

RODENTS

Norway Rat (*Rattus norvegicus*),
Ship Rat (*Rattus rattus*) and
Mouse (*Mus musculus*)

Rodents are widespread throughout Northland. The ship rat is the smaller of the two European species found in New Zealand but has a larger and thicker tail. The coat of the Norway rat is grey-brown and shaggy with a pale underside. Rats are mainly nocturnal, and eat seeds, bird eggs, nestlings, invertebrates, native snails, frogs, and lizards. Since their arrival in New Zealand, rats have had a significant impact on native flora and fauna and have been implicated in the decline of many native species. They also eat and contaminate grain and food stores and some nut crops.

Mice are prolific breeders, reaching sexual maturity at five weeks, and having 5 to 10 litters of 5 to 6 young per year. Mice compete with native species for food sources and also prey on native insects (such as weta), lizards, eggs, bird chicks and other fauna.

Rules

1. No person shall liberate or release any rodent in Northland.

RUDD

(*Scardinius erythrophthalmus*)

Rudd were illegally imported into New Zealand in 1967 and widely released into freshwater systems. They are widespread throughout Northland. Rudd are darker on their backs than on their bellies and have bronze highlights when the light catches their scales. Their fins are usually bright reddish orange. They do not have any barbels around their mouth, a feature that tells them apart from koi carp. Rudd are usually 200-250mm long.

Juvenile rudd are carnivorous, but as adults their diet consists mainly of aquatic plants. A high-density rudd population could impact on native fish and plant communities, particularly where plant communities are limited. Rudd are prolific breeders and large females can produce literally hundreds of thousands of eggs.

Rules

1. No person shall sell, offer for sale, breed, multiply or hold in a premises where animals are offered for sale any live rudd within the Northland region.
2. No person shall knowingly distribute, transport or release any live rudd within or into the Northland region.



DOC

2. Where a management agency has undertaken initial control work on a property and/or supplied resources to reduce pest animal population densities to a level agreed to in a management plan for the area, the occupier of the property shall maintain pest animal population densities to those agreed to in the management plan.

A breach of these rules, without reasonable excuse, is an offence under Section 154(r) of the Act.



U.S. Geological Survey

3. Where a management agency has undertaken initial control work on a property and/or supplied resources to reduce pest animal population densities to a level agreed to in a management plan for the area, the occupier of the property shall maintain pest animal population densities to those agreed to in the management plan.

A breach of these rules, without reasonable excuse, is an offence under Section 154(r) of the Act.

TROPICAL GRASS WEBWORM

(Herpetogramma licarsisalis)

Tropical grass webworm caterpillars are 5-20mm long and very active when disturbed. They are translucent, and range from pale green to dark brown depending on their food. They live in pasture, feeding mainly at night or on cloudy days. By day, the caterpillars shelter in silk tunnels that they spin in the grass. They prefer kikuyu, but eat other grasses and crops as well as some weed species. Adults are drab fawn coloured moths, sometimes with dark spots scattered over the 10-15 mm wide delta shaped wings. The adult or moth stage does not feed.

Webworm caterpillars are most numerous and hungry over late summer and autumn, and can cause serious pasture damage. Apparently hard grazed patches quickly spread out. They can completely strip grass of green tissue, often leaving only peeled white fibrous stalks. The larval, or caterpillar stage does the pasture damage. Tropical grass webworm is widespread in the Far North and localised population explosions occur in periods of extended warm moist conditions.

Rules

There are no rules for tropical grass webworm in this RPMS.



WASPS

German Wasp (*Vespula germanica*) and **Common Wasp** (*Vespula vulgaris*)

German wasps are 12-17mm long with a blackish brown abdomen and bright yellow stripes. They look similar to common wasps and have strong black markings including an arrow-shaped mark down the middle of the abdomen with black spots on either side. German wasps usually nest underground in holes dug in the soil, or in the crevices of tree trunks, stacked materials, compost or hedges. In urban areas, German wasps often nest in walls, roof spaces or other convenient gaps in buildings.

Common wasps are very similar in appearance to German wasps. Members of the colony cooperate in the care of the young, and the building and protection of the nest. Females are easily identified by a black mark behind the eye on the side of the head, yellow bands on the "shoulders" and black dots and rings on the abdomen. Common wasps are found in most habitats.

Wasps are widespread throughout Northland, and are common in some areas. Wasps inflict painful toxic stings on people and animals. Wasps usually attack and sting if their nests are disturbed or they are provoked. Wasps compete for sugar resources with nectar feeding birds and insects. Wasps are major predators of invertebrates and they may compete for the invertebrate prey with insectivorous birds and other predacious invertebrates.



German wasp

Rules

There are no rules for wasps in this RPMS.

5.5 Risk Assessment Animals

Risk assessment animal pests (Table 6) are species which are of potential concern to the Region, but little is known about the distribution or the risks posed. Further information about the ecological requirements and population behaviour of these species is needed. The intention is to improve understanding about these pests in the region so that they can be classified and managed appropriately when the strategy is reviewed.

Table 6: Risk assessment animals.

Common Name	Scientific Name	Common Name	Scientific Name
Bearded dragon	<i>Amphibolurus barbatus</i>	Red-eared slider turtle	<i>Trachemys scripta elegans</i>
Blue-tongued skink	<i>Tiliqua scincoides and Tiliqua nigrolutea</i>	Shingleback lizard	<i>Trachydosaurus rugosus</i>
Caudo	<i>Phallocerus caudimaculatus</i>	Snake-neck turtle	<i>Chelodina longicollis</i>
Eastern water dragon	<i>Physignathus lesueurii lesueurii</i>	Sulphur crested cockatoo	<i>Cacatua galerita</i>
Rainbow skink	<i>Lampropholis delicata</i>		

While the extent of potential impacts is unknown, these species may have the ability to alter native ecosystems and compete with native species for food and space. Exotic reptiles are sold as pets and could potentially impact native ecology. They may carry parasites and diseases, posing a risk to native lizard populations. Predation on eggs and chicks of native birds and other lizards is possible, as is competition with native species for food and habitat.

Objectives (Five Year)

- To assess the risks, impacts and options for managing the risk assessment animals.
- To raise public awareness of the economic, biodiversity, social and cultural impacts of animal pests and encourage reports of sightings.

Pest Management Methods

- The NRC will undertake surveillance, research and raise public awareness of risk assessment pests to assist with classifying these pests and managing them appropriately.
- The NRC will provide advice and information to the public, and will support initiatives to minimise any adverse impacts they have.
- If surveillance indicates that a risk assessment pest poses a threat to the region, and eradication is achievable, control may be carried out by the NRC and their contractors or, with agreement, by other agencies.

Rules

1. No person shall knowingly release any risk assessment pest within or into the Northland Region.
2. Where a management agency has undertaken initial control work on a property and/or supplied resources to reduce pest animal population densities to a level agreed to in a management plan for the area, the occupier of the property shall maintain pest animal population densities to those agreed to in the management plan.
3. Every person who suspects the presence of any uncontained risk assessment pest shall immediately report the sighting to the NRC.

A breach of these rules, without reasonable excuse, is an offence under Section 154(r) of the Act.

6. MARINE PEST MANAGEMENT STRATEGY

The organisms listed in Table 7 are declared to be pests under the Biosecurity Act, throughout the Northland region. The reason for declaration as a pest, management objectives, rules and obligations for occupiers are defined for each pest in the following sections.

Table 7: Marine pests.

Common Name	Scientific Name	Pest Classification	Page
Asian clam	<i>Potamocorbula amurensis</i>	Exclusion	68
Caulerpa seaweed	<i>Caulerpa taxifolia</i>	Exclusion	68
Chinese mitten crab	<i>Eriocheir sinensis</i>	Exclusion	68
European shore crab	<i>Carcinus maenas</i>	Exclusion	69
Mediterranean fanworm	<i>Sabella spallanzanii</i>	Exclusion	69
Northern pacific seastar	<i>Asterias amurensis</i>	Exclusion	69
Asian paddle crab	<i>Charybdis japonica</i>	Suppression	71
Didemnum sea squirt	<i>Didemnum vexillum</i>	Suppression	71
Eudistoma sea squirt	<i>Eudistoma elongatum</i>	Suppression	72
Styela sea squirt	<i>Styela clava</i>	Suppression	72
Japanese kelp	<i>Undaria pinnatifida</i>	Suppression	72
Risk Assessment Pests		Risk Assessment	74

The organisms listed in Table 8 are only deemed to be pests under the Biosecurity Act, where they are subject to a NRC approved management plan for a specific pest control area.

Table 8: Species deemed as pests in CPCAs.

Common Name	Scientific Name	Pest Classification	Page
Asian date mussel	<i>Musculista senhousia</i>	Suppression (CPCA)	73
Australian tubeworm	<i>Ficopomatus enigmaticus</i>	Suppression (CPCA)	73
File shell	<i>Limaria orientalis</i>	Suppression (CPCA)	73
Pacific oyster	<i>Crassostrea gigas</i>	Suppression (CPCA)	73

6.1 Marine Exclusion Pests

Marine exclusion pests are potential pests which are not known to have established in Northland. Many of them are also not currently known to be present in New Zealand. These marine pests all have the potential to establish in the region, and are capable of causing significant adverse effects. They are listed as unwanted organisms under the Biosecurity Act. The intention of the strategy is to prevent these pests from entering and establishing within Northland over the life of the strategy.

Objectives, Methods and Rules for Marine Exclusion Pests

The objectives, methods and rules for the marine exclusion pests are generic for all species in this category.

Objectives (Five Year)

- To prevent the marine exclusion pests from becoming established in Northland.
- To raise public awareness of the economic, biodiversity, social and cultural impacts of the marine exclusion pests and encourage reports of sightings.

Pest Management Methods

Surveillance:

- NRC will develop and implement a regional surveillance plan in conjunction with MAF BNZ, stakeholders, and other Crown agencies such as DOC, and the Ministry of Fisheries, with a particular focus on pathways, vectors and areas of significance.
- Reported sightings will be investigated and a response implemented.

Incursion Response:

- Eradication of incursions of the marine exclusion pests may be attempted in conjunction with relevant Crown agencies and stakeholders where practicable. Any NRC response would be funded via section 100 of the Biosecurity Act as approved by NRC resolution.

Education:

- NRC will provide training to relevant NRC/stakeholder staff in the identification of marine pests to assist in surveillance.
- NRC will provide advice to NRC consents staff, marine stakeholders/interested parties/occupiers on practices which limit the establishment of marine pests.
- NRC will run publicity campaigns to educate the wider public about marine pests.

Research:

- NRC will work cooperatively with other agencies where further research is needed to identify management measures, potential impacts, pathways and/or behaviours.

Rules

The marine exclusion pests are unwanted and notifiable organisms under the Biosecurity Act. As such the following rules apply under sections 46, 52 and 53 of the Biosecurity Act:

1. No person shall sell, offer for sale, breed or multiply any marine exclusion pest.
2. No person shall knowingly transport or release any marine exclusion pest.
3. Every person who sees any marine exclusion pest, or suspects the presence of any marine exclusion pest shall immediately report the sighting to the NRC or MAF BNZ.

A breach of these rules, without reasonable excuse, is an offence under Section 154(r) of the Act.

ASIAN CLAM

(Potamocorbula amurensis)

Asian clam is not known to be in New Zealand. It is a shellfish with a distinctive uneven overbite and is found in estuaries and brackish waters. The shell is 2-3cm across and is a dirty white, yellow or tan colour. Asian clam can live in fresh and salt water and forms dense mats displacing native species and changing seafloor/riverbed conditions. It consumes large amounts of phyto and zooplankton, so can substantially change any marine community. Asian clam can proliferate rapidly and reach extremely high densities and thereby dominate benthic habitat.

It is native to Japan, Korea and China, though has now invaded parts of the west coast of the United States. Young clams can be caught up in ships' ballast water while adults can attach to fishing equipment. Asian clam is thought to be responsible for the collapse of some commercial fisheries in



California Fish and Game

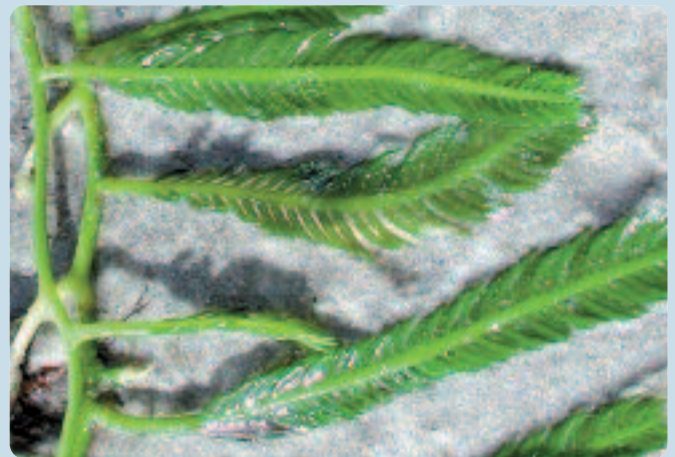
addition to the decline in the diversity and abundance of many benthic species in California.

CAULERPA SEAWEED

(Caulerpa taxifolia)

Caulerpa taxifolia is not known to be in New Zealand, although there are native species that look similar. The aquarium strain of caulerpa is a rapidly growing saltwater weed that can cause major ecological and economic damage. This strain is particularly invasive, and can grow in a wide range of water temperatures, depths and substrates including rock, mud and sand. It is a bright green seaweed with feather-like fronds and has long horizontal runners (up to 9m) supporting many upright fronds. Fronds are flattened-looking with a smooth and distinct midrib.

Caulerpa can form dense fields that can prevent the establishment of native seaweeds and exclude indigenous marine life. It can cause the reduction of fishing catches due to the elimination of fish habitat. The most likely way of *Caulerpa* arriving into New Zealand is through importation



for use in aquariums and subsequent release into the marine environment.

CHINESE MITTEN CRAB

(Eriocheir sinensis)

Chinese mitten crab is light brown with a body width up to 8cm. Adults have dense patches of hairs on the claws. It has a round body shape and a distinctive notch between the eyes. Its legs are twice as long as its body width. Post-larval stages settle in salt water then migrate to freshwater to grow and develop. Adults migrate to the sea to reproduce and die.

Chinese mitten crab could cause significant damage through burrowing activity, which can undermine the integrity of stream banks. It is an opportunistic feeder with a wide diet and can adversely affect biodiversity (both freshwater and marine) through predation upon and competition with indigenous species. It also has the potential to affect human health as it can carry a parasitic lung fluke which can be passed to humans.

Chinese mitten crab is not known to be in New Zealand. Arrival is possible through ships' ballast water, either salt or



California Fish and Game

freshwater, water intakes or among other marine fouling on the outside of ships or yachts. The mitten crab is considered a delicacy in some parts of the world and live crabs have been imported illegally in other countries.

EUROPEAN SHORE CRAB

(Carcinus maenas)

Also known as: European green crab

European shore crab has a broad diet and can survive in a wide range of environments. The crab is medium-sized with a body width up to about 9cm. It has five distinctive spines on either side of the eyes on the front end of the body. The upper body is mottled dark brown to dark green, with small yellow patches. The underside varies in colour from green to orange or red.

It is a voracious predator and can cause the decline of other crab and bivalve species. The crab has the potential to negatively impact shellfish populations important for commercial and recreational fisheries and as a source of kaimoana.

European shore crab is not known to be in New Zealand. Arrival is possible through ships' ballast water, water intakes



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or among other marine fouling on the outside of ships or yachts.

MEDITERRANEAN FANWORM

(Sabella spallanzanii)

The Mediterranean fanworm is a marine bristleworm that is typically found in estuaries or sheltered sites, at depths of anywhere between one to 30m. It consists of a tube, up to 40cm tall, which is always anchored to a hard surface, topped with a single spiral fan (radiole). The tube is tough and flexible and often muddy in appearance. It can often have other organisms growing on the surface.

The Mediterranean fanworm can form dense groups that could affect native species by competing for food and space. Recent studies have indicated some impact on the establishment of new generations of some species, and on nutrient flow. There is potential that dense beds could become a nuisance to recreational and commercial fishers through the clogging of dredges and fouling of other fishing gear.



G. Read, NIWA

The Mediterranean fanworm has been detected in Lyttelton and Auckland. To date, it has not been detected in Northland. Fanworms spread by growing on dirty vessels and equipment and then being relocated. They can also travel growing in enclosed wet areas on ships, or with other marine fouling organisms as larvae in ballast water.

NORTHERN PACIFIC SEASTAR

(Asterias amurensis)

Northern Pacific seastar can reach 40cm in diameter and has distinctive upturned tips to its five pointed arms. The arms join onto a central disc and are covered by numerous small spines with sharp edges. It is mainly yellow in colour and often has purple or red detail on its upper surface. This seastar is normally found in shallow water but can be found from the intertidal area through to the subtidal and as deep as 200m. It is most likely to be found in coastal areas protected from wave action, on soft bottoms, rocks and man-made surfaces.

Northern Pacific seastar is a prolific breeder and voracious feeder preferring mussels, scallops and clams but will also prey upon a wide variety of other marine life. It can survive and breed in a wide range of habitats. It could also adversely affect biodiversity, kaimoana resources and recreational



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seafood harvest given its predatory behaviour and prolific breeding rate.

The Northern Pacific seastar is not known to be in New Zealand. Arrival is possible through ships' ballast water, water intakes or among other marine fouling on the outside of ships or yachts.

6.2 Marine Suppression Pests

Objectives, Methods and Rules for Marine Suppression Pests

The objectives, methods and rules for the marine suppression pests are generic for all species in this category.

Objectives (Five Year)

- To minimise the effects of the marine suppression pests on environmental and economic values in Northland.
- To restrict the spread of the marine suppression pests into areas where they are not currently established.
- To raise public awareness of the economic, biodiversity, social and cultural impacts of marine suppression pests and encourage reports of sightings.

Pest Management Methods

Surveillance:

- NRC will include the marine suppression pests in a regional surveillance plan in order to identify the current range and new sites.

Response:

- Responses to the marine suppression pests will be through site-led tactics. These include:
 - **Community Pest Control Areas:** NRC will assist communities and stakeholders to control marine suppression pests where they have impacts upon local values.
 - **High Value Areas:** NRC will include the marine suppression pests in surveillance programmes and where detected at high value areas a response may be developed in conjunction with Crown Agencies/stakeholders where appropriate.

Education:

- NRC will provide training to relevant NRC/stakeholder staff in the identification of marine pests to assist in surveillance.
- NRC will provide advice to NRC consents staff, marine stakeholders/interested parties/occupiers on practices which limit the establishment of marine pests.
- NRC will run publicity campaigns to educate the wider public about marine pests.

Research:

- NRC will work cooperatively with other agencies where further research is needed to identify management measures, potential impacts, pathways and/or behaviours.

Rules

1. No person shall knowingly propagate, transport or release marine suppression pests in Northland.
2. Where a management agency has undertaken initial control work and/or supplied resources to reduce pest population densities to a level agreed to in a management plan for the area, the pests shall be maintained at the agreed level by the signatories to the management plan.

A breach of these rules, without reasonable excuse, is an offence under Section 154(r) of the Act.

ASIAN PADDLE CRAB

(Charybdis japonica)

The Asian paddle crab is a swimming crab native to South East Asia. It is typically found in estuaries where there is firm sand or muddy fine sand. It is a relatively large crab with paddle-like hind legs. Adults have a shell width of around 12cm. The adults also have six distinct spines or spikes on each side of the eyes. The crabs range in colour from pale green through olive green, to a deep chestnut brown with purplish markings on the carapace (shell).

Adult paddle crabs can produce hundreds of thousands of offspring. The larvae can float in the water for three to four weeks, during which time they can be moved large distances by tides and currents. Adults are also capable of swimming large distances. These crabs are very aggressive and have the potential to compete with native crabs for space and food, including the commercially fished native paddle crab. These crabs also impact upon biodiversity, aquaculture and shellfish resources through predation.



Asian Paddle Crab is in Northland. It is widespread in the Hauraki Gulf and has been detected in small numbers in Whāngārei Harbour.

DIDEMNUM SEA SQUIRT

(Didemnum vexillum)

Didemnum is a leathery or spongy textured, light mustard coloured sea squirt which often looks like a yellowish wax dripping over a structure such as a rope or mussel line. Its surface has raised leaf-like veins without pores. Colonies of didemnum can reproduce sexually by releasing tailed larvae that are carried in water currents. It can also reproduce asexually by budding, hence fragments can break off and grow into new colonies

This sea squirt readily occupies hard surfaces including ship hulls, wharf structures and floats, pilings, moorings and ropes, rock outcrops, and gravel seabed. Didemnum's smothering capabilities choke off bottom dwellers such as shellfish, and may cover grounds needed by fish to lay eggs. Didemnum is not known to be in Northland, but is becoming quite widespread on the east coast of the North Island and the top of the South Island.



A. Courts, Caithron

EUDISTOMA SEA SQUIRT

(Eudistoma elongatum)

Eudistoma is a colonial sea squirt which forms clusters of white coloured tubes, which contain many small individual organisms. It is generally found in muddy bottomed tidal habitats and on man-made structures such as wharf piles and aquaculture equipment. It is generally submerged just below the waterline, but can often be seen at low tide. Eudistoma reduces in volume during the winter months, but once water temperatures lift it reappears in large volumes, usually over the summer.

Eudistoma is an Australian species and was first reported in New Zealand in 2005. It has been reported on several marine farms on Northland’s east coast, Houhora and Pārengarenga harbours, the Bay of Islands, and Whāngārei Harbour.



H. Blomfield

STYELA SEA SQUIRT

(Styela clava)

Styela is a large, solitary sea squirt that is native to the north-west Pacific. This sea squirt has a long, club-shaped body and each individual has its own stalk and adheres separately to a substrate. The sea squirt is usually brown in colour and underwater often appears fuzzy with secondary growth coating it. It grows attached to hard natural and artificial surfaces and is frequently transported as biofouling on vessels and other mobile marine structures.

Styela poses a threat to biodiversity values through its smothering behaviour. It can multiply rapidly in suitable sites, and competes with other filter feeders for food and space. As a result it can disrupt native ecosystems. It can also add significant maintenance costs to marine structures and vessels through its fouling behaviour. Styela is established in Northland at Marsden Cove and Ōpua marinas.



Matt Connee

UNDARIA SEAWEED

(Undaria pinnatifida)

Undaria is a highly invasive and opportunistic seaweed which spreads mainly by fouling on boat hulls. It is harvested in Japan as a food source. Mature plants (as shown) are a brown/ green/ yellow colour and grow to one to two metres. Juvenile undaria plants have a holdfast and stem and an undivided blade (they appear as a single leaf). The distinctive midrib starts becoming apparent once the plant grows over 5cm.

Undaria is not known to be in Northland, but is present in many harbours and ports around New Zealand. Undaria can form dense stands underwater which may lead to the exclusion or displacement of native plant and animal species, and can change the structure of ecosystems, especially in areas where native seaweeds are absent.



6.3 Marine Community Pest Control Area Pests

The NRC aims to assist communities and stakeholders to control pests where they impact upon local values. Species that are regionally or locally common may be considered for a CPCA or interagency site-led programme where significant environmental, economic or social benefits are likely.

In addition to the suppression pests described above, the following marine species may also be considered for inclusion in a CPCA (Table 9). These species are only deemed to be pests under the Biosecurity Act, where subject to a NRC approved management plan for a specific pest control area.

Table 9: Marine CPCA pests.

Common Name	Scientific Name	Group
Asian date mussel	<i>Musculista senhousia</i>	Mollusc
Australian tubeworm	<i>Ficopomatus enigmaticus</i>	Annelid
File shell	<i>Limaria orientalis</i>	Mollusc
Pacific oyster	<i>Crassostrea gigas</i>	Mollusc

These species are widespread throughout the region, but can have adverse impacts on local values, such as recreational use of, or access to beaches and coastal waters. They also have the ability to alter native ecosystems and compete with native species for food and space where present in high numbers.

Pacific oyster is an established commercial species and is subject to Fisheries and Aquaculture Regulations. No CPCA shall be considered for Pacific oyster that contradicts these regulations or proposes to control Pacific Oyster in an Oyster Reserve, authorised marine farm or where it is valued as a food source.

Objectives (Five Year)

- To assist communities and stakeholders to manage local impacts of the marine CPCA pests.

Pest Management Methods

Site-led Programmes:

- NRC will assist communities and stakeholders to control the marine CPCA pests where they impact upon local values.

Education:

- NRC will provide advice to NRC consents staff, marine stakeholders/interested parties/occupiers on practices which limit the establishment of marine pests.

Rules

1. Where a management agency has undertaken initial control work and/or supplied resources to reduce pest population densities to a level agreed to in a management plan for the area, the pests shall be maintained at the agreed level by the signatories to the management plan.

A breach of these rules, without reasonable excuse, is an offence under Section 154(r) of the Act.

6.4 Marine Risk Assessment Pests

Risk assessment pests are those pests which are of potential concern to the region, but little is known about the distribution or the risks posed. The intention is to improve understanding about these pests so that the pest can be classified and managed appropriately when the strategy is reviewed. Most of these species are not known to be in New Zealand.

There are many potential pests that could arrive here and it is difficult to predict which species will arrive and establish, and which will go on to become pests. The majority of species in the risk assessment list (Table 10) are also recommended for surveillance and monitoring in Australian waters.

Table 10: Marine risk assessment pests.

Common Name	Scientific Name	Group
Asian shore crab	<i>Hemigrapsus sanguineus</i>	Crustacean
Dead man's fingers	<i>Codium fragile ssp. tomentosoides</i>	Macroalgae
Red algae	<i>Grateloupia turuturu</i>	Macroalgae
Wireweed	<i>Sargassum muticum</i>	Macroalgae
Asian green mussel	<i>Perna viridis</i>	Mollusc
Asian rapa whelk	<i>Rapana venosa</i>	Mollusc
Brown mussel	<i>Perna perna</i>	Mollusc
Black-striped mussel	<i>Mytilopsis sallei</i>	Mollusc
European clam	<i>Varicorbula gibba</i>	Mollusc
Golden mussel	<i>Limnoperna fortunei</i>	Mollusc
Didemnum sea squirts (other than <i>D.vexillum</i>)	<i>Non-indigenous Didemnum species</i>	Sea squirt
Pyura sea squirt*	<i>Pyura stolonifera praeputialis</i>	Sea squirt

* Already in Northland and under investigation by MAFBNZ.

Objectives (Five Year)

- To assess the risks, impacts and options for managing the marine risk assessment pests.
- To raise public awareness of the economic, biodiversity, social and cultural impacts of marine pests and encourage reports of sightings.

Pest Management Methods

- The NRC will undertake surveillance, research and raise public awareness of marine risk assessment pests to assist with classifying these pests and managing them appropriately.
- The NRC will provide advice and information to the public, and will support initiatives to minimise any adverse impacts they have.
- If surveillance indicates that a marine risk assessment pest poses a threat to the region, and eradication is achievable, control may be carried out by the NRC and their contractors or, with agreement, by other agencies.

Rules

1. No person shall knowingly propagate, transport or release any marine risk assessment pest in the Northland region.
2. Where a management agency has undertaken initial control work and/or supplied resources to reduce pest population densities to a level agreed to in a management plan for the area, the pests shall be maintained at the agreed level by the signatories to the management plan.
3. Every person who suspects the presence of any marine risk assessment pest shall immediately report the sighting to the NRC or MAFBNZ.

A breach of these rules, without reasonable excuse, is an offence under Section 154(r) of the Act.

7. REGULATORY MANAGEMENT

7.1 Biosecurity Act Powers

The powers conferred on the Northland Regional Council by the Biosecurity Act for the purposes of implementing the Regional Pest Management Strategies are outlined below. Authorised persons will exercise many of these powers on behalf of the Principal Officer of the Northland Regional Council. The Principal Officer shall appoint authorised persons and may delegate powers to any authorised person, subject to sections 103 and 105 of the Biosecurity Act. When carrying out their duties, an authorised person shall be limited to using those powers specified in their warrant of appointment, based on those powers listed:

Administrative Powers	Reference in the Biosecurity Act	Level of Delegation
Making of rules.	section 80B	Northland Regional Council in Regional Pest Management Strategies.
The appointment of authorised and accredited persons. Delegation to authorised persons. Power to request a warrant to inspect a dwelling or marae.	section 103(3) and (7) section 105 section 110	Principal Officer of the Northland Regional Council.
Duty to provide information. Power to require assistance. Power of inspection. Power to record information. General powers. Use of dogs and devices. Power to seize abandoned goods. Power to examine organisms. Other powers in respect of "risk goods". Power to vaccinate. Enforcement of area controls.	section 43 section 106 sections 109 and 112 section 113 section 114 section 115 section 119 section 121 section 122 section 123 section 134	An "authorised person" appointed by the Principal Officer of the Northland Regional Council shall have authority to exercise such powers and functions contained within these sections, as defined in the Regional Pest Management Strategies, on the authorised persons warrant of appointment, and the Northland Regional Council Deed of Delegation.

7.2 Authorised and Accredited Persons

Authorised Persons

All those persons, who may, from time to time, be so appointed by the Principal Officer (Chief Executive Officer) of the Northland Regional Council, shall be authorised persons appointed pursuant to section 103 of the Biosecurity Act and shall exercise such functions, powers and duties as are specified in their individual warrants of appointment.

Appointment of Accredited Persons

The Principal Officer (Chief Executive Officer) of the Northland Regional Council may, from time to time, appoint suitably qualified contractors or other persons as accredited persons in terms of section 103(7) of the Biosecurity Act to perform works specified in contract documents.

7.3 Offences

Any person who contravenes section 154 of the Biosecurity Act, including but not limited to, breaching any rule in the Strategies or without reasonable excuse, failing to comply with a direction or failing to comply with the Biosecurity Act, commits an offence against the Act. For the purpose of clarity, the existence of rules in the Strategies in no way limits the application of any provision of the Biosecurity Act. The Northland Regional Council will, at its discretion, bring a prosecution against any person who commits an offence against the Biosecurity Act.

7.4 Exemption Provisions

Any occupier or other person may, upon representation to the Northland Regional Council, seek an exemption from any provision of a rule prescribed in these Strategies. Such exemptions will be considered as follows:

- a. Northland Regional Council may, if it considers it appropriate, exempt any person from any specified requirement in any rule included in these Strategies in accordance with the Biosecurity Act.
- b. Before granting an exemption under this section, the Northland Regional Council must be satisfied in the circumstances of each case that:
 - i. the requirement has been substantially complied with and that further compliance is unnecessary; or
 - ii. the action taken, or provision made in respect of the matter to which the requirement relates, is as effective or more effective than actual compliance with the requirement; or
 - iii. the prescribed requirements are clearly unreasonable or inappropriate in the particular case; or
 - iv. events have occurred that make the prescribed requirements unnecessary or inappropriate in the particular case, and that the granting of the exemption will not significantly prejudice the attainment of the objectives of these Strategies.

Northland Regional Council will maintain a register recording the number and nature of exemptions granted. This register will be available for public inspection during normal office hours.

7.5 Policy Enforcement

Issue of Legal Directions by Authorised Persons

An authorised person may issue a legal direction to any occupier to carry out specified works or measures for the purposes of eradicating or preventing the spread of any pest in accordance with a Pest Management Strategy. The legal direction shall be issued under section 122(a) of the Biosecurity Act and specify the following matters:

- a. The land in respect of which works or measures is required to be undertaken;
- b. The pest for which the works or measures are required;
- c. Works or measures to be undertaken to meet the occupier's obligations;
- d. The time within which the works or measures are to be undertaken;
- e. Action that may be undertaken by the management agency if the occupier or occupiers fail to comply with any part of the direction; and
- f. The name, address, telephone number and fax number of the management agency and the name of the authorised person issuing the legal direction.

Failure to Comply with a Legal Direction

Where a legal direction has been given to an occupier and the occupier has not complied with the requirements of the legal direction within the time specified, then the management agency may enter onto the land specified in the legal direction and carry out, or cause to be carried out, the works or measures specified in the legal direction, or such other works or measures as are reasonably necessary or appropriate for the purpose of giving effect to the requirements of the legal direction.

Recovery of Costs Incurred by Management Agency

Where a management agency undertakes works or measures for the purposes of giving effect to the requirements of a legal direction, it shall recover the costs incurred from the occupier pursuant to section 128 and 129 of the Biosecurity Act and may register the debt as a charge against the land.

Variation of a Legal Direction

Where, upon the representations of an occupier issued with a legal direction, an authorised person is satisfied that:

- a. Steps have been taken to comply with the direction; and/or
- b. The occupier has been prevented by reasonable cause from completing the necessary works or measures;

the authorised person may vary the requirements of the legal direction, including extending the time period specified for works or measures to be undertaken, as considered appropriate.

Cancellation of a Legal Direction

When an authorised person is satisfied that:

- a. Works or measures have been undertaken to meet the occupier's obligations; or
- b. For some other reason it is no longer appropriate to enforce the legal direction;

the authorised person may cancel that legal direction.

Modes of Service for Legal Directions

A legal direction to an occupier is to be served in the ways set out in below:

1. Where an occupier is a person (other than the Crown), or a body by:
 - a. Delivering it personally to the person; or
 - b. Delivering it (including by facsimile) at the usual, last known place of residence or business of the person; or
 - c. Sending it in a prepaid post addressed to the person at the last known place of residence or business of the person; or
 - d. Where it is not practicable to give it in accordance with sub clause (a), (b) or (c), by placing it on some conspicuous part of the land in a way that it will remain legible for a reasonable time.
2. Where the occupier is a Minister of the Crown, by giving it to the Chief Executive of the appropriate department or state owned enterprise in accordance with sub clauses (1)(a) to (1)(c).
3. Where the occupier is a body (incorporated or not) a legal direction shall be given by:
 - a. Giving it to an officer of the body in accordance with sub clauses 1(a) to (1)(c); or
 - b. Delivering it to the registered office of the body in accordance with sub clauses (1)(a) to (1)(c); or
 - c. In the case of a partnership, a legal direction shall be given to any one of the partners in accordance with sub clauses (1) (a) to (1) (c).
4. Where a legal direction is to be served on owners of Māori land, the service shall be in accordance with section 181 of the Te Ture Whenua Māori Act 1993.

In the event of a land occupier or other persons failing to comply with any rule prescribed in the Strategies, or with any provisions of the Biosecurity Act in relation to declared pests, an authorised person of the Northland Regional Council will:

- a. Advise the land occupier or other person of their noncompliance;
- b. Advise they take remedial action and initiate the regulatory procedures set out in section 7; or
- c. Advise the land occupier or other person that they have committed an offence against the Biosecurity Act and initiate court proceedings.

8. RELATIONSHIP TO OTHER STRATEGIES

Integrated management aims to minimise the effects of cross-boundary issues and give effect to the objectives of these Strategies. The Northland Regional Council will use the following procedures in relation to integrated management and cross-boundary issues:

- Liaison with MAFBNZ with regard to pest management issues which are best dealt with or coordinated at a national level;
- Liaison with Crown land occupiers with respect to coordination of pest management programmes;
- Liaison with the Auckland Regional Council on cross-boundary issues pertaining to pest management;
- Liaison with other Regional Councils on pest management matters which are relevant to more than one region;
- Encouraging other authorities (e.g. territorial local authorities) to adopt policies and practices which will avoid, remedy or mitigate adverse effects associated with pests, and coordinating education initiatives with other agencies; and
- Making submissions on documents prepared by other authorities.

There is an operative Regional Pest Management Strategy in the neighbouring Auckland region and national Strategies for Bovine Tb and American Foulbrood. The Northland Pest Management Strategies are not considered to be inconsistent with these strategies.

These Pest Management Strategies have been prepared, taking into account related Strategies, policy statements and plans. Under section 76(4) of the Biosecurity Act, RPMS are not to be inconsistent with:

- a. Any national or Regional Pest Management Strategy (whether relating to the same region or any other region or regions) concerning the same organism; or
- b. Any regulation; or
- c. Any Regional Policy statement or Regional Plan prepared under the Resource Management Act 1991.

9. EFFECTS OF IMPLEMENTING THE STRATEGIES

The Biosecurity Act requires Pest Management Strategies to specify the actual or potential effects that the implementation of a Strategy may have on:

- a. The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and taonga.
- b. The environment; and
- c. The marketing overseas of New Zealand products.

9.1 Effects on Māori

The implementation of the Northland Regional Pest Management Strategies is anticipated overall to have positive effects on Māori culture and traditions. The Strategies should enable Northland Māori to address impacts of pests within their rohe through education and advice and, more specifically, through site-led programmes such as Community Pest Control Areas. The implementation of the Strategies will also reduce the risk of incursion by new pests and thereby avoid impacts upon cultural values.

Iwi will also have the option to undertake or participate in community/stakeholder pest control, which will enable iwi to address pests within their rohe and have input into the practices utilised to manage pests via pest management plans. The NRC may also have regard to the provisions of hapu/iwi management plans in developing pest management policy.

Accordingly, the risk of adverse effects on tikanga, kaitiakitanga, taonga and waahi tapu as a result of pest control is minimised and the Northland Regional Pest Management Strategies are considered to have beneficial effects for Māori and their cultural and traditions with their ancestral lands, waters, waahi tapu and taonga.

9.2 Effects on the Environment

The implementation of the Northland Regional Pest Management Strategies will reduce the risk of environmental impacts as a result of new pest incursions through increased surveillance within the region, and the development of response plans. Publicity campaigns and education programmes will raise awareness and increase the reporting of pests. The Strategies will enable communities and stakeholders to manage the impact of pests on the ecological, production, recreation and aesthetic values of the region through CPCAs.

Detrimental effects of the proposed Strategies include the use of herbicides and pesticides that can adversely impact non-target species, animal welfare and general public health. These effects will be minimised by only using registered toxins and approved animal control techniques. The NRC believes that any detrimental impacts arising from control operations will be low and would be less significant than the benefits. Control operations requiring the use of chemicals, structures or other such activity are subject to the provisions of the Resource Management Act 1991. As such, the Strategies are considered to have beneficial effects on the environment.

9.3 Effects on marketing of New Zealand products overseas

The implementation of the Strategies is not expected to have any significant impact on the marketing overseas of New Zealand products. However, surveillance for and the management of plant and animal pests may provide some minor improvement in the market for New Zealand goods overseas. Similarly, the control of pests in areas of significant ecological importance should enhance the biodiversity, recreational and aesthetic values important to tourism to some degree. Adverse effects will be minimised by only using registered toxins and approved animal control techniques. Consequently, the Strategies are expected to have a small positive effect on New Zealand's marketing overseas in general, and its export products.

10. FUNDING

The underlying tenet of the Biosecurity Act is that the beneficiaries of a Pest Management Strategy, or those who exacerbate a pest problem, should be required to pay.

Funding of the Strategies is determined through two Acts:

- Biosecurity Act 1993 – sections 77 and 97 – based on cost/benefit and exacerbator/beneficiary principles; and
- Local Government Amendment Act 2002 – sets out a process for apportionment of costs and developing funding mechanisms to test equity and reasonableness.

Section 77 of the Biosecurity Act requires a Strategy to specify:

- Beneficiaries and exacerbators;
- The rationale for the proposed allocation of cost; and
- Identify any unusual administrative costs or problems.

10.1 Beneficiaries and Exacerbators

Pest management is an individual's obligation in the first instance. Individuals are beneficiaries and exacerbators of pest problems, to varying degrees. The extent to which an individual contributes to pest problems depends on whether their inaction has the potential to cause significant impairment to other occupier values or to the environment generally. It is often difficult to distinguish between beneficiaries and exacerbators as they can be one and the same, however the following are identified:

Beneficiaries include:

- The public, communities and individuals who derive direct or indirect benefit from pest control;
- Occupiers (including those who occupy the CMA);
- Sectoral public (i.e. industries, interest groups);
- The Crown; and
- Territorial authorities.

Exacerbators include:

- Those who transport, spread or provide habitat for marine pests (knowingly or otherwise); and
- Those, who through inaction, contribute to pest problems.

The Northland Regional Council has determined that achieving the purpose and objectives of the Northland Pest Management Strategies provides 'public good' and that the regional community in general collectively benefits from the implementation of the Strategies.

10.2 Funding Sources and Rationale

The Plant Pest Management Strategy is expected to cost \$600,000 per annum. The Animal Pest Management Strategy is expected to cost \$435,000 per annum. The Marine Pest Management Strategy is expected to cost \$100,000 per annum. The Northland Regional Council, pursuant to sections 16-18 of the Local Government (Rating) Act 2002, intends to fund the implementation of these Strategies by way of the existing biosecurity component of regional rates.

The Strategies are to be funded by rates because the pests in question have the potential to significantly impact the economic, biodiversity, recreation, amenity and cultural values of the region as a whole, and the regional community has an interest in protecting these values. As such, the Strategies provide 'public good' benefits region-wide.

The Strategies also provides for community/stakeholder pest control initiatives (CPCA) whereby, after Northland Regional Council assistance, the community/stakeholder as beneficiary funds the ongoing cost of managing the pest. The community/stakeholder pest control schemes will also provide wider benefits beyond the control site through reduction of pest numbers, and as such initial ratepayer funding of these schemes is justified.

10.3 Cost Recovery

Section 135 of the Biosecurity Act provides Regional Councils with options to recover the costs of administering the Act and performing its functions, powers, duties under a Pest Management Strategy. The mechanisms include user charges and cost recovery in the event of non-compliance with a legal direction. Cost recovery is also used in specific circumstances as a disincentive to exacerbators, particularly where population density of a particular pest is very low and where land management practices undermine the Strategies objectives.

10.4 Compensation

In terms of section 76(1)(n) of the Biosecurity Act, no compensation shall be payable by the Northland Regional Council with regard to losses incurred by individuals as a direct result of the implementation of these Strategies, including the removal of pests as required under the Strategies' rules.

10.5 Identification of Unusual Administrative Costs

No unusual administrative problems or costs are expected in recovering the costs to any of the persons that are required to pay.



Putting Northland first

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