



Bay of Plenty Regional Pest Management Plan 2011-2016

Annual Report for 2018/2019

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Executive summary

The Annual Report highlights progress with key pest programmes and provides a summary of progress for each Exclusion/Eradication and Containment Pest. Information and data used to support this report has been sourced from Accela and other sources, such as GIS systems and staff spreadsheets.

No new to region species were detected in 2018/2019, however, a number of new incursions and eradication species sites have been found from proactive surveillance programmes, including new sites of alligator weed, *sagittaria*, and water poppy. Surveillance and control programmes are currently in place to manage these threats, and the early detection of these infestations increases the likelihood of local eradication being achieved quickly and efficiently.

Overall, 75% of Regional Pest Management Plan (RPMP) pest programmes are considered to be on-track to meet their RPMP management objectives, this is the same as the previous year.

Good progress continues with eradication programmes. Partnerships with research institutions such as the National Institute of Water and Atmospheric Research (NIWA) are resulting in the latest research findings being incorporated into control programmes increasing effectiveness. In total, 48% of the eradication sites currently being managed across the region are at zero density (the goal of the programme), an improvement of 14% from the previous year. Increases in pest numbers were found at only 10% of sites down from 21% in the previous year.

Most containment pest programmes are also progressing well. Innovation has become a big part of managing these more established pests, more efficiently. Trials with infrared technology, mobile data capture applications, and new control technology, continue to evolve and are beginning to allow us to scale up our efforts.

The Marine Biosecurity Programme continues to be successful under the Small Scale Management Programme that has been operating since 2015. The number of sites where Mediterranean fanworm and *Styela clava* were found and controlled reduced when compared to the previous year, despite more sites being surveyed.

Surveillance in Lake Rotorua in December 2018 revealed that catfish had spread from Lake Rotoiti into Lake Rotorua. Significant effort and intensity has been placed on netting with the 2018/19 year catching 18% less catfish compared to the 2017/18 year, despite almost twice the amount of nets being set.

Challenges remain with the management of woolly nightshade on unoccupied or unmanaged land continuing to be one of the programmes biggest challenges. While progress has been achieved at some sites, any gains made are very hard to maintain without a significant change in land-use. This species is at risk of failing to meet its current RPMP management objectives, primarily due to the fact that it is widespread, rapidly distributed across the landscape by birds, and has an incredibly fast transition from seedling to flowering plant (4-6 months compared with 3-4 years for wild ginger).

Contents

Executive summary	i
Contents	iii
Part 1: Introduction	1
Introduction	1
Definitions and terminology	1
Current status of the Regional Pest Management Plan	1
Part 2: Monitoring performance and reporting progress	2
Progress against Regional Pest Management Plan indicators and Long Term Plan Key Performance Indicators	2
Part 3: 2018/2019 highlights and issues	4
Highlights	4
Challenges	8
Part 4: Operational progress and current pest status	11
New pest incursion surveillance and control	11
Agency pests and national programmes	13
Exclusion and eradication pests	14
Containment pests	19
Restricted pests	27
Part 5: Council activities to support the Regional Pest Management Plan	28
Providing support, advice and information	28
National Pest Programme support	30
Enforcement of rules	31
Exemptions	31

Part 1:

Introduction

Introduction

The Regional Pest Management Plan for the Bay of Plenty 2011–2016 (RPMP) became operative on 30 September 2011. As Council is the Management Agency for the RPMP, it is required by Section 100B (2)(a) of the Biosecurity Act, to report progress on its implementation annually.

Definitions and terminology

The terms and definitions of the RPMP also apply to this report. A glossary of definitions can be found on Page 51 of the RPMP.

Current status of the Regional Pest Management Plan

Council formally initiated a review of the 2011-2016 Regional Pest Management Plan with the notification of a new Proposed Regional Pest Management Plan on 25 September 2018. Section 100D(8) of the Biosecurity Act provides for the current Plan to remain in force while its future is determined by the review process. This means the 2011-2016 Regional Pest Management Plan remained in force for the duration of this report period.

Part 2:

Monitoring performance and reporting progress

Progress against Regional Pest Management Plan indicators and Long Term Plan Key Performance Indicators

Reporting on RPMP Indicators and Long Term Plan (LTP) Key Performance Indicators (KPIs) relies on the collection and analysis of surveillance and control data to measure reductions in pest distribution and/or density.

The Land Resources Database, the system Council had used for many years to store biosecurity data, was decommissioned and replaced with Accela in April 2017. As the new Accela system is in its infancy and has had data migration issues, its reporting ability has been limited.


To address this, trials using mobile data collection method in the field have been conducted. Early indications have been very positive and are showing that this approach will allow a more detailed, consistent, and automated level of reporting on biosecurity data.

Progress against Regional Pest Management Plan Indicators

Intermediate plan outcome	Indicators	2018/2019 results
No new pests are established in the region.	Number of emerging pest threats identified.	<ul style="list-style-type: none">● The Regional Surveillance Plan identified 88 potential pest plants that have naturalised at 48 survey sites.
	Number of new pests detected in the region.	<ul style="list-style-type: none">● Water poppy detected at one site in Western Bay of Plenty.● Asian paddle crab detected in Tauranga Harbour.
	Number of new pests with management plans in place.	<ul style="list-style-type: none">● One, water poppy.
Identified pest impacts are excluded, reduced or contained.	Number of new occurrences eradicated and monitoring plans in place.	<ul style="list-style-type: none">● Data not available.
	Percent of eradication and containment pest species that have had their densities reduced.	<ul style="list-style-type: none">● Data not available.
	Percent of eradication and containment pest species that have had their distributions reduced.	<ul style="list-style-type: none">● Data not available.

Intermediate plan outcome	Indicators	2018/2019 results
Our regional communities are experienced and effective pest managers.	Number of sites where community work is underway to control pests.	● Data not available.
	Number of reports and requests for advice made by the community.	● 988 enquiries received and responded to.
	Percent of restricted pests that have had their spread reduced.	● Data not available.

Biosecurity Programme Long Term Plan Key Performance Indicators

Programme KPI	Status	Results
KPI 13 – The percentage of high-risk pests detected in the Bay of Plenty, that are already present elsewhere in New Zealand, that have management plans in place within three months, outlining how the pests will be contained and controlled.		● One, water poppy.

Part 3:

2018/2019 highlights and issues

Highlights

Operational priorities in 2018/2019 included surveillance, monitoring and control of new incursions, exclusion/eradication pests and advisory services. Effort on containment pests focused on those with limited distributions and effective control programmes due to budget constraints.

The table below summarises biosecurity operational results and activities and compares results from the last three years.

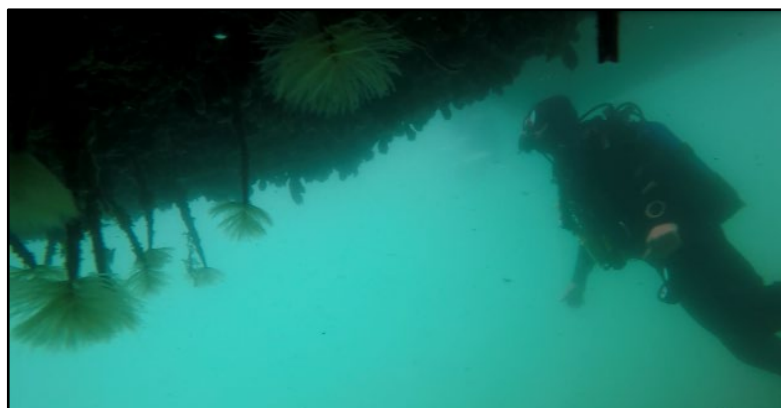
Operational Activity Summary	2016/2017	2017/2018	2018/2019
Number of new incursion pest sites being managed.	23	28	29
Number of new incursion pest sites reduced to zero-density.	2	2	10
Number of new incursion pest sites that remained at zero-density.	5	7	7
Number of new incursion pest sites that were re-classified as eradicated.	2	0	2
Number of exclusion/eradication pest sites being managed.	41	47	55
Number of exclusion/eradication pest sites reduced to zero density.	8	2	7
Number of exclusion/eradication pest sites that remained at zero-density.	8	14	16
Number of exclusion/eradication pest sites that were re-classified as eradicated.	5	0	5
Number of property inspections completed.	3,513	2,649	2,906
Number of pest plant infestations recorded.	2,865	2,254	5,698
Number of RPMP exemptions granted.	0	3	3
Number of Notices of Direction issued.	17	22	12
Number of public enquiries received.	1,007	1,051	988

New incursion management highlights

Marine biosecurity

Council formally adopted the Marine Biosecurity Management Plan for the Bay of Plenty in May 2014. Council, with support from MPI and the University of Waikato, carried out comprehensive surveillance across the Bay of Plenty, with Tauranga Harbour being the priority.

This year, a total of 1,024 hours were spent searching for Mediterranean fanworm and *Styela clava*. The numbers of sites where Mediterranean fanworm and *Styela clava* were found and controlled has reduced compared to the previous financial year, despite more sites being surveyed this year.



A summary of the sites where Mediterranean fanworm was discovered and controlled during the year is provided below:

Mediterranean fanworm		
Site	Number of infestations found	
	2017/18	2018/19
Bridge Marina - Vessels	7	4
Bridge Marina - Pontoon	6	4
Sulphur Point Marina - Vessel	1	1
Sulphur Point Marina - Pontoon	2	0
Other	2	3
TOTAL	18	12

Styela clava was found and controlled at four sites which was a big improvement on the previous year. A summary of the sites where *Styela clava* was discovered and controlled during the year is provided below:

Styela clava		
Site	Number of infestations found	
	2017/18	2018/19
Bridge Marina - Vessels	5	1
Bridge Marina - Pontoon	23	1
Sulphur Point Marina - Vessel	1	0
Sulphur Point Marina - Pontoon	0	0
Other	1	3
TOTAL	30	4

The Bay of Plenty Regional Council dive team are considered experts in the field of marine biosecurity and their services are utilised by other Councils. Work was undertaken on behalf of Waikato Regional Council, Auckland Council, Gisborne District Council and Hawkes Bay Regional Council, at various sites around the North Island. This work generated income for BOPRC.

Asian Paddle Crab

In early 2018, while undertaking surveillance around the Tauranga Harbour, NIWA scientists caught two large Asian paddle crabs near the Matapihi Bridge.



Following this find, a comprehensive surveillance plan was undertaken to determine if the population was established.

In the 2018-19 financial year the University of Waikato were contracted and set a total of 667 traps (633 box traps and 34 crab condos) in 220 different locations around the Tauranga Harbour as well as additional trapping by NIWA as part of the Port high risk surveillance. A total of four Asian paddle crabs were captured over the year this included two females which were in-berry, one of which was trapped at Omokoroa. Targeted trapping is planned to continue.

Regional Surveillance Plan - Surveillance for new to region pests

As part of the Regional Surveillance Plan, the second year of new to region pests surveys were carried out from October 2018 to May 2019, focussing on potential introduction sites in and near Tauranga, Te Puke, Whakatāne, Opōtiki, Kawerau, and Murupara.

The surveys recorded 88 potential new pest plants species at 48 survey sites. Almost all of the species that were located have horticultural origins and it is likely that all of these were planted in the region before naturalising. The main pathways for the naturalisation of these plants is via legal or illegal green waste dumping or dispersal by wind, water, or animals, from plants that are planted at or near a site. In many cases, the species were naturalising within the immediate vicinity of the parent plants.



The results of our surveys suggest that the greatest abundance of new pest plants will likely come from sources that are already present within the region, as opposed to dispersal from other parts of the country via human mediated means.

Photo: Green waste dumping into Matua Estuary Reserve from neighbouring private properties. Illegal dumping was seen at most reserves that border private property during the site surveys.

Exclusion and eradication pest management highlights

Senegal tea

Senegal tea is a perennial aquatic herb that occupies marginal and shallow freshwater habitat. It forms dense mats that can cause flooding, interfere with water movement and exclude other vegetation. Rotting vegetation that becomes trapped can lead to water quality issues.



There are four sites in the region, and all sites were at zero density with three of the sites having had no plants found for the last three years. This species continues to progress towards eradication status for the region.

Alligator weed

There are currently six active alligator weed sites in the Western Bay area, and eleven sites in the Eastern Bay area.

Four of the six active sites in the west had no alligator weed found. All plants found were either removed or controlled with herbicide. The low incidence and numbers of plants found over the last four seasons indicates eradication is achievable for these sites, provided they continue to be intensively managed. The table below summarises plants found since 2015.

Site number and location	2015/2016	2016/2017	2017/2018	2018/2019
Alligator weed – Western Bay of Plenty	50	15	13	6

Significant progress was made at eight of the eleven alligator weed sites in the east. The largest land-based site at Matahina had a significant reduction in the number of plants found and controlled, and the largest aquatic site, the Rangitāiki River, also had a reduction in the number of plants found.

Following feedback from stakeholders in the Rangitāiki river catchment, water sampling was conducted in the Rangitāiki river pre and post alligator weed operations, and no herbicide was able to be detected.

Containment pest management highlights

Pest Plant collaboration in the East Cape

A new contractor local to the East Cape area was engaged by Council in 2018 to work with landowners to help enable them to manage containment pest plant species on their land. Landowners of 64 blocks were worked with in 2018/19, with the focus being on wild ginger, woolly nightshade, and apple of sodom.

The collaborative approach appears to be working well in this area, and it is hoped that more local contractors will become available in the future.

Woolly nightshade in Rotorua

Woolly nightshade is now at a low enough density in Rotorua that all known sites were able to be surveyed in 2018/19 and any live plants found were controlled.

This was supported by an increase in surveillance effort and targeted landowner engagement in the catchments surrounding Rotorua to help maintain the low densities achieved.

Wallabies

Wallabies are managed in partnership with Department of Conservation (DOC), Waikato Regional Council (WRC) and BOPRC.

As wallabies are listed in the current Regional Pest Management Plan as a “Containment” pest animal, control and surveillance efforts have once again focused around the margins of the distribution.

BOPRC contractors have been carrying out wallaby control in Matahina Forest (in the east of their current range), and north of Lake Rotorua (north west of their range). Control has also been carried out at Taheke to reduce the risk of wallabies crossing the Kaituna (Okere) River and Tikitere Forest to reduce the risk of them crossing the Ōhau Channel, via the bridges across those rivers.

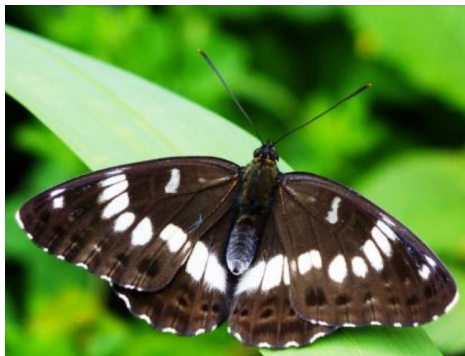


Publicity through social media and the erection of three road signs, advising people to report wallaby sightings, has increased the number of sightings being entered directly into the ArcGIS database which can be accessed by BOPRC, WRC and DOC.

Biological control of weeds

Biological control of weeds involves releasing a host-specific agent (usually an insect, mite or fungi) from a weed's natural range to help control it in areas where the plant is a problem. Biocontrol offers a cost-effective, environmentally friendly, and permanent solution to weed control. Carefully selected biocontrol agents target only weeds. They don't harm desirable plants, and don't pollute the environment. Once established, they travel wherever the weed spreads and can return again and again to kill off new weed growth - all without human input.

A region-wide biocontrol strategy has been developed and implemented to ensure that available biocontrol agents are released and established in parts of the region where host weeds are a problem. Biocontrol agents for broom, Chinese privet, Japanese honeysuckle (pictured) and *tradescantia* have been released across the region this year.



As part of the nationwide Biocontrol collective, we have also helped fund research into new agents for problematic weeds in the Bay of Plenty region, such as *largarosiphon*, moth plant, old man's beard, pampas, wild ginger and woolly nightshade. The aim of this research is to release agents to control these weeds in future.

Challenges

New incursion pest management challenges

Spiny emex

Spiny emex is a low lying annual herb that spreads from a dense rosette and has a thick tap root. It has hard spiny fruit that can injure humans and animals and cause lameness. It also contains oxalate levels which can poison sheep.

Currently there are ten spiny emex sites being managed under the new incursion programme, these sites are all located in the Western Bay of Plenty, primarily around Maketū. Of the ten sites, six are active sites with plants continuing to be found and treated, with an increased number of plants found at two of the sites.

The current management approach will be reviewed and further work will be done with the landowners to ensure farm practices are not exacerbating the problem.

Exclusion/eradication pest management challenges

Brown bullhead catfish

Work continued with controlling brown bullhead catfish that were discovered in Lake Rotoiti in 2016 and Lake Rotorua in December 2018.

Surveillance was also undertaken in Lake Rerewhakaaitu, Lake Rotomahana and the lower Kaituna River during the year with no catfish found.

The community netting program funded by Bay of Plenty Regional Council and managed by Te Arawa Lakes Trust undertook control in Lake Rotorua and Rotoiti with over 3000 catfish being caught, and surveillance in Lake Ōkāreka, Ōkataina, Rotomā, Rotoehu and Tarawera with no catfish found.

In total, 24,935 catfish were caught using fyke nets by Bay of Plenty Regional Council. This is a 18% decrease compared to previous years, despite almost doubling the intensity of netting compared to the 2017/18 season.

While the majority of the population remains within Te Weta Bay, numbers have increased significantly at other sites, particularly Okere Inlet.

Following the discovery of catfish in Lake Rotorua, intensity of netting has increased around Lake Rotorua, particularly Mokoia Island. Given the average depth of Lake Rotorua being around 11 m and knowing that Catfish can occupy habitat to at least 17 m, the majority of Lake Rotorua is suitable for catfish to establish. This means the impact of catfish on Lake Rotorua could be significant compared to other lakes. The majority of the fish being caught are less than 100 mm in length, at this size they are still considered immature and unable to breed.

During the year, environmental DNA work was completed which allows Regional Council to take water samples and send to the University of Waikato for analysis. This tool will be utilised for surveillance in the wider Rotorua lakes to inform Regional Council of any possible spread of catfish.

A pheromone bait provided by NIWA was also used in the lake to increase the catch rates of Brown Bullhead Catfish, this trial was successful but further work is required to make this more cost effective.

The acoustic tagging trial is ongoing and is scheduled to be completed in January 2020.



Containment pest management challenges

Woolly nightshade

In the Tauranga City and Western Bay of Plenty areas, the 2018/2019 work programme focused primarily on compliance work. Notices of Direction have been issued for significant infestations where the landowners have not undertaken adequate control work.

A biocontrol agent for this pest, the woolly nightshade lace bug (photo below), continues to spread around the region. The population is now well established and beginning to cause significant damage at shaded sites, however, the agent is not yet causing the same level of impact on sites in the open which are the majority.



Lodgepole pine

With the release of the New Zealand Wilding Conifer Management Strategy, wilding conifers continue to gain plenty of national attention.

Unfortunately national funding was reduced by treasury early in 2019, and as a result no additional areas including the Bay of Plenty, were able to gain national funding.




Good progress continues in the collaborative programme on Mount Tarawera. Council is also working with landowners that have significant infestations in the east Taupō area. The infestations cover multiple land tenure including Crown, private and Māori land. This is going to require long-term commitment and a coordinated approach to reduce infestations.



Part 4:


Operational progress and current pest status

This section provides an overview of activities completed for each pest programme. It also provides a current status for each programme relating to progress against management objectives. Status ratings are provided in the table below.


Status	Description
	Pest programme is considered on-track to meet RPMP pest classification management objectives.
	Pest programme is considered at risk of not meeting RPMP pest classification management objectives or will not meet some of the management objectives.
	Pest programme will not meet RPMP pest classification management objectives.

New pest incursion surveillance and control

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> High risk areas were inspected. Second year of operational work developed under the regional surveillance plan for high risk sites completed in additional parts of the region (Ōpōtiki, Whakatāne, Murupara).
Rough horsetail	Results
Surveillance and monitoring	<ul style="list-style-type: none"> Seven active sites in the region, two in the Western Bay of Plenty and four in Ōpōtiki. Surveillance undertaken at all sites. All sites reduced to zero density.
Control pest	<ul style="list-style-type: none"> Site Management Plans in place for all sites.
Delta arrowhead (Sagittaria)	Results
Surveillance and monitoring	<ul style="list-style-type: none"> Seven known sites monitored. 15 inspections completed. Five sites at zero density. Three sites now been at zero density for five years
Control pest	<ul style="list-style-type: none"> Site Management Plans in place for all sites. Plant found at the two active sites all controlled.

Creeping gloxinia		Results
Surveillance and monitoring	<ul style="list-style-type: none"> Four sites monitored. 15 inspections completed. Two sites remain at zero density. 	
Control pest	<ul style="list-style-type: none"> Site Management Plans in place for all sites. Two active sites had increased density due to escalating difficulty in access (terrain and debris). 	
Spiny emex		Results
Surveillance and monitoring	<ul style="list-style-type: none"> Ten sites monitored around the region. 23 inspections completed. Four sites reduced to zero density. 2 sites now classed as eradicated. 	
Control pest	<ul style="list-style-type: none"> Six active sites Site Management Plans in place for all sites. A significant reduction in numbers found at the largest site. Site Management plans will be reviewed. 	
2018/2019 expenditure	\$24,423	
Programme status		

Marine pests

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> 3144 boat hulls inspected. 41.2 km of marina pontoons inspected. 280 mooring blocks inspected. 2540 marine/wharf piles inspected. 5.3 km of hard structure inspected (rock wall). Mediterranean fanworm was detected at twelve sites (five vessels, seven structures). <i>Styela clava</i> detected at four sites (one vessel, three structures). Notice of Directions were served when a large infestation of Mediterranean fanworm were found on their hull after coming down from Auckland.
Control pest	<ul style="list-style-type: none"> All pests were controlled. Small scale management programmes for Mediterranean fanworm and clubbed tunicate implemented.
2018/2019 expenditure	\$169,971
Programme status	

Agency pests and national programmes


Definition:

- Pests of national significance that are managed or subject to programmes co-ordinated by the Crown.


Management objective:

- Support national pest management initiatives led by the Crown.

Agency pests

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> • Cape tulip surveillance undertaken. No plants found for the third year, will be classified as historic if no plants found for one more year. • Salvinia site detected at Pāpāmoa in June 2018 being managed by MPI. Weekly inspections undertaken. No live plants or fragments found since January 2019. • Three water hyacinth sites continue to be monitored, all still at zero density. • Didymo sampling completed at high risk sites. • Didymo advocacy carried out as part of Aquatic Pest Awareness Programme. • Contribution made to National Kauri Die-back Programme.
Control pest	<ul style="list-style-type: none"> • Monitoring has shown that the Salvinia control undertaken had good results. No plant or fragments found since January 2019.
2018/2019 expenditure	\$27,214
Programme status	

National pest plant accord

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> • 109 nurseries and “points of sale” inspected. • Nine instances of plants banned from sale detected.
Control pest	<ul style="list-style-type: none"> • All detected pests were voluntarily destroyed. • MPI notified, and all non-compliance entered into MPI database.
2018/2019 expenditure	\$9,984
Programme status	

Exclusion and eradication pests


Definition:

- Pests we want to prevent from entering the region, or eradicate from the region.


Management objective:

- Immediate control leading to the eradication of new occurrences.
- Control pest plants to zero density.
- Eradication of currently known populations of pest animals.


Alligator weed

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> • 17 sites monitored around the region. • 49 inspections for alligator weed completed. • Four sites at zero density. • One new site discovered near Thornton lagoon.
Control pest	<ul style="list-style-type: none"> • Two active sites monitored in Western Bay of Plenty. • 11 active sites monitored in Eastern Bay of Plenty. • All known sites controlled. • Site Management Plans in place for all sites. • Herbicide regime change due to new research from NIWA. • Challenges continue with use of herbicide for alligator weed control in kiwifruit orchards.
2018/2019 expenditure	\$35,982
Programme status	


Horse nettle

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> • Three sites monitored. • 12 inspections for horse nettle completed.
Control pest	<ul style="list-style-type: none"> • Two active sites, had a reduction in plant numbers from previous year, one had increase. • All plants were controlled. • Site Management Plans in place for all sites.
2018/2019 expenditure	\$7,772
Programme status	


Kudzu vine

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> Two sites monitored for kudzu vine. Six inspections for kudzu vine completed. Both sites remain at zero density, no plants found since 2015.
Control pest	<ul style="list-style-type: none"> Site Management Plans in place for all sites.
2018/2019 expenditure	\$1,518
Programme status	


Marshwort

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> No known populations in region.
Control pest	<ul style="list-style-type: none"> No control work.
2018/2019 expenditure	\$0
Programme status	


Nassella tussock

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> One known site One inspection. One site at zero density.
Control pest	<ul style="list-style-type: none"> No control work required. Site Management Plan to be reviewed.
2018/2019 expenditure	\$477
Programme status	


Noogoora bur

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> 15 sites monitored for Noogoora bur. 39 inspections completed. One new site discovered. Nine sites reduced to zero density.
Control pest	<ul style="list-style-type: none"> All plants controlled. Reductions in plant numbers at five sites. Large increase at one site due to adverse weather affecting herbicide application regime. Site Management Plans in place for all sites.
2018/2019 expenditure	\$36,795
Programme status	


Wild purple loosestrife

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> Two sites monitored. Two sites at zero density.
Control pest	<ul style="list-style-type: none"> No control work required. Site Management Plans in place, to be reviewed as currently tracking towards eradication.
2018/2019 expenditure	\$0
Programme status	


Senegal tea

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> Four sites monitored for Senegal tea. 12 inspections completed. All sites remain at zero-density. Three sites have had no plants for five years.
Control pest	<ul style="list-style-type: none"> Site Management Plans in place, to be reviewed as currently tracking towards eradication.
2018/2019 expenditure	\$1,470
Programme status	


Spartina

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> ● Surveillance undertaken at one of the two active sites.
Control pest	<ul style="list-style-type: none"> ● Active control and restoration programme completed at Maketū with 85% reduction of plant coverage. ● Department of Conservation contributed to control at Maketū.
2018/2019 expenditure	\$25,717
Programme status	


Water poppy

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> ● One new site discovered.
Control pest	<ul style="list-style-type: none"> ● All plants controlled. ● Site Management Plan now in place.
2018/2019 expenditure	\$3,499
Programme status	


White edged nightshade

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> ● Two sites monitored for white edged nightshade. ● Four inspections completed. ● Both sites remained at zero density for a fifth year.
Control pest	<ul style="list-style-type: none"> ● No control work.
2018/2019 expenditure	\$60
Programme status	


Brown bullhead catfish

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> Surveillance undertaken on Lake Rerewhakaaitu, Rotomahana, Lower Kaituna River. Science programme developed and being implemented.
Control pest	<ul style="list-style-type: none"> 24,935 catfish controlled in Lake Rotoiti in 2018/2019. 170 catfish controlled in Lake Rotorua in 2018/19. 18% decrease in numbers of catfish caught compared to 2017/18 season. Advocacy completed as part of Summer Aquatic Awareness Programme. Significant local community engagement and volunteer contribution.
2018/2019 expenditure	\$457,935
Programme status	


Koi carp

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> No sightings requiring surveillance.
Control pest	<ul style="list-style-type: none"> Advocacy completed as part of Summer Aquatic Awareness Programme.
2018/2019 expenditure	\$0
Programme status	

Perch

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> Surveillance undertaken in response to sightings. Additional surveillance detected no other perch.
Control pest	<ul style="list-style-type: none"> Advocacy completed as part of Summer Aquatic Awareness Programme.
2018/2019 expenditure	\$0
Programme status	

Rooks

Action	Results
Surveillance and monitoring	<ul style="list-style-type: none"> No rooks seen in east Taupō region last year. Small number of birds identified near Waimana Valley. Considered to be the same group of birds from previous years.
Control pest	<ul style="list-style-type: none"> No opportunity for control programmes due to bird movements.
2018/2019 expenditure	\$0
Programme status	

Containment pests

Definition:


- Pests we want to minimise the effects of and prevent their further spread.

Management objective:


- Reduction in spread and density of known populations.

Budget constraints meant available funding was insufficient to fully and effectively implement the full range of management actions required to achieve the RPMP objectives for containment pests. Effort was prioritised to pests based on their current distribution and effectiveness of current control programmes.


African feather grass

Action	Results
Programme summary	<ul style="list-style-type: none"> Isolated infestations currently dispersed around the Bay of Plenty region, particularly Rotorua. All plants have been controlled. Good progress being made with general reduction in plant numbers.
2018/2019 expenditure	\$12,027
Programme status	


Apple of Sodom

Action	Results
Programme summary	<ul style="list-style-type: none"> Very limited population currently confined primarily to the Western Bay of Plenty with a small isolated population around East Cape. All plants found have been controlled.
2018/2019 expenditure	\$2,552
Programme status	


Asiatic knotweed

Action	Results
Programme summary	<ul style="list-style-type: none"> Geographically dispersed populations around the region with the majority found in the Rotorua District. Considered a priority due to its potential impact. One complaint received. All plants found have been controlled.
2018/2019 expenditure	\$9,644
Programme status	


Blackberry

Action	Results
Programme summary	<ul style="list-style-type: none"> Boundary complaint species. No proactive surveillance. 14 boundary complaints received and responded to.
2018/2019 expenditure	\$295
Programme status	


Boneseed

Action	Results
Programme summary	<ul style="list-style-type: none"> Limited to coastal Bay of Plenty. Control work completed via helicopter at Maketu. Control completed along dune systems in Western Bay of Plenty and Ohope.
2018/2019 expenditure	\$12,082
Programme status	


Chilean rhubarb

Action	Results
Programme summary	<ul style="list-style-type: none"> No targeted surveillance carried out. Advisory services only. One complaint received. Pest distribution through Bay of Plenty is not well understood.
2018/2019 expenditure	\$0
Programme status	


Climbing spindleberry

Action	Results
Programme summary	<ul style="list-style-type: none"> • Good progress being made at sites around the Galatea and Minginui areas in the east. • Good engagement by landowners at Tarawera for community control. • Two complaints received. • Still widely distributed around Rotorua District.
2018/2019 expenditure	\$32,598
Programme status	


Coast tea tree

Action	Results
Programme summary	<ul style="list-style-type: none"> • Coast tea tree contained on Matakana Island. • Good progress made with landowners and community to increase effort in coming years. • Plan being developed with Matakana Island community. • Monitoring undertaken during the year to check on control effectiveness and progress.
2018/2019 expenditure	\$12,772
Programme status	


Darwin's barberry

Action	Results
Programme summary	<ul style="list-style-type: none"> • Surveillance undertaken In Whakarewarewa Forest and Rainbow Mountain. • Engagement with WRC on boundary issues. • Control carried out in Whakarewarewa Forest by forest manager. • Pest contained and at low density.
2018/2019 expenditure	\$2,000
Programme status	


Egeria densa, hornwort, lagarosiphon

Action	Results
Programme summary	<ul style="list-style-type: none"> Lakes Rotomā, Tikitapu, Rerewhakaaitu, Rotokakahi inspected for hornwort, no detections. Lakes Ōkātina, Rotomā, Tikitapu, Rotokakahi inspected for Egeria densa, no detections. Monitoring of hornwort control carried out in Lake Ōkāreka in 2018/2019 revealed no plants. Monitoring to support Land Information New Zealand (LINZ) Spray Programme completed. Development of Lake Management plans underway in collaboration with LINZ. All complaints responded to. Seven weed cordons maintained and one removed at Ōkātina as it was no longer required. Advocacy and awareness programme.
2018/2019 expenditure	\$129,040
Programme status	


Gorse

Action	Results
Programme summary	<ul style="list-style-type: none"> Boundary complaint species. No proactive surveillance. 27 boundary complaints received and responded to.
2018/2019 expenditure	\$1,730
Programme status	


Green goddess lily

Action	Results
Programme summary	<ul style="list-style-type: none"> No targeted surveillance. Advisory services only. Pest is widespread through Bay of Plenty – RPMP management objective will not be achieved.
2018/2019 expenditure	\$0
Programme status	


Italian buckthorn

Action	Results
Programme summary	<ul style="list-style-type: none"> Species confined to Western Bay of Plenty. Focus was on targeting known populations in coastal locations with good success.
2018/2019 expenditure	\$25,778
Programme status	


Lantana

Action	Results
Programme summary	<ul style="list-style-type: none"> Little proactive surveillance outside of the eastern area due to budget constraints. Reduction in plants at Rotorua and eastern area. Three complaints received. Distribution in the west appears to be increasing.
2018/2019 expenditure	\$3,720
Programme status	


Lodgepole pine

Action	Results
Programme summary	<ul style="list-style-type: none"> Surveillance work undertaken by DOC, Kāingaroa Timberlands, Lochinver and Landcorp Rangitāiki Stations and on Māori land. Good progress with Lodgepole shelterbelt removal in east Taupō area. Increased investment by DOC to deal to issues on public land. Control work supported through Biodiversity Programme on Mount Tarawera. Engagement with neighbouring Councils and DOC to develop coordinated control programme.
2018/2019 expenditure	\$3,384
Programme status	


Old man's beard

Action	Results
Programme summary	<ul style="list-style-type: none"> ● Significant issue around Lake Tarawera. ● Development of management plan for Lake Tarawera underway on collaboration with DOC. ● More intensive monitoring in coming years to ensure landowners control recent discoveries. ● One complaint received.
2018/2019 expenditure	\$38,337
Programme status	


Ragwort

Action	Results
Programme summary	<ul style="list-style-type: none"> ● Boundary complaint species. ● Six complaints received and responded to. ● No proactive surveillance or monitoring.
2018/2019 expenditure	\$137
Programme status	


Royal fern

Action	Results
Programme summary	<ul style="list-style-type: none"> ● Control work completed through Biodiversity Programme in Eastern Bay of Plenty. ● Spread by windblown spores, re-invasion very difficult to prevent.
2018/2019 expenditure	\$0
Programme status	


Variegated thistle

Action	Results
Programme summary	<ul style="list-style-type: none"> ● Limited distribution in region. ● No plants found in Rotorua District, small numbers detected in Eastern Bay of Plenty. ● All plants detected were controlled.
2018/2019 expenditure	\$777
Programme status	


Wild ginger

Action	Results
Programme summary	<ul style="list-style-type: none"> ● Good progress around the Rotorua District. ● Collaborative programme being developed around Waihī Beach. ● Successful collaboration with landowners in the East Cape area. ● 20 complaints received. ● Pest relatively widespread. Current focus remains containment east of Ōpōtiki.
2018/2019 expenditure	\$56,275
Programme status	


Wild kiwifruit

Action	Results
● Programme summary	<ul style="list-style-type: none"> ● Significant investment continues in the programme. ● Kiwifruit Vine Health now managing the control component of the programme. ● Control focus was around Te Puke. ● Four complaints received. ● Seed source from orchards still an ongoing concern. ● Still numerous large sites requiring control.
2018/2019 expenditure	\$87,298
Programme status	


Woolly nightshade

Action	Results
Programme summary	<ul style="list-style-type: none"> ● 72 complaints received. ● Significant compliance issues on some properties. ● Pest relatively widespread through coastal Bay of Plenty - current focus is containment in Rotorua.
2018/2019 expenditure	\$95,037
Programme status	


Yellow flag iris

Action	Results
Programme summary	<ul style="list-style-type: none"> ● Sporadic distribution around the region, mainly around the Rotorua Lakes. ● Good progress being made. ● All plants detected were controlled.
2018/2019 expenditure	\$13,208
Programme status	

Feral goats

Action	Results
Programme summary	<ul style="list-style-type: none"> ● Good engagement and support from landowners in the East Cape. ● Remain undetectable or at low numbers at sites where management has been ongoing. ● Trials using infrared technology continue and at this stage show promising results. ● Collaboration with DOC and Gisborne District Council.
2018/2019 expenditure	\$195,932
Programme status	


Rudd

Action	Results
Programme summary	<ul style="list-style-type: none"> ● Rudd are contained in Lake McLaren. ● No new sites detected. ● No control work.
2018/2019 expenditure	\$0
Programme status	

Tench

Action	Results
Programme summary	<ul style="list-style-type: none"> ● Historical records of tench being present in Lake McLaren. Surveillance has not been able to confirm their presence. ● No new sites detected. ● No control work.
2018/2019 expenditure	\$0
Programme status	

Wallaby

Action	Results
Programme summary	<ul style="list-style-type: none"> • The ArcGIS, Wallaby Operational Planning database, which contains all of the public wallaby sighting reports and the surveillance information from contractors (e.g. camera locations, wallaby sign, reports and photos) is continuing to prove its worth. The applications help facilitate rapid responses to sightings from new areas, and the data, which can be accessed by BOPRC, WRC and DOC, helps to inform management decisions. • Ongoing systematic surveillance in both regions, continues to highlight priority areas for wallaby management. • Wallaby control is ongoing at Kaharoa, Matahina Forest, Waerenga/Pukahukiwi-Kaokaoroa, Tikitere Forest, Taheke/Okere and the headwaters of the Ngongotahā Stream. This work is aimed at either eradicating outlying wallaby populations or preventing further expansion of the wallaby distribution. • Research into dispersal, monitoring and control tools still needed.
2018/2019 expenditure	\$114,229
Programme status	


Restricted pests

Definition:

- Pests we want to reduce the further spread of and will support community and occupier efforts to control, in places where they are a problem.

Management objective:

- Residents understand the impacts of restricted pests and prevent their spread.
- Residents and community groups voluntarily participate in a wide range of activities that contribute towards managing the impacts of restricted pests.

Action	Results
Programme summary	<ul style="list-style-type: none"> • 173 complaints resolved. • 392 public enquiries received and responded to. • Presentations to stakeholder groups and weed-swap days held.
2018/2019 expenditure	\$7,438
Programme status	

Part 5:

Council activities to support the Regional Pest Management Plan

This section provides an overview of activities implemented to support RPMP outcomes.

Providing support, advice and information

Raising awareness of pests, the threats they pose and how they are spread, continues to be a priority across the region. This section summarises key actions undertaken during the last year.

Providing advice and information

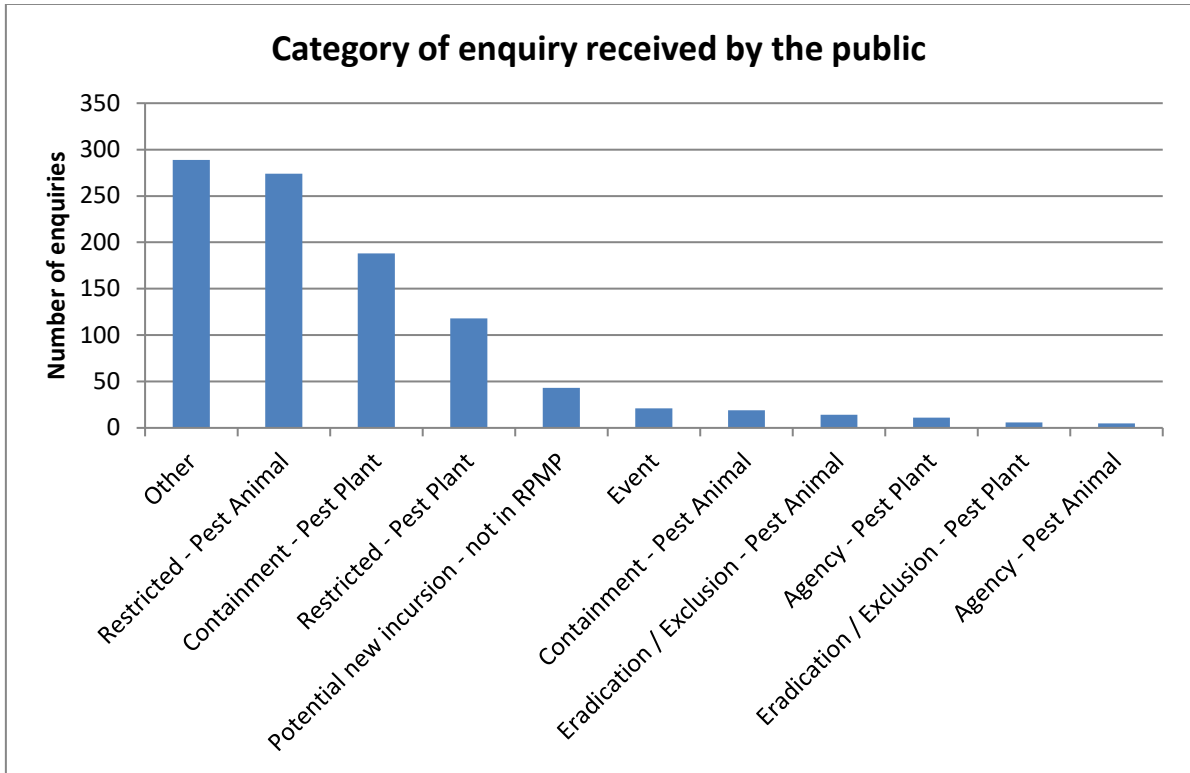
Council has responded to 988 enquiries from the public during the past year. These reports also play an important part of Council's surveillance programme.

Council has organised workshops that provide technical advice to the public and industry regarding pest control. These workshops focus on pest identification and control techniques. Examples of workshops included:

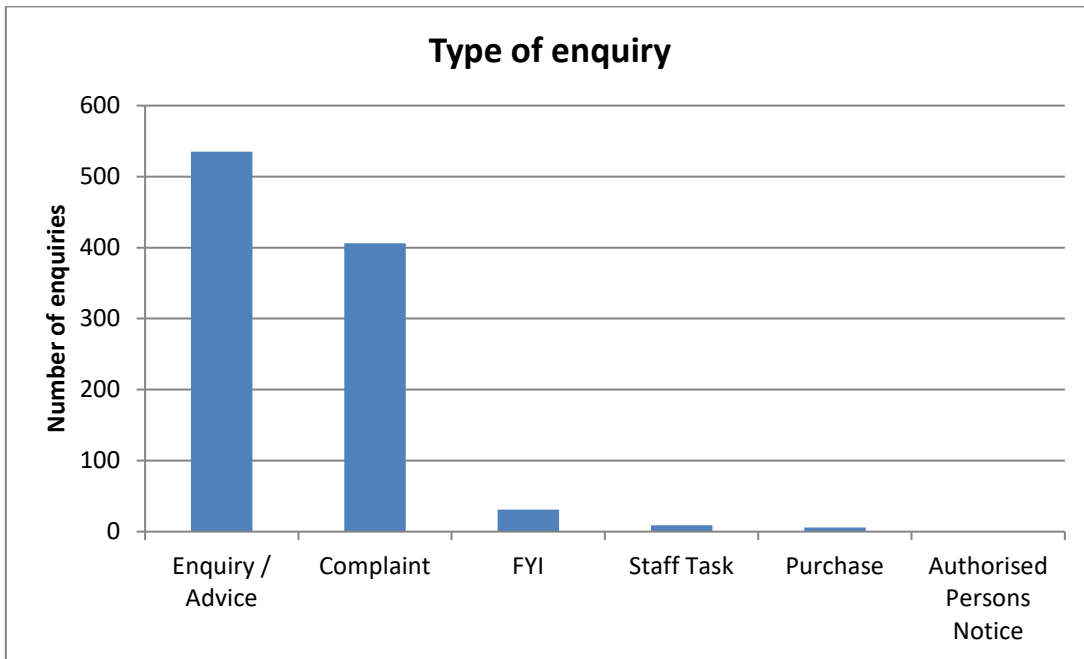
- Weed-swap days - public are encouraged to bring weeds to swap for a native plant. During these events, educational material is provided to inform the public regarding effective pest control.
- Workshops were held at Council's Pest Plant Collection - public taught how to identify pests of significance.
- Attendance at events (boat shows, expos) to educate the public on biosecurity issues.
- Presentations to a variety of stakeholders on biosecurity and technical aspects of pest management.
- Support given to Tauranga Moana Biosecurity Capital events.



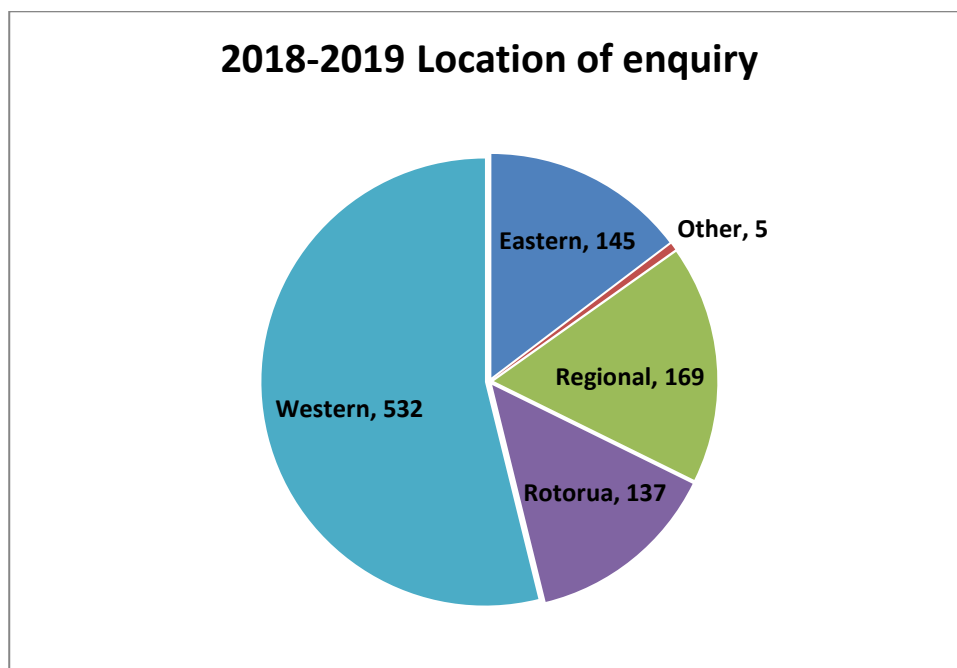
Analysis of enquires (see graph below) show that the majority of public concerns relate to common well established pests such as wasps, rabbits, possums and rats. The RPMP assumes that people or community groups will take voluntary action against these pests, when and where they cause a problem. Council's role is to provide advice and support community action.



The graph below shows the majority of calls are for information and advice on pest identification and control. However, more complaints were responded to during 2018/2019, than compared to previous years.



The following chart shows the majority of calls received are related to pest issues in the Western Bay of Plenty. This reflects not only the population base, but also suitable climatic conditions and habitat for pests. This trend has been identified for a number of years.



Tauranga Moana Biosecurity Capital

The Tauranga Moana Biosecurity Capital initiative (TMBC) brings together councils, iwi and hapu, government, science, education and business for the first time, to lead and take action towards biosecurity excellence in the Tauranga area.

Council supported the TMBC initiative via funding, support at events, and contribution to leadership team meetings.

Aquatic Pest Advocacy Programme

The Aquatic Pest Awareness Programme aims to raise awareness of the threats aquatic pest plants, fish and didymo pose to our lakes and waterways. It also aims to educate people on how to prevent the spread of these pests.

Surveys were conducted at lake boat ramps and on the regions' rivers to assess waterway users' level of awareness of pest threats.

Supporting approved programmes

Council provides resources and funding, through approved programmes, to support occupiers and community groups, to control containment and restricted pests. Approved programmes such as Riparian Management Plans, Biodiversity Management Plans, Care Groups, and the Environmental Enhancement Fund, are outside the scope of this report but provide significant pest control effort.

Other approved programmes supported such as wallaby, goat and wild kiwifruit management are covered in Part 3 and 4 of this report.

National Pest Programme support

As described in Part 3 of this report, Council continued to support the national response to the velvet leaf incursion. Council has also provided support to the myrtle rust response following the recent discovery of this pest in the region.

National interest pests

The Ministry of Primary Industries leads the management of national interest pests. These pests are named as agency pests in the RPMP and Council support of these programmes is covered in Part 4 of this report.

National Pest Plant Accord inspections

Council is a party to the National Pest Plant Accord (NPPA). During 2018/2019, Council delivered on its roles under the accord. Details of inspection work are covered in Part 4 of this report.

Enforcement of rules

Notices of Direction were issued to 12 landowners requiring them to control a variety of species, including Mediterranean fanworm, woolly nightshade, gorse, wild ginger and wild kiwifruit. In these cases, the landowners had not voluntarily carried out control following property inspections. Most notices have been complied with, however, work on default (s128, Biosecurity Act) was carried out in one instance, costs were recovered from the landowner.

Exemptions

Three exemptions were granted in 2017/18 allowing individuals to derogate from Regional Pest Management Plan rules. One was to allow the display of wallabies at Paradise Valley Springs, another was to hold wallabies for research purposes. This final exemption was to allow Scion to undertake lodgepole pine research at their Rotorua facility.