

Regional Pest Management Strategy for Marlborough

Operational Plan Report
2009/2010



MARLBOROUGH
DISTRICT COUNCIL

BIOSECURITY

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REGIONAL PEST MANAGEMENT STRATEGY OPERATIONAL PLAN REPORT 2009/2010

1. Introduction

The Regional Pest Management Strategy is known as the “Regional Pest Management Strategy for Marlborough” (the Strategy). It was made operative on 2 July 2007 following the review and amendment of the existing Strategy which expired on 3 September 2006.

The purpose of the Strategy is to provide a framework for the efficient and effective management or eradication of pests and unwanted organisms so as to:

- Minimise actual and potential adverse and unintended effects associated with the targeted pests; and
- Maximise the effectiveness of individual pest management through a regionally co-ordinated approach.

The Strategy classifies a number of plants and animals in the region as pests and specifies the management regime for each pest. For each pest, the management programme sets out the effects of the pest to be addressed, the objective to be achieved, the main methods to achieve the objective and the rules relating to each pest.

1.1. Purpose of Operational Plan Report

This Operational Plan Report has been prepared in accordance with section 85 of the Biosecurity Act 1993, and identifies and outlines the nature and scope of activities the Marlborough District Council has undertaken in the implementation of its Strategy for 2009/2010.

Reports on performance targets are included in this Operational Plan Report. This will enable key stakeholders to judge the performance of Marlborough District Council as the management agency for the Strategy.

1.2. Linkages

The Operational Plan is integrated, as far as possible, with Marlborough District Council’s Regional Policy Statement, Resource Management Plans and the Long Term Council Community Plan (LTCCP). The LTCCP provides an overview of all Marlborough District Council functions, including pest management and biosecurity activities for 2009/2010.

This Operational Plan Report should also be read in conjunction with the Regional Pest Management Strategy for Marlborough 2007.

2. Pest Plant Management Programmes

2.1. Introduction

The Regional Pest Management Strategy for Marlborough classifies 33 plant and four animal species as pests because they cause or are capable of causing, a significant negative impact on Marlborough's economy and/or environment. The Strategy separates individual pests into classifications ⁽¹⁾, which require various levels of intervention.

The management regime for each pest applies to all or a specified part of the land within the district. In most situations the obligation lies with the land occupier to actually carry out the control of these pests. The only exception is for pests classified as 'Total Control' where either the Marlborough District Council or the Department of Conservation will implement control programmes directly.

Marlborough District Council is primarily responsible for the co-ordination of pest control programmes, ensuring occupiers comply with their obligations, carrying out surveillance to determine new infestations of pests and educating and advising land occupiers as to the most appropriate form of control for each pest.

2.2. Pest Plant Status

The table below summarises the district's pest plants and their designated status as classified in the Strategy.

Plant Pest Species	Status ⁽¹⁾	Comments
African Feather Grass	TC	Marlborough District Council initiative. These pest plants are limited in their distribution, but have the potential to severely affect either pastoral farming or cereal harvesting and/or environmental values in the district. Implementation of these programmes is delivered by Marlborough District Council. The cost of control for these pest plants is shared between the Marlborough District Council (75%) and the land occupier (25%) where the infestation occurs.
Bathurst Bur	TC	
Bur Daisy	TC	
Saffron Thistle	TC	
Giant Needlegrass	TC	
Chinese Pennisetum	TC	
Parrots Feather	TC	
Boneseed	TC	Marlborough District Council/Department of Conservation joint initiative. These pest plants are limited in their distribution, but have the potential to invade large areas of the district's indigenous forest, scrub or waterways. Implementation of these programmes is delivered by Marlborough District Council/Department of Conservation. The cost of control for these pest plants is shared between the Department of Conservation and the Marlborough District Council.
Climbing Spindleberry	TC	
Eel Grass	TC	
Madeira Vine	TC	
Moth Plant	TC	
Spartina	TC	
Evergreen Buckthorn	TC	
Senegal Tea	TC	

⁽¹⁾ Refer to the Regional Pest Management Strategy for Marlborough definitions of Total Control (TC), Containment Control (CC) and Surveillance (S)

Plant Pest Species	Status ⁽¹⁾	Comments
Cathedral Bells	TC	
Nassella Tussock	CC	Land occupiers are required to annually destroy all plants on their properties before they produce seed.
Chilean Needlegrass	CC	Land occupiers are required to annually destroy plants on their properties before they produce seed.
White-Edged Nightshade	CC	
Kangaroo Grass	CC	The degree of intervention required by land occupiers to manage these pest plants depends on the classification of each property. The control requirements range from the destruction of all plants on fringe properties to a boundary control regime on core properties.
Broom and Gorse	CC	Land occupiers are required to progressively control broom in the Upper Awatere River and broom and gorse in the Upper Wairau River catchments. All land occupiers are required to destroy all broom and gorse plants within 10 metres of their property boundary if the adjacent property is free of this pest plant
Ragwort	CC	Land occupiers are required to destroy Ragwort plants within 50 metres of their property boundary if the adjacent property is free of this pest plant.
Nodding Thistle	CC	Land occupiers are required to destroy Nodding Thistle plants within 100 metres of their property boundary if the adjacent property is free of this pest plant.
Contorta Pine	CC	Land occupiers are required to destroy all plants, with the exception of properties located directly adjacent to the Wye Reserve.
Reed Sweet Grass	CC	Marlborough District Council is responsible for managing this pest plant.
Blue Morning Glory	S	The key objective for management of these pest plants is to monitor distribution, the impacts and the spread of these organisms.
Climbing Asparagus	S	
Egeria	S	
Cotton Thistle	S	
Kahili Ginger and Yellow Ginger	S	
Lagarosiphon	S	
Purple Loosestrife	S	

⁽¹⁾ Refer to the Regional Pest Management Strategy for Marlborough definitions of Total Control (TC), Containment Control (CC) and Surveillance (S)

2.3. Pest Animal Status

The table below summarises the district's pest animals and their designated status as classified in the Regional Pest Management Strategy for Marlborough.

Animal Pest	Status ⁽¹⁾	Comments
Rooks	TC	A small number of rooks reside in Marlborough and, if allowed to build up in numbers, they are capable of causing significant damage to cereal crops and pasture. Marlborough District Council will carry out rook control with the aim of eradication.
Rabbits	CC	High rabbit populations affect soil and water quality and have a detrimental impact on economic production and increase the risk of soil erosion. It is Marlborough District Council's responsibility to ensure land occupiers comply with their obligation to control rabbits, co-ordinate and facilitate control activities, carry out rabbit population trend monitoring and offer advice on control.
Possoms	CC	Possoms cause extensive defoliation of native forest and predate on ground and tree nesting native birds and their eggs. At present in Marlborough there are no possums on our offshore islands. A rule in the Strategy prohibits the release of possums onto any offshore island in the Marlborough Sounds.
Darwin Ants	S	The key objective for management of these pests is to monitor their distribution, their impacts and the spread of these organisms.

⁽¹⁾ Refer to the Regional Pest Management Strategy for Marlborough definitions of Total Control (TC), Containment Control (CC) and Surveillance (S)

3. Total Control Pest Objectives and Performance Targets

Objective		
To eradicate Total Control pest plants from Marlborough		
Performance Targets	Action taken to meet Target	Achievements
3.1 Complete control operations at all known sites by 30 June 2010.	<ul style="list-style-type: none"> Plan, implement and manage services required to carry out control operations. 	<p>All Total Control pest plant sites were actively controlled. Those sites where the target weed continues to germinate after control work has been carried out are visited regularly throughout the season until all germinating plants for the season have been destroyed (N.B Section 12 contains details of plant numbers destroyed and shows population trends over time)</p> <p>A total of 36 new sites of total control pest plants were found during routine surveillance and all plants destroyed. These were all new sites of Moth Plant. The majority of these sites were found as a result of a newspaper article and calls from members of the public.</p> <p>The Marlborough District Council has recovered, where appropriate, 25% of the costs incurred when controlling these pest plants from landowners where infestations occur.</p>
3.2 Complete surveillance programmes for total control pest plants by 30 June 2010.	<ul style="list-style-type: none"> Determine the level of annual surveillance for each pest based on risk. 	
3.3 No new infestations resulting from known sites of these pest plants established in Marlborough.	<ul style="list-style-type: none"> Record and maintain plant pest abundance and distribution data to enable trend monitoring over the duration of the strategy. 	
3.4 A measured decline in the population of these plant pest sites by 2012.	<ul style="list-style-type: none"> Recover 25% of the control costs. 	
3.5 Recover by 30 June 2010, 25% of all costs, for those total control pest plants identified in the Marlborough District Council initiative.		

Objective		
To eradicate rooks in Marlborough.		
Performance Targets	Action taken to meet Target	Achievements
3.6 Annually, monitor all historical rookeries in Marlborough by 30 November 2010.	<ul style="list-style-type: none"> • Actively seek public and land occupier reports of sightings of rooks. • Carry out an annual rook survey and report on population trends. • Plan and implement a control programme if technically feasible and conditions are suitable. 	All 10 historical rookeries were surveyed with no rook activity sighted. As a result, no control programmes for rooks were required.
3.7 Implement a control programme if technically feasible by 30 June 2010.		

4. Containment Control Pests

Objective		
To prevent any increase in the distribution and density of these pest plants and reduce infestation levels where possible.		
Performance Targets	Action taken to meet Target	Achievements
<p>4.1 Prepare and distribute pest plant control programmes to land occupiers where active infestations of pest plants occur by 30 June 2010.</p> <p>4.2 Complete compliance inspections of properties issued with a control programme for each pest plant by 30 June 2010.</p> <p>4.3 100% land occupier compliance with the requirements of the Strategy rules by 30 June 2010.</p> <p>4.4 Undertake monitoring and reporting on pest distribution for Nassella Tussock and Chilean Needlegrass by 30 June 2010.</p> <p>4.5 Complete control operations for Reed Sweet Grass by 30 June 2010.</p> <p>4.6 Respond to all complaints with regard to pest plants within 5 working days.</p>	<ul style="list-style-type: none"> • Annually prepare control programmes for all land occupiers where an active infestation of a pest plant occurs. • Carry out inspections or verify compliance, for each pest plant. • Carry out enforcement action where required to ensure that occupiers meet their obligations to control pest plants. • Plan, implement and manage services required to carry out control operations. • Continue with the implementation of Chilean Needlegrass management plans for properties classified as fringe north of the Awatere River. • Any spread or new sites of either Nassella Tussock or Chilean Needlegrass to be recorded by GPS or field map notation and captured on Council GIS for later mapping and area calculation. • Implement Reed Sweet Grass control programme on D'Urville Island 	<p>Control programmes were issued for 429 properties with infestations of containment control pest plants.</p> <p>The following number of pest control programmes by species were issued:</p> <p>Nassella Tussock - 321</p> <p>Chilean Needlegrass - 66</p> <p>Kangaroo Grass - 19</p> <p>White-Edged Nightshade - 4</p> <p>Broom and Gorse Containment Control Area (Upper Wairau) - 7</p> <p>Broom Containment Control Area (Upper Awatere) - 12</p> <p>Of the 429 properties issued with a control programme, 360 (83%) were physically inspected to ensure compliance with the Strategy. A number of other properties were deemed to be compliant and were not prioritised for an inspection as a result of assessing historical compliance and landowner return forms.</p> <p>Unfortunately only 44 or 66% of the properties issued with a control programme for Chilean Needlegrass control were inspected this season due to resource constraints.</p>

Objective		
To prevent any increase in the distribution and density of these pest plants and reduce infestation levels where possible.		
Performance Targets	Action taken to meet Target	Achievements
		<p>Twenty two occupiers were issued with a Notice of Direction under the RPMS. Of these 21 occupiers, 5 occupiers failed to comply with their Notice of Direction and were issued with a Notice of Intention to do Work on Default. Default work was carried out on 3 of these properties.</p> <p>Council officers continue to record any new sites of Nassella Tussock and Chilean Needlegrass found during inspection work and have updated any known pest infestation maps where required. A total of 54,085ha of Nassella Tussock infestation is recorded in the District and 2736ha of Chilean Needle Grass.</p> <p>Significant changes have been made to the mapping systems used to record new sites and Council now is recording the distribution data for a wider range of pest plant species.</p> <p>All known infestations of Reed Sweet Grass in the region were controlled this season. No new sites were found.</p> <p>All complaints were actioned within 5 working days.</p>

Objective

To minimise the impacts that feral rabbits have on pasture production, crops, forestry plantations and soil conservation values in Marlborough by maintaining feral rabbit populations at levels at or below the maximum allowable level identified for the two sub-regions, the 'Upper Awatere/Clarence' and the 'Remainder of area within the District'.

Performance Targets	Action taken to meet Target	Achievements
<p>4.7 Complete initial inspections of properties identified for inspections by 30 June 2010.</p> <p>4.8 Prepare and distribute pest rabbit control programmes by 30 June 2010, to land occupiers where populations exist above the MAL.</p> <p>4.9 Complete compliance inspections of previous year's control programmes by 30 October 2010.</p> <p>4.10 Trend monitor the 12 established night count transects by 30 June 2010.</p>	<ul style="list-style-type: none"> • Identify a geographical representative sample of properties deemed 'at risk' of rabbit population increase by end March and implement an inspection regime. • Where rabbit infestations exist above the maximum allowable level issue a control programme and where possible provide an adaptive management approach to ensure the land occupier can meet their responsibilities. • Re-inspect all properties issued with a control programme to ensure compliance. • Carry out the planned population trend monitors. • Carry out serological blood sampling of rabbits, in predetermined areas, to determine RHD immunity levels. 	<p>A total of 55 properties were inspected for compliance. 33 inspections were carried out on 'new' properties while 22 were carried out on properties with existing Control Programmes. This was necessary to build landholder familiarity with new Council staff and to assess current rabbit levels.</p> <p>Six properties with 2008/09 Control Programmes were inspected for compliance. Five properties had carried out suitable control work and complied. One property had to re-organise control work to align with current Best Practice with approval from Council staff.</p> <p>From the 22 inspections, 7 properties had already completed control work under their 2009/10 Control Programme and were compliant.</p> <p>New 2010/11 Control Programmes were issued to 6 landholders where rabbit levels were found to be above the MAL.</p> <p>All 12 night-count transects were trend monitored. Trend graphs can be found in Section 12.2.</p> <p>Serological blood sampling was carried out at 5 sites in Marlborough. Two sites in the Upper Awatere contributed to long term monitoring. The 3 remaining sites selected in the Medway Valley, coastal Ward and Wairau Valley were to assess the current immunity status. These 3 sites have current issues with high rabbit numbers.</p>

Objective		
To prevent the establishment of possums on offshore islands in the Marlborough Sounds.		
Performance Targets	Action taken to meet Target	Achievements
4.11 Respond to reported sighting of possums on offshore islands within 5 working days.	<ul style="list-style-type: none"> • Solicit public feedback on any possums sited on all offshore islands • Report all sightings to the Department of Conservation who will undertake investigations with Marlborough District Council staff in support if required. 	A report was received by the Department of Conservation of possible possum tracks found on possum-free D'Urville Island. This was conveyed to Council on 9 April 2010. Immediate follow-up investigations found the tracks were that of a cat.

5. Surveillance - Pests

Objective		
To monitor the distribution, the impacts and the spread of surveillance pests, fund appropriate research projects regarding surveillance pests and educate the public as to their identification and most appropriate method of control.		
Performance Targets	Action taken to meet Target	Achievements
<p>5.1 Undertake surveillance and evaluate pest distribution and impacts for Darwin Ants and other invasive ant species and report finding by 30 June 2010.</p> <p>5.2 Update records, within 5 working days of finding or being informed of any plant or animal pest, while carrying out surveillance.</p>	<ul style="list-style-type: none"> • Inspect properties and/or collect information to determine pest status and identify the extent of any new incursions. • Act on feedback from the public in relation to new pest infestations or instances of any unwanted organism or potential incursion of a harmful organism. • Record pest finding on maps and data base records. • Manage the recorded pest as dictated by the Strategy requirements. • Utilise contract services to assist in the undertaking of specific surveillance for invasive ants. 	<p>Following on from the invasive ant survey of 2008-09 a further survey of 227 sites over Riverlands Industrial Park, Cloudy Bay Business park, Grovetown and Spring Creek town and rail siding were sampled for invasive ants. No Darwin's or Argentine ants were identified in this survey.</p> <p>Due to the Darwin's ant infestation of the Havelock Marina (managed by Port Marlborough) and adjacent camping ground, (owned by Council) it was decided to undertake ant control on this site as it is the "gateway" to the Pelorus Sound and its ecologically valued off shore islands. This was undertaken during May, later than planned, due to weather difficulties and is currently under maintenance control. Further surveillance will be undertaken at this site during November 2010.</p> <p>The public have made 35 sample submissions, of which 6 were identified as Darwin's ant and two were Argentine ant. Others were endemic or native species.</p> <p>An additional delimiting survey will be undertaken by contractors during October - December for Argentine ants outside the currently known area in Blenheim urban area, inhabited by this invasive specie to ascertain if there has been any further spread.</p> <p>All ant specie surveillance and location sites have been recorded on Council's GIS database.</p>

<p>Objective To monitor the distribution, the impacts and the spread of surveillance pests, fund appropriate research projects regarding surveillance pests and educate the public as to their identification and most appropriate method of control.</p>		
Performance Targets	Action taken to meet Target	Achievements
		<p>Council officers are recording any new sites of surveillance pests found during inspection work. Often, these new sites are found as a result of our liaison with the public. The GIS section have made significant changes to the mapping systems used to record new sites and Council is now recording the distribution data for a wider range of pest plant species. The new pest plant species selected for distribution mapping was made with input from the Department of Conservation. This information will assist us when we review the RPMS in 18 month's time. All GIS and database updates are made within 5 working days. Generally, officers instigate these updates on the same day of the inspection.</p>

6. Ecological Threat Programme

Objective		
<ul style="list-style-type: none"> • Encourage community initiatives and site led management programmes. • Identify sites with significant ecological value where the reduction of a range of ecological pest threats would be effective in protecting those values. • Provide information material and advice on impacts, threats and control options. 		
Performance Targets	Action taken to meet Target	Achievements
<p>6.1 To continue to support land occupiers with pest/weed work on prioritised significant natural area sites.</p> <p>6.2 To encourage community led pest management initiatives.</p> <p>6.3 To develop ecological pest threat information for the public in the form of fact sheets.</p>	<ul style="list-style-type: none"> • Marlborough District Council has a voluntary land assistance programme applying to significant natural areas sites, which includes pests/weed threat works. • A practical public workshop/seminar on animal pest control will be held in autumn 2010 to provide information and support to people involved in animal pest control for ecological protection purposes. • The Marlborough District Council is developing an active programme to support community led pest management initiatives. 	<ul style="list-style-type: none"> • Council carried out minor weed control on a number of protected significant natural areas sites in addition to providing financial input into two related weed control projects in the Waima/Ure Valley. • Two public animal control workshops were held in June 2010, one targeted for north Marlborough held at Portage and one targeted for south Marlborough held in Seddon. An information package was developed and distributed as a result of the workshops.

7. Educational Programme

Introduction

The Marlborough District Council recognises the advantages of a strong advisory and educational role in pest management and therefore takes a very active role in providing information and advice on the various impacts caused by pests and the best methods for controlling animal pests and pest plants.

Objective		
To educate the public in the identification of regional animal pests and plant pests and promote and encourage the most appropriate management and control options.		
Performance Targets	Action taken to meet Target	Achievements
7.1 Review and publish pest fact sheets for pests listed in the Regional Pest Management Strategy.	<ul style="list-style-type: none"> The Marlborough District Council will engage a contractor to help with modifying the existing pest pamphlets. 	11 additional brochures have been prepared for regional pests listed in the RPMS bringing the total brochures to 29.
7.2 Organise and attend a public display by 30 June 2010.	<ul style="list-style-type: none"> Promote a strong advisory and educational role to create a greater understanding of land occupier pest management roles and responsibilities. 	Council continues to place a large emphasis on educating land occupiers in the identification and control of pests identified in the RPMS.
7.3 Review the overall structure and scope of information on the Marlborough District Council's website by June 2010.	<ul style="list-style-type: none"> Identify and arrange a venue for a public display. Liaise with the Marlborough District Council's website manager to coordinate web site updates 	<p>Council and Department of Conservation staff organised a display at the Hunters Garden Marlborough Fete in November. The public were invited to bring in a weed and swap it for a native plant. Staff from both organisations were busy all day identifying the different weeds and offering advice on control techniques. The display was well attended and the day considered being a resounding success.</p> <p>The website has been reviewed and a web page went live during the year. It is the intention to also provide additional information in the form of fact sheets on the site.</p>

8. Biological Control Programme

Objective		
To enhance the establishment of biological control agents for a range of pest plants with the aim of achieving an environmentally acceptable and cost effective method of control.		
Performance Targets	Action taken to meet Target	Achievements
8.1 Agree on annual biological control programme outcomes in conjunction with the Biological Control Collective Group by 30 March 2010.	<ul style="list-style-type: none"> Contribute to the collective biological control programme managed by Landcare Research. Support research initiatives for the selection and introduction of biological control agents. 	Council continues to contribute financially to the Biological Control Collective Group. The potential release of a rust to control Chilean Needlegrass next Spring is a direct result of the research carried out with the funding available as part of this collaborative programme.
8.2 Release biological control agents which have established in the region, for the purpose of further distribution by 30 June 2010.	<ul style="list-style-type: none"> Analyse and plan for the release and/or redistribution of biological agents. Monitor the distribution status of biological control agents. 	A release of the Broom Leaf Beetle and the Green Thistle Beetle were made in South Marlborough this year with funding from our contract with Landcare Research.
8.3 Release, during the optimum period, any new biological control agent that becomes available by 30 June 2010.	<ul style="list-style-type: none"> Undertake initiatives to assess the impact of Biological control on pest plants in Marlborough. 	Ragwort Flea Beetles were harvested from the Para area (between Blenheim and Picton) and released in the Marlborough Sounds – one release was at North West Bay and the other was on the Northern end of D’Urville Island.

9. National Pest Plant Accord

Objective		
To prevent the sale, distribution or propagation within New Zealand of any pest plant listed in the National Plant Pest Accord.		
Performance Targets	Action taken to meet Target	Achievements
9.1 Annually inspect 50% of the plant retail outlets in Marlborough by 30 June 2010 annually.	<ul style="list-style-type: none"> Inspect half of the plant retail outlets each year on a rotational basis for any plants identified on the National Pest Plant Accord (NPPA). 	<p>50% of known plant retail outlets were inspected. No retail outlets were found to be selling any plant species listed on the National Pest Plant Accord (NPPA) list but two retail outlets were found to be displaying plant species listed on the NPPA. These outlets were instructed to destroy these pest plants. Both retail outlets complied with this requirement.</p> <p>No complaints were received regarding the sale of banned plant species.</p> <p>No notifications of pest incursions into Marlborough were received from Biosecurity New Zealand.</p>
9.2 Respond to any complaints relating to the sale of banned plant species within 5 working days.	<ul style="list-style-type: none"> Ensure compliance of obligations. Promote a strong advisory and educational role in association with the NPPA. 	
9.3 Respond to notification by Biosecurity New Zealand of any pest incursion.	<ul style="list-style-type: none"> Record and report inspection results to Biosecurity New Zealand. Ensure all inspections are carried out by warranted officers. 	

10. Research

Introduction

The Marlborough District Council understands the need for research in the field of pest management and provides funding for a number of research projects.

Objective		
To support research programmes which benefit pest programmes in the Marlborough region.		
Performance Targets	Action taken to meet Target	Achievements
10.1 Provide resource to undertake research as approved by the Marlborough District Council by 30 June 2010.	<ul style="list-style-type: none"> • Continue with trial work and data gathering to progress the registration of Flupropanate for the control of Chilean Needlegrass and Nassella Tussock. • Support Environment Canterbury initiatives with research for Nassella Tussock. • Undertake serological sampling of rabbits in support of the national project to determine the effectiveness of RHD following the use of conventional rabbit control techniques. • Evaluate proposals and gain approval for any expenditure. 	<p>An application was made to Environmental Risk Management Authority (ERMA) for the registration of Taskforce Herbicide over 12 months ago. Promising reports indicate ERMA will approve the application subject to a range of conditions. Council consultants are currently preparing an application to the Agricultural Compound and Veterinary Medicine group which is required before the full registration is granted.</p> <p>Environment Canterbury were unable to attract external funding for their Nassella Tussock research initiative so Council funding was not required.</p> <p>Serological sampling results at the two Upper Awatere sites were sent to Landcare Research. This data is to be incorporated into an ongoing dataset looking at the effectiveness of RHD following conventional control.</p>

11. Biosecurity Programmes - Other

Objective		
To facilitate partnerships with industry and the Crown in the management and coordination of national pest and unwanted organism programmes.		
Performance Targets	Action taken to meet Target	Achievements
<p>11.1 Continue to support the implementation of the Didymo Long Term Management Plan objectives by 30 June 2010.</p> <p>11.2 Provide support in the implementation of the Management Plan for the Top of the South Marine Biosecurity Strategy.</p> <p>11.3 Provide partnership support to Biosecurity New Zealand to respond to any new pest incursion.</p>	<ul style="list-style-type: none"> Support the Didymo Long Term Management Plan in partnership with the Department of Conservation, with support from MAF Biosecurity New Zealand, and Fish and Game and Tasman District Council. Manage the contractual relationship of the service provider of the Top of the South Marine Biosecurity Strategic Plan on behalf of the Top of the South Marine Partnership. 	<p>Council received ongoing funding from MAF-BNZ for Didymo and other fresh water advocacy during the 2009-10 season. The Department of Conservation provided the service for Council and undertook advocacy work. Their staff spoke to 3016 people on river or camping sites of which 42% were overseas visitors but all had heard of Didymo.</p> <p>The Top of the South Marine Biosecurity Partnership has been responsible for the development of a Strategic Plan with a view to safeguarding the marine ecology with buy in from the public and marine users. During the year the partnership has prepared an Operational Plan and undertaking extensive advocacy with stakeholders and marine users.</p> <p>Biosecurity NZ did not request any support for any new marine pest incursion during the report period.</p> <p>Council continues to actively be involved assisting the Marlborough Sounds Restoration Trust with its programme for the management of wilding pine spread in the Queen Charlotte Sound.</p>

12. Monitoring and Review of the Strategy

The Strategy specifies how the effects of the strategies are to be monitored throughout their duration. The term 'effect' covers two main areas:

- The effectiveness of the Strategy in terms of achieving its stated objectives.
- The environmental effects of the Strategy's implementation.

This report will satisfy stakeholders that the majority of stated operational plan objectives have been achieved during 2009/2010, while the term 'environmental effects' is much more difficult to quantify.

Where appropriate monitoring methodologies are available to measure a stated objective, data has been collected to measure these outcomes. Pest population trend data will assist Marlborough District Council and stakeholders to monitor the effectiveness of the Strategy.

12.1. Total Control Plant Pest Trend Monitoring

The overall aim for Total Control Plant Pests, as stated in the Strategy, is the eradication of them from the region. The Strategy's objective is to contribute to the eradication of these plant species by destroying them at known sites annually before they produce seed and preventing their establishment in new areas. To measure this objective, the number of plants destroyed annually at each known site is recorded.

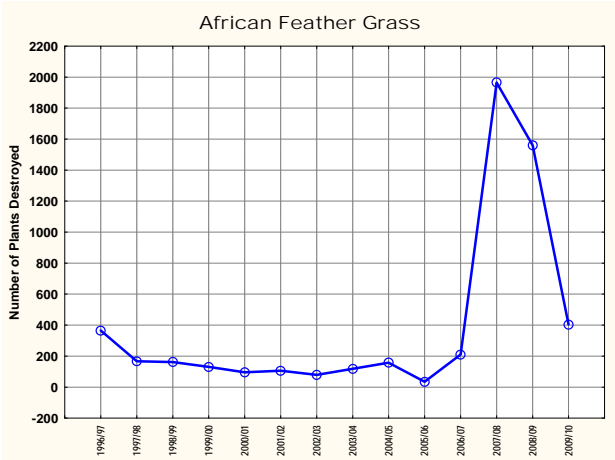
12.1.1. Total Control Plant Pests 'Core Data' (MDC Initiative)

Total Control Plant Pest	Number of Known Infestations	Plants Destroyed												
		1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Bur Daisy	1	2,150 approx	31,000 approx	20,500 approx	6,000 approx	500	130	55	110	50	32	52	100	20
African Feather Grass	16	167	162 (Including 1 new site)	131	96	106	79	119 (Including 2 new sites)	158	35 (Including 1 new site)	210 (Including 1 new site)	1965	1560	404
Saffron Thistle	16	26	2,000 approx	77 (Including 1 new site)	6,035 (Including 6 new sites)	4823	116	1325	1049	341	219 (Including 1 new site)	1084	534	148
Bathurst Bur	12	-	69	669	301	294	12	119 (Including 1 new site)	81	159	2	12	9	0
Giant Needlegrass	12	-	-	-	3,000 approx	273	325	451	329	225	327	34	148	1270
Chinese Pennisetum	11											84	71	19
Parrots Feather N.B Figure shown is litres of Glyphosate Herbicide concentrate used for Parrots Feather control in Gibsons Creek – Infestations are still too extensive in this waterway to count individual plants.	17							(5 new sites)	(4 new sites)	(2 new sites)	(1 new site)	4.3L Glyphosphate (5 new sites)	3L Garlon 360 1L Glyphosphate	1.75L Garlon 360

12.1.2. Total Control Pest Plants ‘Analysis’ (MDC Initiative)

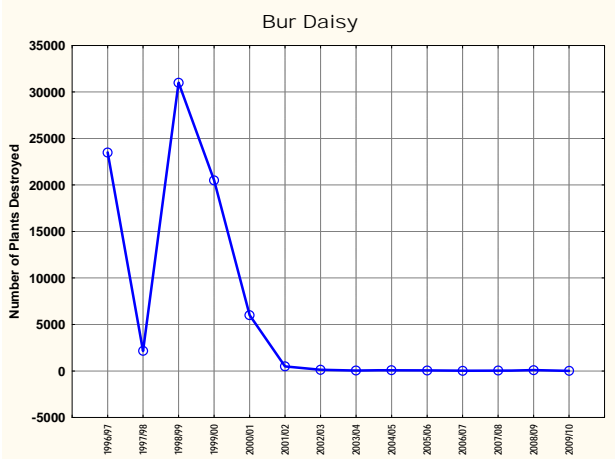
African Feather Grass

After several years of intensive control at Ngakuta Bay, the largest remaining infestation, the number of African Feather Grass plants destroyed is declining rapidly.



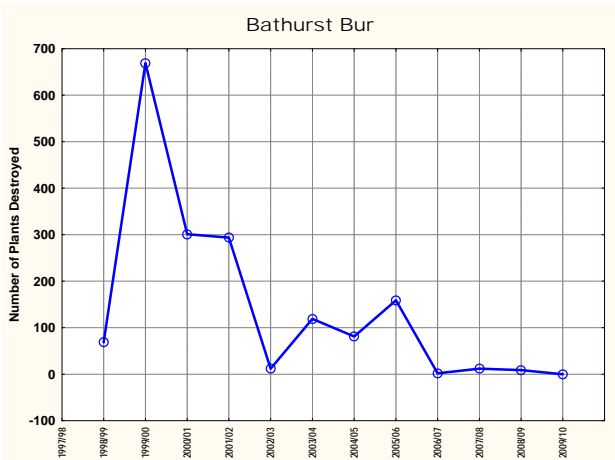
Bur Daisy

The intensive grubbing and bagging of Bur Daisy plants will hopefully lead to the eradication of this invasive weed.



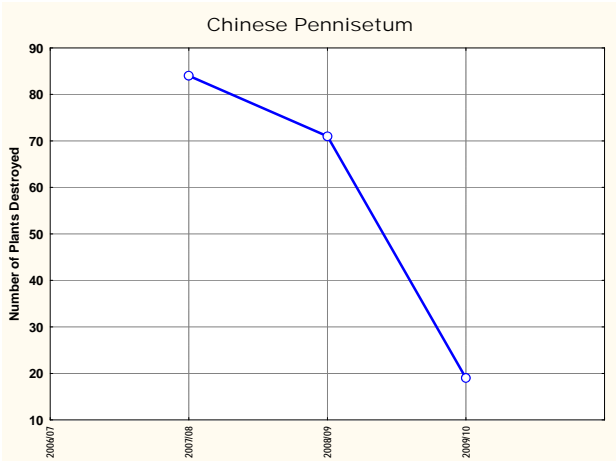
Bathurst Bur

No Bathurst Bur plants were found this season – the result of vigilant control work over many years.



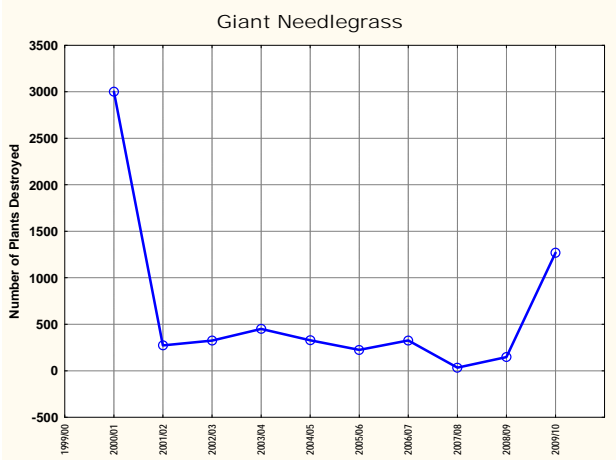
Chinese Pennisetum

The change in status of this weed to ‘Total Control’ has meant that eradicating it could be a very real possibility.



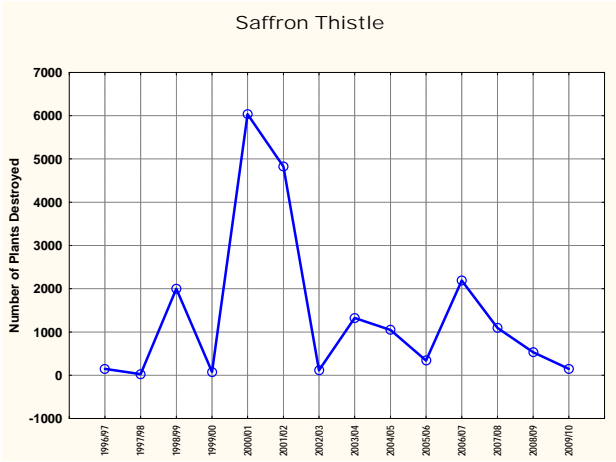
Giant Needlegrass

The area with the largest infestation of this weed was located in a harvested forest area. The result was a huge germination of young plants from the existing seed bank – hence the increase. Three separate control operations were carried out and all plants were sprayed.

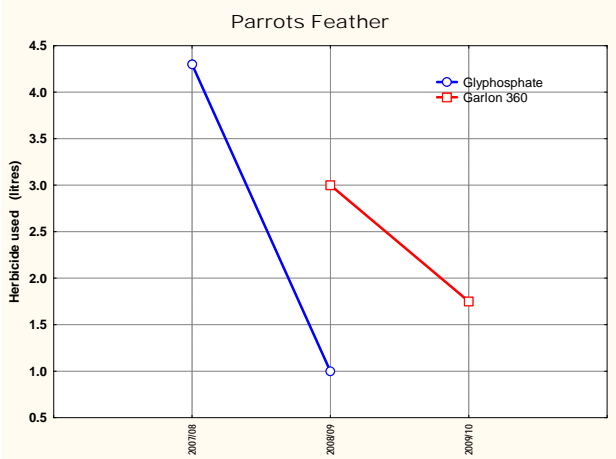


Saffron Thistle

The number of plants destroyed continues to decline. A number of the known sites have been visited annually for several years and no plants have been found.



Parrots Feather
With the use of Garlon 360, infestations of this invasive aquatic weed continue to decline.



12.1.3. Total Control Pest Plants 'Core Data'– (MDC/DOC Combined Initiative)

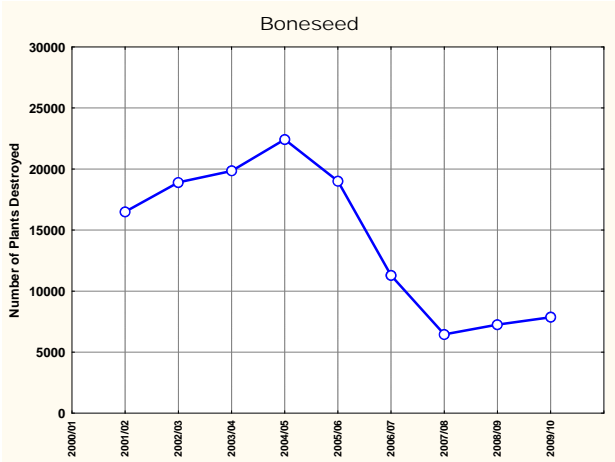
Total Control Pest Plant	Number of Known Infestations	Plants Destroyed									
		2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Boneseed	17	-	16,500 approx	18,904 (Including 3 new sites)	19,843 (Including 5 new sites)	22,421 (Including 5 new sites)	19,011 (Including 1 new site)	11,300	6,455	7,252	7,865
Climbing Spindleberry	5	2,530 approx	1,020 approx	279	79	85	139 (Including 1 new site)	133	333 (Including 1 new site)	644	38
Moth Plant	176	-	25	139 (Including 3 new sites)	135 (Including 5 new sites)	127 (Including 7 new sites)	86 (Including 1 new site)	603 (Including 58 new sites)	677 (Including 9 new sites)	1,479 (Including 47 new sites)	2,484 (Including 36 new sites)
Madeira Vine	4	250	450 (Including 1 new site)	23	63	7	14	20	706 (Including 1 new site)	103	149
Eel Grass NB: Infestations are pulled by hand	8	21 tonne	3 tonne (Including 1 new site)	2.75 tonne (Including 1 new site - Waterlea Creek)	1.25 tonne (Opawa Loop) 60 plants (Waterlea Creek)	60 kg (Opawa Loop)	100 kg (Opawa Loop)	1,500 kg (Including 2 new sites)	150 kg (Opawa Loop) 40 kg (Waterlea Creek)	10 kg	1,800 kg
Cathedral Bells	7	-	-	-	-	-	-	-	364 (NB Control work was carried out at 4 of the 7 sites - All 7 will be inspected and controlled 08/09)	1,329	649
Evergreen Buckthorn	3	-	-	-	-	-	-	-	1,613	1,154	309
Senegal Tea	2	-	-	-	47 (2 new sites)	1	9	--	Both known sites have been eradicated	Both known sites have been eradicated	Both known sites have been eradicated

Total Control Pest Plant	Number of Known Infestations	Plants Destroyed									
		2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Spartina Grass NB: Figure shown is litres of Gallant Herbicide concentrate used for Spartina Grass control each spraying season - Infestations are still too extensive to count individual plants.	5				580 L	415 L	19.7 L	1.97L	1.25L	1.2L	0.9L

12.1.4. Total Control Pest Plants ‘Analysis’– (MDC/DOC Combined Initiative)

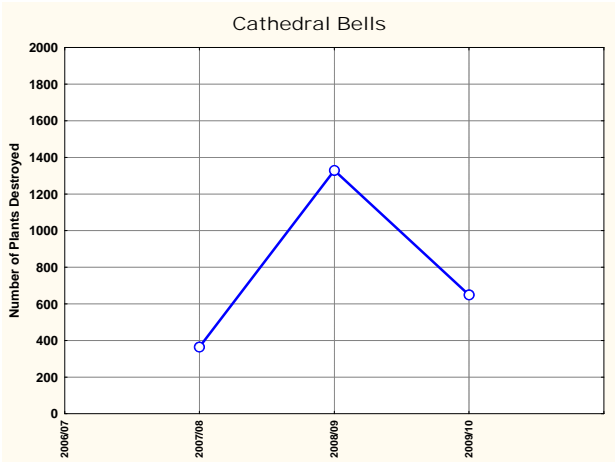
Boneseed

Forestry felled to waste let the light in at Snake Point and the result was large infestations of flowering Boneseed. About half of this was sprayed by helicopter as it worked out more cost effective in the rough terrain.



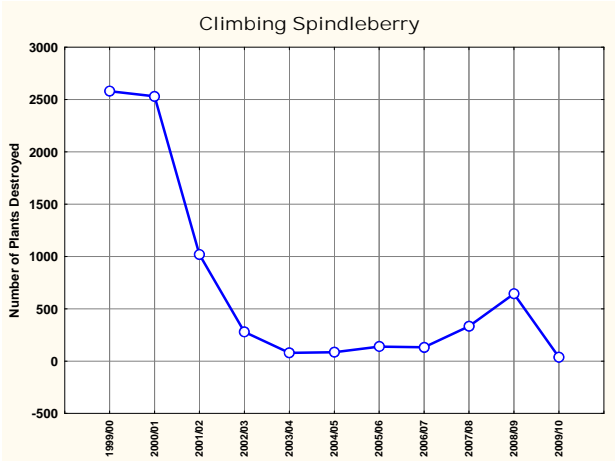
Cathedral Bells

The number of plants destroyed is in decline as the major infestations have been destroyed.



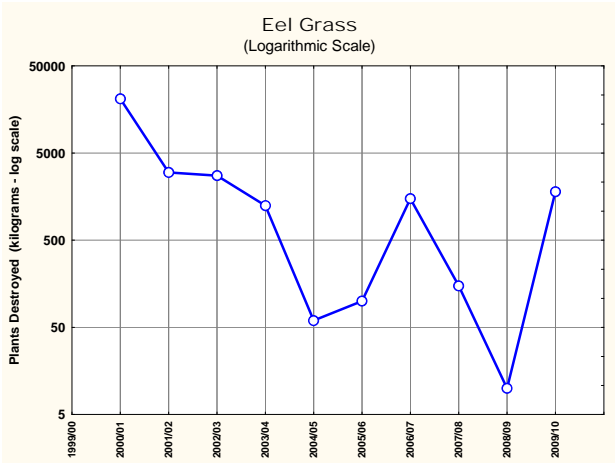
Climbing Spindleberry

The number of plants destroyed each year continues to decline.



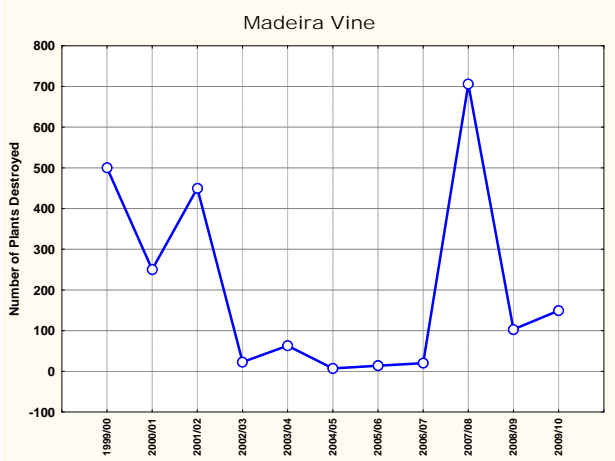
Eel Grass

One of the known sites had substantial growth this year and an increased quantity of Eel Grass was removed by hand. Carpet will be put down over this area to eliminate any re-growth.



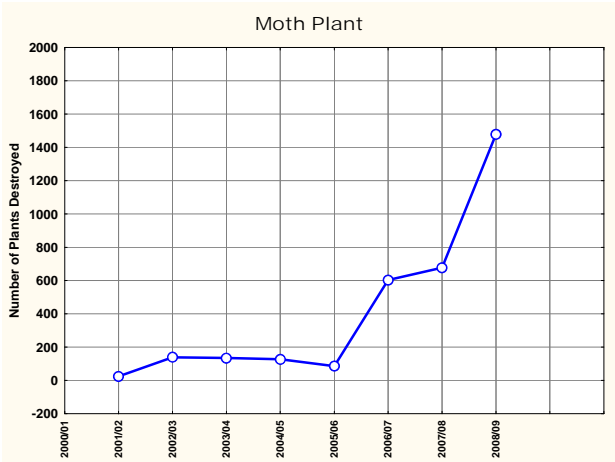
Madeira Vine

Maderia Vine produces aerial tubers which fall off the plant and can sit in the ground for many years. As the tubers emerge, they are removed.



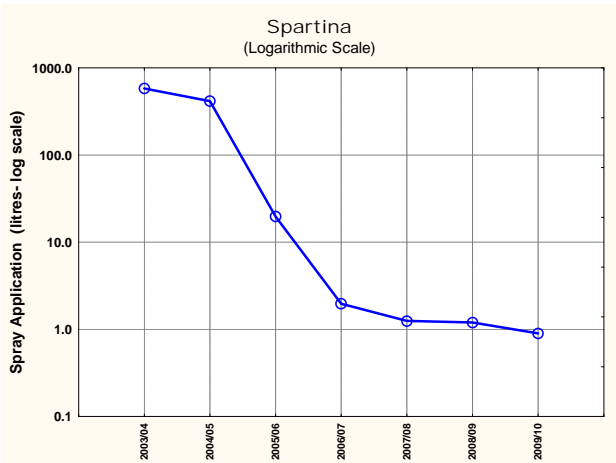
Moth Plant

With the increase in public awareness, Council officers continue to find and control more new sites.



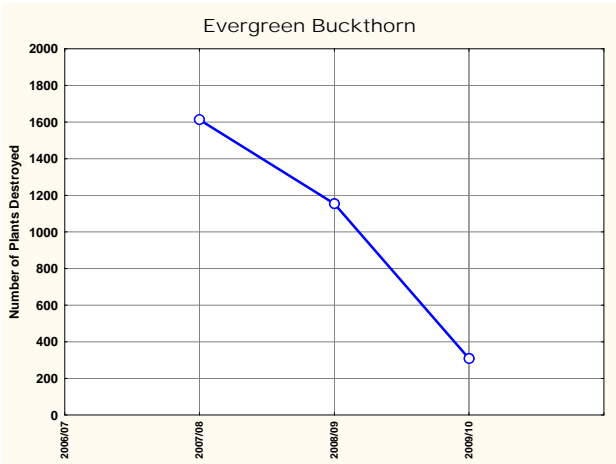
Spartina

This successful initiative shows a continual decline in emerging plants.



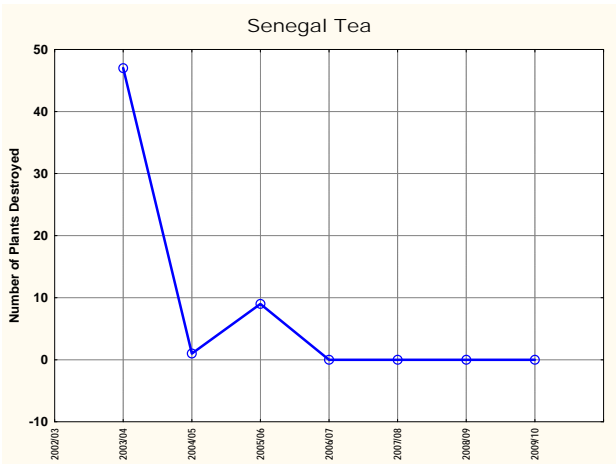
Evergreen Buckthorn

Evergreen Buckthorn is a huge problem in some coastal areas of the North Island. In this region, plant numbers destroyed annually continue to decline.

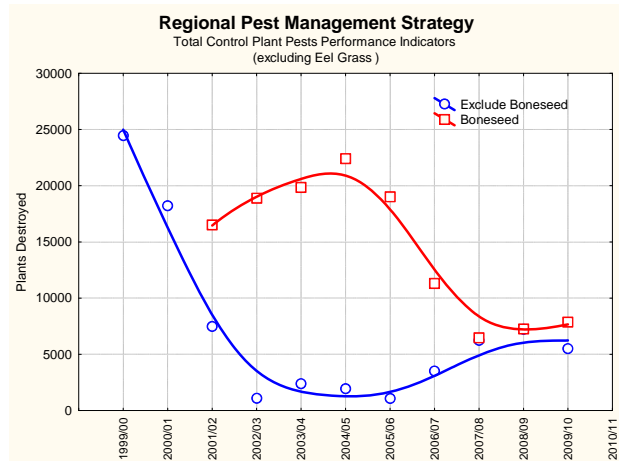


Senegal Tea

No new sites of Senegal Tea have been found. At this stage, it would appear it has been eradicated from the district.



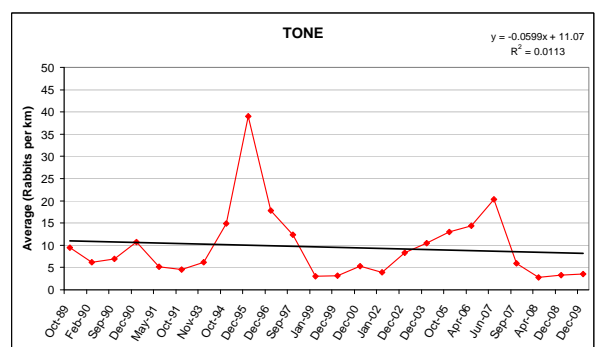
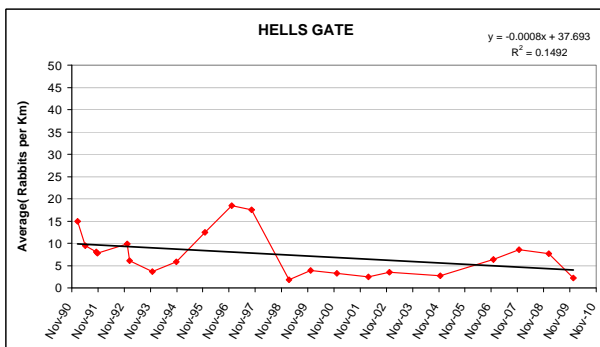
Regional Pest Management Strategy (Total Control Plant Pests Performance Indicators (excluding Eel Grass))

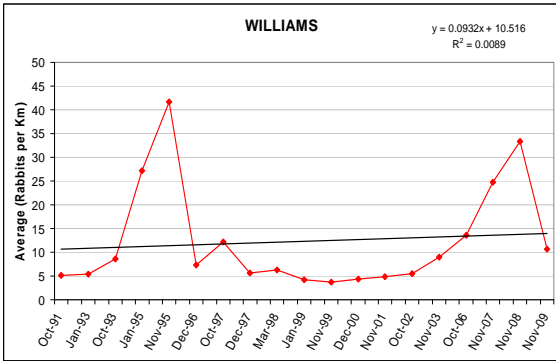
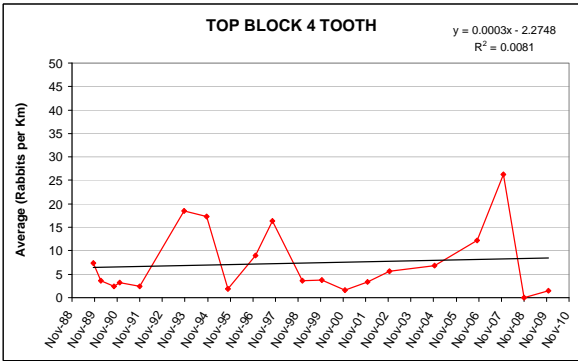
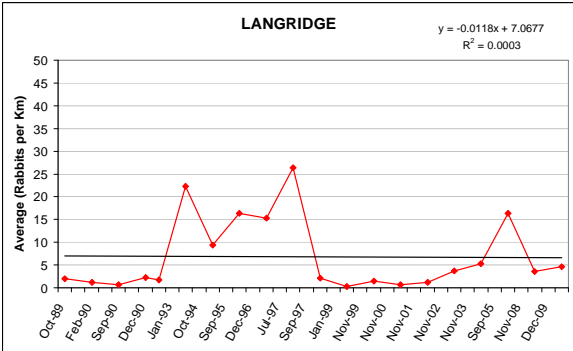
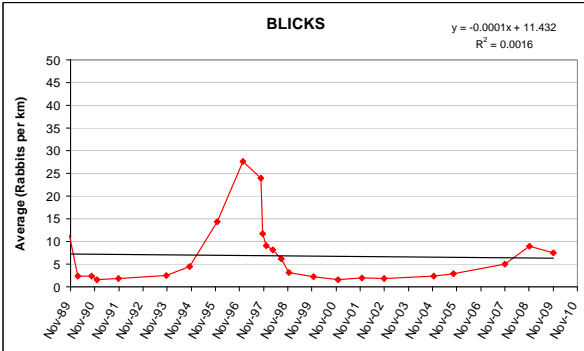
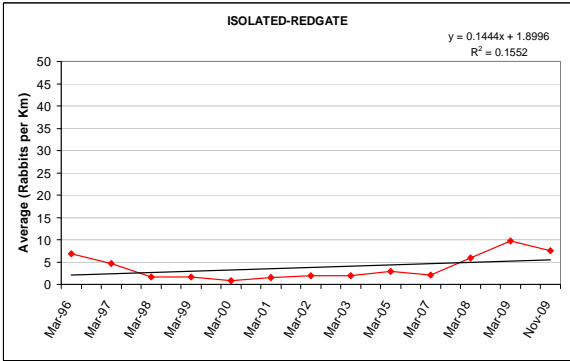
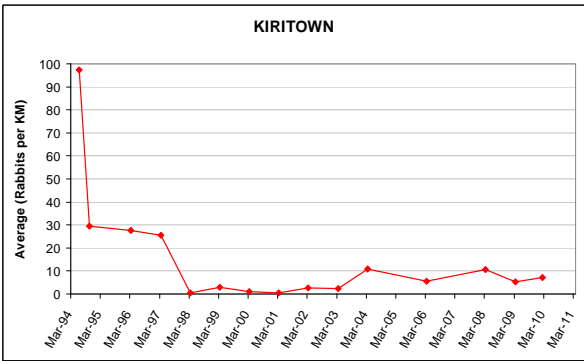
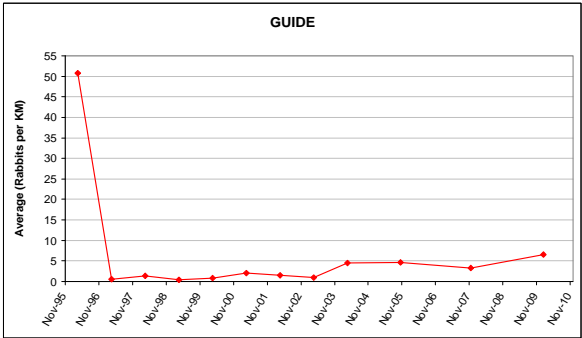
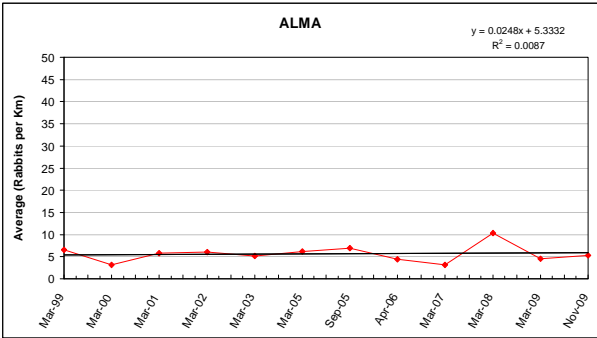


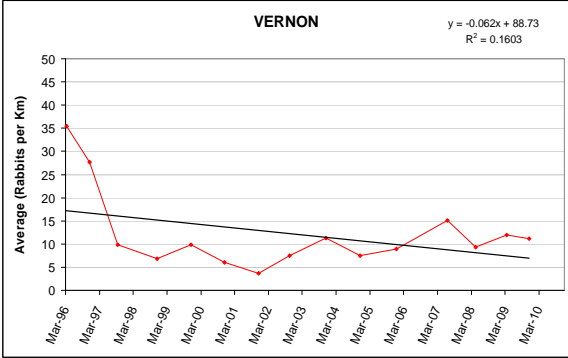
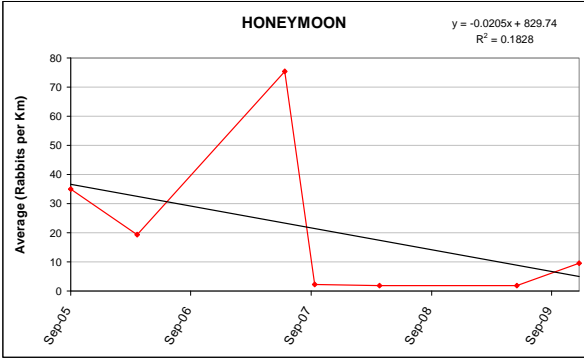
12.1.5. Rabbit Pest Trend Monitoring - Night Count Data

The desired end result of the Rabbit Pest Management Strategy is to ensure rabbit populations are controlled so that they do not adversely affect the economic viability of our primary industry or soil and water quality. It is difficult to quantify the economic or environmental effects of changing rabbit populations.

The graphs below show rabbit levels pre RHD (pre 1997) and the subsequent trends since that time. In general, rabbit numbers across the timeframe of these night counts have remained steady. However, there have been pronounced peaks in rabbit abundance in the mid 1990s and again in 2007. Both times these increases have been brought back down by initially the introduction of RHD then more recently through intensive conventional control. The more recent increases can be correlated to an increase of RHD immunity in the rabbit populations. It is expected, from early signs, the numbers are slowly building again and without intervention would result in another influx as seen previously.







13. Summary

1. The majority of performance measures have been achieved through the year.
2. The control of the aquatic pest plants Parrots Feather and Reed Sweet Grass has proved to be very successful. No new sites of either species were found during the last season. The use of Garlon 360 has been the breakthrough we needed to potentially eradicate Parrots Feather in time.
3. The majority of occupiers have complied with written obligations through the issuing of pest control programmes. Legal directions are only issued once all other compliance alternatives are exhausted. Twenty One Notices of Direction were issued as a result of occupiers failing to meet their obligations under the Strategy. Five Notices of Intention to do Work on Default were issued as a result of further non-compliance. Default work was carried out on 3 properties that failed to comply and default work had to be carried out.
4. Land use changes continue to increase the risk of Chilean Needlegrass (CNG) seed being spread from infested areas to clear areas. The Marlborough District Council is currently looking at better ways it could help to minimise any possible risks. Council continues to proceed with the registration of a new tool to control CNG.
5. The cost of rabbit pest monitoring and land owner conventional control activities continues to increase substantially due to the decline in the impact of the RHD virus in Marlborough.
6. A major emphasis on education relating to the control and identification of pests identified in the Strategy continues to be a primary activity.
7. Extensive surveillance work for Total Control and Containment Control pest plants continues. New pest plant sites for several pest plants continue to be discovered. These sites are recorded and the Marlborough District Council takes appropriate action to ensure the plants at these sites are destroyed where required, either by Council officers or by land occupiers.
8. The Marlborough District Council and the Department of Conservation continue with great success in eradicating Spartina Grass from the region.
9. The biological control of weeds programme with Landcare Research continues to be of huge benefit to the region. The Marlborough District Council and Landcare Research have prepared an application to ERMA to import a rust which parasitises Chilean Needlegrass in South America. We hope to release this rust in Spring of next year.
10. The Marlborough District Council continues to be active with assisting industry and other stakeholders with pest programmes, in particular, Didymo and other marine biosecurity measures.

Record No: 10203439