



Bay of Plenty Regional Pest Management Plan 2011-2016

Annual Report for 2019/2020

Bay of Plenty Regional Council
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NEW ZEALAND

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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.

One new to region species was detected in 2019/2020, Cape tulip. This was discovered as part of Council's Regional Surveillance programme which is designed to discover 'new to region' species. As a National Interest Pest, it will be managed by the Ministry of Primary Industries.

A number of new incursions and eradication species sites have been found from proactive surveillance programmes, including new sites of *sagittaria*, creeping gloxinia, noogoora bur, rough horsetail and Asian paddle crab. 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, 74% of Regional Pest Management Plan (RPMP) pest programmes are considered to be on-track to meet their RPMP management objectives. This is a decrease of 1% (or one programme) compared to last 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, 33% of eradication sites, currently being managed across the region, are at zero density (the goal of the programme). Increased pest numbers were found at 21% of eradication sites but were controlled.

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, are improving the effectiveness and efficiency of control programmes.

Contents

| | |
|---|-----------|
| 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: 2019/2020 highlights and issues | 4 |
| Highlights | 4 |
| Challenges | 10 |
| Part 4: Operational progress and current pest status | 13 |
| New pest incursion surveillance and control | 13 |
| Agency pests and national programmes | 15 |
| Exclusion and eradication pests | 16 |
| Containment pests | 21 |
| Restricted pests | 30 |
| Part 5: Council activities to support the Regional Pest Management Plan | 31 |
| Providing support, advice and information | 31 |
| National Pest Programme support | 34 |
| Enforcement of rules | 34 |
| Exemptions | 35 |

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 | 2019/2020 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 6 species that require advanced risk assessment to determine degree of invasiveness. |
| | Number of new pests detected in the region. | <ul style="list-style-type: none"> Cape tulip was detected in Te Puna Quarry. National Interest Pest so being managed by MPI. |
| | Number of new pests with management plans in place. | <ul style="list-style-type: none"> None – (note, MPI is responsible for the management of Cape tulip). |
| 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. |
| Our regional communities are experienced and effective pest managers. | Number of sites where community work is underway to control pests. | <ul style="list-style-type: none"> 34 community groups (supported by Council) controlling pests. |
| | Number of reports and requests for advice made by the community. | <ul style="list-style-type: none"> 803 enquiries received and responded to. |
| | Percent of restricted pests that have had their spread reduced. | <ul style="list-style-type: none"> Data not available. |

Biosecurity Programme Long Term Plan Key Performance Indicators

| Programme KPI | Status | Results |
|--|---|--|
| Council maintains a current Regional Pest Management Plan, develops management plans for new pest incursions and prepares annual reports in accordance with the Biosecurity Act |  | <ul style="list-style-type: none"> The Regional Pest Management Plan is current and annual report has been developed within the Biosecurity Act timeframes. |

Part 3:

2019/2020 highlights and issues

Highlights

Operational priorities in 2019/2020 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 last three years.

| Operational Activity Summary | 2016/2017 | 2017/2018 | 2018/2019 | 2019/2020 |
|---|-----------|-----------|-----------|-----------|
| Number of new incursion pest sites being managed. | 23 | 28 | 29 | 36 |
| Number of new incursion pest sites reduced to zero-density. | 2 | 2 | 10 | 4 |
| Number of new incursion pest sites that remained at zero-density. | 5 | 7 | 7 | 15 |
| Number of new incursion pest sites that were re-classified as eradicated. | 2 | 0 | 2 | 0 |
| Number of exclusion/eradication pest sites being managed. | 41 | 47 | 55 | 61 |
| Number of exclusion/eradication pest sites reduced to zero density. | 8 | 2 | 7 | 6 |
| Number of exclusion/eradication pest sites that remained at zero-density. | 8 | 14 | 16 | 20 |
| Number of exclusion/eradication pest sites that were re-classified as eradicated. | 5 | 0 | 5 | 0 |
| Number of property inspections completed. | 3,513 | 2,649 | 2,906 | 3,224 |
| Number of pest plant infestations recorded. | 2,865 | 2,254 | 5,698 | 9,860 |
| Number of RPMP exemptions granted. | 0 | 3 | 3 | 1 |
| Number of Notices of Direction issued. | 17 | 22 | 12 | 4 |
| Number of public enquiries received. | 1,007 | 1,051 | 988 | 803 |

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, 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 increased compared to the previous financial year.



Figure 1: Fanworm found at Demolition Wharf – Tauranga Harbour

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 | |
| | 2018/19 | 2019/20 |
| Bridge Marina - Vessels | 4 | 7 |
| Bridge Marina – Pontoon/Benthic | 4 | 8 |
| Sulphur Point Marina - Vessel | 1 | 1 |
| Sulphur Point Marina - Pontoon | 0 | 0 |
| Other | 3 | 8 |
| TOTAL | 12 | 24 |

Styela clava was found and controlled at six sites which is a slight increase from the previous year. A summary of the sites where *Styela clava* was discovered and controlled during the year is provided below:

| <i>Styela clava</i> | | |
|--------------------------------|------------------------------|----------|
| Site | Number of infestations found | |
| | 2018/19 | 2019/20 |
| Bridge Marina - Vessels | 1 | 0 |
| Bridge Marina - Pontoon | 1 | 0 |
| Sulphur Point Marina - Vessel | 0 | 0 |
| Sulphur Point Marina - Pontoon | 0 | 0 |
| Other | 3 | 6 |
| TOTAL | 4 | 6 |

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.

Regional Surveillance Plan - Surveillance for new to region pests

As part of the Regional Surveillance Plan, surveillance of new to region pest plants was carried out from October 2018 to May 2019, focusing on risk sites in and near Tauranga, Te Puke, Whakatāne, Ōpōtiki, Kawerau, and Murupara.

Surveillance detected 88 plant species that are either naturalising or have been introduced. Initial risk assessment has been carried out for 51 of these species with six of these species being identified for advanced assessment, delimiting surveys and potentially pre-cautionary control. Most significantly, one of the species detected was Cape tulip, a National Interest Pest. This find has been reported to MPI who are the lead agency for its management.



Figure 2: Brazilian Pepper (*Schinus terebinthifolius*) identified naturalising at a site in Otumoetai, Tauranga.

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 is also potentially poisonous to sheep.

Currently, there are 10 spiny emex sites located in the Western Bay of Plenty (primarily around Maketū) being managed under the new incursion programme. In previous years there have been continual increases in the number of plants found and controlled across the ten sites. Improved management of this pest during 2019/20 has seen a significant reduction in densities of this pest.

| Spiny emex | No. of sites | Percentage |
|----------------------------|--------------|------------|
| Remained at zero density | 2 | 20% |
| First year at zero density | 2 | 20% |
| Decrease in plants found | 5 | 50% |
| Increase in plants found | 1 | 10% |

Important to note is that three of the sites had a reduction of over 1,000 plants (1,580, 1,238 and 1,750 respectively).

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 existing sites in the region, and all sites were at zero density with three of the sites having had no plants found for the last four years. One new site was discovered in the eastern area and is being controlled. This species continues to progress towards eradication status for the region.



Figure 3: Senegal tea

Spartina

Spartina alterniflora is an introduced estuarine grass and invasive pest plant in New Zealand estuaries. The dense growth habit with large root mass has the potential to change the estuary function, and if uncontrolled, can slowly take over an estuary, turning estuarine habitat into terrestrial grass. *Spartina alterniflora* is a poor seeder, spreading through vegetative means, which through effective control allows the possibility and high probability of eradication of the last remaining site of *Spartina alterniflora* in the Bay of Plenty region. Surveying and consultation began in 2013, with local contractors engaged to carry out annual control operations.

Control operations to date have reduced the population by approximately 98% with just small sites at A, B and S remaining and set for control in 2021.



Figure 4: *Spartina* control operations in the Maketū estuary in 2019-20

Containment pest management highlights

Pest Plant collaboration in the Eastern Bay of Plenty

Council continued to engage local contractors and Iwi representatives to deliver pest plant monitoring and control work east of Opotiki. This work focuses on using skilled local contractors working with landowners to manage containment pest plants. Pest plants on 106 properties were controlled during 2019/20, with the focus continuing to be on wild ginger, woolly nightshade, and apple of sodom.

A similar collaborative approach is currently being developed with the Tūhoe Manawaru Tribal Authority in Ruatāhuna with work looking to begin in 2020/21.

Woolly nightshade in Rotorua

Good progress is being maintained with woolly nightshade management in the Rotorua area. Increased surveillance and landowner engagement during 2019/20 has resulted in all known plants being controlled. Ongoing surveillance will be needed to ensure this pest remains at low density.

Lodgepole pine

Good progress continues in the wilding conifer programme, with a variety of collaborations with other entities being a highlight. The collaborative programme on Mount Tarawera between Iwi, Department of Conservation, and BOPRC continues to progress well.



Figure 5: Lodgepole pine invading Rangitāiki frost flats

A partnership between Council's Biodiversity programme and the Department of Conservation (DOC) has allowed the wilding conifer control work in the Rangitāiki frost flats area to be progressed significantly; and funding from the Provincial Growth Fund was secured to support local contractors affected by Covid-19 in delivering wilding conifer control in the Whakatāne district.

Wallabies

Wallabies are managed in partnership with DOC, Waikato Regional Council (WRC).

As wallabies are listed in the current Regional Pest Management Plan as a containment pest animal, control and surveillance efforts have focused on minimising the risk of spread and controlling satellite populations that have established away from the core population.

Council contractors have been carrying out 'satellite' population control in Kaingaroa Forest, Matahina Forest, north of Lake Rotorua and Paradise Valley. Control has also been carried out within the core population east of Okere and Tikitere Forest to reduce the risk of them crossing the Kaituna River and 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 significantly increased the number of sighting report from the public.



Figure 6: Road sign erected to encourage reports of wallaby sightings

Biological control of weeds

Biological control of weeds involves releasing a host-specific agent (usually an insect, mite or fungi) that then develops self-sustaining populations that go on to attack a specific pest plant. 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, Californian thistle, Chinese privet, Japanese honeysuckle, moth plant (pictured), woolly nightshade and *tradescantia* have been released across the region this year.

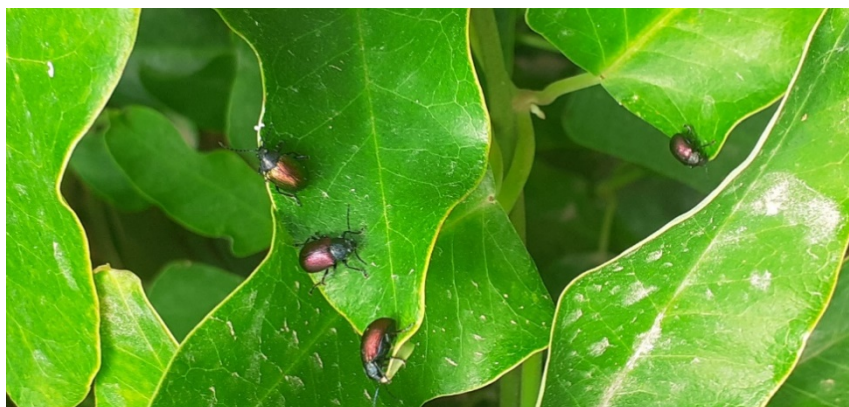


Figure 7: Biological control agents feeding on Moth Plant

Council has been working with tangata whenua in the biocontrol of weeds space. The world-first release of a new biocontrol agent for moth plant (moth plant beetle) was carried out at Matapihi (near Tauranga) with Ngāi Tukairangi representatives.

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 new agents to control these weeds in future.

Challenges

New incursion pest management challenges

Asian Paddle Crab

Within Tauranga Harbour, the number of Asian paddle crabs has increased significantly in the last year, 42 were caught in 2019/20 from 295 crab traps, up from five in 2018/19.

Surveillance was also carried out in Ōhiwa Harbour this year where four Asian paddle crabs were caught from 176 traps. This is the first discovery of Asian paddle crabs in Ōhiwa Harbour and represents a further range extension of this species. Further trapping will be carried out to properly understand the extent of the distribution increase. Results from the trapping will determine the next steps.



Figure 8: Asian paddle crab caught in Tauranga Harbour

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 using fyke netting and environmental DNA was undertaken in lakes Rotomā, Tarawera, Tikitapu, Ōkātina and Ōkātēka during the year with no catfish found.

The 'Catfish Killas' community netting programme, managed by Te Arawa Lakes Trust, completed additional surveillance in lakes Ōkātēka, Ōkātina, Rotomā, Rotoehu and Tarawera, detecting no catfish. They also undertook control in lakes Rotorua and Rotoiti with over 24,320 catfish being caught to date.

Council contractors caught 62,413 catfish using fyke nets during 2019/20. This is a 150% increase compared to the previous year despite less netting being carried out due to Covid-19 Alert Level 4 preventing work during late March/April. The Covid-19 alert level four stand down period may have contributed to the successful spawning of catfish during this time.

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.

A potential biocontrol option for catfish is being investigated currently, with modelling indicating that high level suppression or eradication may be possible by releasing sterile males into the lake to disrupt successful reproduction of wild catfish. This approach is in early stages of investigation, with proof of concept trials to begin in a laboratory environment in the 2020/2021 financial year.



Figure 9: Brown bullhead catfish from Lake Rotoiti

Woolly nightshade

In the Tauranga City and Western Bay of Plenty areas, the 2019/2020 work programme focused primarily on compliance work. Staff have worked on key compliance issues, and 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. Staff are also working closely with Manaaki Whenua Landcare Research and other regional councils to look at other biocontrol options for this species.






Figure 10: Woolly nightshade lace bug.

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"> Third year of operational work developed under the regional surveillance plan for high risk sites completed. |
| 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. One new site discovered in Whakatāne. 6 inspections completed. 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. One new site discovered. 11 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. One new site discovered. 22 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 difficulty in access (terrain and debris). |

| Spiny emex | Results |
|------------------------------------|---|
| Surveillance and monitoring | <ul style="list-style-type: none"> 10 sites monitored around the region. 30 inspections completed. Two sites remained at zero density. Two zero density for the first time. |
| Control pest | <ul style="list-style-type: none"> Site Management Plans in place for all sites. Large decrease (1000+ plants) at three sites. |
| 2019/2020 expenditure | \$14,281 |
| Programme status |  |

Marine pests

| Action | Results |
|------------------------------------|---|
| Surveillance and monitoring | <ul style="list-style-type: none"> 3131 boat hulls inspected. 41.2 km of marina pontoons inspected. 112 mooring blocks inspected. 1251 marine/wharf piles inspected including the Port of Tauranga. 4 km of hard structure inspected (rock wall). Mediterranean fanworm was detected at 31 sites (16 vessels, 7 benthic sites and 7 structures). Large infestation (672) found at Demolition wharf on the seafloor. <i>Styela clava</i> detected at 7 sites (1 vessel, 6 structures). Asian paddle crab numbers increased in Tauranga Harbour. Asian paddle crab discovered in Ōhiwa Harbour. |
| Control pest | <ul style="list-style-type: none"> All pests were controlled. Small scale management programmes for Mediterranean fanworm and clubbed tunicate implemented. |
| 2019/2020 expenditure | \$288,161 |
| 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"> • New Cape tulip site discovered in Te Puna Quarry as part of Regional Surveillance programme. MPI to manage. • Eastern BOP Cape tulip site inspected. No plants found for the fourth 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. 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. |
| 2019/2020 expenditure | \$20,033 |
| Programme status |  |

National pest plant accord

| Action | Results |
|------------------------------------|---|
| Surveillance and monitoring | <ul style="list-style-type: none"> • 99 nurseries and "points of sale" inspected. • One instance of plants banned from sale detected, cut flowers at a road side stall. • Covid-19 meant slightly less inspections undertaken compared to previous years. • A number of small nurseries are now closed, likely due to Myrtle rust and/or Covid-19 |
| Control pest | <ul style="list-style-type: none"> • All detected pests were voluntarily destroyed. • MPI notified, and all non-compliance entered into MPI database. |
| 2019/2020 expenditure | \$7,640 |
| 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. |
| Control pest | <ul style="list-style-type: none"> • All known sites controlled. • Site Management Plans in place for all sites. • Staff continue to work with NIWA to look at different control options and testing effectiveness of current methods • Challenges continue with use of herbicide for alligator weed control in kiwifruit orchards. |
| 2019/2020 expenditure | \$50,029 |
| Programme status |  |


Horse nettle

| Action | Results |
|------------------------------------|--|
| Surveillance and monitoring | <ul style="list-style-type: none"> • Three sites monitored. • 13 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. |
| 2019/2020 expenditure | \$7,159 |
| Programme status |  |


Kudzu vine

| Action | Results |
|-----------------------------|--|
| Surveillance and monitoring | <ul style="list-style-type: none"> Two sites monitored for kudzu vine. Eight 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. |
| 2019/2020 expenditure | \$630 |
| 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. |
| 2019/2020 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. |
| 2019/2020 expenditure | \$245 |
| Programme status |  |


Noogoora bur

| Action | Results |
|------------------------------------|---|
| Surveillance and monitoring | <ul style="list-style-type: none"> 13 sites monitored for Noogoora bur. 79 inspections completed. One new site discovered. Eight sites remained at zero density. |
| Control pest | <ul style="list-style-type: none"> All plants controlled. Reductions in plant numbers at five sites. Small increases at four sites. Site Management Plans in place for all sites. |
| 2019/2020 expenditure | \$29,348 |
| Programme status |  |


Wild purple loosestrife

| Action | Results |
|------------------------------------|--|
| Surveillance and monitoring | <ul style="list-style-type: none"> Two sites monitored. One site at zero density. Two inspections undertaken. |
| Control pest | <ul style="list-style-type: none"> All plants controlled. Site Management Plans in place. |
| 2019/2020 expenditure | Staff time only |
| Programme status |  |


Senegal tea

| Action | Results |
|------------------------------------|---|
| Surveillance and monitoring | <ul style="list-style-type: none"> Four sites monitored for Senegal tea. Five inspections completed. All sites remain at zero-density. Three sites have had no plants for six years. One new site discovered in Eastern Bay of Plenty. |
| Control pest | <ul style="list-style-type: none"> All plants controlled. Site Management Plans in place, to be reviewed as currently tracking towards eradication. |
| 2019/2020 expenditure | Staff time only |
| Programme status |  |


Spartina

| Action | Results |
|------------------------------------|--|
| Surveillance and monitoring | <ul style="list-style-type: none"> Two active sites in region, Maketū estuary and Tauranga Harbour. Surveillance at Maketū completed. DOC undertook surveillance at Tauranga Harbour. |
| Control pest | <ul style="list-style-type: none"> Active control and restoration programme completed at Maketū with 98% reduction of plant coverage compared to original infestation. Local Contractors used to undertake the work. Monitoring for herbicide residues, as per the EPA permission showed no trace of herbicide. |
| 2019/2020 expenditure | \$28,033 |
| Programme status |  |


Water poppy

| Action | Results |
|------------------------------------|--|
| Surveillance and monitoring | <ul style="list-style-type: none"> One active site in the region. Three inspections completed. |
| Control pest | <ul style="list-style-type: none"> All plants controlled. Site Management Plan now in place. |
| 2019/2020 expenditure | \$2,900 |
| Programme status |  |


White edged nightshade

| Action | Results |
|------------------------------------|---|
| Surveillance and monitoring | <ul style="list-style-type: none"> Two sites monitored for white edged nightshade. Two inspection completed. Both sites remained at zero density for a sixth year. |
| Control pest | <ul style="list-style-type: none"> No control work. |
| 2019/2020 expenditure | \$731 |
| Programme status |  |


Brown bullhead catfish

| Action | Results |
|-----------------------------|---|
| Surveillance and monitoring | <ul style="list-style-type: none"> Surveillance undertaken on Lake Rotomā, Lake Tarawera, Lake Tikitapu, Lake Ōkātina and Lake Ōkātika. |
| Control pest | <ul style="list-style-type: none"> 62,365 catfish controlled in Lake Rotoiti in 2019/2020. 48 catfish controlled in Lake Rotorua in 2019/20. 150% increase in numbers of catfish caught compared to 2018-2019 season. Advocacy completed as part of Summer Aquatic Awareness Programme. Significant local community engagement and volunteer contribution. |
| 2019/2020 expenditure | \$300,000 |
| Programme status |  |

Koi carp and Perch

| 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. |
| 2019/2020 expenditure | \$27,014 |
| Programme status |  |

Rooks

| Action | Results |
|-----------------------------|---|
| Surveillance and monitoring | <ul style="list-style-type: none"> No rooks seen in east Taupō region last year. One unconfirmed sighting near Waimana Valley, most likely to be from same group sighted the previous year. |
| Control pest | <ul style="list-style-type: none"> No opportunity for control due to unconfirmed status of sighting. |
| 2019/2020 expenditure | Staff time only |
| 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">• 48 inspections completed.• Isolated infestations currently dispersed around the Bay of Plenty region, particularly Rotorua.• All plants found were controlled. Good progress being made with general reduction in plant numbers. |
| 2019/2020 expenditure | \$12,616 |
| 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.• Four inspections completed. |
| 2019/2020 expenditure | \$3,964 |
| 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. Site at Ruatāhuna controlled in collaboration with local hapū. 143 inspections completed. All plants found have been controlled apart from one organic site where negotiations with landowner meant the control window was missed. |
| 2019/2020 expenditure | \$12,582 |
| Programme status |  |


Blackberry

| Action | Results |
|------------------------------|--|
| Programme summary | <ul style="list-style-type: none"> Boundary complaint species. No proactive surveillance. Two boundary complaints received and responded to. 14 inspections completed. |
| 2019/2020 expenditure | \$4,529 |
| Programme status |  |


Boneseed

| Action | Results |
|------------------------------|---|
| Programme summary | <ul style="list-style-type: none"> Limited to coastal Bay of Plenty. Control work completed around Little Waihi and Maketū cliffs. 53 inspections completed. Control completed along dune systems in Western Bay of Plenty and Ohope. |
| 2019/2020 expenditure | \$18,468 |
| Programme status |  |


Chilean rhubarb

| Action | Results |
|------------------------------|---|
| Programme summary | <ul style="list-style-type: none"> No targeted surveillance carried out. Advisory services only. 7 inspections completed. Pest distribution through Bay of Plenty is not well understood. |
| 2019/2020 expenditure | Staff time only |
| 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. 49 inspections completed. Still widely distributed around Rotorua District. |
| 2019/2020 expenditure | \$33,222 |
| 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. |
| 2019/2020 expenditure | \$7,618 |
| Programme status |  |


Darwin's barberry

| Action | Results |
|-----------------------|--|
| Programme summary | <ul style="list-style-type: none"> Surveillance undertaken in Whakarewarewa Forest and Rainbow Mountain. No plants found at Rainbow Mountain though they are present across the boundary in the Waikato region. Engagement with WRC on boundary issues. Control carried out in Whakarewarewa Forest by forest manager. Pest contained and at low density. |
| 2019/2020 expenditure | \$1,974 |
| 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 2019/2020 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. |
| 2019/2020 expenditure | \$227,175 |
| Programme status |  |


Gorse

| Action | Results |
|------------------------------|--|
| Programme summary | <ul style="list-style-type: none"> 56 inspections completed. 14 boundary complaints received and responded to. |
| 2019/2020 expenditure | \$3,969 |
| Programme status |  |


Green goddess lily

| Action | Results |
|------------------------------|---|
| Programme summary | <ul style="list-style-type: none"> No targeted surveillance. Advisory services only. 8 inspections completed. One complaint received. Pest is widespread through Bay of Plenty – RPMP management objective will not be achieved. |
| 2019/2020 expenditure | Staff time only |
| Programme status |  |


Italian buckthorn

| Action | Results |
|-----------------------|---|
| Programme summary | <ul style="list-style-type: none"> Species confined to Western Bay of Plenty. Good progress and control undertaken and distribution continues to reduce in line with RPMP objectives. 464 inspections completed. Focus was on targeting known populations in coastal locations with good success. |
| 2019/2020 expenditure | \$14,158 |
| 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. 187 inspections completed. Distribution in the west appears to be increasing. |
| 2019/2020 expenditure | \$3,340 |
| 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 and BOPRC 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. Work also completed under the Biodiversity programme which is not included in this report. |
| 2019/2020 expenditure | \$43 |
| Programme status |  |


Old man's beard

| Action | Results |
|------------------------------|--|
| Programme summary | <ul style="list-style-type: none"> ● Significant issue around Lake Tarawera. ● Collaborative programme with DOC initiated and agreement signed. ● Property pest control plans developed at key strategic sites near Lake Tarawera. ● Collaboration with hapū at Ruatāhuna site. ● More intensive monitoring in coming years to ensure landowners control recent discoveries. ● 89 inspections completed. |
| 2019/2020 expenditure | \$32,463 |
| Programme status |  |


Ragwort

| Action | Results |
|------------------------------|--|
| Programme summary | <ul style="list-style-type: none"> ● Boundary complaint species. ● No complaints received. ● No proactive surveillance or monitoring. |
| 2019/2020 expenditure | Staff time only |
| 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. ● One inspection completed. ● Spread by windblown spores, re-invasion very difficult to prevent. |
| 2019/2020 expenditure | Staff time only |
| 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. |
| 2019/2020 expenditure | \$885 |
| 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 Waihi Beach. Successful collaboration with landowners in the East Cape area. 700 inspections completed. Seven complaints received. Pest relatively widespread. Current focus remains containment east of Ōpōtiki. |
| 2019/2020 expenditure | \$100,201 |
| 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. 146 inspections completed. Two complaints received. Seed source from orchards still an ongoing concern. Still numerous large sites requiring control. |
| 2019/2020 expenditure | \$146,766 |
| Programme status |  |


Woolly nightshade

| Action | Results |
|------------------------------|---|
| Programme summary | <ul style="list-style-type: none"> 699 inspections completed. 43 complaints received. Significant compliance issues on some properties. Pest relatively widespread through coastal Bay of Plenty - current focus is containment in Rotorua and other parts of the region where distribution is low. |
| 2019/2020 expenditure | \$163,318 |
| 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. 107 inspections completed. All plants detected were controlled. |
| 2019/2020 expenditure | \$14,027 |
| 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. One site elevated into 3 year surveillance period after zero detections over 5 years. Good progress being made on working towards a standardised data management system across agencies. |
| 2019/2020 expenditure | \$218,635 |
| 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. |
| 2019/2020 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. |
| 2019/2020 expenditure | \$0 |
| Programme status |    |

Wallaby

| Action | Results |
|-----------------------|---|
| Programme summary | <ul style="list-style-type: none"> Wallaby control is ongoing at Welcome Bay, Kaharoa, Matahina Forest, Waerenga/Pukahukiwi-Kaokaoroa, Tikitere Forest, Taheke/Okere and Paradise Valley. This work is aimed at either eradicating outlying wallaby populations or preventing further expansion of the wallaby distribution. Ongoing systematic surveillance, continues to highlight priority areas for wallaby management. Research is underway into a new bait registration for wallaby and preliminary results are very promising. Monitoring of ongoing control operations will help to refine and improve existing methodologies. |
| 2019/2020 expenditure | \$166,058 |
| 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">• 39 complaints resolved.• 247 public enquiries received and responded to.• Presentations to stakeholder groups and weed-swap days held. |
| 2019/2020 expenditure | \$8,799 |
| 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.

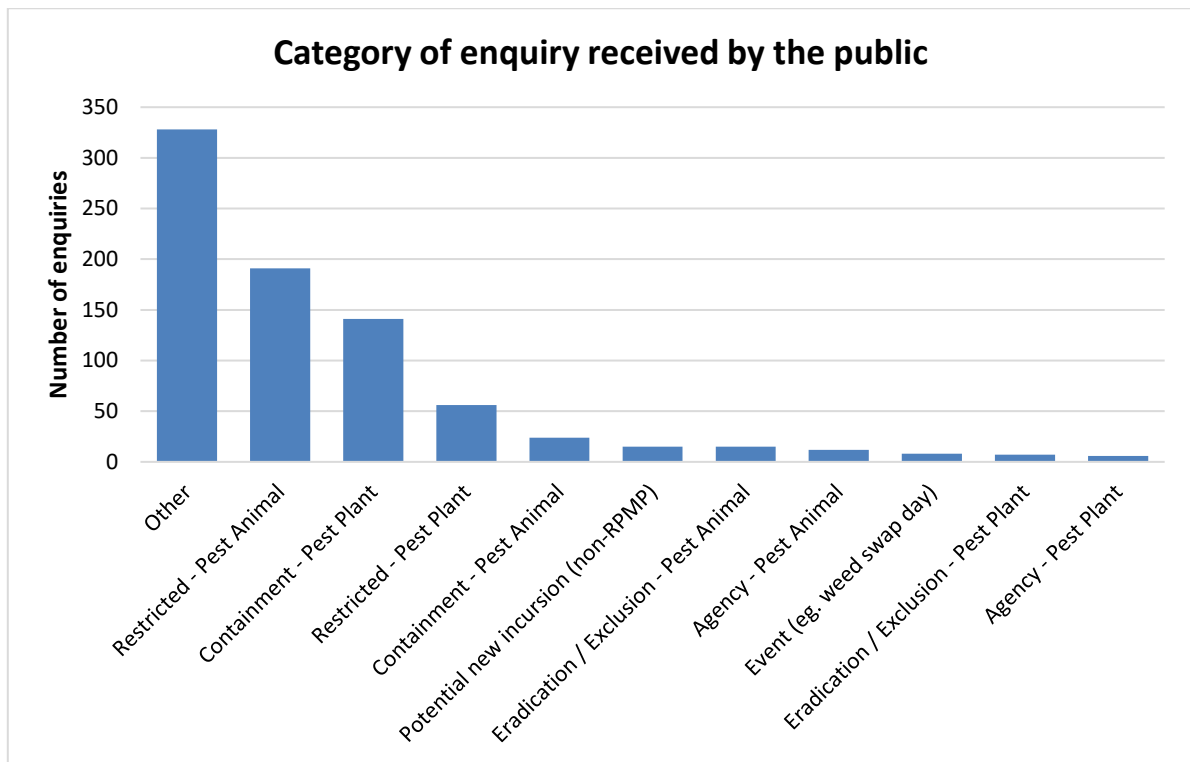
Council has organised workshops that provide technical advice to the public and industry regarding pest control. These workshops focus on pest identification and control techniques. Examples of workshops included:

- 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.
- 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.

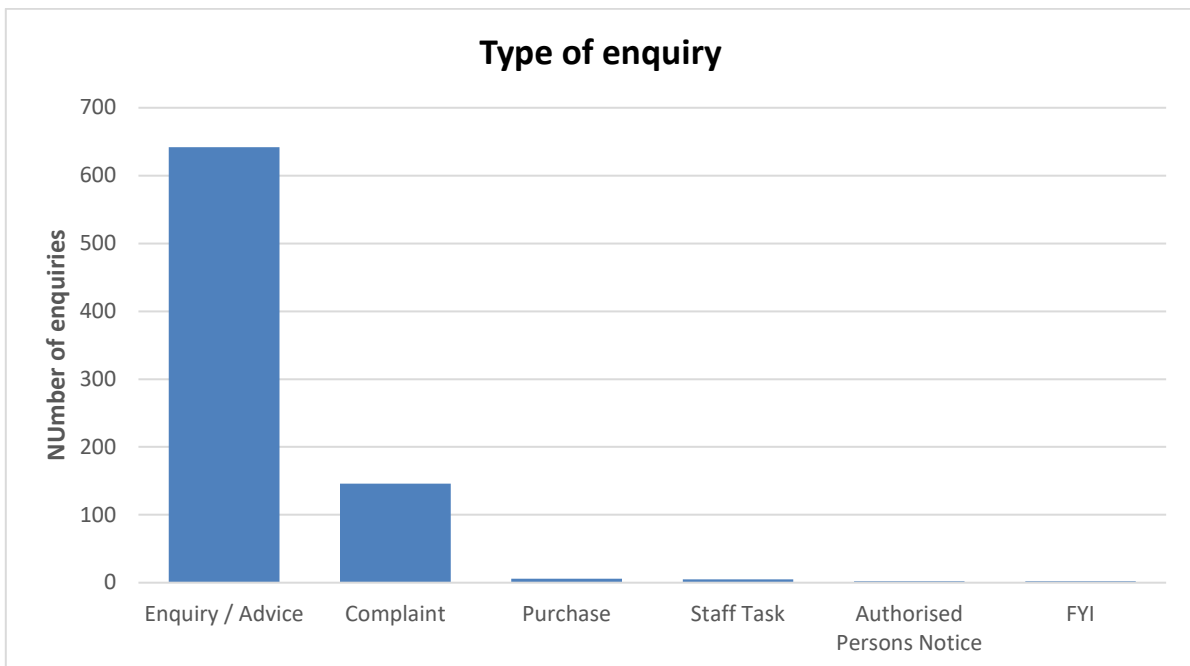
Analysis of enquires (see graph below) shows that the majority of public concerns relate to common well established Restricted pests such as wasps, rabbits, possums and rats. The RPMP assumes that people or community groups will take voluntary action against these pests, when and where they cause a problem.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



Figure 11: Staff educating the public on marine pests at a boat show

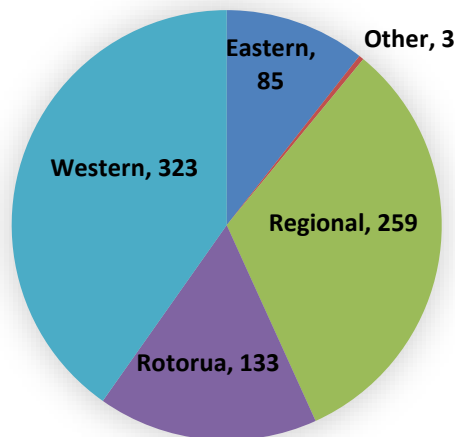


The graph below shows the majority of calls are for information and advice on pest identification and control. Important to note, Council received a significantly lower number of complaints last year (146) compared to the previous year (406).



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.

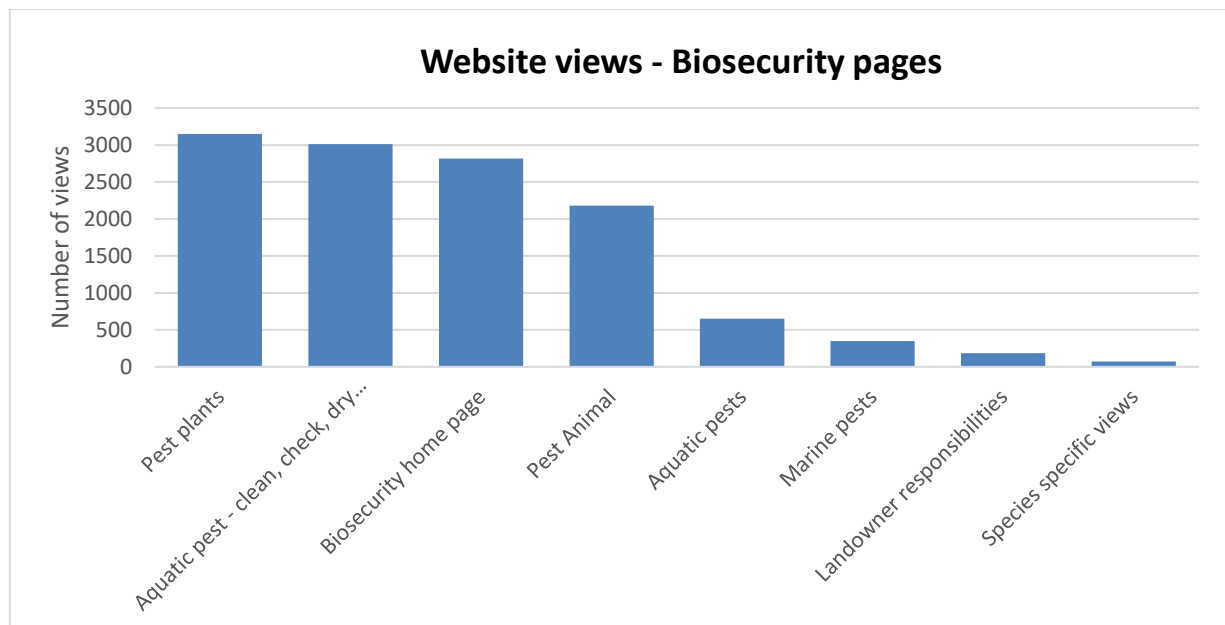
Location of enquiry



Bay of Plenty Regional Council website – Biosecurity related pages

The BOPRCs website is an important tool for landowners and the public to access information relevant to their responsibilities, and specific to pests.

Last year there were 12,420 views on the Biosecurity pages of the BOPRCs website, this is a significant increase compared to the previous year. The graph below illustrates where the majority of the views were targeted.



Tauranga Moana Biosecurity Capital

The Tauranga Moana Biosecurity Capital initiative (TMBC) brings together councils, iwi and hapū, Government, science, education and business 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 region's 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

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 2019/2020, 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 four landowners requiring them to control a variety of species, including woolly nightshade, 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

One exemption was granted in 2019/20 allowing individuals to derogate from Regional Pest Management Plan rules. This exemption was for the capture and movement of wallabies to secure facilities to allow trials into effective control options.