

Regional Plan effectiveness reports – summary

1. Plan effectiveness report: Regional Soil Plan

The Regional Soil Plan has objectives, policies, rules and other methods that address the sustainable management of soil. These are grouped broadly into ‘general’, ‘management’, ‘tangata whenua’, ‘vegetative cover’, and ‘soil disturbance’. The key findings follow:

1.1 General

The “general” provisions of the Plan include three objectives, five policies and 10 methods to manage land use activities that may have an adverse effect on soil in the region.

The ‘general’ policies promote and encourage the principles of sustainable land management, promote land management practices that recognise instability of the land, promote the ethic of stewardship, and encourage whole of catchment and individual farm land management schemes.

Greater Wellington has made some progress in each of these broad policy areas. The related methods use various means to implement the policies, such as workshops, field days, publications, guidelines, strategies, and schemes on a catchment and farm scale. Implementation of the methods represents a large amount of work by staff from different parts of the organisation over many years. Although Greater Wellington does not monitor each policy for its effectiveness in meeting Plan objectives, it is evident that progress has been made in changing attitudes towards sustainable land management practices in both the rural and urban parts of the region.

1.2 Management

The “management” provisions of the Plan include three objectives, seven policies and 10 methods to manage land use activities to further sustainable land management in the region.

Policies and methods address research and monitoring, working with other agencies, recognising voluntary actions, and information and support services required to fully promote sustainable land management principles.

Greater Wellington has made progress with all the policies and methods that recognise and promote sustainable land management in the region. Principles of the National Sustainable Land Management Strategy have been promoted and encouraged through farm plans, catchment schemes, workshops, field days and other information sessions. Again, Greater Wellington does not monitor or survey how effective this has been in meeting the objectives of the Plan, but there are documented improvements in awareness and knowledge.

Since *Measuring up* 1999, Greater Wellington has started a soil monitoring programme and small research projects to further sustainable land management. This information will assist landowners to make better decisions on sustainable management of their land. Work on the *Muddy Waters* programme has lifted awareness of the need for appropriate erosion and sediment control for subdivisions and other earthworks in the region. The programme includes a series of publications with various information and training sessions for council staff, consultants, contractors and others involved in earthworks. The programme has made significant progress towards raising awareness and meeting the Plan objective. It will require ongoing education resources and upgrades to publications and guidelines as industry practices are constantly improving and changing.

1.3 Tangata whenua

The Plan has one objective, one policy and one method to manage sites of significance to iwi.

The policy and method encourage resource consent applicants to notify and consult directly with any affected iwi group before earthworks commence at or adjacent to sites of significance.

Greater Wellington recommends that resource consent applicants consult with local iwi prior to undertaking earthworks where there are known sites of significance. In most cases applicants make contact with local iwi to ensure sites are safeguarded during earthworks operations. Greater Wellington's erosion and sediment control guidelines for small sites also have information and procedures for when artefacts are accidentally uncovered during earthworks.

1.4 Vegetation disturbance

The Plan has three objectives, one policy, and two rules to manage vegetation clearance on erosion prone land. Policies and rules for vegetation disturbance are directed at plantation forestry and planting and maintenance of soil conservation plantings on erosion prone land.

Greater Wellington has been involved with soil conservation plantings on erosion prone for over 50 years. Landowners and land managers approach Greater Wellington for advice and support to restore eroding or potentially erodible hillslopes. Greater Wellington provides poles – poplars and willows - for planting on eroding land and gives advice. There are approximately 500 farms plans in existence. Comments received from Greater Wellington Land Management officers and newspaper reports show that farmers do embrace the concept of conservation plantings and these appear to be effective (on a local farm scale) against further soil erosion on steep slopes.

Greater Wellington does not monitor the success or otherwise of the pole plantings, or if the landowner continues with any form of aftercare. A monitoring programme is important to establish the effectiveness of pole plantings on different geology, soil

types, slope aspects, and species. A pilot study will be introduced in the coming year that monitors plantings, and if this is successful a monitoring programme will be developed.

Plantation forestry has the potential to erode and disturb soil, leading to sediment entering waterways. Problems occur when the forest is harvested close to waterways or the underlying geology is made up of soft sediments. Greater Wellington promotes compliance with the industry codes of practice for harvesting and provides advice on best practice techniques, including riparian plantings, through Rule 3 of the Plan.

The Incident Database shows that not all companies are compliant with the industry code and there have been some well documented breaches of the code with discharges to waterways. Most of the recorded breaches have all been in the western part of the region. District Plans have varying approaches to plantation forestry. Some require adherence to the code of practice, and others provide no guidance.

Greater Wellington promotes riparian management through its Riparian Strategy and the *Streams Alive* programme. There are other forms of riparian promotion as well, including *Take Care*, field days and workshops. Work promoting riparian management has been effective, however the overall task is large compared to the total number of streams that require some form of riparian cover.

Rules 3 and 4 of the Plan control vegetation clearance on erosion prone land. Rule 3 is a permitted activity that includes a clause requiring contact with Greater Wellington's soil conservator. The rule is important to have in the Plan, as district plans have no controls over erosion prone land. The rule requires improvements to be more effective and useful to apply in the field.

1.5 Soil disturbance

The Plan has one objective, two policies, and two rules to manage soil disturbance from roads and tracks and on erosion prone land. The two policies are to ensure that recognised erosion control and land rehabilitation techniques are considered when resource consent applications are made. Both rules exclude earthworks associated with subdivisions in the region.

Rule 1 has not always been effective. It requires specific lengths and heights of a track before the rule applies. Roading or tracking operators can adjust their measurements to be 'under' the rule by a few metres in some instances. This rule is important to have in the Plan as the city and district plans have no controls covering roads or tracks other than for subdivisions. The rule was designed for forestry operations in the eastern Wairarapa and there is evidence that the rule is complied with there. However, to help achieve Plan objectives effectively the rule could be changed to include more situations where roads and tracks are adjacent to waterways.

Rule 2 is easier to apply than Rule 1 and is more effective for this reason. The threshold limits in the rule of 1000 cubic metres of soil within an area of one hectare

may be too high for erosion prone land. District plans do not provide any controls for soil disturbance on erosion prone land. This rule is important because over 30 per cent of the region is deemed to contain unstable land.

It's already been mentioned that both rules exclude soil disturbance associated with subdivisions. Earthworks associated with subdivisions are an ongoing cause of adverse environmental effects on water bodies in the region. Greater Wellington has prepared guidelines for subdivision and small sites earthworks. There has been good progress working with developers and city and district councils to ensure these guidelines are adhered to. Work by Greater Wellington will need to be ongoing to ensure that uptake continues. One reason is that high staff turnover in city and district councils, and consultancies and contractors, means that knowledge gained by their staff is frequently lost.

1.6 Changes to the plan

The Plan's provisions have been met with some success from landowners and land managers alike as is evident by the uptake of sustainable practices and improvements to erodible land in the region. However, it appears that almost all of the rules would benefit from at least minor changes to make them more effective in meeting Plan objectives.

The following should be considered as part of the Plan review:

- ensure that vegetation disturbance rules in the Regional Soil Plan are consistent with policies and rules for fresh water and discharges to land, particularly for vegetation disturbance around water bodies
- begin monitoring and assessment to determine whether the existing practical soil conservation practices on erosion prone are effective
- survey land managers and land owners to assess the most effective methods for promoting and encouraging sustainable land management practices.

2. Plan effectiveness report: Regional Air Quality Management Plan

2.1 Ambient air quality and community feedback

Results of the ambient air quality monitoring show that very fine particulate matter (PM₁₀) is the contaminant of most concern in the region. National standard levels have been exceeded or approached on one to three days each winter in Wainuiomata, Masterton and Upper Hutt since records began. However, even in these vulnerable areas, levels have been "good" (less than 33 percent of the threshold level) around 70 per cent of the time.

Almost all of the polluting chemicals discharged to air come from vehicles (carbon monoxide, nitrogen dioxide and unburned hydrocarbons), but all results for carbon monoxide and nitrogen dioxide testing are less than 33 percent of the threshold level.

Community feedback, both as comments to our regional policy statement review and as complaints to our pollution hotline, indicates that while smoke from fires and pollution from vehicles is of concern, it comes second to the effects of odour on their health and wellbeing as a concern for them.

2.2 Implementation and effectiveness of regional rules

The Plan has 25 policies, 23 regional rules and 31 “other methods” to achieve two objectives. The objectives are to maintain high quality air, and avoid, remedy or mitigate adverse effects of air contamination on the environment, including people.

Six rules allow activities that would otherwise require a discharge permit because they are carried out on “industrial or trade premises” (the trigger for requiring a discharge permit under the RMA). Another 14 rules allow activities regardless of the kind of premises, because the effects were deemed to be less than minor and able to be controlled by general conditions. Some examples of contaminants allowed to be discharged as Permitted Activities (with conditions) are agricultural sprays and powders, fumigants, fumes from fish and chip shops and panel beaters, and smoke from domestic fires and land clearance.

2.2.1 Rules deemed to be effective

The application of many Permitted Activity rules is widespread with a good level of compliance – or at least, few complaints. Rule 5, for example allows, subject to conditions, discharges from a wide range of food production processes like coffee roasting and deep fat frying at fast food outlets. These rules allow people to provide for their social and economic wellbeing, there are few complaints about their effects on people and communities, and air quality monitoring has not shown any level of pollution that could adversely affect amenity values or people’s health. These rules were deemed to be helping achieve Objective 2 of the Plan and so are at least partially effective.

2.2.2 Rules deemed to be ineffective

There are two kinds of activity where the rules are not helping to achieve the objectives of the plan and so are not effective. The first is activities, both consented and unconsented, that cause offensive and objectionable odour beyond the property boundary and adversely affect amenity values. The second kind is combustion processes that cause concentrations of particulate matter to breach threshold levels in the National Environmental Standards and could be adversely affecting people’s health.

Incidents of objectionable odour cause more complaints to Greater Wellington's pollution hotline than any other kind of pollution or non-compliance. Many complaints relate to activities with resource consents where the effects of odour may have been better controlled by setting controls on the process rather than setting an "effects-based" condition about the effect at the property boundary.

Complaints about smoke have come second to odour almost every year since the pollution hotline was established. Sources tend to be residential (domestic fires) or industrial (burning metal or timber) rather than generators or boilers and most incidents attended were compliant and no action was necessary. Domestic fires are the source of most of the PM₁₀ (airborne particulates that are smaller than 10µm in diameter) in winter throughout the region wherever there are many houses and topography restricts the dispersion of the smoke. This is particularly so in the airsheds where PM₁₀ concentrations approach or exceed the threshold in the National Environmental Standard (Masterton, Upper Hutt and Wainuiomata). Any change to the permissive approach in the Plan, which does not deal with the cumulative effects of domestic fires effectively, is probably only necessary in gazetted airsheds because elsewhere in the region particulate matter is dispersed and does not cause a health hazard.

2.2.3 Some points of interest

Two activities that were highly contentious when the plan was being developed have caused few problems since it was made operative. These are the use of agrichemicals and the escape of diisocyanates from spray painting at panel beating shops. Greater Wellington's biosecurity department provide advice around the region about how to comply with the two agrichemical rules and minimise adverse effects from the use of agrichemicals. This advice, together with promoting compliance with agrichemical training requirements, has helped with the effectiveness of those rules.

For spray painting, Greater Wellington undertook extensive testing and modelling to determine the actual effects of harmful paint constituents on people living near panel beater shops. The conclusions were that provided all major spray painting is carried out in purpose built spray booths and ventilated through appropriately located stacks, emissions of the application rates specified in the rules are unlikely to cause adverse health effects on neighbours.

At least six rules in the Plan control activities that are also controlled by New Zealand Standards or under the Building Code. For example, fume cupboards are required by the Building Act 1991 to be tested for the Building Warrant of Fitness, for which the owner of the building is responsible. The nature and frequency of testing is specified in a compliance schedule which is unique to each building and prescribed by the city or district council. Compliance with the rule may contribute to achieving the objectives, but may not be the most efficient means of doing so.

2.3 Implementation and effectiveness of non-regulatory methods

When the Plan was being prepared, Greater Wellington had little information about the state of air quality in the region. Since then, considerable work has been completed in setting up and maintaining an ambient air quality monitoring framework and there is now good environmental data for air quality and the pressures on it.

Discharges to air from domestic and mobile sources are allowed as of right under the RMA. Instead of introducing regulation, Greater Wellington has provided information and advice about how to reduce the effects of these activities in annual environmental report cards and in *Be the Difference* campaigns. The effectiveness of this approach to managing domestic fires has not been assessed because our information campaigns have been limited and any decrease in PM₁₀ levels is more likely to be associated with weather conditions than possible improved burning practices. In addition, there is now some regulation of domestic fires because central government introduced a design and emission standard for wood burners which has been in effect since 1 September 2005.

2.4 Changes to the Plan

The results of this evaluation have shown that the implementation of the regional rules and the non-regulatory methods has only been partially effective in achieving the objectives of the Plan. High quality air has not been degraded, but activities are having adverse effects on ambient air quality and amenity values. Smoke emissions are responsible for potentially harmful effects on people's health in some airsheds in winter, and a small number of industries are responsible for offensive and objectionable odour that affects the amenity values of significant numbers of people. The effects of discharges to air on resources or values of significance to tangata whenua, the quality of ecosystems, water and soil, and the global atmosphere are not assessed by Greater Wellington's monitoring programme.

Almost all rules would benefit from at least minor changes and some would benefit from a complete re-write. Some areas where it may be appropriate to take action are:

- Activities that are controlled in more than one plan, for example, domestic composting, or that are controlled by other means, such as by New Zealand standards may not require additional management in a regional plan for air quality.
- Activities known to cause offensive odour may be more effectively managed by controlling the process rather than the effects at the property boundary. The offensiveness of some odours depends on the quantities of material being processed, and on the site housekeeping by the industry. In some cases it may be preferable to restrict the location of the activity rather than trying to deal with the effects on the community once the business has become established.
- Activities known to cause problems with smoke may be more effectively managed by adopting clearer restrictions on fuel types and by targeting information about appropriate burning techniques at specific airsheds.

3. Plan effectiveness report: Regional Coastal Plan

3.1 General findings

This Plan is the largest of the regional plans. It has 130 policies, 86 rules and 28 methods to achieve 68 objectives. The provisions are structured into a chapter on 'general' objectives and policies, and nine chapters covering the following topics:

- reclamation and draining of the foreshore and seabed
- structures
- destruction, damage or disturbance of foreshore or seabed
- deposition of substances on foreshore or seabed
- exotic or introduced plants
- discharges to land and water
- discharges to air
- taking, use, damming or diversion of water
- surface water and foreshore activities.

Generally, the policies in the Plan do give effect to the objectives, but it has been difficult to detect whether or not changes in the environment are attributable to any particular policy.

Responses to the question "have the issues been addressed by the plan provisions?", asked as part of the review of the Regional Policy Statement, show that the regional community recognise the improvements in coastal water quality that have occurred over time, particularly in relation to sewage discharges. However, the focus has now shifted to the need to clean up stormwater discharges. Concerns about coastal development were also highlighted, but this concern generally related to subdivision and development within the coastal environment. The Regional Coastal Plan only deals with management of the coastal marine area (the area from the line of mean high water springs out to 12 nautical miles).

Most of the rules in the Plan invoke few consents. The exceptions to this are the rules for structures and discharges to water. These activities are placing a steady pressure on parts of the coastal marine area. Monitoring of coastal water quality shows that water quality is good in most places, except for localised hot spots near discharges of sewage, stormwater, and inflow from streams and rivers. This localised lower quality water, and results from shellfish flesh and sediment monitoring suggest that the discharges to water provisions are not stringent enough. In particular, the stormwater provisions need to be improved, and contaminant flow via rivers needs to be addressed by better co-ordination with other regional plans.

Permitted activities are monitored through state of the environment monitoring and responses to complaints. In addition to this, limited monitoring of seven permitted activity rules has been carried out as part of this evaluation. It established that, of the seven monitored, six rules are effective and one is not. The permitted activity rules for

discharges of stormwater are not effective because they do not provide enough clarity and are difficult to enforce. These provisions need to be improved.

The effectiveness of methods, other than rules, in the Plan is largely determined by the level to which they have been implemented and whether or not they are targeted at relevant policies. Most of the methods in the plan for discharges to land and water have been implemented. There has been mixed implementation of the methods for exotic plants, structures and surface water and foreshore activities. Most methods in other chapters of the plan have not been implemented.

3.2 Changes to the Plan

The results of the evaluation have shown that the implementation of the regional rules and the non-regulatory methods has only been partially effective in achieving the objectives of the Plan.

Many of the policies and rules would benefit from at least minor changes and some would benefit from a complete re-write. The connections between the objectives, policies, rules and other methods also need to be looked at. Some areas where it may be appropriate to take action are:

1. The structures and the discharges to land and water chapters require the greatest focus in the review. The greatest number of consents granted are for these activities, and they have potentially significant adverse environmental effects: for structures the effects on coastal processes, historic heritage and natural character; for discharges, cumulative ecological, recreation and amenity effects.
2. Two cross boundary matters require attention:
 - a) Integration of this plan with the provisions of the other regional plans in order to effectively deal with the adverse effects of discharges of sediment and contaminants to the coast.
 - b) Integration with district plans, management plans, bylaws and other mechanisms to address foreshore and surface water activities that span the MHWS jurisdictional boundary, notably driving vehicles on beaches.
3. Construction of provisions can be improved. The links between the provisions could be clearer, and the provisions easier to interpret and apply.
4. Special attention to conditions on permitted activities in general is needed, and they need to be capable of being monitored.
5. The permitted rule for the discharge of stormwater needs to be more stringent, with clear thresholds and conditions for contaminants and acceptable loading rates.

6. The regulatory/non-regulatory balance of methods and rules to implement the policies should be looked at to see if it is still appropriate.

4. Plan effectiveness report: Regional Freshwater Plan

Key findings of the report on the effectiveness of the Regional Freshwater Plan are summarised below.

4.1 Rules

4.1.1 Stormwater

The permitted activity rule for stormwater discharges is not effective. Investigation over the last four years of stormwater, urban streams and harbours has identified that conditions in the rule are breached at times. Enforcement of breaches of the rule for any individual stormwater discharge is difficult.

A comprehensive approach that brings together infrastructure management and the regulation of stormwater discharges is needed. Greater Wellington is currently working with territorial authorities on a stormwater action plan for the region. Recent investigations and the work underway with territorial authorities will help us develop more effective rules and other methods when the next version of the Plan is notified.

4.1.2 Taking water

The permitted activity rule in the Plan for water takes is probably not effective. It allows 20 cubic metres to be taken per person each day. Each permitted water take is linked to a legal title, which means the amount of water taken can significantly increase as a result of subdivision. Also, upstream users can get first use of water that is not available to downstream users – situations have been drawn to our attention when water is not available for domestic or stock use because it has been taken by upstream users.

Measuring up 2005 has identified that demand for freshwater is increasing in the region and pressure is growing on many rivers, streams and groundwater aquifers. The present permitted activity was intended to include taking water for reasonable domestic use and for stock. A legal opinion that we have recently received considers that taking water for these purposes is already permitted by the RMA. This view has been reinforced by a recent amendment to the RMA.

The permitted activity water take rule has implications for small streams. However, adverse effects associated with the rule are not very widespread across the region. A reduction in the amount of water that the permitted activity allows would be appropriate, but a suitable quantity to include in a permitted activity rule has not yet been established. Without appropriate science behind setting a new limit in the permitted activity rule, Greater Wellington runs the risk of being challenged at the Environment Court.

4.2 Policies and other methods

4.2.1 The relationship with tangata whenua

Provisions in the Plan that address the relationship of tangata whenua with fresh water, have generally not been very effective. For example, we have not worked with iwi to identify sites in water bodies of special value to them. *Measuring up 2005* identifies that Greater Wellington is not taking the principles of the Treaty into account in a systematic way in resource management decision-making, and this applies to fresh water. The opportunity is there to increase implementation of the relevant methods.

4.2.2 Land use effects on water quality

Measuring up 2005 identifies that stormwater discharges in urban areas and run-off from rural land (non-point source discharges), including stock access to streams are the contaminants causing most pollution in water bodies across the region. In some water bodies, the result is unacceptable water quality. Policies and the methods that address these types of discharges need to be more effective. Neither of these discharges are controlled at the present time. Both are probably best managed at the sources of the discharges, which means placing greater emphasis on managing land uses for water quality purposes.

Greater Wellington's approach to managing and controlling land use for water quality reasons is dictated by the provisions in the Regional Policy Statement. These provisions are intended to integrate land and water management. The present approach is that territorial authorities, not Greater Wellington, control land use. Any alternative approach needs to be considered, in the first instance, during the review of the Regional Policy Statement (RPS), which is now underway.

Shortcomings in the way wetlands are managed have been identified. For example, vegetation clearance and earthworks in and around wetlands can be a problem. Our approach relies on territorial authorities controlling land use while we control discharges to water and the diversion of water. Once again, the integrated approach to wetland management is dictated by provisions in the RPS. Any alternative approach first needs to be considered during the review of the RPS.

4.2.3 Groundwater safe yield and water allocation for rivers

The Plan sets extraction limits, called safe yields, for all aquifers in the region. These safe yields identify the amount of water that can be taken from an aquifer while still preserving flow and water quality. Groundwater levels are falling in aquifers of the Parkvale, Martinborough Terraces and Kahutara groundwater zones in the Wairarapa. Extraction limits in these aquifers are approaching the safe yields assigned to them.

We now believe the safe yields estimated for these aquifers are too high. Safe yields in these groundwater zones are being reviewed using an improved methodology and

better information than before. Until the results are available, it may be appropriate to amend the Plan to limit any additional takes from these aquifers.

The Plan also identifies minimum flows and allocation limits for 14 rivers in the region. Other rivers have been identified where the same approach will be taken once investigations are complete. Of these others, the following rivers in the Wairarapa are already fully allocated: the Makoura Stream; Otukura Stream; Papawai Stream; Parkvale Stream; Donald Creek and Dock Creek; and the Tauweru River. The Plan could be amended to limit additional takes from these rivers until investigations of minimum flows and allocation limits are completed.

4.2.4 Water transfers

Prior to notifying the Plan in 1997, Greater Wellington investigated the transferring and trading of water permits as a way of making water use in the region more efficient. The investigation responded to suggestions that permitting the transfer of water permits has the potential to promote trading of water among users, thereby increasing the efficiency of use. The investigation looked at the costs and benefits of a transferable permit system and did not recommend in its favour at the time. (Therefore, the Plan requires resource consents to transfer water permits.)

Measuring up 2005 has identified that increasing demand for limited water resources means that it is now time for Greater Wellington to look again at transfer and trading of water permits. This issue is being looked at closely by the National Water Programme of Action and we will be guided by the approach that central government decides. An appropriate place to provide direction, in the first instance, will be the Regional Policy Statement, which is currently being reviewed.

4.2.5 Piping and reclamation of small streams

Guidance in the Plan on the reclamation and piping of small streams, particularly in urban or peri-urban areas, is not very effective. The reclamation or piping of streams, for example during subdivision, is an issue of increasing concern. Intact small streams and wetlands can provide natural flood control, groundwater recharge, trap sediments and pollution, recycle nutrients, provide biological diversity and sustain downstream rivers and estuaries.

Resource consents are required to pipe or reclaim small streams, but these are often processed separately from the land use or subdivision consents. At present, the Plan contains no useful criteria or direction to assist with the assessment of small stream values when development is proposed. The Auckland Regional Council have developed criteria that categorise streams according to their biological values. The approach in their proposed regional plan of having two categories of stream, according to their values and degree of modification, has the potential to be adapted to conditions in Greater Wellington.

4.3 Other changes to the Plan

Following the effectiveness report, some changes were made to the Regional Freshwater Plan to limit additional water takes from the Parkvale, Martinborough Terraces and Kahutara groundwater zones in the Wairarapa. Changes were also made to the Plan to limit additional takes from the Makoura Stream; Otukura Stream; Papawai Stream; Parkvale Stream; Donald Creek and Dock Creek; and Tauweru River.

5. Plan effectiveness report: Regional Plan for Discharges to Land

The Plan has objectives, policies, rules and other methods for five groups of contaminants – solid contaminants, liquid contaminants, agricultural contaminants, hazardous substances and site contamination. The key findings are as follows.

5.1 Solid contaminants (landfills)

The Plan has two objectives, 11 policies, two rules and 12 other methods to manage the discharges of solid contaminants to land.

Before the RMA was enacted, landfills were not required to have discharge permits. The transitional provisions of the RMA set out a timeframe for consenting all waste management facilities, and the Plan set out the policies and rules that would govern landfill consent requirements. Today all landfills have resource consents and are managed in accordance with national guidelines.

Other than the requirement for resource consents, improvements made in solid waste management have been largely in response to direction from the Local Government Act 1974, the New Zealand Waste Management Strategy (2002), and new programmes from central government like the Packaging Accord. Nevertheless, the Plan's policies and methods are consistent with these central government initiatives, which aim to reduce waste volumes sent to landfills and increase waste recycling and waste recovery programmes.

5.2 Sewage and other liquid contaminants

The Plan has two objectives, eight policies, six rules and eight other methods to manage discharges of liquid contaminants, including sewage, to land.

The Plan promoted more co-ordinated management of on-site sewage discharges between Greater Wellington and the territorial authorities. Working towards this, Greater Wellington staff have run seminars and workshops for territorial authority staff and on-site wastewater engineers, made submissions on district plans and subdivision consent applications, and produced brochures for homeowners and guidelines for system designers. These measures have improved the quality of systems installed with new developments, though the effects of these and older systems are still relatively

unknown because our state of the environment monitoring network was not designed to assess the effects of on-site sewage discharges.

On-site sewage discharges are suspected to be the cause of bacteria and nutrient contamination of groundwater at Te Horo, coastal water at Pauatahanui, and surface water at Makara and Riversdale. We estimate that there could be around 10,000 on-site sewage systems in the region, and more investigation is needed to assess whether the rules are effective in managing the effects of discharges from them. A programme to monitor the performance of five on-site sewage systems at Riversdale was started in 2004 and some targeted monitoring is planned for 2006-2007.

The Ministry for the Environment is investigating the appropriateness of developing National Environmental Standards (NES) for managing on-site sewage systems. Any change to the rules in the Plan will need to take into account the results of the targeted monitoring, and any NES that are produced.

5.3 Agricultural contaminants

The Plan has one objective, five policies, four rules and ten other methods to manage discharges of agricultural contaminants to land.

More than half the resource consents issued under the Plan are for discharges of dairy shed effluent, granted under Rule 13 of the Plan as a Controlled Activity. The Plan encouraged the shift of these discharges from water to land by requiring them to be processed non-notified. Together with other incentives – lower monitoring costs and longer consent periods – the practice of discharging dairy shed effluent to rivers and streams has ended and the effects of dairy shed effluent on the environment has reduced.

Most dairy farms are in the Wairarapa Valley and on the Kapiti Coast. These areas are identified in the Plan as having groundwater that is vulnerable to contamination, but Rule 13 has no specific guidance about appropriate nitrogen loading rates. We will need to determine whether a replacement rule should include a standard for nitrogen loading in these areas, and work with Fonterra to investigate how best to accommodate the nutrient budgeting target from the Dairying and Clean Streams Accord.

We have little information about the effects of discharges of effluent from the eight piggeries in the region, all of which discharge to land. These discharges are capable of causing significant effects on groundwater and surface water and may be more effectively controlled by a separate rule with more specific guidance.

Rule 12 allows fertiliser applications as a permitted activity along with a requirement for Greater Wellington to investigate where fertiliser use may be contributing to nitrogen contamination of groundwater. This investigation will need to be done before options to change the rules governing agricultural effluent and fertiliser application are canvassed.

5.4 Hazardous substances

The Plan has two objectives, 17 policies, six rules and 11 other methods for avoiding, remedying or mitigating the effects of the use land for hazardous substances, and for avoiding, remedying or mitigating hazardous discharges.

The RMA requires regional councils to allocate land use responsibilities for controlling the effects of hazardous substances between themselves and the territorial authorities in regional policy statements. The Regional Policy Statement for the Wellington Region allocated responsibilities for developing objectives and policies to ourselves, with the responsibility for writing rules given to city and district councils. Accordingly, objectives, policies and methods were adopted in the Regional Plan for Discharges to Land, and these were intended to guide city and district councils on the rules they would adopt in their district plans, for example, where to locate petrol stations. The extent to which these policies have been taken into account in their resource consent decision-making cannot be determined.

Greater Wellington is not responsible for hazardous waste management, only for controlling discharges to the environment. Nevertheless, implementation work by Greater Wellington, such as funding the HazMobile and running *Take Charge*, is helping to reduce the potential effects from the inappropriate disposal of hazardous wastes.

5.5 Site contamination management

The Plan has three objectives, eight policies, two rules and six other methods to guide the management of contaminated land.

City and district councils have primary responsibility for managing contaminated land through their land use planning function. This allows them to control land uses to prevent or mitigate any adverse effects of the development, subdivision, or use of contaminated land. Greater Wellington controls all discharges to the environment, including discharges from contaminated sites. A change to the RMA in 2005 now allows regional councils to investigate land so that they can identify and monitor contaminated land.

Rules 21 and 22 of the Plan control discharges from contaminated land, but have proved difficult to apply in the field. It would be more straightforward if these regional rules were less prescriptive and applied to any discharges, with rules adopted in district plans, as they are in the Wellington City Council District Plan, to control land uses on contaminated land. Changes to Rules 21 and 22 may be able to be drafted once the upcoming National Environmental Standard for contaminated land has been finalised.

5.6 Changes to the Plan

In general, we have found that the Plan provisions are working well but almost all rules would benefit from at least minor changes. These changes would be dependent on:

- additional work (monitoring and assessment) to determine whether the rules governing discharges from on-site sewage systems are effective, and whether we need to develop standards for nitrogen application rates in the rule for agricultural effluent discharges to protect areas where groundwater is vulnerable
- the content of upcoming National Environmental Standards for on-site sewage management and contaminated land
- land use control responsibilities for hazardous substances in the Regional Policy Statement; and
- integrating the review with that of the Regional Freshwater Plan to reduce potential for overlaps.