

**Biosecurity and Biodiversity Working
Party**
Wednesday 20 March 2024 at 1pm

AGENDA

Biosecurity and Biodiversity Working Party Agenda

Meeting to be held in the Council Chamber
36 Water Street, Whangārei
on Wednesday 20 March 2024, commencing at 1pm

Please note: working parties and working groups carry NO formal decision-making delegations from council. The purpose of the working party/group is to carry out preparatory work and discussions prior to taking matters to the full council for formal consideration and decision-making. Working party/group meetings are open to the public to attend (unless there are specific grounds under LGOIMA for the public to be excluded).

MEMBERSHIP OF THE BIOSECURITY AND BIODIVERSITY WORKING PARTY

Chairperson, NRC Chair Geoff Crawford
Councillor John Blackwell
Councillor Joe Carr
TTMAC Representative, Niki Conrad
TTMAC Representative, Michelle Elboz
TTMAC Representative, Nyze Manuel
TTMAC Representative, Mira Norris
Councillor Marty Robinson

KARAKIA

RĪMITI (ITEM)	Page
1.0 NGĀ MAHI WHAKAPAI/HOUSEKEEPING	
2.0 NGĀ WHAKAPAHĀ/APOLOGIES	
3.0 NGĀ WHAKAPUAKANGA/DECLARATIONS OF CONFLICTS OF INTEREST	
4.0 REPORTS	
4.1 Record of Actions – 1 December 2023	4
4.2 Receipt of Action Sheet	8
4.3 Biosecurity Operational Plan 2024-2025	13
4.4 Dune Lakes Protection - Update	41
4.5 Gold Clam	44

Karakia

Ka tū i te waonui a Tāne Ka tupu ake rā Te rākau roa Te rākau nui Te rākau rangatira Ko te Kauri Ko te Tōtara Ko te Manuka Ko te Kahikātea Ko te Pūriri Ka toro atu rā ngā peka kia hono ki tētahi Haramai te toki Haumie hui e TAIKI E!	Stand strong in the realm of Tāne Where the tree develops, endures, grows and where prominence reveals itself Tis the Kauri Tis the Tōtara Tis the Manuka Tis the Kahikātea Tis the Pūriri Reach out far, bind together Bring forth unity Tis done!
--	--



TITLE: **Record of Actions – 1 December 2023**

From: Sandra Harris, Personal Assistant - Pou Tiakai Taiao

Authorised by Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 12 March 2024
Group Manager/s:

Whakarāpopototanga / Executive summary

The purpose of this report is to present the Record of Actions of the last meeting (attached) held on 1 December 2023 for review by the meeting.

Attachments/Ngā tapirihanga

Attachment 1: Record of Actions - December 2023 [↓](#) 

Biosecurity and Biodiversity Working Party
1 December 2023

Biosecurity and Biodiversity Working Party Record of Actions

Meeting held in the Council Chamber
36 Water Street, Whangārei
on Friday 1 December 2023, commencing at 9.30am

Tuhinga/Present:

Chairperson, Councillor Geoff Crawford
Councillor John Blackwell
TTMAC Representative, Michelle Elboz
TTMAC Representative, Mira Norris (online)
TTMAC Representative, Nyze Manuel (online)
TTMAC Representative, Niki Conrad (online)
Councillor Marty Robinson (online)
Councillor Joe Carr

I Tae Mai/In Attendance:

Full Meeting

Pou Tiaki Pūtaiao Don McKenzie
Pou Tiaki Taiao | GM Environmental Services (online)
Biosecurity Manager - Incursions and Response
Biosecurity Partnerships Manager
Personal Assistant Pou Tiaki Pūtaiao
Personal Assistant Pou Tiaki Taiao
Biosecurity Weeds and Freshwater Manager
Biosecurity Predator Free Manager
Biosecurity Marine Manager
Predator Free Manager Biosecurity
Predator Free Manager – Pēwhairangi Whānui Bay of Islands
Biosecurity Specialist Predator Free
Biodiversity Manager
Biodiversity Specialist – Freshwater Biodiversity
Kauri Protection Engagement Officer (online)

The meeting commenced at 9.30am. Karakia – Cr Robinson.

Ngā Mahi Whakapai/Housekeeping (Item 1.0)

Ngā Whakapahā/Apologies (Item 2.0)

Guest speaker Dr Beccy Ganley. Cr Carr attended from 10am.

Record of Actions – 29 August 2023 (Item 4.1)

Presented by: Cr Crawford

Biosecurity and Biodiversity Working Party
1 December 2023

Agreed action points:

- Working party members agreed that the record of actions was an accurate reflection of the meeting.

Receipt of Action Sheet (Item 4.2)

Presented by: Cr Crawford

Agreed action points:

- Action sheet updates were read and noted.

Lake Taharoa (Item 4.3)

Presented by: Lisa Forester – Biodiversity Manager, Jacki Byrd – Biodiversity Specialist | Freshwater Biodiversity, Ruben Wylie – Pou Tiaki Taiao

1. That the Biosecurity and Biodiversity Working Party note the contents of the report.
2. That a further update is provided to a future Working Party meeting.

Agreed action points:

- Recommendations were supported by the Working Party
- Staff to work with iwi hapu and the Lake Taharoa domain bylaws to focus on biosecurity checks
- The water quality monitoring team will be undertaking monitoring of pollutants over a 12 week period during safe swim monitoring at Lake Taharoa

Biodiversity Annual Report (Item 4.4)

Presented by: Lisa Forester – Biodiversity Manager

1. That the Biodiversity Annual Report be received.
2. That the Biosecurity and Biodiversity Working Party review the contents of the report.

Agreed action points:

- Recommendations were support the Working Party
- Chair acknowledged content of report and congratulated the staff on the targets and report content

Myrtle Rust (Item 4.5)

Presented by: Liam Kiely – Kauri Protection Engagement Officer, Don McKenzie – Pou Tiaki Pūtaiao

1. That the Biosecurity and Biodiversity Working Party note the information in this report.
2. That the Biosecurity and Biodiversity Working Party receive the presentation from Dr Beccy Ganley.

Biosecurity and Biodiversity Working Party
1 December 2023

Agreed action points:

- Recommendations were supported by the Working Party
- Dr Beccy Ganley's presentation deferred until 2024

PF2050 (Item 4.6)

Presented by: Sam Johnson – Biosecurity Predator Free Manager, Maaka McKinney – Predator Free Manager | Pēwhairangi Whānui, Bay of Islands, Oliver Hopwood – Predator Free Manager

1. That the Biosecurity and Biodiversity Working Party note the progress of the Predator Free 2050 projects.

Agreed action points:

- Recommendation support by the Working Party members

Kauri Protection (Item 4.7)

Presented by: <<enter name of councillor/staff who leads discussion>>

1. That the Biosecurity and Biodiversity Working Party note the contents of the report.
2. That a further update is provided to a future Working Party meeting.

Agreed action points:

- Recommendation supported by the Working Party Members
- Staff to research and feedback what studies have been made on tracing origins and carriers of Kauri dieback.

Whakamutunga (Conclusion)

The meeting concluded at 11.24am. Karakia – Cr Robinson

TITLE: **Receipt of Action Sheet**

From: Sandra Harris, Personal Assistant - Pou Tiakai Taiao

Authorised by Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 11 March 2024
Group Manager/s:

Whakarāpopototanga / Executive summary

The purpose of this report is to enable the meeting to receive the current action sheet.

Nga mahi tutohutia / Recommendation

That the action sheet be received.

Attachments/Ngā tapirihanga

Attachment 1: Receipt of Actions - March 2024 [↓](#) 

Biosecurity and Biodiversity Working Party – Schedule of Actions

Meeting date	Item	BABWP action	Responsible staff	Status	Notes
1 December 2023	Myrtle Rust (Item 4.5)	Dr Beccy Ganley's presentation deferred until 2024			A date for this presentation will be confirmed for a future working party meeting.
1 December 2023	Kauri Protection (Item 4.7)	Staff to research and feedback what studies have been made on tracing origins and carriers of Kauri dieback		Complete	<p>The science research below concludes that there is insufficient evidence to conclude there was a recent incursion (post 1945) or arrival of the disease with large scale European settlement.</p> <p>https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0250422</p> <p>Extract: "If we assume that the inoculum of <i>P. agathidicida</i> introduced into New Zealand was genetically uniform, that is it contained a single mitochondrial genome sequence type, then estimates of 303.0–304.4 years (95% HPDs 206.9–414.6 years) old for the MRCA of the sampled <i>P. agathidicida</i> isolates are inconsistent with either a recent incursion (i.e., post-1945) or an arrival associated with large scale European settlement (i.e., 1845-1940s). To be consistent with these hypotheses the estimated age of the MRCA would need to have been less than 70 years old or 70–175 years old, respectively. Instead, both mean estimates and 95% HPDs suggest that the MRCA of the sampled isolates is more than 175 years old."</p>
29 August 2023	Fishing Controls Update (Item 4.5)	Signage, communications, engagement and educational tools to be prepared for the summer period commencing Labour Weekend	Nicola	Complete	<p>Signage was designed with input from the respective rāhui tapu hapū mandated representatives, and has been installed at the following boat ramps:</p> <p>Teal Bay; Ngahau Bay; Ngunguru; Whananāki North; Otamure; Mouresses Bay; Tutukaka; Ōakura; Bland Bay; Whangaruru Wharf Road; Ohawini; Mimiwhangata Reserve; Opua; Okiato; Waitangi River; Tapeka Point; Waipapa Landing; Kerikeri Cruising Club; Opito Bay; Rawhiti; Kororareka; Kaimarama Bay; Te Uenga Bay; Windsor Landing</p> <p>Pamphlets and collateral have been created (with input from hapū representatives) and circulated to the community by hapū at Te Uenga, Kororareka and Kaimarama boat ramps, with wider messaging delivered by key stakeholders (DOC, MPI, marinas,</p>

				<p>dive and snorkel charters), and also via staff presence at community maritime events. Pamphlet stocks were left at proximate campgrounds to communicate to holiday makers over the summer period.</p> <p>Hapū mandated representatives endorsed contracting vessels for on-water presence over the summer period to assist with educating the boating public on the new fishing and take restrictions. Pamphlets and collateral are used in on-water surveillance for positive messaging.</p> <p>Russell Radio have been advertising the marine protection rules since 1 December 2023.</p> <p>The Rāhui Tapu boundary coordinates are available on MarineMate, Navionics, and NZ Fishing Rules boating applications, and have been notified by LINZ for inclusion on the charts.</p>
		Staff to report on further progress to a future Working Party meeting	Nicola	<p>Staff have been working with the mandated representatives of Ngati Kuta and Patukeha (Rakaumangamanga), and Te Uri o Hikihiki (Mimiwhangata) on implementation of the new rules. Te Whanau Whero hapū (who also hold mana whenua over a portion of the Mimiwhangata Rāhui Tapu but were not involved in the Environment Court appeal) have recently appointed mandated representatives to hui with NRC and Te Uri o Hikihiki.</p> <p>NRC has engaged an environmental monitoring officer to manage compliance actions/planning with hapū, and enforcement processes are in development.</p> <p>NRC has been collaborating with DOC and MPI on implementation of the marine protection rules for a combined approach to the respective interests and activities undertaken in the rāhui tapu.</p> <p>NRC have been in discussions with MPI in relation to the commercial fishing restrictions, with a reporting process covering activity in the area to be established over the coming months.</p> <p>Te Uri o Hikihiki mandated komiti has sought funding from NRC of \$55,000 for ecological monitoring for the 2023/24 financial year. Staff will work with Te Uri o Hikihiki and Te Whanau Whero on that application, with wānanga to be scheduled to discuss and formalise wider planning initiatives for the Mimiwhangata Rāhui Tapu. Wider planning discussions have commenced with Rakaumangamanga Rāhui Tapu representatives, who will hui with hapū to discuss the strategic pou for the</p>

					<p>Rakaumangamanga Rāhui Tapu and year one priorities in terms of education, compliance and ecological monitoring. A formal planning document is in development, however hapū capacity is currently limited due to the Caulerpa response.</p> <p>In February 2024 Auckland University undertook a survey of long-spined sea urchin in the Rakaumangamanga Rāhui Tapu. A report on the findings will be provided. As hapū representatives for both Rāhui Tapu may not be in a position to develop with NRC formal implementation plans prior to the end of this financial year, staff are in the process of preparing a plan which sets out NRC's proposed approach to implementation of the marine protection rules. This plan will be a living document, subject to change pending identification of hapū aspirations. An update on progress has been circulated to iwi entities, Ngātiwai Trust Board and Te Rūnanga ā Iwi Ō Ngāpuhi, with an offer to meet if desired.</p>
21 February 2023	Update on Wetland Mapping Project (Item 4.5)	Comms plan to be developed for Working Party to consider. Wetland mapping in progress through Biospatial.	Justin Murfitt	Ongoing	<p>Draft wetland maps are expected to be delivered by the end of March – an internal quality review is expected to take 2 weeks and finalised maps provided by the end of April 2024. The maps will form a key part of the wetland inventory required by the National Policy Statement for freshwater Management 2020.</p> <p>It is recommended that the wetland maps and associated comms plan be workshopped with full council once maps are finalised given the working party schedule does not align with these timeframes.</p>
31 August 2022	Lake Taharoa update	<p>Update on investigation around significant submerged vegetation loss recorded in Lake Taharoa in March 2023.</p> <p>Staff to work with iwi and hapū on Lake Taharoa domain bylaws to focus on biosecurity checks summer 2023-2024</p>	<p>Lisa Forester/ Jacki Byrd</p> <p>Lisa Forester/Jacki Byrd</p>	ongoing	<p>Significant submerged vegetation loss was recorded in Lake Taharoa (Kai Iwi lakes) in March 2023. Cyclone Gabrielle was found to have caused impacts and monitoring continues. Diving was undertaken again in October 2023 to see if the submerged vegetation in Lake Taharoa had recovered. Little change was observed with the lake remaining largely devegetated.</p> <p>Biosecurity and Environmental Services staff attended a meeting of the Taharoa Domain Governance Committee on November 14 2023 to present on the threat of gold clam introduction, which had recently be found in NZ in the Waikato. The committee passed a motion to recommend to the Kaipara District Council to support a temporary closure of Lake Taharoa to power boats, however this recommendation was not passed by Council. Because of the risk of visiting power boats bringing gold clam north, agencies including NRC staff and mana whenua, stepped-up on-site biosecurity checks and Check, Clean, Dry advocacy every day at the lakes over the summer period including installation of temporary boat and trailer wash down facilities. Interviews with boaties found that a small number of</p>

		The water quality monitoring team will be undertaking monitoring of pollutants over a 12 week period during safe swim monitoring at Lake Taharoa	Lisa Forester/Jacki Byrd	<p>boats had been brought north from the Waikato, so gold clam introduction still represents a risk.</p> <p>A continuous monitoring buoy was installed in June 2023 to monitor water quality including low dissolved oxygen at depth indicating summer stratification. These results are still coming in and will be reported on at the next meeting. NRC water quality monitoring team also undertook polycyclic aromatic hydrocarbons (from power boats), and zinc (from sunscreen) and total suspended solids monitoring for 12 weeks during the safe swim season to help determine if there are impacts from boating, swimming and sunscreen on lake water quality. Despite the lakes being very busy with boating and swimming over the summer, hydrocarbon and zinc levels were below the detection limits throughout the monitoring period.</p>
--	--	--	--------------------------	--

Unconfirmed

TITLE: **Biosecurity Operational Plan 2024-2025**

From: Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity

Authorised by Group Manager/s: Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 11 March 2024

Whakarāpopototanga / Executive summary

The attached draft Biosecurity Operational Plan 2024-2025 (hereafter referred to as the Operational Plan) has been prepared as a requirement of the Biosecurity Act 1993 section 100B and should be read in conjunction with the Northland Regional Pest and Marine Pathway Management Plan 2017–2027 (hereafter referred to as the Pest Plan). It includes all species listed in the Pest Plan and describes performance measures and how biosecurity programmes will be implemented during the 2024/2025 financial year.

Ngā mahi tūtohutia / Recommended actions

1. That the report 'Biosecurity Operational Plan 2024-2025 by Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity and dated 8 March 2024, be received.
 2. That the working party support the Operational Plan being presented to council for approval in accordance with the Biosecurity Act section 100B.
 3. That the working party authorises the GM Biosecurity to make any necessary minor drafting, typographical, rounding, or presentation corrections to the Operational Plan
-

Background/Tuhinga

The Biosecurity Operational Plan aims to be a concise and accurate reflection of the content of the Pest Plan. Reviews of the Operational Plan can be undertaken during the year to align with any changes in external funding that may arise.

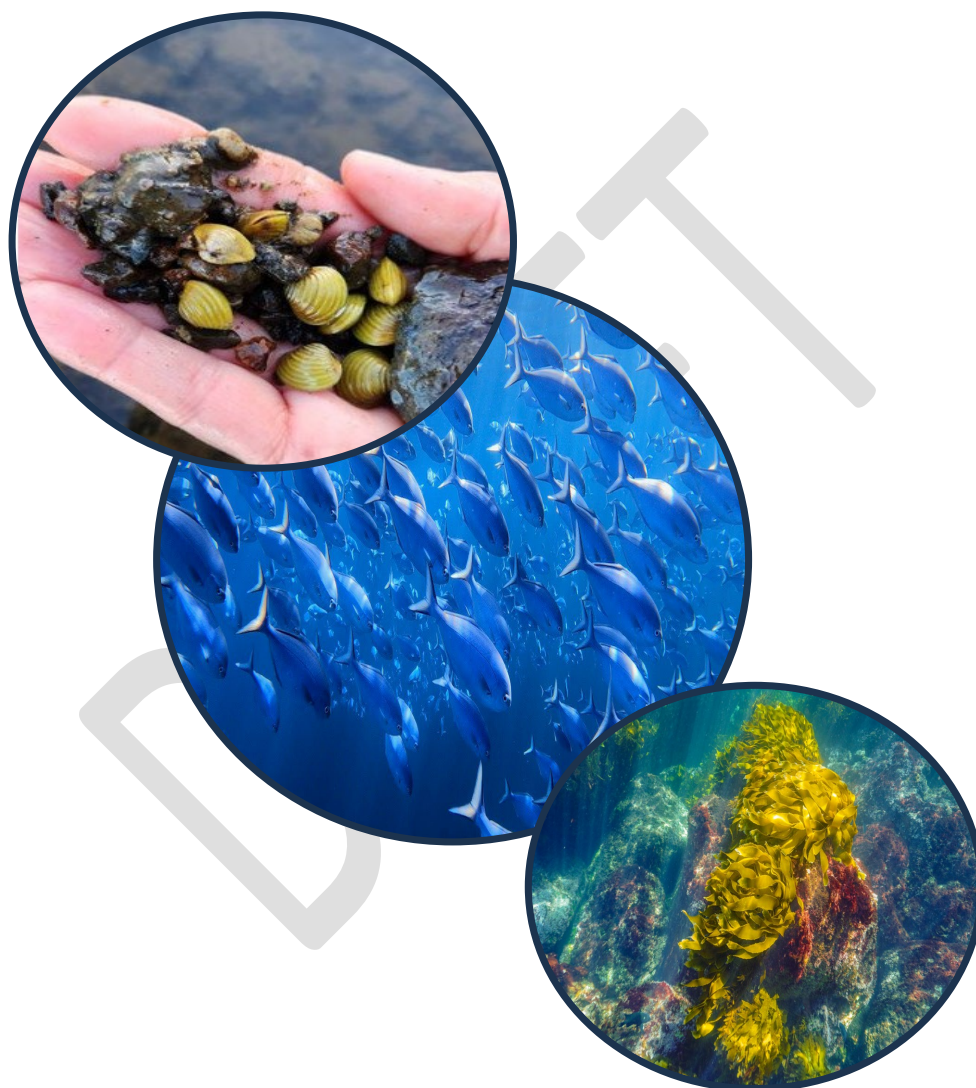
Section 100B of the Biosecurity Act states that the Operational Plan will be completed within three months of the end of the financial year. It must be presented to council for their approval within that timeframe and this is an opportunity for the Biosecurity and Biodiversity Working Party to provide their feedback.

Ngā tapirihanga / Attachments

Attachment 1: 2024-2025 Biosecurity Operations Plan - Working Draft 1 [↓](#) 

Draft 1

Biosecurity Operational Plan 2024-2025 Mahere tautahi whakahaumaru taiao



Tē tōia, tē haumatia

Contents | Ihirangi

1. Introduction Tīmatanga kōrero	3
2. Implementation Programmes Whakatinana te hōtaka	4
3. Pest species in the plan Ngā riwaha katoa i te rautaki	5
4. Financial summary Whakarāpopoto ā pūtea.....	8
5. Team key performance indicators Ngā tohu paetawhiti o te roopū	9
6. Pest plants Ota-ota rāwaho riha	11
7. Pest animals Karerehe rāwaho riha	15
8. Diseases and pathogens Ngā mate uru tāme me ngā tukumate.....	1919
9. Freshwater pests Riha wai māori.....	211
10. Marine pathways management plan Rautaki wai moana	255
11. Operational plan reporting Ripoata mahere tautahi whakahaumarū whakamahi	277
12. Operational plan review Arotake mahere tautahi whakahaumarū whakamahi.....	277



Draft 1

1. Introduction | Timatanga kōrero

Tē tōia, tē haumatia

Nothing can be achieved without a plan, workforce, and way of doing things.

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 (Pest Plan). 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.

The Pest Plan describes the biosecurity activities that will be undertaken throughout Northland and outlines the management or eradication of specific organisms and/or marine pest pathways. Doing so will:

- minimise the actual or potential adverse or unintended effects associated with these organisms and/or pathways, and,
- maximise the effectiveness of individual actions in managing pests or pathways through a regionally coordinated approach.

Associated Documentation

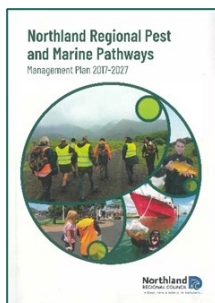
Regional Pest and Marine Pathway Management Plan 2017-2027 (*the Pest Plan*)

This operational plan has been prepared as a requirement of the Biosecurity Act 1993 section 100B and should be read in conjunction with the Pest Plan. It includes all species listed in the Pest Plan. The plan describes the nature and scope of activities the Council intends to undertake in the implementation of the Pest Plan for the period 1 July 2021 – 30 June 2022. For full details of pest management objectives, aims, principal measures to manage pests, and pest management rules, please refer to the Pest Plan.

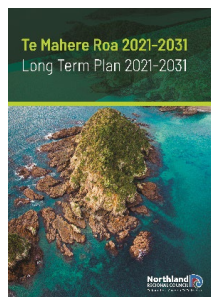
Northland Regional Council Long Term Plan 2021-2031

This operational plan is integrated with council's Annual and Long Term plans which prescribe the funding and resources allocated to programmes within the plan. Council's Long Term Plan 2021-2031 maintains a focus on pest management activities in Northland. The plan states that the council will provide the services of:

- Reducing the impact of introduced pests on the environment, economic and social values; and,
- Protect the health of forests and lakes through effective regional pest control; and,
- Promoting community involvement in pest management, including tangata whenua, communities, district councils and other stakeholders.



<https://www.nrc.govt.nz/media/uhudlio4/northlandregionalpestandmarinepathwaymanagementplan20172027.pdf>



<https://www.nrc.govt.nz/media/wsidxsbe/ina-long-term-plan-2021-to-2031.pdf>

Draft 1

2. Implementation Programmes Whakatinana te hōtaka

The Pest Plan is implemented by programmes as detailed below:



Draft 1

3. Pest species in the plan Ngā riwha katoa i te rautaki

Northland's Pest Plan contains **143** species. A breakdown on the number and types of pests along with a detailed listing of the pests included is detailed in the tables below and overleaf.

Type of Pest	Number of Species (or groups of species) in the Pest Plan					Total
	Exclusion	Eradication	Progressive Containment	Sustained Control	Banned from sale or distribution	
Plants	13	22	5	18	35	93
Animals	11	3		12		26
Diseases				1		1
Fresh water	3	8	3	2		16
Marine				7		7
Total	27	33	8	40	35	143



Draft 1

Pest species included in the plan

Pest Type	Exclusion Species	Eradication Species	Progressive Containment
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	Akebia Balloon vine Bat-wing passionflower Cape tulip Cathedral bells Chilean rhubarb Evergreen buckthorn Field horsetail Firethorn Gypsywort Lesser knotweed Mexican feather grass Mickey mouse plant Monkey musk Nassella tussock Nutgrass Royal fern Spartina species including: <i>Spartina alterniflora</i> <i>Spartina anglica</i> <i>Spartina townsendii</i> Wilding kiwifruit Yellow flag iris	African feather Grass Lantana (all varieties) Manchurian wild rice Mile-a-minute Pultenaea
Animals	Bearded dragon Big headed ant Blotched blue tongued skink Common blue tongued skink Indian ring-necked parakeet Rainbow lorikeet Rook Sulphur crested cockatoo Wallaby (all <i>Macropus</i> , <i>Petrogale</i> and <i>Wallabia</i> species)	Feral deer including all species and hybrids of: <i>Cervus</i> <i>Dama</i> <i>Odocoileus</i>	
Disease			
Fresh water	Entire marshwort Orfe Water poppy	Eastern water dragon Eel grass Nardoo Red-eared slider turtle Salvinia Senegal Tea Snake-necked turtle Water hyacinth	Koi carp Perch Tench
Marine			

Draft 1

Pest Type	Sustained Control	Banned from Sale and Distribution	
Plants	Bathurst bur Brazillian Pepper tree Gorse Gravel Groundsel Phoenix palm Privet (Ligustrum) including: <i>L. lucidum</i> (tree privet) <i>L. sinense</i> (Chinese privet) <i>L. ovalifolium</i> (privet) <i>L. vulgare</i> (common privet) Queen of the night Rhus tree Wild ginger including: Yellow ginger Kahili ginger Wilding conifers including: <i>Pinus contorta</i> Douglas fir Maritime pine Radiata pine Woolly nightshade	Agapanthus Black-eyed Susan Broom Brush wattle Buddleia Camphor laurel Cape honey flower Cape ivy Century plant Coastal banksia Cotoneaster incl: <i>C. glaucophyllus</i> <i>C. franchetii</i> Eleagnus Elephant's ear English ivy Furcraea German ivy Greater bindweed Hakea Hakea Himalayan fairy grass Himalayan honeysuckle	Jasmine Kangaroo acacia Lily of the valley vine Oxylobium Paperbark poplar Periwinkle Prickly mooses incl: <i>Acacia verticillata</i> subsp. <i>cephalantha</i> <i>A. v. subsp. ruscifolia</i> Sexton's bride Sharp rush Sycamore Sydney golden wattle Taiwan cherry Velvet groundsel
Animals	Argentine ant Possum Darwin's ant Rabbit Feral and stray Rodents incl: cats Norway rat Feral goat Ship rat Feral pig Mustelids incl: Ferret Stoat Weasel		
Disease	Kauri dieback		
Fresh water	Brown bullhead catfish Rudd		
Marine	Asian paddle crab Australian droplet tunicate Japanese mantis shrimp Mediterranean fanworm Pyura sea squirt Styela sea squirt Undaria seaweed		

Draft 1

4. Financial summary Whakarāpopoto ā pūtea

Council's Long Term Plan 2021 - 2031 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 also been allocated to supplement council investment in pest management.

Biosecurity Budget 2024- 2025	Long Term Plan
Biosecurity Pest Management rate	\$9.49M
External funding	\$4M
Total Biosecurity Expenditure	\$13.49M

NOTE: Budget is an estimate at this stage. This will be subject to changes as the Long- Term Plan forecasts are finalised and LTP decisions are made later in the year.

Draft 1

5. Team key performance indicators Ngā tohu paetawhiti o te roopū

Biosecurity has several key performance measures applicable over all or some of the department as detailed in the table below.

Additional focussed key performance measures applicable within specific areas of the Biosecurity are detailed as required in Sections 6 – 10 of this operational plan.

Department area	Key performance measures	How will this be measured?
Whole department	Community engagement Total number of engagement events and other social media interactions is maintained or is greater than the previous year.	Events attended and social media interactions recorded and reported annually.
Whole department	Bicultural collaboration: Number of relationships and collaborative projects that are underway with hapū / whanau / iwi increases by a minimum of 5% annually.	Recorded via council databases.
Whole department	Bicultural capability All permanent staff will have achieved competency level 1 in council's Te Whāriki workshops.	Human resources records.
Pest Plants Pest Animals Freshwater Pests	Identify new sites Identify new sites of exclusion, eradication, and progressive containment pest through passive and active surveillance by council staff, the public, or through regional surveillance.	Evidence of the records of new sites reported and recorded.
Pest Plants Pest Animals Freshwater Pests	Exclusion incident investigation Initial investigations for all reported sightings and/or discoveries of exclusion species undertaken within 5 working days.	Reported via council database.
Pest Plants Pest Animals Freshwater Pests	Exclusion incident response An initial response plan developed and implemented for any new incursion of an exclusion species within 20 working days of confirmation of species.	Evidence of plans developed.

Draft 1

Department area	Key performance measures	How will this be measured?
Pest Plants Freshwater Pests	Eradication incident investigation and response Initial investigations for all reported sightings and/or discoveries of eradication species undertaken within 10 working days and control actions completed within 20 working days.	Reported via council database.
Pest Plants Freshwater Pests	Progressive containment incident investigation and response Initial investigations for all reported sightings and/or discoveries of Progressive Containment species (outside of containment zones) undertaken within 10 working days and decisions documented within 20 working days.	Council database.
Pest Plants Pest Animals Freshwater Pests	Request response time Response to requests from the public on sustained controlled pests will be responded to within 20 working days.	Reported via council database.
Pest Plants	Plant retail outlet compliance All known plant outlets in Northland are inspected annually for exclusion, eradication, progressive containment and sustained control species, and species banned under the National Pest Plant Accord.	Record of plant outlets visited by staff and any non-compliances found.

Draft 1

6. Pest plants | Ota-ota rāwaho riha

6.1 Exclusion plants

Eradication of infestations of exclusion plants will be attempted by the council in conjunction with relevant Crown agencies, tangata whenua, and other stakeholders where practicable.

Council will provide training to relevant council staff and stakeholders about the identification of the exclusion pests to assist in early detection. Council will provide advice, attend events, and undertake publicity campaigns to increase public awareness of exclusion pests.

Regulatory programmes include:

- Enforcement of rules relating to exclusion plants.
- Eradication of exclusion plants found in Northland.
- Inspection / enforcement of rules relating to Plant nurseries and retail outlets (National Pest Plant Accord).

Non-regulatory services include:

- Supporting eradications undertaken by other Crown agencies, tangata whenua, and other stakeholders.
- Provide advice about how to manage exclusion plants.
- Support, attend and provide public weed control workshops to raise awareness and provide training to relevant stakeholders.
- Manage contractors relating to control of exclusion plants.

Eradication Plants

Control work will be undertaken annually by council staff / contractors / partners and/or stakeholders and detailed work plans will be developed for specific pests.

Regulatory programmes include:

- Enforcement of rules relating to eradication plants.
- Eradication of species listed within the eradication programme.
- Inspection / enforcement of rules relating to Plant nurseries and retail outlets (National Pest Plant Accord).

Non-regulatory services include:

- Support eradications undertaken by other Crown agencies, tangata whenua, and other stakeholders.
- Provide advice about how to manage eradication plants.
- Support, attend and provide public pest control workshops to raise awareness.
- Manage contractors relating to control of eradication plants.



Eradication plant bat-wing passionflower overgrowing a stone wall.

Draft 1

Key performance measures

Key performance measures	How will this be measured?
Best practice management All management sites visited on scheduled best practice rotation (based on biological characteristics of each species and defined in the species programme record in the council's IRIS database).	Reported from council database.
Progress towards eradication Annual decrease in number of adult plants observed or the infestation area at existing management sites.	Reported from council database.

Progressive containment plants

Council staff will aim to eradicate populations outside the containment zone and reduce the size of the containment zone through a variety of control methods, including but not limited to spraying.

Council staff will also support communities to reduce the impact of progressive containment pests through several regulatory and non-regulatory biosecurity programmes.

Regulatory programmes include:

- Enforcement of rules relating to progressive containment plant species.
- Eradication and reduction of infestations of progressive containment plants may be attempted by the council in conjunction with relevant Crown agencies, tangata whenua and stakeholders.

Non-regulatory services include:

- Develop and support community pest control programmes.
- Develop and support biosecurity environment fund projects.
- Support community, mana whenua, and landcare groups.
- Provide advice about how to manage progressive containment species.
- Support, attend and provide public weed control workshops.
- Provide public weed workshops.
- Support biocontrol for progressive containment species.

Key performance measures

Key performance measures	How will this be measured?
Best practice management 100% of council managed sites visited on scheduled best practice rotation (based on biological	Evidence of schedule and visits made reported back.

Draft 1

Key performance measures	How will this be measured?
characteristics of each species and defined in the species programme record in the council's IRIS database).	
Progress towards eradication Annual decrease in number of adult plants or the infestation area at existing council managed sites.	Reported from council database.

Sustained Control Plants

Council will provide advice to relevant road and rail authority staff regarding development and implementation of management plans for sustained control plants. Sustained control plants are managed through both regulatory and non-regulatory biosecurity programmes.

Regulatory programmes include:

- Enforcement of rules relating to sustained control plant species.
- Enforcement of Good neighbour rules.
- Inspection / enforcement of rules relating to Plant nurseries and retail outlets (National Pest Plant Accord).
- Inspection / enforcement of rules relating to Quarries.
- Enforcement of rules relating to Road and rail, and development and implementation of management plans).

Non-regulatory services include:

- Develop and support community pest control programmes and high value areas.
- Develop and support biosecurity environment fund projects.
- Support community, mana whenua, and land care groups.
- Provide advice about how to manage sustained control species.
- Support, attend and provide public weed control workshops.
- Provide public weed workshops.
- Continuing investing in deployment and development of biocontrol agents for sustained control plants.

Key performance measure

Key performance measures	How will this be measured?
<p>Road and rail five year weed management plans All road and rail authorities have five year weed management plans or prioritised annual plans approved and implemented.</p> <p>15% of all operating commercial quarries are inspected annually to determine compliance with Rule 6.4.5, Rule 6.4.7, and Rule 6.4.15”</p>	<p>Evidence of management plans in place and monitored showing reduction in impacts of pest plants.</p> <p>Evidence held on council database</p>
<p>Best practice guide Best practice guide developed for all road and rail authorities</p>	<p>Evidence of a guide developed.</p>



Blue morning glory overgrowing road signage in Tikipunga.

Draft 1

7. Pest animals | Karerehe rāwaho riha

7.1 Exclusion animals

Eradication of infestations of exclusion animals will be attempted by the council in conjunction with relevant Crown agencies, tangata whenua, and other stakeholders where practicable.

Council will provide training to relevant council staff and stakeholders about the identification of the exclusion pests to assist in early detection. Council will provide advice, attend events and undertake publicity campaigns to increase public awareness of exclusion pests.

Regulatory programmes include:

- Enforcement of rules relating to exclusion animals.
- Eradication of exclusion animals found in Northland.

Regulatory programmes include:

- Support eradications undertaken by other Crown agencies, tangata whenua, and other stakeholders.
- Provide advice about how to manage exclusion animals.
- Support, attend and provide public pest control workshops to provide training and raise awareness to assist in early detection.
- Manage contractors relating to control of exclusion animals.
- Council will provide advice, attend events, and undertake publicity campaigns to increase public awareness of exclusion animals.



Exclusion pest Indian ring-necked parakeet seen at Whangārei Heads.

Draft 1

7.2 Eradication animals

These pests all have the potential to establish widely in the region and can cause 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.

Eradication of the eradication pests will be undertaken by the council in conjunction with relevant Crown agencies, tangata whenua, and other stakeholders where practicable.



Trail camera footage of a sika deer near Elliot's Bay in July 2021.

Regulatory programmes include:

- Enforcement of rules relating to eradication animals.
- Eradication of species listed within the eradication programme.

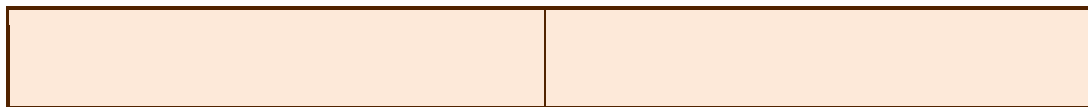
Non-regulatory services include:

- Support eradications undertaken by other Crown agencies, tangata whenua, and other stakeholders.
- Provide advice about how to manage eradication animals.
- Support, attend and provide public pest control workshops to raise awareness.
- Manage contractors relating to control of eradication animals.

Key performance measures

Key performance measures	How will this be measured?
Deer incident response and investigation 100% of deer incidents are responded to within 48 hours.	Incidents and time to respond are recorded in council databases.
Deer location records Known deer populations are surveyed and mapped across Northland.	Data recorded on council mapping software.
"No wild Deer in Te Taitokerau" NRC and DOC design a joint advocacy campaign, involving other stakeholders as necessary (e.g.: iwi, hapu, Game Animal Council), to promote the Strategy Vision of "No wild populations of deer in Northland"	Develop a joint NRC/DOC advocacy campaign.
Best practice management NRC maintains at least annual contact with Northland deer farmers to support the industry in best practice. Reducing the farm deer escapes annually.	Meetings noted in monthly reporting and council database

Draft 1



7.3 Sustained control animals

Sustained control animals are generally managed through non-regulatory biosecurity partnerships, regulatory measures are used when required.

Regulatory programmes include:

- Enforcement of rules relating to sustained control animal species.

Non-regulatory services include:

- Develop and support community pest control programmes and high value areas.
- Develop and support biosecurity environment fund projects.
- Develop and support significant biosecurity partnerships (eg. Northland Regional Council-Kiwi Coast Partnership).
- Support community, mana whenua, and landcare groups.
- Provide advice about how to manage sustained control animals.
- Support, attend and provide public pest control workshops.
- Provide selected pest control materials.
- Manage contractors relating to sustained control animal control.
- Staff will assist landowners and agencies to develop management plans to manage sustained control animals in Northland.

Key performance measures

Key performance measures	How will this be measured?
Land area in CPCAs Increase in hectares of land under CPCAs per annum (increase by 5000 ha).	Evidence of management plans which show hectares of CPCAs.
Council supported programmes Measure annual outputs of council supported programmes – may include: <ul style="list-style-type: none"> • Number of traps issued. • Number of kills recorded or post control pest densities, where known. • Number of Biofund projects approved. • Number of Community Pest Control Areas approved. • Trends in indicator species (eg. kiwi call counts and pateke flock surveys). 	Council database records.
Contractors specifically engaged by council for possum control will meet a target of 5% residual	Possum index monitoring.

Draft 1

Key performance measures	How will this be measured?
trap catch index or 15% wax tag index in council led operations. Council supported programmes undertaking possum control are achieving agreed targets set in community pest control area agreements.	Evidence of targets met in relevant CPCA agreements.

7.4 Predator Free Whangārei and Pēwhairangi Whānui (Bay of Islands.)



Predator Free Whangārei and Pēwhairangi Whānui aims to protect, restore, and enhance thousands of hectares of Northland’s native forests, coastal habitats, and wetlands, allowing for greater protection and enhancement of threatened species of native fauna and flora.

It will link and connect several community led, landscape scale predator control programmes delivering environmental awareness and enhancement. . The project will completely remove possums from 8,600 ha of the Whangārei Heads area, and 11,600 ha in Pēwhairangi Whānui, and utilise the narrow neck of the numerous peninsula inlets and streams to protect from reinvasion. Elimination will be achieved by 2025 and 2026 respectively.

Key performance measures

Key performance measures	How will this be measured?
Posssum eradication Percentage of project area in knockdown / removal phase.	Area under active management
Posssum eradication surveillance Percentage of project area in surveillance phase (detection and response).	Area under surveillance



Possums caught on trail camera at Taurikura.

Draft 1

8. Diseases and pathogens

Ngā mate uru tāme me ngā tukumate

The *Phytophthora agathidicida* programme is a multi-agency programme involving the Ministry for Primary Industries, Department of Conservation, Northland Regional Council, Auckland Council, Waikato Regional Council, Bay of Plenty Regional Council, and tangata whenua.

The programme will utilise scientific and technological advancements to help reduce the spread of *P. agathidicida* including mātauranga Māori.

Regulatory programmes include:

- Enforcement of rules relating to sustained control disease.
- Development of high risk *P. agathidicida* management plans.
- Council staff and/or their contractors will visit all places on private land suspected of containing *P. agathidicida* to undertake further assessment or testing.

Non-Regulatory Services include:

- Support community, mana whenua, and landcare groups.
- Provide advice about how to manage sustained control disease.
- Support, attend and provide public *P. agathidicida* workshops.
- Provide materials to manage *P. agathidicida*.
- Manage contractors relating to sustained control species.

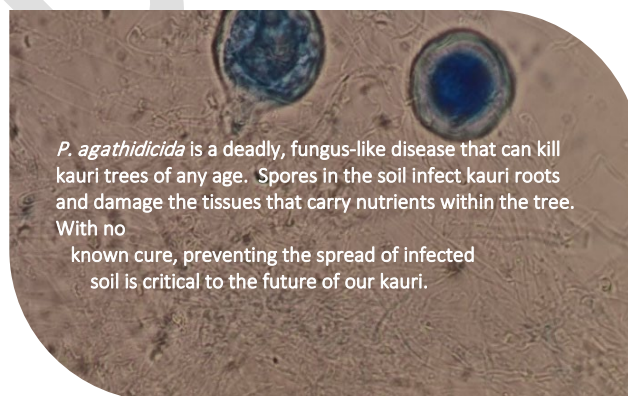


Boardwalk wending its way through young trees on the Kauri Mountain section of the Te Araroa trail.

Draft 1

Key performance measures

Key performance measures	How will this be measured?
Soil Sampling 100% of remaining aerial survey sites on private land will be sampled and a minimum of 50% of high risk sites will have management plans	Evidence of the number of sites sampled and <i>P. agathadicida</i> management plans completed will be recorded on council databases.
Follow up soil sampling Sample five previously sampled sites in order to reconfirm the status of the site with regard to the presence of <i>P. agathadicida</i> .	Evidence of the number of sites sampled recorded on council databases.
Hygiene stations A minimum of 5 hygiene stations installed at priority sites.	Evidence of stations recorded on council database
<i>P. agathadicida</i> distribution Maintain a record of distribution of <i>P. agathadicida</i> disease across Northland.	Recorded on national and council data systems.
Incident response times All incidents are recorded, and a response plan is developed within 20 working days.	Evidence held on council database.
Community engagement Deliver a minimum of ten public engagement events annually	Evidence held on council database



Draft 1

9. Freshwater pests | Riha wai māori

9.1 Exclusion freshwater pests

Regulatory programmes include:

- Enforcement of rules relating to exclusion freshwater pests.
- Eradication of exclusion freshwater pests found in Northland.
- Inspection / enforcement of rules relating to Plant nurseries and retail outlets (National pest plant accord).

Non-Regulatory programmes include:

- Support eradications undertaken by other Crown agencies, tangata whenua, and other stakeholders.
- Provide advice about how to manage exclusion freshwater species.
- Support, attend and provide public pest control workshops to raise awareness.
- Manage contractors relating to control of exclusion species.
- Provide training to relevant council staff and stakeholders about the identification of the exclusion pests to assist in early detection.
- Provide advice, attend events, and undertake publicity campaigns to increase public awareness of exclusion pests.

Key performance measures

Key performance measures	How will this be measured?
<p>Incursion response plans</p> <p>Develop surveillance and incursion response plan for at least one vulnerable high value biodiversity and/or culturally significant site annually.</p>	<p>Reported on through council database</p>

Draft 1

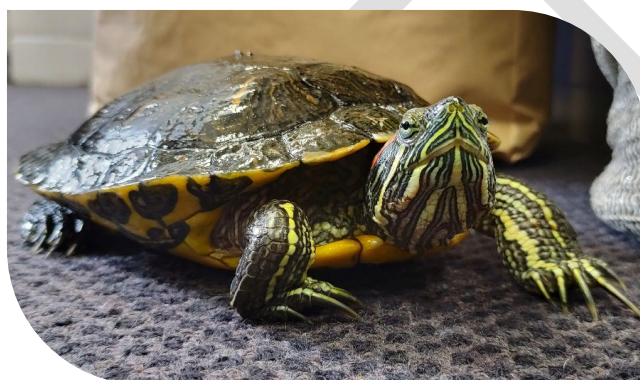
9.2 Eradication freshwater pests

Regulatory programmes include:

- Enforcement of rules relating to eradication freshwater species.
- Eradication of species listed within the eradication programme.
- Inspection / enforcement of rules relating to plant nurseries and retail outlets (national pest plant accord).

Non-Regulatory programmes include:

- Support eradications undertaken by other Crown agencies, tangata whenua, and other stakeholders.
- Provide advice about how to manage eradication freshwater species.
- Support, attend and provide public pest control workshops to raise awareness.
- Manage contractors relating to control of eradication freshwater species.



*Eradication freshwater pest
– red eared slider turtle.*

Key performance measures

Key performance measures	How will this be measured?
<p>Management site visit 100% of council freshwater pest fish management sites visited on scheduled best practice rotation (based on biological characteristics of each species and defined in the species programme record in the council's IRIS database).</p>	<p>Evidence of schedule and visits made reported back.</p>

Draft 1

9.3 Progressive Containment Freshwater Pests

Regulatory programmes include:

- Enforcement of rules relating to progressive containment control freshwater species.
- Eradication and/or reduction of infestations of the progressive containment freshwater pests may be attempted by the council in conjunction with relevant Crown agencies, tangata whenua, and other stakeholders where practicable.

Non-regulatory services include:

- Council staff will assist landowners to develop management plans.
- Council will provide training to relevant council staff and stakeholders in the identification of pests to assist in early detection.
- Council staff will provide advice, attend events, and undertake publicity campaigns to increase public awareness of pests.
- New technologies and methods will be investigated and introduced where possible.



Biosecurity staff setting nets after a reported koi carp sighting at Lake Taharoa.

Key performance measures

Key performance measures	How will this be measured?
Distribution record Maintain a distribution record of progressive containment pest fish species.	Reported from council database.
Annual status reports Training, surveillance, control, and eradication actions attempted for progressive containment pest fish species will be reported annually.	Summary included in the annual Biosecurity Operations Plan report.

Draft 1

Key performance measures	How will this be measured?
<p>Community Engagement</p> <p>Attend at least 2 community events (annually) to advocate and promote public awareness and biosecurity best practice around pestfish</p>	<p>Engagement events reported on in annual Biosecurity Operations Plan report</p>
<p>Management tools and technology</p> <p>Investigate the use of new management tools and technology around pestfish detection or control</p>	<p>Implemented and reported on through annual Biosecurity Operations Plan report</p>

9.4 Sustained Control Freshwater Pests

Regulatory programmes include:

- Enforcement of rules relating to sustained control freshwater species.

Non-regulatory services include:

- Council staff will provide education and advice to owners, occupiers, and the public about the freshwater sustained control pests and how to control them.
- Council will provide training to relevant council staff and stakeholders in the identification and control of the sustained control freshwater pests.
- Council will provide advice, attend events, and undertake publicity campaigns to increase public awareness of these freshwater pests.



Rudd - sustained control freshwater pest.

Draft 1

10. Marine pathways management plan Rautaki wai moana

Background of the Marine Pathway Management Plan

Over the life of the Pest Plan (including the Marine Pathway Management Plan), council has the following aims:

- To increase the number of vessel owners and/or persons in charge of vessels complying with the pathways plan rules.
- To see a reduction in new marine pest introductions to Northland.
- To see a reduction in the rate of spread of established sustained control marine pests between designated areas within Northland.
- To help marine stakeholders, coastal marine area occupiers, vessel owners and the public to gain knowledge and skills to help reduce the impacts and spread of sustained control pests and to understand the risk hull biofouling poses to marine pest spread.

Since 2010 council has had a species led approach to managing marine pests. However, identifying marine pests and potential risk organisms for Northland is difficult so rather than relying solely on the species led approach, council is addressing a universal vector of spread. Mediterranean fanworm is just one of many species that has entered the region via hull biofouling, with over 100 vessels found infected with fanworm in uninfected Northland harbours since 2012. Taking a proactive approach and encouraging cleaner hulls through a MPMP will result in fewer vessels carrying marine pests and other biofouling to the region and reduce the risk of new marine pest incursions.

The programme includes the following species and pathways:

Marine pests and pathway	
Marine pathway plan	Hull fouling: Level of Fouling 2 or 'light fouling'*
Sustained control marine pests	Asian paddle crab Australian droplet tunicate Japanese Mantis Shrimp Mediterranean fan worm Pyura sea squirt Styela sea squirt Undaria seaweed

**light fouling is defined as: small patches (up to 100 millimetres in diameter) of visible fouling, totalling less than 5% of the hull and niche areas. A slime layer and/or any species of barnacles is allowable fouling.*

Implementation

- Continue with existing communication and advice programmes to assist vessel owners & stakeholders with ensuring compliance with rules.
- The Hull Surveillance Programme will assess a minimum of 2000 vessels annually. Any vessel carrying a named marine pest in an area where that pest is not widely established, will be formally directed to make a plan to have the vessel cleaned. In addition, owners of vessels that exceed the MPMP fouling threshold will be advised and issued a warning letter encouraging them to have the vessel cleaned and explaining that enforcement action will follow if they fail their next inspection and move between designated places.
- Enforcement action on vessels will be tracked in IRIS (councils online incident logging database).
- Owners of structures that constitute high risk in terms of marine pest spread will also be subject to consideration and assessment for the need of a marine pest management plan in accordance with species rules.

Performance Targets and Measures

Key performance measures	How will this be measured?
<p>Vessel compliance reporting Compliance with the marine pest and pathway plan is recorded and trends over the duration of the plan are analysed.</p>	Compliance with the pathway plan and all incidents will be recorded and reported monthly.
<p>Hull survey The vessel hull surveillance programme will inspect a minimum of 2000 vessel hulls annually.</p>	Evidence of hulls surveyed recorded on council databases, or national databases as they become available.
<p>Community engagement A minimum of two engagement activities annually are conducted to facilitate an increase in awareness of the risk hull fouling poses to the spread of marine pests.</p>	Engagement events will be recorded on council databases
<p>New marine pests Introductions of new marine pests to Northland and spread of established pests to new designated areas within Northland are recorded and trends over the duration of the plan are analysed.</p>	<p>Number of incidents and reports of marine pests will be recorded and reported monthly.</p> <p>Surveillance activities will be recorded to contribute to an assessment of surveillance effort over the duration of the plan.</p>
<p>Incident response All significant incidents are recorded, and a response plan is developed and implemented within 5 working days.</p>	Incidents recorded on council databases.



Young visitors to the marine Biosecurity display at an Experiencing Marine Reserves snorkelling event.

Draft 1

11. Operational plan reporting Ripoata mahere tautahi whakahaumaru whakamahi

Council will produce a report on the operational plan and its implementation not later than 5 months after the end of each financial year.

A copy of this report will be provided to council.

12. Operational plan review Arotake mahere tautahi whakahaumaru whakamahi

This operational plan will be reviewed periodically as required.

Acknowledgements

Table of contents: Fantail image supplied by Stefan Billings

Northland Regional Council

P 0800 002 004

E info@nrc.govt.nz

W www.nrc.govt.nz



TITLE: Dune Lakes Protection - Update

From: Lisa Forester, Biodiversity Manager and Jacki Byrd, Biodiversity Specialist - Freshwater

Authorised by Group Manager/s: Ruben Wylie, Pou Tiaki Taiao, on 12 March 2024

Whakarāpopototanga / Executive summary

Applications of Reglone® and Aquathol K® to eight dune lakes since 2020 has reduced target freshwater weeds in lakes. In addition, a full programme of treatments aimed at eradication of two aggressive aquatic weeds, hornwort and egeria oxygen weed is planned in three lakes this autumn. A comprehensive programme of other work to protecting, educating about and monitoring Northland lakes has also been undertaken.

Ngā mahi tūtohutia / Recommended actions

1. That the Biosecurity and Biodiversity Working Party note the information in this report
 2. That a further update be provided at a future Working Party meeting
-
-

Background/Tuhinga

Freshwater weed control.

At Lake Ngatu the aquatic weed lagarosiphon (African oxygen weed) was treated via a whole lake treatment using Aquathol K in Spring 2020. The treatment was effective with no lagarosiphon detected since by diver searches. If no weed is found by spring 2025 eradication will be declared.

Hornwort has been an ongoing problem in two lakes on Mt Camel Station. Knockdown of weed mass was achieved by application of Reglone® in the northern lake, followed by three lake treatments using Aquathol K with the aim of eradication. Unfortunately, this has not been as successful as other lakes probably because only 25% of the lake can be treated at a time to comply with EPA requirements, and only during autumn. It appears that in this instance and during the intervening months, the remaining weed grew back. The latest Aquathol K treatment in February 2024 appears to have been effective and a second follow up treatment in April is planned to attempt to kill the remaining hornwort. Due to poor water quality hornwort has not been detected recently in the main body of the South Mt Camel lake however the outlet, which has been flowing to the beach, does contain hornwort and was treated in February 2024 once the outlet stopped flowing.

Hornwort was also discovered in five waterbodies on the Poutō peninsula. Of these, weed knock down was achieved in Lakes Tutaki and Egg using Reglone® and subsequently via effective treatments (at 25% of the lake each time) using Aquathol K. Diver surveys in 2024 in Egg detected no hornwort and only small fragments of hornwort in Tutaki. Lake Egg will be monitored for hornwort for the next five years and treated if necessary. The helicopter company contracted to undertake herbicide spraying withdrew from the project it is planned to use a drone to undertake follow-up treatments in Tutaki and other lakes in April. Tutaki South Pond was treated once with Aquathol K aerially before the access track became impassable preventing follow up treatment. Use of drones from April will allow treatments of this pond to recommence.

Unfortunately, hornwort was also discovered in Lake Karaka, probably having been introduced accidentally by eel fishers or duck hunters. The weed bulked up rapidly causing concern that people coming in off the beach would spread the weed to other waterbodies on the Poutō coast, so lake access points were treated by Aquathol K in January 2023. This was followed up by two 25% lake

treatments in autumn 2023, which reduced the amount of hornwort significantly. Further treatments using a drone are planned in April 2024 aiming for eradication.

Lake Rotokawau (Poutō) is a Regionally Outstanding Waterbody with high ecological values. It has low levels of egeria oxygen weed and a delimitation survey showed that it will be possible to eradicate this weed by hand using divers. Two days of hand weeding were undertaken in December 2022 with more weeding planned for May 2024.

Landowners and mana whenua have either partnered with NRC or been involved in all weed control programmes.

Table 1 summarises the dates, various treatments, and planned treatments in all eight water bodies.

Lake	Dates and treatments				
	2020	2021	2022	2023	2024
Ngatu	Sept	No lagarosiphon found since 2020 whole lake treatment			
Mt Camel North		Nov	Mar	Jan, Mar	Feb, Apr planned
Mt Camel South		No control as lake was discharging to sea			Outlet in Feb
Tutaki (Poutō)		Aug, Nov	Mar	Mar	Apr planned
Tutaki South Pond (Poutō)			Mar	No access	Apr planned
Egg (Poutō)		Nov	Mar	Mar	No hornwort found
Karaka (Poutō)		Hornwort discovered for first time		Jan	Apr planned
				Mar x 2	
Rotokawau (Poutō)		Egeria mapping	Dec		May planned
Lagarosiphon – Aquathol K by airboat					
Hornwort – Reglone® (Diquat) by kayak					
Hornwort – Aquathol K by aerial helicopter					
Hornwort – Aquathol K by kayak					
Hornwort – Aquathol K by aerial drone					
Egeria – hand weeding by divers					

Other work

Since July 2022 Biodiversity staff assisted the Biosecurity Team with pest fish control and grass carp removal in two lakes. Education days were held in two lakes for 121 students from five schools. Te Reo versions of our popular fish identification cards were developed and launched. Kākahi/torewai freshwater mussel dive surveys were undertaken in two Poutō lakes. Individual hui were also held with six iwi partners to discuss their aspirations for the coming years and how the council can support them with lakes protection work in their rohe.

Annual ecological surveys have been conducted in Northland lakes for more than 20 years with over 100 lakes being monitored every five years on a rotating basis. Twelve lakes were visited in 2023 with NIWA divers, biodiversity staff and interested mana whenua and landowners. Approximately 10 lakes are a planned to be monitored in May 2024. The monitoring contract was put out to tender and this year the work will be undertaken by Submerged Environmental Ltd, once again in collaboration with landowners and mana whenua.

Investigation, additional monitoring and collaborative work with Kaipara District Council, DOC and Te Roroa was undertaken at Lake Taharoa in response to the impacts of Cyclone Gabrielle and the threat of gold clam introduction. See the Action Sheet for details.

For further detail on lakes work please see the Biodiversity Annual Report 2022 – 2023.

www.nrc.govt.nz/biodiversityAR23

Ngā tapirihanga / Attachments

Nil

TITLE: Gold Clam

From: Nicky Fitzgibbon, Biosecurity Manager - Incursions and Reponse and Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity

Authorised by Group Manager/s: Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity, on 11 March 2024

Whakarāpopototanga / Executive summary

- Following the council decision on 12 December to support activities urgent actions over the next 12 months to reduce the risk of gold clam being transported to northlands lakes and waterways staff have installed signage, developed social media campaigns, run information sessions, and the Check Clean and Dry (CCD) program.
 - Kaimahi from Te Roroa, the Kaipara District Council, Johnson Contracting, and Northland Regional Council (NRC) conducted biosecurity checks on watercraft visitors to Lake Taharoa during the holiday period from December 23rd to February 6th, 2024.
 - The checks involved stopping and inspecting all types of watercraft, including jet skis, boats, and kayaks, along with their trailers, and a visitor survey was conducted at the same time.
 - Almost 2000 surveys were completed with the aim of gathering insights into visitors' origins, their activities at the lake, other potential destinations in Tai Tokerau, and their awareness of the current biosecurity threat posed by the invasive Freshwater Gold Clam.
 - 47% of visitors¹ identified as having travelled from within the Northland region, Auckland closely following at 45%. There were 25 visitors from the Waikato region (2%). A portion of these visitors self-identified as having been in the infected area only 2 days prior.
 - A collaborative approach to future biosecurity activities at Lake Taharoa is recommended, accompanied by sustained investment and stakeholder engagement to protect the mauri and ecological integrity of Lake Taharoa and its surroundings.
-

Ngā mahi tūtohutia / Recommended actions

1. That the report 'Gold Clam' by Nicky Fitzgibbon, Biosecurity Manager and Don McKenzie, Pou Tiaki Pūtaiao - GM Biosecurity and dated 8 March 2024, be received.
2. That the working party support the collaborative stakeholder approach to future planning and implementing practical tools to prevent the spread of Freshwater Gold Clam.

¹ Those visitors who had watercraft and were stopped at the biosecurity check point and completed a survey.

Background/Tuhinga

This paper provides an update on the activities that have been undertaken since the 12 December meeting where Council agreed to fund urgent actions to reduce the risk of gold clam being transported to northlands lakes and waterways.

Northland Wide Activities

Signage has been installed at key recreational lakes where high-risk activities such as motorised boats and jet skis are popular. These signs likely inform visitors about the risk and how to report if they see something unusual.

Staff have participated in or organized various outreach and education activities, including regional information wānanga and speaking engagements at regional and national freshwater events. These events were conducted in collaboration with organizations like Mountains to Sea, DOC, Landcare Trust, and the Northland Freshwater Working Group.

New information pamphlets and posters have been distributed to provide visitors with essential information about risk posed by the Freshwater Gold Clam and how to take action to prevent the spread (Check, Clean, Dry).

A joint social media campaign with Kaipara District Council targeting visitors to the region was launched over the summer. This campaign aimed to raise awareness and ensure the community understood the requirement to Check, Clean and Dry their gear before entering our waterways.

Pre-Summer eDNA at key lakes was completed with post summer surveillance underway. We have also begun preparing a Small-Scale Management plan accordance with Section 100v of the Biosecurity Act.

Staff efforts were particularly focused on Lake Taharoa due to its status as the region's highest-risk recreational lake, receiving an estimated 75000 visitors annually.

23/24 Summer Activities at Taharoa

- Biosecurity Checks:** Kaimahi from Te Roroa, Kaipara District Council, Johnson Contracting, and Northland Regional Council conducted biosecurity checks on all visitors to Lake Taharoa with watercraft during the holiday period from December 23rd to February 6th 2024. The checks involved stopping and inspecting all types of watercraft, including jet skis, boats, and kayaks, along with their trailers using a water blaster to clean their gear.
- Installation of Temporary Washdown Station:** A temporary washdown station, equipped with a water tank, tap facilities, and water blaster, was installed at Lake Taharoa to facilitate the cleaning of gear and equipment brought by visitors.
- Publicity Material and Awareness Campaign:** Publicity material as well as an awareness campaign were launched to educate visitors about the importance of biosecurity measures and encourage compliance with inspection protocols.
- eDNA Survey and Sampling:** With hapū support water samples will be collected in the near future for post summer surveillance eDNA testing. Ideally surveys will be carried out at all three lakes (2 sites at Taharoa, Waikare and Kai Iwi). Early detection is critical to ensure we have the best possible chance of exploring management options for the Freshwater Gold Clam (if the population discovered is small and discrete).

5. **Information Survey and Results:** During the completion of a biosecurity check, if the visitor was willing a short survey was conducted simultaneously. Key highlights from the survey conducted during the summer period are as follows:

- **Survey Reach:** Almost 2000 surveys were completed with the aim of gathering insights into visitors' origins, their activities at the lake, other potential freshwater destinations in Tai Tokerau, and their awareness of the current biosecurity threat posed by the invasive Freshwater Gold Clam.
- **Visitor Origins:** 47% of visitors² identified as having travelled from within the Northland region, Auckland closely following at 45%. This is consistent with previous patterns observed during Labour Weekend 2023, emphasizing a significant influx of visitors from Auckland, primarily comprising of day visitors.

Visitors from Waikato represented a noteworthy segment, with 25 visitors accounting for 2% of the total. It is essential to highlight that some of these visitors self-identified as having been in the infected area with their jet skis only two days prior. However, as they demonstrated they attempted to follow the Check, Clean and Dry (CCD) process there are currently no restrictions on the movement of these watercraft.

- **Activity Preferences:** While swimming remained a popular activity (31%), Wakeboarding, waterskiing, jetboating and jet skiing combined made up 36% of the preferred activities at the lake over the summer period. This is in contrast with results from Labour Weekend where these activities made up only 11% of visitors preferred activities.

Future Management Strategies:

The primary objective of the biosecurity response to the invasive Freshwater Gold Clam remains containment to the current known location in the Waikato River and preventing its spread to other regions. To be able to achieve this will require proactive monitoring, enforcement of biosecurity protocols, and targeted interventions to mitigate the risks posed by human-mediated pathways.

Previous research underscores the significant role of human activities in facilitating the spread of invasive species like the Freshwater Gold Clam. The recent survey results highlight the popularity of boating activities considered particularly high-risk such as wakeboarding and jet skiing at Taharoa.

Having a kaimahi presence at the lake over the summer not only provided useful information to support decision making but provides an essential engagement and education opportunity with the community.

A debriefing session is scheduled for mid-March. This will provide an opportunity to reflect on the successes and lessons learned from the summer operations at Lake Taharoa. This session will involve discussions with hapū and iwi, as well as other key stakeholders, to explore long-term management options (surveillance, research, infrastructure development, public awareness campaigns, and capacity building initiative) and possible funding mechanisms.

At a minimum staff are recommending a continued presence at Taharoa over the peak summer months conducting checks and further the collection of visitor data as well as eDNA surveillance at key locations.

In the immediate term NRC remains committed to implementing practical tools to prevent the spread of freshwater Gold Clam. These tools include signage, social media campaigns, information sessions, and the Check Clean and Dry (CCD) program.

² Those visitors who had watercraft and were stopped at the biosecurity check point and completed a survey.

Ngā tapirihanga / Attachments

Nil