

Executive summary

This report reviews the Taranaki Regional Council's performance and achievement on its biodiversity functions for the 2007/08 year. The report also fulfils the Council's statutory obligation under Section 35 of the Resource Management Act 1991 to report to the regional community on its performance in exercising any functions, powers or duties delegated to it.

Biodiversity work is both a relatively new area of work for the Council and one that has been always undertaken by the Council, albeit under the guise of sustainable land management, pest control, consent management etc. The Council's biodiversity actions have been identified and pulled together in the Council's *Biodiversity Strategy: an operational strategy to guide biodiversity actions of the Taranaki Regional Council*.

This report summarises work undertaken by the Council on sites identified as regionally significant through its Key Native Ecosystem programme. The report also reports on biodiversity work undertaken through other Council programmes. This information has been largely gleaned from other annual reports, recognising that biodiversity work spans across the whole of Council's operations.

This is the first significant activity report prepared by the Council on its biodiversity work.

Set out below is a summary of the main biodiversity activities carried out by the Council in 2007/08:

- € The Council prepared a draft Biodiversity Strategy: an operational strategy to guide the biodiversity actions of the Council. This was circulated for stakeholder comment. Submissions were received from 17 stakeholder groups or individuals. Overall the response to the proposed directions and focus in the Strategy was positive. Stakeholder comments were valuable in finalising the Strategy.
- € A workshop was held gathering together representatives from biodiversity agencies and community groups in Taranaki to discuss ways of working more closely together. The response from participants was highly positive.
- € Nine biodiversity plans were commenced or prepared in conjunction with landowners of Key Native Ecosystems. Out of this planning work, additional biodiversity condition fund resources are being made available to two Key Native Ecosystems (one the Council is managing on behalf of the landowners, and the other, the Council assisted a community group to access this fund). Council supported predator control work and wetland fencing/planting work was carried out at a number of Key Native Ecosystem sites.
- € Biodiversity work through the Council's existing programmes included the preparation of 21 farm plans and 301 riparian plans, providing 256 438 plants at cost to 670 plan holders and advice and support to 3 437 land occupiers through the self help possum control programme and monitored structures in waterways for fish passage.
- € Support was provided to several 'iconic' biodiversity projects: technical and financial support was provided to Lake Rotokare Scenic Reserve Trust; support to prepare a marketing proposal for the East Taranaki Environment Trust kiwi project was provided; logistical support was provided for the pest control work at Whitecliffs for Ngati Tama

and the Council continued to work in partnership with the Department of Conservation in terms of working towards the next possum control operation in the Egmont National Park. Finally, the Council's own iconic project, the riparian restoration project on the ring plain was the subject of increased public awareness.

- € The Council has started scoping the requirements for its biodiversity data management and the requirements for a monitoring plan.
- € A study into biodiversity changes in riparian vegetation of differing ages was commenced, along with a study into the biodiversity values of small streams, and a re-survey of wetland extent using 2007 aerial photos.

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Introduction

1.1 Purpose

This report reviews the Taranaki Regional Council's performance and achievements on its biodiversity functions for the 2007/08 year.

1.2 Background

A number of the Council's day to day activities include an element of indigenous biodiversity protection or management. These functions include the development of plans, processing consent applications, protecting regionally significant wetlands, undertaking pest animal and plant control, assessing and removing barriers to fish passage, and the riparian and sustainable land management programmes.

Thus the Council has had a long involvement in biodiversity related activities. The 2003 amendment of the Resource Management Act (the 'RMA') further strengthened the role of regional councils in this area through specifically stating that one function was the establishment and implementation of objectives, policies and methods for maintaining indigenous biodiversity (s30(ga)).

1.2.1 Objectives

There are a number of objectives that relate to biodiversity in the Council's 2007/08 *Annual plan*:

"To control pest animals to minimise their adverse effects on biodiversity, primary production and the regional economy and environment";

"To control or eradicate pest plants to minimise their adverse effects on biodiversity, primary production and the regional economy and environment";

"To monitor the state of the environment in Taranaki to enable periodic evaluation of trends in the state of the environment";

"To provide relevant and quality information for resource management programmes";

"To promote the protection of the environment through a programme of enhancement grants";
and

"To promote sustainable land and riparian management by providing property planning services that identify actions for land use and management on an individual property basis".



Council officer and community volunteer set mustelid traps at Te wawa wetland, a Key Native Ecosystem

1.2.2 Performance measures

The Biodiversity Strategy identifies a number of **proposed performance indicators** for each section of the Strategy. These are discussed in each section below.

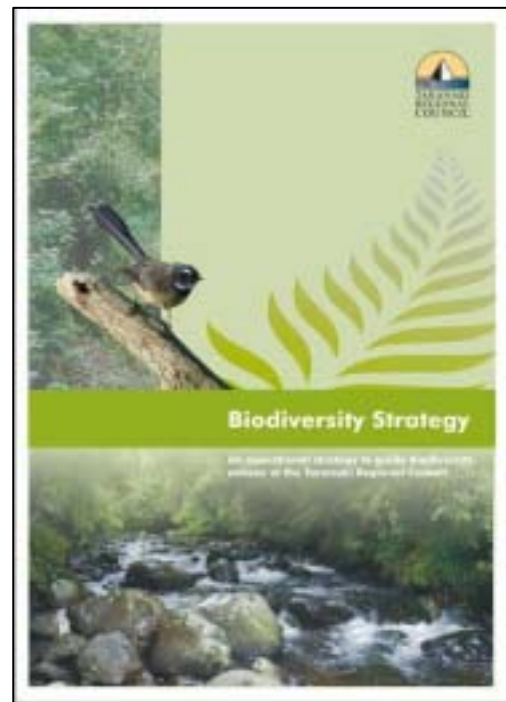
2 Report on progress

2.1 Biodiversity Strategy

This financial year the Council prepared a strategy to guide its biodiversity operations.

The '*Biodiversity Strategy: An operational strategy to guide biodiversity actions of the Taranaki Regional Council*' (the 'Strategy') built on earlier work that commenced a review of the Council's responsibilities in relation to indigenous biodiversity (*'Indigenous biodiversity for the Taranaki region: RPS working paper'*, 2004).

The primary purpose of the Strategy was to pull together all the Council's biodiversity-related programmes under one operational document, develop a co-ordinated and focused programme of action for indigenous biodiversity work, and set out a road map for the future. The maintenance of indigenous biodiversity is work that spans across all sections of the Council and thus requires a 'whole of council approach'.



The strategy was developed through extensive in-house discussion as well as some discussion with key stakeholders. The draft was then circulated for comment to interested parties in biodiversity. 17 submissions were received on the draft. Overall, these submissions were highly supportive of the direction proposed in the strategy, and comments were more of a fine-tuning nature enabling an improved strategy to be finalised.

The Strategy sets out the priorities for the Council and includes over 180 specific actions to be undertaken over the life of the Strategy. The Strategy also proposed performance indicators, although does not specify targets as these are more appropriately set during the preparation of the annual plan.

The Council has established a new Biodiversity Section which will provide a focus to the implementation of the Strategy. Cross council involvement in biodiversity will remain crucial to achieving the goals of the Biodiversity Strategy.

Council's priorities for Biodiversity from the Strategy:

1. Develop and implement an integrated and co-ordinated biodiversity protection and enhancement programme with private landowners on prioritised Key Native Ecosystems (regionally significant sites).
2. Acknowledge the biodiversity component of existing Council programmes, particularly the provision of education and advice. Bring an increased 'biodiversity focus' to these programmes, especially as they relate to the national priorities, i.e. indigenous vegetation associated with 'threatened land environment types', wetlands and habitats for threatened species.
3. Where appropriate, facilitate improved coordination of biodiversity work undertaken by different agencies, trusts and community groups across Taranaki in order to build capacity in the community for the efficient and effective maintenance and enhancement of indigenous biodiversity. This will include the development of community based partnerships to achieve success with a small number of 'iconic' biodiversity projects.
4. Contribute to the management and development of biodiversity information systems relevant to Taranaki to ensure management decisions are based on sound scientific information and to enable the monitoring of outcomes for biodiversity in the Region and the revision of priorities as necessary.

2.2 Key Native Ecosystem Programme

2.2.1 Objectives and performance indicators

The objectives of the Key Native Ecosystem programme are :

1. To identify regionally significant sites;
2. To establish an integrated approach to management at prioritised KNE sites; and
3. To work with landowners to ensure regionally significant biodiversity values on KNEs are maintained, enhanced and restored.

The Biodiversity Strategy proposes the following performance indicators:

- € Number of KNEs with a Biodiversity Plan.
- € Progress with management recommendations from the Plans.
- € Change in the number, or area (ha) of KNEs under formal protection (legal covenants or rules in district or regional plans).
- € Number, or area (ha) under a sustained animal pest control programme (i.e. including area within the self help possum control programme).
- € Number of KNEs that are fully fenced.
- € Number of KNEs in receipt of biodiversity funds (from a range of sources – Council funds, district council funds, QEII, central government funds etc).

- € Change in biodiversity condition of specific sites that are being monitored through Biodiversity Plans.
- € Change in biodiversity indicators across representative KNE sites (biodiversity index yet to be developed).

2.2.2 Summary of progress with Key Native Ecosystem Programme

The Council's Key Native Ecosystem inventory was prepared, in partnership with district councils, community groups and the Department of Conservation in 2006¹. These sites were selected on the basis of their ecological values (rarity and distinctiveness, representativeness, ecological context and sustainability) and likely management threats and responses.

Management actions required for Key Native Ecosystem sites will vary from site to site. Planning the management at each site is important to ensure that all aspects of management are considered (e.g. it is no good killing the predators if meanwhile Old Man's Beard is smothering the canopy). Developing a plan of the required management actions will:

- € provide the landowner with a clear idea of what management is required to sustainably manage the site for biodiversity purposes;
- € show landowners what tasks they can do, and what tasks Council staff can assist with;
- € will help facilitate coordination between Council staff;
- € may help facilitate coordination between agencies with an interest at the site, or expertise to offer;
- € will set out what monitoring is required at a site;
- € will clearly define roles and responsibilities so ensure responsibilities area allocated for the various management actions; and
- € will be used to assist landowners to access funds from the various funding pools available.

The Council has much experience and expertise in preparing riparian plans and comprehensive property plans. Using these as a model, the Council proposes to develop **Biodiversity Plans**. These plans will vary according to the complexity of management needs at a particular site. They will be customised to suit the site and landowners.



Umutekai bush is a large semi-coastal forest remnant on the Pouakai ring plain just out of New Plymouth.



New fencing at Lake Waiau will safeguard the wetland's values.

¹ TRC 2006. *Key Native Ecosystems: Inventory of sites with indigenous biodiversity values of regional significance.*

Liaising with other agencies will be a critical part of the planning process as those other agencies may already have developed a relationship with the landowner, and it is important to streamline the management of biodiversity on that site to avoid doubling up of effort. Other agencies or community groups may also be helpful in terms of information gathering, e.g. Ornithological and Herpetological Societies.

The Strategy sets out the current state of Key Native Ecosystems (Table 1). This will be updated in future annual reports.

Table 1: State of Key Native Ecosystems

Indicator	Number (as at Aug 07)
Total number of Key Native Ecosystems	155
Number that have some private land	99
Number that are fully fenced	55
Number in the self-help possum programme	49
Number with other pest animal programmes	19
Number in public ownership or with some form of formal protection agreement	102

Table 2 sets out progress in terms of biodiversity plan preparation and implementation at the Key Native Ecosystems worked on this financial year. As can be seen by this table the Council was engaged in working with landowners in a range of activities designed to protect the indigenous biodiversity values at these sites.

Table 2: Summary of progress with Key Native Ecosystems

Key Native Ecosystem Site:	Progress with planning	Summary of fencing/plant pest management activities undertaken by the Council.	Summary of animal pest management activities at that site.
Dorset Road		Environmental enhancement grant used for spraying and planting.	
Huiakama Lagoon		Environmental enhancement grant used for planting, spraying and fencing.	
Julian's pond	Draft Biodiversity Plan prepared.	-	Predator control recommended but yet to commence.
Kaweora Block	Biodiversity Plan in preparation.	Discussions in progress with landowners re legal protection.	Council undertakes pest control of this block for possums.
Lake Kaikura		Environmental enhancement grant used for plants to revegetate area.	
Lake Rotokare Scenic Reserve	Management Plan already in place.	-	Council has continued to provide advice and support (such as storage and monitoring of bait), along with financial support for the pest eradication programme.
Lake Taumaha		Environmental enhancement grant used for spraying.	
Lake Waiau		Environmental grant used for additional fencing and planting.	
Maketawa stream bush	Biodiversity Plan prepared with landowners	-	Landowner undertaking some predator control on a trial basis.
Matau/Purangi	Management Plan already in place.	-	Council has continued to provide advice and support including financial support to prepare marketing proposal to progress predator control over the area.
Ngati Tama Whitecliff area	Management Plan already in place.	-	Council is project managing the 1080 aerial possum control operation to achieve biodiversity outcomes set out in management plan for the area. The operation is likely to happen in August 08.

Key Native Ecosystem Site:	Progress with planning	Summary of fencing/plant pest management activities undertaken by the Council.	Summary of animal pest management activities at that site.
Nowell's lake	Biodiversity Plan in preparation.	Environmental enhancement grant used for fencing and planting.	Council staff undertook hare and rabbit control.
Rapanui Petrel Colony	Biodiversity Plan prepared with the Trust.	Council staff carried out annual inspection of predator proof fence	Council staff carried out rabbit control.
Sandy Bay	Separate management plan in place.	Council supported Society to apply for biodiversity condition funds for sand dune planting and restoration.	Ngati Tara Oaonui Sandy Bay Trust carry out predator control, particularly of hedgehogs and feral cats, and report numbers to Council. Council planning to upgrade traps next financial year.
Spence Road Ponds		Environmental enhancement grant used for plants.	
Te Wairoa	Biodiversity Plan prepared with owners (Forest and Bird)	-	Forest and Bird carry out predator control.
Te Wawa wetland	Biodiversity Plan prepared with landowners.	Plant pest extent noted on biodiversity plan.	Predator traps installed and serviced by community volunteer. Numbers of animals killed provided to Council.
Toko wetland	Biodiversity Plan prepared with landowners.	Extensive willow control undertaken.	Landowners have killed numerous predators in and around the wetlands including mustelids, hedgehogs and cats. They report their catches to the Council.
Tom and Don's Bush	Biodiversity Plan prepared with owners (Forest and Bird).	-	Council funding will be used to set up predator control. Night shoot carried out by Council staff for riparian protection.
Toro Road			
Umutekai bush and conservation area.	Biodiversity Plan prepared with landowners.	Plant pest extent mapped and contract awarded (although not carried out) for control of woolly knightshade.	Biodiversity condition funds secured to put in place predator control. Rat and bird surveys have been conducted, prior to predator control commencing.
Wiremu Road		Environmental enhancement grant used for spraying.	

2.3 Enhancing biodiversity component of existing programmes

2.3.1 Objectives and performance indicators

The objectives of the Council's biodiversity work generally will be:

1. To promote the maintenance, enhancement and restoration of indigenous biodiversity throughout the Taranaki landscape, particularly on threatened land environments. wetlands, sand dunes, 'originally rare' ecosystems and habitats (both indigenous and non-indigenous) important for threatened species;
2. To avoid, remedy or mitigate adverse effects on indigenous biodiversity from use and development of natural resources;
3. To work with landowners to identify opportunities to promote the protection or restoration of indigenous biodiversity through pest control, riparian plans or comprehensive farm plans, etc; and
4. To promote sympathetic management of the productive landscape that will safeguard or restore biodiversity values.

The Biodiversity Strategy proposes the following performance indicators:

- € Hits on the biodiversity page of the Council's website.
- € Number of riparian property plans or comprehensive farm plans prepared.
- € Length of stream bank where riparian vegetation has been restored.
- € Length of small streams piped, straightened or relocated for land improvement purposes (as a contra indicator).
- € Change in hill country land that has been retired.
- € Amount of indigenous vegetation remaining in the region (refer action in Section 6.5).
- € Amount of wetland habitat remaining in the region (refer action in Section 6.5).
- € Number of properties in self help possum programme with residual trap catch levels below 10% post treatment.
- € Number of structures in streams with barriers to fish passage.
- € Amount of money allocated from the Council's environmental enhancement grant.



Tangatara stream, before and after riparian planting, showing improved biodiversity..

2.3.2 Summary of biodiversity actions undertaken through existing programmes

(a) *Policy development and review*

The focus of biodiversity policy development this financial year, has been the biodiversity chapter of the *Proposed Regional Policy Statement* and the *Biodiversity Strategy* described above. The *Proposed Regional Policy Statement* has been progressing through the pre-hearing process and the formal hearing on submissions will be next financial year.

(b) *Information, advice and communications*

The Council has taken the opportunity to promote biodiversity through a number of media releases include releases on world wetlands day, didymo and the riparian restoration programme.

Five teacher workshops were facilitated by the Council including *Visit the Rock Pools, Waste Minimisation and Recycling*, two sessions on *SHMAK (Stream Health Measurement and Assessment Kit)* and *Adopting a Stream*.

The *Didymo Communications Plan* for the 2007-2008 summer period was implemented by the Taranaki Regional Council on behalf of the Taranaki Regional Didymo Group. The programme was funded by MAF Biosecurity New Zealand (BNZ) and the Department of Conservation (DOC). A communications programme was developed to increase public knowledge of didymo, especially amongst freshwater users, and to encourage responsible freshwater hygiene practices.

The primary audiences for the 'Check, Clean, Dry' campaign were anglers, trampers, kayakers and whitebaiters. The recommended approach with these groups was face to face contact and onsite visits to clubs and meetings to discuss didymo, distribution of communications material provided by BNZ and the demonstration of cleaning techniques at key events and locations.

An Environmental award was awarded to a newly restored wetland area at Toko, where the landowners are undertaking their own predator trapping and restoration programme.

Three wetland gully areas have been fenced to exclude stock and enhanced with thousands of new plants and the creation of five areas of open water habitat that has attracted the dabchicks, scaups, spotless crake, pied stilt and gamebirds such as mallard duck and even a solitary black swan. The drier sides of the gullies also provide much-needed habitat for the threatened striped skink *Oligosoma striatum*.

The safety of these indigenous species is enhanced by the trapping operation, which to date yielded 53 stoats, 11 ferrets, six weasels and a number of feral cats. The property is also part of a new self-help possum control programme in the Toko area.

So with plenty of help from family and friends, and advice and assistance from the Taranaki Regional



Recently created wetland at Toko

Council, Taranaki Tree Trust, the NZ Gamebird Habitat Trust (through Fish and Game Taranaki), the Department of Conservation and the QEII Trust, these pockets of the property have been transformed. The farm hosted an open day in February 2008 to mark World Wetlands Day.

(c) Sustainable land management

The Council's sustainable land management programme contributes to biodiversity protection or enhancement through providing landowners with property plans for either hill country (potentially involving retirement of indigenous vegetation rather than farming it unsustainably) or through riparian plans. This financial year, the Council prepared 21 comprehensive farm plans covering an additional 15 355ha of hill country and 310 riparian management plans covering 1 584 kilometres of stream bank.

The Council has continued to provide plant materials at cost to landowners for land stabilizing, soil conservation and riparian restoration, recognising the biodiversity benefits of these planting programmes. This financial year, the Council provided 256 438 plants to 670 plan holders.

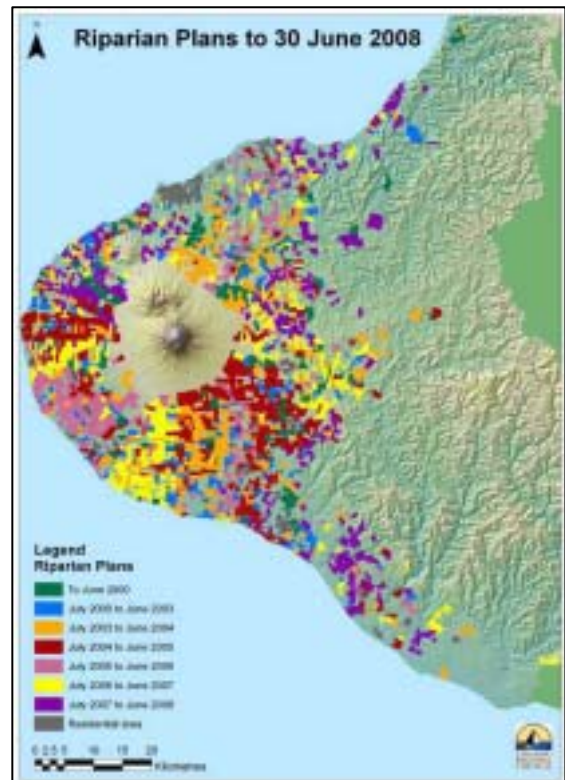
Council has supported the protection of areas for biodiversity through its environmental enhancement grant (in addition to Key Native Ecosystems discussed above), such as the Tongaporutu whitebait area.

The Council continues to administer and service the Taranaki Tree Trust – a charitable trust dedicated to the protection and enhancement of the region's ecosystems and landscapes. It provides an annual grant of \$30,000 to the Tree Trust from the Environmental Enhancement Grant.

The Trust has confirmed its strategic direction in line with the recently published national priorities for the protection of biodiversity on private land, and will continue to focus on financially supporting landowners to protect and restore remnant wetland and forest areas, particularly on land environments where there is little original indigenous vegetation left.

(d) Pest Management

The implementation of the 'Self-help Possum Control Programme' on the Taranaki ring plain continues to be the main focus of the Council's pest animal management activities. Possums are arguably New Zealand's number one pest and are having an extraordinary impact on indigenous biodiversity values. The Programme is effectively a joint programme between the Council and land occupiers and achieves a level of possum control that would otherwise be beyond the resources and capability of any one party to manage alone.



In 2007/2008, the Council carried out initial possum control work over 3 431 ha (the Kaimata operational area). Council officers contacted 3 437 occupiers to provide property specific advice and other assistance to properties that have been treated and incorporated in the Self-help Possum Control Programme.

In 2007/2008, the Council randomly selected and monitored 341 properties to determine possum numbers. These properties represent approximately 9% of the properties in the Programme. The mean Residual Trap Catch for those 341 properties was 7.5% (Table 3). Of the 341 properties, 85, or 24% were over the 10% Council target. Council staff followed up these 'hot spots' with all the individual land occupiers to ensure possum control work was undertaken.

Of the 341 properties monitored, 190 of those trap lines were monitored after land occupiers had done their possum work. This gives a clearly indication of possum levels across the ring plain once annual possum control had been undertaken, and therefore an indicator of the overall success of the programme. The average residual trap catch for those 190 properties was 6.8 (i.e. well below the Council's target of 10%). However, 40 properties (21%) exceeded the Council's target.



Self help possum operational areas as at 30 June 08

Therefore, based on the monitoring undertaken, land occupiers have been generally successful at maintaining possums at very low levels throughout the self help possum programme

Table 3: Results of Programme monitoring

	2004/05	2005/06	2006/07	2007/08
Number of properties monitored	320	305	300	341
Mean Residual Trap Catch	4.6	4.1	8.2	7.5
Number of lines exceeding 10% Target	32	34	89	85
Percentage exceeding 10% Target	10%	11%	30%	24%

In addition to the possum programme, the Council assists the East Taranaki Environment Trust with the predator trapping programme outside of the Egmont National Park for the protection of blue duck. The Council provides logistic assistance through the circulation of the newsletter.

(e) When exercising legislative powers: stream modification

While stream modification (stream re-alignment and culvert installation) carried out in small tributaries is not a new issue, the effect of these works on in-stream ecology has not been documented to any significant extent in the rural community in Taranaki. Structures such as culverts and farm dams continue to be installed in order to increase effective land area or increase certainty of water supply. Drain clearing and straightening of small tributaries are also common activities that can affect the ecology of small tributaries. There is also anecdotal evidence to suggest culvert installation in relation to land reclamation is the preferred option over that of fencing and riparian margin planting in order to meet the Dairying and Clean Streams Accord target. This increases effective hectares which can have a measurable pay back period.



Piping of small streams is an increasing activity.

As a result there has been an increasing tendency among landowners to pipe small streams running through farmland, and to re-contour these areas into flat paddocks. As at 18 March 2008, the Council issued 53 consents for the piping of streams for the purpose of land improvement since 2004. The total length of streambed lost to culverts, and only that consented, totals 19 kilometres since 2004.



Council officers undertaking fish salvaging in the Inaha Stream prior to stream realignment being carried out

The Council is proposing to develop guidelines for both applicants and consenting officers in terms of information that needs to be gathered for stream modification applications (stream channelising, culverting etc). This could include such information as the amount of stream modification that has already occurred in the catchment using such tools as GIS and aerial photography.

(f) When exercising legislative powers: Consents

Two hearings were held during the year that have a biodiversity component. These were the erection of a 311 metre rock rip-rap seawall, and associated occupation of the coastal marine area at Urenui Beach by New Plymouth District Council [Restricted Coastal Activity], and three applications by Normanby Power Limited to recommission the Normanby Hydro Scheme (decisions realised in the 2008/09 year).

(g) When exercising legislative powers: Enforcement

In 2007/2008, Council officers responded to three significant pollution events in the Taranaki region, two had biodiversity implications:

In July 2007 a blocked culvert, on a property at Upper Pitone Road, blew out and caused a flash flood through neighbouring properties, resulting in extensive damage to an oxidation pond system, riparian planting, and also causing severe damage to a house and associated property. Severe damage was also caused to State Highway 45 and the bridge across the Katikara Stream.

In October 2007 approximately 33,600 litres of crude oil was discharged from the Umuroa FPSO in the Tui Oil Field. A significant amount of oil washed up along 13 km of the high energy Okato coastline. The coastline area affected was mainly rocky foreshore, with approximately 4.5 km of sandy beach area. A major clean up operation was undertaken on the beach areas. The clean up operation continued for eight months and is ongoing. The rocky foreshore areas were left to bioremediate. Maritime New Zealand undertook a successful prosecution as a result of this incident.



A scene from the clean up along the Okato coastline

Council officers served 104 abatement notices in relation to unauthorised incidents in 2007/2008 (118 were served in 2006/2007). Of the abatement notices issued, 88 were in relation to fresh water, 14 to air and two to land. There were no appeals lodged against any Council abatement notices in 2007/2008.

2.4 Working with others

2.4.1 Objectives and performance indicators

The Council's **objectives** when working with others on biodiversity are:

1. To co-ordinate, contribute to and build community capacity for the maintenance and enhancement of indigenous vegetation and the habitats of indigenous species outside of public conservation land;
2. To facilitate communication between agencies and community groups involved in biodiversity;
3. To work with the community on a small number of iconic projects that will be flagship projects for biodiversity in Taranaki; and
4. To facilitate the involvement of iwi in biodiversity management.

The Strategy identifies the following proposed **performance measures**:

- € Level of funding brought into the region for biodiversity work through greater coordination between the groups.

- € Number of biodiversity forums/meetings/workshops run annually and who attended.
- € Feedback from form/workshop attendees.
- € Submissions made to other agencies to advocate for biodiversity outcomes.
- € Number of formal partnerships/protocols/memorandums established.
- € Progress with 'iconic' biodiversity projects (recognising and acknowledging the different levels of commitment and contributions to the project).

2.4.2 Summary of biodiversity actions undertaken with others

(a) *Biodiversity workshop*

The Council invited all the key biodiversity stakeholders in Taranaki to a workshop to seek feedback on the Strategy and to explore ways of working towards improved biodiversity coordination into the future.

The meeting was well attended by representatives from a wide variety of agencies, trusts and community groups involved in biodiversity in Taranaki.

The workshop was attended by representatives from the Council, DOC, Herpetological Society, Massey University: Research of Biosciences, Environmental Monitoring for Schools, Nga Motu Marine Reserve Society, Taranaki Kiwi Trust, Rotokare Scenic Reserve Trust, South Taranaki District Council, Taranaki-Whanganui Conservation Board, Federated Farmers, Taranaki Tree Trust, Forest and Bird, Ornithological Society and East Taranaki Environment Trust with apologies from QEII, Ngati Tara Oaonui Sandy Bay Trust, Fish and Game and New Plymouth District Council.



Participants are welcomed to a workshop on biodiversity.

The response to the Council's proposed Strategy and suggested direction for biodiversity was most positive, particularly the elements of facilitating the gathering of community information and coordinating greater communication and networking between biodiversity groups.

(b) *Working with others*

The Council has worked with a number of community groups. For example, the Council assisted the Ngati Tara Oaonui Sandy Bay Society to prepare an application for biodiversity condition funds. This application was successful.

(c) *Working with others on 'iconic' projects*

The Strategy identified a number of 'big-ticket' projects that the Council was keen to support, projects that will become high profile flagship projects that will showcase Taranaki's biodiversity and the value of different groups working together towards a common biodiversity goal.

The Council has supported the Lake Rotokare Scenic Reserve Trust through participating on the Pest Eradication Advisory Committee with members of the Lake Rotokare Trust, and Pest Eradication consultant Jo Ritchie. The Council is currently storing bait for the Lake Rotokare Trust who will be undertaking an aerial application in the reserve, specifically targeting the eradication of rodents. This involves maintaining daily bait storage monitoring to ensure maximum bait quality. Council pest animal staff will be assisting the Lake Rotokare Trust during the aerial application which is expected to be complete in one day.

The Council has supported the East Taranaki Environment Trust through a number of means: providing administration support for the circulation of their newsletter, financing the preparation of a marketing proposal for the Matau/Purangi kiwi project and assisting with the publication of an information sheet on the project.

Egmont National Park is recognised as an 'iconic' biodiversity site for the region. The Council assists with the management of this site through coordinating possum operations on private land around the boundary with the 7 yearly operation on the mountain. Planning has commenced for the next operation.

The Council has continued to work with Ngati Tama on the pest control programmes at Whitecliffs.

Finally, as discussed above, the Council continues to focus on the riparian restoration programme as an 'iconic' biodiversity project. In order to promote the riparian programme and to encourage uptake of the riparian plan recommendations by landowners, the Council has worked in partnership with Fonterra to develop a joint communication strategy.

The purpose of the communications strategy is "To increase implementation of riparian plans in Taranaki to meet the targets of the Regional Action Plan". The aim of the plan, is to move the focus from "awareness raising" to achieving a specific behaviour, which is the fencing and planting riparian margins.

(d) Advocacy

The Strategy identifies a number of avenues for Council led advocacy on biodiversity matters. This financial year has seen the Council make submissions on a number of biodiversity-related documents. This has included making submissions on the draft Western North Island Brown Kiwi Taxon plan, the Lake Rotokare Management Plan, the Proposed National Coastal Policy Statement and several biosecurity related policies.

2.5 Information management, monitoring and information gathering

2.5.1 Objectives and performance indicators

The Council's objectives in relation to gathering and managing biodiversity information are as follows:

1. To establish internal systems, or utilise external data systems, for managing information about biodiversity management both on Key Native Ecosystems and more generally;
2. To gather information on biodiversity to inform future reviews of Council policy; and
3. To monitor changes in biodiversity.

The Biodiversity Strategy identifies the following proposed performance measures:

- € Development of biodiversity database for managing information on KNEs.
- € Preparation of integrated biodiversity chapter for the State of Environment report.
- € Progress with identified biodiversity resource investigations.



Graeme Churchill plays tape of fernbird at Te Wawa to survey bird diversity at this Key Native Ecosystem.

2.5.2 Summary of actions for information management, monitoring and information gathering.

(a) Managing biodiversity data and information

The Council has commenced the process of identifying what it needs in terms of data management systems for its biodiversity information. This has involved 'brainstorming' the information gathered and how we want to be able to report on it. This work will continue as a priority into the next financial year.

(b) Monitoring biodiversity: preparation of a programme

A Biodiversity Monitoring Programme is currently being designed to monitor trends in the condition of biodiversity in privately owned Regionally Significant Wetlands and Key Native Ecosystems. The main aims of this programme will be:

1. To enable Taranaki Regional Council to assess to what extent objectives stated in the Council's Biodiversity Strategy are being achieved;
2. To provide necessary data to enable Taranaki Regional Council to report on the state of the regions biodiversity and meet it's biodiversity reporting obligations under the Resource Management Act (1991); and

3. To provide data by which the Council can make better informed decisions relating to management of Key Native Ecosystem sites and species, in particular by providing data on the effectiveness of management actions such as predator and weed control.

This programme is to be outlined in an operational plan which will describe monitoring methods to be used, which sites will be subject to which methods, and a schedule as to when and how frequently each site will be monitored. The operational plan is to be completed and implemented in late 2008.

(c) Monitoring biodiversity: indigenous vegetation in Taranaki hill country

The Strategy notes that the area covered by indigenous forestry will be monitored through the 25 hill country sites (the monitoring work contracted out to Landcare Research every 5 years for the State of Environment report). This work was completed this year and found that while the amount of production forestry had increased significantly, the amount of indigenous vegetation had decreased slightly².

(d) Monitoring biodiversity: fish passage

The Strategy notes that the effectiveness of consent conditions for maintaining native fish diversity through provision of fish passes will be monitored. The absence of torrentfish and banded kokopu above the weir on the Waiwhakaiho River above the Mangorei power scheme, was noted in a major survey conducted by Council staff in the summer of 2006/07.

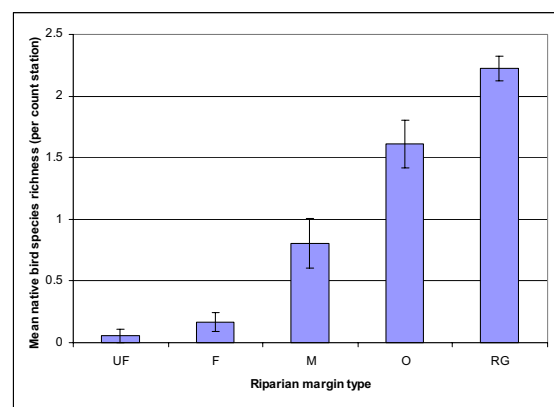


Trapping the top of the fish pass

This is despite considerable efforts by the scheme operator and the Taranaki Regional Council to ease the passage of fish life over the power scheme's weir, including improving the residual flow for 6 km immediately below the weir, and the construction of an elaborate fish pass 10 years ago. Further monitoring will be conducted.

(e) Resource investigations: riparian vegetation

Riparian management has been a key focus for the Council. While riparian planting is intended initially to provide benefits for aquatic biodiversity and water quality, little is known about its effects on terrestrial biodiversity. A study has therefore been undertaken to investigate whether and to what extent riparian management has impacted on native terrestrial biodiversity values.



Bird diversity in riparian areas of various ages.

The biodiversity values, as measured by the richness and abundance of plant and bird species

² Betts, H; Lynn, I. 2008. *Sustainable land-use monitoring in the eastern Taranaki hill country and coastal sand country. 2007 re-survey. Landcare Research Contract Report.*

was measured and compared in different types of riparian margins. Sites included riparian margins that were still grazed (UF), some that had just been fenced (F), margins with medium aged plantings (4 – 8 years)(M), margins that had been planted 8-12 years ago (O), and margins with remnant or naturally regenerated vegetation 20+ years old (RG).

The preliminary results seem to indicate that:

- € Riparian planting leads to an increase in native plant species richness over time: a trend that is particularly notable for fern species (as these are not typically planted).
- € The use by native and introduced birds of grazed and un-vegetated fenced riparian margins tends to be very low.
- € Planted margins of at least a moderate age (4+yrs) and margins with naturally regenerated vegetation 20+ years old both have significantly higher native bird abundances than grazed and un-vegetated fenced margins (see figure above).
- € As planted riparian vegetation ages, there is an increase in abundance and richness of native bird species.
- € Native bird abundances and plant diversity in older plantings (8-12 years) are likely to continue to increase.

Overall the study indicates that planting of riparian margins is creating new habitat for native plant and bird species where none existed previously and is leading to an improvement in the biodiversity of the region. Fenced margins with naturally regenerated vegetation 20+ years old are also making a positive contribution to the biodiversity to the region biodiversity.

(f) Resource investigations: small streams

The Council is currently undertaking a resource investigation in order to:

- € Determine the ecological values in small tributaries in Taranaki;
- € Assess the effects of culverting various lengths of stream on these ecological and hydrological (particularly during low flow) values;
- € Determine the extent to which loss of small streams is occurring in Taranaki;
- € Assess the effects of clearing vegetation from small streams on ecological values;
- € Establish a method for assessing the cumulative effects of piping and realignment in a catchment and an approach to deal with this in the consenting process (i.e., a database or GIS map detailing total loss of stream reach);
- € Assess whether the rules in the RFWP continue to be appropriate, in lieu of the review of the plan in 2011; and
- € Investigate and recommend appropriate mitigation measures in instances where a consent is granted, and habitat loss is required to be off-set.

(g) Resource investigation: Wetland extent

The Council commenced a research investigation into changes in the extent and condition of wetlands originally identified through a study of aerial photos flown in 1995. This earlier report had generated a list of 717 wetlands. Each of these locations was then re-examined through the 2007 aerial photos. The report is yet to be finalised. Early indications are that a number of wetlands, particularly smaller ones on the ring plain, have been drained or modified over the last 13 years.

3 Conclusions

In conclusion, the Council achieved considerable achievements in 2007/08 in the biodiversity field. The highlights were:

- € The preparation of the *Biodiversity Strategy: An Operational Strategy to Guide the Biodiversity Actions of the Taranaki Regional Council*. This non-statutory, non-regulatory document pulls all the biodiversity work undertaken by the Council into one place. It focuses Council's biodiversity work on four major areas, and identifies over 180 specific actions to be undertaken over the next 5 years;
- € Developing a template for preparing biodiversity plans for Key Native Ecosystems, based on other property planning services provided by the Council. Biodiversity Plans prepared to date have assisted with the focusing of actions at specific sites, engaged landowners in biodiversity management and have been used to secure additional resources from outside the region;
- € Undertaking a range of actions, with landowners, at Key Native Ecosystems ranging from increased fencing and planting to weed and predator control;
- € Undertaking considerable biodiversity work through the sustainable land management programme: the preparation of a further 301 riparian plans and 21 farm plans, and providing at cost over a quarter of a million plants to plan holders;
- € Carrying out initial possum control for the Kaimata operation and supporting Taranaki landowners to maintain low possum numbers around the ring plain through the self help possum control programme;
- € Undertaking a range of information and advice services ranging from working with teachers and schools to educating the public about the risks of didymo;
- € Recognising community efforts to restore biodiversity through the environmental awards;
- € Running a workshop with biodiversity stakeholders in Taranaki to seek feedback on the Strategy and to explore ways of working towards improved biodiversity coordination into the future;
- € Supporting a range of 'iconic' biodiversity projects happening in the region: supporting the pest eradication programme at Lake Rotokare, assisting the East Taranaki Environmental Trust prepare a marketing proposal, working with DOC on the planning for Operation Egmont, working with Ngati Tama Iwi on their possum control programme, and raising the profile of the riparian programme; and
- € Undertaking an investigation into the biodiversity benefits of riparian planting.

This report will be forwarded to key interested biodiversity stakeholders.