Implementation of the Regional Policy Statement and Regional Plans in 2001/2002

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 became operative, the Council has worked hard to implement these methods. This report describes what has been done to give effect to them between July 2001 and June 2002.

Implementing the RPS and plans is not about working on the listed methods so they can simply be "ticked off" and the Council said to have complied with its statutory obligations. The work that is done each year is done for a purpose - 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, therefore, 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 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 2001-02 include the following (Iwi 14):

- Ngati Raukawa is completing a tikanga report on the Otaki River. The Council has also contributed to the printing of the iwi management plan.
- A contract has been signed with Rangitaane o Wairarapa to prepare an inventory of sites of significance
- Work has proceeded to assist the Morris whanau at Homewood to retire a 4ha wetland.

- Discussions with landowners have taken place over the Punaruku Lagoon at Ngawi, with a view to planting and weed clearing.
- The Council assisted the Taueru Urupa Committee to fence off and add native plants at this waahi tapu.
- A workshop for Ara Tahi members on gravel was held at the Papawai Marae. Another workshop took place on the use of geographic information systems by tangata wheua (Iwi 2).

A training session for Councillors was held with the Wellington Tenths' Trust on their Treaty of Waitangi claim (Iwi 6).

3. Using Fresh water

3.1 *Surface Water Use*

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 which aims to foster the growth and development of the area through access to reliable sources of water.
- As part of a programme to review the validity of the minimum flows in the Regional Freshwater Plan, an assessment was made of flows in the Hutt River, using fish habitat as a measure. The conclusion reached was that there should be enough water in the river to provide for fish, even over summer periods (Report 01.505) (**RFWP 8.5.5**).
- A review was undertaken of surface water takes in Wairarapa catchments that have come under pressure over the last five years. The review concluded that a short term moratorium on new takes is desirable in some areas (e.g,, Mangatarere, Makoura, Otakura, Parkvale, Papawai, Taueru, Donalds Creek), while large takes (>40l/s) should be metered before the next irrigation season commenced. It also set priorities for obtaining information on water ways to better inform the Regional Freshwater Plan (**RFWP 8.5.5**).
- Routine monitoring of large water takes and summer low flow monitoring throughout the Region (FW 11). No water use restrictions were needed in the Wairarapa this year.
- Regular monitoring of rainfall and river levels by the Council's hydrologists.

The Water Group promoted its water conservation message once more this summer, including taking the message directly to residents through a door-knocking campaign in selected areas (FW 9) (**RFWP 8.5.7**).

Six consent applications were received for water races across the Wairarapa, with the renewal process still in progress at year end.

3.2 *Groundwater Use*

The verdict of *Measuring Up* on groundwater use is that the Lower Hutt groundwater is over allocated and abstraction volumes in several other groundwater zones, especially in the Wairarapa, are increasing. The SER also sounds a warning that the quality of some shallow aquifers is being affected by surrounding land uses.

During 2001/02 the condition of groundwater in the Region was generally healthy with levels and quality within recorded minima and maxima.. Monitoring of water levels showed Kapiti ground water levels to be at or above long term averages. The wet summer period allowed these aquifers to fully recover from record low levels observed during 2001. The McEwan Park bore at Petone showed a similar picture.

In the Hutt Valley, we are working to redefine the sustainable yield of the Lower Hutt Groundwater Zone (FW 13). New minimum operating levels have been identified for the Waiwhetu artesian aquifer. This will have the effect of restricting abstraction earlier than is the case under the pre-existing management regime (**RFWP 8.5.4**).

In the eastern part of the Region a review of the safe yields and consented takes in some groundwater zones resulted in a suggested moratorium for two of them, the Martinborough Eastern Terraces zone and the Parkvale zone (Report 01.840).

Work has also continued on improving our knowledge of the shallow groundwater under the Paraparaumu area (FW 13). Metres were installed on seven privately owned bores to identify the level of domestic use, and three bores were drilled to provide water levels. Domestic use turned out to be significantly less than is allowed by law and groundwater levels were significantly higher than during the drought in early 2001. This measuring system will remain in place to show up any changes with different weather patterns.

3.3 *On-site sewage and waste water*

In small communities across the country domestic septic tanks are causing problems for groundwater quality. An investigation by the Council at Riversdale revealed groundwater contaminated by faecal material, the most likely source being seepage from malfunctioning septic tanks (most systems inspected failed!). The Riversdale community is working on a new scheme to solve this problem. Septic tanks in the Pauatahanui area were also checked by Porirua City Council as part of the Pauatahanui Inlet programme.

The Council continues to encourage good on-site sewage system maintenance through education and information. A workshop on the new national standard for on-site sewage treatment was held in August. Such was the demand for information that some of our “how to” septic tank brochures ran out at year end, and will be reprinted (**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**). There were 76 non-notified subdivision or land use consents for comment during the year, with comment made on 51 of these (though not all for effluent disposal).

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). Progress is being made (see Reports 01.838 and 01.837 for a description of the state of play in the Wairarapa). *Measuring Up* points out that water quality in some places is still deteriorating due to stormwater and runoff from urban and rural land uses, and it also says that the worst affected water bodies are not improving significantly.

This trend has been confirmed by our most recent monitoring. The latest Annual Freshwater Quality Report (for the 2000/01 year) (Report 01.658) reveals a picture little different from the year before. The Pauatahanui, Owhiro, Waitohu, Ngarara, Porirua, Ngauranga, Waiwhetu, Wainuiomata and Mangaroa Rivers/Streams still have the poorest water quality in the Region. Generally, the eastern part of the region enjoys higher quality water than the western part. Streams draining urban areas are often the worst polluted and the most difficult to clean up.

The need to take more concerted action to clean up our worst rivers was considered as part of the Long Term Financial Strategy and additional funding allocated in key areas. One of these was funding for a riparian management strategy and works in trial catchments. In the past, the authors of various Council water quality reports have pinned their hopes on a Council funded riparian management programme as the solution to rural water quality problems. Their expectation was that kilometres of retired stream margins would intercept large volumes of contaminated runoff before it found its way to streams and rivers.

However, the work that has been done this year developing a riparian programme (described in the Ecosystem section below) has shown that this exercise is expensive and will not solve all water quality problems. Only limited areas will be able to be established each year (about 4km), at least initially. Retirement and fencing of land is a proven method for cleaning up waterways but widespread improvements in the health of the Region's rural streams will depend on landowners choosing to fence waterways for economic and business reasons, as well as for environmental ones. This is expected to occur as farming sectors, such as dairy farming, improve their environmental performance (Fonterra is urging its suppliers to move in this direction now). The Council's contribution will be to demonstrate best practise, and provide advice, aid, and encouragement, as well as contributing to well managed riparian zones in key areas that will "add up" over the long term. The Council will also continue 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. Eighty per cent of formal enforcement action in the Wairarapa in 2000-01 related to diary farms, including one prosecution (Report 01.651).

The number of urban streams in the poor quality category above points to the need to address water quality in a number of different ways, in addition to riparian management. The influences on the quality of any given water body are numerous and complicated, and this will require a multi-dimensional response. As *Measuring Up* pointed out, stormwater from roads and suburbs causes a lot of the problem. The Council has been working on this part of the problem, but the year's major stormwater

investigation was held up by a lack of rain at key times of the year (it will happen in 2002/03. It will also be relevant to coastal water quality (**Coastal Plan 15.3.4**)).

It should come as no surprise then that the worst affected water bodies are taking some time to recover. Improving the quality of our streams and rivers will take time. Within this context, the major actions taken this year to improve the quality and ecological health of our waterways are detailed below.

4.1 ***Waiwhetu Stream***

Progress on this urban Hutt valley stream this year has been good, with most effort going towards gaining a better understanding of the stream's problems. The contaminated sediments have been thoroughly analysed and a study was made of the options available for re-mediating this difficult problem (FW 22, **RFWP 8.4.6, 8.4.7**). An ecological study was undertaken to explore the impact of the contamination on the stream ecosystem. It found it to be poor in the lower contaminated reaches but surprisingly healthy upstream. Given the possible cost of removing and treating the sediment, however, further work is needed to understand the risk to people posed by leaving the contaminants in place. This will be addressed this year.

A landscape rehabilitation plan was prepared to provide local residents with a vision for the stream and some planting by local businesses has continued at various sites. Flood modelling has shown us where riparian planting can occur without increasing the risk to properties of flooding. The stream was cleared manually of weed in December 2001 and later sprayed to control this prolific aquatic pest (**RFWP 8.3.4**).

4.2 ***Kaiwharawhara Stream***

On the lower Kaiwharawhara Stream in central Wellington another ecosystem and water quality enhancement project continued to develop over the year (FW 22). The Council has joined forces with the Wellington City Council and a number of active community groups to make a concerted effort on this stream. An ecological study has been completed which will provide guidance for future restoration activities. It revealed that there remains a considerable amount of life in the stream, although there are some patches where it is quite degraded. At the mouth of the stream a small area has been rehabilitated, whilst further up the efforts of care groups are beginning to pay dividends (see my Manager's Report in this Order Paper). The Council has made a commitment to work with all of the above parties to produce an action plan for the stream, and we expect progress to speed up in the year to come.

4.3 ***Porirua Stream***

An investigation has been carried out to find out why this stream supports little in the way of macro-invertebrate life, the small critters that are the building blocks of healthy stream ecosystems. The water and sediment was tested but the exact cause of the problem could not be pinpointed. It may be that the stream contains more metals (e.g., zinc, lead, copper) when it rains and this may be toxic to stream life. Further work is needed, including identifying possible sources of these contaminants (FW 23).

4.4 ***Stream and Wetland Restoration by Community Care Groups***

The Council has supported a number of stream ecosystem restoration projects through the *Take Care* (care group) programme and as RPS implementation projects. 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 water ways that we are trying to achieve. This year's projects have occurred on:

- the Waimapehi Stream in Pukerua Bay;
- Fensham wetland in Carterton;
- the Moehou stream in Moehou Reserve, Upper Hutt;
- a stream and wetland in Manuka Street, Masterton;
- Wharemauku Stream at Kaitawa;
- the Waikanae River (Friends of the River);
- the Queen Elizabeth Park wetland;
- the freshwater wetland at Pauatahanui;
- Muapoko Stream at Greendale;
- Stebbings Stream in Glenside;
- the Kaiwharawhara Stream in Wellington;
- the Mangaone coastal wetland;
- the Pakuratahi Stream;
- the Waimeha lagoon near Paraparaumu;
- the Korimako Stream in Ngaio;
- the Waitohu Stream at Otaki; and
- the Otaki river mouth lagoons at Otaki.

A number of these groups, and some additional groups are monitoring water quality across the Region and feeding the information back to the Council. On the Kaiwharawhara Stream, for example, 21 people are active at seven sites. The Council also contributed to a baseline study of the Wharemaukau Stream at Paraparaumu, an important first step in the community's restoration plan for this stream.

4.5 ***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 commenced in February and has been highly sought after by schools (FW 21 and 28; **RFWP 8.4.9**). Unfortunately, the *Take Charge* pollution prevention programme for small businesses has not been as successful, primarily because we have lacked sufficient staff resources to implement it. Nineteen businesses have used this service but our staff have been busy with pollution control work and have not been able to give as much time to *Take Charge* as we would have liked.

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.

4.6 *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, despite the fact that more people are adopting sustainable land use practices, 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 2001-02, we were notified of 12 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 contributed to the sponsorship of the Farm Environment Awards for the first time (**Soil Plan 6.1.2**). This will become 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 2001-02, soil conservation programmes were completed on 130 properties. Afforestation work was completed over 190 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 *River management*

Soil methods 14 to 19 of the RPS describe the Council's on-going river management activities (**RFWP 8.3.4**). These are reported on regularly through the Landcare and Wairarapa and Rural Services Committees. In the western region, one of the more significant tasks has been obtaining resource consent for the improvements to the Ava-Ewing reach of the Hutt River (Soil 14;**RFWP 8.3.1**).

In the Wairarapa, the river scheme on the upper Ruamahunga River was reclassified into three schemes during the year (**RFWP 8.3.3**). In developing these new classifications floodplain management and hydrological studies are undertaken (Soil 15,16). Each river scheme has an advisory committee reflecting the beneficiaries of the scheme. Annually there is usually at least an inspection, committee meeting and newsletter circulated. The annual meeting approves the completion of the year's work programme and the next year's works programme. It also recommends any rates rise to achieve the proposed works programme. Reclassification causes an increase in the number of meetings, circulation of pamphlets and newsletters, and public displays to ensure all ratepayers have an understanding of what is proposed.

5.4 *Soil health information*

Funding was provided for soil quality monitoring through the last Long Term Financial Strategy. Last year (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 (2001-02), a further 22 sites were sampled, with hill country soils to be sampled next year (**Soil Plan 6.2.6**).

Another investigation into soil "intactness" commenced in May. This measures the extent to which soil is being lost from the soil profile either through wind or water erosion.

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. The SER also identified a lack of information about changes in the marine ecosystem, but said that coastal water is generally of good quality.

6.1 *Coastal developments and natural character*

The decline in the naturalness of coastal areas is being addressed on the Wairarapa coast. The Council is playing a significant role in the development of the Wairarapa coastal strategy (Coast 3[1]) which arose out of concern about sporadic subdivision. During the year a discussion document was prepared by the coastal strategy organising group and submissions called for. Technical papers on ecological and landscape issues are also in preparation, and it is expected that there will be another round of consultation later in 2002.

6.2 *Coastal ecosystem projects*

The loss of open space and indigenous species that is "natural character" also places coastal ecosystems in jeopardy. The importance of coastal ecosystems and their rapid disappearance was recognised in the state of the environment report's assessment of regional biodiversity. 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.

The Council has been active to protect and enhance examples of these ecosystem types, with the Pauatahanui Inlet estuary project the most visible. This year the major achievement has been the creation of the community Trust that will drive the implementation of the Action Plan in the future. (Coast 3[2], Eco 11,12, 14). A continuous sediment measuring device has beeen placed in the Horokiri Stream and is giving us a more accurate picture of sediment coming into the inlet from this and neighbouring streams. The Council funded a fresh water wetland constructed by a Forest & Bird care group at the wildlife reserve, whilst a restoration plan for the publicly owned land on the inlet's margins is nearing completion. 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). Some 15,000 plants were planted at the Horokiri site this year.

The updating of the Regional Council's silt guidelines is almost complete, with draft guidelines having been sent to interested parties for comment (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**).

The Council funded the analysis of the triennial inlet cockle count this year. The total estimated population of cockles is currently around 210 million, slightly down from the 257 million estimated in 1998, but up from 180 million in 1995 (both differences are not statistically significant). In general, the cockle population appears to have stabilised over the past two surveys.

Thus far the Council's involvement in coastal escarpment projects has been limited. However, a project on the Kapiti coast was supported during the year as a Key Native Ecosystem project (reflecting the decision to broaden the KNE programme to include ecosystems other than native bush). The Nga Ururoa Project aims to restore the Paekakariki escarpment by removing pest plants and animals and replanting local species.

The Council continues to support the care group working on the Waitohu estuary and dunes. The group has about 60 members now. Over the last year the group has been pleased to see the dunes beginning to reform as a result of their work. The group actively promoted its dune care message over the summer with posters and planting, and has been working with land owners along the stream and estuary margin. The major planting effort for the year is happening in July 2002 (FW 22, Eco 14).

On the Wairarapa Coast, assistance has been given to the Riversdale dune care and Castlepoint beach care groups (Eco 14). At Riversdale the group completed 18 tonnes of rock protection, 100 metres of fence, and planted 350 native grasses and shrubs. At Castlepoint, eroding dune have stabilised since 1999 when wind break fences were installed to trap windblown sand. The gradual improvement in the dune formation since then has allowed the community to begin fencing and planting. Further work is planned for next financial year. 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, another group has made progress with the creation of Little Blue Penguin habitat, gaining consent to proceed from the territorial authority.

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 assessments by an ecologist and coastal processes expert, and detailed weed and plant surveys. This year public meetings have been held to discuss the restoration, weed control continues, monitoring plots have been created, and a trial of the sand binding properties of pingao and spinifex commenced.

6.3 *Other coastal activities*

- In March, Wairarapa staff celebrated Sea Week at Castlepoint, with a number of key speakers talking to the public and local schoolchildren about various coastal matters.
- Under the banner, “On the Beaches’, the recreational water quality monitoring programme has been combined with other western area territorial authorities’ programmes, sites added, and communicated to the public via the Council’s web site. This commenced in November 2001. The shellfish monitoring programme is also being replaced by a programme targeting hazardous substances in the marine food chain (see Report 01.782 for details).
- Policy analysis on coastal occupation charges has been undertaken so that the Council can take a position on this issue. Some analysis has also been carried out as a result of the Government’s announced aquaculture review. This could have a significant impact on the coastal plan. These issues will all be further progressed in 2002-03, along with the port noise provisions of the coastal plan.
- An inventory of coastal structures for the western Wellington Region has been completed. This has involved a field inspection of existing structures along the entire coastline of the western Wellington Region. A survey of the Wairarapa coastline was undertaken in 1997. These surveys are undertaken to identify existing lawful structures that are provided for by the rules in the Regional Coastal Plan, and redundant and illegal structures for which staff will investigate options for removal (**Coastal Plan 15.1.1 to 15.1.4**).

6.4 *Marine Biodiversity*

The Council launched the Wellington Harbour marine ecosystem project in June. The aim of this project is to sustain and improve the marine biodiversity in the harbour and out into Cook Strait, and it involves local iwi, relevant agencies, the Ministry for the Environment, and community members (Coast 3(2)). A submission to the Oceans Policy Group on the regional community's attitudes to the sea was made in July.

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. However, the SER observed that we did not yet fully understand the extent of these problems in the Region. It noted also that, like the rest of the world, we are suffering from the effects of climate change.

The need to extend air quality monitoring to a network of stations was recognised in the Long Term Financial Strategy and provision made for the purchase of three additional stations. We established the first permanent monitoring station at Lower Hutt (Birch Street Reserve) in February 2001 and employed the mobile station to check the condition of the air in Upper Hutt (Trentham Fire Station) (Air 3[1]) (**Air Plan 6.1.2**). A second permanent station has been established in Masterton. The results of the measurement of "ambient" air quality (the air that surrounds us) in the two Hutt locations from September 2000 to October 2001 indicate the highest concentrations of air pollutants can be found in the winter. Cold, calm weather means more emissions from heating sources and less wind to disperse these emissions and those from vehicles. The pollutants that normally cause problems are carbon monoxide, nitrogen dioxide, and fine particles. It is thought that the first two are caused by motor vehicles and the latter come from domestic fires.

This has a bearing on the provisions of the RPS and how we implement them which will need to be examined. By and large, the RPS's air policies and methods are directed towards industrial emissions and the general impacts of motor vehicles. Yet the Council's Emissions Inventory (**Air Plan 6.1.3**) and the results obtained thus far from the stations indicate a need to address *households* and domestic fires in specific locations. Combine this with our use of cars, and there seems to be a need for an educational approach to air quality for the wider community, in addition to a regulatory approach for business. The Regional Land Transport Committee also turned its mind to this issue at a recent meeting, and the need for public education about the use and tuning of vehicles (Report 02.274).

A study was made of the incidence of particulate (dust) in the Wairarapa.. This will help with the assessment of dust generating activities and public complaints about dust that might arise in this district (Air 3[3], 4). Fine particulate was also investigated in Wainuiomata over the course of the year, with breaches of the national guideline occurring three times in cold, calm conditions.

7.1 *Climate Change*

The view taken by the RPS of climate change and greenhouse gases is that this is a national issue and that the Council should support relevant government initiatives. However, it also stresses the importance of regional efforts. This issue has attained a higher profile this year through central government's increased attention and international developments relating to the Kyoto Protocol. Regionally, we have assessed the risks to natural resources posed by changing weather patterns (see the report elsewhere in this Order Paper) (NH 6). We also made a submission to the government on its proposed ratification of the Kyoto protocol.

Climate change is likely to become increasingly important and something the Council may have to reconsider its contribution to. This region's greatest contributions to the gases that contribute to global warming come from farming, transport and domestic heating. The Regional Land Transport Strategy (listed as a Method in the RPS) contains a number of measures designed to reduce greenhouse gas emissions from motor vehicles. It promotes the use of public transport, cycling, walking, and other measures designed to reduce the need for vehicle trips (Air 10 [5] and Air 12) (see also the discussion under "Energy' below).

7.2 *Amenity, agrichemical sprays and odour*

As in previous years, odour remains a significant source of complaint from the public and takes up much of the time of the Pollution Response Service (e.g, 249 of 290 complaints in April-May)(**Air Plan 6.1.7**). Odours from landfills, abattoirs, an asphalt plant, and sewage treatment facilities were commonly reported by the public.

A workshop was held in October for agrichemical contractors to encourage spraying in accordance with the provisions of the Air Plan (**Air Plan 6.4.1**). This produced a number of suggestions as to how this activity might be regulated and carried out. In a similar vein, a number of care group volunteers were sponsored to attend "Growsafe" training courses (**Air Plan 6.4.5**). Only suitably qualified people in care groups are supplied with chemicals for weed removal. The Council's policy is to have professional contractors remove major weed infestations where these occur on land where care groups are working. Experiments are in place by some care groups and the Council's Biosecurity Department to find more "environmentally friendly" alternatives to spraying for weed suppression (**Air Plan 6.4.3**), such as mulching and the recycling of old carpet.

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 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 two years, and as a result of the Council's increased investment in this area, 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 biodiversity. A strategic assessment is underway to determine how best to contribute to meeting this goal and this has lead to a rethinking of our approach to lowland bush, wetlands, rivers, dunes, escarpments, and so on. A series of strategic documents is being developed to guide future efforts, with an initial emphasis on bush, wetlands, and rivers/streams. It is expected that a similar approach will be taken to dune lands, and estuaries in the near future. Within this overall strategic framework, the following has taken place this year:

8.2 ***Lowland Bush***

- The Key Native Ecosystem (KNE) programme and the Bovine TB programme are the Council's primary vehicles for managing lowland bush ecosystems. KNE work is of critical importance to the Council achieving its ecosystem objectives (Eco 7 [2], 12, 14, 15). This year a strategic assessment of the KNE programme has been progressed to ensure the programme delivers the best biodiversity value over the long term. This assessment is still ongoing. Staff have been looking at where the priorities should lie and how best to deliver more integrated pest management for both private landowners and on Council land. Good progress has been made on a prioritisation procedure for deciding which areas of lowland bush should receive Council support (Eco 10). After running this procedure, it was found that, of the top 100 lowland bush sites in the Region, 88 were already part of the existing KNE programme. In addition, the KNE programme has been extended to include other ecosystem types in addition to native bush. This resulted in some funding being made available for wetland and escarpment restoration projects.

- In the mean time, possum control in Key Native Ecosystems continued throughout the year. The first phase of the large East Harbour possum control operation was successfully completed in October (1.9% RTC over 2,375 ha), while in Wellington the focus was on the new areas of Wrights Hill and Karori Park (treated for the first time). Maintenance possum control was undertaken at sites throughout the Kapiti (Kaitawa Reserve), Porirua (Porirua Scenic Reserve), and Hutt Valley areas (Wi Tako Reserve, Maidstone Park, Keith George Memorial Reserve). Maintenance possum control also took place in Denton Park, Khandallah Park, and Trelissick Park, all part of the larger Wellington City KNE Management Area.

- In June, 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 will provide vital support for the native ecosystem and the kaka, kokako, and kiwi breeding programmes of the National Wildlife Centre Trust (Eco 12, 14).

- A predator control operation was completed on the Tauherenikau KNE to provide a more advanced level of control of feral cats, ferrets, and rats.

- Pest plant control in KNE areas included the Kaiwharawhara Stream (Otari/Wilton Bush and Trelissick Park), the East Harbour Reserve, and the Otaki River. The Otari-Wilton Bush care group (which the Council also supports) has been active in replanting the areas that were cleared, and the Wellington City Council will replant the areas where blackberry was removed.

- In strategic terms, perhaps the most fundamental achievement of the year, has been the approval by the Council of the Regional Pest Management Strategy. Unfortunately it is still subject to appeal in one area, though the issue has been resolved (Eco 10). The Pest Management Strategy sets out a 20 year vision for the control and management of plant and animal pests across the Region and provides a strong endorsement of pest management to enhance and support ecosystems. Despite the appeal being held up by the court system, work that has been carried out since July 2001 has been focused on achieving the objectives of the new strategy.

- Further work has been undertaken on the "mainland island" concept. Various sites have been examined and costs considered, with a view to further consideration by the Council in August 2002.

- 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 efficacy of the control programme is being questioned (Report 02.264) and a WCC and Regional Council team has been set up to investigate. In urban areas of the Wairarapa, some 600 previously identified sites were found to still contain the plant, and another 125 sites were found when an inspection programme was undertaken over the summer. The problem of garden escapes into natural areas requires urgent attention. The Council has begun work with other authorities to counter it.

- 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 2001-02 programme consisted of approximately 330,000 hectares, with only 30,500 hectares not being completed at year end (this includes areas at Bideford, Tinui, Managroa, Mt Bruce, and Te Wharau). Over the year the number of infected herds continued to fall (61 this year, compared with 76 last year).

- Sales of the Wellington Regional Native Plant Guide, which shows how to support neighbourhood ecosystems by planting "the right plant in the right place" have slowed this year but the total number sold or distributed has exceeded 12,000 (Eco 14, 15);

- The private land protection programme (for the formal protection of remnant habitats on private land) is continuing to prove very successful. Fifteen covenants were approved by the Queen Elizabeth II National Trust, with Council financial support, in 2001/02 (Eco 15). Council funds were fully expended in this area.

- The services provided by the Council for private landowners with remnant bush or wetlands were advertised in a new brochure. This has led to a steady stream of enquiries, including a number relating to the covenanting procedure described above.

8.3 ***Wetlands***

- A major achievement has been the completion of the draft Wetland Action Plan 2002-2006. This provides strategic guidance for the Council's wetland efforts on both its own land and private land. It proposes investing in some outstanding wetlands on Council land and encouraging wetland restoration on private land through advice and incentives. Consultation on the Plan has commenced (FW 48. **RFWP 8.2.5**).

- Practical wetland efforts through the year include a demonstration project on the Oporua Floodway (land retired and fenced), a hydrological study of the Te Harakeke wetland and a fish survey at Lake Pounui (the last two being KNE projects). Advice has also been provided for landowners and care groups on how to manage wetlands and their distinctive biota and processes (FW 48, **RFWP 8.2.5**). Manchurian Wild Rice in the wetland below the Waikanae sewage treatment ponds was treated for the fourth year in succession.

- Information on surviving wetlands in the Region has been collected and placed on a database.

8.4 ***River ecosystems***

- Another significant development has been the completion of the Riparian Management Strategy, which spells out where and how the Council will act to protect water quality and stream corridor biodiversity. The Strategy heralds the beginning of 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**). Three trial riparian areas were further developed over the year (Kakariki Stream, Karori Stream, Enaki Stream), and a successful field day held for farmers promoting riparian management (**Soil 6.1.7**). Other streamside plantings have also been carried out in regional parks and river corridors by the Landcare Divisison (e.g., Arbor Day).

- Opportunities for using more native species in river corridors to improve the health of these ecosystems are being explored. A paper detailing the advantages and disadvantages of willows as a river bank stabilisation tool was prepared and experiments with native species in "front line" flood management situations have begun, in co-operation with local botanists (**RFWP 8.6.4**). Two thousand native plants were planted along the Hutt River during the year.

- Of related interest is the presence within the Wairarapa of the willow sawfly. Although no serious damage to willows in the Region has yet been observed, the Council has contributed to research into this pest. The possibility of defoliation, however, has caused river managers to think more laterally about the species which are used in river corridors and to consider greater use of endemic plants for erosion control and river bank stability (Report 01.654).

- By March 2002, three contracts for the control of Old Man's Beard on the banks of various rivers had been completed and further contracts let for other areas. Completed areas were the Waipoua River (upstream of the railway bridge), the Ruamahanga River (south of Martinborough), and the lower Managtarere and Waiohine Rivers.

- The second year of a programme to develop a more ecologically derived approach to freshwater management has been completed. This year another 12 rivers in the Region were assessed for whitewhait spawning habitat (FW 40). An inventory of structures in rivers that restrict fish passage in the western part of the Region was also completed (FW 36). The Landcare and Utility Services Divisions have begun to look at opportunities for mitigating the effects of Council owned structures on fish passage (e.g., the new fish-friendly ford at Battle Hill, Kaitoke weir etc). Elsewhere in this Order Paper, there is a report on a recent regional survey of freshwater fish, and a description of how fish can help us manage rivers in a more sustainable way.

8.5 ***Important ecosystems on Council land***

- On Council land, re-vegetation and restoration work commenced or continued at a number of sites. The Council supported a number of community groups working in these areas. Projects of note are:

    - The Te Marua Bush restoration (where the main work this year has been the removal of weeds).
    - The efforts of the MIRO group at East Harbour (trapping rats and monitoring, and a native fish survey of Gollan's Stream and Butterfly Creek).
    - KEA's efforts in the Queen Elizabeth Park Kahikatea remnant (planting and maintenance).
    - Weed control, track construction, planting, and possum control at Cannons Creek Valley Bush (by the Friends of Maara Roa).
    - Possum and goat control at Korokoro Bush (Forest & Bird).

- Other major sites on Council land are the wetland restoration at Queen Elizabeth Park (planting and planning the new entrance to the park in 2001/02), the Rimutaka Summit rehabilitation works, and the construction of several ponds and fencing of a wetland at Battle Hill (see Report 02.425) (Eco 13).

- The Landcare Division continues to improve its management of huge areas of native ecosystems within the Council's parks and forests. 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 maintain forest health. This year's pest control programmes were a 1080 operation in the Akatarawa West area, goat, deer, and pig culls in the Wainuiomata/Orongorongo catchments, and large vertebrate control operations in the Pakuratahi Forest, Belmont Regional Park, and at Battle Hill (see report 02.416 for details).

- 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* (environmental care group) 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 have been active in the planning phase of the lagoon restoration at the mouth, have worked on the Chrystall's Bend wetland, and taken part in other river management processes.

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 has commenced but is not yet complete (L&H 9). A workshop of people and organisations involved in regional heritage issues was held to gather views and discuss options. It would seem that a regional plan is not the best way to deal with regional heritage issues as such a plan could contain only policies and general guidance, something that could be included in the RPS itself when it is reviewed in three years.

The Council made a submission on a proposed heritage plan change in Masterton. (L&H 18). Work advanced on the review of the Council's own parks and forests management plans (L&H 6), and the Council continued to provide and manage a range of recreational and open space areas, parks and facilities (L&H 14).

10. Natural Hazards

Method 7 of the RPS (making information available) is mainly given effect to through the activities of the Emergency Management Department and the Wairarapa emergency management officer. This year a suite of attractive fact sheets has been printed and widely circulated (Report 02.331). Members of the public and territorial authorities have continued to seek information from us on the Region's hazards.

In the Wairarapa, a joint study with Masterton District Council into the Masterton fault was completed (NH 8), as was an initial investigation into the Mokonui fault, west of Masterton.

Other activities such as drought 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 this year have included:

- The use of "optimiser" technology to operate the water supply pumping system in a way that uses energy better (by reducing demand on fossil fuel burning power stations) and lowers the need for water treatment chenicals.
- A submission on an application to extend the Haunui wind farm behind Martinborough. The Council's concerns over surface water flows and erosion were met, and the consent was granted.
- Continued efforts by Council staff to reduce power use in buildings (Energy 1).

Through the Regional Land Transport Strategy, the Council has promoted a range of ways to reduce the energy used as people move about, and encouraged greater reliance on more "sustainable" forms of transport (Energy 4, **Air Plan 6.5.2**). The year's activities included:

- Promoting public transport (examining new services, providing new infrastructure in the form of bus shelters, car parks, and interchange improvements, introducing bus lanes);
- Developing a policy framework for a pedestrian strategy and commencing work on a cycling strategy;
- Surveying public travel patterns to provide information to be used in transport modelling;
- Developing a regional car parking strategy;
- Completing a trial into teleworking;
- Investigating road pricing as a way of managing future traffic levels;
- Continuing to develop "multi-modal" corridor plans for the Wellington CBD, Hutt, and Wairarapa so that non-car proposals are taken into account.

Of considerable significance to the regional energy scene was the appearance in October 2001 of the national Energy Efficiency and Conservation Strategy. It endeavours to set a national direction towards more sustainable energy use - reduced demand, and greater reliance on renewable energy sources - and contains a number of messages for local authorities. The strategy's expectation is that councils will lead energy efficiency and conservation initiatives in their areas through information, regulation, and education, as well as reduce their own consumption by 15% over five years. The appearance of the Strategy obviates the need for the Council to promote a national energy strategy, which had been one of the methods in the RPS (Energy 3), but it puts added weight on the need to implement the energy provisions of the RPS as well. Its policy direction essentially mirrors that of the RPS.

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 2001-02:

- The Pollution Response Services continued to police waste discharges of all kinds. At year end, the total number of investigations carried out across the Region was 1702 (**Coastal Plan 15.3.12**) .
- In the Wairarapa, the Council continued its involvement in the development of a Waste Plan for the area. Carteton and South Wairarapa Councils have accepted a consultant's report to develop one regional landfill close to Masterton. This involvement is likely to continue for a number of years (Waste 13[2], **Discharges to Land Plan 6.1.8**).
- Agri-chemicals were collected for disposal. Councillors considered the options for collecting and disposing of unwanted agri-chemicals and household wastes as part of the last Long Term Financial Strategy. One outcome of the additional funding provided for this was the collection of agri-chemicals from rural properties in the Wairarapa. Over 14,000 kgs of chemicals were collected by the end of June (Waste 23,**Discharges to Land Plan 6.3.6**). The collection moves to the western region area in 2002/03.
- An investigation was undertaken in the Hutt Valley following allegations that Agent Orange had been dumped at two landfills. No evidence was found of the chemicals being present.
- Funding was provided for Enviromart, the regional waste exchange for the recycling of commercial waste (Waste 8).
- Re-mediation works were carried out on the Rimutaka Incline Summit Yards contaminated site.
- 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**).
- 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]).

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. However, this has changed somewhat in the last year, with the recognition that a more planned approach is needed to urban growth issues along the "western corridor" (Wellington/Porirua/Kapiti). We have participated fully in the Wellington City Council's Northern Growth Strategy and in the western corridor work (looking at growth issues from Wellington to Otaki).

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

14. Monitoring

An essential element of the implementation of both the RPS and the regional plans is monitoring. We need to check on the condition of the environmental resources we are managing and our regulatory documents to know whether we are continuing to be successful and relevant. A strategy for how this monitoring will be done in future was completed during the year (see Report 01.805 and RPS p.267).