation of SLUI); bank regrading; two-stage channel construction; rock riffles; in-stream structures; appropriate gravel management that considers geomorphic processes; wetland creation riparian planting; floodplain engagement; and stopbank relocation.

Boyte, S., Patterson, M., Cooper, G., & Roygard, J. (2019). Hill country erosion and sediment management in the Manawatū Whanganui Region, Report No 19-94 to the Horizons Regional Council Catchment Operations Committee, 11 June 2019.

Conn, S., Quilter, B., & Groom, J. (2019). Lower Manawatū Sedimentation Study. Tonkin + Taylor Client report prepared for Horizons Regional Council.

3.6 Nutrient Management Research

- 3.6.1 A project to assess the water and nutrient flow pathways from intensive winter grazing on gravel soils in the Rangitikei catchment was established in 2018/19. This project is led by Massey University and funded by Horizons with the trial site located on a farm near Hunterville. Five surface water sites and one groundwater site have been sampled monthly since August 2018 and analysed for nutrients, sediment and *E. Coli*. This project will continue into the 2019-2020 year. The results will help identify likely nutrient pathways and their impact on the Rangitikei River.
- 3.6.2 Horizons is co-funding a three year project to measure and manage diffuse nitrogen losses from cropping systems. This project is led by the Foundation for Arable Research and was established 2018. A network of drainage fluxmeters are installed on 12 farms across the country to measure loss of phosphorus and nitrogen. These collect soil drainage at a depth of 1 m. There are three sites in our region near Levin (intensive vegetable cropping); Bulls (mixed cropping and livestock grazing); and Ohakune (mixed cropping). The results from these trials will be used to test the impact of current management practices on indicators of nutrient use efficiency.

3.7 Land Chapter State of Environment

- 3.7.1 The Land chapter of the State of the Environment report provided a summary of changes in farming since 1994, current land use and introduced our soil health monitoring programme established in 2015. It highlights the Sustainable Land Use Initiative through which 16 million trees have been planted over the last ten years to prevent hill country erosion. A case study on sediment demonstrated the new direction we are undertaking to understand fluvial resources better by characterising sediment sources through Manaaki Whenua's sediment fingerprinting technique as well as a LiDAR comparison analysis completed by Massey University.

4 Biosecurity and Biodiversity

Biosecurity and biodiversity management are core functions of Horizons that add significantly to the environmental, economic, social and cultural prosperity of the Region by enhancing the quality of indigenous ecosystems and reducing the impacts of pest plants and animals. This group of activities includes Horizons' species-led pest plant and pest animal control (Biosecurity function) and the protection of biodiversity through site-led approaches, including support of community biodiversity programmes (Biodiversity function).

The work programme for 2018/19 included a follow-up to the previous year's biodiversity programme review. This included the implementation of management levels and a stocktake of all managed sites. The ecosystems that would likely have been present without human intervention were mapped and this

information was used to inform a prioritisation analysis that supports our work to ensure that a representative range of ecosystems are protected on to the future.

4.1 Biodiversity Implementation Support

4.1.1 A series of projects to support the implementation of Horizons' Biodiversity Programme were initiated last year with subsequent projects scheduled for the upcoming year. The biodiversity review was overviewed in the biodiversity operation plan and updated to council via environment committee. uj

Madden, A., Smillie, R., and Roygard, J. (2018). Biodiversity Operational Plan 2018 – 19. Report No: 2018/EXT/1583. Endorsed by Council at the Environment Committee meeting on 28th August 2018.

4.1.2 Modelling and mapping of the region was commissioned to identify the full complement of ecosystems prior to human-induced land use change. Developed by the Department of Conservation and now adopted by most regional councils, this process draws on a wide range of resources available that describe both the biotic and abiotic attributes of ecosystems. The addition of this provides for a regional approach that is more nationally consistent.

Singers, N. and Lawrence, C. (2018). A Potential Ecosystem Map of the Manawatū – Whanganui Region. NZES Client Report prepared for Horizons Regional Council, December 2018.

4.1.3 To ensure that a representative range of our remaining ecosystems are managed into the future Zonation modelling was completed. Analysis was performed using internationally recognised spatial prioritisation software that maximises ecosystem representation. This process combines spatial data describing potential ecosystems (described above) and current land cover for the Horizons Region to allow identification of priority sites for indigenous biodiversity management. Analysis is supported by development of a condition layer that takes account of habitat fragmentation, distributions and any management of vertebrate pests and recognises the value of linkages between different ecosystems.

Leathwick, J. (2019). Indigenous Biodiversity Rankings for the Horizons Region. Client Report prepared for Horizons Regional Council, February 2019.

4.1.1 The State of Environment Report provides a summary of the changes to the extent of biodiversity in the region and the work that Horizons is doing to maintain and enhance remaining indigenous biodiversity. Highlighted case studies include Cape Turnagain, Te Apiti and the prioritisation ecosystem remnants across the region.

4.2 Tōtara Reserve Bird Monitoring

- 4.2.1 Annual bird monitoring in Totara Reserve Regional Park was completed in December 2018. This round of monitoring is the first applying an improved methodology recommended by Wildlands following a review of the monitoring protocol in 2017.
- 4.2.2 Nineteen indigenous and 17 introduced bird species were recorded in 2018, including kārearea (bush falcon), pōpokatea (whitehead), kererū (wood pigeon), pīpīwharau (shinning cuckoo), ruru (morepork); and sulphur-crested cockatoo were heard throughout all three zones. Native to Australia, these birds have established populations in Pohangina, Port Waikato and Turakina.
- 4.2.3 A report containing the full analysis of this data will be completed following monitoring in the 2019/20 FY.

5 Environmental Reporting and Air Quality Monitoring

Effective management of the Region's natural resources depends on accurate and timely information about the environment and its health, along with ready access to this information and having it packaged in a way that is understandable for the intended audience.

During 2018/19 our focus is on the 2019 State of Environment report; continued delivery of data to the LAWA website; responding to public enquiries and general requests for monitoring data and information; and supporting national work programmes including development and implementation of the **National Environmental Monitoring Standards** (NEMS). We will also be producing a science communication strategy and developing a framework for annual SoE reporting, following the release of our next SoE report early in 2019.

The air quality monitoring programme will continue to monitor and report on the Taihape and Taumarunui airsheds, which are designated under the **National Environmental Standard for Air Quality** (NES-AQ).

5.1 Air Quality

- 5.1.1 The NES-AQ requires councils to monitor and report exceedances of the short-term **World Health Organisation** (WHO) guideline values for outdoor air quality. Monitoring of air quality is undertaken by Horizons in two designated airsheds: Taihape and Taumarunui.
- 5.1.2 Annual pre-winter independent calibration checks of the **Beta Attenuation Monitoring** (BAM) instruments at Taihape and Taumarunui were completed by WaterCare technicians towards the end of the April 2019.
- 5.1.3 Monitoring over the last 14-months shows that Taihape and Taumarunui have met the NES for air quality for the 2018/19 financial year. The winter air quality in the towns is expected to improve over time as more homes switch to more efficient home heating units (attrition), resulting from

Horizons public awareness /education campaigns (burning dry wood) and from people moving to less polluting motor vehicles.

- 5.1.4 Staff have advised Council over the past few years that the two BAM instruments are old and their reliability and cost to keep them operational is of concern. Spare parts are not readily available, compromising the length and integrity of the record. The BAM at Taumarunui has not been operating since 15 July 2019 as a result of a failed heater element. A replacement for the faulty unit is currently being sourced and will be installed on arrival.

5.2 Climate Change

- 5.2.1 Over the 2018/19 year, we commissioned NIWA to provide a report analysing the implications of climate change for our region. The report looked at how climate change would impact the different areas of the region and sectors. Asset data from the Risk Scape database was used to assess exposure of buildings infrastructure, land and population to coastal inundation and flood hazard.
- 5.2.2 The results showed that climate change is likely to lead to increased costs in most sectors. The agricultural sector is likely to be affected by increased drought, water availability, feed preparation and pest control. The health care and social assistance sectors are likely to be affected by an increase in the risk of respiratory illness, heat-related death and water and food borne disease. It is also important to note that climate change impacts on the transport network will affect many sectors in the region.
- 5.2.3 Compared to other regions, the assets of the Horizons Region will be less affected by sea level rise, however the Horowhenua District will be impacted and is the most exposed area of the region. Greater parts of the region are exposed to flood hazards in the Manawatū, Rangitikei and Tararua Districts.
- 5.2.4 This report will be used in the development of the climate change strategy currently underway for the council.
- 5.2.5 The State of Environment report provides a summary of the regional scale climate change projections for the region. We can expect an increase in annual average temperatures of up to 3.1°C by 2090, more snow and rainfall, particularly in the Ruapehu District, and up to 20 % less rainfall on the East Coast of our region. Climate change projections have also been integrated in our water quality and land programmes through the SedNetNZ model developed by Manaaki Whenua. With ongoing implementation of SLUI works at our current pace, the projected annual average sediment load decrease of 27 % by 2043 could be reduced to between 19 and 5 % depending on the climate change scenario.

Holland, P., Pearce, P., Luttrell, J & Paulik, R (2019). Climate change implications for the Manawatū-Whanganui Region. NIWA client report prepared for Horizons Regional Council, June 2019.

Boyte, S., Matthews, A., & Roygard, J. (2019). Climate Change. Report No 19-62 to the Horizons Regional Council Strategy and Policy Committee, 14 May 2019

5.3 Drinking Water

- 5.3.1 Ensuring the security of drinking water supplies requires collaboration between territorial authorities, water suppliers, public health offices and Horizons. A new work programme initiated during 2017/18 seeks to ensure that all parties are aware of any risk associated with each supply, that their roles and responsibilities are understood, and that there is adequate flow of information to ensure each agency is meeting its requirements.
- 5.3.2 Source protection zones for each drinking water supply over 500 people in the region has now been completed. Reports are being prepared for each territorial authority identifying three source protection zones around each drinking water source, including a physical assessment of well head security. This project has been co-funded by the territorial authorities and recommends various management options to protect these drinking water sources. A final report is still in progress.

Matthews A and Roygard J (2019) Drinking Water Research Annual Report, Report No 19-84 to the Horizons Regional Council Strategy and Policy Committee, 12 June 2019.

5.4 State of Environment 2019

- 5.4.1 Horizons' 2019 State of Environment Report was released in May 2019 including chapters on Climate, Air, Land and Water. The report (available on Horizons' website) presents a range of indicators including pressures on the environment and state as well as trends in both of these. The report also presents some information on the response to identified issues. While the information on response is not intended to be comprehensive, it does present a range of case studies, information on rates of progress and project outcomes for the region.

Matthews A and Roygard J (2019) State of Environment Report, Report No 19-73 to the Horizons Regional Council, 28 May 2019.

Horizons Regional Council (2019) 2019 State of Environment. Horizons Regional Council, May 2019.

5.5 Science Communication Strategy

- 5.5.1 Sound communication of science is critical to inform stakeholders, advise decision-makers and empower communities. We recognise that scientific information is often targeted to the science community and this can create difficulties in conveying this information in ways that engage the wider public. By ensuring the communication of science is purposeful and targeted to key audiences we can increase uptake and improve understanding of the issues and, in turn, empower those involved in making decisions about how natural resources can best be managed.

- 5.5.2 During 2018/19 we developed a strategy around the communication of our science. The objective of this strategy is to maximise science uptake, and ensure up-to-date and relevant science information is effectively communicated to Horizons staff, councilors, iwi, the public, external agencies, and any other parties interested in aspects of natural resource management. Implementation of the strategy is planned in the coming year.

5.6 Land Air Water Aotearoa (LAWA)

- 5.6.1 LAWA is a regional council-driven initiative to present data and information about New Zealand's environment and natural resources to the public. Horizons provides science support for the continued evolution of the website, and data for annual refreshes. Further information can be found at www.lawa.org.nz
- 5.6.2 During 2018/19 Horizons contributed data to all modules, including real-time water quantity and air quality data the provision of Groundwater Quality data and an annual update for a range of water quality modules.

Report No 19-26 to the Horizons Regional Council Environment Committee, 13 March, 2019.

5.7 Public Information and RMA Advice

- 5.7.1 The Science and Innovation team regularly responds to data and information requests, and provides RMA advice to internal and external clients. External information sharing is an important part of Horizons' business. The purpose of this project is to communicate programme outputs, and to inform and educate resource consent holders and the public about the value of these programmes and how they contribute to the wider management of the Region's water resources.
- 5.7.2 The Science and Innovation team continued efforts to work closely with Horizons' Communications team to regularly produce consumable "sound bites", respond to media requests, and assist with the provision of public information.
- 5.7.3 Public information included contributions to a summer edition of 'Across the Region' dedicated to Swim Spot monitoring. See the State of Environment report for more details:

Horizons Regional Council (2019) 2019 State of Environment. Horizons Regional Council, May 2019.

5.8 Community and National Engagement

- 5.8.1 External information sharing is an important part of Horizons' science programme, with an increasing focus on communicating science to our wider community. Opportunities to communicate information can range from data provision, over-the-phone (non-RMA) advice, site visits, and provision of guidance material, through to community workshops. During 2018/19, Horizons science team have contributed to community and national engagement through:

- Participation in a number of regional sector Special Interest Groups (SIGs) to coordinate regional sector activities at a national level;
- National leadership and project management of the National Environmental Monitoring Standards (NEMS), including contributing to the development of NEMS on Water Quality Monitoring in rivers, Lakes, Coastal Waters and Groundwater;
- Contribution to Environmental Monitoring and Reporting (EMaR) Rivers and Land Management working group;
- Conference presentations at the New Zealand Hydrological Society Conference, and the Land Use and Water Quality Conference in Denmark;
- Presentations to community and school groups including a presentation on the Manawatū Estuary was given at the biannual meeting of the Manawatū Estuary Management Trust;
- Supporting Sustainable Farming Fund projects in the region;
- Chairing and facilitating sessions at the inaugural “Pint of Science” events in Palmerston North and Whanganui;
- Participation in the AgTech Hackathon at Massey University with members from the Environmental Data team;
- Organising and hosting a workshop on Biodiversity Off-setting including stakeholders from DoC, TAs, various consultants, and environmental lawyers;
- Guest lecturing for a range of courses at Massey University;
- Hosting students as part of the ShadowTech initiative, aimed at introducing girls aged 9-11 to careers in technology;
- Judging exhibits at the Regional Science Fair and hosting prize winners on a day out with our field team;
- Participation in the Manawatu Careers expo.

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Item 7

Annex E

Report No.	19-119
Information Only - No Decision Required	

REGULATORY MANAGEMENT REPORT - APRIL TO JUNE 2019

PURPOSE

- 1.1. This report updates Members on regulatory activity, for the period April 2019 to June 2019 and summarises regulatory activities for the 2018-2019 year. It also provides a summary of the regulatory work programme for the 2019-2020 year.

2. RECOMMENDATION

That the Committee recommends that Council:

- a. receives the information contained in Report No. 19-119 and Annexes.

3. FINANCIAL IMPACT

- 3.1. We are still anticipating that there will be significant costs associated with processing large and complex applications, which may in turn be subject to appeal. Also, on-going investigations and prosecutions within the compliance monitoring programme, coupled with an increase in environmental incidents being received, are likely to have an impact on both expenditure and revenue within this programme. Regular updates will be provided to the Audit and Risk Committee throughout the year.

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. OVERVIEW

- 6.1. Regulatory activity has once again been busy this year. Of note is that during the 2018-2019 year Horizons processed and authorised 558 activities (or consents), with 89 percent being processed with the relevant statutory timeframes, compared to 324 consents being granted in 2017-2018 year. Four consents were subject to full public notification.
- 6.2. There are also 181 applications that are in currently still in the process.
- 6.3. The 2018-2019 year saw the resolution of a number of high profile applications, including the Foxton Wastewater Treatment Plant and AFFCO Feilding.
- 6.4. In relation to the major applications, the following provides a summary of their current status:
 - i. Regarding the **Department of Conservation (DOC) Whakapapa Wastewater Treatment Plant (WWTP)** application DOC is engaging with iwi on whether the discharge should be located either within or outside of Tongariro National Park. A potential move to locate the plant outside the dual World Heritage Area and its associated ecological, environmental, and cultural values is significant. Whilst this engagement will delay the final consenting process, it is important that it occurs. The

- focus of this process is to make sure that the best possible solution for the maunga and waterways is identified. At the same time DOC are still progressing with significant upgrades to the current WWTP to improve its environmental performance. Officers continue to liaise with DOC and iwi.
- ii. Re-consenting of Pahiatua wastewater treatment plant remains the subject of a mediation process. This process is confidential to the parties involved.
 - iii. A decision on the Eketāhuna WWTP was made on 11 March 2019. This has subsequently being appealed to the Environmental Court.
 - iv. Submissions closed for the Woodville WWTP on 19 April 2019, with seven submissions being received, of which six were in opposition.
 - v. The Tokomaru WWTP is now onto its second iteration of draft conditions, which are now with the **Horowhenua District Council (HDC)** for review.
 - vi. Further information requested, relating to the discharge of stormwater into the Koputaroa Stream catchment, has been provided by HDC and is currently being reviewed. After this the next step in the process is to determine whether the applications need to be notified in accordance with section 95 of the **Resource Management Act 1991 (RMA)**.
 - vii. HDC has lodged a consent application for the operation of the Levin WWTP discharges (commonly known as 'The Pot'). The consent application has been notified and at the close of submissions 17 submissions had been received. Most are in opposition to the proposal. A hearing is set down for the week of 27-29 August.
 - viii. HDC lodged a resource consent application prior to Christmas, seeking to authorise the discharge of stormwater from the Levin Township into Lake Horowhenua for a period of five years. Further information has been requested and HDC has asked for time to engage with the relevant parties. Given the tensions around Lake Horowhenua this is not expected to be a simple process.
 - ix. HDC is preparing a consent application, seeking to discharge stormwater from the Foxton Township to the Manawatū River.
- 6.5. The Manawatu Gorge replacement project "Te Ahu a Turanga" is progressing. A decision on the **Notice of Requirement (NOR)** has been made and subsequently appealed by the three parties, including the Department of Conservation.
 - 6.6. Horizons staff have continued to meet with **New Zealand Transport Authority (NZTA)** in relation to the pending regional consenting process. At this stage NZTA are anticipating lodging the main resource consents with Horizons either late this year or early in the 2020.
 - 6.7. To date, Horizons has processed one 'enabling' consent application in relation to geo-technical investigations in the Manawatu River. Another enabling consent application was lodged in July, in relation to the construction of an access road into the main alignment. NZTA have indicated that further enabling consent applications are likely to be lodged in the near future.
 - 6.8. As previously reported officers have also been considering the regulatory demands that such a major civil construction project will have on its business. These lie in three main areas: the large numbers of consent variations that need to be managed and processed following the main consenting process; large volumes of management reports and compliance inspections required to enable works to occur or follow up on consent conditions; and a significant administration process to manage large volumes of data and information.
 - 6.9. To this end staff have initially assessed the capacity and capability required to meet its statutory obligations in these areas. This assessment indicates that a Special Projects Team (**the Team**) of at least four full time equivalent (**FTE**) will be required. This FTE

would consist of a Senior Planner, Senior Compliance Officer, a Compliance Officer and an Administrator. At the time of writing this report conversations were still occurring with NZTA on resource demands for the “Te Ahu a Turanga” project and how these demands can be funded.

- 6.10. Mercury Energy have announced they are to commence construction of the Turitea Windfarm in August this year. The conditions associated with these resource consents are extensive and the project will require development and implementation of a robust compliance monitoring programme. At present the focus is on the certification of a number of management plans associated with the project, which has to occur prior to construction commences. The certification process has been very involved and require significant staff time and input from various internal and external experts. Once construction commences, Horizons will be undertaking active monitoring of the site, with a particular focus on ensuring land disturbance activities are being undertaken in accordance with the various resource consents and management plans. Given the nature and scale the project, a significant amount of compliance time will be required to both assess compliance with the number of conditions and management plans.
- 6.11. As reported below there has been a significant increase in the number of environmental incidents received during the 2018-2019 year. This along staff vacancies in the first half of the year and continued implementation of the NES-PF has had a direct impact on the delivery of the compliance programmes.
- 6.12. The year has also seen the release of the report titled “**Independent Analysis of the 2017/2018 Compliance Monitoring and Enforcement Metrics for the Regional Sector**”. This was a first for the sector and was the most comprehensive survey on **Compliance Monitoring and Enforcement (CME)** activities under the RMA in its 27 year history. A number of recommendations were made, including ensuring adequate resource is in place to undertake CME functions, ensuring information systems are appropriate and Councils have good internal policy frameworks in place. Regarding Horizons, the report noted that whilst there is a well-developed policy framework, it has some of the lowest CME resourcing in the sector on per population basis and information management was an area for improvement. Whilst comments were also made regarding the level of enforcement action, it must be noted that for the period of the report, Horizons had a number of matters before the courts and since there were not completed, they were not counted in the statistics for the period. A copy of this report is attached as **Annex A**.
- 6.13. A Compliance Monitoring Policy for Horizons RMA regulatory activities has recently been developed. This policy details at a high level the general principles that guide Horizons compliance business and how Horizons takes a risk based approach to compliance monitoring. This policy should be read in conjunction with Horizons Enforcement Guidelines. A copy the policy is attached as **Annex B**

7. COMPLIANCE PROGRAMME

- 7.1. This section of the report will summarise activities in the key programmes within the wider compliance programme for the 2018-2019 year.

Programme Overview (2018-2019)

- 7.2. For the 2018-2019 a total of 1246 resource consents were assessed, with a total of 373 Non-compliances being recorded, of which 80 were significant. This equates to a compliance rate of 66 percent across the entire compliance monitoring programme for the year. Table 1 provides a comparison of these numbers against the 2017-2018 year.

2017-2018 year			2018-2019 year		
Consents inspected	Non-compliances detected	Overall Compliance rate	Consents Inspected	Non-Compliances detected	Overall compliance rate
1400	174	88%	1246	373	66%

Table 1 - Summary of compliance programme for 2018-2019

Rural Programme

- 7.3. This programme primarily assesses compliance with **Farm Dairy Effluent (FDE)**, **Intensive Land Use (ILU)** and stock water consents.

Farm Dairy Effluent

- 7.4. During the year a total of 307 FDE resource consents were inspected. In addition to this 12 follow-up inspections occurred due to significant non-compliance being detected. The number of consents inspected is less than the planned 450. This is due to vacancies and staff resource being diverted to support a significant increase in incidents received, and implementation of the **National Environment Standard for Plantation Forestry (NES-PF)**.
- 7.5. Table 2 summarises the compliance assessments in relation to FDE consents for the year. In summary there were 9, 14 and 17, low risk, moderate and significant non-compliances, respectively. This represents an 87% compliance rate across those consents assessed (compared to 91.5% in the 2017-2018 year). The significant non-compliances related to significant pond overflows, failure to install adequate storage and significant ponding at or in the vicinity of the irrigator. Figures 1-3 illustrate some of the issues that have been identified during the year.

Compliance Rating	No. Consents
Comply - Full	178
Comply - At Risk	89
Low Risk Non - Compliance	9
Moderate Non-Compliance	14
Significant Non Compliance	17
Total Consents Monitored This Season	307

Table 2 – Number of FDE Consents Inspected and Associated Compliance Gradings



Figure 1 – Sump Overflow – Effluent in a drain



Figure 2 – Effluent ponding – result of slurry wagon spill



Figure 3 – Runoff and ponding of effluent from unconsented standoff/feed pad

Intensive Land Use Consents

- 7.6. During the year a total of 75 ILU on farm inspections were undertaken. As previously reported, the focus of these inspections is to assess those conditions that can be assessed on-site. Table 3 summarises the compliance gradings received. Of particular note is no moderate or significant non-compliances were detected, with only two low risk non-compliances being detected due to minor non-compliances with mitigations under the Sustainable Milk Plan (SMP). The latter included not introducing the specific crop as identified in the SMP, however the overall impact of this on nitrogen leaching was considered insignificant.

Compliance Rating	Number of Consents
Comply - Full	65
Comply - At Risk	8
Low Risk Non - Compliance	2
Moderate Non-Compliance	0
Significant Non Compliance	0
Total	75

Table 3 – ILU Consents Inspected

- 7.7. The ILU programme also assesses compliance against nutrient budget reporting. During the year a total of 239 nutrient budgets were assessed. Given the annual nature of the assessment and when the budgets are provided, the budgets assessed were for the 2017-2018 year. Table 4 below summarises the gradings for the year.
- 7.8. The high number of low risk non-compliances were due consent holders failing to supply nutrient budgets within timeframes required by consent conditions, whilst moderate and significant non-compliances were due to failures to comply with consented Nitrogen leaching limits specified in the conditions of consent. Regarding the latter, these ILU were referred to Horizons Rural Advice Team to give advice on how nitrogen leaching on the farm could be achieved.

Compliance Rating	Number of Consents
Comply Full	28
Comply at Risk	9
Low Risk Non Compliance	154
Moderate Non-Compliance	40
Significant Non Compliance	8
Total Assessed	239

Table 4 - ILU Nutrient Budgets Assessed

Stock Water Takes

- 7.9. The Rural programme also assess compliance against stock water consents. Table 4 summarises the stock water programme for the year.

Compliance Rating	Number of Consents
Comply - Full	54
Comply - At Risk	12
Low Risk Non - Compliance	18
Moderate Non-Compliance	9
Significant Non Compliance	6
Not Assessed	22
Total Assessed	98
Permitted Activity	135
Require Consent	7

Table 5 - Rural Water Takes Assessed

- 7.10. Overall 33 non-compliances were detected from 98 consents that were assessed. This represents a compliance rate of 66 percent. The non-compliances related to flow meters not being verified, minor exceedances in volumes and flow meters not being installed, whilst the significant non-compliances typically related to repeated non-compliance.
- 7.11. In addition to this, 135 permitted activities were assessed and an additional 7 water takes were identified as requiring resource consent. In relation to the latter, timeframes were set for resource consent applications to be lodged.
- 7.12. Table 6 summarises the enforcement action undertaken as part of the Rural Programme. The action taken ranged from Formal Warnings to a prosecution before the District Court. Formal warnings were all issued for failing to provide nutrient budgets, Abatement notices were issued for moderate and significant non-compliances with water stock water take and farm dairy effluent discharge consents and infringement notices largely related to significant effluent ponding or run-off and failure to install effluent storage facilities as required by resource consents.

Type Of Enforcement	Number
Formal Warnings	46
Abatement Notices	28
Infringement Notices	8
Prosecutions before the Court	1

Table 6 - Rural Programme Enforcement Action

Water Programme

- 7.13. This programme focuses primarily on those consents (or authorisations) associated with Hydro electricity generation, municipal water supplies and irrigation stockwater takes. This programme also undertakes compliance monitoring against the National Water Regulations which includes all water takes greater than 5 litres per second. The programme is characterised by a mixture of automated monitoring, assessing manual records, and undertaking physical inspections and in the case of consents associated with hydro-electricity generation and some municipal water supplies, assessing annual reports. The programme is currently prioritised along assessing large water takes and/or takes that occur within fully allocated catchments.
- 7.14. Currently there are 402 consents that are monitored via the council telemetry system. Activities subject to this automated monitoring system include large irrigation takes, takes within fully allocated catchments, municipal water supplies and hydro electricity generation. This system of monitoring involves compliance staff receiving automated notification reports in the event non-compliance has occurred with the amount of water taken by a consent holder. Over the reporting period 43 non-compliances (10 of moderate risk, 35 low risk) were identified and verified via this automated reporting system. The non-compliances were related to system leaks, poor management and emergency situations for municipal water supplies.
- 7.15. In addition to this, compliance monitoring has occurred against the Water Regulations. Over the reporting period, a number of non-compliances were identified, with the primary issue being the failure to have water meters installed. In the reporting period, enforcement action was taken for an overdue flow meter install and an overdue verification certificate. A letter went out to 200 consent holders requesting they contact Horizons with regard to whether flow meter/s are installed as required by either consent conditions or the National Water Regulations. To date, 70 meters have been confirmed as installed, the remainder are currently being followed up to confirm if these are installed or not. This will require

working closely with consent holders to establish compliance and taking enforcement action when appropriate.

Industry Programme

- 7.16. This programme consists of monitoring those resource consents associated with industrial and municipal activities, including discharges to land, air and water. It also includes the monitoring of land disturbance activities associated with residential sub-divisions, windfarms, industrial developments and works associated road construction activities.
- 7.17. The consents associated with this programme range from the small and simple to large and complex, with the latter generally being associated with major activities such as WWTP discharges, industry discharges and windfarm developments. The consents generally authorise numerous activities and can contain conditions spanning numerous pages of varying complexity.
- 7.18. Given the breadth of the programme, activities in this programme are categorised based on risk, with the following factors being considered when assessing site risk:
- Actual and potential effects⁷;
 - Natural and scale;
 - Compliance History;
 - Public profile or interest, including tangata whenua expectations; and
 - Complexity of resource consent(s).
- 7.19. Consideration of these factors will determine whether the activity is high, medium or low risk, which in turn will determine the frequency by which an activity is monitored, with higher risk activities being subjected to more intensive monitoring than lower risk activities. This ensures Horizons finite resources are directed to those activities that pose a greater risk to the environment.
- 7.20. Compliance reporting in this programme is based on a site as opposed to individual consent basis as is the case in the Rural Programme. Therefore, a single site assessment, typically includes an assessment of numerous conditions. For example, the annual audit report conducted for the Feilding WWTP covered seven consents, however, this was only recorded as one assessment.
- 7.21. Considering this, over the reporting period a total of 89 sites were assessed for compliance. This included 14, 30 and 18 C1, C2 and C3 sites respectively, and 23 inspections associated with land disturbance activities. Over the reporting period 37 received significant non-complaint, 29 non-compliant and 23 fully compliant gradings. This represents an overall compliance rate for sites monitored for this programme of 26%, whilst the compliance rate for individual consents assessed is 48%. It is also important to note that whilst two and nine and three, C1, C2 and C3 sites, respectively were not assessed in the year, these were at the time of writing this report being assessed.
- 7.22. In relation to non-compliances these related to low and moderate risk non-compliances and significant non-compliances. The first two include one off or first time failures to comply with reporting requirements or minor exceedances in discharge volumes, whilst the latter is due to repeated failure to comply with monitoring requirements, continued non-compliance with water quality standards, failure to follow management plans and failure to report non-compliances. Whilst some of these have been on-going and are being addressed via consent renewals, a number have resulted in enforcement action being taken, including the issuing of Abatement and Infringement Notices.

⁷ This includes assessing the toxicity of any discharge, value of the receiving environment and any actual or potential adverse effects.

National Environmental Standards

- 7.23. This is a new stream of work and deals with the monitoring of activities that occur under National Environmental Standards. Currently the NES-PF is the only NES subject to this programme, however, this may change in the event other National Environmental Standards come into effect.
- 7.24. As previously reported staff have adopted a risk based approach to implementation of the NES-PF. Tables 7 to 9 summarises the key permitted activity notifications, consent applications and enforcement action that has occurred in this area.

TYPE	IN FLIGHT	FINALISED	TOTAL
Permitted Activity Notices	26	147	173
Afforestation	3	23	26
Pruning & Thinning (to Waste)	-	2	2
Forestry Earthworks	15	77	92
Forestry River Crossings	3	10	13
Forestry Quarrying	2	3	5
Forestry Harvesting	22	126	148
Forestry Mechanical Land Preparation	-	-	-
Replanting	1	2	3
Forestry Ancillary Activities	-	1	1
Forestry General Provisions	25	128	153
Resource Consent Applications	2	9	11
Afforestation	-	1	1
Pruning & Thinning (to Waste)	-	-	-
Forestry Earthworks	2	2	4
Forestry River Crossings	1	3	4
Forestry Quarrying	-	-	-
Forestry Harvesting	-	3	3
Forestry Mechanical Land Preparation	-	-	-
Replanting	-	2	2
Forestry Ancillary Activities	-	1	1
Forestry General Provisions	-	1	1
TOTAL	28	156	184

Table 7 – Summary of PA notifications and consent applications

	Afforestation	Earthworks	Harvesting	Quarrying	River Crossings	Slash Traps
Compliance Inspections	1	30	28	0	1	2
Non-Compliance	0	16	13	0	0	0

Table 8 – Summary of inspections and non-compliance

	Formal Warning	Infringement Notice	Abatement Notice	Enforcement Order	Investigation
Enforcement Action	0	0	8	0	1

Table 9 – Summary of NES-PF enforcement action

7.25. The main issues identified during the year primarily relate to management of slash and earthworks, and the risk these activities pose to the receiving environment. Figures 5-9 provide examples of some of the issues identified during the reporting period.



Figure 5 – Poor erosion and sediment controls



Figure 6 – Slash deposited in and close to a small waterway



Figure 7 – Slash placed close to a stream/river



Figure 9 – Side casting of material

Enforcement

7.26. During the 2018-2019 year 52 Formal Warnings, 69 Infringement Notices and 82 Abatement Notices were issued. Table 9 provides a summary of the actions taken. This is an increase from the 2017/2018 year which saw 48 Formal Warnings, 17 Infringement notices and 36 Abatement Notices issued.

	Section 9 (land)	Section 12(CMA)	Section 13 (beds of lakes/rivers)	Section 14 (water)	Section 15 (Discharges)	S338(1)(c) Abatement Notice
Formal Warnings	46	0	0	0	6	0
Infringement notices	14	0	0	1	42	12
Abatement notices	28	0	0	6	48	0

Table 10 – Enforcement Action for 2018-2019

7.27. Formal warnings are typically used for very minor offending, but are referred to and taken into consideration if further non-compliance occurs. Abatement notices are issued under section 324 of the Resource Management Act and can be issued on a person to either cease, not undertake or take a certain action, whilst an infringement notice is a fine that can be issued on a person or organisation. The fines associated with an infringement notice are set by the Infringement Notice RMA Regulations 1999 and range between \$300 and \$1000 depending on what section of the RMA has been contravened.

7.28. During the reporting period a number of prosecutions were resolved, resulting in fines of \$290,000, of which 90% is paid to Horizons. These cases are summarised in table 10 below.

Prosecution	Section of RMA contravened	Nature of Offence	Fine/Sentence imposed
MWRC v Land Meat NZ Ltd	s15(1)(b)	Discharge of wastewater associated with meat processing that entered into the Whanganui River.	\$66,500
MWRC v WDC	s15(1)(b)	Discharge of treated human effluent into the Mowhanau Stream	\$21,000
MWRC v Le Poulet Fabuleux	s15(1)(b)	Discharge wastewater from intensive chicken growing operation to land	\$57,000
MWRC v Fyfe Charles Williamson	s9(2) s13(1)(b) s13(1)(e)	Earthworks in the bed of a lake and earthworks within 10m of a wetland.	80 hours community work
MWRC v PGG Wrightsons Ltd and Carfileds Livestock Ltd	s15(1)(b)	Discharge of animal effluent from the Feilding stockyards to Makino Stream	\$75,000 and \$71,200 respectively

Table 11 – Summary of prosecutions completed for 2018-2019

7.29. Regarding the Fyfe Williamson case the Court noted that if the defendant was in a position to pay a fine a starting point of between \$80,000 to \$100,000 would have been adopted,

which is between 25 to 33 percent of the maximum penalty for an individual under the RMA.

- 7.30. In relation to fines, where possible Horizons endeavours to put money associated with the fine back into the catchment affected, to assist projects that help enhance the overall environmental status catchment.
- 7.31. In addition to the above there are currently seven active investigations underway in relation to serious non-compliances and two matters before the Courts.

Incident Response Programme

- 7.32. This programme focuses on Horizons 24-hour incident response function and involves incidents relating to both consented and unconsented activities. When received, incidents are categorised on priority basis from 1 to 5. The categorisation is based on a number of factors, including environmental risk, compliance history and public interest. From an operational perspective, the categorisation means that for:
 - Category 1 incidents - there must be an immediate response. These incidents are normally characterised by an organizational wide response, such as the Raetihi diesel spill in 2013;
 - Category 2 incidents are to be responded to within one day;
 - Category 3 incidents are to be responded to within two weeks;
 - Category 4 incidents are to be responded to when an officer is next in the area; and
 - Category 5 incidents no physical response is required
- 7.33. During the 2018-2019, 1298 incidents were received and responded to by Horizons. This is a significant increase from previous years (see figure 9 below). Additionally most the complaints related to discharges to air, followed by complaints regarding impacts on streams and rivers and then land related activities, such as land or vegetation disturbance (see figure 10).

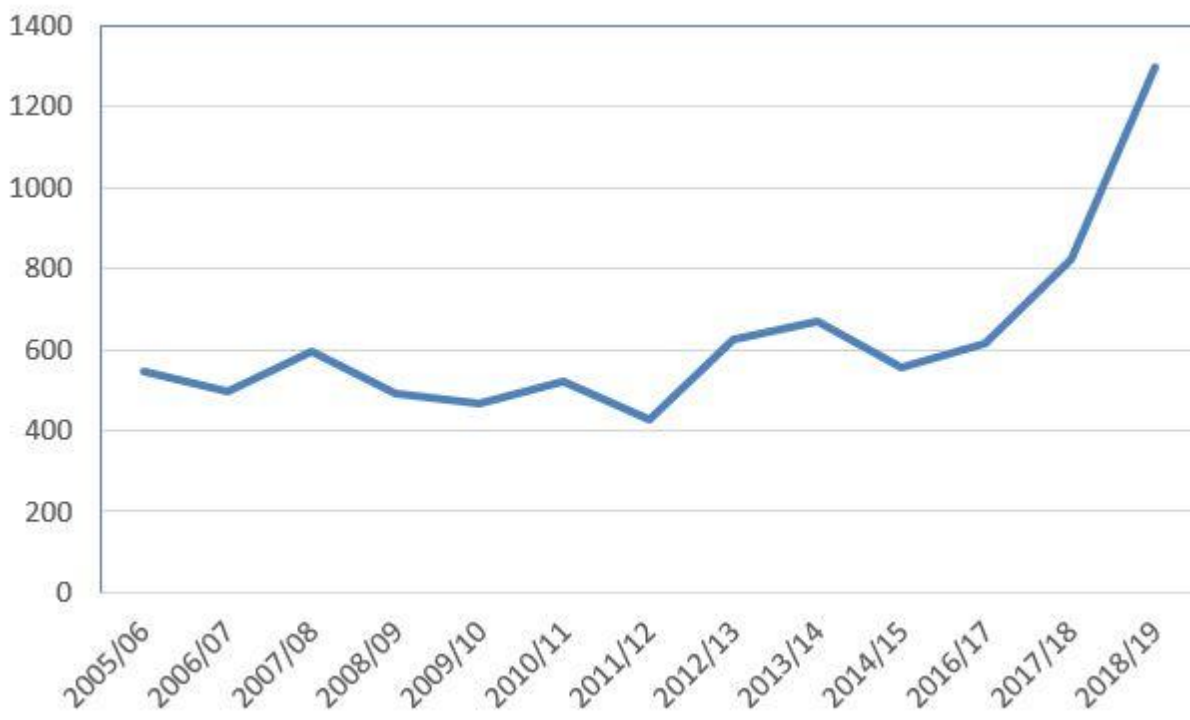


Figure 9 – Complaints received between 2005 and 2019

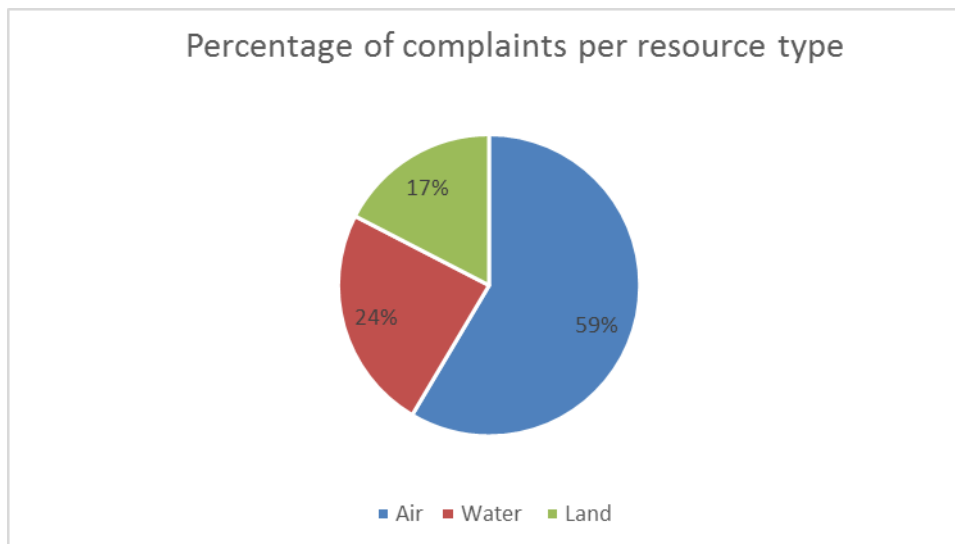


Figure 10 – Complaints by Resource Type

8. COMPLIANCE AND NON-COMPLIANCE

- 8.1. During the reporting period there were 190 compliance monitoring assessments. Of these, 49 non-compliances and 27 significant non-compliances were detected. This equates to a 60% compliance rate across the entire programme for the reporting period.
- 8.2. Below is a breakdown of the non-compliances by consent area, for the reporting period:
- Industry:** 11 non-compliance and 17 significant non-compliances; and
- Rural:** 38 non-compliances and 10 significant non-compliances

9. REGULATORY ACTION

- 9.1. During the reporting period 31 abatement and 27 infringement notices were issued. Table 11 below provides a summary of the formal regulatory action taken during the reporting period.

Person	Regulatory Action Taken	District	Date Issued	Section of RMA Contravened	Actions
Milson Foundry	Infringement Notice	Palmerston North	3/04/2019	15(1)(c)	Objectionable odour
Robert Wells	Infringement Notice	Wanganui	03.04.19	15(2A)	Discharge of a contaminant into air
Eastown Timber Products Limited	Infringement Notice	Wanganui	18.04.2019	15(1)(c)	Discharge of a contaminant into air
SDG Horopito Limited	Infringement Notice	Ruapehu	21/05/2019	15(1)(b)	Discharge of a contaminant to land
SDG Horopito Limited	Infringement Notice	Ruapehu	22/05/2019	15(1)(b)	Discharge of a contaminant to land
Mead and Vickery	Infringement Notice	Ruapehu	22/05/2019	15(1)(b)	Discharge of a contaminant to land
Ivan Thomas Mead & Suzanne Helena Mead	Infringement Notice	Ruapehu	22/05/2019	15(1)(b)	Discharge of a contaminant to land
Desley and Stephen McGougan	Infringement Notice	Ruapehu	22/05/2019	15(1)(b)	Discharge of a contaminant to land

Person	Regulatory Action Taken	District	Date Issued	Section of RMA Contravened	Actions
SDG Horopito Limited	Infringement Notice	Ruapehu	21/05/2019	9(2)	Unauthorised earthworks
SDG Horopito Limited	Infringement Notice	Ruapehu	22/05/2019	9(2)	Unauthorised earthworks
Mead and Vickery	Infringement Notice	Ruapehu	22/05/2019	9(2)	Unauthorised earthworks
Ivan Thomas Mead & Suzanne Helena Mead	Infringement Notice	Ruapehu	22/05/2019	9(2)	Unauthorised earthworks
Desley and Stephen McGougan	Infringement Notice	Ruapehu	22/05/2019	9(2)	Unauthorised earthworks
Owen Rush Contracting Limited	Infringement Notice	Manawatu	17/05/2019	15 (1) (c)	Discharge contaminant into air
A1 Digger Hire	Infringement Notice	Palmerston North	5/06/2019	15 (1)(c)	Discharge contaminant into air
SDG Horopito Limited	Infringement Notice	Ruapehu	21/05/2019	338(1)(c)	Breach of Abatement notice (AN)
SDG Horopito Limited	Infringement Notice	Ruapehu	22/05/2019	338(1)(c)	Breach of AN
Mead and Vickery	Infringement Notice	Ruapehu	22/05/2019	338(1)(c)	Breach of AN
Ivan Thomas Mead & Suzanne Helena Mead	Infringement Notice	Ruapehu	22/05/2019	338(1)(c)	Breach of AN
Desley and Stephen McGougan	Infringement Notice	Ruapehu	22/05/2019	338(1)(c)	Breach of AN
Roger Wilson GLOYN	Infringement Notice	Manawatu	23/05/2019	15(2A)	Objectionable odour beyond property boundary.
Tamatarau Farms Limited	Infringement Notice	Horowhenua	18/06/2019	15(1)(b)	Ponding
Tamatarau Farms Limited	Infringement Notice	Horowhenua	18/06/2019	338(1)(c)	Breach of AN
Tamatarau Farms Limited	Infringement Notice	Horowhenua	18/06/2019	15(1)(b)	Ponding
Tamatarau Farms Limited	Infringement Notice	Horowhenua	18/06/2019	338(1)(c)	Breach of AN
Manawatu District Council (Feilding WWTP)	Infringement Notice	Manawatu	14/06/2019	15(1)(b)	Exceeding Soluble Inorganic Nitrogen limits
Paranui Organics (2006) Ltd	Infringement Notice	Horowhenua	11/06/2019	15(1)	Offensive odour Beyond Boundary
HRC Management River Group	Infringement Notice	Whanganui	11/06/2019	9(2)	Unauthorised land disturbance
Koputara Farm Limited	Abatement Notice	Foxton	16-Apr-19	14(2)	Cease unauthorised water abstraction and use above Permitted activity rule

Person	Regulatory Action Taken	District	Date Issued	Section of RMA Contravened	Actions
Higgins Contractors Limited	Abatement Notice	Region Wide	2-Apr-19	15(1)(b) & 9(2)	Cease all unauthorised land disturbance activities within the Manawatu-Wanganui Region
Grant Wright (Property Owner 235 No.2 Line)	Abatement Notice	Whanganui	15-Apr-19	15(2A)(b)	Cease the unauthorised discharges of contaminants, namely domestic wastewater, onto or into land
Te Paratai Farms Limited	Abatement Notice	Manawatu	9-Apr-19	9(2)	Nutrient Budget not submitted
Ross Mclean Burnett	Abatement Notice	Manawatu	9-Apr-19	9(2)	Nutrient Budget not submitted
Moonbiana Farms	Abatement Notice	Tararua	9-Apr-19	9(2)	Nutrient Budget not submitted
Forest Owner Marketing Services Limited (FOMS)	Abatement Notice	Whanganui	18-Apr-19	9(1) & 15(1)(b)	Forestry Earthworks stabilised by 17 May 2019
Eastown Timber Processors	Abatement Notice	Whanganui	16-Apr-19	15 (1) (c)	Cease the discharge of objectionable dust beyond its boundary
Hones Family Trust	Abatement Notice	Tararua	30-Apr-19	15(1)(b)	Under irrigation area
Forest 360 Limited	Abatement Notice	Whanganui	14-May-19	9(1) & 15(1)(b)	Remove slash from watercourse.
Forest360 Limited	Abatement Notice	Whanganui	20-May-19	9(1) & 15(1)(b)	Forestry Earthworks stabilisation
Owen Rush Contracting Ltd	Abatement Notice	Manawatu	17-May-19	15 (1) (c)	Cease unauthorised discharge to air.
John Turkington Limited	Abatement Notice	Whanganui	21-May-19	9(1) & 15(1)(b)	Forestry Earthworks stabilisation
Forest 360 Limited	Abatement Notice	Whanganui	14-May-19	9(1) & 15(1)(b)	Forestry Earthworks stabilisation
NZL Forest Group	Abatement Notice	Tararua	16-May-19	9(1) & 15(1)(b)	Forestry Earthworks stabilisation
Kerry Ian Griffiths	Abatement Notice	Palmerston North	20-May-19	15(2A)	To cease burning of prohibited materials
A1 Digger Hire	Abatement Notice	Palmerston North	5-Jun-19	15 (1) (c)	To cease burning of prohibited materials
A1 Digger Hire	Abatement Notice	Palmerston North	5-Jun-19	15 (1) (c)	To appropriately clean up burn site

Person	Regulatory Action Taken	District	Date Issued	Section of RMA Contravened	Actions
GLOYN, Roger Wilson	Abatement Notice	Manawatu	30-May-19	15 (2A)	Cease any objectionable odour and smoke discharging beyond property boundary
SKRC Farms Limited	Abatement Notice	Manawatu	30-May-19	15(1)(b)	Cease effluent ponding
Ngatahaka Holdings Limited	Abatement Notice	Tararua	6-Jun-19	15(1)(b)	Cease effluent discharge to drain
Ngatahaka Holdings Limited	Abatement Notice	Tararua	6-Jun-19	15(1)(b)	Cease effluent discharge to drain
John Turkington Limited	Abatement Notice	Whanganui	13-Jun-19	9(1) & 15(1)(b)	Forestry Earthworks stabilisation
Ray Coles Transport Ltd	Abatement Notice	Rangitikei	10-Jun-19	15(1)(b)	Cease use of effluent pond and discharge of effluent to Rangitikei river
Ray Coles Transport Ltd	Abatement Notice	Rangitikei	10-Jun-19	15(1)(b)	Remove contents of effluent pond
KR and SD Farrier	Abatement Notice	Manawatu	12-Jun-19	15(1)(b)	Failure to line feedpad open drains in breach of condition 6 of consent
Glen Bartosh, Paranui Organics (2006)	Abatement Notice	Horowhenua	25-Jun-19	15(1)c	Offensive odour detected beyond property boundary.
Tamatarau Farms Limited	Abatement Notice	Horowhenua	18-Jun-19	14 (2) (a)	Install working flow meter and verify
SKRC Farms Limited	Abatement Notice	Manawatu	25-Jun-19	15(1)(b)	Cease effluent run off.
D.L.R. Farms Limited	Abatement Notice	Rangitikei	14-Jun-19	14(2)(a)	Verify flow meter
Manawatu District Council	Abatement Notice	Manawatu	28-Jun-19	15(1)(b) and (d)	Provide water budget

Table 11 – Regulatory action taken during reporting period

10. INCIDENT REPONSE

- 10.1. An annual summary of incidents for the year is detailed above, however over the reporting period, a total of 300 complaints were received. For this reporting period, the majority of these complaints (162) related to discharges to air. The remainder of the complaints related to discharges to land (67) and water (71).
- 10.2. 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.

11. 2019-20120 REGULATORY PROGRAMME

- 11.1. This section of the report provides a high level summary of the regulatory work programme for the 2019-2020 year.

Consents

- 11.2. In addition to processing Business as Usual applications, continued implementation of the NES-PF, and implementing any new regulation from central government, the focus this year will be on advancing those WWTP that have been on existing use rights for extended periods of time and whose environmental effects are considered more than minor. However in setting this priority it must be noted that not all WWTP can be advanced at the same time due to resourcing capacity for both Horizons and the district councils and the fact the pace at which applications proceed are to certain extent beyond Horizons control as these applications are typically notified, subject to a hearing and then potentially subject to Environment Court appeal.
- 11.3. It is expected that consents for the 'Te Ahu a Turanga' will be lodged and processed during the 2019-2020 year. This will also include significant input from staff at various stages. It is also possible, depending on the outcome of the consent process that Horizons compliance programme for the 'Te Ahu a Turanga' project will commence.

Compliance

- 11.4. The compliance programme has been reviewed against the key risk factors detailed above. To this end, the following priorities have been set:
- Inspect 300 FDE consents. This will focus on those operations that have been assessed as non-compliant and had a comply at risk grading in the 2018-2019 year;
 - Assess 239 nutrient management budgets associated with ILU consents;
 - Undertake aerial monitoring in the Tararua and Ruapehu districts to assess compliance with the NES-PF;
 - Assess Category 1 and Category 2 sites on the industry programme;
 - Assess compliance of water abstraction activities and performance against the National Water Regulations;
 - Undertake active monitoring of the Turitea windfarm development;
 - Follow-up on all significant non-compliances;
 - Respond to environmental incidents as per the existing risk based model; and
 - Investigate and take appropriate enforcement action when non-compliance is detected.
- 11.5. After considering resource capacity, increasing demands in other areas (such as incident response, investigations and enforcement, and continued implementation of the NES-PF) and matching this to the risk framework around compliance monitoring, the review has identified that site inspections associated with ILU consents and proactive monitoring of C3 sites (including C3 WWTP) will only occur in the event there is a complaint.
- 11.6. The inspection process for Dairy Farms has been reviewed. Those farms that were assessed in the 2018-2019 year as being Comply At-Risk, Moderately Non-compliant or Significantly Non-Compliant will be inspected on a non-notified basis. A courtesy call when staff arrive at the farm gate to the consent holder or site contact. Farms that were assessed as compliant will be given 24 hours' notice.

12. RURAL ADVICE

- 12.1. During the reporting period the team has continued to provide technical advice internally and externally. A particular focus has been on discharge consents, and changed to land use consents, along with providing pre-consenting advice to farmers. Over the past year

the team completed 52 technical reviews of consents submitted, completed 35 farm visits and fielded over 385 enquiries. These site visits included dairy farms, horticultural operations, goat farms and cropping farms, as well as activities with the compliance team.

- 12.2. The team has continued to communicate broadly with the sector, including meeting with agricultural sector representatives, rural banking specialists, real estate agents and a range of scientists based at Lincoln. We held regular meetings with Dairy NZ, Federated Farmers, Horticulture NZ, Foundation for Arable Research and the Rural Professionals Network.
- 12.3. Presentations on our work were provided to various groups and conferences including at the Fertiliser and Lime Research Centre conference, and to high school groups, farmer groups, and stakeholder groups. The team also provided advice to the public at the Central District Fielddays held in Feilding earlier this year.
- 12.4. To maintain professional practice, members of the team attended various conferences and events, including the **New Zealand Agricultural and Resource Economics Society (NZARES)** conference in Wellington, the New Zealand effluent expo in Hamilton, the **Fertiliser and Lime Research Centre (FLRC)** conference in Palmerston North, the ACRE group in Palmerston North, and the Grow2019 AgriSummit at Lincoln. Staff also contributed to papers to the NZARES, FLRC and Grasslands conferences.
- 12.5. In the latter part of the year the team became heavily involved in providing technical support, project management, and stakeholder engagement support for the recently notified Proposed Plan Change 2, and have also begun similar work to support draft Plan Change 3.
- 12.6. Staff have kept up-to-date with advances to Overseer. This has included attending Regional Council Overseer workshops & arranging transfer of all Overseer files to new OverseerFM system. The team is continuing to train Horizons staff and provide ongoing advice to staff and stakeholders on the new Overseer platform.
- 12.7. Various members of the team are members of project teams for Dairy NZ Partner Farms and Plantain Project, and one of the team has undertaken a short term secondment to Whanganui and Partners to support the land optimisation project team.

13. SIGNIFICANCE

- 13.1. 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 Independent Analysis of the 2017-18 Compliance Monitoring and Enforcement for the Regional Sector
- B Compliance Monitoring Policy



USE OF THIS REPORT

This report has been prepared by The Catalyst Group at the request of our client for the purposes for which they intended. Where we have relied on information from external sources, we have referenced these sources as appropriate and assumed them to be accurate. If you are unsure about interpretation of the content of this report, or its use beyond that for which the client intended, please get in touch with us at enquiries@thecatalystgroup.co.nz

This report was developed by Dr Marie A. Brown of The Catalyst Group for the Waikato Regional Council (on behalf of the Compliance and Enforcement Special Interest Group).

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ACKNOWLEDGEMENTS

The report was completed under strict confidentiality requirements so no external acknowledgements are required. The researcher recognises the timely assistance of councils in clarifying their data and providing suggestions on a draft circulated to CESIG for comment.



THE CATALYST GROUP
planning and environment



EXECUTIVE SUMMARY

The RMA is New Zealand's flagship environmental legislation and its implementation is highly devolved. Achieving the purpose of the Act – the sustainable management of natural and physical resources – is dependent on the quality of that implementation. Monitoring and reporting on the activities and performance of agencies charged with applying the Act is pivotal to understanding our nation's stewardship of the environment and to reviewing and validating the institutional arrangements in place to carry out that important role.

Compliance monitoring and enforcement (CME) is a significant tool in achieving the overarching purpose of the RMA. Carried out poorly it can result in slippage that erodes the potential of the regulatory regime to achieve its statutory goals. Carried out in a robust manner, it can assist in driving positive environmental outcomes and mitigating failures elsewhere in the policy process. However, data on performance of the agencies charged with the CME role has always been patchy, and councils have historically been provided little overarching guidance and support.

This independent report represents a sector-led effort, under the leadership of the Compliance and Enforcement Special Interest Group (CESIG), to improve the availability of data on CME functions. This inaugural survey saw all 16 of New Zealand's regional councils and unitary authorities (collectively referred to as the 'regional sector') participate. The dataset - while patchy due to various factors - provides a very interesting insight into the conduct of CME agencies under the RMA, and its value will only increase in subsequent iterations.

Four hundred and thirty-six FTEs are employed in regional CME roles under the RMA. Collectively the regional sector receives nearly 30,000 complaints annually, 87% of which are responded to. Regional councils and unitary authorities monitor 92% of consents requiring monitoring and encounter highly variable levels of compliance region to region. In response to non-compliance, the sector issued (in the 2017/2018 year) 905 formal warnings, 1844 abatement notices, 1289 infringement fines and applied for 21 enforcement orders (a total of more than four thousand formal actions).

Overall, the sector also secured 114 convictions against 49 individuals, and 102 convictions against 60 corporate defendants (216 convictions of 109 defendants in total), with the dominant offence being the discharge of contaminants. Collectively, the prosecutions netted more than two million dollars in fines in addition to other sanctions (e.g. restorative justice and costs awards).

The data contained within this survey is the most comprehensive made available on the CME activities of councils under the RMA in the Act's 27-year history. It also exceeds the publicly available detail available on the activities of any other environmental regulatory regime in the country. Councils have made the data available in a way that leaves them subject to criticism and analysis that many agencies are unlikely to receive, which is brave and should be commended. Throughout the analysis of the survey, several key

issues surfaced, and these perhaps represent something of a 'blueprint' for improvement, identifying the key sector-level priorities to enhance operations in the coming years.

Key recommendations for improvements arising from the findings within this report are as follows:

- While variation is to be expected given the diffuse nature of the regime and lack of oversight in the past, there is ample opportunity for councils to now work to standardise approaches to fundamental CME tasks, which would enable national scale data to have much stronger value due to increased comparability
- Resourcing for CME is varied, but overall appears to be relatively low in several councils, possibly too low to carry out the minimum requirements set down within the newly promulgated Best Practice Guidelines. The variation is not generally explained by relative wealth, land area or population - but appears often driven by other matters.
- Many councils were unable to provide some relatively basic Information for these survey questions. While information management is doubtless an area in which the sector has improved greatly in recent years, further development is required to maintain reasonable levels of transparency.
- The internal policy framework for CME in many agencies is incomplete or has aspects that open councils and individuals within those councils up to reputational risk from an inability to demonstrate fair and clear decision-making processes. The sector must carefully consider performance in this space as independence, transparency and consistency are fundamental components of being a credible regulator.
- Some councils perform consistently well across all or most measures in this survey while the reporting of others demonstrates some significant shortcomings that should be addressed. Continuing to administer a robust and regular reporting framework, including review and improvement of the current suite of metrics, will help to drive performance improvement year on year.
- Unitary authorities do not sufficiently demarcate their regional vs district CME activities in their information management systems, meaning that the level of transparency on regional-level operations they can provide is lower than their regional council counterparts. This erodes both the comparability of the collective dataset and has reputational implications for the unitary councils.

Monitoring reports such as this one help to discern areas of strong performance and areas where improvement is needed. They also help to give insight into the appropriateness of institutional arrangements and crucially provide public transparency. They are of greatest value when conducted regularly and consistently over time, with agencies gradually orienting their information management system such that they can fulfil the data requirements comprehensively.



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CONCISE SUMMARY AND ANALYSIS

Monitoring reports such as this one help to discern areas of strong performance and areas where improvement is needed. They also help to give insight into the appropriateness of institutional arrangements and crucially provide public transparency. They are of greatest value when conducted regularly and consistently over time, with agencies gradually orienting their Information management system such that they can fulfil the data requirements comprehensively.

Key findings from each section

This section summarises the key findings from each section of the survey for quick reference. It is focused on the main findings and does not set out the full range of detail, thus is not exhaustive. However, it provides the important background to the analysis that follows.

Section	Questions	Key findings
Regional context	3-7, 10-12	<ul style="list-style-type: none"> * Councils carry out the CME role in very different contexts, with wide variation in land area, population and industry types, and these distinctions must be kept in mind in managing the sector at a national scale * Councils generally have limited but evolving relationships with iwi and hapū in respect of CME matters and this area is likely to increase in importance over time
CME operations	16-17, 20-21, 28-40	<ul style="list-style-type: none"> * Councils have relatively systematic approaches to determining priorities for incident response and consent monitoring, with less codification for permitted activity monitoring * Overall, the CME functions of regional councils and unitary authorities comprises 436 FTE, comprising 209.43 monitoring FTEs, 87.83 environmental incident and pollution response FTEs, 65.84 investigations positions, all supported by at least 68.7 support staff including non-regulatory education-based FTEs and administrative support. * Resourcing is highly variable, and that variation is not easily explained - councils require adequate resourcing to be credible regulators and shortfalls in capacity must be addressed. It is, however, difficult to determine what constitutes 'adequate' in each context, but the minimum resource requirements in the MFE Guidelines are referred to as a basic indicator. * Most councils have well developed internal policy frameworks, however where they are lacking, they make the council and staff vulnerable to criticism - deficiencies must be addressed. * The sector expends often significant resources in engaging with regulated communities on CME.

Managing the workload	13-15, 18	<ul style="list-style-type: none"> * Councils collectively receive 29143 complaints, of which 25,314 (87%) are responded to, (33% in person, the rest via other means). * Councils report relatively low rates of complaint verification (as low as 17%) which may be driven by a range of reasons * Councils administered a total of more than 200,000 active resource consents for the reporting year, of which nearly a quarter (49,491) were deemed to require monitoring (at least). Of these, more than 91% (45,070) were monitored at a sector level. Councils have varying approaches to classifying levels of compliance, making comparisons across sector impossible. * Councils detect varying levels of compliance in their regulated communities, ranging from only 22.1% considered to be in full compliance (Auckland) through to 96.3% (West Coast)
Acting on non-compliance	41-50	<ul style="list-style-type: none"> * Across the entire sector, councils issued (in the 2017/2018 year) 905 formal warnings, 1844 abatement notices, 1289 infringement fines and applied for 21 enforcement orders (more than four thousand formal actions). * Overall, the sector secured 114 convictions against 49 individuals, and 102 convictions against 60 corporate defendants. * The dominant type of offence is the discharge of contaminants
Sanctions and outcomes	51-54	<ul style="list-style-type: none"> * The total fines issued for regional sector convictions was more than two million dollars (\$2,044,028) * Outside of fines, there are relatively few examples of restorative justice across the sector (10 total)
CME Reporting	11-12, 55	<ul style="list-style-type: none"> * All councils undertake some form of external reporting on CME functions via the National Monitoring System, but reporting besides that is highly variable * SOE reporting is typically only weakly linked to CME activities, and highlighting the important connections between these two forms of assessment could strengthen the internal priority for CME

Table 1: Key section findings for quick reference

Analysis

Regional context

The scene-setting questions answered by the participating councils helped give consumers of the data a sense of the context in which the different councils operate, and the implications the differences between those contexts might have for the CME function. The data demonstrated the significant variation in population, area, regional economic profile and rural to urban population ratio – all of which have a material impact on the scale and nature of the CME role. No specific analysis is offered in respect of these figures, other than to acknowledge that they must be kept in mind in undertaking any comparative evaluation of CME regime effectiveness.

CME Operations

Making decisions on priorities

Making the right choices about where to expend usually limited CME resources is critical to ensuring the greatest risks to the environment are managed first and most intensively. Councils must develop coherent and systematic approaches to making decisions on relative priority. The questions in this section requested councils provide an outline of how they make those choices and on what basis. Naturally, it is difficult to know the extent to which the theory is reflected in practice.

The three main sources of CME workload represent competing demands on the resources available. Current best practice denotes that a **risk-based approach** is desirable, noting that resources in environmental management generally and CME specifically resources are generally expected to always be in short supply. A robust risk-based approach has several specific requirements as outlined in the Best Practice Guidelines (see pages 43-45). The survey does not provide scope to assess the integrity of the different approaches being described as 'risk-based'. It is important that purportedly taking a risk-based approach is not used as a political shield against providing appropriate resourcing for the CME role wherever possible.

Analyses to date have demonstrated that the first and second categories usually dominate the workload, with issues of risk, priority and weak cost recovery mechanisms impacting the level of permitted activity monitoring undertaken. This trend is reflected in the present survey. Council approaches to allocating resources to permitted activities appears overall less systematic, and more dependent upon residual resources leftover from addressing the other two main sources of work. The extent to which this more *ad hoc* approach carries environmental risk is largely dependent upon the permissiveness of the regulatory regime. Where significant reliance is placed upon permitted activities being managed by way of standards, a systematic means of monitoring compliance should not be negotiable.

In this section we learned that the regional and unitary authorities are applying increasingly systematic approaches to determining the relative priority of incoming workstreams, most particularly in respect of consent monitoring and incident response. It would seem that a sector-wide adoption of a risk-based approach has occurred, doubtless informed by the recent development of both the Regional Sector Strategic Compliance Framework and the even more recent Best Practice Guidelines. Ensuring these approaches are followed and enshrined in practice is likely to better utilise what resources are available in any given agency and to ensure the most serious issues are quickly and efficiently addressed.

It is acknowledged that the cost recovery mechanisms for both incident response and permitted activity monitoring are opaque and not fit for purpose. Providing councils with a more clear-cut statutory context for cost recovery would assist in addressing this matter. In addition, if significant non-compliance events are

occurring from permitted activity standards, then it may – in the long term- be desirable for that council to reconsider its non-regulatory approach to that activity.

Staffing levels

Overall, the CME functions of regional councils and unitary authorities comprises 435.8 FTE, comprising 209.43 monitoring FTEs, 87.83 environmental incident and pollution response FTEs, 65.84 investigations positions, all supported by at least 68.7 support staff including non-regulatory education-based FTEs and administrative support.

Councils are differently resourced for the CME function, with wide variation in resourcing not necessarily explained by differences in population, area and regional GDP. For instance, more than half of these (236.2 or 54%) are employed by just 3 of 16 councils – Auckland, Waikato, and Canterbury. Other variables are likely material to determining the resourcing, and councils with limited resourcing are more likely to struggle to meet the minimum resource requirements referred to at the beginning of this section. Comparisons with other variables (i.e. number of active consents, complaints etc) is confounded by differences in priority frameworks. The lack of clarity is not helped by a lack of clear demarcation of information on the respective functions of unitary authorities. It may take time to establish a true notion of resourcing adequacy.

CME policies and procedures

Providing a coherent policy framework for CME is particularly important, as decisions made in this space can have wide-ranging implications for the public's perception of the agency's effectiveness. The majority of councils have a relatively robust policy framework, including 14 of 16 with enforcement policies. However, that means two do not have what is a relatively fundamental instrument in the CME toolbox – a credible and consistent means of guiding decision-making on enforcement matters. This does of course not automatically mean that all decisions that might arise from an ad hoc context are questionable but means there is no ability for the regulator to demonstrate the veracity of decisions that have been made. It is strongly recommended that this gap is addressed without delay, such that all councils have robust and publicly available enforcement policies aligned with the Best Practice Guidelines.

Engagement and education

Councils appear to undertake a broad range of both engagement and educational programmes but provided varying levels of detail. Some councils have an extensive variety of approaches in this space. While there is no 'correct' number or range of ways to engage and educate the regulated community¹, investing in the information-based end of the spectrum gives important balance to a regime.

Managing the workload

Dealing with complaints

Collectively the regional sector physically attends nearly 9000 complaints a year from a total pool of nearly 30,000 (a further 16,000 are addressed via other means). Key findings included that councils tended to receive volumes of complaints broadly commensurate with their populations, but that the way they responded to them varied considerably (no doubt influenced by prioritisation approaches and resourcing constraints). The responses to these questions provide a useful continuous dataset, in contrast to most CME reporting to date.

Unfortunately, many councils were unable to provide the full suite of data, and some were unable to provide an accurate number of the complaints that had been received. Councils are required, like all public agencies,

¹ The 'regulated community' is broadly defined as the community to which any regulation applies or could apply

to accurately record complaints and guidance on doing so has been available for many years from the Office of the Ombudsman. It is reasonable to expect that councils would hold accurate records of incoming complaints and strive to maintain that accuracy through to the resolution of those complaints.² This requirement is also reflected in the RMA.

A further interesting outcome from this section of the survey was the relatively low proportion of complaints that were reported to be verified – including a rate that was as low as 17% verification in Wellington.³ Many of these figures seemed extremely low. Potential drivers could include low public knowledge of the role of agencies, poor internal management of complaints leading to frequent misdirection to incorrect departments, difficulty in verifying particular complaints or inaccurate systems for recording legitimacy. Further information would be required to understand this trend better.

Monitoring consent activity

A failure to monitor a consented activity at an appropriate frequency removes the ability for the regulator (absent a complaint) to detect non-compliance and therefore address environmental harm. Councils routinely set goals for proportions of consents to monitor and appear to meet these goals most of the time. Current best practice suggests that consents should be monitored in a way that reflects the level of risk the subject activity (risk-based approach) may pose to the environment and/or the wider community and given the relatively robust basis for cost recovery of consent monitoring, there is no good reason why councils should fall significantly short of fulfilling this expectation. For some, resourcing may simply be inadequate for the task, which places undue stress on staff and management and should be addressed at a council level.

Classifying compliance levels

All councils had a system for classifying compliance status of an activity, ranging from a binary approach (Nelson with 'satisfactory' or 'unsatisfactory') through to more detailed taxonomies, including some targeted at certain sectors (usually dairy). Councils vary in the extent to which these categories are integrated into their overall information management system.

Having different categories (and presumably different thresholds within categories) makes the councils very difficult to compare. A possible future area of improvement would be the nationwide standardisation of such thresholds. A standard taxonomy is proposed within the Best Practice Guidelines released in 2018 (Table 4 of guidelines). A nationally consistent taxonomy would enable councils to more easily demonstrate that the allocation of resources sensibly follows environmental risk.

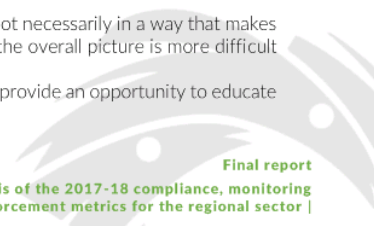
Compliance of consented activities

A key goal of any CME regime should be to secure behaviours that are desirable within the given statutory framework. Therefore, the compliance levels being achieved by the regulated community are a critical reflection of the effectiveness of the regime. Consistently poor levels of compliance usually denote a regime ineffective in marshalling appropriate behaviours and/or short on resourcing and signal that approaches to CME must be reviewed.

Notwithstanding that, a degree of non-compliance is typical and 'perfect' regimes are rare. In a typical regime it would be expected that there is a spread of compliance status along a spectrum, each part demanding a

² It is important to note that some councils may keep good records of complaints, but not necessarily in a way that makes it easy to report at a meta scale (i.e. individual complaint detail may be significant, but the overall picture is more difficult to extract). This type of reporting relies on the metadata.

³ Notwithstanding that, even in the absence of a breach responding to a complaint may provide an opportunity to educate a member of the regulated community or avert a future compliance matter.



different approach from the regulator. In the table on compliance levels, this expectation would translate into much of the regulated community occupying the left-hand columns with a gradual attrition in proportions as one moves to the right, which is exactly what is present.

Monitoring permitted activities

Permitted activity monitoring programmes are relatively rare outside of forestry and dairy. The need for them of course depends on the regulatory regime. The robustness of the CME regime is underpinned by whether it is appropriate in the first place for the activity in question to be approached in a non-regulatory way. If activities that potentially constitute significant environmental risk are permitted, then they may cause an unreasonable burden on the CME unit, particularly considering opaque cost recovery mechanisms.

Acting on non-compliance

Formal enforcement actions

Across the entire sector, councils issued (in the 2017/2018 year) 905 formal warnings, 1827 abatement notices, 1289 infringement fines and applied for 21 enforcement orders (total 4042 formal actions). Some councils are demonstrably less active in enforcement than others. These differences are not explained by population etc but appear to be related to more opaque variables such as the council's individual approach to the CME function. A balanced approach across the spectrum of education and engagement through to taking formal and punitive actions when necessary is a vital component of being a credible regulator. A more long-term dataset will enable the trends in the activity levels of council to transcend year-on-year variability and should be carefully monitored.

Discharges of contaminants was the driver behind more than half of all notices (other than prosecutorial action) under the Act and sends a clear message that more work is needed. It is also possible that discharges are more readily recognised by the public than other actions and therefore have a greater chance of being notified to council or being detected in routine monitoring. Whatever the reason, work is required in this space by both regulators and the regulated community to better stay within the boundaries of the law.

Prosecutorial actions – total convictions and types of offences

The sector secured 114 convictions against 49 individuals and 102 convictions against 60 corporate defendants. These data clearly demonstrate that prosecution is both (a) relatively rarely used compared with other tools under the Act and (b) its use is predominantly clustered in a small number of agencies for the reporting year. It is possible that these trends in activity levels could vary significantly year on year as prosecutions and the investigations leading up to them can take many years. Notwithstanding that, 216 successful convictions against both corporate and individual efforts is a significant effort and likely has critical deterrent value within the RMA regime, particularly where outcomes are publicised in national media.

Certain activities appear to lend themselves to higher visibility in enforcement statistics and without a doubt, the discharge of contaminants is one. It consistently tops the list of offences and managing these infractions evidently occupies a significant proportion of the regional sector's resourcing and energy. This may also reflect that the regulated communities may not be getting the message that unlawful discharges are unacceptable or that compliance regimes in respect of this matter are being less effective than they need to be in driving behaviour change.

Sanctions and outcomes

The sector secured more than \$2 million dollars in fines against both corporate and individual offenders. What can be demonstrated from these data is that the total quantum of fines is approximately 2% of the total possible fines for the entire suite of convictions (\$90 million). It is possible that the proportion of fines issued compared with those possible to have been issued would seem low to some commentators; although this could also be seen as a crude analysis.

At issue is whether such a small proportion of the total potential quantum being issued reflects any view of the judiciary that potential penalties are not justified, and what variables affect that assessment. The quantum of a fine reflects not only the seriousness of the incident/s that led to the prosecution, but also the quality of the information put before the Courts, precedence and judicial discretion. The degree of sanction is also an important element for whether it constitutes a sufficient deterrent to would-be offenders.

CME Reporting

Overall, there is a significant amount of variation in the scale and nature of reporting on the CME function between councils. Some operate with limited genuine public visibility while others appear to allocate significant resources to documenting their activities for the consumption of observers (e.g. Canterbury). This is in addition of course to participation in National Monitoring System surveys, this survey and other more ad hoc reporting efforts (e.g. Brown, 2017).

What is striking is that none of the SOE reports detail to any degree the importance or impact of the council's approach to CME as being material to environmental outcomes. While some reference the CME function in relation to specific matters (see for example Northland's SOE report in relation to wetland damage for swamp kauri extraction and associated compliance issues), there is a lack of comprehensive discussion of the linkage between CME operations and environmental outcomes.

This is an area that councils may wish to consider expanding on in the future. CME is a significant tool in achieving the overarching purpose of the RMA - done poorly it can result in slippage that erodes the potential of any regulatory regime to achieve statutory goals. Carried out in a robust manner, it can assist in driving positive environmental outcomes and mitigating failures elsewhere in the policy process. Connecting CME more robustly with state of the environment reporting may assist in providing a more robust basis for CME resourcing and delivery focus.

Summary of overall key recommendations

Key recommendations and observations arising from the findings within this report are as follows:

- While variation is to be expected given the diffuse nature of the regime and lack of oversight in the past, there is ample opportunity for councils to now work to **standardise approaches** to fundamental CME tasks, which would enable national scale data to have much stronger value due to Increased comparability
- **Resourcing** for CME is varied, but is relatively low in several councils, possibly too low to carry out the minimum requirements set down within the newly promulgated Best Practice Guidelines. The variation is not generally explained by relative wealth, land area or population - but appears often driven by other matters.



- Many councils were unable to provide some relatively basic information for these survey questions. While **information management** is doubtless an area in which the sector has improved greatly in recent years, further development is required to maintain reasonable levels of transparency.
- The **internal policy framework** for CME in many agencies is incomplete or has aspects that open councils and individuals within those councils up to reputational risk from an inability to demonstrate fair and clear decision-making processes. The sector must carefully consider performance in this space as independence, transparency and consistency are fundamental components of being a credible regulator.
- Some councils perform consistently well across all or most measures in this survey while the reporting of others demonstrates some significant shortcomings that should be addressed. Continuing to administer a **robust and regular reporting** framework, including review and improvement of the current suite of metrics, will help to drive performance improvement year on year.
- Unitary authorities do not sufficiently demarcate their regional vs district CME activities in their information management systems, meaning that the level of **transparency** about regional-level operations they can provide is lower than their regional council counterparts. This erodes both the comparability of the collective dataset and has potential reputational implications for the unitary councils.

Monitoring reports such as this one help to discern areas of strong performance and areas where improvement is needed. They also help to give insight into the appropriateness of institutional arrangements and crucially provide public transparency. They are of greatest value when conducted regularly and consistently over time, with agencies gradually orienting their Information management system such that they can fulfil the data requirements comprehensively.



Regional snapshots

The following section sets out the most striking aspects of the survey at a regional level, highlighting areas in which each council performed very well or indeed their responses reflected clear room for improvement. Councils can note their performance relative to the rest of the sector in each part of the report, but a short overview of key take home messages for each region is included here for quick reference. It is not exhaustive and should not be relied upon to give the full picture of the council in question. Activity levels and other variables are also very likely to vary considerably year on year, and the following snapshots are solely based on the data within this survey.

Northland

The Northland region is vast and approximately half the population are located rurally, one of the largest proportionally rural populations in the country. Northland Regional Council has a relatively systematic approach to determining priorities and a well-regarded monitoring programme for Farm Dairy Effluent (FDE) compliance. A robust policy framework guides CME decision-making and the council administers a range of education and engagement programmes. Northland has average levels of resourcing on a population basis, is relatively active in the use of lower level enforcement tools and reports regularly on CME activities in a variety of ways.

Auckland

The scale of the CME operation of Auckland Council dwarfs all other councils in numerical terms, but resourcing for CME on a population basis is below average. Internal prioritisation approaches appear sound although, like all unitary authorities, there is no way to understand (from the survey questions) how the competing demands of regional and territorial local authority functions are juggled. Information management appears to be an area where improvement is needed, although it is recognised that the efforts to integrate the legacy approaches of the amalgamated councils are ongoing.

Waikato

Waikato Regional Council operates a comprehensive CME regime, with a well-developed policy framework, prioritisation protocols and relatively good information management. Bespoke approaches to managing compliance approaches sometimes constrain the council from being able to contribute to nationally comparative datasets, however. Resourcing is slightly below average, but the regime overall appears generally balanced and well-documented. Education and engagement programmes and formal relationships with iwi and hapū on CME matters all appear comprehensively managed. Waikato appears to utilise the full range of tools in the CME toolbox. It does not (at least for the reporting year) carry out high numbers of prosecutions but did secure significant fines for convictions that were secured.

Bay of Plenty

Bay of Plenty Regional Councils approach to CME appears comprehensive with respect to the data gathered, although resourcing is below average. The policy framework and internal prioritisation approaches appear sound, although the monitoring of permitted activities could benefit from greater codification. Information management is an area for improvement given the gaps in data provision. A balanced approach to CME appears to exist with the council appearing to use a wide range of tools, and reporting is comprehensive.



Hawkes Bay

The Hawkes Bay Regional Council has some of the lowest levels of resourcing across the sector on a population basis. Like Taranaki, express provision for the CEO to participate in decision-making on prosecutions is an area of potential reputational risk. Information management, particularly regarding the outcomes of incident response demonstrates room for improvement.

Taranaki

The CME approach of Taranaki Regional Council appears both well codified and well captured in their information management system. The council has the greatest number of FTEs of all councils relative to population and has a well-developed policy framework. The monitoring of permitted activities is generally reactive however and would benefit from greater codification. Taranaki administers a relatively balanced enforcement regime, although the express delegation to the Chief Executive on prosecutorial matters is of concern.

Gisborne

Gisborne has a developing approach to CME, with internal policies and procedures having been subject to significant review in recent times, a process that is still ongoing. Resourcing levels are typical of the smaller unitary authorities (noting existing vacancies). Information management is an area of improvement, as the council was not able to provide some important data for the reporting year. However, Gisborne was the only unitary authority able to provide its consent monitoring data for regional consents only, enabling comparison with sector colleagues.

Manawatu-Whanganui (Horizons)

Manawatu-Whanganui Regional Council has a well-developed policy framework (noting that there is limited codification for prioritising permitted activity monitoring) but has some of the lowest resourcing in the sector. Information management is an area for improvement, as some datapoints were not able to be provided via council's systems. Manawatu-Whanganui used relatively few formal tools overall and recorded no prosecutions for the reporting year.

Wellington

Wellington Regional Council appears to have a comprehensive CME policy approach internally, with all expected policies and prioritisation procedures intact. Despite this, resourcing is the lowest of the entire sector, and the relatively scant use of formal tools (except non-statutory warnings) potentially reflects this. The council administers no permitted activity monitoring programmes.

Reporting appears comprehensive. Information management appears relatively sound. The relative sophistication of the internal framework for CME contrasts with the relatively low activity levels in the CME space, suggesting that the council has perhaps pulled back from this role for the at least the reporting year.

Tasman

Tasman District Council administers a large area and when combined with Nelson has slightly above average resourcing levels. However, less than half of consents that required monitoring were monitored in the reporting year and information management – like many councils – would benefit from some improvements.

Tasman has a relatively well-developed internal policy context for CME and is making progress in developing a prioritisation approach for permitted activity monitoring. The council appears to use the full range of tools

in the RMA enforcement toolbox and netted some significant fines from the few prosecutions they did undertake.

Nelson

Nelson City is the smallest jurisdiction of the sector and operates a slightly different CME model to most councils, relying on external contractors for much of the monitoring work. The resourcing appears reasonably adequate and the basic policy requirements are in place. For the reporting year, formal enforcement tool use favoured the softer end of the spectrum.

Marlborough

Marlborough District Council has a well-developed internal policy framework for CME and has above average resourcing for the CME function. Information management appears sound, with few gaps in the information provided, indicating that the council keeps good records of CME activities relative to the rest of the sector. Reporting seems comprehensive across a range of fronts.

Canterbury

Canterbury is New Zealand's largest region with the second largest population after Auckland, with significant resource management issues and a high level of public interest in council's approach to CME. Canterbury provided a significant level of detail on its CME activities in all instances and is evidently highly concerned with considering the CME function within its wider operations. The orientation of the council appears strongly focused on relationships with the regulated community and while this has many positive benefits, it can be a brake on punitive enforcement action where it is necessary. Canterbury relies heavily on non-statutory warnings notices and for the reporting year undertook relatively few prosecutions.

West Coast

The remote West Coast covers a large area, although much of it is public conservation land. CME resourcing for the West Coast Regional Council appears sound, although there are significant improvements likely required to the internal policy framework and information management – both appear lacking. The Council is relatively active at the lower end of the enforcement spectrum, mainly issuing non-statutory warnings, but carried out limited prosecutions.

Otago

Otago's narrative responses to questions were very brief, so it was difficult to discern how comprehensive their approach to some aspects of the role was. The categorical responses however generally showed that although there is room for improvement in information management, reporting is relatively comprehensive. Resourcing is below average, and council does appear to have struggled to meet its monitoring goals. The internal policy framework appears weak; it is one of the few councils to report that it does not have an enforcement policy for example. Notwithstanding the opaque internal context, Otago is one of the most active councils in high level enforcement proceedings

Southland

Southland has a well-codified approach to CME. The internal policy framework appears relatively sound, although like some other councils, provision for CE involvement in day to day enforcement decision-making is an area of reputational risk. Notwithstanding that however, Southland was the strongest performer in prosecutions of offenders, securing nearly a quarter of the fines for the entire sector over the greatest number of prosecutions of individuals and corporates. Information management and reporting appear generally sound.



PART 1 OVERVIEW

This report is the first of its kind – one derived from questions designed by the regional sector to improve and complement the present national monitoring system's brief CME aspects. Numerous analyses have raised concerns about poor information availability and a lack of continuous long-term data to demonstrate sector activities. Little guidance and direction exist for how environmental regulatory agencies must report on their activities, either internally or externally. Councils, given their local presence, also often face higher expectations for transparency than central government regulators.

This report represents a sector-led effort, under the leadership of CESIG, to improve the availability of data on CME functions. This inaugural survey saw all 16 of New Zealand's regional councils and unitary authorities (collectively referred to as the 'regional sector') participate. The dataset - while patchy due to the various factors - provides a very interesting insight into the conduct of CME agencies under the RMA, and its value will only increase in subsequent iterations.

How to read this report

The analysis of the data supplied by the regional sector is detailed below under headings which group like questions together into sections. At the beginning of each section is a box containing the exact wording of the relevant questions and results are graphed and tabulated for readability. Questions 1 and 2 contain identifying information for the councils and individuals filling in the survey so are excluded from analysis.

The format of information is generally:

- a boxed section containing the exact questions relevant to that section
- an overview of the purpose of the questions
- the tables and graphs of the information
- a description of findings
- a short analysis of the findings, at both a regional and national scale.

Questions exclusively devoted to giving opportunities for authorities to upload documents are not analysed but addressed in narrative form as standalone or within the relevant other question/s. Where an open-ended narrative-style response is required amidst an otherwise continuous series of numerical information, it has been spliced out and separately discussed. A full list of questions can be found in Appendix 1.

Unfortunately, unitary authorities were not generally able to demarcate the CME matters that relate to their regional functions and instead reported on their overall levels of activity. **Where this distinction is material, they have been separately analysed to ensure fair comparability.**

Data limitations

Reporting on CME activities is complex, and truly reflective metrics can be difficult to establish. The metrics within this survey were developed collaboratively by CESIG as a first and very important step toward a more robust sector-led framework for reporting on CME activities. There are several aspects of the metrics and the data that was submitted that should be kept in mind when reading this report. Where expressly relevant to the discussion, the limitations are also set out in the report. Otherwise they are contained here to avoid significant and lengthy repetition. Key limitations are:

- Many councils were unable to provide the required data for a range of reasons, including that the way the question was phrased was incompatible with present recording systems. This was accepted at the outset and will presumably be gradually addressed over time. The most notable example was that none of the participating unitary authorities – except Gisborne in respect of consent monitoring – were able to separate their total CME activities for regional functions from their territorial local authority functions, resulting in a significant issue of non-comparability.
- Councils also provided a significant amount of data that had caveats or was based on estimates. Special effort has been made to ensure the report carefully records those. The more the data are estimated and caveated, the lower their comparability and collective value however, and it is hoped that over time these can be reduced.
- The veracity of the data council-to-council is also unknown, and errors could possibly have been made while councils filled in the survey. A draft of the report was circulated to CESIG to provide councils with an opportunity to correct any data that was erroneous or to provide additional data they could to address gaps. Many amendments were received, which helped to mitigate this limitation somewhat. However, it would be useful if, in the future, greater time was allocated to gather the requisite information and to more carefully ensure its accuracy at the outset.
- While several questions focused on asking whether councils had policies or procedures in place, there is no easy way to determine whether (a) they are robust and reflect best practice, and (b) whether they are followed. This may be an area in which the survey could be expanded in the future.

Notwithstanding the above limitations, and those question specific issues set out in the body of the report, the data contained within this survey is the most comprehensive made available on the CME activities of councils under the RMA. It also far exceeds the detail available on the activities of any other environmental regulatory regime in the country.



INTRODUCTION

CME under the RMA in New Zealand

The CME function is almost entirely delegated to regional and territorial authorities (and unitary authorities which carry out both functions). The Ministry for the Environment acts in a somewhat limited oversight role, providing overarching policy, guidelines and administering national reporting on the function. In the past it has not been particularly active, but this is slowly changing.

Councils can choose how to exercise their CME role within the relatively broad framework of the RMA. There are few specific parameters set down in the act other than procedural/tool-based sections. Because of this relatively high level of discretion and limited national direction, the role has evolved differently over different jurisdictions and culminated in high levels of variation nationwide.

Key definitions

Compliance: adherence to the RMA, including the rules established under regional and district plans and meeting resource consent conditions, regulations and national environmental standards.

Monitoring: the activities carried out by councils to assess compliance with the RMA. This can be proactive (e.g. resource consent or permitted activity monitoring) or reactive (e.g. investigation of suspected offences).

Enforcement: the actions taken by councils to respond to non-compliance with the RMA. Actions can be punitive (seek to deter or punish the offender) and/or directive (e.g. direct remediation of the damage or ensure compliance with the RMA).

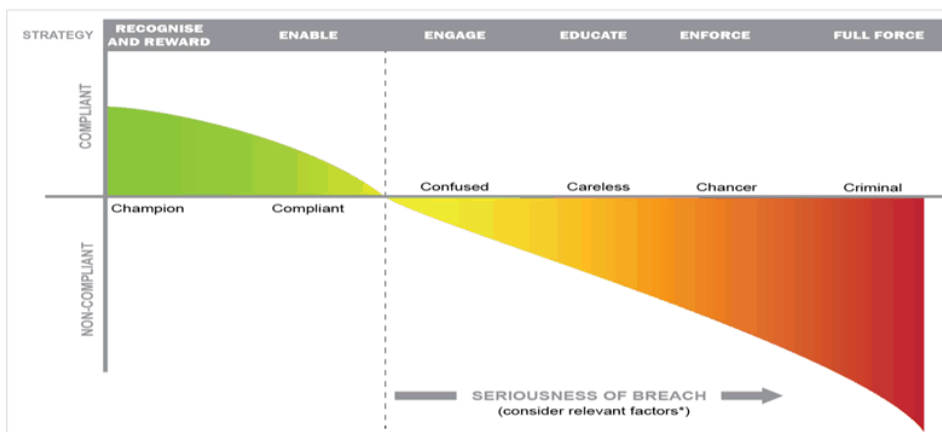


Figure 1: CME diagram (source: Best Practice Guidelines)

A robust approach to CME entails a council being able to work comfortably and competently across the above spectrum, applying tools and seeking sanctions that are appropriate to engender behaviour change.

The credible regulator – what should we look for?

It is important that regulators – in this case unitary and regional councils – are credible. But what does it mean to be credible? Insights into the kinds of expectations that might be had of the credible regulator under the RMA can be found in the following documents:

- Solicitor General Prosecution Guidelines
- Best Practice Guidelines (see 'minimum resource requirements' below)
- Basic Investigative Skills Manual

Expectations relate to the kinds of resourcing that is available for compliance (including capacity and capability), the policy context for CME and the procedures and reporting in place to record and demonstrate outcomes and effectiveness. Councils have significant discretion in how they carry out the CME role, and transparency in operation is the typical check on discretion in public policy.

Minimum resource requirements

There are certain CME functions councils should, at a minimum, support with sufficient resources. The list has been drafted so that it applies to all types and sizes of councils. For a well-functioning and effective CME programme, there are many other functions councils should consider resourcing.

As a minimum requirement, all councils should have sufficient access to resources to support:

- development and regular review of a compliance strategy, which includes an approach for addressing different behaviours, as set out in
- trained and qualified staff to undertake the CME role, including a combination of scientific, planning, regulatory, investigative and legal skills
- proactive programmes (eg, education and engagement) to achieve national, regional and local environmental objectives
- monitoring high-risk resource consents, and most medium-risk resource consents
- responses to and investigation of significant incidents, including appropriately trained investigation staff
- public reporting on CME at least once a year, fulfilling the minimum information requirements set out in the Best Practices Guidelines
- internal systems to support monitoring and reporting, including hardware/software to support the record-keeping requirements set out in the Best Practice Guidelines
- enforcement action (including taking a prosecution), ensuring staff are appropriately trained and qualified to do so
- access to legal representation and expertise in enforcement and prosecution
- administrative support for the CME function, for example to support financial matters such as charging for compliance monitoring.

A brief background on CME monitoring and reporting in New Zealand

The RMA contains high level guidance on what councils must do in terms of reporting and record keeping. These requirements include that they must;

- maintain records on the efficiency and effectiveness of plans (which includes CME) that is publicly available and in intervals of five years or less (section 35(2A))
- maintain a record of all written complaints received for the previous five years concerning alleged breaches of the Act or a plan and information on how the council addressed each complaint (section 35(5)(i))
- keep 'reasonably available at [their] principal office' a range of information including the monitoring of resource consents (section 35(3))

Outside of these relatively limited parameters, councils have significant discretion in how they conduct their CME role. Throughout this survey, the basic statutory requirements are referred to when considering the adequacy of some council responses to questions.

The regional and national context for reporting on CME activities to date can be best described as patchy. The sole specific data requirements are contained within the Ministry for the Environment's evolving National Monitoring System (and prior to this, the two-yearly survey of local authorities also administered by MfE). While the survey of local authorities provided some insight into the effectiveness of councils, a lack of continuous datasets (as questions have altered significantly over time) and limited quality control have undermined the utility of the exercise. Quality of the reporting and analysis varied significantly from report to report, with some being relatively comprehensive and carefully analysed and others being subject to only very limited analysis (especially the CME dimensions).

The National Monitoring System - linked to the Environmental Reporting Act 2015 - has been an improvement in part not least because it has ushered in a more consistent and integrated approach to reporting and greater online availability of the data. However, the system has not yet addressed other matters that undermine the utility of the data, including the long delays between the submission of information and its analysis and release. An important reason for monitoring and reporting on performance is benchmarking and giving agencies guidance on what they must improve on - long lags between submission and analysis make this difficult as the information is time-sensitive and has generally lost business relevance when lags number years not months.

Councils are also free to determine how and when they report on CME activities (outside of their NMS contribution). Some execute this role keenly and in a variety of ways, but for others reporting is scant and irregular, usually unlinked to other reporting streams in local government (e.g. SOE reporting). This means different communities have very different levels of access to information about how their council is conducting this critical role around the country. Robust and regular reporting that is publicly accessible helps councils and the sector demonstrate their activities and outcomes, and improvements in operations over time.

This project hopefully represents the genesis of a more consistent and practical means of monitoring council performance on CME in a way that is operationally relevant and instructive for councils, oversight bodies, regulated communities and the public. It may also represent a blueprint for an overhaul of the CME questions in the NMS in the future.



PART 2 - DATA ANALYSIS – QUESTION BY QUESTION PLUS INTERPRETATION

Regional context (questions 3-7, 10-12)

3. What is the population of your region?
 4. What is the geographic size of your region?
 5. What is the percentage split of urban and rural population in your region?
 6. What is your regional GDP percentage of national GDP?
 7. What is the regional % of GDP for each of the following industries? *e.g. forestry 25%*
- | | | |
|--------------------------|-------------|--------------|
| Agriculture (excl dairy) | Aquaculture | Construction |
| Dairy | Forestry | Horticulture |
| Mining | Oil and gas | Tourism |
| Viticulture | Other | |
10. Are you a Unitary or Regional Authority?
If you are a Regional Authority, how many Territorial Local Authorities are in your region?
 11. Provide link to your council's latest state of the environment report.
 12. Alternatively, upload the report (if less than 16MB)

The survey begins with a range of questions designed to provide valuable context to the remainder of the questions. Questions 1 and 2 relate to which council and which staff member was responding and are not analysed further. All these variables demonstrate that regions face different levels of population pressure, land use type and intensity and must carry out their CME activities across sometimes very large geographical areas.

Councils operating at a regional and unitary level in New Zealand face different challenges and are differently equipped to meet those challenges. The types of CME issues that are confronted by each council and the way CME operations are conducted are logically going to differ. Providing context for the subsequent analysis is important. Several estimates differed from readily available national data, so the author has defaulted to the use of data drawn directly from Statistics New Zealand where it has been available at a regional level.⁴

Population, size, urbanisation and GDP of participating regions (Question 3-4, 6, 7 and 10)

Population and area within the council's jurisdiction varies significantly. So too does regional GDP and the industries from which it is generated. All these variables likely have a significant impact upon the level of activity required to implement a robust CME regime. Development activities generally coincide with where people are, as do complaints, so understanding the population that the CME functionaries must service, and the area over which they must undertake the task can provide some insight into their workload.

⁴ Unfortunately, the Nelson and Tasman unitary areas are combined in some regional context data. Where this has affected analysis, it has been clearly articulated in italics.

Population, area and total regional GDP

Council	What is the population of your region?	What is the geographic size of your region?	What is your regional GDP percentage of national GDP?	Regional or unitary authority (number of TAs)
REGIONAL				
Northland	173,500	12,500	2.6	Regional (3)
Waikato	455,000	23,900	8.4	Regional (11)
Bay of Plenty	296,900	12,071	5.3	Regional (6)
Hawke's Bay	162,900	14,137	2.7	Regional (4)
Taranaki	117,400	7,254	3.1	Regional (3)
Manawatu-Whanganui	238,800	22,220	3.8	Regional (7)
Wellington	509,700	8,048	13.2	Regional (8)
West Coast	32,500	23,245	0.6	Regional (3)
Canterbury	607,000	44,504	12.9	Regional (10)
Otago	221,900	31,186	4.3	Regional (5)
Southland	98,200	31,196	2.1	Regional (3)
UNITARY				
Auckland	1,637,000	4,941	37.5	Unitary
Gisborne	43,653	8,355	0.7	Unitary
Tasman		9,615		Unitary
Nelson	101,700	422	1.8	Unitary
Marlborough	45,900	10,457	1	Unitary

Table 2: Regional contextual data for participating jurisdictions (Questions 3-4,6 and 10)

The region with the largest population is Auckland with over 1.6 million people, almost three times larger than the next most populous region, Canterbury. The West Coast has the smallest population with 32,500 people. This enormous disparity must be kept in mind in comparing the activities of the different councils – the economies of scale that some organisations are able to achieve with respect to matters such as resourcing/training are simply not within reach of smaller councils within the present local government funding model.

The largest region by area is Canterbury (44,504.50km²), followed at some distance by Otago and Southland which are very similar in size, being just over 31,000km². The smallest region by some margin is Nelson City, covering just 422.2km² (roughly 100 times smaller than Canterbury). Some councils have a relatively small population over a relatively small land area (e.g. Taranaki) while others have a large population over a small land area (notably Auckland, but also Wellington's land area is roughly equivalent to Taranaki's with five times the population).

Regional GDP varies widely across the sector, with Auckland collectively contributing 37.5% of the national total and the West Coast contributing just 0.6%. The source of the GDP contribution varies widely, from some regions heavily focussed on one or two particular industries (e.g. oil and gas in Taranaki) through to regions with very diverse economies (e.g. Auckland).

Urbanisation

Much of New Zealand's population is urbanised, but many regions do not reflect this split. Both urban and rural areas have compliance issues, so while this information does not provide insight into the level of workload councils face, it may provide some idea of the types of issues commonly encountered.

Rural areas tend to be associated with large distances and lengthy travel times between incidents (depending on where staff are located) so may have logistical/resourcing implications. Urban populations may also tend to be more vocal and more proximal, meaning more local issues can displace wider regional matters if prioritisation approaches are not robust. Managing this potential tension should be of concern particularly to unitary authorities.



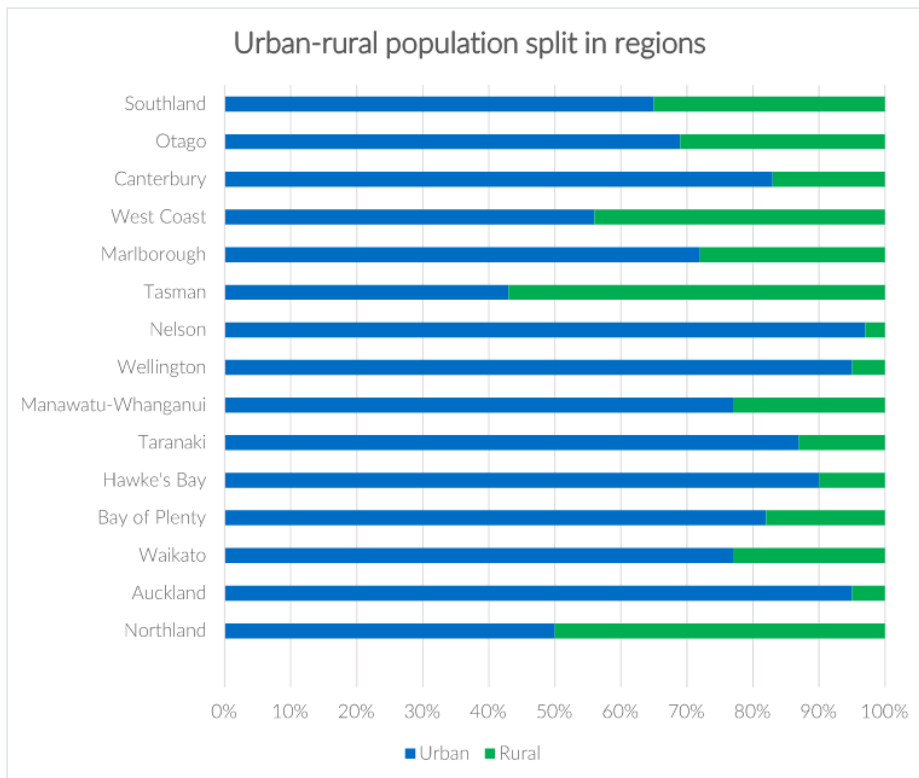


Figure 2 Urban and rural population split across regions (Question 5) Gisborne - DNR

There is no easily available source of information to verify the rural and urban population split reported by councils. Some figures reported were clearly in error and needed to be swapped around and a couple of councils reported two different sets of figures over 2-3 responses. All regions have a significant proportion of the population in urban areas, in line with national trends.

Of all the regions, Tasman has the highest proportion of the population classified rural (roughly half and half), followed closely by Northland and the West Coast. Conversely, the great majority of Auckland, Wellington and Nelson residents are in urban areas.

The scene-setting questions answered by the participating councils helped give consumers of the data a sense of the context in which the different councils operate, and the implications the differences between those contexts might have for the CME function. The data demonstrated the significant variation in population, area, regional economic profile and rural to urban population ratio – all of which have a material impact on the scale and nature of the CME role. No specific analysis is offered in respect of these figures, other than to acknowledge that they must be kept in mind in undertaking any comparative evaluation of CME regime effectiveness.



Working with iwi (Questions 8 and 9)

8. Describe your regional key commitments to work with iwi/Maori on CME (e.g. commitments in Joint Management Agreements or other co-management agreements)
9. Upload copies of any agreements related to this work with iwi/Maori.

The relationship between local government and iwi and hapū is increasingly well-recognised (see for example Part 3 of the Best Practice Guidelines). Across the breadth of council functions, there are many opportunities to broker agreements and commitments between these parties, and some of these refer to CME functions under the RMA. Examples may include the requirement to consult with local iwi on CME policy or to involve tangata whenua in CME-related processes such as freshwater monitoring or formal enforcement action.

All but one council responded to this question (Table 3). Two referred to programmes that were currently under development, while the remainder were able to share their operational experience working with iwi and hapū in CME. Detail varied, but overall the question responses signalled that this is a growing area of focus and that there are likely opportunities for cross-agency knowledge sharing.

Section findings

- Councils carry out the CME role in very different contexts, with wide variation in land area, population and industry types, and these distinctions must be kept in mind in managing the sector at a national scale
- Councils generally have limited but evolving relationships with iwi and hapū in respect of CME matters and this area is likely to increase in importance over time

Council	Describe your regional key commitments to work with iwi/Maori on CME (e.g. commitments in Joint Management Agreements or other co-management agreements)
Northland	Tai Tokerau Māori & Council Working Party that meet monthly
Auckland	Currently being developed
Waikato	Comprehensive requirements via existing joint management agreements and proposals for further work in this space (e.g. honorary ranger programme)
Bay of Plenty	Several governance-level agreements provide for formal engagement with tangata whenua
Hawke's Bay	Gravel Extraction Ngāti Pāhauwera
Taranaki	Iwi authorities involved in prosecutions by producing victim impact statement. Further involvement in enforcement being considered.
Gisborne	JMA with Ngati Porou, MOU with Te Runganui o Turanganui a Kiwa, Statutory Acknowledgments for Rongowhakaata, Ngai Tamanuhiri, Ngati Porou. Local Leadership Body being set up with 3 Turanga Iwi
Manawatu-Whanganui	DNR
Wellington	12 Key Forums, Agreements or functions which integrate iwi and our Mana Whenua partners into the work of the organisation
Nelson	No formal agreements - all iwi are informed about all resource consent applications and iwi monitoring occurs as required
Tasman	No formal agreements with Iwi for wider CME however does work with Iwi through consent conditions where they are have an active monitoring role.
Marlborough	Draft Iwi Engagement Policy
West Coast	Iwi are informed of all resource consent applications. Iwi representatives sit on the Council Resource Management Committee which compliance, monitoring and enforcement activity is reported to monthly. WCRC has strong working relationships with iwi and is working towards formal agreements.
Canterbury	<p>Quarterly meetings between the 10 Papatipu Rūnanga Chairs and Regional Councillors. Every 6 weeks ECan staff meet with the environmental experts from each marae to discuss regional projects, Te Waihora Co Governance, Te mana o Wai project at Wainono, ECan and Ngāi Tahu joint work programme, Service level agreements with 3 Ngāi Tahu environmental entities that support the 10 Papatipu Rūnanga. Regional Councillors meet at individual marae each year. Each marae has 2 representatives that sit on each of the 10 Water Zone Committees. Two dedicated staff to look after the 20 marae water zone representatives. Strategic Mātauranga Māori and mahinga kai programmes through the CWMS and science portfolios.</p> <p>ECan's Long Term Plan 2018 Significance and Engagement Policy specifically identifies the values and interests of Ngāi Tahu whānau, hapū and rūnanga, as mana whenua for the region, where proposals or decisions relate to land or a body of water, the implications for the relationships of Ngāi Tahu and their culture and traditions with their ancestral land, water, sites, wāhi tapu, valued flora and fauna and other taonga.</p> <p>This Engagement Policy is supported by ECan's Tuia Relationship Agreement which recognises the importance of face to face engagement with Te Rōpū Tuia, direct with Rūnganga, operational engagement and membership of ECan committees.</p>
Otago	MOU in place
Southland	Charter of understanding of Iwi and local government March 2016 (see question 9)

Table 3: Listed regional key commitments to work with iwi/Maori on CME (Question 8 and 9)

CME operations (Questions 16-17, 20-21, 28-40)

There are three key sources of workload in CME:

- incoming written or oral concerns from the public or other agencies ('complaints'),
- CME in relation to consented activities and
- CME in relation to the monitoring of permitted activities throughout council's jurisdiction.

All are important and deserve attention. However, they can represent competing demands on officer's time, and proportioning effort across the three workstreams is the key test for internal prioritisation approaches.

Making decisions on priorities (Questions 16, 17, 20-21, 28-29)

16. What basis is used for determining what notifications are physically attended and with what urgency or priority?
17. If your council uses a prioritisation model or compliance strategy, please upload file.
20. Describe how you determine which consents are monitored and how frequently?
If there is a prioritisation model or compliance strategy, add link
21. Upload file, if link not provided
28. Describe what basis was used for determining how these permitted activities are monitored.
If there is a prioritisation model or compliance strategy, add link
29. Upload file, if link not provided above

Questions 16 and 17 addressed how each council makes decisions on what notifications (i.e. complaints) to respond to and what not to, and in what ways. Questions 20-21 dealt with the same subject matter as 16-17 but related to how the council determined the priority of consent monitoring. Question 28-29 addressed the basis upon which council decided when and how to monitor permitted activities. No specific information was requested or offered by unitary authorities as to how their two suites of functions are prioritised in relative terms.⁵

⁵ In email communication, Nelson City Council advised that approximately 20% of consents were regional in nature and all were monitored, whereas only some district level consents were monitored.

Council	What basis is used for determining what notifications are physically attended and with what urgency or priority?	Describe how you determine which consents are monitored and how frequently?	Describe what basis was used for determining how these permitted activities are monitored.
REGIONAL			
Northland	Following factors taken into account: Adverse effects (actual & potential); nature of the incident; if activity is still happening or not; time elapsed to incident being reported to Council; relevant history (e.g. repeat non-compliance), staff availability & location of incident	Frequency for some activities decided on a whole (e.g. dairy = minimum 1 annual visit; coastal structures = once every 3 years); all other consents on case-by-case (e.g. some on-site systems once every 5 years if low risk and good history, others may be every year if high risk due to proximity of waterway etc).	All permitted activity dairy farms monitored at least once annually. NES-PF is monitored with a risk-based approach. All other activities case-by-case.
Waikato	Prioritisation model, please note also have individual compliance strategies for various industries and activities.	Compliance Strategies (have 7 compliance strategies but only able to upload one)	Compliance Strategy Managing Dairy Effluent is seen as a high-risk activity because of the number of Dairy Farms in the Waikato Region and its potential for effect on water quality. Farming activities are mostly permitted under the Waikato Regional Plan - unlike many other plans.
Bay of Plenty	Whether or not the matter for complaint is still occurring, nature of the issue and whether attending the site will change anything, and/or whether it is safe to visit. Note: some may not be attended if there are multiple complaints at any one time and resources need to be triaged according to risk.	BOPRC uses a risk-based approach to scheduling compliance according to different consented activities. This framework is reassessed annually and feeds into our Section 36 policy	Permitted activities are generally monitored on a reactive basis; currently in the process of developing a monitoring plan for permitted forestry under the NESPF
Hawkes Bay	Risk Based approach	Compliance Monitoring Strategy	NES Forestry, Annual Plan
Taranaki	All are attended as per Annual Plan.	Link provided to risk-based monitoring procedure	Availability of staff and priority activities

Council	What basis is used for determining what notifications are physically attended and with what urgency or priority?	Describe how you determine which consents are monitored and how frequently?	Describe what basis was used for determining how these permitted activities are monitored.
Gisborne	We attend all complaints and have performance standards to respond to all notifications within 30 minutes and attend within 60 minutes.	DNR	There were new Permitted Activity requirements in our Freshwater Plan - these were targeted at significant environmental risks so as part of implementing the Plan we have developed a Permitted Activity monitoring programme. This is to ensure that farmers and growers are familiar with and complying with the new rules. Now the NES-PF has been in place we have identified the need to undertake Permitted Activity monitoring of forestry activities which previously would have required consent under our Plan. We have identified this as a high priority to ensure that there is a good level of understanding and compliance around the Permitted Activity standards.
Manawatu-Whanganui	Council uses a prioritisation model that determines how and when it responds to incidents, this is outlined in the document attached to question 17.	This is based on a risk-based approach, this is consistent with the Strategic Compliance Framework. The compliance strategy is summarised in our LTP, at page 51, this outlines what the compliance team will deliver in relation to compliance monitoring based on site/consent prioritisation.	Strategy for NES-PF monitoring is still in a draft format and not yet finalised.
Wellington	Incident Response Protocols are based on specific factors which form a decision-making flow chart	GWRC has a Strategic Compliance Programme which prioritises what consents are monitored and how frequently	No response

Council	What basis is used for determining what notifications are physically attended and with what urgency or priority?	Describe how you determine which consents are monitored and how frequently?	Describe what basis was used for determining how these permitted activities are monitored.
West Coast	Determined by compliance officer in consultation with team leader or manager. Compliance policy requires attendance within 24 hours for urgent matters.	As per Council Long Term Plan targets, internal mining targets and undocumented risk-based assessment.	Permitted activity dairy farms are required under the Long Term Plan to be monitored at least every 2nd year depending on compliance history.
Canterbury	Currently an officer decision based on environmental effects and ability to attend. A project to create an incident response evaluation model is nearing completion, with a draft model currently being tested. This approach combines organisational priorities (both regional and sub-regional/zone) and environmental effects (risk) to determine whether an incident requires an elevated response or a standard response. The evaluation process is a yes/no decision against a list of predetermined triggers for elevated response. All incidents are standard unless they trigger an elevated response (when any trigger returns a 'yes' answer). Elevated response incidents will require a site visit within two working days, standard response incidents will require a desktop response within 5 working days.	Environment Canterbury's compliance monitoring programme has traditionally been risk based, i.e. monitor high risk consents and react to issues/incidents from lower risk consents. A risk-based methodology is still valid; however, the compliance monitoring programme also needs to deliver on Environment Canterbury's strategic priorities. For 2018/2019 Environment Canterbury has moved to a balance of risk and priority-based monitoring that is delivered through a campaign methodology. The campaign identifies the approach for delivery of priorities and allocates inspections for compliance monitoring. 2018/2019 Compliance Monitoring priorities were agreed by Environment Canterbury Council as: Regionally Significant Consents, Water Use Compliance, Good Management Practice, Fish Screens, consents with a history of significant non-compliance and Zone Priority Projects. The priorities are translated into priority inspections for monitoring. [abridged]	We have a compliance strategy based on environmental risk and organisational priority. Due to the reduced risk of the permitted activities, these do not form part of the prioritised monitoring programme unless significant non-compliance is detected. PA monitoring programmes are in place for domestic home heating, forestry and construction site run-off.
Otago	Is it happening now? What is happening?	Consent are monitored on a risk-based system	NES (Forestry)/ Risk based

Council	What basis is used for determining what notifications are physically attended and with what urgency or priority?	Describe how you determine which consents are monitored and how frequently?	Describe what basis was used for determining how these permitted activities are monitored.
Southland	Office based assessment in line with Environment Southland's current environmental focus.	We aim to complete a minimum of one inspection per consent annually except for our south coast structures/Stewart Island/Fjordland consents which are inspected every three years on rotation.	Compliance monitoring strategy - see question 20
UNITARY			
Auckland	An electronic risk-based triage form - cannot upload	Risk based matrix	Required by the Auckland Unitary Plan
Nelson	Risk based with priority on incidents that could adversely affect the health and safety of people or cause harm to sensitive environments	All consents requiring monitoring as determined through the resource consent process are monitored. Frequency depends on risk, compliance history, activity/industry type	The 3 dairy farms are monitored at least annually, same for all forestry operators
Tasman	Complaint priority matrix	We use a prioritisation matrix within a monitoring policy. Frequency depends on the conditions, type of activity and level of compliance	Consent & Permitted activity Monitoring prioritisation Strategy 2018-20. Not attached as it is yet to be ratified.
Marlborough	High, Medium, low priority given on receipt based on adverse effects and mitigation. Table of CRM categories identified and likely Priority.	Risk based strategy	Risk based strategy based on activity

Table 4: Prioritisation approaches across three key CME workstreams

Prioritising incoming complaints

Most councils referred to priority or risk-based approaches to determining whether to attend a complaint and with what urgency. One council (Taranaki) referred to an annual plan undertaking to address all complaints, which they did). Gisborne referred to a policy of responding to all complaints also, within a designated timeframe. Ten councils provided a document which set out their approach formally, within a policy, in a wall chart form or as an excerpt from a more widely focused document. Waikato referred to a total of seven compliance strategies, each focused on a different activity type.

Prioritising consent monitoring

Most councils again adopt a risk-based approach, although some activities are monitored at a set minimum frequency (for example, Northland carries out a minimum of one annual visit to each dairy farm) presumably also based on risk. The level of detail provided did vary, but overall most council responses reflected a relatively systematic approach to monitoring of consented activities being in place. Gisborne did not provide information on the basis for prioritising but were able to provide figures as to what consents were deemed to require monitoring (so it is assumed there is a framework of sorts in place, even if not articulated).

Prioritising the monitoring of permitted activities

Councils also generally appear to adopt a risk-based approach in this space, although overall it would seem less well codified than other workstreams. As with consented activities, some activity types automatically attract a minimum number of visits (e.g. in Nelson all forestry activities which are permitted are visited at least once). The National Environmental Standard: Plantation Forestry (NES-PF) has evidently acted as a significant catalyst for codifying approaches to permitted activity forestry.

Summary

Making the right choices about where to expend usually limited CME resources is critical to ensuring the greatest risks to the environment are managed first and most intensively. Councils must develop coherent and systematic approaches to making decisions on relative priority. The questions in this section requested councils provide an outline of how they make those choices and on what basis (Table 4). Naturally, it is difficult to know the extent to which the theory is reflected in practice.

The three main sources of CME workload represent competing demands on the resources available. Current best practice denotes that a **risk-based approach** is desirable, noting that resources in environmental management generally and CME specifically are generally expected to always be in short supply. A robust risk-based approach has several specific requirements as outlined in the Best Practice Guidelines (see pages 43-45). The survey does not provide scope to assess the integrity of the different approaches being described as 'risk-based'. It is important however that purportedly taking a risk-based approach is not used as a political shield against providing appropriate resourcing for the CME role.

Analyses to date have demonstrated that the first and second categories usually dominate the workload, with issues of risk, priority and weak cost recovery mechanisms impacting the level of permitted activity monitoring undertaken. This trend is reflected in the present survey. Council approaches to allocating resources to permitted activities appears overall less systematic, and more dependent upon residual resources left over from addressing the other two main sources of work. The extent to which this more ad hoc approach carries environmental risk is largely dependent upon the permissiveness of the regulatory regime. Where significant reliance is placed upon permitted activities being managed by way of standards, a systematic means of monitoring compliance should not be negotiable.

In this section we learned that the regional and unitary authorities are applying increasingly systematic approaches to determining the relative priority of incoming workstreams, most particularly in respect of consent monitoring and incident response. A sector-wide adoption of a risk-based approach has occurred, doubtless informed by the recent development of both the Regional Sector Strategic Compliance Framework and the even more recent Best Practice Guidelines. Ensuring these approaches are followed and enshrined in practice is likely to better utilise what resources are available in any given agency and to ensure the most serious issues are quickly and efficiently addressed.

It is acknowledged that the cost recovery mechanisms for both incident response and permitted activity monitoring are opaque and not fit for purpose. Providing councils with a more clear-cut statutory context for cost recovery would assist in addressing this matter. In addition, if significant non-compliance events are occurring from permitted activity standards, then it may – in the long term- be desirable for that council to reconsider its non-regulatory approach to that activity.



Staffing levels (Questions 30-33)

30. How many FTEs does your council have who carry out monitoring roles?
Include contractors.
31. How many FTEs does your council have who carry out environmental incident or pollution response roles?
Include contractors.
32. How many FTEs does your council have who carry out investigation or enforcement roles?
33. How many FTEs does your council have in CME support roles (e.g. administrative roles)?

Note: FTEs should only be counted once under each of these categories. However, if a team member has more than one role then calculate what portion of their time generally is spent in each role. An example of an answer to each of the questions in this section might look like '24 FTE spread across 40 individuals. Exclude any in-house or contract lawyers

Resources available for CME vary considerably across different agencies, depending on funding levels, community expectations and internal priorities (including political priorities). Staff commonly carry CME responsibilities alongside other tasks related to council's wider functions. Having adequate resources to carry out CME in a comprehensive and systematic manner is a fundamental component of being a credible regulator.

Questions 30-33 asked councils to provide details of the resourcing available to the RMA CME function. The purpose of using FTEs compared with 'people' is to recognise that a mix of duties for the same person is commonplace, particularly in smaller councils. It is reasonable to assume that resourcing would differ substantially across the sector, given differences in population, area, development type and intensity and council funding base.

Unitary authorities carry out regional and territorial functions, and the two sets of functions themselves require somewhat different expertise at certain times and of course more relative resourcing. For instance, Tasman must undertake both the work of a regional council and one or more territorial local authorities within the same CME unit. However, the unitary authorities did not distinguish between the staffing levels for regional and territorial functions, hence they are separated in the table. Going forward, it may be advantageous for unitary authorities to either separate this information, or at least provide a sense of how resources are divided between the two tiers and how much overall time is attributed to each.



Council	How many FTEs does your council have who carry out monitoring roles? Include contractors.	How many FTEs does your council have who carry out environmental incident or pollution response roles? Include contractors.	How many FTEs does your council have who carry out investigation or enforcement roles?	How many FTEs does your council have in CME support roles (e.g. administrative roles)?	TOTAL FTEs
REGIONAL					
Northland	13.3	4	2.7	2.4	22.4
Waikato	22.5	9	6	9	46.5
Bay of Plenty	14	2	3	12	31
Hawke's Bay	6	3	0	1	10
Taranaki	27	3	4	2	36
Manawatu-Wanganui	4	4	1	1	10
Wellington	10	4	1	0.5	15.5
West Coast	1.5	1.5	1.5	1	5.5
Canterbury	28	10.5	3	2.2	43.7
Otago	9.7	6.3	1.7	5.5	23.2
Southland	7.5	1	2	2.6	13.1
UNITARY					
Auckland	54	31	35	26 ¹	146
Gisborne	6 ²	1	1	DNR	8
Nelson	1.33	1.33	1.34	0.5	4.5
Tasman	2	3	4	2	11
Marlborough	2.6	3.2	2.6	1	9.4
TOTAL	209.43	87.83	65.84	68.7	435.8

Table 5: FTEs for CME across regional sector (Questions 30-33)

¹ Estimate only ² Gisborne reported that of the 6 FTE, only 4 were currently filled and the remaining 2 were being recruited at the time of the survey. The figure of 6 was retained as it was not clear whether other councils had also included vacant positions.

Overall, the CME functions of regional councils and unitary authorities comprises 435.8 FTE, comprising 209.43 monitoring FTEs, 87.83 environmental incident and pollution response FTEs, 65.84 investigations positions, all supported by at least 68.7 support staff including non-regulatory education-based FTEs and administrative support (Table 5).

Councils are differently resourced for the CME function, with wide variation in resourcing not explained by differences in population, area and regional GDP. For instance, more than half of these (236.2 or 54%) are employed by just 3 of 16 councils – Auckland, Waikato, and Canterbury, so team size varies significantly. Other variables are likely material to determining the resourcing, and councils with limited resourcing are more likely to struggle to meet the minimum resource requirements referred to at the beginning of this section.

As expected, the resources available for CME differ significantly across the sector and between regional and unitary authorities. The best resourced regional council in terms of whole numbers is Waikato, closely followed by Canterbury. West Coast employs the least people in CME roles, with Hawkes Bay and Manawatu-Whanganui employing the same number of persons at the next lowest level.

Among the unitary authorities, Auckland Council's staff levels are so large as to be difficult to compare. However, the smaller unitaries all carried similar levels of resourcing even before population was considered. Enabling a more comparative approach is needed to understand the relative resourcing in more detail.

The split across the different workstreams of monitoring, incident response and investigation/enforcement differ between councils, although the predominant trend is that approximately half or more of total FTEs are occupied by consent monitoring, and the least proportional resourcing is allocated to investigations and enforcement (Tasman is a notable exception).

The degree of administrative support to the CME function also varies considerably and arguably may have been an area where calculations differed internally in preparing survey responses (e.g. where administration functions are pooled – as is common – the survey respondent may have not considered the full range of persons engaged in CME activities for a proportion of their time). For instance, Waikato has a total of 9 FTE administrative support within a staff of 46.5, whereas Canterbury have a similar number of staff but only 2.2 FTE for administration. Many functions of council are indirectly linked to CME (finance for example) and may or may not have been included.

CME resources compared with population of the jurisdiction

Determining the adequacy of resourcing is complex. There is no magic number. What is known is that good CME requires people and limited resources constrains a council from being a credible regulator. It is important that councils allocate enough resource to this crucial function to ensure they have enough people, and enough of the right people (well-trained etc) to do the job robustly.

FTEs per 1,000 head of population provides some broadly comparative metric for information's sake. The following data demonstrate the wide variability in resourcing between councils on this basis. This variability may in part be explained by contextual differences and in part be explained by other factors such as political priority. Certainly, the limitations of population as a metric are very much acknowledged, but in the absence of a clearly viable alternative, it provides at least some insight.



Council	TOTAL FTEs	Population	FTEs per 1,000
REGIONAL			
Northland	22.4	173,500	0.13
Waikato	46.5	455,000	0.10
Bay of Plenty	31	296,900	0.10
Hawke's Bay	10	162,900	0.06
Taranaki	36	117,400	0.31
Manawatu-Wanganui	10	238,800	0.04
Wellington	15.5	509,700	0.03
West Coast	5.5	32,500	0.17
Canterbury	43.7	607,000	0.07
Otago	23.2	221,900	0.10
Southland	13.1	98,200	0.13
UNITARY			
Auckland	146	1,637,000	0.09
Gisborne	8	43,653	0.19
Nelson	15.5*	101,700*	0.15*
Tasman			
Marlborough	9.4	45,900	0.20

Table 6: FTE resourcing for CME relative to population (Nelson/Tasman combined)

The average resourcing is 0.13 per 1,000, with a range of 0.03 to 0.31 across the entire sector (0.157 for unitary authorities and 0.11 for regional councils) (Table 6). The best-resourced regional council relative to population is Taranaki Regional Council (0.31 FTEs per 1,000 population). The least resourcing relative to population is in the Wellington Region (0.03, ten times less relative resourcing than Taranaki). Among the unitary authorities, Auckland has significantly less resourcing than other councils with dual functions on a relative basis, but unitary authorities overall carried usually higher levels of resourcing on a population basis (but were not able to demarcate the resources allocated for addressing regional functions alone as directed by the survey introduction).

Councils are differently resourced for the CME function, with wide variation in resourcing not explained by differences in population, area and regional GDP. Clearly other variables are material to determining the resourcing, and councils with more limited resourcing are more likely to struggle to meet the minimum resource requirements referred to at the beginning of this section. Comparisons with other variables (i.e. number of active consents, complaints etc) is confounded by differences in priority frameworks and the wider regulatory regime. Further work is needed on establishing a truly comparative metric (which is likely to need to be multi-dimensional).

CME Policies and procedures (Questions 34-38)

34. Does your council have an Enforcement Policy?
If yes, please upload copy
35. What is your process for making decisions on prosecutions?
36. Does your council have a Conflict of Interest Policy?
If yes, please upload copy
37. Does your council have any other CME policies? (not mentioned previously)
If yes, please list
38. If yes, please upload copies

Provision of a coherent policy context for CME within the council's overall operations is important to maintain the credibility of a regulator. Questions 34-38 addressed the ways in which policy informed councils CME operations, particularly with respect to making decisions on prosecutions and in managing conflicts of interest. There is of course no easy way to capture the degree to which policies are adhered to but having them in the first place is important.

None of the above policies are expressly required in statute, however the need for an active enforcement policy is set out in the newly promulgated Best Practice Guidelines. Note that for the purposes of the analysis, enforcement policies in draft were still counted (more than one council was, for example, in the process of amending their policy to align with the Best Practice Guidelines).



Council	Does your council have an Enforcement Policy?	Does your council have a Conflict of Interest Policy?	Does your council have any other CME policies? (not mentioned previously)	What is your process for making decisions on prosecutions?
Northland	Yes	Yes	Yes (Quality Manual)	EDG with minimum 3 staff (CEO is not involved in decision making for prosecutions)
Auckland	Yes	Contained within charter	Yes (see Charter)	Recommended by officers, approved by Manager Regulatory Compliance
Waikato	Yes	Yes	We refer to the CESIG Regional Sector Compliance Framework 2016-2018	Investigating officer reports to a panel of 3 senior managers with recommendation.
Bay of Plenty	Yes	Yes	No	Investigating officers present detailed report and recommendations to an EDG, which comprises Regulatory Compliance Management. The EDG makes a recommendation which is forwarded to counsel for legal advice, before being presented to the GM for Regulatory Services for decision.
Hawke's Bay	Yes	Yes	No	Enforcement Decision Group - approvals by Manager/ Group Manager/ CEO based on an Enforcement Action Checklist EDG
Taranaki	Yes	Yes	No	Decision delegated to Chief Executive and decision made in conjunction with the Director of Resource Management and Compliance Manager.

Council	Does your council have an Enforcement Policy?	Does your council have a Conflict of Interest Policy?	Does your council have any other CME policies? (not mentioned previously)	What is your process for making decisions on prosecutions?
Gisborne	Yes	Yes	Internal prosecutions policy	EDG has 2 managers, TL compliance and a senior compliance officer and investigator with voting rights. Lawyer and director do not vote. Once a recommendation has been made to prosecute by EDG. It is reviewed by Director, and they make the decision as to whether to proceed. If yes it then goes to the lawyers who will give legal peer review and advice. Based on legal advice the CME manager, investigator and Director will consider the legal advice and decide whether to proceed. The Director makes final decision.
Manawatu-Whanganui	Yes	Yes	No	Upon completing investigation, the OC prepares a report for both the Regulatory Manager and Group Manager recommending action to be taken. this is then provided to the CE for their consideration. the report is also accompanied by legal advice from the Crown solicitor on evidential sufficiency and public interest.
Wellington	Yes	Yes	Draft Prosecution Guideline	GWRC will generally take the following steps as part of its prosecution process under the Act: <ul style="list-style-type: none"> • Investigation of the incident • Correspondence with the person/s suspected of breaching the Act, during which an opportunity is provided to respond to the allegations • Incident presented to the Enforcement Decision Group • Obtaining external legal advice about the merits of prosecution • Final decision made by Prosecution Decision Group • Where appropriate, filing charges in the District Court.
Nelson	Yes	Yes	No	Recommendation report completed by officer, reviewed by all levels to the tier 2 manager who decides after receiving legal advice

Council	Does your council have an Enforcement Policy?	Does your council have a Conflict of Interest Policy?	Does your council have any other CME policies? (not mentioned previously)	What is your process for making decisions on prosecutions?
Tasman	Yes	Yes	No	Delegated authority with tier 2 manager. Recommendation to him from Team leader after consultation with O/C case and review of file.
Marlborough	Yes	Yes	No	Stage one QA peer review panel Stage two Enforcement and Prosecution Committee Stage three Legal Counsel review
West Coast	Yes	Yes	No	Recommendation made by compliance officer to enforcement decision group made up of CEO and manager.
Canterbury	Yes	Yes	Yes Incident response Unreasonable complaints	The case is initially presented to the Enforcement Decision Panel by the investigating officer, with a recommendation to prosecute. The Enforcement Decision Panel is comprised of three managers in the Compliance and Enforcement area. If the Enforcement Decision Panel endorse the recommendation then the file goes to Legal Section for assessment under the Solicitor General's Guidelines, i.e. evidential sufficiency and public interest. If it is assessed as suitable for prosecution the file goes to the CEO via two senior managers for final approval to lay charges.
Otago	No	No	Yes Diversions policy	EDG (Prosecutions policy in place)
Southland	Yes	No	Yes Diversions policy	Incident response – Investigation – Enforcement decision group meeting – legal opinion – CEO approval

Table 7: Policy for CME active in the regional sector – it is assumed that all councils also refer to both the Regional Sector Strategic Compliance Framework, the MfE Best Practice Guidelines and the Solicitor General's Prosecution Guidelines even where it is not explicitly stated.

Of the sixteen participating councils, 15 advise they have enforcement policies (Table 7). Otago does not, although notes it has a 'prosecutions' policy in the final column. Fourteen councils also have a conflicts of interest policy, while two do not. Several councils referred to additional compliance policies they had in operation, including Otago and Southland with active diversions policies.

Councils all provided a narrative description of how they approach the prospect of a prosecution. All approaches involved the participation of more than one staff member and a decision to be made by a more senior staff member. All reflect a formal process that is in place to guide decision-making whether or not it is captured by a written enforcement policy.

A key point of variation was whether the Chief Executive was involved in decision-making. The questions did not specifically ask for this information, but it was expressly addressed in several responses. At least five councils expressly provide for a role for the Chief Executive in case-by-case decision-making in enforcement. From a public policy perspective, it is reasonable to be concerned with this aspect of regional sector management and the appropriateness of these arrangements should remain a point of discussion going forward.

Providing a coherent policy framework for CME is particularly important, as decisions made in this space can have wide-ranging implications for the public's perception of the agency's effectiveness. The majority of councils have a relatively robust policy framework, including 15 of 16 with enforcement policies. Policies are important and relatively fundamental instruments in the CME toolbox – a credible and consistent means of guiding decision-making on enforcement matters. This does of course not automatically mean that all decisions that might arise from an ad hoc context are questionable but means there is no ability for the regulator to demonstrate the veracity of decisions that have been made.

Educating and engaging with the regulated community (Questions 39 and 40)

39. Education

Does your council have, or support, any education or enabling projects relating to compliance with the RMA or any of its derivative regulation? For example, an annual workshop for earthworks contractors around erosion and sediment controls. If so, briefly describe project(s)

40. Engagement

Does your council have, or support, any engagement projects relating to compliance with the RMA or any of its derivative regulation? For example, wetland stakeholder group meetings to highlight emerging issues with the wetland.

If so, briefly describe project(s)

The 4 E's explained

Engage – consult with regulated parties, stakeholders and community on matters that may affect them. This will require maintaining relationships and communicating until final outcomes have been reached. This will facilitate greater understanding of challenges and constraints, engender support, and identify opportunities to work with others.

Educate – educate regulated parties about what is required to be compliant, and that the onus lies with them to maintain their compliance. Educate the community and stakeholders about what regulations are in place around them, so they will better understand what is compliant and what is not.

Enable – provide opportunities for regulated parties to be exposed to industry best practice and regulatory requirements. Link regulated parties with appropriate industry advisors and promote examples of best practice.

Enforce – when breaches of regulation, or non-compliance, are identified, a range of enforcement tools are available to bring about positive behaviour change. Enforcement outcomes should be proportional to the circumstances of the breach, and culpability of the party.

Virtually all councils carry out **education and engagement programmes** related to CME and there is a very wide range of forms that this takes. Again, the variations in approach are significant, evidently designed to address local needs and interpret regional and local requirements. Some initiatives mentioned could fall within either education or engagement, so they are treated together for the purposes of analysis. Councils that said they did not run any such programmes likely do as part of their day to day functions, they are just perhaps not targeted or named as such.

Examples of education and engagement approaches across sector

- Training workshops for consent holders on earthworks and sediment management, management of farm dairy effluent and other common resource management activities
- Participation in fora and working groups associated with specific industry groups (dairy, horticulture, forestry etc)



- Development and awarding of good practice awards for industry operators
- Proactive presentations to companies and sectors on compliance matters
- Development of engagement strategies where plan changes will introduce a new approach to managing an existing activity type.
- Ongoing provision of advice and information to consent holders and those undertaking permitted activities about the parameters in which they must work.

Councils appear to undertake a broad range of both engagement and educational programmes but provided varying levels of detail. Some councils have an extensive variety of approaches in this space. While there is no 'correct' number or range of ways to engage and educate the regulated community, investing in the information-based end of the spectrum gives important balance to a regime.

Section findings

- * Councils have relatively systematic approaches to determining priorities for incident response and consent monitoring, with less codification for permitted activity monitoring
- * Overall, the CME functions of regional councils and unitary authorities comprises 435.8 FTE, comprising 209.43 monitoring FTEs, 87.83 environmental incident and pollution response FTEs, 65.84 investigations positions, all supported by at least 68.7 support staff including non-regulatory education-based FTEs and administrative support.
- * Resourcing is highly variable, and that variation is not easily explained - councils require adequate resourcing to be credible regulators and shortfalls in capacity must be addressed. It is, however, difficult to determine what constitutes 'adequate' in each context, but the minimum resource requirements in the MfE Guidelines are referred to as a basic indicator.
- * Most councils have well developed internal policy frameworks, however where they are lacking, they make the council and staff vulnerable to criticism - deficiencies should be addressed.
- * The sector expends often significant resources in engaging with regulated communities, an important aspect of managing CME operations



Managing the workload

Dealing with complaints (Questions 13-15, 18)

13. How many notifications (complaints) were received from members of the public (or other sources, but excluding information from council monitoring activity) relating to environmental incidents or potential breaches of environmental regulation?

This might include information from, for example, emergency services attending an incident or perhaps a council staff member observing something while on other duties, but excludes information from council monitoring activity

14. How many of these notifications were responded to by council?

This response may be in any form – e.g. phone call, site visit, desktop audit

Total number responded to

Percentage of the number received

15. How many of these notifications were physically attended by council staff?

Total number

Percentage of the number received

18. How many of these notifications were confirmed as breaches of the RMA or subsidiary instruments?

Questions 13-15 and 18 develop a contiguous dataset that helps to demonstrate the level of response council is undertaking to expressions of concern, and the final figure helps to reflect the level of risk to the environment from the complaints. Not all complaints relate to a matter that is within council's jurisdiction, nor do they necessarily relate to any unlawful activity. Many complainants complain frequently about matters that may not be of any relevance to the council, which is a significant drain on resources.

Attending to a complaint physically is the most resource-intensive response possible to an incoming query. There are ways to reduce the need to respond in person to a complaint that may seem like it does not constitute an enforcement matter such as a phone call, desktop search etc. Measuring the number of complaints that link to genuine determinations of wrong-doing helps reflect the level of legitimacy of complaints as a whole.



Council	How many notifications (complaints) were received from members of the public (or other sources)	How many of these notifications were responded to by council?	Percentage of the number received	How many of these notifications were physically attended by council staff?	Percentage of the number received	How many of these notifications were confirmed as breaches of the RMA or subsidiary instruments?
REGIONAL						
Northland	1052	1052	100%	705	67%	DNA
Waikato	1543	1543	100%	313	20.30%	370 (24%)
Bay of Plenty	2834	2834	100%	DNA	DNA	DNA
Hawke's Bay	1095	1095	100%	DNA	DNA	DNA
Taranaki	414	414	100%	414	100%	153 (37%)
Manawatu-Whanganui	792	792	100%	180	23%	DNA
Wellington	1308	1085	83%	548	42%	223 (17%)
West Coast	102 ²	102	100%	DNA	DNA	51 (50%)
Canterbury	4735	3111	80%	1,500	38%	1099 (23%)
Otago	1913	DNA	DNA	DNA	DNA	DNA
Southland	742	673	90%	380	51%	128 (17.2%)
UNITARY						
Auckland	9022	9022	100%	3840	42.50%	DNA
Gisborne	147	147	100%	147	100%	DNR
Nelson	472 ¹	472	100%	330	70%	DNA (est. 70%)
Tasman	2562	2562	100%	DNA	DNA	DNA
Marlborough	557	557	100%	267	48%	189 (33.9%)

Table 8: Responding to complaints and complaint verification (Question 13-15 and 18)

¹ Data include excessive noise complaints.

² Actual number likely to be a lot higher due to limitations of recording system.

Councils across New Zealand receive a highly variable number of complaints, however that variation would seem generally in line with their population base in most instances (Table 8). Almost all councils that held data on response levels reported that all complaints were attended to in some form or other (phone call, site visit etc). Many councils were unable to provide a continuous dataset that followed complaints through to resolution – identifying an area of improvement for the future. The proportion that were attended physically by staff was highly variable, ranging from slightly over 20% in the Waikato Region to 100% in Taranaki and Gisborne. Five councils did not have any data on this aspect.

The final point of analysis in this table is the proportion of notifications confirmed as breaches of the RMA or subsidiary instruments. Nine of the sixteen councils did not provide this data, although Nelson did provide an estimate. Nelson's estimate placed it highest of the proportion confirmed as legitimate breaches, followed by the West Coast at 50%.

Unfortunately, many councils were unable to provide the full suite of data, and some were unable to provide an accurate number of the complaints that had been received. Councils are required, like all public agencies, to accurately record complaints and guidance on doing so has been available for many years from the Office of the Ombudsman. It is reasonable to expect that councils would hold accurate records of incoming complaints and strive to maintain that accuracy through to the resolution of those complaints. This requirement is also reflected in the RMA.

A further interesting outcome from this section of the survey was the relatively low proportion of complaints that were reported to be verified – including a rate that was as low as 17% verification in Wellington.⁶ Many of these figures seemed extremely low. Potential drivers could include low public knowledge of the role of agencies, poor internal management of complaints leading to frequent misdirection to incorrect departments, difficulty in verifying legitimacy or inaccurate systems for recording legitimacy.

The majority of complaints not relating to an incident of a CME nature could represent a very significant drain on resources, and councils (particularly those with mandated 100% response policies) may stand to divert significant human resources away from more legitimate concerns where most are not legitimate. Further information would be required to understand this trend better.

⁶ Notwithstanding that, even in the absence of a breach responding to a complaint may provide an opportunity to educate a member of the regulated community or avert a future compliance matter.



Monitoring consent activity (Questions 19 and 22-23)

19. How many active resource consents exist in your region?

In totals exclude Land use consents where the activity is completed. E.g. Land use-Subdivisions where the subdivision is complete and certificates issued or Land Use-Building where the building has been constructed

22. How many consents required monitoring during this period, in accordance with your monitoring prioritization model/strategy?

23. How many of those consents have been monitored (including by desktop audit) in this period?

Number monitored

Percentage monitored of the number requiring monitoring this period

The level of consented development activity in a given region can vary across the sector and over time. Understanding the number of consents and the degree of consent monitoring gives insight into the relative workload of each council.

Question 19 asked for the number of 'active' resource consents. Implicit within the question was that 'inactive' consents did not form part of the workload, and these were noted to include 'land use consents where the activity is completed. E.g. Land use-Subdivisions where the subdivision is complete and certificates issued or Land Use-Building where the building has been constructed'.

Question 22 determined the proportion of those total active consents that were considered by the council to 'require' monitoring, noting that this determination varies across sector. Finally, question 23 asked for the actual proportion that was subject to monitoring (including by desktop audit) to provide an insight in the extent to which council's efforts were keeping pace with its intentions.



Council	How many active resource consents exist in your region? In totals exclude Land use consents where the activity is completed.	How many consents required monitoring during this period, in accordance with your monitoring prioritization model/strategy?	How many of those consents have been monitored (including by desktop audit) in this period?	Percentage monitored of the number requiring monitoring this period
REGIONAL				
Northland	3812	3724	3512	94%
Waikato ¹	4500*	1500*	1159*	77%*
Bay of Plenty ²	5500	1900	1303	68.60%
Hawke's Bay	3144	3144	2943	93%
Taranaki	4837	2930	2930	100%
Manawatu-Whanganui	4700	1700	1400	82%
Wellington ³	6375 ¹	1544	1457	94.40%
West Coast	DNA	DNA	1309	DNA
Canterbury	20,417	DNA	5,754	28%
Otago	5984	3827	2526	66%
Southland	5376	3188	3188	100%
UNITARY				
Auckland	103,690	17,759	12,642	70%
Gisborne ⁴	1250	699	238	34%
Nelson	1200	550	550	100%
Tasman	15,764	4250	1940	46%
Marlborough	20802	2686	2219	83%
TOTAL	207,351	49,401	45070	91%

Table 9: Consent monitoring data (Questions 19 and 22-23)

¹ Waikato RC establishes monitoring priority on a site basis, not a consent basis. Some sites may have many consents associated with them. The figures relate to sites, not consents.

² BOP provided 2016/2017 figures in lieu of 2017/2018 as the information was not available at the time of survey which also does not include performance monitoring (e.g. returns)

³ Wellington includes telemetry readings (unable to be excluded)

⁴ Gisborne was the only unitary council able to provide this data on a regional basis, enabling comparability with the regional councils. All other unitaries provided aggregated data across the breadth of their dual functions.

Grey = estimate only

Councils administered a total of more than 200,000 active resource consents for the reporting year, of which nearly a quarter (49,491) were deemed to require monitoring (at least). Of these, more than 91% (45,070) were monitored at a sector level. Three councils were unable to provide definitive figures on the number of consents requiring monitoring (relying on officer estimates) and one council (West Coast) was unable to provide three of the four pieces of information relevant to this section (Table 9).

All councils were able to provide data on the number of consents monitored, perhaps enabled by the cost recovery capacity of the consent monitoring function demanding more accurate recording than for the other activities in the CME space. Taranaki, Nelson and Southland all monitored 100% of the consents requiring monitoring, with Northland and Wellington both in the nineties. The lowest proportion of consents monitored was Canterbury, followed by Gisborne.

Councils also evidently have very different ways of calculating the monitoring workload. For instance, Canterbury considers all consents should be monitored, therefore the percentage monitored may seem disproportionately low (28%) compared with some councils that sought to monitor more conservative proportions. Waikato also address monitoring on a site basis, and each site may include many consents, which means – other than the percentage of those monitored – the balance of the data is not comparable.

A failure to monitor a consented activity at an appropriate frequency removes the ability for the regulator (absent a complaint) to detect non-compliance and therefore address environmental harm. Councils routinely set goals for proportions of consents to monitor and appear to meet these goals most of the time. Current best practice suggests that consents should be monitored in a way that reflects the level of risk the subject activity (risk-based approach) may pose to the environment and/or the wider community and given the relatively robust basis for cost recovery of consent monitoring, there is no good reason why councils should fall significantly short of fulfilling this expectation. For some, resourcing may simply be inadequate for the task, which places undue stress on staff and management and should be addressed at a council level.



Classifying compliance levels (Question 24)

24. What grades do you apply to non-compliance? (e.g. technical non-compliance, significant non-compliance)

- Fully Compliant
- Technical/Low Non-Compliance
- Moderate Non-Compliance
- Significant Non-Compliance
- Other (please specify)

Taxonomies that classify compliance levels observed on a site or in respect of a consent help to direct resources and priority and identify where strategies to promote compliance may be less effective than they need to be. There is no national framework for these classifications, meaning that the thresholds for what constitutes each level (e.g. what is 'significant' non-compliance) differ between councils. All councils had a system for classifying compliance status of an activity, ranging from a binary approach (Nelson with 'satisfactory' or 'unsatisfactory') through to more detailed taxonomies, including some targeted at certain sectors (usually dairy). Councils vary in the extent to which these categories are integrated into their overall information management system.

Having different categories (and presumably different thresholds within categories) makes the councils very difficult to compare. A possible future area of improvement would be the nationwide standardisation of such thresholds. A standard taxonomy is proposed within the Best Practice Guidelines released in 2018 (see below – from Table 4 of guidelines). A nationally consistent taxonomy would enable councils to more easily demonstrate that the allocation of resources sensibly follows environmental risk.

Compliance grade	
	FULL COMPLIANCE with all relevant consent conditions, plan rules, regulations and national environmental standards.
	LOW RISK NON-COMPLIANCE. Compliance with most of the relevant consent conditions, plan rules, regulations and national environmental standards. Non-compliance carries a low risk of adverse environmental effects or is technical in nature (eg, failure to submit a monitoring report).
	MODERATE NON-COMPLIANCE. Non-compliance with some of the relevant consent conditions, plan rules, regulations and national environmental standards, where there are some environmental consequences and/or there is a moderate risk of adverse environmental effects.
	SIGNIFICANT NON-COMPLIANCE. Non-compliance with many of the relevant consent conditions, plan rules, regulations and national environmental standards, where there are significant environmental consequences and/or a high risk of adverse environmental effects.

Figure 3: Compliance grades suggested by best practice guidelines for councils

Compliance of consented activities (Question 25)

25. What were the levels of compliance with consents according to the grades you use?

Note 1: Numbers provided under each grade is per monitoring event not per consent. E.g. a consent may be monitored 4 times in the year on one occasion it may be Technically Non-Compliance and on three occasions it may be Fully Compliant, this would add 3 to the total of Fully Compliant and one to the total for Technical Non-compliance.

Note 2: The compliance grade is based on the condition with the worst compliance grade. (e.g. a consent with five conditions Fully Compliant and one condition Moderate Non-Compliance has an overall compliance grade of Minor Non-Compliance.

Note 3: Daily telemetry water readings where compliance with water take limits is continuously monitored are to be excluded from compliance grade totals.

Full Compliance

Low Risk/Technical Non-Compliance

Moderate Non-Compliance

Significant Non-Compliance

Other

Councils were asked for Question 25 to shoehorn their data on non-compliance into a general taxonomy. The question included several important caveats and clarifications pertaining to how to calculate the level of non-compliance and that they should exclude water telemetry readings so as not to skew results.

As discussed earlier, the lack of standardised categories makes true comparability impossible. Some councils may assess a given activity as compliant, where others would assess it as technically or even more seriously non-compliant depending on their taxonomy. As a result, the inference possible from the dataset is quite muted. In addition, the total consents monitored in the previous section rarely equated with the cumulative total of the consents set out in Table 10, but this was purposely overlooked as the proportion falling into the different compliance categories was the focal point.



Council	Full compliance	Low Risk/Technical Non-Compliance	Moderate Non-Compliance	Significant Non-Compliance	Other	TOTAL
REGIONAL						
Northland	2764 (72.7)		746 (19.6)	293 (7.7)	0	3803
Waikato	479 (44.4)	237 (22)	333 (30.9)	29 (2.7)	0	1078
Bay of Plenty	1407 (76.4)	266 (14.4)	134 (7.3)	35 (1.9)	0	1842
Hawke's Bay	2730 (92.8)	0	203 (6.9)	10 (0.3)	0	2943
Taranaki	3879 (94.2)	0	0	32 (0.8)	208 (5)	4119
Manawatu-Whanganui	950 (84)		92 (8.1)	89 (7.9)		1131
Wellington	1112 (76.3)	255 (17.5)	0	0	90 (6.2)	1457
West Coast	1261 (96.3)	0	0	0	48 (3.7)	1309
Canterbury	4598 (63)	375 (5.2)	606 (8.3)	105 (1.4)	1590 (21.8)	7274
Otago	4181 (59.5)	675 (9.6)	549 (7.8)	112 (1.6)	1508 (21.5)	7025
Southland	2252 (70.6)	0	0	0	936 (29.4)	3188
UNITARY						
Auckland	4134 (22.1)	3984 (21.3)	569 (3)	220 (1.2)	9825 (52.4)	18732
Gisborne	DNA	DNA	DNA	DNA	DNA	DNA
Nelson	475 (86.4)	0	0	0	75 (13.6)	550
Tasman	1223 (63)	138 (7.1)	102 (5.2)	29 (1.5)	448 (23.1)	1940
Marlborough	1442 (65)	44 (2)	688 (31)	0	44 (2)	2219

Table 10: Table of compliance levels (Question 25)

¹ Marlborough provided percentage figures only, so figures here are based on the total number of consents reported to be monitored, although this will create error with multiple visits (however percentages are as reported) (2219)

All councils but one (Gisborne) provided these data (Table 10). Five councils reported that no consents within their jurisdiction were found to be significantly non-compliant, while the highest proportion considered to fall within this category was in Manawatu-Whanganui (7.9%). Full compliance rates range from just 22.1% in Auckland, through to 96.3% on the West Coast. Taranaki and Hawkes Bay also report high levels of full compliance, whereas next lowest to Auckland is the Waikato with consents exhibiting a compliance rate of 44%.

For councils with simple taxonomies, there were simply fewer categories over which their consents could be spread however, so the proportions should be carefully considered before they are used as a basis for decision-making on relative effectiveness of compliance regimes.

The category of 'other' gave councils flexibility in adhering to their own taxonomy but made the data difficult to compare. This is particularly notable with Auckland, where almost half of all inspected consented activities were 'other' with no clear sense of what 'other' might mean (e.g. inactive, a separate category of compliance etc – no details were provided). Unitary councils were more likely to have a significant number of consents fall within 'other'.

A key goal of any CME regime should be to secure behaviours that are desirable within the given statutory framework. Therefore, the compliance levels being achieved by the regulated community are a critical reflection of the effectiveness of the regime. Consistently poor levels of compliance usually denote a regime ineffective in marshalling appropriate behaviours and/or short on resourcing and signal that approaches to CME must be reviewed.

Notwithstanding that, a degree of non-compliance is typical and 'perfect' regimes are rare. In a typical regime it would be expected that there is a spread of compliance status along a spectrum, each part demanding a different approach from the regulator. In the table on compliance levels, this expectation would translate into much of the regulated community occupying the left-hand columns with a gradual attrition in proportions as one moves to the right, which is exactly what is present.

Monitoring permitted activities (Questions 26-27)

26. Are there any significant industries or activities in your region that are permitted activities rather than consented activities (or both)? If so, what are they?
27. Which permitted activities do you have a monitoring programme for?

Permissiveness of regulatory regime for certain activities (Question 26)

Monitoring of the compliance of permitted activities is commonly acknowledged to be an area in which councils allocate limited resources. A contributing factor is that it is difficult for councils to cost recover for resourcing spent in this area unless a bespoke arrangement is in place (e.g. Waikato has a targeted rate for permitted activity dairy monitoring). Notwithstanding the clear resourcing challenge, monitoring permitted activities is a crucial aspect of council functions, particularly where the level of regulatory controls on potentially hazardous/environmentally risky sectors is relatively low.

It was difficult to compare councils for 'permissiveness' as per question 26 because not all activity types occur in all regions. In addition, some activities are partly permitted but consented over certain trigger points (e.g. mining exploration may be permitted, but any extraction requires a consent). As such, the responses to Question 26 have not been presented. Unpacking the influence of the permissiveness of the regulatory regime

would doubtless be helpful context but may need to be conducted externally to the survey because it is not a reflection of CME performance and is outside the compliance staff and management's control.

Permitted activity monitoring programmes (Question 27)

Council	Permitted activity monitoring programmes
Northland	Dairy, forestry
Auckland	Dairy, forestry
Waikato	Dairy, forestry
Bay of Plenty	Forestry
Hawke's Bay	Forestry
Taranaki	Forestry, construction
Gisborne	Agriculture, horticulture, forestry (under development)
Manawatu-Whanganui	Forestry
Wellington	No programmes
Nelson	Dairy, forestry
Tasman	Dairy, forestry
Marlborough	Dairy, forestry and wineries
West Coast	Dairy
Canterbury	Forestry, domestic home-heating, construction site run-off
Otago	Dairy, forestry
Southland	Agriculture (exc. Dairy)

Table 11: *Permitted activity monitoring programmes (Question 27)*

Permitted activity monitoring programmes are relatively rare outside of forestry and dairy and in one region they are entirely absent (Wellington) (Table 11). The need for them of course depends on the regulatory regime. The robustness of the CME regime is underpinned by whether it is appropriate in the first place for the activity in question to be approached in a non-regulatory way. If activities that potentially constitute significant environmental risk are permitted, then they may cause an unreasonable burden on the CME unit, particularly considering opaque cost recovery mechanisms.

Section findings

- * Councils collectively receive nearly 30,000 (29,290) complaints, of which 25,461 are responded to; less than 9,000 in person, however.
- * Councils report relatively low rates of complaint verification (as low as 17%) which may be driven by a range of reasons
- * Councils administered a total of more than 200,000 active resource consents for the reporting year, of which nearly a quarter (49,491) were deemed to require monitoring (at least). Of these, more than 91% (45,070) were monitored at a sector level. Councils have varying approaches to classifying levels of compliance, making comparisons across sector impossible.
- * Councils detect varying levels of compliance in their regulated communities, ranging from only 22.1% considered to be in full compliance (Auckland) through to 96.3% (West Coast)

Acting on non-compliance

Formal enforcement actions (formal warnings, abatements, infringements and enforcement orders – Questions 41-44)

<p>41. Formal warnings issued 42. Abatement notices issued 43. Infringement fines issued 44. Enforcement orders applied for</p> <p>Under the following categories: Section 9 Use of land, Section 12 Coastal marine area, Section 13 Beds of lakes and rivers, Section 14 Water, Section 15 Discharges of contaminants, Section 17 Duty to avoid, remedy & mitigate Other breach e.g. Section 22</p>

Total actions (Questions 41-44)

Council	TOTAL Formal warnings ⁷	TOTAL Abatement notices	TOTAL Infringement fines	TOTAL Enforcement orders	TOTAL FORMAL ACTIONS	TOTAL FORMAL ACTIONS (exc. warnings)
REGIONAL						
Northland	6	373	253	0	632	626
Waikato	198	89	100	0	387	189
Bay of Plenty	DNA	106	29	2	137	137
Hawke's Bay	14	46	91	0	151	137
Taranaki	0	200	67	1	268	268
Manawatu-Whanganui	46	41	23	0	110	64
Wellington	57	11	25	0	93	36
West Coast	50	24	10	0	84	34
Canterbury	415	72	127	1	615	200
Otago	5	12	22	0	39	34
Southland	19	80	35	3	137	118
UNITARY						
Auckland	DNA	648	456	10	1114	1114
Gisborne ¹	50*	19	4	1	74	24
Nelson	41	28	13	1	83	42
Tasman	DNA	33	23	0	56	56
Marlborough	4	45	11	2	62	58
TOTAL	905	1827	1289	21	4042	3137

Table 12: Formal enforcement actions taken (Questions 41-44)

¹ Gisborne provided an estimate only as the information was not easily able to be extracted.



Some councils issue relatively few formal actions, and some figures are similar even where there is significant disparity in population size (e.g. Otago, West Coast and Wellington undertook a similar number of actions at this level when warnings were excluded). Among the regions, Northland issued the most actions whether or not warnings were included (Table 12).

Some councils appear to rely heavily on warnings, such as Canterbury in which non-statutory letters constitute two thirds of the actions taken. Formal warnings feature heavily (nearly a quarter of all actions). Twelve of the 16 councils use a warning tool of some sort and they have been legitimised via jurisprudence as an important tool in establishing a history of non-compliance. However, they are not expressly provided for in the Act and there is limited guidance as to what they must contain.

The inclusion by unitaries of their TA functions make comparison across the whole regional sector difficult and potentially misleading, most particularly in relation to section 9 offences. The figures do not fully equate between tables 12 and 13, but as proportion is the main point of interest, they are set out as reported. The 'total' figures are relied upon for the balance of the report (with the addition of Gisborne's estimate).

Total actions and types of offences (Question 44)

Notice type	Section 9 Use of land	Section 12 Coastal marine area	Section 13 Beds of lakes and rivers	Section 14 Water	Section 15 Discharges of contaminants	Section 17 Duty to avoid, remedy & mitigate	Other breach e.g. Section 22	TOTAL (exc. warnings)
Formal warnings	86	49	47	168	488	0	17	855
Abatement notices	605	66	31	76	1052	7	7	1844
Infringement fines	147	13	34	43	791	0	261	1289
Enforcement orders	12	0	0	1	6	1	1	21
	850	128	112	288	2337	8	286	4009

Table 13: Table showing predominant offence categories for issuing lower level actions

NB Gisborne provided an overall estimate of formal warnings issued, but not a breakdown of the relevant sections, so their figures for the top line are excluded.

Across the entire sector, councils issued (in the 2017/2018 year) at least 905 formal warnings⁸, 1844 abatement notices, 1289 infringement fines and applied for 21 enforcement orders (total 4042 formal actions) (Table 13).

The most commonly used notice by councils is an abatement notice, followed by infringement fines. This spread is to be expected given the graduated nature of the RMA enforcement regime. Enforcement orders are used relatively rarely, in line with previous surveys of this nature. Overall, discharges of contaminants dominated as a reason for councils acting (even considering the inclusion of all section 9 infringements by unitaries).

⁸ Three councils do not record formal warnings in a way that allow aggregated reporting, so figures reported are minimums, there are likely many more formal warnings issued in practice.

Some councils are demonstrably less active in enforcement than others. These differences are not explained by population etc but appear to be related to more opaque variables such as the council's individual approach to the CME function. A balanced approach across the spectrum of education and engagement through to taking formal and punitive actions when necessary is a vital component of being a credible regulator. A more long-term dataset will enable the trends in the activity levels of council to transcend year-on-year variability and should be carefully monitored.

Discharges of contaminants was the driver behind more than half of all notices under the Act and sends a clear message that more work is needed. It is also possible that discharges are more readily recognised by the public than other actions and therefore have a greater chance of being notified to council or being detected in routine monitoring. Whatever the reason, work is required in this space by both regulators and the regulated community to better stay within the boundaries of the law.

Prosecutorial actions (Questions 45-50)

45. What is the total number of individual (person) defendants convicted as a result of RMA prosecutions concluded in this period?
46. For all of these (person) defendants what is the total number of convictions entered against them? *For example, there may be a total of 27 separate convictions entered against a total of nine 'individual' defendants.*
47. What is the total number of corporate (e.g. Crown, company, body corporate etc) defendants convicted as a result of RMA prosecutions concluded in this period?
48. For all of these (corporate) defendants what is the total number of convictions entered against them? *For example, there may be a total of 30 separate convictions entered against a total of 12 corporate defendants.*
49. **Total number of convictions against an individual**
Section 9 Use of land, Section 12 Coastal marine area, Section 13 Beds of lakes and rivers,
Section 14 Water, Section 15 Discharges of contaminants, Other breach e.g. Section 22, TOTAL
Total fine potential (Total x \$300,000)
50. **Total number of convictions against a corporate entity**
Categories as above
Total fine potential (Total x \$600,000)

Prosecution is the most serious action to take against a person or company that have been found to be in breach of the RMA. Questions 45-48 addressed the total number of defendants and convictions, while questions 49 and 50 delved deeper into that information to determine what sections of the Act were most commonly breached in respect of those prosecutions.



Total convictions (Questions 45-48)

Council	What is the total number of individual (person) defendants convicted as a result of RMA prosecutions concluded in this period?	For all of these (person) defendants what is the total number of convictions entered against them? For example, there may be a total of 27 separate convictions entered against a total of nine 'individual' defendants.	What is the total number of corporate (e.g. Crown, company, body corporate etc) defendants convicted as a result of RMA prosecutions concluded in this period?	For all of these (corporate) defendants what is the total number of convictions entered against them? For example, there may be a total of 30 separate convictions entered against a total of 12 corporate defendants.
REGIONAL				
Northland	1	1	0	0
Waikato	3	4	8	18
Bay of Plenty	6	6	2	2
Hawke's Bay	1	2	3	5
Taranaki	3	3	1	2
Manawatu-Whanganui	0	0	0	0
Wellington	0	0	0	0
West Coast	0	0	1	1
Canterbury	1	2	4	8
Otago	10	12	10	13
Southland	11	41	11	25
UNITARY				
Auckland	11	35	16	18
Gisborne	0	0	0	0
Nelson	0	0	1	3
Tasman	2	8	2	5
Marlborough	0	0	1	2

Table 14: Total convictions against individual and corporate defendants (Questions 45-48)

Unitary councils were separated out for analysis- noting that they had included all prosecution actions, not just those relating to regional functions. Auckland secured 35 convictions against a total of 11 individual defendants and 18 convictions against 16 corporate defendants across their entire range of functions. Of the regional councils, Southland secured the most convictions - 41 convictions against 11 individuals and 25 convictions against 11 corporate defendants (Table 14).

The other unitary authorities could not easily be distinguished from the remainder of the regional sector, suggesting that their levels of activity in the prosecution space may be relatively lower. Greater transparency would assist in better understanding these trends. Overall, the sector secured 114 convictions against 49 individuals, and 102 convictions against 60 corporate defendants (216 convictions against 109 defendants in total).

Among the regional councils, Southland Otago and Waikato dominated successful convictions overall. Manawatu-Whanganui and Wellington Regions secured no prosecutions against either an individual or a corporate entity for the reporting year.

These data clearly demonstrate that prosecution is both (a) relatively rarely used compared with other tools under the Act and (b) its use is predominantly clustered in a small number of agencies for the reporting year. It is possible that these trends in activity levels could vary significantly year on year as prosecutions and the investigations leading up to them can take many years.

Types of offences (Questions 49-50)

Different sections of the Act relate to different types of possible offences. Understanding where in the regime most breaches are occurring can help to focus resourcing in areas where compliance is poorer and demonstrate the key compliance challenges of the different agencies. It should be noted that the data do not totally match with the figures in Questions 45-48 (some are missing), however the figures for this question have been taken as read because it is the proportion that is of interest, rather than the absolute number.



Individual offences

Council	Section 9 Use of land	Section 12 Coastal marine area	Section 13 Beds of lakes and rivers	Section 14 Water	Section 15 Discharges of contaminants	Other breach e.g. Section 22	TOTAL	Total fine potential (Total x \$300,000)
Northland	1	0	0	0	0	0	1	300,000
Waikato	0	0	0	0	2	2	4	1,200,000
Bay of Plenty	0	1	0	0	2	3	6	1,800,000
Hawke's Bay	0	0	0	0	2	0	2	600,000
Taranaki	0	0	0	0	3	0	3	900,000
Manawatu- Whanganui	0	0	0	0	0	0	0	0
Wellington	0	0	0	0	0	0	0	0
West Coast	0	0	0	0	0	0	0	0
Canterbury	0	0	1	0	1	0	2	600,000
Otago	0	0	11	0	1	0	0	0
Southland	4	0	0	0	26	11	41	12,300,000
Sub total	5	1	12	0	37	16	59	17,700,000
Auckland	14	0	0	0	7	15	35	10,500,000
Gisborne	0	0	0	0	0	0	0	0
Nelson	0	0	0	0	0	0	0	0
Tasman	0	0	0	0	2	0	8	2,400,000
Marlborough	0	0	0	0	0	0	0	0
Sub total	14	0	0	0	9	15	43	12,900,000

Table 15: Sections relevant to convictions secured against an individual (Question 49)

Of 102 total convictions against an individual defendant, nearly half related to breaches of section 15 (discharges of contaminants). The next most common category was 'other' which includes breaches of section 22 ('Duty to give certain information'). The third most common category were breaches of section 9, relating to the use of land (more than a third of which were from Auckland) (Table 15).

Collectively those three categories accounted for a significant proportion of all offences, with the only other notable category being 12 convictions pertaining to section 13 matters ('beds of lakes and rivers'). Among the regions and indeed overall, Southland performed strongly in this area.

Corporate offences

The trends of the types of offences are relatively common across corporate and individual defendants (Table 15). Section 15 (discharges of contaminants) remains predominant in the corporate space, comprising 60% of total convictions. The category of 'other' however is much less common, with the second most common category being section 13 (beds of lakes and rivers) followed again by section 9 (Table 16).

It should be noted that the data do not totally match with the figures in Questions 45-48 (some are missing), however the figures for this question have been taken as read because it is the proportion that is of interest, rather than the absolute number.

The possible fines that the individual convictions could yield (based on maximum penalty) was \$30.6 million. The total potential fine value of corporates was exactly \$60 million, roughly double the individual quantum. This reflects that the maximum fine level is double also, illustrating that individuals and corporates have been convicted in relatively equal amounts under the Act for the reporting year.

Certain activities appear to lend themselves to higher visibility in enforcement statistics and without a doubt, the discharge of contaminants is one. It consistently tops the list of offences and managing these infractions evidently occupies a significant proportion of the regional sector's resourcing and energy. This may also reflect that the regulated communities may not be getting the message that unlawful discharges are unacceptable or that compliance regimes in respect of this matter are being less effective than they need to be in driving behaviour change.



Council	Section 9 Use of land	Section 12 Coastal marine area	Section 13 Beds of lakes and rivers	Section 14 Water	Section 15 Discharges of contaminants	Other breach e.g. Section 22	TOTAL	Total fine potential (Total x 600,000)
Northland	0	0	0	0	0	0	0	0
Waikato	0	0	2	0	16	0	18	10800000
Bay of Plenty	0	0	0	0	2	0	2	1200000
Hawke's Bay	0	0	0	0	5	0	5	3000000
Taranaki	0	0	0	0	2	0	2	1200000
Manawatu- Whanganui	0	0	0	0	0	0	0	0
Wellington	0	0	0	0	0	0	0	0
West Coast	0	0	1	0	0	0	1	600000
Canterbury	0	0	2	1	3	0	6	3600000
Otago	0	0	9	0	4	0	13	7800000
Southland	2	0	0	0	21	2	25	15000000
	2	0	14	1	53	2	72	43200000
Auckland	9	0	0	0	2	7	18	10800000
Gisborne	0	0	0	0	0	0	0	0
Nelson	0	0	0	0	3	0	3	1800000
Tasman	0	0	0	0	2	0	5	3000000
Marlborough	0	0	1	1	0	0	2	1200000
	9	0	1	1	7	7	28	16800000

Table 16: Sections relevant to convictions secured against corporate defendants (Question 50)

Section findings

- * Across the entire sector, councils issued (in the 2017/2018 year) 905 formal warnings, 1844 abatement notices, 1289 infringement fines and applied for 21 enforcement orders (total 4000+ formal actions).
- * Overall, the sector secured 114 convictions against 49 individuals, and 102 convictions against 60 corporate defendants.
- * The dominant type of offence is the discharge of contaminants



Sanctions and outcomes (Questions 51-54)

51. What is the total amount of fines imposed by the courts as a result of RMA prosecutions concluded in this period?

Individual fines

Corporate fines

52. What other sanctions, if any, have been imposed by the courts as a result of RMA prosecutions concluded in this period?

Prison sentence

Enforcement order

Reparation

Community Service

Other

53. How many prosecutions involved restorative justice, diversion or other alternative justice process?

Restorative justice

Diversion

Alternative justice

54. Describe any outcomes relating to these processes.

Questions 51-54 related to what sanctions were imposed as a result of the successful convictions secured by the councils. Question 54 provided a narrative opportunity for councils to describe the outcomes that were achieved in relation to these processes.

Fines imposed (Question 51)

Question 51 asked councils what the total fine quantum was that was imposed over the full suite of RMA prosecutions for the reporting period. Question 49-50 showed that the total potential fines (based on maximum penalty) was \$30.6 million for individual prosecutions and \$60 million for corporate prosecutions. There can be no reasonable expectation that the total quantum of fines would come near to the maximum possible penalties, but it does assist in defining the outside perimeter of sanctions that could be expected.



Council	Individual	Corporate	Total
REGIONAL			
Northland	0	0	0
Waikato	\$60,500	\$273,950	\$334,450
Bay of Plenty	\$82,000	\$60,000	\$142,000
Hawke's Bay	\$5,000	\$37,600	\$42,600
Taranaki	\$80,000	\$54,000	\$134,000
Manawatu-Whanganui	0	0	0
Wellington	0	0	0
West Coast	0	\$17,000	\$17,000
Canterbury	\$11,000	\$87,000	\$98,000
Otago	\$75,894	\$157,156	\$233,050
Southland	\$162,298	\$305,675	\$467,973
Sub total	\$476,692	\$992,381	\$1,469,073
UNITARY			
Auckland	\$96,300	\$42,937	\$139,237
Gisborne	0	0	0
Nelson	0	\$90,000	\$90,000
Tasman	\$36,718	\$270,000	\$306,718
Marlborough	0	\$39,000	\$39,000
Sub total	\$133,018	\$441,937	\$574,955
TOTAL	\$609,710	\$1,434,318	\$2,044,028

Table 17: Total fines imposed as a result of convictions of individuals and corporates (Question 51)

More than two million dollars in fines were handed down to individual and corporate defendants combined in the reporting year (Table 17). However, it was not clear whether some councils were reporting the full quantum of fine, or the 90% allocation they receive so the figures may not exactly reflect what the sector received.⁹

Environment Southland secured the greatest quantum of fines (\$467,973) followed next by Waikato Regional Council and Tasman District. Four councils secured no fines in that same period, Northland, Gisborne, Manawatu-Whanganui and Wellington. Of interest is that while Waikato and Tasman did not carry out a large proportion of the total prosecutions, they secured a significant proportion of the total fines across the sector.

What can also be demonstrated from these data is that the total quantum of fines is approximately 2% of the total possible fines for the entire suite of convictions (\$90 million). It is possible that the proportion of fines issued compared with those possible to have been issued would seem low to some commentators; although this could also be seen as a crude analysis.

At issue is whether such a small proportion of the total potential quantum being issued reflects any view of the judiciary that potential penalties are not justified, and what variables affect that assessment. The quantum of a fine reflects not only the seriousness of the incident/s that led to the prosecution, but also the quality of the information put before the Courts, precedence and judicial discretion. The degree of sanction is also an important element for whether it constitutes enough deterrent to would-be offenders.

⁹ The recovery of fines is a vexed issue in CME, with many fines issued not ever being collected for a range of reasons (see Brown 2017 for a fuller discussion).



Other sanctions imposed (Question 52)

The sentencing judge can choose to impose sanctions other than fines, with options including reparation, community service, an enforcement order and a prison sentence among others. Question 52 asked councils what sanctions had been imposed on convicted defendants.

Council	Prison sentence	Enforcement order	Reparation	Community service	Other
REGIONAL					
Northland	0	1	2	0	0
Waikato	0	0	1	0	0
Bay of Plenty	0	2	0	0	0
Hawke's Bay	0	0	0	0	0
Taranaki	0	0	0	0	0
Manawatu-Whanganui	0	0	0	0	0
Wellington	0	0	0	0	0
West Coast	0	0	0	0	0
Canterbury	0	0	0	0	0
Otago	0	0	0	0	0
Southland	0	3	0	0	0
UNITARY					
Auckland	2	0	3	1	0
Gisborne	0	0	0	0	0
Nelson	0	0	0	0	0
Tasman	0	0	0	0	0
Marlborough	0	0	1	0	0
Total	2	6	7	1	0

Table 18: Other sanctions imposed (Question 52)

Other sanctions appear to be used relatively rarely, with reparation being the most common, followed by the issuance of an enforcement order (Table 18). Reparation appeared to be primarily the awarding of costs to council to help address the financial burden of the enforcement action. Auckland Council secured two prison sentences (one being the largest ever issued under the Act) and the only community service sentence for the reporting year.

The survey also asked whether councils had engaged in alternative sanction approaches such as diversion (Table 19). Alternative justice solutions featured to only a minor degree across the total suite of prosecutions, with the most common tool being diversion, followed closely by restorative justice. Alternative justice (although it is unclear how this might differ from restorative justice) numbered just one instance.



Council	Restorative justice	Diversion	Alternative justice
REGIONAL			
Northland	0	0	0
Waikato	1	0	0
Bay of Plenty	1	0	0
Hawke's Bay	0	0	0
Taranaki	0	0	0
Manawatu-Whanganui	0	0	0
Wellington	0	0	0
West Coast	0	0	0
Canterbury	0	0	1
Otago	0	2	0
Southland	2	3	0
UNITARY			
Auckland	0	0	0
Gisborne	0	0	0
Nelson	0	0	0
Tasman	0	0	0
Marlborough	0	0	0
TOTAL	4	5	1

Table 19: Alternative sanctions imposed (Question 53)

Outcomes relating to these processes (Question 54)

Responses to question 54 varied considerably and sent a signal that the purpose of the question was perhaps not clear. Some responses were generic acknowledgements of the wider benefits of taking enforcement action, while others were specific discussions of cases mentioned. A series of examples are included below for reference. Eight of the councils provided no response at all.

"Improved compliance rates and contributed to improved environmental quality"

"Contribution to environmental agencies: Contribution to council costs: Creation of a wetland"

"Apologies made, practice in business changed, flyer issued to neighbouring community with information and contact details in case of discharge, new equipment installed, \$5000 donation to nominated charity, media release."

Section findings

- * The total fines issued for regional sector convictions was more than two million dollars (\$2,044,028)
- * Outside of fines, there are relatively few examples of restorative justice across the sector



CME reporting (Question 55)

55. What mechanisms do your council use to report CME data to the public? (e.g. annual reports, reports to Councillors)

Provide links or examples.

- Annual Report
- Report to Councillors
- Snapshot
- Report(s) to Council committee meetings (open to public)
- Other (please specify)

Except for the contribution of data to the National Monitoring System, councils are responsible for determining the scope and content of the reporting on their RMA CME functions. Question 55 addressed the ways in which this operational function was carried out, providing a range of 'standard' options and giving council respondents space to describe alternate approaches.

The most common type of reporting is a report to committees of councillors (open to the public) about CME activities and outcomes (Table 20), followed closely by reports to council and the inclusion of CME information in an annual report.

Three councils undertake all four standard forms of reporting (Canterbury, Bay of Plenty and Marlborough) with Canterbury also carrying out additional reporting types. Of the participating councils, only one does no reporting of any kind on their CME function (Auckland). Waikato also reports that it releases details of successful prosecutions to the press in addition to providing report/s to council committees.

Overall, there is a significant amount of variation in the scale and nature of reporting on the CME function between councils. Some operate with limited genuine public visibility while others appear to allocate significant resources to documenting their activities for the consumption of observers (e.g. Canterbury). This is in addition of course to participation in National Monitoring System surveys, this survey and other more ad hoc reporting efforts (e.g. Brown, 2017).



Council	Annual Report	Report to Councillors	Snapshot	Report(s) to Council committee meetings (open to public)	Other (please specify)
REGIONAL					
Northland	1	1	0	1	
Waikato	0	0	0	1	Press releases upon completion of prosecutions.
Bay of Plenty	1	1	1	1	
Hawke's Bay	0	1	0	0	
Taranaki	1	0	0	1	
Manawatu-Whanganui	0	0	0	1	
Wellington	1	1	0	1	
West Coast	0	1	0	1	
Canterbury	1	1	1	1	Annual zone CME reports, PCC portfolio monthly reports, Zone Committee monthly meetings and quarterly reports.
Otago	1	1	0	1	
Southland	1	1	0	1	
UNITARY					
Auckland	1	1	0	1	Media strategy
Gisborne	0	0	0	1	
Nelson	0	0	0	1	
Tasman	1	1	0	0	Half Yearly summary report
Marlborough	1	1	1	1	
Total	10	11	3	14	

Table 20: CME reporting modes (Question 55)

State of the environment reporting (Q11-12)

All participating councils provided a link or reference to their most recent state of the environment report. The reports were briefly scanned but did not form part of the formal reporting and evaluation. Some councils produce a comprehensive SOE report annually, while others report less frequently or in different formats.

What is striking is that none of the SOE reports detail to any degree the importance or impact of the council's approach to CME as being material to environmental outcomes. While some reference the CME function in relation to specific matters (see for example Northland's SOE report in relation to wetland damage for swamp kauri extraction and associated compliance issues), there is a lack of comprehensive discussion of the linkage between CME operations and environmental outcomes. This is an area that councils may wish to consider expanding on in the future.

Section findings

- * All councils undertake some form of external reporting on CME functions via the National Monitoring System, but reporting besides that is highly variable
- * SOE reporting is typically only weakly linked to CME activities, and highlighting the important connections between these two forms of assessment could strengthen the internal priority for CME



PART 3 - REGIONAL SNAPSHOTS

The following section sets out the most striking aspects of the survey at a regional level, highlighting areas in which each council performed very well or indeed their responses reflected clear room for improvement. Councils can note their performance relative to the rest of the sector in each part of the report, but a short overview of key take home messages for each region is included here for quick reference. It is not exhaustive and should not be relied upon to give the full picture of the council in question. Activity levels and other variables are also very likely to vary considerably year on year, and the following snapshots are solely based on the data within this survey.

Northland

The Northland region is vast and approximately half the population are located rurally, one of the largest proportionally rural populations in the country. Northland Regional Council has a relatively systematic approach to determining priorities and a well-regarded monitoring programme for Farm Dairy Effluent (FDE) compliance.

A robust policy framework guides CME decision-making and the council administers a range of education and engagement programmes. Northland has average levels of resourcing, is relatively active in the use of lower level enforcement tools and reports regularly on CME activities in a variety of ways.

Auckland

The scale of the CME operation of Auckland Council dwarfs all other councils in numerical terms, but resourcing for CME on a population basis is below average. Internal prioritisation approaches appear sound although, like all unitary authorities, there is no way to understand (from the survey questions) how the competing demands of regional and territorial local authority functions are juggled. Information management appears to be an area where improvement is needed, although it is recognised that the efforts to integrate the legacy approaches of the amalgamated councils are ongoing.

Waikato

Waikato Regional Council operates a comprehensive CME regime, with a well-developed policy framework, prioritisation protocols and relatively good information management. Bespoke approaches to managing compliance approaches sometimes constrain the council from being able to contribute to nationally comparative datasets, however. Resourcing is slightly below average, but the regime overall appears generally balanced and well-documented.

Education and engagement programmes and formal relationships with iwi and hapū on CME matters all appear comprehensively managed. Waikato appears to utilise the full range of tools in the CME toolbox. It does not (at least for the reporting year) carry out high numbers of prosecutions but did secure significant fines for convictions that were secured.

Bay of Plenty

Bay of Plenty Regional Councils approach to CME appears comprehensive with respect to the data gathered. The policy framework and internal prioritisation approaches appear sound, although the monitoring of permitted activities could benefit from greater codification. A balanced approach to CME appears to exist with the council appearing to use a wide range of tools, and reporting is comprehensive.



Hawkes Bay

The Hawkes Bay Regional Council has some of the lowest levels of resourcing across the sector relative to population. Like Taranaki, express provision for the CEO to participate in decision-making on prosecutions is an area of potential reputational risk. Information management, particularly regarding the outcomes of incident response demonstrates room for improvement.

Taranaki

The CME approach of Taranaki Regional Council appears both well codified and well captured in their information management system. The council has the greatest number of FTEs of all councils relative to population and has a well-developed policy framework. The monitoring of permitted activities is generally reactive however and would benefit from greater codification. Taranaki administers a relatively balanced enforcement regime, although the express delegation to the Chief Executive on prosecutorial matters is of concern.

Gisborne

Gisborne has a developing approach to CME, with internal policies and procedures having been subject to significant review in recent times, a process that is still ongoing. Resourcing levels are typical of the smaller unitary authorities (noting existing vacancies). Information management is an area of improvement, as the council was not able to provide some important data for the reporting year. However, Gisborne was the only unitary authority able to provide its consent monitoring data for regional consents only, enabling comparison with sector colleagues.

Manawatu-Whanganui (Horizons)

Manawatu-Whanganui Regional Council has a well-developed policy framework (noting that there is limited codification for prioritising permitted activity monitoring) but has some of the lowest resourcing in the sector on a population basis. Information management is an area for improvement, as some datapoints were not able to be provided via council's systems. Manawatu-Whanganui used relatively few formal tools overall and recorded no prosecutions for the reporting year.

Wellington

Wellington Regional Council appears to have a comprehensive CME policy approach internally, with all expected policies and prioritisation procedures intact. Despite this, resourcing is the lowest of the entire sector, and the relatively scant use of formal tools (except non-statutory warnings) potentially reflects this. The council administers no permitted activity monitoring programmes.

Reporting appears comprehensive. Information management appears relatively sound. The relative sophistication of the internal framework for CME contrasts with the relatively low activity levels in the CME space, suggesting that the council has perhaps pulled back from this role for the at least the reporting year.

Tasman

Tasman District Council administers a large area and when combined with Nelson has slightly above average resourcing levels. However, less than half of consents that required monitoring were monitored in the reporting year and information management – like many councils – would benefit from some improvements.

Tasman has a relatively well-developed internal policy context for CME and is making progress in developing a prioritisation approach for permitted activity monitoring. The council appears to use the full range of tools

in the RMA enforcement toolbox and netted some significant fines from the few prosecutions they did undertake.

Nelson

Nelson City is the smallest jurisdiction of the sector and operates a slightly different CME model to most councils, relying on external contractors for much of the monitoring work. The resourcing appears reasonably adequate and the basic policy requirements are in place. For the reporting year, formal enforcement tool use favoured the softer end of the spectrum.

Marlborough

Marlborough District Council has a well-developed internal policy framework for CME and has above average resourcing for the CME function. Information management appears sound, with few gaps in the information provided, indicating that the council keeps good records of CME activities relative to the rest of the sector. Reporting seems comprehensive across a range of fronts.

Canterbury

Canterbury is New Zealand's largest region with the second largest population after Auckland, with significant resource management issues and a high level of public interest in council's approach to CME. Canterbury provided a significant level of detail on its CME activities in all instances and is evidently highly concerned with considering the CME function within its wider operations. The orientation of the council appears strongly focused on relationships with the regulated community and while this has many positive benefits, it can be a brake on punitive enforcement action where it is necessary. Canterbury relies heavily on non-statutory warnings notices and for the reporting year undertook very few prosecutions.

West Coast

The remote West Coast covers a large area, although much of it is public conservation land. CME resourcing for the West Coast Regional Council appears sound, although there are significant improvements likely required to the internal policy framework and information management – both appear lacking. The Council is relatively active at the lower end of the enforcement spectrum, mainly issuing non-statutory warnings, but carried out limited prosecutions.

Otago

Otago's narrative responses to questions were very brief, so it was difficult to discern how comprehensive their approach to some aspects of the role was. The categorical responses however generally showed that although there is room for improvement in information management, reporting is relatively comprehensive. Resourcing is below average, and council does appear to have struggled to meet its monitoring goals. The internal policy framework appears weak; it is one of the few councils to report that it does not have an enforcement policy for example. Notwithstanding the opaque internal context, Otago is one of the most active councils in high level enforcement proceedings

Southland

Southland has a well-codified approach to CME. The internal policy framework appears relatively sound, although like many of the southern councils, provision for CE involvement in day to day decision-making is an area of reputational risk. Notwithstanding that however, Southland was the strongest performer in prosecutions of offenders, securing a quarter of the fines for the entire sector over the greatest number of prosecutions of individuals and corporates. Information management and reporting appear generally sound.

PART 4 - SUMMARY AND ANALYSIS

This section presents a summary and analysis of the survey outcomes, focusing on the national picture, including the comparison and contrasts between regional councils and unitary authorities. In discussing the outcomes of the survey, specific reference is made to the list of minimum requirements set down in the Ministry for the Environment issued Best Practice Guidance on CME. While not all matters in the list are addressed, and the list itself is only newly promulgated, it does encapsulate some basic expectations to assess the sector's progress against over this and coming years. This is the inaugural benchmarking exercise.

Minimum resource requirements

There are certain CME functions councils should, at a minimum, support with sufficient resources. The list has been drafted so that it applies to all types and sizes of councils. For a well-functioning and effective CME programme, there are many other functions councils should consider resourcing.

As a minimum requirement, all councils should have sufficient access to resources to support:

- development and regular review of a compliance strategy, which includes an approach for addressing different behaviours, as set out in
- trained and qualified staff to undertake the CME role, including a combination of scientific, planning, regulatory, investigative and legal skills
- proactive programmes (eg, education and engagement) to achieve national, regional and local environmental objectives
- monitoring high-risk resource consents, and most medium-risk resource consents
- responses to and investigation of significant incidents, including appropriately trained investigation staff
- public reporting on CME at least once a year, fulfilling the minimum information requirements set out in the Best Practices Guidelines
- internal systems to support monitoring and reporting, including hardware/software to support the record-keeping requirements set out in the Best Practice Guidelines
- enforcement action (including taking a prosecution), ensuring staff are appropriately trained and qualified to do so
- access to legal representation and expertise in enforcement and prosecution
- administrative support for the CME function, for example to support financial matters such as charging for compliance monitoring.



What did the survey results tell us about alignment with minimum requirements?

The survey was instructive as to how the regional sector is meeting part of the minimum requirements but does not yet address all elements. Further additions to the survey or other forms of reporting to address the other matters would be advantageous and are considered in the next section. Overall, the sector has an evolving approach to CME with different councils leading in different areas.

First and foremost, the minimum requirements make references to the need for a **compliance strategy** to guide operations. Virtually all councils take a strategic approach to managing the different CME workstreams, developing internal prioritisation approaches. The effort appears largely concentrated in the areas of incident response and consent monitoring however, and further attention is needed in most councils on the management of permitted activity compliance. Many regimes across the country rely heavily on permitted activities (e.g. dairy farming in the Waikato), and systematic responses to ensuring the relevant standards are complied with are vital to manage environmental risk. The survey questions did not provide much opportunity to assess whether the relevant frameworks were being observed in practice however, so there is a degree of trust involved in the absence of those data.

Most councils recognise the importance of **education and engagement programmes**, and significant time and resources sector-wide are expended on helping the regulated community understand requirements. Most such programmes are heavily focused upon agricultural activities. It would be useful if the sector could capture – or were asked to capture – the effectiveness of such programmes, noting whether or not there had been an observed improvement in compliance levels from using these approaches.

Prioritising the **monitoring of consents** and developing systematic approaches to doing so is an evolving area for the sector, with most councils having a relatively well codified approach to doing so. Councils appear to generally manage to monitor all or most of the consents that require monitoring in any one year. However, given that triage systems vary so considerably, relative measures of effectiveness are limited. Where possible, the sector should consider standardising taxonomies such as compliance risk level. Like consenting, most councils have a codified approach to **incident response** within resource constraints. Again, differences in prioritisation frameworks make comparison and sector-level conclusions difficult.

Reporting on CME is patchy – being absent or very limited in some councils through to surprisingly comprehensive and evidently very time-consuming in others. The lack of strong drivers for comprehensive reporting in the past is reflected in the often-poor information management systems of councils. It will take time to improve these, but they should be a priority, given the overarching statutory duty of councils to maintain good records. When the general public are in receipt of CME information, it is helpful for them to understand how their council is performing relative to the rest of the sector, further driving home the importance of procedural standardisation where practicable.

Information management improvements to better support CME is doubtless an area where most councils could improve. Many councils were unable to provide some of the relatively basic information in this survey. In the absence of robust data, it is practically impossible for a regulator to demonstrate its credibility. Another area of variability which is related is in the level of **administrative support** available for CME. While some councils provide a significant support base for monitoring and investigating officers (e.g. Waikato), other councils provide only a limited amount meaning officers time is consumed with generic paperwork that would be perhaps better passed on to maximise CME-focused time. Given that the Guidelines are only newly released, it will take time for councils to align with them and for the questions to capture the elements of operations that reflect that alignment.



What improvements could be made to the survey in the future?

Designing metrics that reflect fully and fairly the state of a regulatory regime is inherently difficult. It is useful to consider the areas of inquiry future surveys could cover and consider what questions perhaps could be excluded or altered in the future as they have only limited explanatory power.

Observers and stakeholders have different perceptions of 'success', statute and policy are often ambiguous on its definition also, and public knowledge of the technical dimensions of CME can be poor. Against this background, metrics need to be technically sound and capable of reflecting performance at an appropriate scale and doing so on a continual basis to show trends over time.

It is important to also consider the burden on agencies of providing this information. Information management and reporting can be costly and cumbersome and divert often scant resources from the job at hand. On the other hand, it is critical that regulators maintain reasonable levels of transparency to enable accountability to the wider public. It is a difficult balance but one that must always be kept in mind. It points to the need to carefully consider the need for new metrics, but at the same time not use the difficulty of providing the data as a reason to not ask for it (where there is a clear need for it).

Improving current questions

The suite of questions posed to councils in this survey was doubtless comprehensive, more than any previous iteration of CME reporting in New Zealand for regional and unitary authorities. However, several suggestions are offered to enhance the current survey's utility and accuracy.

- Clearer caveats and clarifications in the survey questions would potentially improve data quality and reduce analysis time.
- As with any suite of largely numerical data, the units the information are expressed in is very important. The quality of some of the data were undermined by inaccurate reporting and miscalculations. Limiting the need for calculations within survey answers would help to limit error.
- Standardisation of approaches to CME would go a long way to enhancing the value of the dataset. At present, many aspects are difficult to compare meaning that the ability to genuinely rank performance is undermined.
- At present, unitary authorities are not required to separate the CME data related to their regional functions from their territorial local authority functions. This is problematic because it is not possible to compare them with either their regional or territorial colleagues, which results in uneven transparency across the CME sector. While it may take time to usher in this change, it is one that is essential.

Where specific suggestions for individual questions are available, they have been tabulated in Appendix 2.

Adding new questions

Adding questions to the survey to capture the outstanding aspects of the minimum requirements would mean the survey would play an important role in tracking the sector's implementation of those requirements over time. This would require questions to be included relating to the matters such as staff capability and access to legal expertise. Other suggested additions include the following:

- More comprehensive questions on the nature and permissiveness of council's regulatory regime (to determine the influence of different statutory contexts)
- Questions that reflect the adherence to the prioritisation strategies outlined in this survey to ensure that practice reflects theory.

- Questions relating to tracking the outcomes of statutory and non-statutory interventions to achieve compliance (validation tactics)
- Further questions could be considered on the following matters: notice period for inspections; explicit questions on delegations for decision-making; and the environmental outcomes of CME activities.

Councils could also consider implementing alternative ways of assessing and benchmarking performance in a more detailed manner (such as formalising the visiting audit programme already in operation).



PART 5 - CONCLUSIONS AND RECOMMENDATIONS

The inaugural regional sector CME metrics project has demonstrated a wide range of valuable learnings for the sector itself and the wider community. This section summarises the key findings and recommendations. Some improvements may not be within the scope of the CME team's control but are recorded for broader interest. The source of the observations is solely that dataset provided by the councils and may conflict with commentary from other sources.

Fundamentally, the value of the questions – old and new – are constrained by the sheer variation in approach to the CME role. There is nothing inherently wrong with variation – councils demonstrably operate in very different settings – but **standardisation** of some procedural aspects would be very desirable for reporting purposes. There are several opportunities where councils could adopt similar approaches and make the data much easier to compare.

Fundamentally, a robust CME programme relies on people. Many councils are **poorly resourced** for what is a technical, difficult and often highly contentious function. Resourcing sector wide is uneven and is likely to be undermining the ability of most councils to operate as functionally competent regulators. Councils that performed strongly in any area all had average or greater levels of FTEs. Councils must focus on ensuring a reasonable number of FTEs is available to carry out this function as a minimum.

People require good internal systems for **information management** to coordinate the CME function, including hardware and software solutions that streamline the role where possible and ensure appropriate record keeping standards are maintained. Virtually all councils would benefit from greater investment in this space, although it is noted that many improvements have already occurred. With changing technology, there will always be a demand for enhanced information management and councils must be able to keep up.

Maintaining a reputation as a credible regulator is vital to protect the people that work in CME and those that support them. The regulated community has a rightful expectation that council will execute its functions in a way that is fair, reasonable and within the law. To guide the many decisions that are made daily in the CME space, **a robust internal policy framework** is a necessity. Unlike most public prosecuting agencies in New Zealand, councils are not subject to the mandatory oversight of the Solicitor-General and are wholly responsible for their own efforts in this space. It is strongly recommended that policy gaps are filled and that councils with existing policies ensure they are subject to regular review and revision to ensure they are in line with best practice.

The current and potential content of this survey provides a unique opportunity to capture efforts and illustrate improvements over time and the sector is strongly encouraged to continue it on an annual basis. Questions should provide ample opportunity for councils to detail examples of both success and failure in approaches, maintaining a primary focus on transparency over 'looking good'. The results should also be subject to analysis and reporting by a suitably qualified expert and potentially be subject to audit and review following submission to ensure accuracy. The value of the data is evident from a single year and will only increase with subsequent iterations.



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APPENDIX 1

1. Which council are you completing this survey on behalf of?
2. What is your name and contact details?
3. What is the population of your region?
4. What is the geographic size of your region?
5. What is the percentage split of urban and rural population in your region?
6. What is your regional GDP percentage of national GDP?
7. What is the regional % of GDP for each of the following industries? *e.g. forestry 25%*
8. Describe your regional key commitments to work with iwi/Maori on CME (e.g. commitments in Joint Management Agreements or other co-management agreements)
9. Upload copies of any agreements related to this work with iwi/Maori.
10. Are you a Unitary or Regional Authority?
11. Provide link to your council's latest state of the environment report.
12. Alternatively, upload the report (if less than 16MB)
13. How many notifications (complaints) were received from members of the public (or other sources, but excluding information from council monitoring activity) relating to environmental incidents or potential breaches of environmental regulation?
This might include information from, for example, emergency services attending an incident or perhaps a council staff member observing something while on other duties, but excludes information from council monitoring activity
14. How many of these notifications were responded to by council?
This response may be in any form - e.g. phone call, site visit, desktop audit
Total number responded to
Percentage of the number received
15. How many of these notifications were physically attended by council staff?
Total number
Percentage of the number received
16. What basis is used for determining what notifications are physically attended and with what urgency or priority?
17. If your council uses a prioritisation model or compliance strategy, please upload file.
18. How many of these notifications were confirmed as breaches of the RMA or subsidiary instruments?
19. How many active resource consents exist in your region?
In totals exclude Land use consents where the activity is completed. E.g. Land use-Subdivisions where the subdivision is complete and certificates issued or Land Use-Building where the building has been constructed



20. Describe how you determine which consents are monitored and how frequently?
If there is a prioritisation model or compliance strategy, add link
21. Upload file, if link not provided
22. How many consents required monitoring during this period, in accordance with your monitoring prioritization model/strategy?
23. How many of those consents have been monitored (including by desktop audit) in this period?
Number monitored
Percentage monitored of the number requiring monitoring this period
24. What grades do you apply to non-compliance? (e.g. technical non-compliance, significant non-compliance)
Fully Compliant; Technical/Low Non-Compliance; Moderate Non-Compliance; Significant Non-Compliance; Other (please specify)
25. What were the levels of compliance with consents according to the grades you use?
Note 1: Numbers provided under each grade is per monitoring event not per consent. E.g. a consent may be monitored 4 times in the year on one occasion it may be Technically Non-Compliance and on three occasions it may be Fully Compliant, this would add 3 to the total of Fully Compliant and one to the total for Technical Non-compliance.
Note 2: The compliance grade is based on the condition with the worst compliance grade. (e.g. a consent with five conditions Fully Compliant and one condition Moderate Non-Compliance has an overall compliance grade of Minor Non-Compliance
Note 3: Daily telemetry water readings where compliance with water take limits is continuously monitored are to be excluded from compliance grade totals.

Full Compliance; Low Risk/Technical Non-Compliance; Moderate Non-Compliance; Significant Non-Compliance; Other
26. Are there any significant industries or activities in your region that are permitted activities rather than consented activities (or both)? If so, what are they?

Activity	Permitted	Consented	Activity	Permitted	Consented
Agriculture (excl dairy)			Mining		
Aquaculture			Oil and gas		
Construction			Tourism		
Dairy			Viticulture		
Forestry			Other		
Horticulture					

27. Which permitted activities do you have a monitoring programme for?
Agriculture (excl Dairy), Aquaculture, Construction, Dairy, Forestry, Horticulture, Mining, Oil and gas, Tourism, Viticulture, Other
28. Describe what basis was used for determining how these permitted activities are monitored.
If there is a prioritisation model or compliance strategy, add link
29. Upload file, if link not provided above



Note: FTEs should only be counted once under each of these categories. However, if a team member has more than one role then calculate what portion of their time generally is spent in each role. An example of an answer to each of the questions in this section might look like '24 FTE spread across 40 individuals'. Exclude any in-house or contract lawyers

30. How many FTEs does your council have who carry out monitoring roles?
Include contractors.
31. How many FTEs does your council have who carry out environmental incident or pollution response roles?
32. How many FTEs does your council have who carry out investigation or enforcement roles?
33. How many FTEs does your council have in CME support roles (e.g. administrative roles)?
34. Does your council have an Enforcement Policy?
35. What is your process for making decisions on prosecutions?
36. Does your council have a Conflict of Interest Policy?
37. Does your council have any other CME policies?
38. If yes, please upload copies
39. Education
Does your council have, or support, any education or enabling projects relating to compliance with the RMA or any of its derivative regulation? For example, an annual workshop for earthworks contractors around erosion and sediment controls.
40. Engagement
Does your council have, or support, any engagement projects relating to compliance with the RMA or any of its derivative regulation? For example, wetland stakeholder group meetings to highlight emerging issues with the wetland.

Please populate the table with the number of actions taken during the period.
41. Formal warnings issued
Section 9: Use of land
Section 12: Coastal marine area
Section 13 : Beds of lakes and rivers
Section 14 : Water
Section 15 : Discharges of contaminants
Section 17: Duty to avoid, remedy & mitigate
Other breach: e.g. Section 22
42. Abatement notices issued
43. Infringement notices issued
44. Enforcement orders applied for
45. What is the total number of individual (person) defendants convicted as a result of RMA prosecutions concluded in this period?

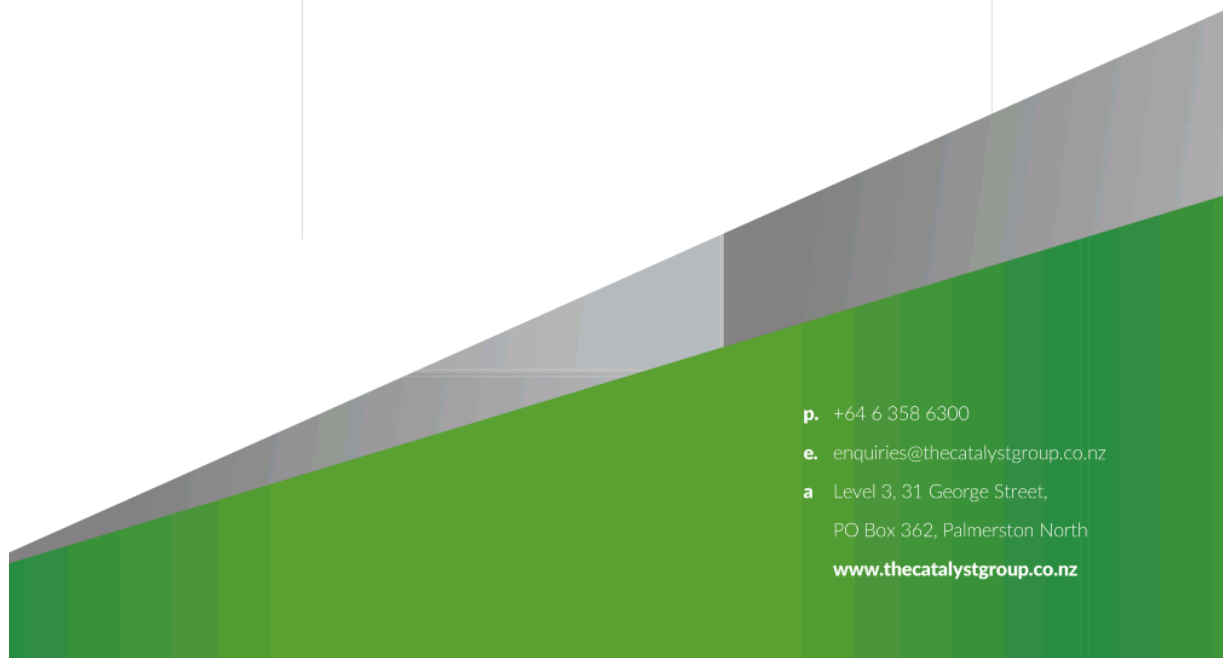


46. For all of these (person) defendants what is the total number of convictions entered against them?
For example, there may be a total of 27 separate convictions entered against a total of nine 'individual' defendants.
47. What is the total number of corporate (e.g. Crown, company, body corporate etc.) defendants convicted as a result of RMA prosecutions concluded in this period?
48. For all of these (corporate) defendants what is the total number of convictions entered against them?
For example, there may be a total of 30 separate convictions entered against a total of 12 corporate defendants.
49. Total number of convictions against an individual
Total fine potential
(Total x \$300,000)
50. Total number of convictions against a corporate entity
Total fine potential
(Total x 600,000)
51. What is the total amount of fines imposed by the courts as a result of RMA prosecutions concluded in this period?
Individual fines/Corporate fines
52. What other sanctions, if any, have been imposed by the courts as a result of RMA prosecutions concluded in this period?
Prison sentence/Enforcement order/Reparation/Community Service/Other
53. How many prosecutions involved restorative justice, diversion or other alternative justice process?
Restorative justice/Diversion/Alternative justice
54. Describe any outcomes relating to these processes.
55. What mechanisms do your council use to report CME data to the public? (e.g. annual reports, reports to Councillors) Annual Report/Report to Councillors/snapshot/report to council committee meetings (open to public)/Other (please specify)



APPENDIX 2

Question/group	Suggestion
Regional context data	<p>An overarching comment on such questions is that it may not be appropriate to source all the information asked for from each council, but to instead draw from a definitive and common source to ensure accuracy and comparability.</p> <p>The information on regional GDP was patchy. Councils could consider, for example, asking for a ranking of major industries that occupy the focus of the CME department/s</p>
Council CME Operations – priorities (questions 16-17, 20-21 and 28-29)	These questions all required the upload of a prioritisation strategy to reflect how the council addresses complaints, consent monitoring and permitted activity monitoring. It may be possible to streamline this request – providing an opportunity to upload one strategy and point out any differences in approach between the three workstreams.
Question 19 Active consents	Clarify meaning of 'active' as interpretations differ.
Question 26 – Permitted activities	The responses to this question were difficult to analyse in any depth, particularly as many activity types were only permitted up to certain thresholds. In the future, it may be useful to use 'sample activities' to demonstrate differences in permissiveness of the regimes. Alternatively, subject that aspect to more intensive scrutiny in parallel to the current metrics as a policy-based project because it does not explicitly relate to performance in CME.
Question 30-33 – staffing levels	Clarify in future surveys what counts as CME 'support' and also make clear how to treat existing vacancies.
Question 39-40	Either consider combining the question or clearly defining each term as most responses demonstrated the distinction is not necessarily well understood.
Question 53	Clarify the difference between alternative justice and restorative justice or combine them.
Question 55	Consider expanding this question to drill into what information is contained in that reporting (keeping in mind the reporting requirements in both statute and in the guidelines).



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FRONT COVER PHOTO:
Effluent pond with pump

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1 Purpose

This policy sets out Horizons Regional Council's (Horizons) approach to monitoring compliance of activities that occur under the Resource Management Act 1991 (RMA) and how it will monitor compliance to achieve environmental outcomes that are consistent with the purpose of the RMA¹. To this end regard has also been given to the Ministry for the Environment Best Practice Guidelines for Compliance Monitoring and Enforcement².

PURPOSE OF THE RMA

(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.

(2) In this Act, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and

(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and

(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

As an effective regulator Horizons' role and responsibility is to monitor activities occurring within the region that are regulated under its regional plan, national environmental standards, resource consents and regulations, to ensure activities are being undertaken in manner that is compliant with these documents and thereby achieving the environmental outcomes expected by the regional community.

¹ This policy should also be read in conjunction with the document titled Horizons Enforcement Guidelines, dated November 2014.

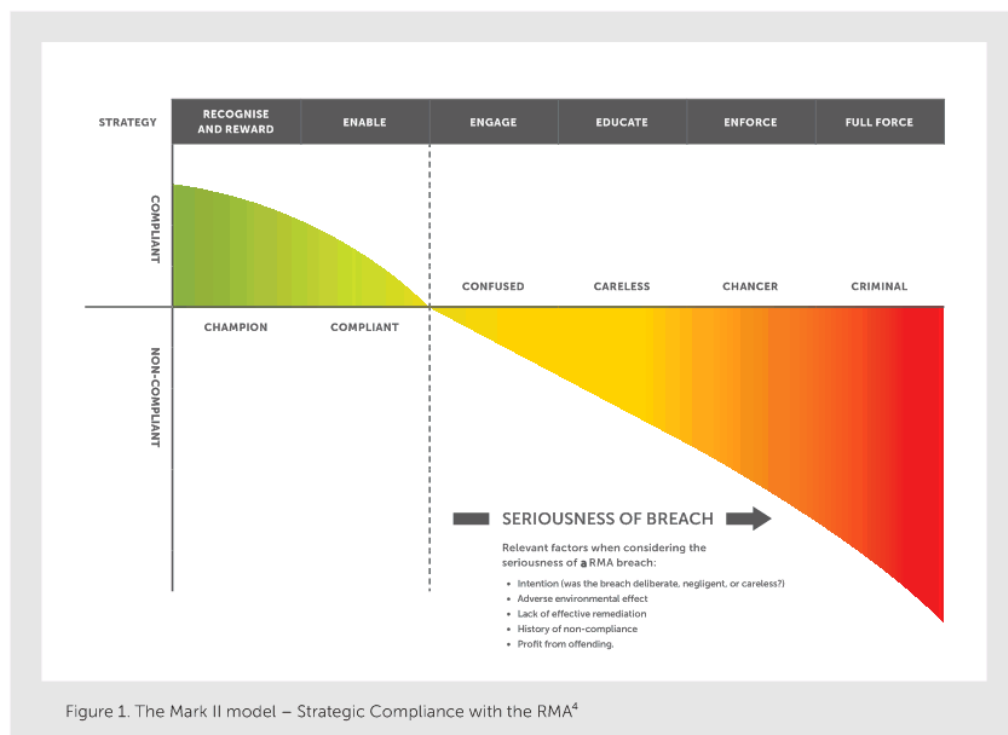
² Ministry for the Environment 2018, Best Practice Guidelines for Compliance Monitoring and Enforcement under the Resource Management Act 1991.



2 Principles of compliance monitoring

Horizons has a statutory duty to monitor compliance with the documents mentioned above and to ensure the provisions of both the RMA and its plans are enforced.³ Monitoring and taking appropriate enforcement action ensures the RMA's underlying purpose of sustainable management is achieved.

Horizons will take a graduated approach to compliance which ensures that responsible and compliant resource users are acknowledged while those who are not are in the first instance made aware of their obligations or, where necessary, held accountable for their breach. Figure 1 illustrates this approach.



To this end when meeting its statutory obligations of compliance monitoring, Horizons will adhere to the following principles⁵:

- 1. Transparent:** Being clear to the regulated community about the standards and requirements for compliance to be achieved. To this end, information will be made available to the general public about industry environmental performance and actions taken by Horizons to address non-compliance.
- 2. Consistent:** What we do and how we do it will be consistent with the relevant legislation and within Horizons legislative authority. To ensure public confidence in its compliance programmes it is important our approach to compliance and decisions are made consistently regardless of the person, organisation or activity under consideration.

³ Sections 35 and 84 of the RMA.

⁴ Compliance and Enforcement Special Interest Group, Regional Strategic Compliance Framework 2019-2024.

⁵ These principles are based on those detailed in document titled Regional Sector Strategic Compliance Framework 2019-2024 and the document titled Horizons Regional Council, Enforcement Guideline, dated November 2014.

3. **Fair, reasonable and proportionate:** Regulatory intervention is a natural outcome of undertaking compliance monitoring. Equality before the law and the regulated community is fundamental to the credibility of any compliance monitoring system. To this end all persons will be impartially and fairly treated by Horizons using the same process, regardless of the type and nature of resource use.
4. **Evidence based and informed decision making:** Evidence and fact will be used to inform Horizons compliance programme and associated compliance decisions.
5. **Collaborative:** Where appropriate, Horizons will work with other regulators, stake holders and industry groups to ensure the best compliance outcomes are achieved for the region.
6. **Lawful, ethical and accountable:** In fulfilling its functions, Horizons will act lawfully and impartially, and will document and take responsibility for the regulatory decisions and actions taken.
7. **Targeted:** Horizons will focus on the most important issues and activities taking into account our finite resources and key risk factors. Focus, will also be on those poor performers and non-compliant activities that pose the greatest risk to the environment.
8. **Responsive and effective:** Where non-compliance is identified Horizons will respond in an effective and timely manner to ensure impacts to the environment are appropriately remedied or mitigated.

2.1 RISK BASED MONITORING

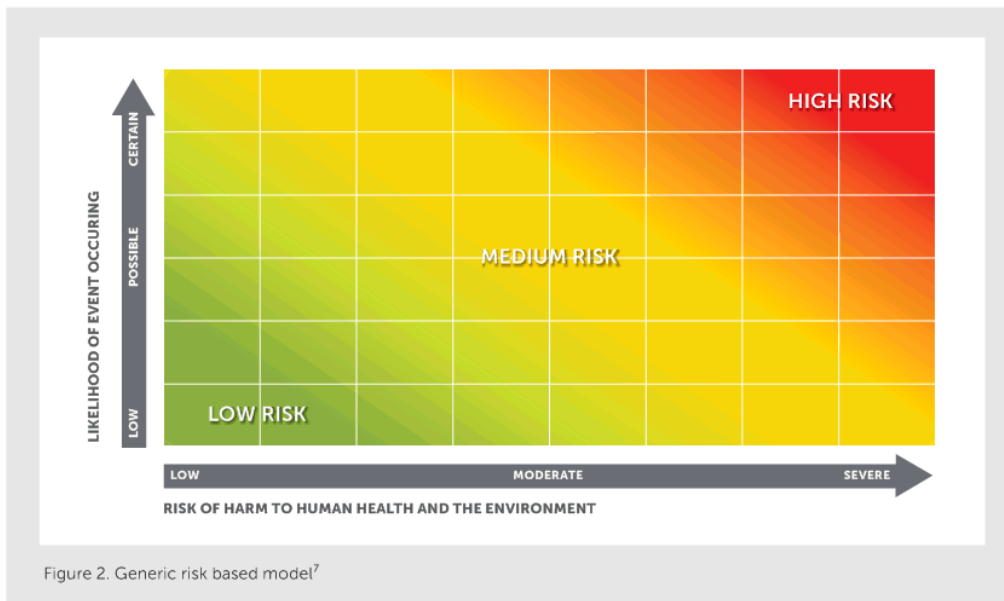
"The regulator resources are inevitably scarce, so effectively implementing a regulatory regime will require the regulator to prioritise its effort. How the regulator prioritises its effort will also be crucial to the success of the regime of meeting its intended outcomes"⁶

Horizons, like other regional councils, face challenges associated with increases in land intensification, the implementation of new and/or improved infrastructure (road construction, storm water management and wastewater treatment), and the implementation of new rules, regulations and national environmental standards.

As Horizons has a finite resource in relation to compliance monitoring, there is a need to utilise this resource in a strategic and risk based manner to ensure we can achieve the best possible outcomes for our community.

⁶ New Zealand Productivity Commission
– Regulatory institutions and practices, June 2014, pg 5.





In determining risk associated with monitoring consented activities Horizons takes into consideration the following factors:

- Actual and potential effects⁸;
- Nature and scale;
- Compliance history;
- Public profile or interest, including tangata whenua expectations; and
- Complexity of resource consent(s).

Consideration of these factors will determine whether the activity is high, medium or low risk, which in turn will determine the frequency by which an activity is monitored, with higher risk activities being subjected to more intensive monitoring than lower risk activities. This ensures Horizons finite resources are directed to those activities that pose a greater risk to the environment.

2.2 IWI IN COMPLIANCE

Horizons has a number of legislative and other obligations to Māori under the RMA and various Treaty Settlements with iwi in its region.

Horizons approach to compliance monitoring and enforcement recognises the unique relationship that Māori have with the environment and the specific functions that iwi have under the RMA in relation to the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga⁹, kaitiakitanga¹⁰ and the ethic of stewardship¹¹.

In this regard, when designing compliance programmes, the importance of particular activities to iwi are considered. For instance, where activities have been

subject to a resource consent process that has had a high level of iwi interest this will be a factor considered in determining the overall risk profile of the activity.

In addition to this, where serious issues of non-compliance occur within a particular rohe, iwi will be informed of the non-compliance, and without compromising the integrity of any investigation, Horizons will endeavour to keep iwi informed of progress in the investigation. Horizons will also seek to obtain Cultural Impact Statements (CIA) from iwi regarding non-compliances subject to comprehensive investigations.

⁷ Compliance and Enforcement Special Interest Group, Regional Strategic Compliance Framework 2019-2024.

⁸ This includes assessing the toxicity of any discharge, value of the receiving environment and any actual or potential adverse effects.

⁹ Section 6(e), RMA 1991. ¹⁰ Section 7(a), RMA 1991. ¹¹ Section (7)(aa), RMA 1991.

3 Compliance monitoring of activities

The following details the main activities that make up compliance monitoring under the RMA. These include, undertaking proactive site inspections of consented activities, reviewing information such as annual reports, management plans and environmental data supplied by a consent holder, responding to environmental complaints from members of the public and dealing with non-compliances identified.

3.1 SITE VISITS

Site visits are effectively visiting regulated activities on a proactive basis to assess compliance with conditions of a resource consent, rules in a plan, national environmental standards or regulations. Typically, the site visit will focus on the conditions that can be assessed during the site visit. These can include conditions that control matters such as ponding of effluent on the land surface, irrigation of wastewater within allowed buffer distances, odour beyond the property boundary, installation and operation of environmental controls and visually assessing in river conditions where appropriate. Effectively the site visit provides a 'snap shot' in time of how an operation is complying with any of these documents.

3.2 REVIEWING INFORMATION FROM CONSENT HOLDERS

It is now common that consent holders are required to provide information as part of their resource consents. Depending on the size and scale of the operation and the complexity of the resource consent the amount of information that is to be provided can vary greatly. For example a small stock water take in an under allocated catchment may be required to provide annual records of the volume of water taken, whilst a large industrial operation may require the provision and assessment of numerous site management plans (e.g. Odour Management Plans, Discharge to Land Management Plans, Erosion and Sediment Control Plans) and also the provision of information either on an automatic basis (such as discharge volumes) and either quarterly and/or annual monitoring reports. All this information has to be assessed to determine whether the consent holder is complying with its resource consent.



3.3 PROACTIVE MEASURES

Where appropriate Horizons will work with industry to assist in improving both capability and capacity to improve compliance. This may include facilitation of workshops, such as those focused on erosion and sediment control. However, it is important to note these endeavours in no way compromises Horizons role as a regulator and ultimately it is the resource users responsibility to ensure they have the requisite capability and capacity to comply.

3.4 COMPLAINTS

Complaints are received from the general public in relation to environmental matters. These complaints are important as Horizons cannot be in all places at once, and complainants often act as another source of information.

Complaints are categorised based on risk and in determining its response Horizons takes into consideration the factors noted in section 2.2 above.

3.5 INVESTIGATIONS AND DEALING WITH NON-COMPLIANCE

Where non-compliance is identified, Horizons will respond in a manner that is proportionate to the overall circumstances of the non-compliance.

Where a failure to comply has occurred, Horizons will investigate. The aims of any investigation include:

- Determining whether there has been a failure to comply with a resource consent, rule in the regional plan, national environmental standard or regulation;
- Determining the nature and scale of any effect the failure to comply has had on the environment;
- Collecting admissible evidence that, if required, can be used in criminal prosecutions;
- Promoting both specific and general deterrence;
- Achieving an appropriate outcome within a reasonable timeframe; and
- Giving the public confidence in the integrity of the compliance monitoring and regulatory system.

In the event non-compliance is identified, Horizons will either commence a minor or comprehensive investigation. The former generally relates to low level non-compliances, whilst the latter is where the non-compliance is serious and evidence is collected that is likely to end up before the courts. In addition to the factors detailed above, Horizons will, in determining whether the investigation is minor or comprehensive, consider the culpability of the person(s) involved, the duration of the non-compliance and any financial benefit obtained through delaying or avoiding non-compliance. These and other matters are detailed in the Horizons Enforcement Guidelines.



4 Cost recovery

Horizons will seek to recover the costs associated with its compliance monitoring obligations. This is provided for under section 36(1) (c) and (cc) of the RMA.

How Horizons recovers its costs are detailed in its Annual Plan each year. In setting its cost recovery model Horizons is conscious that costs associated with monitoring should fall onto those resource users who are subject to monitoring, as opposed to the general ratepayer.

In the event that non-compliance is identified, Horizons will seek to recover all its actual and reasonable costs. This approach is consistent with the polluter pays principle.





5

Who within Horizons will make decisions on compliance monitoring

In order to have a compliance monitoring programme, which ensures impartiality, fairness and consistency it is essential that decisions relating to compliance are made objectively and are free from political or public pressure¹². In order to ensure the independence and integrity of its compliance monitoring programme and decision making process, Horizons has delegated decisions to specific positions, with the delegation for prosecution lying with the Chief Executive or Group Manager Strategy and Regulation.

Publicly elected representatives are not involved in such decisions and acknowledge the importance that they are not perceived to be involved in influencing Horizons' compliance programme and associated decision making functions.

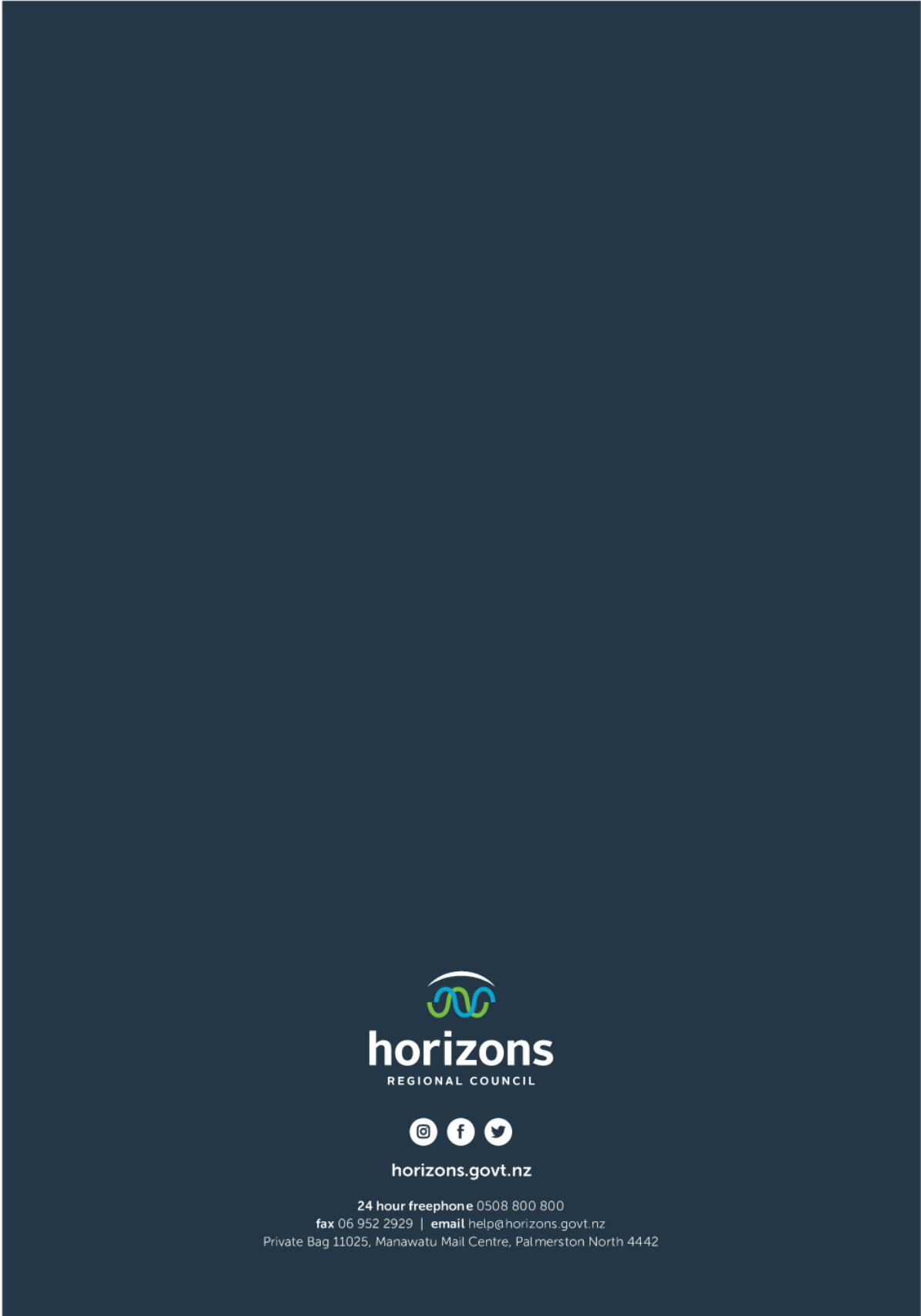
For this reason members of the community who are subject to compliance monitoring and/or investigation should direct any queries they have to Horizons officers, who will then respond. Publicly elected representatives will direct any enquiries made to them by constituents in relation to specific compliance matters to Horizons officers for a response.

6

Review

Compliance Monitoring and Enforcement (CME) is a dynamic and challenging environment. To this end, this policy will be reviewed, as a minimum, once every 3 years to take into account any changes associated with CME best practice development.

¹² This approach is consistent with the principles relating to enforcement decision making that are detailed in the Solicitor General Prosecution Guidelines, dated 2013, which states "... the independence of the prosecutor refers to the freedom from undue or improper pressure from any source, political or otherwise..."



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