Implementation of the Regional Policy Statement and Regional Plans in 2002/2003

1. Introduction

The Regional Policy Statement (RPS) contains around 250 "methods". The regional plans contain many more. These are commitments the Council has made to resolve the Region's environmental issues and to manage the environment in a sustainable manner. Since the adoption of the RPS in mid-1995, and as each regional plan has become operative, the Council has worked hard to implement these methods. This report describes what has been done to give effect to them between July 2002 and June 2003.

The work that is described in this report is undertaken to improve the environment. The point of the methods and policies in these planning documents, and of our efforts to implement them, is to move towards meeting the environmental objectives and outcomes which those documents list as the Region's desired environmental state.

There are too many environmental objectives in the plans and RPS to report here on how well we are achieving them. In any case, that it is the job of the five yearly state of the environment report (SER) and the Annual Environment Report.

The purpose of this implementation report is to describe how we have addressed the environmental problems of the Region and how we have worked towards achieving our stated resource management objectives. Since *Measuring Up* is our main environmental accountability mechanism, it is appropriate to refer to its findings when considering what has been done to implement the RPS and plans.

In the following paragraphs:

- The letters and numbers in parentheses denote the relevant RPS method. For example, FW 12, is method 12 of the Freshwater Chapter.
- The letters and numbers in parentheses in bold denote the relevant plan method. For example, **RFWP 8.5.7** is method 8.5.7 of the Regional Freshwater Plan.

2. Iwi Matters

Measuring Up concluded (in 1999) that, although there are increased opportunities for iwi to participate in resource management, this can be difficult to achieve. Much has been done since to provide for the involvement of tangata whenua in the management of the environment. Relevant examples from 2002-03 include the following (Iwi 14):

- Administrative funding to assist iwi to build capacity.
- Funding for ongoing iwi projects, such as:
- Tikanga Mäori Report on the Otaki River – Stage 1 (Ngati Raukawa)
- Iwi Environmental Management Plan (Taranaki Whanui)
- Hurunuiorangi Marae Urupa Planting, Okautete Marae Protection and Beautification Project, Urupa fencing Riversdale Golf Club, Riversdale Church (Ngati Kahungunu)
- Wāhi Tapu database (Rangitāne)
- Taueru Urupa – planting/fencing (Rangitāne).
- Inventory of Mäori Heritage Values in the Port Nicholson Block – GIS project (Wellington Tenths Trust)
- Iwi continue to receive resource consents for their input on a regular basis (Iwi 4).
- In March a joint Councillor and iwi workshop took place to talk about the new Local Government Act 2002.
- A second workshop occurred in May to discuss tangata whenua input to the Council's decision-making processes. Work has started on a plan to implement the outcomes of that workshop.
- A technical workshop on emergency management was held at the Beehive and another on wetlands at the Raukawa Marae. A third technical workshop occurred in March to ascertain whether iwi representatives were happy with the direction of the Council's 10 year plan.
- A programme of enhancement and management of the Punaruku Lagoon at Ngawihi has been agreed with the owners and a contract signed.

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Several training sessions for Councillors have been held. Topics have included the Treaty of Waitangi, the work of the Office of Treaty Settlements and a walkover of the Wairarapa rohe (Iwi 6).

3. Using Fresh water

Measuring Up found that, in general, enough surface water is available to meet community needs but that climatic conditions cause shortages in some areas and the flows in some rivers can fall below levels set to protect them. This is particularly the case in parts of the Wairarapa and the Kapiti Coast. The RPS and Freshwater Plan contain methods to address these problems and they have been a part of the Council's work programme for several years. Initiatives contributing to the efficient use and conservation of water that have taken place this year are:

- Involvement in an on-going Wairarapa based irrigation study that aims to foster the growth and development of the area through access to reliable sources of water.
- An assessment of flows in the Wainuiomata River (as part of a programme to review the validity of the minimum flows in the Regional Freshwater Plan) (**RFWP 8.5.5**).
- Restrictions on some water abstractions in the Wairarapa because of low rainfall over the summer. Many small streams were very low and the Ruamahanga River reached a 10 year low flow in February. In April the Rural Services and Wairarapa Committee approved the requirement for consent holders to install metres on all new water takes over 20 l/sec and on existing takes when they came up for renewal.
- Further work on the Mangatarere Stream water allocation plan.
- Routine monitoring of large water takes and summer low flow monitoring throughout the Region (FW 11).
- Regular monitoring of rainfall and river levels by the Council's hydrologists.

4. Water quality

The RPS and Regional Freshwater Plan put considerable emphasis on keeping rivers and streams clean and in good ecological condition. *Measuring Up* concluded that, overall, freshwater quality is generally good and suited for its stated purpose (as determined by the RPS and Regional Freshwater Plan). However, it points out that water quality is still being affected by the runoff from urban and rural land uses, and it also says that the worst affected water bodies are not improving significantly.

Our most recent water quality data (for the 2001/02 year) reinforces this view. In general, the best water quality and ecosystem health is found in rivers and streams close to the Tararua and Rimutaka Ranges (e.g., Hutt, Otaki, Waikanae, Waiohine, Upper Ruamahanga). Mild to moderate pollution occurs in streams affected by agricultural land uses (e.g., Mangaroa, Tauherenikau, lower Ruamahanga), whilst the poorest water quality and stream health occurs in streams affected by urban land uses (e.g., Waiwhetu, Owhiro, Kaiwharawhara, Porirua). At most sites there was no significant difference between the results for this year and previous years. However, marked improvements did occur in the Ngarara and Wainuiomata Rivers, particularly in levels of plant available phosphorous. These improvements in water quality are almost certainly linked to the removal of municipal sewage discharges from these streams.

Over the summer bathing season (2002-03) samples were taken at 22 river sites to check for faecal contamination. On this measure water quality was also generally considered to be good. Fourteen sites exceeded the guideline at some point over the summer, but in over 80% of these instances, there had been rain

in the previous 72 hours. Faecal contamination of waterways typically rises after rain and then falls away again.

It should come as no surprise that the worst affected water bodies are taking some time to recover. It is said that it can take up to three decades for the effects of land use changes to show up in stream health. Improving the quality of streams and rivers will take time and is a long-term commitment.

The Council took a big step forward towards achieving improvements in the more intractable waterways by naming six priority streams and rivers for enhancement in its 10 year plan, *Towards a Sustainable Region*. These "most polluted" waterways are the Waiwhetu, Waitohu, Kaiwharawhara, Ngarara, and Makoura streams, and the Ruamahanga River. The ten year target is to see the water quality of these waterways improved. All are already being worked on to a greater or lesser extent and some have seen a considerable amount of effort in the last year (e.g., the Waiwhetu Stream). The significance of their listing in the Council's work programme is simply that this is the first time this has been done and reflects a desire to see real progress with this category of stream. Also of importance is the target of "no significant deterioration" in the water quality of a further set of key streams and rivers. This work will also contribute to the improvement of some of the streams listed as degraded in the RPS (FW 25).

Already, of course, a considerable amount is being done to improve the quality and ecological health of our waterways. In the last year this has included the following:

4.1 Riparian management

The Council now has a Riparian Management Strategy in place. It puts a strong emphasis on the provision of advice for landowners wanting to retire their stream margins (FW 31, 32). Trial projects on the Enaki, Karori, and Kakariki Streams continued through the year, adding further to the areas retired in the previous year. A successful field day was held for farmers on the Kapiti Coast to promote riparian management (**Soil 6.1.7**). Monitoring data shows some promising early results, particularly in water temperatures, and much has been learned about the management of pest plants which can be passed on to land owners. Funds are available to support riparian margins in some key catchments but, in general, the strategy relies on farmers to take the initiative, as much perhaps for business reasons as for environmental ones.

4.2 Dairying and Clean Streams Accord

This agreement between the Fonterra Dairy Co-operative, Regional Councils and government agencies came into effect in May. Its purpose is to reduce the impacts of dairy farms on waterways and wetlands, and it sets performance standards and timeframes for improving the environmental performance of farms. Work has commenced on a regional action plan to assist with the Accord's implementation in this Region (FW 26). The Council made a

submission to Fonterra on the farm "environment classification system", giving our view of the priorities that should be attached to improving farms' environmental performance. The Accord is of considerable importance to the uptake of riparian management in the Region and should fit well with the approach adopted by the Council.

4.3 Sewage Discharges

Over the last five years most of the major community sewage discharges in the Wairarapa have been consented. The Martinborough, Tinui, and Masterton discharges were granted consents of varying durations in 2002-03. The new consents contain conditions requiring upgrades which "will give progressive improvements over the next ten years" (Report 03.380). Five of these discharges contribute to the Ruamahanga system.

4.4 On-site sewage and waste water

In small communities across the country domestic septic tanks are causing problems for both surface water and groundwater quality. Work is continuing with communities at Riversdale and Lake Ferry to resolve these issues. The Council continues to encourage good on-site sewage system maintenance through education and information (**Discharges to Land Plan 6.2.1**).

In the Wairarapa, officers place considerable emphasis on checking the effluent disposal proposals for new subdivisions and developments are up to scratch (along with comment on flooding and bank erosion, potentially contaminated sites, coastal development, and soil erosion)(**Discharges to Land Plan 6.2.3**).

4.5 Stock Crossings

With most of the direct discharges of dairy effluent to water now having ceased in favour of land based systems (only 4 remain), attention has now turned to addressing stock crossings of streams. In July the Rural Services and Wairarapa Committee requested that a strategy be drawn up to identify and address problem sites with relevant interests.

4.6 Enforcement Action

The Council continues to take monitor compliance with resource consents and regional plans and take enforcement action against landowners that break regional plan rules or discharge effluent into waterways. Abatement and infringement notices were issued to the Carterton District Council for failing to prevent treated effluent entering the Mangatarere Stream over the summer.

4.7 Stormwater

The number of urban streams with poor quality points to the need to address this problems in a number of ways, in addition to the rural solution of riparian retirement. The influences on the quality of water in urban streams are numerous and complicated, and require a multi-dimensional response. As

Measuring Up pointed out, stormwater from roads and suburbs causes a lot of the problem for urban streams. A project to determine the content of stormwater in the Region continued this year, with six of the ten sites being completed. A lack of suitable rain events has held up the progress of this investigation (which is also relevant to coastal water quality and the work we do on estuary ecosystems (**Coastal Plan 15.3.4**)).

A brochure telling people how to "save the drain for rain" was produced and is being used by the Pollution Response Service, in association with the territorial authorities.

4.8 Monitoring for water quality and ecosystem health

Changes have been made to the rivers monitoring network to attain a better coverage of the range of aquatic and riverine ecosystems and habitats in the Region. In the past the monitoring network gave too much emphasis to the low level, hard sedimentary waterways around Wellington city, and not enough to the streams of the eastern and western Wairarapa and Kapiti Coast. A number of monitoring sites have been moved or disestablished accordingly.

4.9 Waiwhetu Stream

The Waiwhetu Stream is regarded as one of the most polluted streams in the Region, with a significant contaminated sediment problem in its lower reaches. It has been the subject of a rehabilitation programme for three years. The size of the problem has necessitated a considerable amount of investigation and the consideration of a range of options for improving the stream's ecological condition. In 2002-03 two major studies were completed: one investigated the various diversion options around the Hutt Park area, while the second scoped the environmental and human health risks that might arise with any large scale changes to the stream (FW 22, **RFWP 8.4.6, 8.4.7**). A legal opinion has been obtained on responsibility for any clean up and work has begun on an assessment of the flood hazard in the lower reaches and how any diversion might affect this. This is expected to be completed by December this year.

The upper end of the Stream has not been forgotten; a programme of works for the whole stream for the next three years has been determined by the Stream Action Group and some planting has occurred. During the year a new resource consent was obtained so that the stream can be cleared of the prolific aquatic weed in its middle reaches (**RFWP 8.3.4**).

4.10 Kaiwharawhara Stream

On the Kaiwharawhara Stream in central Wellington another ecosystem and water quality enhancement project is continuing (FW 22). The Council has been working with the Wellington City Council and a number of active community groups to implement the community's vision for a more healthy and natural stream. The major achievement this year has been the publication of a resource kit to help the commmunity look after the stream, and a considerable amount of weed clearance and revegetation, particularly upstream

of Otari-Wilton's bush. At the river mouth, stage two of the amenity enhancements have been completed. The Kaiwharawhara has been listed as one of the Region's priority streams which means it will receive even more attention over the next three to four years.

4.11 Stream Restoration by Community Care Groups

The Council has supported a number of stream ecosystem restoration projects through the *Take Care* (care group) programme. These projects generally have more to do with restoring a more natural stream corridor than improving water quality per se. However, the rebuilding of the stream environment does contribute significantly to the way a waterway acts in an ecological sense, and it is healthy functioning waterways that we are trying to achieve. This year's projects have occurred on:

- the Waimapehi Stream in Pukerua Bay;
- the Porirua Stream at Glenside;
- the Moehou stream in Upper Hutt;
- a stream and wetland in Manuka Street, Masterton;
- the Wharemauku Stream at Kaitawa;
- the Waikanae River (Friends of the River);
- the Muapoko Stream at Greendale;
- the Waitohu Stream at Otaki;
- Hulls Creek at Silverstream;
- the Mangaone Strean at Te Horo; and
- the Motuwaireka Stream at Riversadale.

A number of these groups, and some additional ones, are monitoring water quality across the Region and feeding the information back to the Council. On the Kaiwharawhara, for example, about 15 people are active at seven sites. The Guardians of Pauatahanui have also formed a care group to monitor water quality at the streams around the Inlet.

4.12 Educating the public about water and its care

Considerable effort goes into education and information to encourage better attitudes towards rivers and streams. Much of the work of the pollution response services in both parts of the Region has to do with showing people how to look after water (FW 28). Staff have attended field days and addressed groups, provided information to schools, written articles for the media, and continue to check on how resource users are exercising their consents (FW 21 and 28; **RFWP 8.4.1**).

As reported throughout the year, the *Take Action* programme for school children has been highly sought after by schools (FW 21 and 28; **RFWP 8.4.9**).

Thirty nine classes and 1150 students "took action" in 2002-03 and completed a wide range of projects to help clean up streams in their local areas.

Take Charge, the pollution control programme for businesses, made major inroads in the 2002/2003 financial year. The approach taken has been to target priority industries based on their level of environmental risk and contribution to pollution statistics. *Take Charge* commenced in March 2003, and targeted service stations. Over the next four months, 60 service stations were visited and assisted to improve their environmental performance, thereby reducing the risk of stormwater contamination from their operations.

As in previous years, the Trees for Survival programme continues to contribute to the Council's riparian management goals, as well as reducing bank erosion (Soil 7) and teaching young people about water care (FW 21). The Trees for Survival programme contributes to the implementation of three policies and three methods of the Regional Freshwater Plan and one policy of the Regional Soil Plan.

4.13 Other activities

Finally, in reporting on specific projects directed at particular problems, the day-to-day impact of many of the Council's activities on the use or health of rivers, streams, and wetlands can be overlooked. Activities such as consent granting, plan writing, hydrological and water quality monitoring, river works, pollution control, and compliance monitoring, all contribute to the implementation of the RPS and Freshwater Plan's provisions (FW 1, 2, 13, 17, 29, 30, 34, 43, and 46; **RFWP 8.4.4, 8.5.3, 8.5.4,**).

5. Soil

On soil, *Measuring Up* said that there is still a need for a more sustainable approach to land management and that some severely erosion prone land is not under active control (about 10% of the Region's erosion prone land). Lack of information about the quality of our soils was also seen as a problem.

5.1 Sustainable land management

Sustainable land management is a relatively new concept which did not have a common currency when the RPS was written. Hence, there is little mention of it. Fortunately, this has been remedied by the Regional Soil Plan. The Soil Plan became operative in October 2000. In the Wairarapa, forest harvesting has been the predominant activity affected by the Plan, with lesser call to issue consents for roading and tracking and soil disturbance on erosion prone land.

Forest harvesting is a permitted activity under the Plan, as long as the Council is notified of the activity. In 2002-03, we were notified of 19 operations and these were given permitted activity status. Compliance monitoring was completed **at** 6 sites.

As one way to promote sustainable land management, the Council again contributed to the sponsorship of the Farm Environment Awards (**Soil Plan 6.1.2**). This is an annual component of the Council's efforts to encourage environmentally sound farming practices.

5.2 Erosion control and soil conservation

The methods in the Soil Chapter of the RPS are directed primarily at erosion control and the management of flood risk and river beds. As such, they describe much of the work that is carried out by the Wairarapa Operations Department and the Flood Protection Department of the western region.

The Council continues to bring erosion prone land into active management and to provide incentives for soil conservation works under the Soil Conservation and Rivers Control Act 1941 (Soil 3). These include the preparation of property conservation plans and sustainability plans for the control of hill country erosion and wind erosion, and annual works programmes in support of these plans.

In 2002-03, soil conservation programmes were completed on 129 properties. Afforestation work was completed over 136 hectares (Soil 8). On erosion prone land, 17,000 3 metre poles have been planted, and soil conservation advice and guidance for landowners remained a significant activity (Soil 5).

5.3 Soil health information

Funding was provided for soil quality monitoring through the 1999 Long Term Financial Strategy. In 2000-01 a three-year soil monitoring programme got under way. It found this Region's soil problems to be similar to those found elsewhere in the country, namely compaction from cattle, loss of organic matter in soils under arable crops, and high levels of phosphorous and nitrogen in some dairy pastures. Some 28 samples were taken from soils on the Wairarapa and Otaki plains. This year (2002-03), the proposed sites were too dry to sample in the autumn and will now be sampled in the spring of 2003 (Soil Plan 6.2.6). This will complete the initial monitoring phase and a more detailed programme will be established to look at sites where soil health problems have been identified.

Another investigation into soil "intactness" has also commenced. This measures the extent to which soil is being lost from the soil profile either through wind or water erosion. A pilot study was completed in 2002/03 and will be expanded to cover the entire region in 2003/04. Results from this work will be reported in next year's report.

6. The Coastal Environment

Measuring Up identified the loss of the "naturalness" of coastal areas as a growing problem. In both remote and peri-urban areas, the open, wild nature of this environment is being lost to creeping subdivision and increased

development. Coastal ecosystems have been in jeopardy for some time, but the threats seem to have increased as more and more people seek to acquire property near the sea. Coastal habitats contain a higher number of threatened species than any other form of habitat. For this reason, *Measuring Up* identified *estuaries, dunes and coastal escarpments* as priority ecosystems for action.

6.1 Coastal developments and natural character

The decline in the naturalness of coastal areas is being addressed on the Wairarapa coast. The Council has played a significant role in the development of the Wairarapa coastal strategy (Coast 3[1]) which arose out of concern about sporadic subdivision. The Draft Strategy has now been published, with a vision and policies for the area about land use, development, heritage, hazards, landscape, and other issues. The Strategy also contains detailed policies and recommendations for the protection and management of remnant coastal native ecosystems (e.g., estuaries, dunes, grasslands, shrublands, reedlands) which, if implemented would go along way towards retaining these important areas. A consultation phase is now underway.

6.2 Estuaries

The Council's focus with respect to this type of ecosystem has been the Pauatahanui Inlet estuary. This year the Pauatahanui Inlet Community Trust has been busy developing its views on the condition of the Inlet and organising its work plan and priorities (Coast 3[2], Eco 11,12, 14). The second phase of a restoration plan for the publicly owned land on the Inlet's margins is nearing completion, and a scoping paper for an Inlet Transport Strategy has been completed for the Trust. Work has also continued (enhanced by funding from the Pauatahanui Inlet project) on the restoration of two small river *estuaries* which flow into the Pauatahanui Inlet, namely the Kakaho and Horokiri Streams (Eco 12).

The updating of the Regional Council's silt guidelines has been completed (FW 24). It is hoped that these guidelines will play a significant part in improving the management of sediment and reduce the possibility of discharges into the Inlet (**Coastal Plan 15.3.6**).

6.3 Dune ecosystems and escarpments

A draft Action Plan has been completed covering Greater Wellington's work in dune areas and on coastal escarpments. The purpose of this plan is to determine how the Council deals with dunes and escarpments that are of a "key native ecosystem" status, and thus what level of pest management they should have, as well as dunes and escarpments of lesser quality. Many of the major sites covered by the Plan are in public land but there are some privately owned dunes which could be the subject of covenants if landowners so desired. This work represents one of the last pieces of the biodiversity "jig-saw", that has been developed across Greater Wellington over the last three years, complementing the Riparian Management Strategy and the Wetland Action

Plan. As with the other Plans, this one is being prepared by a Dune Ecosystems Group from across the Council, and it also includes the Department of Conservation.

The Council continues to support the care group working on the Waitohu estuary and dunes, as well as 13 other care groups that have an interest in dunes or coastal ecosystems. One of the more dramatic changes effected by a care group in the last year has been at Eastbourne, where the dunes have been reshaped and replanted (Eco 14). On the Wairarapa Coast, assistance has been given to the Riversdale dune care and Castlepoint beach care groups (Eco 14). At Pukerua Bay, the Council is helping one care group with the restoration of coastal forest alongside the Waimapehi Stream, and another with the narrow vegetated strip behind the beach. At Evans Bay, Little Blue Penguin "housing" has been created and some of the new owners have moved in.

At Queen Elizabeth Park, the last relatively unmodified dunes on the Kapiti Coast are a valuable regional asset. A project to restore the dunes commenced in 2000-01 with the assistance of local people. This year blackberry has been controlled, protective fences and sand ladders have been built to manage access to the beach, and three public planting events have taken place.

6.4 Marine Biodiversity

The Council launched the Wellington Harbour marine ecosystem project in June 2002. The aim of this project is to sustain and improve the marine biodiversity in the harbour and out into Cook Strait. It involves local iwi, relevant agencies, the Ministry for the Environment, and community members (Coast 3(2)). This year the programme has included public lectures on marine biodiversity, focus group research to determine how best to meet community interests in the marine environment, and the creation of a database to centralise information about these ecosystems.

6.5 Other coastal activities

- Recreational water quality monitoring continues under the banner "On the Beaches". Water quality was good at the majority of the Region's beaches throughout the 2002-03 bathing season. When problems occurred (enterococci concentrations above the "action" guideline"), this was generally because of rainfall in the preceding 48 hours contributing contaminants to sea water via stormwater outlets and streams.
- An investigation is continuing into chemical contaminants in shellfish. See Report 03.208 for details). One of the purposes of the investigation is to achieve a better understanding of the relationship between contaminants and stormwater from populated areas.
- A discussion document on aquaculture in the Region was completed to gauge public interest in potential aquaculture management areas.

7. Air Quality

Motor vehicles and domestic fires are the two main causes of air quality problems in the Region according to *Measuring Up*. In some confined areas, and under certain weather conditions, air pollution from these sources reaches levels set to protect the environment. The SER also observed that, like the rest of the world, we are suffering from the effects of climate change.

We have continued to monitor ambient air quality at three sites in Lower Hutt, Upper Hutt, and Masterton. We also monitor carbon monoxide emissions at Te Aro (Air 3[1]) (**Air Plan 6.1.2**).

7.1 Odour

As in previous years, odour remains a significant source of complaint from the public (e.g, 47% of complaints in May-June)(**Air Plan 6.1.7**). A proactive approach to monitoring some of the problem areas was taken over the summer, along with a rationalisation of the way in which we respond to odour complaints. This freed up much needed resources and has enabled staff to do more preventative work through the *Take Charge* programme.

8. Ecosystems

The implementation of the RPS's ecosystem provisions has continued to develop this year. Many of these projects also contribute to meeting plan objectives.

8.1 Council Ecosystem and Biodiversity Programme

Measuring Up's survey of this Region's ecosystems helped identify those places where natural biodiversity has been lost and where our management and protection efforts need to be directed. These are:

- Lowland bush;
- Wetlands;
- Rivers and their margins;
- Estuaries;
- Coastal escarpments;
- Dunes; and
- Marine ecosystems.

Over the last three years a number of initiatives have been developed to address ecosystem decline and contribute to the Council's goal of improving the overall health of regional ecosystems and biodiversity. This section charts progress this year.

8.2 Lowland Bush

The Key Native Ecosystem (KNE), Bovine TB, and private land protection programmes are the Council's primary vehicles for managing lowland bush ecosystems. Pest management activities in bush areas are guided by the Regional Pest Management Strategy (RPMS). In addition, a land ecosystem's action plan is in preparation which will bring together and describe in one document the full range of activities and services currently employed by the Council to support bush (and related land based) ecosystems.

- KNE work is of critical importance to the Council achieving its ecosystem objectives (Eco 7 [2], 12, 14, 15). The programme is intended to protect and enhance native plants and animals in a range of representative sites throughout the region by the on-going integrated control of both plant and animal pests (not just possums). The Council's commitment to the programme was reinforced in the latest RPMS. To ensure resources are directed to the highest value areas where they will achieve the greatest results, a prioritisation system using remote sensing technology was developed in 2001-02 to rank the "top 100" native forest sites in the region (Eco 10). This exercise showed that nearly 90% of these sites were already subject to treatment under the programme and that some of the highest value native forests in the region are owned and managed by Greater Wellington (such as the water catchment areas of Wainuiomata and Orongorongo).

- There are currently 65 KNE sites totalling 18,793 hectares, of which 39 are on territorial authority land, 4 on Greater Wellington land and 22 on private land. As a result of the prioritisation exercise, the programme has been consolidated on the very best sites (e.g., in Porirua, Wellington City, East Harbour). Work on territorial authority land is undertaken on a cost share basis with the council concerned. The increasing commitment to biodiversity on the part of these authorities greatly assists this work. Future projects and cost sharing arrangements are being cemented through Memoranda of Understanding between Greater Wellington and its territorial authority partners.

- In the Wairarapa all KNE sites now have an integrated approach where all animal predators are targeted. In the Western Zone in the non-farmed areas the baiting regime continues to target possums, although there are some by-kill benefits for mustelids. Throughout the year maintenance works continued on 39 sites, some of this provided by contractors and others by care groups.

- Major KNE sites that were treated during the year were the East Harbour Reserve buffer zone, Raroa Reserve at Pukerua Bay, and O-Te-Pua Wetland at Otaki. More pest plant control was also carried out at Trelissick Park and Otari. The Otari-Wilton Bush care group (which the Council also supports) has been active in replanting the areas that have been cleared.

- The initial operation to rid the Mirimar Peninsular of possums was completed successfully. The possum population has been substantially reduced. Maintenance operations are now on-going.

- The bovine TB programme (which gives effect to Eco 7) also protects native bush. A very large part of the Region is now subject to this type of management. The 2002-03 programme consisted of approximately 365,000 hectares, of which 86% had been treated at year end. Over the year the number of infected herds continued to fall (45 this year, compared with 62 last year).

- Many lowland forest remnants of ecological importance are found on private land. These patches are often quite small so only a small proportion meet the criteria for support as a KNE. However, their importance is often directly related to the fact that they are small; true remnants of vanishing habitats, they are representative of what once was common and contain the seed beds for potential future re-vegetation efforts. These areas can be protected and cared for under the Council's private land protection programme, which is run in association with the Queen Elizabeth II National Trust, and with a contribution from the landowner concerned. This programme is continuing to prove very successful. In the year under review, 21 covenants were approved, that will protect 113 hectares when registered. Nine are in the Wairarapa and 12 in Porirua and Kapiti. Sixteen are forest remnants. Highlights of the year were a 20 hectare block of Totara dominant forest on the Otaki Plains, which has been identified as high priority for protection by DOC, and 20 hectares of riparian forest at Bideford.

- The need to protect these remnants was recognised in the Council's ten year plan. A target of 400 protected bush areas has been set for 2013, currently the number is 134. As well as formal protection, it is also the case that landowners often contact us only for advice on re-vegetation, pest management, or plant selection, and are happy to do their own management. We have continued to provide this kind of advice, and have "how-to" guides in preparation. These will be funded through the government's Biodiversity Advice Fund. Another booklet describing the land protection services and advice available from Greater Wellington and a number of other agencies was published in April and distributed to all rural addresses.

- In June 2002, the Council agreed in principle to fund a predator control buffer zone on private land around the southern side of the Mt Bruce Scenic Reserve. This was to provide support for the native ecosystem and the kaka, kokako, and kiwi breeding programmes of the National Wildlife Centre Trust (Eco 12, 14). Work commenced on the buffer in September and continued for a number of months. In the first five months 1730 animals were removed from the area, predominantly possums and rats.

- Old Man's Beard continues to have a deleterious effect on ecosystems and gardens around the Region, as does the dumping of garden waste. In Wellington City the control programme for Old Man's Beard has been changed. A consignment of the Old Man's Beard Sawfly has been released in Wellington, but it will take a couple of years to see any results from this biological control agent. This pest plant also grows on the banks of rivers. Efforts to clear it from the Ruamahanga River continued. The problem of garden escapes into natural areas is being addressed, including the provision of information for all householders in the Region.

- The Landcare Division manages huge areas of native ecosystems within its parks and forests. These are well described in the Regional Parks Network Management Plan (released for consultation in November 2002 and adopted in August this year), along with policies for their management on an ecosystem basis. An extensive programme of surveying and monitoring is yielding information about the ecological health of these areas, and this is followed up with pest control programmes designed to enhance forest health. This year's pest control programmes included possum trapping in Dry Creek (reducing the RTC from 29.6% to 3.9%), goat and pig culls in the Wainuiomata and Orongorongo catchments, large vertebrate control operations in Kaitoke Regional Park and the Hutt Water Collection Area, and rabbit control in Queen Elizabeth Park (see report 03.457 for details). At Korokoro the under-story is showing positive signs of recovery after the removal of goats over the las ttwo years. Pest plants are also controlled on Council land, with work occurring in nearly all the main areas managed by Greater Wellington, according to priorities established after weed mapping and analysis.

- At Te Marua, Council staff are assisting the Botanical Society to clear weeds and replant the Te Marua Bush, and there have been further community plantings to restore the remnant kahikitea forest at Queen Elizabeth Park.

8.3 Wetlands

The loss of wetlands in the Region is well known. This year Greater Wellington's efforts to do something about this started to bear fruit. The Wetland Action Plan was approved by the Council on 18 March 2003 (FW 48. **RFWP 8.2.5**). It says the Council will invest in some outstanding wetlands on Council land and encourage wetland restoration on private land through advice and incentives. Its implementation by staff across the Council has already commenced. In addition to the Action Plan, the following has also been achieved in the last year:

- Staff provided advice on wetland management and assessments of wetland health for landowners through the Wetland Advisory Service (FW 48, **RFWP 8.2.5**).

- A "Beginners guide to wetland restoration" - a do it yourself book for wetland owners - has been completed.
- A guide to wetland plants in the Region has also been written and is being used by Council staff and landowners to identify the nature and composition of the wetlands they are managing.
- A database of remaining wetlands has been established and Biosecurity staff are "ground truthing" it across a large part of the region. At the end of the year 44 of the 130 wetlands on the list had been visited. Five "new" wetlands were discovered that were not on the list.
- A series of consultative meetings with landowners has taken place to identify their information and financial assistance needs to help them better manage their wetlands. The Council has a small fund available to support privately owned wetlands, and the finishing touches are now being put to the methodology for allocating this money.
- The KNE programme has been extended to include other ecosystem types, in addition to native bush. This has resulted in funding being available for wetland and escarpment restoration projects. Three wetland KNE projects have been completed. A water budget has been prepared for the Te Harekeke Wetland at Waikanae, along with some weed control. At Lake Pounui, in South Wairarapa a fish survey has been completed and assistance provided to fence the wetland. The O Te Pua Wetland has had a considerable number of the willows that infested it cleared.
- On Council land, a large control operation cleared willow, honeysuckle and blackberry from the northern wetland at Queen Elizabeth Park. At Wainuiomata a harekeke planting by the local iwi and school children doing *Take Action* will help preserve the species and give the tangata whenua access to weaving resources. A botanical survey of a wetland in the Akatarawa forest has been completed, whilst planning work has been carried out for the Queen Elizabeth Park wetland and new entrance at McKay's Crossing.
- At Battle Hill a large portion of Swampy Gully has been fenced and retired and a thousand plants planted around the wetland. This project is expected to take a further five years to complete
- A number of the objectives of the Action Plan will be met through the efforts of care groups, supported by the Council, and working around the Region. In addition to those already mentioned, such as O Te Pua, the following wetland rehabilitation projects are currently underway:
- Te Horo Beach Residents Association (restoring the Mangaone coastal wetland);
- . Waimeha Restoration Group (working on the Waimeha lagoon);
- . Forest and Bird Fensham Group (restoring the Fensham wetland near Carterton);

- Manuka Street Residents Association (improving a wetland and stream in Masterton);
- Forest and Bird, Upper Hutt Branch (restoring Hulls Creek and wetland at Silverstream);
- Riversdale Stream Care Group (restoring the stream and lagoon at Riversdale)
- Henley Trust (improving the wetlands at Henley, Masterton); and
- The Waitohu Stream Care Group has worked with local landowners to complete the fencing of a major wetland at the estuary.
- Manchurian Wild Rice in the wetland below the Waikanae sewage treatment ponds was treated, clearing the original infestations. On-going control will only involve re-growth and seedling plants. Hornwort infesting Forest Lake at Otaki was sprayed in October, and other associated wetlands have been checked for this weed.

8.4 River ecosystems

Increasingly, an ecosystem-based approach is being taken to the management of rivers and streams within the Region. This means we are seeking to manage each waterway as a whole and enhance the ecological functioning of the river ecosystem. Actions to enhance a waterway should be taken on the basis of their contribution to the health and functioning of the processes, cycles, and elements that make up the complex living web that is the river ecosystem. In practice, this means such things as managing habitat, nutrient cycles, hydrological conditions, temperature, toxicity, the ability of species to feed, breed and move about, diversity of species, habitats and conditions within a river, pest plants and animals, and so on.

- As mentioned above, the Riparian Management Strategy spells out where and how the Council will act to protect water quality over the coming years. The Strategy will also have a bearing on the ecological health of streams and stream corridor biodiversity. As landowners retire land alongside water courses, water temperatures will decrease, excess nutrients will be removed, habitat for macro-invertebrates will increase, and species that have retreated to the headwaters of streams will be able to re-colonise areas downstream. Riparian restoration is a major new strand of work for the Council and it implements a number of methods in the RPS, Soil Plan and Freshwater Plan (FW 31-33, **RFWP 8.4.10-8.4.14, Soil Plan 6.1.3**). The funding for farmers available under the Strategy focuses on ecosystem protection in catchments where land uses are threatening otherwise healthy streams.

- In the Wairarapa, river managers have begun to explore how ecosystem functions can be accommodated along side the necessary physical works and day-to-day operations of controlling rivers to prevent floods.

- Also mentioned already is the contribution made by river and stream based care groups, most of which are contributing to the rehabilitation of aquatic and riparian ecosystems. In the last year five business groups gave their time to the same end at planting events.

- Streamside plantings are regularly carried out in regional parks and river corridors by the Landcare Divisison (e.g., Arbor Day).

- The need to understand how aquatic ecosystems in our Region function has driven the "Freshwater Ecosystems" programme for the last three years. This programme's achievements were reported to the Committee at its last meeting (see Report 03.471). In 2002-03 this meant more work on the identification of habitat, barriers to fish passage, and the presence of particular species, so that streams and rivers can be managed with the health and life cycles of their most charismatic inhabitants in mind. An inventory of structures in rivers has been completed for the Wairarapa (FW 36), as has a report on spawning habitat over the same area (completing the coverage of the Region) (FW 40). Surveys of fish at 30 more sites, has brought our knowledge to a point where we have been able to develop a computer based model of fish presence which will greatly improve our ecological management of rivers (called Point, Click, Fish). Six publications on freshwater species now exist, including a "how-to" guide for building fish friendly culverts. The next steps in this programme are to raise public awareness about stream life, mitigate fish passage over selected structures, and restore inanga habitat in certain areas.

- The Landcare Division continues to improve fish passage over structures it manages, making changes to two fords in the Akatarawa and Pakuratahi forests this year.

- The Friends of the Waikanae River have continued their good work looking after the river and its margins. The group receives funding from the *Take Care* fund. The Friends have worked on restoring the river ecosystem by clearing unwanted weeds and trees, planting native trees, and surveying existing native species (FW 32, Eco 14). On the Otaki River, the Friends of the Otaki have been active during the planning, construction and planting phases of the lagoon restoration at the mouth, and have planted further plants at the Chrystall's Bend wetland (see Report 02.500 for a detailed commentary on the Otaki Lagoon project).

- Urban streams have not been forgotten, with a study completed of the ecological health of a number of waterways on the Wellington peninsular, including the Porirua Stream. The Wellington and Porirua City Council's have collaborated with Greater Wellington on these investigations. This report is helping us develop strategies for managing these water ways, and provides useful information for restoration plantings, care groups, and for schools doing *Take Action*.

8.5 Estuaries, Dunes, Coastal Escarpments

These ecosystems are discussed above under "The Coastal Environment" section.

9. Landscape and Heritage

The Council's role in heritage matters is minimal, being restricted to general policy matters and national issues where they arise, and the management of heritage resources on Council land. An investigation into the need for a regional plan for regionally significant heritage matters was completed in May. The conclusion reached was that a statutory plan would not be as useful as the non-statutory means that could be employed in any specific case. With the review of the RPS coming up in only two years, it was considered that a new RPS could provide as much policy guidance as could a plan (L&H 9). Other heritage management activities during the year were a report on the heritage values of the Wairarapa coast for the Coastal Strategy (November 2002) and detailed policies in the Draft Strategy , and the inclusion of heritage in the Regional Parks & Forests Network Plan (L&H 6).

Greater Wellington also continued to provide and manage a range of recreational and open space areas, parks and facilities, as promised by the RPS (L&H 14).

10. Natural Hazards

Natural Hazards Method 7 of the RPS (making information available) is mainly given effect to through the activities of the Hazard Analyst, the Emergency Management Department and the Wairarapa office. Members of the public and territorial authorities have continued to seek information from us on the Region's hazards. A "stakeholder need analysis" was carried out this year to find better ways of getting our information across to, and used by, organisations and the public (see Report 03.294 for details).

In the Wairarapa, a major lifelines study was completed by the Wairarapa Engineering Lifelines Association (Greater Wellington is a member). The report will assist the future development of emergency management in the Wairarapa (NH 8). Further work was also completed on identifying the Mokonui Fault north of Masterton.

Other activities such as weather studies, flood plain management plans, and submissions on resource consents for new buildings relating to earthquake and flood risk help meet *Measuring Up's* concerns about natural hazards in this Region. These are earthquakes, flooding, drought, tsunami, coastal erosion, and the need to identify risks before new developments go ahead.

11. Energy

Measuring Up's main concern about energy use is our continued reliance on fossil fuels and the only modest gains in energy efficiency that have been made. The Council's energy related activities have this year taken a great leap forward, as the use of energy, and its environmental impacts, have been recognised as a key part of building a sustainable Region. Ten year targets have been set for aspects of the Region's energy use and transport networks and the key components of the Council's energy and transport approach have been spelled out in *Towards A Sustainable Region*. Activities by the Council in the last year have included the following:

- Greater Wellington became an Energy Wise Council in May 2003. This affirmed the Council's commitment to sustainable energy management as evidenced in its re-branding and the 10 year plan. An Energy Manager has been appointed and a staff group established to develop energy saving projects to help us meet our obligations as an Energy Wise Council. This will also help us identify ways of meeting the expectations of the National Energy Efficiency and Conservation Strategy of local authorities for a 15% reduction in energy use.

- Progress was made on the estimation of the organisation's overall "carbon footprint". For the Wairarapa Division, the estimated footprint is 350 tonnes of carbon dioxide per annum, mainly from vehicle usage.

- Energy savings were effected during the winter energy shortage. The main Council building in Wellington saved 15%, and some of the changes to heating and air conditioning have been retained.

- Work commenced on an assessment of the energy generating potential of wind farms on Greater Wellington owned and managed land.

- Energy usage in the water supply area continues to be managed by the "optimiser" technology. The Water Group received an energy saving award for this.

- Council staff provided comment on various papers put out by the Climate Change Office and provided a peer review of the Climate Change Effects Guidelines (one set on coastal issues, another more general).

Through the Regional Land Transport Strategy, the Council seeks to reduce the energy used in the Region as people move about, lower greenhouse gas emissions from motor vehicles, and encourage greater reliance on more "sustainable" forms of transport (Energy 4, Air 10 [5] and Air 12, **Air Plan 6.5.2**). The Strategy promotes the use of public transport, cycling, walking, and other measures designed to reduce the need for vehicle trips, as well as making the transport network more effective.

The 2002-03 Annual Report on the implementation of the Transport Strategy paints a mixed picture, with some successes but frustration that implementation

is slower than anticipated. Successes include significant increases in the peak and off-peak use of public transport, the completion of the Lambton Interchange, more public transport services, and increased walking and cycling. However, congestion has worsened (though is lass than any other Australasian city), some network improvement projects have not commenced as planned, and fuel sales grew at around 3 per cent. Total fuel sales are a reasonable proxy measure for the air pollution attributable to motor vehicles. The Annual Report provides an excellent assessment of how well some of the Council's 10 year targets might be met in the future.

12. Waste Management and Hazardous Substances

According to *Measuring Up*, the quantity of waste produced in the Region is not being minimised, but recycling, the consenting of waste disposal facilities, and the gradual clean-up of high risk contaminated sites are helping to manage the by-products of the way we live.

The Council seeks to control waste discharges in many ways; through consents under its Regional Discharges to Land Plan and Freshwater Plan (Waste 9), through education and advocacy, and through contributions to national debates and policy making. During 2002-03:

- Greater Wellington established targets for its waste activities in its 10 year plan and was surprised by the degree of public interest in this aspect of its work when submissions were called for. The role that we should play in waste management has been minimal since changes to the Local Government Act in 1996 required territorial authorities to take the lead in these matters. The Council is now reassessing its role.

- The Pollution Response Services continued to police waste discharges of all kinds (**Coastal Plan 15.3.12**).

- In the Wairarapa, the Council continued its involvement in the development of a Waste Plan for the area. With the consent for the Masterton landfill expiring in three years, there is a need to find a solution for the Wairarapa's waste. (Waste 13[2], **Discharges to Land Plan 6.1.8**).

- Agri-chemicals were collected for disposal in the western part of the Region. (Waste 23,**Discharges to Land Plan 6.3.6**).

- Funding was provided for Enviromart, the regional waste exchange for the recycling of commercial waste (Waste 8). The waste exchange has become more active and greater volumes of "waste" are passing through it.

- Councillors and officers participated in the activities of the Wellington Regional Environment Agency, a local authorities solid waste discussion group (Waste 2, **Discharges to Land Plan 6.1.6**). The group is chaired by Councillor Yardley.

- Many of the schools doing the *Take Action for Water* programme developed local scale ways of addressing waste issues in their communities. A major thrust of the programme is litter and waste prevention, in order to stop this material ending up in stormwater systems and streams (Waste 8[1]).

- *Take Charge* is being successfully implemented, reducing the potential for discharges that could pollute groundwater and streams. *Take Charge* also encourages small business to reduce their waste and implement waste minimisation schemes.

- Greater Wellington has built a "hazmobile" to be used by territorial authorities for household hazardous waste collections. It has been used by Hutt City Council and Upper Hutt City Council, with assistance from Greater Wellington staff.

- At the main offices of Greater Wellington a waste minimisation scheme has been put into place and there has been a marked increase in recycling. When renovations to the building are completed we will be able to quantify the extent of the reduction (although a waste survey at the start of the programme suggested a figure of 67% was possible). In the Wairarapa office, where the same scheme has been running for a number of months, a reduction of 55% in waste going to landfill has been achieved.

- A survey to identify "background" levels of contamination in soil has been completed. This will help us identify and assess contaminated sites in future.

13. Built Environment and Transportation

The SER describes the Wellington Region as being "on the up", a place to come to, with a lifestyle to be envied. It says we have a public transport network that is the best in New Zealand. Nevertheless, it also says that the way we live in cities and towns, particularly how we move around, use resources, and generate waste, is generating environmental pressures.

The Council's role in achieving its RPS objectives in this area is centred around its regional transport functions and, in particular, the promotion of a sustainable transport system that encourages the efficient use of infrastructure (BE 3). The Council has not taken a strong advocacy role on the development of the Region's urban areas, opting to leave decisions about these areas to the territorial authorities.

This year, each of the Councils in the Western part of the Region has agreed in principle to the development of a Wellington Regional Sustainable Urban Development Strategy. This will be a framework for urban form and development, linked to transport planning. Officers from Greater Wellington's

Transport and Environment Divisions are working on the Strategy, along with officers from each of the territorial authorities.

Submissions have continued to be made on proposed developments within the cities where Council policies are relevant or Council services affected (BE 5 [2]).