Biosecurity Operational Report

Northland Regional Pest and Marine Pathway Management Plan - Annual Report 2018-2019

Northland REGIONAL COUNCIL
Te Kaunihera ā rohe o Te Taitokerau

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1. EXECUTIVE SUMMARY

1.1 Why Has This Report Been Written?

This Annual Report is the first written under the ten year Northland Regional Pest and Marine Pathway Management Plan 2017 – 2027 (the Pest Plan). It records progress in implementing the Pest Plan via the Operational Plan 2018-2019, covering council's biosecurity activities for the period 1 July 2018 to 30 June 2019. The Annual Report of regulatory activities is a statutory requirement under section 100B(2) of the Biosecurity Act 1993 (the Act), and copies will be made available to the council and the public.

1.2 Key Achievements for 2018-2019?

2. INTRODUCTION

2.1 Background

The Northland Regional Council (council) is the management agency responsible for developing and implementing the Northland Regional Pest and Marine Pathway Management Plan 2017-2027 in accordance with the Biosecurity Act 1993. The Pest Plan is a combination of the eradication or effective management of specified pests (or groups of pests), and a marine pathway plan designed to prevent and manage the spread of harmful marine organisms via boat hull fouling within Northland coastal waters.

An Operational Plan is prepared and reviewed annually as a requirement of the Biosecurity Act 1993 (section 100B). It describes how the Pest Plan will be implemented for a given year. The first Operational Plan written under the new Pest Plan covered the period 1 July 2018 to 30 June 2019. Council has a statutory requirement under the Act to report on progress in implementing the Pest Plan, within five months of the end of the relevant financial year.

This Annual Report on the Operational Plan 2018-2019 is the first produced under the new 10-year Pest Plan. The report notes progress made against aims, objectives and Key Performance Indicators (KPI's) contained in the Operational Plan and expands on these where appropriate.

2.2 Implementation Programme Summary

Objectives have been set in the Pest Plan for each pest or group of pests, as required by the National Policy Direction. The objectives in full are contained in the Pest Plan and are summarised below:

Exclusion Pests

Preventing the establishment of named pests in Northland. Council will search for and control new incursions of pests that are present in New Zealand, but not yet established in Northland and have the potential to be a serious pest. Emergency control actions of pests that are not listed in the Pest Plan can also be carried out.

Eradication Pests

Eradicating identified pests in Northland. The intermediate outcome is to achieve zero density of these pests in certain areas. In the short to medium term, infestation levels will be reduced to the point where it becomes difficult to detect the pest.

Progressive Containment Pests

Containing and, where practicable, reducing the geographic distribution of certain pests in Northland over time. Progressive containment pests have high densities in parts of Northland, but low extent or limited range. Eradication is not feasible, but it is practicable to prevent them from spreading to other parts of Northland or to eradicate the pest from other parts of Northland.

Sustained Control Pests

Providing ongoing control of a pest (or group of pests), or an organism being spread by a pest to prevent unreasonable impacts. The intermediate outcome is to ensure any external impacts are manageable.

Marine Pathway Management Plan

Reduce and avoid impacts to biodiversity, cultural and economic values by preventing the establishment of marine pests and (where practicable), containing the geographic distribution of marine pests in Northland.

Practical Pest Management

Council achieves practical pest management by:

- Requiring land owners and/or occupiers or other persons to adhere to pest or pathway management rules (eg. pests controlled, pathways managed, management plans prepared, and the presence of pests reported).
- Undertaking inspections of properties and places for a variety of outcomes (e.g. to determine whether pests are present, that rules and management programmes are being complied with and monitoring effectiveness of control).
- Carrying out direct control (service delivery) of high threat pests where council is best placed to coordinate control efforts (eg. pests that are difficult to identify and/or control, distributing biological control agents, traps and herbicides and work on a user pays basis).
- Promoting awareness and education on what good biosecurity management looks like. To help occupiers and communities control pests the council provides practical advice and advocacy material around impacts of pests and pathways of pest spread. This includes working co-operatively with other agencies and stakeholders, contributing to research, cost sharing with others and promoting 'good practice' guidelines to control pests.
- Supporting community led pest management activities through non regulatory approaches such as council's biosecurity partnerships.

2.3 Report format

This Annual Report should be read in conjunction with the:

- Northland Regional Pest and Marine Pathway Plan 2017-2027
- Operational Plan 2018-2019

Section 1 sets the scene for the need for the report based on the programmes implemented and the actions carried out by council as the management agency. Section 3 provides a financial overview for expenditure during the year.

Sections 4 to 8 comprise the main part of the document and reports on the five pest management implementation programmes in the same order as set out in Section 2.2 above. Programme activities and KPI's are listed in the left hand columns. The comments in the right hand column note the achievements (or the reasons why if a KPI has not been met). Supplemental reporting material is detailed in the appendices.

3. FINANCIAL SUMMARY

Council's Long Term Plan 2018 - 2028 provides the necessary funding (via rates and user charges) for the operational and planning activities associated with biosecurity and pest management carried out by Northland Regional Council. Additional external funding grants have been secured to supplement council investment in pest management.

Council, through the Long Term Plan 2018 – 2028, significantly increased investment in pest management, in a bid to work towards becoming pest free. In 2018, Council increased investment in pest management by over $2,200,000, adding an additional $6,600,000 over the following three years (2018-2021).

During the course of the year additional grants were secured of approximately $493,000 from the Ministry for Primary Industries, the Department of Conservation and other sources.

The revised departmental budget and actual expenditure is detailed in the table below.

Biosecurity Activities 2018 - 2019	Revised Budget	Actual Expenditure
Biosecurity Overheads *	$2,425,480	$2,790,027
Exclusion Pests	$52,021	$62,329
Eradication Pests	$302,250	$221,376
Progressive Containment Pests	$273,232	$257,776
Sustained Control Pests – Partnerships	$1,997,433	$1,635,339
Sustained Control Pests - Other	$983,247	1,102,797
Marine Pathway Management Plan	$543,173	$646,770
Totals	**$6,576,836**	**$6,716,414**

* *Includes staff training, vehicle running costs, regional and national working group costs, administration staff, and council support services.*

The total biosecurity expenditure for 2018-2019 was **$6,716,414**. This is an operational deficit of 2.1% or $139,578 as at 30 June 2019.

4. EXCLUSION PESTS

4.1 Overview

Definitions

Exclusion Programme:	*To prevent the establishment of the subject, or an organism being spread by the subject, that is present in New Zealand but not yet established in an area.*
Exclusion Pests:	*Are pests which are not known to have established in Northland or have previously established and been eradicated. Exclusion Pests all have the potential to establish in Northland and are capable of causing adverse effects to the environmental, economic, social or cultural values of the region.*

Key points of the Exclusion Programme are:

- Prevention of 23 organisms from establishing in the region – 13 pest plants, 8 pest animals, and 3 freshwater pest species (refer below).
- Council and Crown agencies are responsible for control.
- Success is related to fast and efficient response planning and action in the field.

Exclusion Plants		
Asiatic knotweed Chinese knotweed Climbing spindle berry Giant hogweed Giant knotweed	Holly-leaved senecio Houttuynia Noogoora bur Old man's beard	Phragmites Purple loosestrife Sea Spurge Velvetleaf
Exclusion Animals		
Bearded dragon Big headed ant Blue tongued skink (common and blotched)	Indian ring-necked parakeet Rainbow lorikeet Rook	Sulphur crested cockatoo Wallaby
Exclusion Freshwater Pests		
Entire marshwort	Water poppy	Orfe

4.2 Progress in Achieving Aims

Programme Activities and Key Performance Indicators	Achievements and Comments
Enforcement of Rules Enforcement of rules relating to exclusion species.	**Achieved** No exemptions were granted in 2018-2019.
Eradication Response Eradication responses of any exclusion pests found in Northland (by council).	**Achieved** Surveillance of a Houttuynia management site identified in 2017-2018 continued on a 3 monthly basis, controlling regenerating seedlings, and conducted extended surveillance around residences and a nearby bush block. No further areas of infestation were found.
Support Eradications Support eradications undertaken by other Crown agencies and stakeholders.	**Achieved** Staff have been assisting Ministry for Primary Industries staff with incursions including: • Fruit fly incursions in Auckland. • Assisting contractors on farm managing *Mycoplasma bovis.* This support will continue in the following year.
Identify New Sites Identify new sites through passive and active surveillance by council staff, the public, or through regional surveillance.	**Achieved** **Plant Incursions:** Seven reports of exclusion plant species were investigated and confirmed as non-exclusion species. **Animal Incursions:** Incursion reports included: • Big-headed ant report – found to be a native species. • Blue tongued skink – related to captive specimen. • Indian ring-necked parakeet – several reports were received from the Kerikeri area and sightings investigated. Owners of caged birds were reminded of their responsibility to keep birds caged at all times. **Freshwater Incursions:** Two potential incursions were identified: • Orfe – a potential incursion was reported for a site located in the Auckland Region. This was passed on to Biosecurity staff at Auckland Council. • Water lettuce (*Pistia stratiotes*) – this notifiable organism (thought to be largely eradicated in New Zealand) was found in a pond at a residence in Whangarei. This weed is regarded as one of the worst aquatics weeds internationally. Ongoing management of this site has been assigned to the Ministry for Primary Industries.

Programme Activities and Key Performance Indicators	Achievements and Comments
Respond to Sightings Within 5 Working Days All reported sightings and/or discoveries in the course of other work will be investigated within 5 working days.	**Achieved in part** Council received and responded to 16 requests or incidents relating to exclusion species during 2018-2019. It is often not possible to investigate sightings within 5 working days (especially caged bird escapees often return the next day). *This performance indicator will be reviewed in the 2019-2020 Operational Plan.*
Collaborate with Other Regional Councils Collaborate with other Regional Councils to prevent spread into Northland.	**Achieved** Cross border meetings have been held with Auckland Council. There was key information sharing and learning with regard to risks posed by: • Auckland velvet leaf sites • Increasing frequency of exclusion knotweed species and Houttuynia.
Nursery Compliance 95% of nurseries compliant under the National Pest Plant Accord (NPPA): • inspection of rules relating to plant nurseries and retail outlets in region.	**Not Achieved** No formal inspections were undertaken because no Biosecurity staff held the NPPA authorisations necessary. The Ministry for Primary Industries (who administers the program) has been unable to provide the necessary training and refresher courses for the last two years. A new NPPA programme manager has been appointed and staff are booked for training in September 2019. Interim measures undertaken were: • **TradeMe Monitoring:** There were no listings of exclusion species in 2018-2019. • **Investigation of Public Reports:** There were no reports of any nurseries or individuals selling exclusion pest species.
Increase Public Awareness Increase in awareness of the exclusion species.	**Achieved** Public awareness activities are detailed in *Appendix A*. In particular, exclusion species related activities included: **Rainbow Lorikeet and Indian Ring-Necked Parakeet Publicity:** This publicity campaign included: • **Press Release:** Addressing the risks they pose, the requirement to ensure pets are secured, and to report escaped birds *(A4).* • **Facebook**: The campaign included Facebook, and one of the posts was the most popular post in October 2018 with a reach of 7,746 *(A1.2).*

Programme Activities and Key Performance Indicators	Achievements and Comments
	Events: Exclusion pests were featured at events including *(A6)*: • Northland Field Days. • 4 Agricultural and Pastoral Shows (Kaitaia, Bay of Islands, Whangarei and Paparoa). • 15 community events (eg. Kerikeri Garden Safari, Matakohe Settler's Day). • 4 Weed and Animal Pest Workshops. **Velvetleaf Awareness:** Promotion at the Northland Field Days and in social media posts. **Static Display:** Exclusion plant species were included in a month long pest plant display at NorthTec in Whangarei.

5. ERADICATION PESTS

5.1 Overview

Definitions

Eradication Programme:	*To reduce impacts to biodiversity, cultural and economic values by eradicating identified pests in Northland. The intermediate outcome is to achieve zero density of these pests in certain areas. In the short to medium term, infestation levels will be reduced to the point where it becomes difficult to detect the pest.*
Eradication Pests:	*Eradication pests are present in low numbers or have a limited distribution within Northland and eradicating them appears to be feasible and cost-effective. These pests all have the potential to establish widely in the region and are capable of causing adverse effects to the environmental, economic, social or cultural values of the region. Council is either the lead agency or a partner for eradicating these pests from the region.*

Key points of the Eradication Programme are:

- Eradicating or at least achieving zero density of 29 pests in the region – 20 pest plants, 1 pest animals, and 8 freshwater pests (refer below).
- Council is responsible for control in conjunction with relevant Crown agencies and stakeholders.
- Detailed work plans are developed for specific pests.

Eradication Plants		
Akebia	Field horsetail	Nassella tussock
Balloon vine	Firethorn	Nutgrass
Bat-wing passionflower	Gypsywort	Royal fern
Cape tulip	Lesser knotweed	Spartina
Cathedral bells	Mexican feather grass	Wilding kiwifruit
Chilean rhubarb	Mickey mouse plant	Yellow flag iris
Evergreen buckthorn	Monkey musk	
Eradication Animals		
Feral deer – all species		
Eradication Freshwater Pests		
Eel grass	Senegal Tea	Eastern water dragon
Nardoo	Water hyacinth	Red eared slider turtle
Salvinia		Snake necked turtle

5.2 Progress in Achieving Aims – Eradication Plants

Summary

The addition of the new role of Biosecurity Manager – Pest Plants and Freshwater Pests in November 2018 has provided crucial capacity to undertake a review of the eradication pest plants programmes. Of the 20 eradication plant species programmes, 17 are showing expected progress toward eradication, with decreasing numbers of active sites, and few new sites. However, the review highlighted that there is a significant shortfall in the resource necessary to manage all eradication programmes efficiently and meet baseline good practice for achieving successfully containment and eradication.

Shortfall in staff and contract capacity means that inspection and control work frequencies have at times been prioritised, resulting in sub-optimal management. Vital extended surveillance work is could not be undertaken, meaning that unidentified sites may be continuing to be a source of further spread. This increases the overall cost of the programme, extending the length and scale of the management interventions required to achieve eradication, and even more significantly, increasing the risk of failure.

There are currently 711 small scale eradication pest plant management sites, and 217 moderate to large scale eradication pest plant management sites spread across the Northland region. Based on the required inspection and control frequency, management of these sites require an estimated minimum of 5,500 hours of staff or contract time. This total does not include the essential active surveillance work beyond known sites.

An example of these issues can be seen in the bat-wing passion flower eradication programme (*Passiflora apetalar*). This species represents a major threat to Northland forests. The growth rate of this species is such that three inspections per site per annum are required to prevent seeding, which significantly increases the resources required for inspection and control of known sites. Known bat-wing passion flower management sites are continuing to increase. This is partly due to passive surveillance (public reporting), and new finds during the limited surveillance activities, but principally it is an indication that there are still unmanaged adult sites acting as seed sources or known sites where the intensity of management is not enough to prevent seeding.

Contract work commenced in 2018-2019 to begin intensively grid searching forest blocks adjacent to known control areas (which had previously only been selectively searched). To be able to complete and repeat this work, additional resource is required, and an annual plan proposal has been completed to this end.

Data Management

Efficient data management has also been an area of focus in 2018-2019. Staff have worked with the GIS team to develop an initial prototype and scheme for a spatial tool that can be used in the field for data collection, and in the office for reporting. If this can be progressed to a fully functioning tool in 2019-2020 it will significantly improve efficiency and strategic management of eradication programmes.

Programme Activities and Key Performance Indicators	Achievements and Comments
Identify New Sites Identify new sites through passive and active surveillance by council staff, the public, or through regional surveillance.	**Achieved** New management sites were identified through both public reports and through extended surveillance work as detailed below. **Plant** / **Total New Sites** / **Public Reports** Bat-wing passionflower / 17 / 6 Mickey mouse plant / 55 / 16 Yellow flag iris / 3 / 2 Evergreen buckthorn / 2 / There was also: • Extended infestation area of an existing balloon vine site. • 3 reports of firethorn proved to be different species or potential hybrids.
Control of Eradication Pests Control of any eradication pests found in Northland (by council) to meet the objective of zero-density in Northland by 2027.	**Achieved in part** **Smaller Eradication Programmes** The smaller programmes are showing good progress toward eradication, but there are still capacity constraints preventing best practice with regard to frequency of checks and data management. **Larger Eradication Programmes** There are some significant challenges particularly with the: • Bat-wing passionflower • Mickey mouse plant • Spartina – Kaipara regime. This is highlighted by the number of new sites detected for Mickey mouse plant and bat-wing passionflower. To help address this, the Mickey Mouse programme has been reviewed, with the biennial check of all 382 sites replaced with a staggered regime so that half of the site checks are completed each year. An additional round of checks for half the sites are planned for 2019-2020 to allow for this realignment. This will spread the pressure on delivery hours and allow for more thorough control and additional surveillance. The Kaipara spartina management site data has also been reviewed and consolidated to improve data management. *This performance indicator will be reviewed in the 2019-2020 Operational Plan to better reflect best practice targets and progress toward eradication.*

Programme Activities and Key Performance Indicators	Achievements and Comments
Nursery Compliance Enforcement of rules relating to plant nurseries and retail outlets in region.	**Not Achieved** No formal nursery inspections undertaken – refer *Section 4.2.*
Respond to Reports Within 5 Working Days Response to reports from the public on eradication pests will be responded to within 5 working days.	**Achieved in Part** 36 reports from the public of eradication plant species were received and responded to. Initial responses were all completed within 5 days, but full investigation including site inspection frequently took longer than 5 days. *This performance indicator will be reviewed in the 2019-2020 Operational Plan as a full response is not always practical or necessary within 5 days.*
Increase Public Awareness Increase in awareness of eradication species:	**Achieved** Public awareness activities are detailed in *Appendix A*. In particular, eradication plant related activities included: **Eradication Plant Species Social Media Publicity**: Facebook campaigns for eradication species including: • **Mickey Mouse Plant:** An extended campaign. • **Cathedral Bells:** The most popular post in January 2019 with a reach of 7,141 *(A1.2).* **Events:** Eradication plants were featured at events including *(A6)*: • Northland Field Days. • 3 Agricultural and Pastoral Shows (Bay of Islands, Whangarei and Paparoa). • 5 community events (eg. Kerikeri Garden Safari). • 4 Weed Workshops. **Static Display:** Exclusion species were included in a month long pest plant display at NorthTec in Whangarei.

5.3 Progress in Achieving Aims – Feral Deer

There are currently three species of deer known to be present in Northland, red deer (*Cervus elaphus scoticus*), fallow deer (*Dama dama*), and sika deer (*Cervus nippon*). Red deer and fallow deer are farmed, but sika deer is present only as a result of illegal releases.

Objectives

To maintain low densities of feral deer in Northland through deer farmer liaison, fence inspections, surveillance, wild deer response activities, and statutory management, to prevent the successful establishment of wild deer populations.

To increase community awareness of the risks and environmental consequences of feral deer establishing in Northland in order to gain wide community support for the vision of no feral populations of deer in Northland.

Aims

Council will work co-operatively with the Department of Conservation and other stakeholders to achieve the objectives of the Northland Wild Deer Response Plan 2016-2025.

Land owners, occupiers and the public understand the risks and environmental consequences of feral deer establishing in Northland and are supportive of the programme.

Programme Activities and Key Performance Indicators	Achievements and Comments
Identify New Sites Identify new sites through passive and active surveillance by council staff, the public, or through regional surveillance.	**Achieved** Aerial thermal surveillance was conducted over Waipoua, Mangakāhia, Mangonui, Russell Forest, Kaihū, Waihue and Whananaki. Ongoing surveillance is required in 2019-2020.
Respond to Reports Within 5 Working Days Response to reports from the public will be responded to within 5 working days.	**Achieved** One farm escape event at Mangonui River was reported and responded to in 2018-2019.
Community Awareness and Support: "No Wild Deer in Northland" marketing and advocacy campaign. Continued promotion of the 'Find Deer' Hotline.	**Achieved in part** The Find Deer Hotline received very few calls this financial year. An active marketing and advocacy campaign is required to increase awareness to raise the programme profile. Positive relationships with key parties between the Response Team and the community (eg. Land owners and deer farmers) are being maintained has been maintained with regular meetings throughout the year.

Programme Activities and Key Performance Indicators	Achievements and Comments
Specific objectives of the Northland Wild Deer Response Plan 2016-2025	
Farm Escapes: Ongoing input into, and management of, the existing deer farm database and filing system. Ongoing input into, and management of, escape event database. Declining number of escape events over time.	**Achieved in part:** **Mangonui River Escape Outcome** • 23 deer were mustered with helicopter back into farm and sent to meat works. • 19 were destroyed on farm to de-stock deer farm. • 1 deer was destroyed by aerial shooting. • 8 deer were destroyed by ground hunters. • 4 deer are still known to be at large on properties restricting access to the Response Team. **Other Escaped Deer Outcome** 14 other escaped animals had previously been documented and were targeted by the response team. • 8 escaped deer were destroyed. • 5 were recaptured within deer farms. • 1 deer (from an escape 18 months ago) remains unaccounted for. **New Deer Farms** No new farms are known to have been established this year.
Enforcement of Rules Completion of perimeter fence inspection forms annually and up-dating of the database.	**Achieved** The Department of Conservation conducts deer farm inspections. Several farms require ongoing inspections and support to achieve deer permit standards. This is currently being led by the Department of Conservation.
Wild Populations Respond to calls to the DOC 'Find Deer' Hotline in respect of liberated deer within 24 hours. Accurate records and reporting of all surveys and response outcomes. Careful documentation on the use and outcomes of using new technologies.	**Achieved** **Aupōuri:** No wild deer were detected by the Response Team during the year or reported by members of the public. **Kaimaumau:** No wild deer were detected by the Response Team during the year or reported by members of the public. One escaped deer may remain at the site but was not located during surveillance and fence inspections further south. **Poutō**: No active surveillance was conducted. There are anecdotal reports deer are still present and possibly fallow liberated. **Mangakāhia:** Pending resources becoming available. 5 deer are known to be present, and one problematic farm remains to be inspected by the Department of Conservation. No wild deer were detected by the Response Team during the year or reported by members of the public.

Programme Activities and Key Performance Indicators	Achievements and Comments
Eradication of Russell Sika Eradication of the Russell Sika herd.	**Achieved in part** Two Sika deer were destroyed in Russell Forest. One hind was detected on Department of Conservation land and two stags were detected using cameras, acoustic devices and ground hunting. Six deer were sighted on inaccessible properties surrounding Russell Forest.
Cross Border Liaison Close liaison with deer response teams in the Auckland Region.	**Achieved** Staff are liaising with Auckland Council to improve communications and cross border operations.

5.4 Progress in Achieving Aims – Eradication Freshwater Pests

Summary

Good progress has been made toward eradication for the freshwater eradication pest plant species in 2018-2019.

The year also saw an increasing number of reports of turtles in the wild, demonstrating a growing issue as well as a good level of awareness amongst the public. Staff attempts to confirm and capture reported animals have had limited success and better methods, equipment, and lures are required. This will be the focus for trials in 2019-2020.

Programme Activities and Key Performance Indicators	Achievements and Comments
Control of Eradication Pests Control of any eradication pests found in Northland (by council) to meet the objective of zero-density in Northland by 2027.	**Achieved in Part** **Senegal tea**: The 2 active sites were controlled with only two small areas of plants found with a total area of less than 2 m^2. **Eel Grass and Nardoo:** There were no active sites. **Salvinia:** Awareness work around salvinia has continued with three reports investigated, confirmed and handed over to Ministry of Primary Industries in 2018-2019. A new system for reporting was instigated to ensure better tracking of reports. There are still challenges in getting information back from the Ministry for Primary Industries with regards to sites reported through other mechanisms and ongoing status of reported sites. **Turtles:** Multiple reports were investigated, but additional resources and equipment are needed to improve detection and capture rate.

Programme Activities and Key Performance Indicators	Achievements and Comments
Identify New Sites Identify new sites through passive and active surveillance by council staff, the public, or through regional surveillance.	**Achieved** A total of 18 reports from the public of eradication freshwater species were received and responded to: • 14 red-eared slider turtle reports. • 3 salvinia reports. • 1 eastern water dragon query. **NEW MANAGEMENT SITES** **Salvinia:** Three new sites were identified, two from public reports and one from discussion with customer at the 2019 Northland Field days event. **Red-Eared Slider Turtle:** There were multiple reports of which: • 2 were able to be recaptured. • 7 sites remain active with ongoing investigations (5 were for the same or similar location). • 1 report was provided with insufficient information for further investigation.
Respond to Reports Within 5 Working Days Response to reports from the public on eradication pests will be responded to within 5 working days.	**Achieved in Part** Initial response and investigations were completed within 5 days, but full investigation including site inspection frequently took longer than 5 days. *This performance indicator will be reviewed in the 2019-2020 Operational Plan as a full response is not always practical or necessary within 5 days.*
Increase Public Awareness Increase in awareness of eradication species.	**Achieved** Public awareness activities are detailed in *Appendix A*. In particular, eradication freshwater pest related activities included: **Eradication Freshwater Animals Publicity**: Freshwater eradication animal publicity included: • A profile on social media. • A press release in August 2018 for red eared slider and snake neck turtles focusing on raising the awareness of risk, the requirement to ensure pets are secured, and to need to report escaped or wild turtles *(A4)*.

Programme Activities and Key Performance Indicators	Achievements and Comments
	Events: The eradication plants salvinia and water hyacinth were featured were featured at events including *(A5)*: • Northland Field Days – this display resulted in a new report of eradication species. • 3 Agricultural and Pastoral Shows (Bay of Islands, Whangarei and Paparoa). • 5 community events (eg. Kerikeri Garden Safari). • 4 Weed Workshops.
Enforcement of Rules Enforcement of rules relating to eradication species.	**Achieved in Part** **Eradication Freshwater Plant Species:** Land owners with freshwater eradication plant species were informed of their responsibilities and requirements, and eradication species removed with ongoing follow up. **Eradication Freshwater Animal Species:** Capacity and equipment limitations resulted in difficulties detecting and/or capturing reported turtles at larger public sites. New equipment will be purchased and tested in 2019-2020.

6. PROGRESSIVE CONTAINMENT PESTS

6.1 Overview

Progressive Containment Pests:	*Refers to pests that land owners/occupiers are required to treat throughout or in defined areas of the region, or in boundary situations. Pests are to be treated by a recognised Progressive Containment method, at intervals that ensure the pest is completely controlled or controlled to or from a stipulated distance from a property boundary.*

Key Points of the Progressive Containment Programme are:

- Eight pests are present within defined areas in the region. This includes 5 pest plant species, and 3 pest freshwater fish species.
- Council is responsible for monitoring and control of African feather grass, Manchurian wild rice, mile a minute, and pultenaea outside of mapped containment areas to prevent further spread.
- Land occupiers are responsible for control of African feather grass, lantana and pultenaea on their land (different rules and approaches apply depending on locations within or outside containment areas).
- Regarding pest fish species, council will work collaboratively with the Department of Conservations to survey and monitor vulnerable areas and undertake enforcement and control work where necessary. All people in the region must report sightings of pest fish outside of mapped areas, not transport or move any live or dead fish around Northland, and not possess any live fish.

Progressive Containment Plants		
Manchurian wild rice[1] African feather grass	Mile a minute Pultenaea	Lantana
Progressive Containment Freshwater Pests		
Koi carp	Perch	Tench

[1] Management is overseen and funded by the Ministry for Primary Industries.

6.2 Progress in Achieving Aims - Progressive Containment Plants

Summary

The African feather grass and mile-a-minute programmes are showing good progress toward the target of no active sites of these species outside the containment zones by 2027. However, more needs to be done toward more proactively supporting and engaging land owners inside the containment zones. The capacity constraints highlighted in Section 5.2 (Eradication Plants) are also relevant to the implementation of these programmes.

The pultenaea containment zone and core infestation is located in steep bush at Maranui, near Mangawhai and staff have worked closely with the land owners to provide advice and support, as well as initial contract work in 2018-2019 to support land owner efforts. Additional support will be needed to successfully contain this site.

For the lantana program, responsibility for control outside of the containment zones sits with land owners, and additional staff capacity is required to more proactively support and enforce the development and implementation of management plans.

Annual Status Reports

Annual reporting on the status and number of new sites of all progressive containment plants is required in the Pest Plan. With the exception of Manchurian wild rice, the 2018-2019 status reports are detailed below. The Manchurian wild rice programme is funded by the Ministry for Primary Industries and reported on separately – only highlights from the programme are reported here.

Programme Activities and Key Performance Indicators	Achievements and Comments
Respond to Reports Within 5 Working Days Response to reports from the public on progressive containment plants (found outside containment areas) will be responded to within 5 working days.	**Achieved in Part** Total of 7 reports from the public of progressive containment plant species were received and responded to. The majority of initial response and investigations were completed within 5 days but full investigation including site inspection frequently took longer than 5 days. *This performance indicator will be reviewed in the 2019-2020 Operational Plan as a full response is not always practical or necessary within 5 days.*

Programme Activities and Key Performance Indicators	Achievements and Comments
Annual Status Report – Manchurian Wild Rice Report on the status of all progressive containment plants, including number of new sites of each plant.	**Manchurian Wild Rice** This programme is carried out in partnership with the Ministry for Primary Industries as part of the National Interest Pest Response Programme (NIPR), and an Annual Report produced separately. Key highlights from the programme were: *Outside of the intransigent zone.* • No new management sites were identified. • All 278 management sites were controlled by contractors resulting in a combined total site area of 87 ha. • All 4 interim sites (sites that have had no live foliage for up to two years) were inspected twice and found to have no live foliage. An additional outlier site, near Puketī, was inspected by staff and found to have no active plants. • 7 of 12 monitored sites (sites that have had no live foliage for between two to ten years) had two visits each confirming no foliage was present, 4 sites had one visit and the remaining 1 site was not visited (however the status will be assumed to remain 'monitored'). 5 of the 12 monitored sites had not recorded any live foliage present since 2014. *Inside the intransigent zone.* Land occupiers are generally responsible for control of MWR on their properties, until such time as these sites can be added to the programme for eradication. Council assists with advice and information on best practice techniques in relation to control of outlier sites. Farmer uptake and interest in Manchurian wild rice control is increasing with at least 14 land owners inside the intransigent zone undertaking their own operations, thereby assisting the programme. Of these land owners: • 3 have commenced control work in 2018-2019. • 2 are maintaining ongoing control work on their properties. • 9 are Pukehuia farmers who have formed a group that have been working to control Manchurian wild rice for the last five years with the assistance of council. In addition, there are 4 land owners outside the intransigent zone with established management sites that are undertaking extra control work to keep Manchurian wild rice off their land.

Programme Activities and Key Performance Indicators	Achievements and Comments
Annual Status Report – African Feather Grass Report on the status of all progressive containment plants, including number of new sites of each plant.	**African Feather Grass** The annual roadside contract ($3,600) was completed for existing sites, covering both areas inside and outside the containment zone on the Poutō peninsula. This work focuses on controlling infestations outside the containment zone as well as roadsides inside the containment zone to reduce the risk of spread. The status of sites is: • No new management sites were identified, but new areas were active within existing sites. • 19 of 21 surveillance sites (free of African feather grass for three years), continue to be clear of plants. Two sites were found to have 1 and 2 plants respectively and have reverted to an active status. • 17 other sites remain active, 4 of which are located outside of the containment zone. These sites were all found to contain 1 or 2 plants respectively, except for one larger site containing 29 plants. • An additional outlier site, near Puketī, was inspected by staff and found to have no active plants. Further contract resources are required for extended surveillance and to increase land owner engagement.
Annual Status Report – Lantana Report on the status of all progressive containment plants, including number of new sites of each plant.	**Lantana** 3 new sites were identified outside of containment zone. These were responded to with: • Direct control work on one site (a single plant). • Advice and support to land owners for other two sites. The larger of which (at Puke Kōpīpī, Ngunguru) is now being managed cooperatively by the local community group and Whangarei District Council. There is a need for additional resources to more proactively enforce this programme. **Biocontrol** activities were also undertaken during the year with: • A re-release of the Lantana blister rust, *Puccinia lantanae,* as the previous release had limited success. • A re-distribution of the established agent, Lantana leaf rust, *Prospodium tuberculatum*, to a site at Waipapakauri.

Programme Activities and Key Performance Indicators	Achievements and Comments
Annual Status Report – Mile-a-minute Report on the status of all progressive containment plants, including number of new sites of each plant.	**Mile-a-minute** Three reports were received including: • 1 outside of the council region. This was passed on to Auckland Council. • 1 report of an existing site. • 1 new management site outside of containment zone. There was ongoing control at 40 active sites, and inspection at 3 surveillance sites. Not all sites received the best practice twice yearly inspection/control visit because of capacity constraints – the more active sites were prioritised. The status of the sites is: • Of the 40 active sites, relatively few had active growth in 2018-2019. • 8 sites in the Northern regime require more consistent contract funding to ensure more frequent inspections and control. There was limited proactive engagement with land owners within progressive containment zone because of capacity constraints. There was some control work undertaken by council at key sites and in the roading corridor.
Annual Status Report – Pultenaea Report on the status of all progressive containment plants, including number of new sites of each plant.	**Pultenaea** There was 1 pultenaea report from the public of a new site outside of containment zone, which is now a management site controlled by staff. Within the containment zone, staff have worked with the key land owner to develop a management plan, and initial knockdown contract work was implemented by council to support the land owner's efforts. Additional support will be needed to successfully contain this site and the land owners will be supported to complete a Biofund bid to add additional resources.
Land Owner Support Maintain or increase in number of landowners undertaking work within progressive containment zones.	**Achieved in Part** Land owner support during 2018-2019 activities included: • **Pultenaea:** Within the containment zone, staff have worked with the key landowner to develop a management plan and support a Biofund bid (refer above). • **Lantana:** A community group at Puke Kōpīpī, Ngunguru and the Whangarei District Council were given advice and support (refer above).

Programme Activities and Key Performance Indicators	Achievements and Comments
	• **Manchurian wild rice:** At least 14 land owners inside the intransigent zone are undertaking their own operations, thereby assisting the programme (refer above). Additional capacity is required to more proactively support and enforce the development and implementation of management plans for all progressive containment species.
Increase Public Awareness Increase in awareness of progressive containment species.	**Achieved** Public awareness activities are detailed in *Appendix A*. In particular, progressive containment pest plant related activities included: **Pest Control Hub**: Progressive containment species are included in the Pest Control Hub *(A2)*. The hub received 44,303 views in 2018-2019 (18% of all the council website views). **Events:** Progressive containment plants were featured were featured at public events including *(A6)*: • Northland Field Days. • 3 Agricultural and Pastoral Shows (Bay of Islands, Whangarei and Paparoa). • 5 community events (eg. Kerikeri Garden Safari). • 4 Weed Workshops.

6.3 Progress in Achieving Aims - Progressive Containment Freshwater Fish

Summary

In 2018-2019, new funding was made available to the Department of Conservation to increase the work underway for freshwater pest management. The focus in Northland is on pest fish, and in particular koi carp. To maximise the benefit of this funding, council and the Department of Conservation are planning and prioritising work with a partnership approach and pooled resources. This coordinated approach will enable more effective delivery in a challenging work area with resource constraints. Staff from both organisations have been developing a combined data set and terminology for Northland's pest fish sites.

As a first step, a joint programme of netting was undertaken to confirm the success of a previous eradication site, undertake surveillance at reported sites, and undertake initial investigation and planning for 2019-2020 summer eradication work.

A collective of regional councils and partners working on pest fish in the Northern part of the North Island was also initiated, to more effectively share knowledge and pool resources. Staff attended electrofishing work activities with the Auckland Council to support their programmes and also gain experience in the technique.

Annual Status Reports

Annual reporting on the status and number of new sites of all progressive containment freshwater pests is required in the Pest Plan. The 2018-2019 status reports are detailed below.

Programme Activities and Key Performance Indicators	Achievements and Comments
Respond to Reports Within 5 Working Days Response to reports from the public on progressive containment pest fish (found outside containment areas) will be responded to within 5 working days.	**Achieved in Part** Total of 7 reports from the public of progressive containment pest fish species were received and responded to. Full investigation including site inspection frequently took longer than 5 days to complete and were often inconclusive. Significant netting effort is also often required both to confirm a sighting or to determine if a site is free of a reported pest. *This performance indicator will be reviewed in the 2019-2020 Operational Plan as a full response is not always practical or necessary within 5 days. Instead a change in approach is to be trialled, with initial investigations and planning undertaken at the time of the report. Where substantial netting and surveillance work is required, this will be targeted for summer periods with additional contract support to allow for thorough best practice surveillance netting.*
Report on Status of Sites Report on the status of all progressive containment pest fish	**Koi Carp** As part of the new partnership in development with the Department of Conservation joint programme were undertaken including: • Surveillance netting to confirm the status of a previous eradication site. • Surveillance at reported sites. • Initial investigation and planning for 2019-2020 summer eradication work. Results of the joint programme showed during 2018-2019: • 3 potential new sites outside of containment zones were added to the 2019-2020 summer surveillance netting programme. • The single known site within the Houhora site was confirmed as eradicated, meaning this containment zone is no longer active. • In addition, the only known record from within the Whangaroa containment zone was also confirmed as being erroneous, meaning there are no confirmed active sites within this containment zone.

Programme Activities and Key Performance Indicators	Achievements and Comments
	• There were no koi carp netted at the reported Kaikohe site, but additional netting effort is required to meet the level of confidence required for confirming pest fish absence. **Perch** No new management sites were added during 2018-2019. **Tench** No new management sites were added during 2018-2019.
Increase Public Awareness Progressive containment pest fish feature in regular display and educational activities.	**Achieved** Public awareness activities are detailed in *Appendix A*. In particular, progressive containment freshwater pest related activities included: **Pest Control Hub**: Freshwater progressive pest fish publicity included profiling on council's Pest Control Hub *(A2)*. **Facebook**: A Facebook campaign for progressive containment species. A post on Koi carp was the most popular post in April 2019 with a reach of 5,555 *(A1.2).* **Events:** Progressive containment pest fish were featured were featured at public events including *(A6)*: • Northland Field Days. • 3 Agricultural and Pastoral Shows (Bay of Islands, Whangarei and Paparoa).

7. SUSTAINED CONTROL PESTS

7.1 Overview

Sustained Control:	*For the duration of the Pest plan, reduce impacts to biodiversity, cultural and economic values by controlling identified pests in Northland and preventing unreasonable impacts from sustained control Pests. The intermediate outcome is to provide for the sustained control of the pest to a level where external impacts are manageable. The focus is on ensuring densities do not reach a level where they are causing significant external impacts.*

Key Points of the Sustained Control Programme are:

- Reducing the impacts of pests that are widespread in suitable habitats throughout Northland. These pests all cause adverse effects to the environmental, economic, social or cultural values of the region.
- Sustained controlled pests in Northland are detailed in the table below.
- Council will provide education, advice and support to enable landowners to manage sustained control pests on their properties.

Sustained Control Plants		
Bathurst bur	Phoenix palm	Wild ginger
Brazilian pepper tree	Privet	Wilding conifers
Gorse	Queen of the night	Woolly nightshade
Gravel groundsel	Rhus tree	
An additional 33 plants from the National Pest Plant Accord – *refer Pest Plan page 55 for full list.*		
Priority plants listed for road and rail corridor owners (refer Pest Plan page 60) include:		
Broom	Gorse	Wilding conifers
Cotoneaster	Taiwan cherry	Wild ginger
Sustained Control Animals		
Argentine ant	Feral and stray cats	Mustelids
Darwin's ant	Feral goats	Rabbits
Possums	Feral pigs	Rodents
Diseases and Pathogens		
Kauri dieback		
Sustained Control Freshwater Pests		
Brown bullhead catfish	Rudd	

7.2 Progress in Achieving Aims – Sustained Control Pest Plants

Programme Activities and Key Performance Indicators	Achievements and Comments
Respond to Requests Response to requests within 5 working days.	**Achieved in Part** Biosecurity staff received over **1,050** requests relating to sustained control plants during 2018-2019. Not all were responded to within 5 working days. *This performance indicator will be reviewed in the 2019-2020 Operational Plan as a full response is not always practical or necessary within 5 days.*
Increase Use of Biocontrol Agents Increase number of biocontrol agents released in Northland.	**Achieved** **New releases** There were three releases of biocontrol agents in 2018-2019. • 2 releases of the *Tradescantia* leaf spot fungus, *Kordyana brasiliensis*, (December 2018 and May 2019). • 1 release of the Honshu white admiral, *Limenitis glorifica*, for biocontrol of Japanese honeysuckle, *Lonicera japonica.* **Re-releases** There was 1 re-release of the Lantana blister rust, *Puccinia lantanae*. **Redistribution of Existing Agents** Redistributions included: • **Tradescantia leaf beetle** – Kaiwaka, Takahue, Kerikeri, Cable Bay, Hikurangi, Whangaroa, Fairburns, Ōhaeawai , Rangitāne, Kohumaru, Whatatiri, and Kawakawa. • **Tradescantia stem borer** – Kaiwaka, Whāngārei Heads, Awanui, Tameterau, Waipū, Langs Beach, Whangaroa, Kaimaumau, Matauri Bay Rd, Ōhaeawai, Quarry Gardens and Whau Valley Rd (Whāngārei), Puketōtara (Kerikeri). • **Tradescantia tip feeder** – established at one new site in Doubtless Bay. • **Lantana leaf rust** – *Prospodium tuberculatum* in Waipapakauri.
Nursery Compliance 95% of nurseries are compliant under NPPA.	**Not Achieved** No formal nursery inspections undertaken – refer *Section 4.2*

Programme Activities and Key Performance Indicators	Achievements and Comments
Exemptions to Rules All exemptions to any rule are reported.	**Achieved** No exemptions were granted.
Increase Public Awareness Increase in awareness of sustained control plants	**Achieved** Public awareness activities are detailed in *Appendix A*. In particular, sustained control pest plant related activities included: **Sustained Control Pest Plant Publicity** Publicity included: • Profiling of community actions controlling sustained control weeds on council's Facebook page *(A1).* • Inclusion in the Pest Control Hub *(A2).* • A new video on Weed Action Whāngārei Heads added to council's YouTube Channel *(A3).* • A press release on wilding conifers *(A4)*. **Events:** Sustained control pest plants, control methods and biological control were featured at public events including *(A6)*: • Northland Field Days. • 3 Agricultural and Pastoral Shows (Bay of Islands, Whangarei and Paparoa). • 5 community events (eg. Kerikeri Garden Safari). • 4 Weed Workshops. **Beetle Collection Workshops** Tradescantia leaf feeding beetle collection workshops included: • Two held at Otaika Valley- beetles collected released at Akerama/Towai, Hoteo River, Glenbervie, Toanga Gardens (Kaiwaka), Maunu Cemetary, Waipū , Ngunguru, Mangakāhia, Springfield, Tutukaka. • Additional tradescantia collection workshops held by High Value Area coordinators in Piroa-Brynderwyns and Whāngārei Heads.
Road and Rail Authorities All road and rail authorities have 5 year weed management plans or prioritised annual plans approved and implemented.	**Achieved in part** The status of plan development is: • New Zealand Traffic Authority have a plan approved and implemented. • Whāngārei District Council and New Zealand Rail plans are still in development.

Programme Activities and Key Performance Indicators	Achievements and Comments
Enforcement of Rules Enforcement of (general) rules and Good Neighbour Rules relating to sustained control plants.	**Achieved** 13 requests for enforcement of sustained control pest plant species rules were received and actioned in 2018-2019.

7.3 Progress in Achieving Aims – Sustained Control Animals

Biodiversity restoration projects controlling sustained control pest animals generally managed outside the Pest Plan through Biosecurity Partnership Programmes. These include:

- Community Pest Control Areas (CPCA's) – a way of assisting communities to manage pest on private land.
- High Value Areas (HVA's) – these are specifically identified areas of high biodiversity and/or cultural, recreational or economic value.

Council uses regulatory measures when required (rules differ for each animal), such as not holding mustelids in captivity.

<table>
<tr><th>Programme Activities and Key Performance Indicators</th><th>Achievements and Comments</th></tr>
<tr><td>Respond to Requests Within 5 Working Days
Response to requests (for information) within 5 working days.</td><td>Achieved in part
Biosecurity partnership staff received over 5,200 requests during 2018-2019. Not all were responded to within 5 working days.
This performance indicator will be reviewed in the 2019-2020 Operational Plan as a full response is not always practical or necessary within 5 days.</td></tr>
<tr><td>Increase Area of Land in CPCA's.
Increase in hectares of land under CPCA's per annum (increase by 5,000 hectares).</td><td>Achieved
37,243 ha of land is under protection with new CPCA agreements in 2018-2019. Figure 1 shows the geographical location of the new areas.
<table>
<tr><th>Historical Results</th><th>2017-2018</th><th>2018-2019</th><th>Increase</th></tr>
<tr><td>Land area in CPCA's</td><td>83,043</td><td>120,286</td><td>37,243</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Programme Activities and Key Performance Indicators</th><th>Achievements and Comments</th></tr>
<tr><td>Increase in Council Supported Community Led Programmes

Increase in the number of NRC supported community led pest control programmes (by 10 per cent per annum), including:

• develop and support community pest control programmes (CPCAs).
• develop and support biosecurity environment fund projects.
• develop and support significant biosecurity partnerships (eg. Council-Kiwi Coast Partnership).
• support community and land care groups.</td><td>Achieved

• New CPCAs = 11
• Biofund Projects 2018-2019 = 70
• Kiwi Coast Entities/Groups = 129

<table><tr><th>Historical Results</th><th>2017-2018</th><th>2018-2019</th><th>Increase</th></tr><tr><td>Number of CPCA’s</td><td>57</td><td>68</td><td>11</td></tr><tr><td>Biofund Projects</td><td>54</td><td>70</td><td>16</td></tr></table>
Kiwi Coast groups have collectively trapped over 297,753 animal pests over the past six years.</td></tr>
<tr><td>Exemptions to Rules

Enforcement of rules relating to sustained control animals and all exemptions to any rule are reported.</td><td>Achieved

A short-term exemption to rules 7.3.7 and 7.3.8 was granted to an individual to hold in captivity, up to 80 Brush tailed possums (Trichosurus vulpecula) for the purpose of export to Thailand during either the month of June or July 2019.</td></tr>
<tr><td>Increase in Kiwi Populations

Increase in kiwi populations within council supported programmes – increase by 2% per annum.</td><td>Achieved

• Baseline established 2018-2019 (Year 1 of the Plan).
• Average call per hour = 7.2

This measure is collated from council’s High Value Area programmes (Whangarei Heads, Tutukaka, Piroa-Brynderwyn and Mid North).</td></tr>
<tr><td>Increase in Biodiversity Indicators

Increase in biodiversity indicators within council supported programmes.</td><td>Achieved

• 2019 Pateke Flock Count completed. Data shows pateke distribution continues to expand on Northland’s East Coast and population size is increasing.
• Baseline of kaka and bellbird distribution established. The next survey is scheduled for 2019.</td></tr>
</table>

Programme Activities and Key Performance Indicators	Achievements and Comments
Increase Public Awareness Provide advice on managing pests • support / attend public workshops to raise awareness • provide selected pest control materials working with contractors controlling these pests.	**Achieved** Public awareness activities are detailed in *Appendix A*. In particular, sustained control pest animal related activities included: **Facebook:** Sustained control pest animal Facebook activity of 2018-2019 included *(A1)*: • 19 tagged posts that received 49,186 views. • Posts on possums (July 2018) and Biofund (March 2019) were council's most popular post of the month with reaches of 16,062 and 15,296 respectively. **Pest Control Hub**: Pest animal species are included on the Pest Control Hub which received 44,303 views in 2018-2019 (18% of all the council website views). Two sustained control animal pests (feral pigs and rats) were in the top five most popular pages of the Hub *(A2)*. **Council YouTube Channel:** There were 2 sustained control pest animal videos added to the channel in 2018-2019, one of which (*How to trap and kill rats*) has been extremely popular and is already in the top ten most watched videos on the channel *(A3).* **Other Media:** Sustained control pest animals were promoted through other media including: • **Press Releases:** 2 press releases related to sustained animal species *(A4)*. • **Stories:** 4 stories relating to sustained pest animal control *(A5).* **Events:** Sustained control pest animals were featured at public events including *(A6)*: • Northland Field Days. • 4 Agricultural and Pastoral Shows (Kaitāia, Bay of Islands, Whangarei and Paparoa). • 4 community events (eg. Matakohe Settler's Day). • 3 Trapper's workshops. **Enviroschools:** Biosecurity staff supported 6 Enviroschools workshops helping 110 young Northlander's gain NZQA credits in pest control. **Kiwi Releases:** Biosecurity staff assisted the Kiwi Coast in achieving **8** kiwi releases in Northland in 2018-2019. **Northland Pest Control Wananga:** The Wānanga (held in Whāngārei in June 2018) had over 200 attendees, representing 73 community and hapū led projects from across the region.

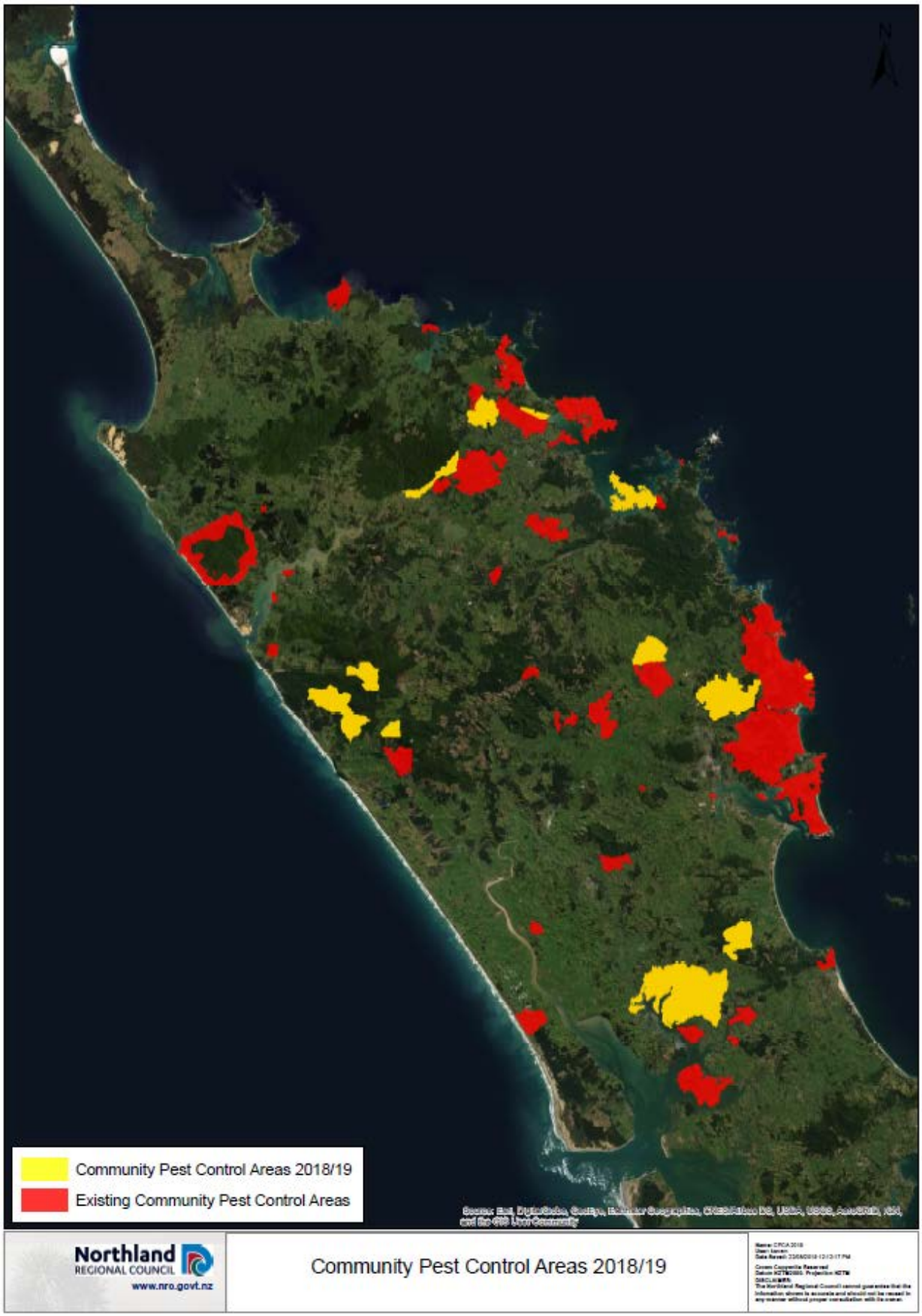

Figure 1: New and existing CPCA areas

7.4 Progress in Achieving Aims – Kauri Dieback

Sustained controlled diseases are ones that are widespread throughout Northland in suitable habitats. The following section relates to the management of kauri dieback disease in Northland. Kauri dieback (KDB) is managed by a multi-agency collaborative partnership between tangata whenua, Biosecurity New Zealand, Department of Conservation, Auckland Council and the Northland, Waikato and Bay of Plenty regional councils.

Objectives

- For the duration of the Pest Plan, prevent the spread of kauri dieback to reduce impacts on biodiversity, cultural and economic values in Northland.
- Ensure coordination with other government agencies and the Department of Conservation to achieve the Pest Plan objectives.

Aims

- To maintain a complete record of the distribution and severity of kauri dieback in Northland.
- To increase public knowledge and skills and encourage people to take action to help reduce the spread of kauri dieback.
- To ensure that measures taken under the Pest Plan are complementary to inter-regional and national approaches to kauri dieback.
- To utilise scientific and technological advancements to help reduce the spread of kauri dieback.

Programme Activities and Key Performance Indicators	Achievements and Comments
Annual Kauri Dieback Work Plan Describes a schedule of works for council's key kauri dieback activities.	**Achieved** Work plan includes ongoing ground truthing of priority aerial surveillance risk sites, requests from public and other engagement and educational opportunities.
Visit All Places on Private Land Suspected to Contain Kauri Dieback Visit all places on private land suspected of containing kauri dieback to undertake further assessment or testing.	**Achieved in part** Aerial surveillance of private land undertaken in 2017-2018 could not be investigated because a lack of resources prior to 2018-2019. From the aerial surveillance a total of **305** sites requiring further assessment were identified. Additional resources and support from Biosecurity New Zealand have allowed staff to fast track ground truthing of priority sites in Northland through the use of an external contractor. *Figure 2* shows the location of sampled sites in Northland. • Priority Sites Inspected (Contractor) 2018-2019 = **124** • Priority Sites Inspected (Council) 2018-2019 = **59** Council now have **122** sites left to assess and sample.

Programme Activities and Key Performance Indicators	Achievements and Comments
High Risk Site Management Plans All (100 per cent) high risk sites to have management plans in place.	**Achieved in part** Total Positive Sites (30 June 2019) = **38** New management plans (30 June 2019) = **22** Kauri dieback management plans continue to be developed for all positive sites, and negative sites deemed to be high risk. In addition to this, mitigation advice has been developed for undetected sites that are identified as low-medium risk. With the completion of externally contracted ground truthing work council will continue preparing plans for any newly discovered high risk sites.
Fencing of High-Risk KDB Areas Increase in hectares of high-risk kauri dieback areas protected by fencing.	**Achieved** • Area Protected (2018-2019) = **383.6 ha** • Length of fences (2018-2019) = **6.86 km** With funding assistance from Biosecurity New Zealand, council has been able to support 10 Northland landowners take a significant step towards protecting kauri and preventing the spread of kauri dieback to and from their land. These land owners are also significantly more aware and engaged in preventing the spread of kauri dieback and protecting kauri in Northland.
Respond to Requests and Incidents within 5 Working Days Response to requests for information or incidents within 5 working days.	**Not Achieved** Aerial surveillance of private land undertaken in 2017-2018 (refer above) identified a total of **305** sites requiring further assessment. *This performance indicator will be reviewed in the 2019-2020 Operational Plan as this workload makes achievement of this KPI unrealistic, and a full response is not always practical or necessary within 5 days.*
Coordination with Other Government Agencies Coordination with other government agencies and the Department of Conservation to achieve the Pest Plan objectives.	**Achieved** Two regional hui (the Northland Region Kauri Dieback Stakeholder Group) were coordinated during 2018-2019.

Programme Activities and Key Performance Indicators	Achievements and Comments
All Exemptions to Any Rule are Reported Enforcement of rules relating to kauri dieback and all exemptions to any rule are reported.	**Achieved** No exemptions were granted in 2018-2019.
Increase Public Awareness Increase awareness of kauri dieback and provide advice to the public and interested parties.	**Achieved** Public awareness activities are detailed in *Appendix A*. In particular, kauri dieback related activities included: **Council Media:** Kauri dieback was promoted through both social media and press releases including: • **Facebook Page:** 7 tagged posts that received 21,670 views *(A1).* • **Press Releases:** 2 press releases related to kauri dieback *(A4)*. • **Stories:** 1 story relating to kauri dieback control in iwi Te Roroa *(A5).* **Events:** Kauri dieback was featured were featured at public events including *(A6)*: • Northland Field Days. • 3 Agricultural and Pastoral Shows (Whangarei and Paparoa). • 5 community events (eg. Matakohe Settlers Day). • 2 Kiwi aversion training workshops. Other public awareness activities also undertaken were: **Schools:** Kauri dieback staff are working with Northland schools to help educate young Northlanders about kauri dieback. 10 schools were visited in 2018-2019. **Pig Hunters:** Staff have worked closely with Northland hunting clubs to establish a positive ongoing relationship with pig hunters which encourages good hygiene practices and wild pig eradication. **Te Araroa Trail:** Staff have worked with Te Araroa Trail to supported private landowners the trail passes through to improve signage, hygiene facilities and realign tracks to avoid kauri. **Hygiene Guidelines**: A simple set of guidelines to improve hygiene practices for hunters, trappers and general forest users have also been developed.

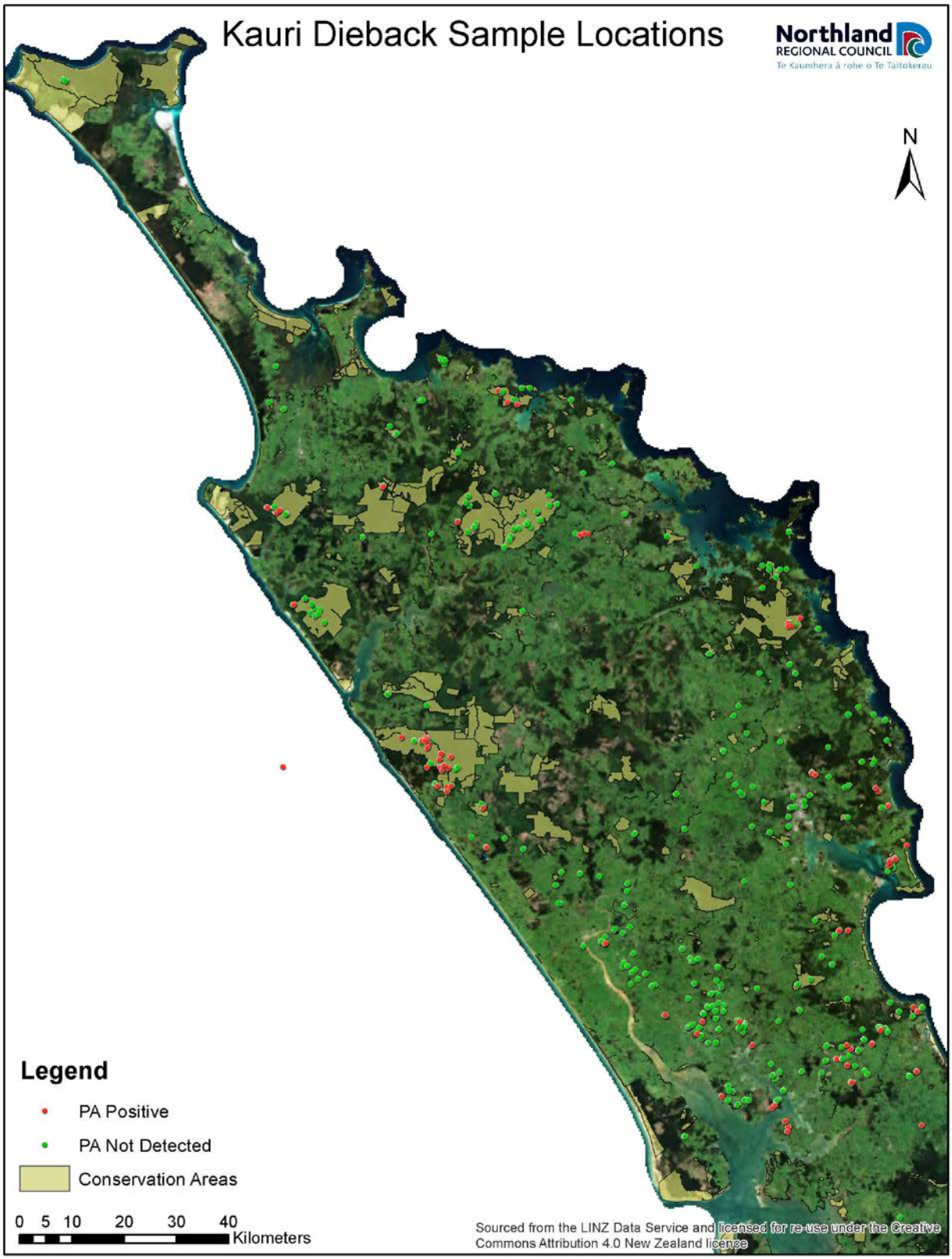

Figure 2: Northland Kauri Dieback Sample locations.

7.5 Progress in Achieving Aims – Sustained Control Freshwater Fish

Regarding pest fish species, council will work collaboratively with DOC to determine whether rules and management programmes are being complied with. Fishers must destroy these fish if caught and no one may transport any live or dead fish and not possess any live fish.

Programme Activities and Key Performance Indicators	Achievements and Comments
Respond to Requests Within 5 Working Days Response to requests (for information) within 5 working days.	**Achieved** There was 1 report of sustained control pest freshwater fish in 2018-2019 (Brown bullhead catfish). This was responded to within 5 days and found to be an unpermitted grass carp release. The matter passed to Department of Conservation for follow up.
Enforcement of Rules Enforcement of rules relating to sustained control pest fish and all exemptions to any rule are reported.	**Achieved** **No exemptions were granted in 2018-2019.**
Increase Public Awareness Increase in awareness of sustained control pest fish: • Provide advice on managing pests. • Support / attend public workshops to raise awareness. • Provide selected pest control materials.	**Achieved** Public awareness activities are detailed in *Appendix A*. In particular, progressive containment freshwater pest related activities included: **Pest Control Hub**: Sustained control Freshwater pest fish publicity included profiling on council's Pest Control Hub *(A2)*. **Events:** Progressive containment pest fish were featured were featured at public events including *(A6)*: • Northland Field Days. • 3 Agricultural and Pastoral Shows (Bay of Islands, Whangarei and Paparoa).

8. MARINE BIOSECURITY PESTS AND PATHWAYS

8.1 Overview

Since 2010 council has had a species led approach to managing marine pests, such as Mediterranean fanworm which is one of many pests that has entered the region by way of hull biofouling. Since 2012 over 100 vessels carrying fanworm have been found in Northland. Encouraging cleaner hulls through a Marine Pathway Management Plan (MPMP) would have resulted in fewer vessels carrying marine pests and other biofouling to the region. Identifying marine pests and potential risk organisms for Northland is difficult, so rather than relying solely on a species led approach, council is taking a proactive approach and addressing a universal vector of spread. Northland's Marine Biosecurity Programme is comprised of two parts:

- Marine Pathway Management Plan – operative from 1 July 2018, to prevent marine pests from reaching new areas from human induced activities (eg. through ballast water exchange, moving aquaculture equipment around the region).
- Marine sustained control species – 6 animals and one plant.

Vessel owners are required to ensure hulls are free of unwanted marine species and that hull fouling meets MPMP requirements.

Council is responsible for:

- Encouraging owners and/or persons in charge of vessels to control hull fouling.
- Working cooperatively with other agencies and stakeholders to facilitate research.
- Provide training on assessments and identification of marine pest species.
- Undertake assessment surveys.
- Enforcement of rules and action on default.
- Ensure best practice guidelines are available.
- Providing education, publicity campaigns and advice.

Marine pathway		
Hull fouling: Level of Fouling 2		
Marine pests		
Asian paddle crab Australian droplet tunicate Japanese Mantis Shrimp	Mediterranean fan worm Pyura sea squirt Styela sea squirt	Undaria seaweed

8.2 Aims for Year 1: 2018-2019

- Develop communication and advice programme to assist vessel owners and stakeholders with ensuring compliance with rules.
- Develop resources including; information on hull maintenance regimes, common fouling organisms and how to assess if the fouling on their hull exceeds the MPMP threshold level.
- Undertake a diver hull surveillance programme with a target to assess over 2,000 hulls for compliance annually with the MPMP and marine pest rules in the RPMP.
- Feedback vessel hull surveillance results to vessel owners where possible.
- Liaise with other regions such as Auckland to educate vessel owners travelling to Northland.
- Standard follow up of vessel where a listed marine pest, harmful or new to New Zealand, organism, or unwanted organism is found on a hull during surveillance. This will include a Notice of Direction (NOD), requiring the vessel owner to clean their hull. Evidence of this clean will be required before the notice is lifted.
- Increase of signage and communications around boat ramps, marina newsletters, radio advertising and marinepests.nz website.
- Continue to work with other regions in developing shared resources such as the marinepests.nz website.
- Continue to liaise with crown research agencies, Ministry for Primary Industries, National Institute of Water and Atmospheric Research (NIWA) to build a wider toolkit for managing marine pests and pathways.

8.3 Progress in Achieving Aims

Highlights

Over 2000 hulls are assessed annually, representing surveillance of a considerable proportion of the fleet of vessels that pose a risk for the spread of invasive marine pests. In addition, council, with support from Biosecurity New Zealand, has funded several responses to marine pest incursions. Mediterranean fanworm has been successfully eradicated from Tutukaka and other responses are ongoing.

The detection of Asian Paddle Crabs in Ngunguru in 2014 provided an excellent opportunity for engagement and council collaborated with Ngunguru School to design and implement a trapping programme. The school students organised a very successful community day to educate the local community about the potential impacts of this pest crab. Council staff have also established successful pest ID workshops for public participants to learn to recognise and safely remove pests from vessels.

A council decision was made to allocate an additional $100,000 to enable a step-wise eradication programme in response to the detection of Mediterranean fanworm in Ōpua.

Programme Activities and Key Performance Indicators	Achievements and comments
Increase in Vessel Compliance with the Marine Pathway Plan Increase in the number of vessel owners and/or persons in charge of vessels complying with the Marine Pathway Plan rules annually. Targets are: • 85% compliance after year 2. • 90% compliance after year 3. • 98% compliance by the end of the plan.	**Achieved (Year 1)** In total, **2037** hulls were assessed in 2018-2019 (Year 1). This data will be used as a baseline for subsequent surveys. Approximately 59% of hulls inspected were assessed as being compliant with the Marine Pathways Plan rules if the vessel was to move to a different designated area.
Increase Public Awareness of Marine Pest Increase in awareness of the risk hull fouling poses to marine pest spread over the duration of the plan.	**Achieved** Public awareness activities are detailed in *Appendix A*. In particular, marine related activities included: **Vessel Owners Survey:** In 2018-2019, 88 vessel owners were surveyed in person as part of the on-water education survey in the Bay of Islands, Tutukaka, and Whangaroa. 86% of vessel owners surveyed were aware of marine pest rules and the risk that hull fouling poses. This percentage can be monitored each year to detect an increase. **Council Website and Pest Control Hub**: Marine biosecurity and pest species are included on the council website and Pest Control Hub *(A2)*. Marine biosecurity website activity of 2018-2019 included: • **Council Website:** The marine biosecurity website page received 1,500 views in 2018-2019. • **Pest Control Hub:** The hub received 44,303 views in 2018-2019 (18% of all the council website views) with the marine pest Mediterranean fanworm the most popular page. **Council Facebook Page:** Social media *(A1)* was also used to raise awareness with: • Approximately 1 – 2 posts per month that were shared 130 times and created over 100 comments. • 15 tagged posts that received 57,168 views. • A post on Mediterranean fanworm on scallops was council's most popular post in September 2018 with a reach of 87,223. This included 42,843 video views.

Programme Activities and Key Performance Indicators	Achievements and comments
	Press Releases: Marine biosecurity was the subject of 6 press releases *(A4)* during 2018-2019 including: • 3 on Ōpua fanworm. • 1 about Hull Surveillance. • 1 on the Inter-regional Marine Pathways Plan proposal. • 1 about the Kaipara marine pest survey. **Events:** Marine pests and the pathway plan were featured were featured at public events including *(A6)*: • 2 Boat Shows (Hutchwilco Boat Show and the Auckland On Water Boat Show) reaching approximately 3,600 participants between these two events. • 3 marine community events (Marsden Cove Seafood Festival, the OceanFest evening talk, and the Pahi Regatta). These events reached 60, 50, and 30 people, respectively. **Other Advertising:** Other non-council media advertising included: • 5 marine magazines. • Local marine radio station (Russell Radio). • MetService website. • Signage and publicity materials for distribution at marinas and other key locations.
Reduction in New Marine Pest Introductions Reduction in new marine pest introductions to Northland over the duration of the plan.	**Achieved** In 2018-2019 there were: • No new marine pests were recorded on vessel hulls during the surveillance of 2,037 vessel hulls throughout Northland. • No new marine pests were recorded in the NIWA high risk surveillance programme in Whangarei Harbour and Ōpua Marina. • No public reports of any new marine pests.

Programme Activities and Key Performance Indicators	Achievements and comments
Reduction in Rate of Spread of Established Marine Pests There will be a reduction in the rate of spread of established marine pests within Northland over the duration of the plan.	**Achieved in Part** In 2018-2019 (Year 1) there were 8 recorded new detections of marine pests already established in Northland. • Mediterranean fanworm was discovered in Ōpua in July 2018. • Japanese Mantis Shrimp were recorded in Whangaroa in February 2019. • *Botrylloides giganteum*, *Diplosoma listerianum*, *Tritia burchardi, Ectopleura crocea, Eudistoma elongatum* were detected in the Kaipara Harbour. • Asian paddle crabs were detected in Tutukaka in June 2019. These new detections during Year 1 have established a baseline against which future reductions can be measured (after accounting for changes in surveillance effort).
Appropriate Funding and Resources Assessed Appropriate funding and resources are assessed annually and allocated accordingly.	**Achieved in part** While some aspects of the programme are well resourced such as the Hull Surveillance Programme, funding and resources are not sufficient to respond to new incursions. For example, the *Sabella* incursion in Ōpua in July 2018 has diverted considerable staff time and resources from other parts of the programme, most notably away from education and engagement activities. An incursion response fund has been raised for new initiative funding to address this issue. Marine pest monitoring, particularly of structures in high risk sites and anchorages in high value areas in Northland has also been highlighted as under funded. We anticipate reallocating some effort within the 2019-2020 Hull Surveillance Programme with the aim of gathering data from certain high value areas which will allow better assessment the funding required for further monitoring.
Respond to Request Within 5 Working Days All requests/incidents from the public are recorded and responded to within 5 working days.	**Achieved in part** 4 requests from the public were recorded as not having been responded to within 5 working days. In reality, these requests were responded to but not recorded appropriately in the records database within the specified time frame due to staff error. Staff will continue to receive adequate training to ensure accurate reporting.

Programme Activities and Key Performance Indicators	Achievements and comments
Exemptions to Rules All exemptions to the rules are recorded and reported on. Exemptions include a description, reasons, time period and are made available to the public.	**Achieved** Northland Regional Council issued 4 exemptions to the marine biosecurity rules during 2018-2019, as follows: *"Exemption from rule 10.2.1 in the Northland Regional Pest and Marine Pathway Management Plan. Exempt person can remove and transport for appropriate and immediate disposal only the marine sustained control pest Mediterranean fanworm (*Sabella spallanzanii*)."* The reason for the exemptions were: *"Named person attended and completed NRC marine pest workshop and was assessed as meeting requirements by a warranted biosecurity officer; vessel is based in an area where Mediterranean fanworm is already established".* All exemptions are valid for 5 years and are reviewed annually by a marine biosecurity officer.

A PUBLIC AWARENESS ACTIVITIES

A1 Council Facebook Page

A1.1 Tag Reports

Tag reporting is data recorded on *tagged* posts on the council's Facebook site. Not all posts are tagged – only those with significant content.

Biosecurity post tagging categories include:

- Pest animals
- Pest plants
- Kauri dieback
- Marine
- Biosecurity Week – *Shining the Light on Innovation.* This was council's week long promotion showcasing some of the innovative ways Biosecurity is carried out in Northland (including the Pest Control Hub and controversial pests such as Mediterranean Fanworm).

Results for Biosecurity tagged posts are summarised in the table below.

Biosecurity Activity	Tagged Posts Sent*	Impressions *(reach)*	Engagements
Pest animals	19	49,186	3,743
Pest plants	4	3,922	220
Kauri dieback	7	21,670	1,801
Marine	15	57,168	5,155
Biosecurity week	33	2,575	61
Totals	**78**	**134,521**	**10,980**

** Only selected posts are tagged, so actual Facebook activity will be higher than recorded here.*

A1.2 Most Popular Facebook Post

This is a monthly assessment of council's most popular Facebook post. The post is assessed on two industry metrics:

M1 Engagement / Total Fans = Likes + Comments + Shares (of post) / Total fans

*This metric has an industry average of **1 – 2%***

M2 Engagement / Reach = Likes + Comments + Clicks + Shares (of post) / Reach

*This metric has an industry average of **10 – 20%***

Biosecurity posts were the most popular on the council Facebook page for **seven** months of the year as shown in the table below.

Month	Category	Subject	Reach	React-ions	Post Clicks	M1	M2
Jul 18	Sustained control	Possums	16,062	821	4,426	8.6%	31%
Sep 18	Marine	Fanworm on scallops	87,223*	1,917	17,303	24%	21%
Oct 18	Exclusion	Indian ring-necked parakeet	7,746	137	1,600	2.2%	25%
Nov 18	Awards	National Biosecurity Awards	3,159	77	310	0.9%	12%
Jan 19	Eradication	Cathedral bells	7,141	160	665	2%	11.5%
Mar 19	Sustained control	Biofund	15,296	476	1,533	5.7%	13.2%
Apr 19	Progressive control	Koi carp	5,555	77	844	1%	17%
		Totals	**142,182**	**3,665**	**26,681**		

* *Includes 42,843 video views.*

A2 Council Website and Pest Control Hub

Weed and Pest Control

Biosecurity material is contained within the Environmental section of council's website under Weed and Pest Control.

Pest Control Hub

The major part of the Weed and Pest Control section is the Pest Control Hub. It is a user friendly portal for customers to learn more about Northland's worst pests, how to control them, and the rules regarding their control. The webpage also provides a way for the public to report new pests and incidents increasing the regions ability both to detect new pests early and manage existing ones.

The layout of the portal allows easy searching on the basis of both pest type (eg. animal, plant etc) and classification under the Pest Plan. Included on the front page of the Hub is a *Pest of the Month* highlight bar which is used to raise the profile of selected pests on a seasonal basis.

Visits to council's Biosecurity webpages are summarised in the table below.

Web Page	Visits in 2018-2019	% of Council Website Views
Pest Control Hub	44,303	18.5%
Weed and Pest Control Front Page	3,275	1.4%
Marine Biosecurity	1,532	0.6%
Community Pest Control Areas	631	0.3%
Our Role	592	0.2%
Other pages	1,180	0.5%
Total	**51,513**	**21.5%**

The Pest Control Hub received the majority of Biosecurity's website traffic with **44,303** visits in 2018-2019. The most popular Pest Control Hubs pages were (in order).

- Mediterranean fanworm
- Myna birds
- Feral pigs
- Rats
- Guava moth

A3 Council YouTube Channel

Council maintains a YouTube Channel of videos about council activities containing 143 videos at the end of 2018-2019. The Biosecurity team added 12 new videos to the channel in 2018-2019 as detailed in the table below.

Month	Subject	Category
Jul-18	Cadetships	General
Oct-18	Maori Language Week	General
Oct-18	Mantis shrimp	Marine
Nov-18	Pest control hub	General
Nov-18	Pest control hub	General
Nov-18	Weed action Whangarei Heads	Plants
Feb-19	Check Clean Dry Kai Iwi lakes	Freshwater
Feb-19	Check Clean Dry check your gear	Freshwater
Feb-19	Check Clean Dry clean your gear	Freshwater
Apr-19	Project Pest Control	Animals
May-19	Biosecurity activities	General
May-19	How to kill rats	Animals

Biosecurity videos made up 26% of the channels 143 videos as at the end of 2018-2019 (as detailed in the table below. The Biosecurity videos are well represented in the channels most popular videos with **six** of the top ten related to Biosecurity. Overall approximately **half** the channels views are on Biosecurity related topics.

Category	New Videos Added 2018-2019	Biosecurity Catalogue Total	% of Council YouTube Channel Videos
Animals	2	11	8%
Plants	1	10	7%
Disease	0	1	1%
Freshwater	3	4	3%
Marine	1	4	3%
General	5	7	5%
Total	**12**	**37**	**26%**

A4 Council Press Releases

Biosecurity was involved in 17 (27%) of council's 63 press releases in 2018-2019. This was an increase by one from 16 (20%) of 82 press releases in 2017-2018.

Biosecurity related press releases are summarised in the table below.

Date	Subject	Category	Programme
Jul-18	Wild ginger biocontrol	Plant	Eradication
Jul-18	Ōpua fanworm	Marine	Pathways
Jul-18	Kauri dieback funding	Disease	Sustained control
Aug-18	Turtle traps	Freshwater	Eradication
Oct-18	Hull survey	Marine	Pathways
Oct-18	Escaped exotic birds	Animal	Exclusion
Oct-18	Careers	Other	
Nov-18	Kauri new team members	Disease	Sustained control
Nov-18	Environmental Leaders Funding	Animal	Sustained control
Nov-18	Exotic fish survey	Freshwater	
Dec-18	Ōpua fanworm	Marine	Pathways
Feb-19	Sticky pulled wild pork (field days)	Animal	Sustained control
Feb-19	Wilding conifers	Plant	Sustained control
Mar-19	Inter-Regional Marine Pathway consultation	Marine	Pathways
Apr-19	Kaipara marine pest survey	Marine	Pathways
Apr-19	Ōpua fanworm	Marine	Pathways
May-19	Environmental awards	Other	

A5 Council Stories

The Stories page was a new addition the council's website in June 2018. A total of 15 stories were added in 2018-2019, of which Biosecurity was involved in 5.

Biosecurity related stories are summarised in the table below.

Date	Subject	Category	Programme
Dec-18	Wild Kiwi Girls: Case study	Animals	Sustained control
Jun-19	Steve Allan : Environmental action in industry	Animals	Sustained control
Jun-19	Puketōtara Landcare Group : Environmental action in pest management	Animals	Sustained control
Jun-19	Iwi Te Roroa : Environmental leadership	Disease	Sustained control
Jun-19	Hancock Forest Management NZ – Northland office : Environmental action in industry	Animals	Sustained control

A6 Events

The Biosecurity team was involved in a wide range of public events during the year as summarised below.

Event Type	Number of Events				
	Pest Plants	Partner-ships	Disease & Incursions	Fresh-water	Marine
Field Days	1	1	1	1	
Agricultural and Pastoral Shows	3	4	2	3	
Enviroschools Workshops		6	1		1
School Visits and Workshops	1	2	10	2	3
Stakeholder Meetings	4	4	11		1
Pest Workshops	4	1		4	2
Trappers Workshops		3			
Kiwi Releases and Associated Events	1	8			
Community Events	4	4	5	2	
Pig Hunting Competitions			1		
Kiwi Aversion Dog Training		1	2		
Detector Dog Training	3				
Beetle Collection Workshops	4				
Boat Shows					2
Marine Events and Regattas					3
Static Displays	1				
Prize sponsorship		1			
Total	**26**	**35**	**33**	**12**	**12**

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