greater WELLINGTON
REGIONAL COUNCIL

Regional Freshwater Plan Evaluation

A review of the efficiency and effectiveness of provisions in the Regional Freshwater Plan

Resource Policy Department

FOR FURTHER INFORMATION

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Evaluation of provisions in the Regional Freshwater Plan

1 Introduction

Section 35 of the Resource Management Act 1991 (the RMA) requires every local authority to monitor the effectiveness of the policies, rules and other methods in its policy statement and plans, and to prepare a report on the results of this monitoring every five years. Councils must then take appropriate action when their monitoring indicates that is necessary.

Monitoring the effectiveness and efficiency of policies, rules and other methods is an on-going process from plan implementation to plan review. Such monitoring helps determine when different actions are required, and whether the level of policy intervention needs to be changed so that the objective can be achieved.

This report describes the results of monitoring the effectiveness of the policies and methods, including rules, in the Regional Freshwater Plan (the Plan).

2 Methodology

To monitor the provisions in plans, we have used state of the environment monitoring information (*Measuring up 2005* has just been completed), a regional plan feedback forum that identifies problems with plan provisions that staff have identified, and a database that monitors the implementation of plan methods.

At the present time, we have no monitoring programme for permitted activities and our database for consents does not track the regional plan provisions that apply to applications. For these reasons, our ability to review the efficiency and effectiveness of plan provisions is limited.

State of the Environment monitoring of freshwater

Greater Wellington's state of the environment monitoring programme checks the state of the natural resources of the region. The programme covers air, water and soil. For fresh water, in water bodies across the region, we monitor river flows, lake levels, groundwater levels, surface water quality, ground water quality and recreational water quality. The results are collated and reported annually and at 6 yearly intervals.

Regional rule feedback

Greater Wellington maintains a regional rule feedback forum on its intranet. This allows officers to record problems with implementing the rules, for example:

- a rule is too complicated to apply in the field
- a rule overlaps with another rule, or has a confusing integration with other rules
- a rule is not practical or enforceable
- a rule is irrelevant and never used.

Results from this forum are included in Table 2.

Implementation of methods

Greater Wellington maintains a database to record the actions that officers and others have taken to implement each method in plans since they were made operative. The database is updated annually. Results from this database are included in Table 3.

3 Summary of findings

Tables 1, 2 and 3 of this report, respectively, provide information on the effectiveness of policies and methods in meeting objectives, an assessment of methods, and an assessment of the implementation of methods in the Plan. These findings are summarised below for issues, objective, policies, rules and other methods. The summary targets where plan provisions could be more effective.

The effectiveness of provisions in the Regional Plan for Discharges to Land were evaluated separately at the same time as this evaluation. It is considered that better integration of both the Regional Freshwater Plan and the Regional Plan for Discharges to Land would be achieved if both plans are reviewed at the same time.

3.1 Issues

Issues in the Plan generally draw on the issues identified in the Regional Policy Statement (RPS). They are identified in further detail in Plan than in the RPS, and specific catchment or river reach components of an issue are included. Five years after the RFP was made operative, the issues generally remain the same but some new issues are identified below.

Since the RFP became operative, the effects of taking groundwater on river flow have become more important. This is an issue that is not addressed directly in the RFP. We now know that significant interaction between groundwater and rivers occurs in some of the priority streams we have now identified that need minimum flows and allocation limits established.

Another issue that is emerging strongly is the need for greater management of streams in urban and peri-urban areas. A distinction between management of urban streams and management in other areas is not made in the RFP. *Measuring Up 2005* identifies that making this distinction is now appropriate because urban streams are generally adversely affected by one discharge type, stormwater, and there is now greater demand for our urban streams to be improved to a healthy state. Also, the loss of stream habitat through piping of urban and peri-urban streams has become more important and needs to be addressed.

Other issues identified in the tables as needing to be addressed more effectively are already raised in the RFP.

3.2 Objectives

The RFP objectives are set out in Table 1. They are generally consistent with those in the RPS. Some additional objectives have been included in the RFP, such as for amenity values and access, and use and development. Some objectives in the RFP have a different emphasis than those in the RPS.

Some specific objectives on the relationship of tangata whenua with fresh water are included in the RFP. These are not in the RPS. *Measuring up 2005* and our analysis of the effectiveness of policies and methods in the RFP indicate objectives relating to iwi are not always being met.

3.3 Policies

There are 88 policies in the RFP. Table 1 sets out these policies and, together with the methods (including rules), assesses their effectiveness in achieving the objectives.

The RFP contains a number of general policies about the values that people place on use and development of fresh water and flood mitigation that sometimes duplicate approaches taken in the RPS. As part of the RPS preparation process, we need to consider where these policies are best placed. Some other policies also duplicate requirements of the RMA and it is not necessary to restate them

Some policies that relate to the relationship of tangata whenua with fresh water have not been effective. In particular, we have not identified, with iwi, sites of special value to tangata whenua. Hence their cultural values and effects on the sites cannot be measured. The Council has also not supported tangata whenua participation in monitoring the effects of activities in fresh water.

Measuring up 2005 has identified that our management of water bodies with high natural values has been effective. It found that water bodies with high values that we have been monitoring are protected, with the possible exception of Lake Wairarapa. The water quality and hydrology of Lake Wairarapa remains much as it was when the RFP was prepared but the wetland margins around Lake Wairarapa are probably still adjusting to changes to water levels made prior to the RFP. The absence of any monitoring of the wetland margins prevents us from quantifying any changes.

The RFP contains water quality guidelines that apply to all water bodies in the region. *Measuring up 2005* has found that the guidelines are sometimes not met in water bodies. The main reasons for not meeting water quality guidelines are stormwater discharges, which are permitted, and non-point source discharges, which are not controlled through the RFP.

Both these discharges are probably best controlled at their sources, which means greater emphasis on managing and controlling land uses. Greater Wellington's approach to the management and control of land uses is guided by the RPS. The issue of who controls land use effects on water quality is one that needs to be revisited during the review of the RPS

which is presently underway. With regard to stormwater discharges, Greater Wellington has begun working with territorial authorities on how these might be improved in the future. A steering group comprising all territorial authorities and Greater Wellington is currently working on a Stormwater Action Plan for the Region.

The RFP also identifies water bodies that need enhancement. *Measuring up 2005* has provided an opportunity to review these. We now have better information on water quality of streams than before. The improved information will enable us to reprioritise the rivers that most need enhancement. This can be done initially through the RPS review with greater detail provided in the RFP when it is next reviewed.

Policies that establish minimum flows and allocation limits for identified rivers and streams have been effective. They have been adhered to when resource consent applications to take water are considered. Minimum flows and allocation limits have been identified in the RFP for 14 rivers. The flows in some of these rivers need to be reviewed. *Measuring Up 2005* identifies other rivers that are fully allocated and need to have minimum flows and allocations limits established for them. These rivers are a priority.

We also have policies that establish 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 quality. The policies have been adhered to when resource consent applications to take water are considered.

Groundwater investigations have identified there are aquifers in the Wairarapa where levels are falling. Safe yields in these aquifers (Parkvale, Martinborough Terraces and Kahutara groundwater zones) may be too high. These aquifers are at, or close to, their safe yields. The results of these investigations have prompted us to review the way we estimate safe yields. It appears that management of the three aquifers is not sustainable and it's possible that some clawback of water may be needed once their safe yields are reviewed. In the meantime, to ensure the situation does not get work it is appropriate to change the RFP now to cap takes in these aquifers at current levels.

Policies on river and lake beds provide general guidance on when resource consent applications to carry out activities in river and lake beds will be allowed. In addition, there is a specific policy that identifies when a river bed can be reclaimed. However, these policies do not provide guidance on how piping a stream should be regarded. Piping streams when there may be alternatives, particularly in urban areas, is an emerging issue that we need to provide greater certainty on because of the cumulative adverse effects that are occurring.

At present, piping or reclaiming a stream requires a resource consent but policies do not distinguish between the different values that they may have. For example, piping a stream with high biodiversity values requires a resource consent, just as piping a stream with no discernable values does. An approach that combines better policy guidance with rules that treat streams differently according to their values is desirable. The first step in taking this approach is to identify differences in stream values.

3.4 Rules

There are 50 rules in the RFP. Twenty-eight are permitted activities, 21 activities require resource consents, and one is a prohibited activity. Table 2 provides comments on of the rules. With the exception of Rule 2, for stormwater, we have no monitoring data to establish the effectiveness of permitted activity rules. Therefore Table 2 relies largely on feedback that has been received on the rules.

Investigations of stormwater and receiving waters in the Porirua Harbour and some urban streams indicate that minimum standards of the Act (conditions in the permitted activity rule) are being breached regularly. The rule is also extremely difficult to enforce when breaches occur. Hence, the permitted activity rule for stormwater is not effective.

Finding workable alternatives to the stormwater rule that promote improvements to stormwater discharges needs to involve territorial authorities who manage stormwater infrastucture. Greater Wellington has begun working with territorial authorities on a Stormwater Action Plan for the Wellington Region. The preparation of the Stormwater Action Plan will assist the development of alternative stormwater rules that are effective.

The permitted activity rule in the RFP for water takes is also probably not effective. It allows 20 cubic metres to be taken by a person per 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. This allows upstream users to get first use of water that may not be 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.

Another rule that is ineffective is Rule 35 permitting entry to river and lake beds. Rule 35 does not place any limits on the frequency of entry or passage across a river or lake bed. For example, crossing a river in a vehicle may not be a problem but doing it repeatedly in the same location may have an adverse effect on the river bed. While such repeated entry or passage across a river bed can require a resource consent because of disturbance of the river

bed, a clearer rule would be desirable. Adverse effects are not occurring very frequently as a result of the rule not being effective.

Table 2 identifies other problems that have arisen with the rules. Rewording and adding conditions will improve some of the rules, particularly for enforcement purposes.

Some suggestions have been made for specific new rules and these include:

- Rules for ponds and wetlands
- Daylighting streams
- Stock crossing
- Discharge of herbicides to water
- Control of activities close to river beds that may result in discharges of contaminants during rainfall.

3.5 Other Methods

The RFP has 48 other methods. Implementation of these methods is assessed in Table 3. The following discussion identifies key items that arise from this assessment

The Method in the RFP that Greater Wellington will work with iwi to identify, record and protect sites of special value to iwi has not been implemented. The absence of information about sites of special value to iwi limits our ability to provide protection for them

The RFP contains several methods that relate to us working with territorial authorities and making submissions on district plans in relation to land use effects on water quality. This is the steer given to us by the RPS. The current approach of relying on territorial authorities to control land use effects on water quality through their district plans has not always been effective. The territorial authority response has been variable. In practice, territorial authority knowledge of fresh water has limited their ability to control land use effects (eg. earthworks and vegetation clearance controls) on water quality.

Similarly, our approach to managing wetlands relies on territorial authorities controlling land use while we control discharging to water and diverting water. However, district plans don't always provide suitable controls for the protection of wetlands and there is sometimes uncertainty about whether a wetland is in within (regional council control) or outside (territorial authority control) a river or lake bed.

Application of methods relating to water conservation and more efficient use of water has highlighted the opportunity to avoid water wastage through better estimates of crop requirements based on based on soil and climate. Irrigation studies in the Wairarapa suggest some water is wasted. Movement of irrigation water through the soil profile was monitored in different substrates. At the vast majority of sites, more water was being applied than could be held in the soil, which meant that a proportion of irrigated water recharged the shallow groundwater. To stop such waste, we need to better understand water requirements under differing crop, soil and climatic conditions.

Methods relating to the transfer and trading of water permits have not been implemented. The transfer and trading of water permits was investigated before the RFP was notified. It has not been promoted as a result but some further investigations were proposed to examine the feasibility of transfer and trading systems.

Water allocation in the Wairarapa has doubled in the last ten years and a greater number of freshwater resources are now fully allocated than before. We must look at new management approaches to if we are to continue to meet people's needs for fresh water. The only way we can increase the amount of available water is by increasing the efficiency of people's use. It is now time for us to look again at transfer and trading of water permits.

We also need a clearer picture of water demand in the Wairarapa if we are to make progress on water trading and transfer. We need to know the rate at which demand will grow if water transfer/trading is going to be promoted.

Table 1: Effectiveness of policies and methods in meeting objectives in the Regional Freshwater Plan

Objectives	Policies	Effectiveness of Policies and Methods
Objective 4.1.1: The relationship of tangata whenua and their culture and traditions with fresh water, and with ancestral sites, waahi tapu and other taonga within the beds of rivers and lakes, is recognised and provided for. **Objective 4.1.2:** The mauri of water bodies and river and lake beds is protected. **Objective 4.1.3:** The principles of the Treaty of Waitangi are taken into account in the management of the Region's water bodies and river and lake beds.	**Policy 4.2.1:** To manage sites of special value to the tangata whenua in water bodies and river and lake beds so that the cultural values of those sites are not adversely affected.	Policy 4.2.1 is appropriate for achieving the objectives but is not effective because method 8.3.1 has not been implemented. Sites of special value to the tangata whenua have not been identified by the Council. Hence their cultural values and effects on them cannot be measured.

	Policy 4.2.2: To encourage applicants to consult directly with affected tangata whenua when making an application for a resource consent which is for an activity within, upstream, or immediately downstream of any identified site of special value to the tangata whenua. As part of this consultation the applicant should determine: 1. Whether granting the resource consent could have any adverse effects on the special values of the site. 2. How any potential adverse effects that might result from the activity could be avoided or remedied.	Implementation of method 8.3.2 means that policy 4.2.2 has generally been effective in achieving the objectives.

	Policy 4.2.3: To not allow the use or development of water bodies and river and lake beds that would restrict the access of tangata whenua to any identified site of special value in a publicly owned river or lake bed, unless that access can specifically be provided for, or the loss can be adequately remedied or mitigated.	Policy 4.2.3 is appropriate for achieving the objectives but is not effective because method 8.3.1 has not been implemented. Sites of special value to the tangata whenua have not been identified by the Council. Hence their cultural values and effects on them cannot be measured
	Policy 4.2.4: To avoid, remedy, or mitigate the adverse effects of the use and development of water bodies and river and lake beds on the habitats of species traditionally harvested by the tangata whenua.	This policy is appropriate but its effectiveness has not been monitored.
	Policy 4.2.5: To have regard to the values and customary knowledge of the tangata whenua, where these have been identified by the tangata whenua, when assessing resource consent applications for the use and development of water bodies and river and lake beds.	This policy is appropriate but its effectiveness has not been monitored.

	Policy 4.2.6: To not restrict tangata whenua initiatives for the use or development of freshwater resources subject to the provisions of this Plan and the Act.	This policy is not really necessary because all the actions carried out are subject to the provisions of the Plan and the Act.
	Policy 4.2.7: To encourage and support, where appropriate, tangata whenua participation in monitoring the effects of activities that may potentially adversely affect sites or values of importance to the tangata whenua.	This policy is not effective because it has not been implemented.
	Policy 4.2.8: To have regard to matters raised in an iwi or hapu management plan authorised by the tangata whenua of the Region when assessing resource consent	This policy has been superceded by changes to the Resource Management Act 1991, which now require iwi or hapu management plans to be taken account of when assessing resource consents. One iwi management plan has been prepared by Ngati Raukawa for the Otaki and Waitohu catchments. The policy is not really necessary because it is a requirement of the RMA.

Objective 4.1.3: The natural character of wetlands, and lakes and rivers and their margins, is preserved and protected from inappropriate subdivision, use and development. **Objective 4.1.4:** The life-supporting capacity of water and aquatic ecosystems is safeguarded from the adverse effects of any subdivision, use and development. **Objective 4.1.5:** Significant indigenous aquatic vegetation and significant habitats of fresh water fauna in water bodies are protected.	**Policy 4.2.9:** To have regard to the following characteristics of wetlands, and lakes and rivers and their margins, when considering the protection of their natural character from the adverse effects of subdivision, use, and development: • ecosystems, habitats and species; and • water quality; and • the natural flow characteristics and hydraulic processes (such as sediment transport) of rivers or the pattern and range of water level fluctuations that occur naturally in wetlands or lakes; and • the topography and physical composition of river or lake beds and the course of the river.	This policy is appropriate and has been effective to the degree described in the Freshwater Chapter of *Measuring up 2005*.

	Policy 4.2.10: To avoid adverse effects on wetlands, and lakes and rivers and their margins, identified in Appendix 2 (Parts A and B), when considering the protection of their natural character from the adverse effects of subdivision, use, and development.	This policy is appropriate and has been effective to the degree described in the Freshwater Chapter of *Measuring up 2005*. It found that water bodies listed in Appendix 2 that we have been monitoring are being protected with the possible exception of Lake Wairarapa. The water quality and hydrology of Lake Wairarapa remains much as it was when the RPS was prepared but the wetland margins around Lake Wairarapa are probably still adjusting to changes made prior to the RPS. The absence of any monitoring of the wetland margins prevents us from quantifying any changes.
Objective 3:	**Policy 4.2.11:** To avoid, remedy or mitigate the adverse effects of the use and development of water bodies and river and lake beds on aquatic habitats and freshwater ecosystems by having regard to: • the maintenance of biological and physical processes; and • the maintenance of habitat for feeding, breeding and sheltering aquatic life; and • the maintenance of the diversity of aquatic life; and • the maintenance of the ability of fish to disperse and migrate; and	This policy is appropriate and has been effective to the degree described in the Freshwater and Ecosystems Chapters of *Measuring up 2005*. There has been some loss of aquatic habitat as a result of subdivision and development, including irreversible loss due to the piping and reclamation of water bodies. However, there have also been some gains, particularly as a result of work carried out by community groups. An example is the care group programme that Greater Welington supports. There are 26 Care Groups at the present time that are involved in projects that are restoring freshwater ecosystems, such as wetlands or through riparian plantings. Information is now available to applicants and staff processing resource consents on fish passage and the critical life stages of fish species including feeding, spawning, dispersal or migratory patterns.

	• the times which will least affect feeding, spawning, dispersal or migratory patterns of fish and other aquatic species; and • the prevention of irreversible adverse effects.	
	Policy 4.2.12: To promote the maintenance and enhancement of aquatic habitats and ecosystems when considering the adverse effects of the subdivision, use and development of land outside river and lake beds.	This policy is appropriate but has not been very effective. It targets the adverse effects of land use on water quality but there is insufficient direction in it to assist either resource consent applicants or territorial authorities.
	Policy 4.2.13: To protect the nationally threatened indigenous aquatic plants identified in Part B of Appendix 3 and to protect nationally threatened freshwater fauna, in the water bodies identified in Part A of Appendix 3 by: • managing water quality so that Polices 5.2.1 to 5.2.7, whichever is (are) relevant, is (are) satisfied; and	This policy is appropriate. It places an emphasis on protection of plants and fish identified in the appendix referred to. With respect to plants the policy has not been very effective because it does not identify locations where they are found. With respect to fish, the nationally threatened species identified have been reviewed and there is now a different species list. Therefore, the policy has become redundant. However, the approach has been an effective one for emphasises the greater protection of the habitat of particular species.

	• managing the flows and levels of water bodies so that Policies 6.2.1, 6.2.2, 6.2.12, and 6.2.13, whichever is (are) relevant, is (are) satisfied; and • maintaining migratory and dispersal pathways for fish; and • avoiding adverse affects on habitats that are important to the life cycle and survival (including spawning areas) of fish and birds; and • promoting landowner and user knowledge of nationally threatened species, the sites where they are present, and how they can be protected.	

Objective 3:	**Policy 4.2.14:** To avoid, remedy or mitigate any adverse effects on important trout habitat in the Region, identified in Appendix 4, by: • managing water quality so that Policy 5.2.3 is satisfied; and • managing the flows and levels of water bodies so that Policies 6.2.1, 6.2.2, 6.2.12, and 6.2.13, whichever is (are) relevant, is (are) satisfied; and • having particular regard to offsetting adverse effects on trout habitat; and • having particular regard to maintaining the same, or similar, river bed configuration in the rivers identified..	This policy is appropriate. It places an emphasis on protection of trout habitat in identified rivers. The policy has been effective because provides additional protection for water quality, river flows and trout habitat that is targeted to that species.

Objective 4.1.7 The amenity and recreational values of wetlands, lakes, and rivers are maintained and, where appropriate, enhanced. **Objective 4.1.8:** The quality of lawful public access to and along river and lake beds is maintained and, where appropriate, enhanced.	**Policy 4.2.15:** To avoid, remedy, and mitigate any adverse effects of use and development on the water bodies identified in Appendix 5 as regionally important for their amenity and recreational values, by: • managing water quality so that Policy 5.2.4 is satisfied; and • managing the flows and levels of water bodies so that Policies 6.2.1, 6.2.2, 6.2.12, and 6.2.13, whichever is (are) relevant, is (are) satisfied; and • having particular regard to offsetting adverse effects on amenity and recreational values; and • having particular regard to the timing of use and development so that, where practicable, adverse affects on amenity values and recreational use are minimised.	This policy is appropriate. It places an emphasis on protection of the recreational use of identified rivers. The policy has been effective because provides additional protection for water quality, river flows and recreational use.

	Policy 4.2.16: To ensure there is no reduction in the quality of lawful public access along the beds of lakes and rivers unless exceptional circumstances arise that make restrictions necessary, including to: • protect any characteristic of any site or feature which gives a water body its special value or any conservation value; or • provide for public health and safety; or • provide for security on private property; or • protect the rights of property owners, including the protection of crops and stock.	Policy 4.2.16 is appropriate but it does duplicate Policy 16 and associated methods of the Freshwater Chapter of the RPS. Implementation has largely been through making submissions on district plans and resource consent applications to territorial authorities because the control of access to water bodies lies with territorial authorities not Greater Wellington.
	Policy 4.2.17: To promote the avoidance or mitigation of the potential adverse effects associated with flooding.	Policy 4.2.17 is appropriate but it largely duplicates Policy 16 and associated methods of the Freshwater Chapter of the RPS. It adds to the RPS by identifying specific water bodies where there should be an emphasis placed on access. Implementation has largely been through making submissions on district plans and resource consent applications to territorial authorities because the control of access to water bodies lies with territorial authorities not Greater Wellington.

Objective 4.1.9: The risk of flooding to human life, health, and safety is at an acceptable level. **Objective 4.1.10:** The adverse effects of flooding on natural values and physical resources, including people's property, are at an acceptable level.	**Policy 4.2.18:** To promote the avoidance or mitigation of the potential adverse effects associated with flooding. **Policy 4.2.19:** To allow the maintenance of lawful flood mitigation works within river and lake beds and on floodplains. **Policy 4.2.20:** To ensure that there is sufficient information about flood hazards to enable flooding in the Region to be mitigated to an acceptable level. **Policy 4.2.21:** To encourage community awareness about flood hazards by involving people in the processes that establish acceptable levels of flood mitigation. **Policy 4.2.22:** To adopt a precautionary approach when planning for and making decisions about the potential adverse effects of flooding on people and communities where information is incomplete or limited.	Policies 4.2.18 to 4.2.23 are implemented by the operational flood protection departments of the Council, including through methods 8.3.1 to 8.3.8 in the Regional Freshwater Plan. These policies are appropriate and their implementation has been largely effective, as is borne out by the findings for flooding in the region that are reported in the Natural Hazards Chapter of Measuring up 2005

Objective 4.1.11: People and communities are able to use and develop freshwater resources to provide for their social, economic, and cultural well being and for their health and safety. **Objective 4.1.12:** The adverse effects of the use and development of freshwater resources are avoided, remedied, or mitigated. **Objective 4.1.13:** Activities that enhance freshwater resources are promoted. **Objective 4.1.14:** The needs of existing lawful resource users are recognised during the transition from the Transitional Regional Plan to the Regional Freshwater Plan. **Objective 4.1.15:** Opportunities are provided for people and communities to be involved in decision making on significant freshwater resource management issues in the Wellington Region.	**Policy 4.2.23:** To have regard to the benefits arising from any proposal for the use and development of a water body when assessing the proposal.	Policy 4.2.23 is a general policy that recognises benefits associated with development that the RMA recognises. This type of policy is probably not appropriate because it is made effective through the RMA rather than the Regional Freshwater Plan. If it were appropriate, then it would be better placed in the RPS because of its general application to all resources rather than just water.

Objective 4.1.16: The administrative requirements of activities are minimised, particularly in those situations where the adverse effects are minor. **Objective 4.1.17:** Conditions placed on resource consents are used as a means of avoiding, remedying or mitigating adverse effects.		
	Policy 4.2.24: To have regard to the effects on other established activities when considering any proposal for the use and development of water bodies.	Policy 4.2.24 is appropriate. Whether the activity is discharging to water, taking water or placing structures in river or lake beds, there are implications for other users. This policy is made effective through permitted activities and when resource consents are considered.
	Policy 4.2.25: To encourage users of fresh water to adopt an ethic of guardianship for future generations.	Policy 4.2.25 is a general policy that encourages people to look after fresh water. This type of policy is probably not appropriate because it is made effective through the RMA rather than the Regional Freshwater Plan

	Policy 4.2.26: To adopt a precautionary approach to the management of freshwater in the Wellington Region where information is incomplete or limited.	Policy 4.2.26 is a general policy that reflects the need for a precautionary approach to freshwater management that is contained in some case law. This type of policy is probably not appropriate because it is made effective through the RMA rather than the Regional Freshwater Plan. If it were appropriate, then it would be better placed in the RPS because of its general application to all resources rather than just water.
	Policy 4.2.27: To encourage the restoration or rehabilitation of freshwater resources in the Region, including the establishment of wetlands, where appropriate.	This policy is appropriate but may be more so in the Regional Policy Statement than the Regional Freshwater Plan. It has been made effective through our work with communities (eg. Care Groups) and in some instances, resource consents.
	Policy 4.2.28: To have regard to any relevant objectives and policies in section 4 of the Plan, when considering an application for a discharge permit to discharge to fresh water, a water permit, a land use consent to construct a bore/well, or a land use consent within a river or lake bed.	This policy is not really necessary as it is required by the RMA.

	Policy 4.2.29: To recognise the needs of existing lawful users of fresh water by: • allowing existing users to upgrade progressively their environmental performance where improvements are needed to meet the provisions of the Plan; and/or • giving priority to existing users over new users at locations where the demand for the use of water is greater that the resource can sustain.	This policy provides more specific examples of what might be considered within 4.2.24. The first bullet point has been effective in requiring progressive upgrading of discharges to water in some instances. The second bullet point reinforces the first-in-first serve philosophy of the RMA. Since the Regional Freshwater Plan became operative, amendments to the RMA have negated the need for this bullet point to be included.
	Policy 4.2.30: To work with other relevant agencies and tangata whenua in order to achieve the integrated management of fresh water.	This policy may not be necessary since it is an underlying expectation of the RMA.

	Policy 4.2.31: To ensure that the process for making decisions relating to the management of fresh water is fair and transparent. In particular, to ensure that as far as practicable, all interested people and communities have the opportunity to be involved in freshwater resource management processes, including significant resource consents.	This policy may not be necessary since it is an underlying expectation of the RMA.
	Policy 4.2.32: Encourage the development of industry "Codes of Practice" and "Guidelines".	This policy is appropriate and has been effective to the extent that some industry guidelines and codes of practice have been prepared by industry and Greater Wellington (eg., Erosion and sediment control guidelines for the Greater Wellington region).

	Policy 4.2.33: To provide for those activities which have no more than minor adverse effects on the environment. As a guide, the adverse effects of activities are likely to be no more than minor if the following criteria are met: 1. the activity does not require exclusive use of the river or lake bed, and does not preclude lawful public access to, and use of, the river or lake bed (subject to the circumstances listed in Policy 4.2.16 that make restrictions necessary); and 2. any adverse effects on plants, animals or their habitats are confined to a small area or are temporary, and the area will naturally re-establish habitat values comparable with those prevailing before commencement of the activity; and 3. there are no significant or prolonged decreases in water quality; and	This policy is appropriate if it is able to provide guidance on "less than minor adverse effects".

	4. there are no off-site adverse effects; and 5. river bank or lake shoreline stability is not adversely affected; and 6. there are no adverse effects on mahinga kai, waahi tapu, or any other sites of special value to tangata whenua; and 7. there are no adverse effects on the natural character of wetlands, and lakes and river and their margins.	
	Policy 4.2.34: To avoid, remedy, or mitigate adverse effects which are associated with, or are a consequence of, an activity by placing conditions on resource consents, particularly where adverse effects are likely to occur on the following: • characteristics of spiritual, historical or cultural significance to tangata whenua; or • natural values; or • amenity and recreational values;	This policy may not be not necessary because it duplicates the RMA.

	or • lawful public access.	
	Policy 4.2.35: To have regard to the following matters when determining the nature and extent of any conditions to be placed on a resource consent: • the significance of the adverse effects arising as a consequence of, or in association with, the proposed activity; and • the extent to which the proposed activity contributes to the adverse effects; and • the extent to which the adverse effects of the proposed activity can be, and have been, dealt with by other means; and • any proposals by the applicant to avoid, remedy or mitigate adverse effects, and any agreements reached at pre-hearing meetings; and • the monitoring proposed to be carried out by the applicant; and	This policy may not be necessary because it duplicates the RMA.

	• the extent to which the community as a whole benefits from the proposed activity and from any proposed conditions on a consent; and • the financial cost of complying with any conditions on a consent; and • the extent to which a condition placed on a consent will avoid, remedy or mitigate any adverse effects.	
	Policy 4.2.36: To avoid, remedy or mitigate adverse effects, conditions on a resource consent may relate to all or any of the following: • project design and implementation, choice of materials, site improvements; or • habitat restoration, rehabilitation, creation and improvement; or • restocking and replanting of fauna or flora (with respect to replanting, preference will be given to the use of indigenous species, with a further preference for the use of local genetic stock);	This policy may not be necessary because it duplicates the RMA.

	or • works and services relating to the improvement, provisions, reinstatement, protection, restoration or enhancement of the matters listed in Policy 4.2.35; or • the relationship between flow in a river and water quality (e.g. conditions attached to discharge permits can be flow related in respect of compliance with water quality guidelines).	
	Policy 4.2.37: To encourage applicants for resource consents to: • consult and discuss with parties who may be affected by the proposal prior to applying for a consent; and • identify in the consent application how adverse effects may be avoided, remedied or mitigated.	This policy is appropriate as a matter of good practice for consent applicants.

	Policy 4.2.38: To recognise that there are circumstances where placing conditions on resource consents may not be sufficient to adequately avoid, remedy or mitigate the adverse effects of a proposal; and that in such circumstances a consent application will be declined.	This policy may not be necessary because it duplicates the RMA.
Objective 5.1.1: The quality of fresh water meets the range of uses and values for which it is required while the life supporting capacity of water and aquatic ecosystems is safeguarded. **Objective 5.1.2:** The quality of fresh water has the potential to meet the reasonably foreseeable needs of future generations. **Objective 5.1.3:** The quality of water is, as far as practicable, consistent with the values of the tangata whenua.	**Policy 5.2.1:** To manage water quality in its natural state in those water bodies identified in Part A of Appendix 2 (subject to Policy 5.2.10). **Policy 5.2.2:** To manage water quality in Lake Wairarapa in accordance with the National Water Conservation (Lake Wairarapa) Order 1989 (subject to Policy 5.2.10).	Policies 5.2.1 to 5.2.10 are appropriate. They identify the water quality "standards" that Greater Wellington seeks for every water body in the region, including water bodies that need to be enhanced and the circumstances under which resource consents will be granted in water bodies that need enhancement. The policies are effective when resource consents applications are made and the "standards" are applied. *Measuring up 2005* has found that "standards are often not met in water bodies. The main reasons for this relate to stormwater discharges, which are permitted, and non-point source discharges, which are not controlled. Both these discharges are probably best controlled at the sources of the discharges, which means greater emphasis on managing and controlling land uses.

	Policy 5.2.3: To manage water quality for trout fishery and fish spawning purposes in those rivers, or parts of rivers, identified in Appendix 4 (subject to Policy 5.2.10). **Policy 5.2.4:** To manage water quality for contact recreation purposes in those water bodies identified in Appendix 5 (subject to Policy 5.2.10), excluding Lake Waitawa (managed according to Policy 5.2.6) and Lake Wairarapa (managed according to Policies 5.2.2 and 5.2.6) **Policy 5.2.5:** To manage water quality for water supply purposes in those water bodies, or parts of water bodies, identified in Appendix 6 (subject to Policy 5.2.10).	Greater Wellington's approach to the management and control of land uses is dictated by the RPStatement. In this regard, improving the effectiveness of these policies needs to be addressed in the first instance in the RPS Although not entirely effective because "standards" are breached, it is imperative that the policy approach in the Regional Freshwater Plan continues so that acceptable water quality is sought.

	Policy 5.2.6: Except for rivers and streams identified in Appendix 7, to manage the water quality of all surface water bodies in the Region for aquatic ecosystem purposes (subject to Policy 5.2.10). **Policy 5.2.7:** To manage all groundwater in the Wellington Region so that there are no net adverse affects on its quality as a result of discharges to surface water or groundwater (subject to Policy 5.2.10). **Policy 5.2.8:** To have regard to the relevant guidelines in Appendix 8 when deciding whether a discharge is able to satisfy Policies 5.2.1 to 5.2.7 (above) when considering applications for resource consents (subject to Policy 5.2.10).	

	Policy 5.2.9: To manage the quality of the fresh water of the rivers, or parts of rivers, identified in Appendix 7 so that water quality is enhanced to satisfy the purposes identified in the Appendix (subject to Policy 5.2.10). **Policy 5.2.10:** To allow the discharge of contaminants to fresh water which do not satisfy Policies 5.2.1 to 5.2. 9, whichever is (are) relevant, only where: 1. the discharge is of a temporary nature; or 2. the discharge is associated with necessary maintenance works; or 3. exceptional circumstances justifying the granting of a permit; or	

	4. the discharge: • was present at the time the Plan was notified; and • is not likely to cause a decrease in the existing quality of water at that site and the person responsible for the discharge has defined a programme of work for upgrading the discharge within a specified timeframe; or 5. that in any event, it is consistent with the purpose of the Act to allow the discharge.	
	Policy 5.2.11: To ensure that any zones allowed on a discharge permit for reasonable mixing of contaminants or water with the receiving water are determined by having regard to: • the purpose for which the receiving water is being managed, and any effects of the discharge on that management purpose; and	Policy 5.2.11 is appropriate because some guidance on reasonable mixing zones is necessary. Any guidance that is more specific would improve effectiveness of the policy. However, because the circumstances of every discharge are different, providing more specific guidance will be difficult. Each discharge has to be considered on a case by case basis.

	• any tangata whenua values that may be affected; and • the volume of water or concentration of contaminants being discharged, and the area of receiving water that could potentially be affected; and • the physical, hydraulic and hydrological characteristics of the receiving water.	
	Policy 5.2.12: To allow a discharge containing sewage directly into fresh water without passing through land or an artificial wetland, (subject to 5.2.10), where: • it better meets the purpose of the Act than disposal to land; and • there has been consultation with the tangata whenua in accordance with tikanga Maori and due weight has been given to sections 6, 7, and 8 of the Act; and • there has been consultation with the community generally.	A policy with criteria that identify when sewage discharges can occur is appropriate. Combined with other municipal waste, each discharge from the larger cities and towns are among individual discharges with the largest effects on freshwater quality in the region. Sewage discharges have been removed from two rivers in the region since the Regional Freshwater Plan became operative and *Measuring up 2005* reports that water quality has improved in these two rivers (Ngarara Stream and Wainuiomata River). Other communities that still make discharges directly to fresh water include Masterton, Carterton, Greytown, Martinborough, Featherston and Paraparaumu/Waikanae. While this policy may have had some effect in ensuring community participation, more stringent provisions may be needed, given the significant adverse effects of these discharges.

	Policy 5.2.13: To encourage users to discharge to land as an alternative to surface water where: • the provisions of the Regional Plan for Discharges to Land are satisfied; and • discharging to land has less adverse environmental effects than discharging to water; and • there are no significant cultural, environmental, technical, or financial constraints associated with discharging to land.	Policy 5.2.13 is an appropriate policy. It has been effective. *Measuring up 2005* reports that over the last 10 years the number of discharges of dairy shed effluent toi land have reduced from 63 to three and water quality improvements have occurred in streams where this has happened.
	Policy 5.2.14: To encourage the treatment of stormwater discharges to reduce the adverse effects of such discharges on the receiving water body.	Policy 5 has not been effective. *Measuring up 2005* has identified stormwater discharges from urban areas as having significant adverse effects on receiving waters in the region. The discharge of stormwater is a permitted activity, which is discussed in relation to Rule 2. The combination of permitted activity and a “soft” policy has not achieved satifactory stormwater discharges in the region.

	Policy 5.2.15: To promote the reduction of the levels of contaminants entering water bodies, including groundwater, from non-point sources in the Wellington Region, particularly in water bodies where non-point sources of contamination contribute to making water quality unsuitable for the purposes that the water body is to be managed for in Policies 5.2.1 to 5.2.7.	Policy 5.2.15 is appropriate but it has not been particularly effective. Some gains have been made that are identified in Measuring up 2005. For example, the Fonterra Accord and our riparian strategy. However, to be more effective, this policy needs to involve more guidance on specific land uses that are causing problems.
	Policy 5.2.16: To minimise the adverse effects of accidental spills on water quality.	This approach in this policy is appropriate. However, it may be better placed as the subject matter for a rule or a method. Some work has been undertaken in implementing the policy through Method 8.4.9. As a result of submissions on a change to the Regional Plan for Discharges to Land, a rule has now been included that addresses adverse effects in relation to discharges to land. A similar approach could be taken in the Regional Freshwater Plan.

Objective 6.1.1: People and communities are able to take, use, dam, or divert surface water, and take and use groundwater, while ensuring that the flows in rivers, and water levels in lakes and wetlands, are sufficient to maintain the natural and amenity values of water bodies. **Objective 6.1.2:** People and communities are able to take and use groundwater while ensuring that the construction of bores and abstractions do not: • exceed the safe yields of aquifers; or • adversely affect the yields of nearby bores through interference, inefficient borehole construction, or excessive drawdown; or • adversely affect water quality. **Objective 6.1.3:** Water abstracted from rivers, streams, lakes and aquifers is used efficiently and water conservation is promoted.	**Policy 6.2.1:** To manage the allocation of water and flows in the parts of the rivers and streams shown in column 1 of Table 6.1 by: 1. recognising the flows shown in column 3 as minimum flows that should be achieved in low flow conditions; and 2. authorising, through resource consents, the taking of no more than the core allocation shown in column 4 (except where the requirements for supplementary allocation in clause (3) of this policy are satisfied); and 3. authorising, through resource consents, the taking of a supplementary allocation when the flow exceeds that shown in column 5 (which is additional to the core allocation provided for in clause (2) of this policy); and	This policy is appropriate. It establishes minimum flows and allocation limits for identified streams. The policy has been effective to the extent that the flows and allocation limits it identifies have been adhered to when resource consent applications to take water are considered. Measuring up 2005 mentions that habitat assessments for minimum flows have been reviewed for the Waikanae, Wainuiomata and Hutt Rivers. Findings on the Waikanae and Hutt and Hutt Rivers indicate that the flows set are appropriate for aquatic life. Findings for the Wainuiomata indicate that a higher level might be needed to provide adequate trout habitat.

Objective 6.1.4: The flows in rivers and water levels in lakes and wetlands are, as far as practicable, consistent with the values of the tangata whenua. The flows in rivers and water levels in lakes and wetlands are, as far as practicable, consistent with the values of the tangata whenua.	4. authorising, through resource consents, the taking of no more than the first and second stepdown allocations shown in columns 6 and 7, respectively, when the river or stream is below the stepdown flows, also shown in columns 6 and 7 respectively.	
	Policy 6.2.2: To manage the flows in rivers and streams not identified in Policy 6.2.1 by having regard to: • the significance of natural, amenity, and tangata whenua values; and • the scale/magnitude of any adverse effects on natural, amenity and tangata whenua values; and • the reversibility of any adverse effects on natural, amenity and tangata whenua values.	Policy 6.2.2 is a default policy for rivers that do not have minimum flows and allocation limits according to Policy 6.2.1. Such a default policy is appropriate but is probably so general and broad that it is not very effective.

	Policy 6.2.3: To manage the aquifers in each groundwater zone in Tables 6.2-6.5 (below) using the safe yield shown and to maintain discretion over the allocation of aquifers not identified in the Tables.	This policy is appropriate. It establishes 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 quality. The policy has been effective to the extent that safe yields have been adhered to when resource consent applications to take water are considered. Groundwater investigations have identified there are aquifers in the Wairarapa where levels are falling. Safe yields in these aquifers (Parkvale, Martinborough Terraces and Kahutara groundwater zones) may be too high. The results of these investigations have prompted us to review the way we estimate safe yields. We now believe that a better way to estimate safe yields is to look at how much water is discharging from an aquifer, rather than how much is going in.
	Policy 6.2.4: To ensure that land use permits to construct a bore/well avoid: • damage to the structural integrity of an aquifer; or • contamination of an aquifer from external sources.	Policy 6.2.4 is appropriate. Rule 15 of the plan requires resource consents to be obtained for the construction of all groundwater bores in the region. The policy has been effective in meeting the objectives. The criteria in the policy must be met for a resource consent to be granted constructed conditions are included to ensure appropriate construction methods are adhered to.

	Policy 6.2.5: To give priority over other users to the abstraction of water for the public health water needs of people including: • the use of water by any statutory authority which has a duty for public water supply under any Act of Parliament or regulation; or • the use of water for reticulation into a public water supply network; when: • water takes exceed the core allocation shown in Table 6.1; or • water takes exceed the safe yields shown in Tables 6.2, 6.3, 6.4, and 6.5; or • a water shortage direction is issued under section 329 of the Act.	Policy 6.2.5 places a priority on water for public health needs over other uses. The policy has been successfully implemented through allowing abstractions for public water supply to continue in a catchment while other takes are cut off. Our permitted activity rule for taking up to 20 cubic metres of water anticipated that this would include water for domestic use. We have since received legal advice that water taken for domestic use is permitted as of right by section 14(1) of the RMA. An adjustment of the permitted activity rule to take water may be needed as a result.

	Policy 6.2.6: To allocate water for irrigation purposes, subject to Policies 6.2.1 to 6.2.5, up to a maximum rate of 350 m^3/hectare/week (equivalent to 35 mm of rainfall per week) unless the applicant can demonstrate that a higher rate is efficient and necessary.	It is appropriate to limit the total amount of water that a person can use for irrigation, so that water is not wasted. The effectiveness of the policy is limited by not taking into account crop and soil types in any specific situation. I methodology that takes account of crop soil types will be more effective.
	Policy 6.2.7: To encourage users to take groundwater as an alternative to surface water resources where: • the groundwater is of sufficient quality and quantity for the prospective use; and • there are no significant environmental, technical, or financial constraints associated with abstracting groundwater.	Policy 6.2.7 is appropriate to encourage the protection of surface water biodiversity. It has been effective as they Council is aware of circumstances where groundwater has been taken as an alternative to surface water. The policy would be more effective it was more directive.

	Policy 6.2.8: To ensure that water permits to take groundwater: • consider excessive reductions in the yields of nearby bores (including excessive interference drawdowns); and • avoid significant adverse effects on surface water bodies.	Policy 6.2.8 is appropriate though the first bullet point may not be needed because the RMA requires adverse effects to be considered and it is already addressed in Policies 4.2.24 and 4.2.29. The second bullet provides some guidance on how to treat groundwater effects on surface water. *Measuring up 2005* has identified that these effects are a growing issue for managing fresh water in the region. A more comprehensive policy is needed to effectively address the issue.
	Policy 6.2.9: Where appropriate, to encourage and support "user committees" to assist in managing the taking and use of fresh water.	Policy 6.2.9 has not been effective because "user committees" are not present in the region
	Policy 6.2.10: To allow water permits to be transferred where there will be net benefits to the community and where there will be no additional adverse effects caused by the change in the location of a water take.	This policy provides a basis for transferring water permits, which have been allowed when the criteria are met.

	Policy 6.2.11: To have due regard to the relevant provisions of this Plan, such as Policies 6.2.1 to 6.2.3, when considering water permits for the take of water for water races.	Policy 6.2.11 is probably not necessary as it is a requirement of the RMA to have regard to other relevant policies in the Regional Freshwater Plan.
	Policy 6.2.12: To manage water levels in Lake Wairarapa using the minimum water levels for the time periods specified in Table 6.6 below; and • as soon as practicable, to lower the lake level when the lake level is over 10.3 metres; and • as far as practicable, to maintain the outflow of water from Lake Wairarapa until the seasonal minimum is reached.	This policy is appropriate. It establishes minimum lake levels for Lake Wairarapa. Tto give effect to the Lake Wairarapa National Water Conservation Order 1987. The minimum levels follow the Lake Wairarapa Wetlands Management Guidelines 1991. These guidelines were developed by the Lake Wairarapa Co-ordinating committee following the Order. The management committee comprised all the key statutory authorities involved in, or affected by, the management of the lake, including iwi, recreational users, landowners, commercial fishers and environmental groups. *Measuring up 2005* reports that over the last five years, the Lake was well above target levels for most of the autumn, winter and spring, but sometimes fell short during summer. It also comments that while the biological health of the lake is holding up, we know nothing about the state of its margins and the effects of controlled lake level fluctuations on them. We suspect their ecology is probably altering, but we can't measure this change without vital data on things like wading bird numbers and wetland turf communities.

		In view of the reservations in *Measuring up 2005* about the effectiveness of the lake level policy for the entire wetland complex, the use of these lake levels should be reviewed.
	Policy 6.2.13: To manage the water levels in lakes and wetlands, excluding Lake Wairarapa, by having regard to: • the significance of natural, amenity, and tangata whenua values; and • the scale/magnitude of any adverse effects on natural, amenity and tangata whenua values; and • the reversibility of any adverse effects on natural, amenity and tangata whenua values.	Policy 6.2.13 is a default policy for lakes and wetlands that do not have minimum levels established. Such a default policy is appropriate but is probably so general and broad that it is not very effective.
	Policy 6.2.14: To provide for minor or temporary diversions of water in any river, lake or wetland, where they are associated with authorised works and/or the exercise of a resource consent.	Policy 6.2.14 takes an appropriate approach. It is adopted by permitted activities in the Plan. However the policy is not very effective because, once these permitted activities are made, the policy has no effect on them. Also, the policy has little bearing on resource consents because the RMA already allows such consents to be granted and the approach is contained in 4.2.33.

	Policy 6.2.15: To allow the damming or diversion of water in any river, lake, or wetland, provided: 1. adverse effects are avoided, remedied or mitigated; and 2. significant adverse affects, which cannot be adequately offset, are avoided on: • the values held by tangata whenua; and • natural or amenity values; and • water quality and flows below the dam or diversion; and • water levels in any lake or wetland; and • biological and physical processes; and • fish passage; and • sediment transport processes; and	Policy 6.2.15 provides criteria about when the diversion of water from lakes and rivers will be allowed. Such a policy is appropriate but is probably not very effective because the criteria used are so general and broad that they are not very useful in practice.

	• the quality of lawful public access along a river or lake bed; and • the flood hazard; and • river or lake bed or bank stability.	
	Policy 6.2.16: To ensure that, for any proposal to divert water between catchments, there has been consultation with the tangata whenua in accordance with tikanga Maori.	This policy has had some effect in ensuring consultation with iwi occurs when diverting water between catchments (eg. Otaki River water supply diversion).
	Policy 6.2.17: To promote land uses that do not have adverse effects on river flows, water levels in lakes and wetlands, or on groundwater yields.	Policy 6.2.17 is appropriate but is so broad and general as to not be very effective.
	Policy 6.2.18: To have regard to the following when considering an application for a resource consent to take water: 1. the amount of water required is reasonable, considering the intended use of the water; and	Policy 6.2.18 is appropriate because it identifies specific matters to consider when resource consent applications are made.

	2. the need for accurate measurement of the take from any river listed in Table 6.1 or Method 8.5.5; and 3. for any applicant taking water for public supply, the extent of any: • demand management programmes; or • drought management plans.	
	Policy 6.2.19: To encourage water conservation, particularly in water short areas.	Policy 6.2.19 is appropriate but it's effectiveness is limited because it is a broad and general approach
Objective 7.1.1: Appropriate uses of the beds of rivers and lakes are allowed while avoiding, remedying, or mitigating any adverse effects. **Objective 7.1.2:** The risk of flooding or erosion is not increased by locating structures or carrying out activities in the beds of rivers and lakes or on the floodplain.	**Policy 7.2.1:** To allow the following uses within river and lake beds: • structures or activities for flood mitigation or erosion protection purposes; • structures for transportation and network utility purposes; or • structures for activities which need to be located in, on, under, or over the beds of rivers and lakes; or	Policy 7.2.1 is appropriate because it identifies activities that will be allowed to occur in rivers. It is effective because these activities are allowed to occur in rivers, subject to conditions on permitted activity rules or resource consents. One activity needing clarification because it is not necessarily allowed to occur under this policy is the piping of streams in situations where it is not necessary, ie. Alternatives to piping are available. At the present time resource consents are granted for these activities even though alternatives may be available. Policy 7.2.1 must be read together with policy 7.2.2

Objective 7.1.3: Activities do not cause damage to, or destruction of, existing lawful flood mitigation works. **Objective 7.1.4:** The uses of river and lake beds are, as far as practicable, consistent with the values of the tangata whenua.	• structures for cultural harvest (e.g., pa tuna); or • the maintenance of any lawful structure; or • the removal of aquatic weeds from farm drains and urban drains for drainage purposes; or • the extraction of sand, gravel, or rock; or • the diversion of water associated with activities that are otherwise authorised; or • the enhancement of the natural character of any wetland, lake or river and its margins; provided that any adverse effects are avoided, remedied or mitigated and that the significant adverse effects identified in Policy 7.2.2 are avoided.	
	Policy 7.2.2: To not allow the use of river and lake beds for structures or activities that have significant adverse effects on: • the values held by tangata whenua; and/or • natural or amenity values; and/or	Policy 7.2.2 must be read together with policy 7.2.1. It is appropriate but would be made more effective by providing more specific guidance on the situations when activities in river and lake beds are not allowed.

	• lawful public access along a river or lake bed; and/or • the flood hazard; and/or • river or lake bed or bank stability; and/or • water quality; and/or • water quantity and hydraulic processes (such as river flows and sediment transport); and/or • the safety of canoeists or rafters.	
	Policy 7.2.3: To not allow new uses within the beds of rivers and lakes, and subdivision, use and development on the floodplain where the potential effect of flooding significantly increases the risk to human life, health, and safety; or where the actual or potential effect of flooding has significant adverse effects on: • private or community property; and • flood mitigation structures and works; and • natural values.	Policies 7.2.3 to 7.2.7 are appropriate for the mitigation of flood hazards in the region.

	Policy 7.2.4: To not allow the development of *ad hoc* flood or erosion mitigation structures within river beds or on floodplains with Floodplain Management Plans or River Management Schemes; and To discourage the development of *ad hoc* flood or erosion mitigation structures in other rivers, unless all feasible alternatives have been evaluated and found to be impracticable or have greater adverse effects on the environment. **Policy 7.2.5:** To not allow new industrial, residential, or commercial development within the river corridors of the Otaki, Waikanae and Hutt Rivers or the floodways of the lower Ruamahanga and Waiohine Rivers, with the exception that network utility operations are excluded from this policy.	

	Policy 7.2.6: To have regard to any relevant Floodplain Management Plan and the information provided in any relevant flood hazard assessment, or in connection with any River Management Scheme, when considering subdivision, use, or development within any river bed or floodplain. **Policy 7.2.7** To avoid any adverse effects on the structural integrity and effectiveness of lawful flood mitigation structures and works in river beds and on floodplains from the adverse effects of subdivision, use, and development.	
	Policy 7.2.8: To allow re-contouring of the beds of rivers provided: • the activity is necessary to avoid or mitigate the effects of flood hazard; and	Its appropriate to have a policy that identifies when re-contouring of the beds of rivers is allowed. The policy could be made more effective by the provision of greater clarity about the situations when this activity might be necessary to avoid or mitigate the effects of flood hazards. The second bullet point is not necessary because it duplicates what the RMA requires.

	• the assessment of a resource consent application to carry out the activity is subject to Part II of the Act.	
	Policy 7.2.9: To encourage the removal of any structure which: • is derelict; or • poses a threat to the safety of people; or • is not in active use and is not likely to be used in the future unless its removal is not practicable or will create more adverse effects on the environment than its non-removal.	Policy 7.2.9 is appropriate but could be made more effective by explicitly directing resource consents to require such removal at the expiry of resource consents if structures are no longer to be used.
	Policy 7.2.10: To ensure that all structures in or on the beds of rivers and lakes which are visible are adequately maintained so that: • the structure is safe; and • any adverse effects on the visual amenity of the area are minimised.	Policy 7.2.10 is appropriate. Its effectiveness has not been measured. The safety of structures is subject primarily to Building Act requirements.

	Policy 7.2.11: To ensure that the use of any river or lake bed which is not covered by water does not disturb nesting birds or any of the nationally threatened plant species identified in Part B of Appendix 3.	Policy 7.2.11 in appropriate.
	Policy 7.2.12: To ensure that the disturbance of any river or lake bed associated with the removal of vegetation: • does not exacerbate bank erosion or the flood hazard; and/or • maintains the drainage of farmland; and/or • is required to be carried out either as a permitted activity or an activity for which a resource consent has been granted.	Policy 7.2.12 is appropriate but its effectiveness has not been measured.

	Policy 7.2.13: To ensure that the removal of sand, gravel, or rock, from any lake or river bed is located and carried out in such a way that flood or erosion hazards are reduced or there is, at least, no increase to these hazards.	Policy 7.2.13 is appropriate but its effectiveness has not been measured across the region. However, the flooding or erosion hazards associated with river and lake bed works are assessed for every resource consent application.
	Policy 7.2.14: To ensure that the deliberate introduction of plants to a river or lake bed for flood mitigation, erosion protection, habitat restoration, or for mitigating non-point source discharges of contaminants, will not result in the displacement of desirable species which are already present.	Policy 7.2.12 is appropriate but its effectiveness has not been measured.

	Policy 7.2.15: To ensure that the reclamation or drainage of any river or lake bed is only carried out when: • there are no practicable alternatives which do not involve reclamation or drainage; and • the reclamation or drainage provides significant benefits to the community; and • the reclamation or drainage is consistent with Policy 4.2.10.	Policy 7.2.12 is appropriate. However, it needs to provide more certainty when reclamation of small streams is proposed.

Table 2. Assessment of the rules in the Regional Freshwater Plan

Rule	Assessment of Implementation
Rule 1: Permitted activity for discharges of water and minor contaminants.	Rule 1 allows discharges of free or combined residual chlorine, suspended solids, acid-solid aluminium or fluoride at specified concentrations to water bodies other than those being managed for "natural state" purposes. It also allows differences in water temperature between discharges and receiving water. There has been no monitoring of the implementation of this rule. The discharge of contaminants at levels provided for in the rule is likely to be a low risk to receiving waters.
Rule 2: Permitted activity for stormwater discharges	There are many stormwater discharges in the Region, particularly in urban areas. The rule uses the narrative standards in sections 70 and 107 of the RMA to apply minimum standards of the Act. These narrative standards are conditions in the rule. Almost all stormwater discharges are treated as permitted activities and few resource consents have been sought or granted for stormwater discharges. However investigations of stormwater and receiving waters in the Porirua Harbour and some urban streams suggest that minimum standards of the Act (conditions in the permitted activity rule) are being breached regularly. In particular, stormwater discharges are having adverse effects on aquatic life. Our investigations indicate that heavy metals are present in stormwater sediments and dissolved in the stormwater. Zinc and copper are often at levels that breach guidelines for aquatic life. Of 22 streambed sediment sites sampled, zinc breached guidelines at 10 sites and lead at six sites. DDT levels in stream bed sediment were above guidelines at all but two streams. Eight streams had levels of polyaromatic hydrocarbons at levels that breached guidelines.

	Council monitoring has also identified many examples where the concentrations of sediment in discharges are exceeding minimum standards for colour and clarity in receiving waters. Overall, it appears that stormwater discharges are often in breach of the current permitted activity rule. However, the rule is difficult to enforce because, in any instance, it requires the collection of a lot of data in at any offending site before breach of the rule can be established. There are other reasons why the current permitted activity rule is not very effective. The rule only applies to discharges to water from a stormwater pipe. It does not address discharges into the pipe (ie. the source of the discharge) or discharges to the ground that may subsequently enter water. These discharges are permitted in the Regional Plan for Discharges to Land. Both rules are not particularly well integrated because they do not promote treatment at the source of stormwater contamination, which may be one of the solutions available to mitigate the adverse effects of stormwater discharges. Rule 2 of the Regional Freshwater Plan is not effective because it is not promoting stormwater discharges that meet the minimum water quality standards of the RMA. There are hundreds of stormwater discharges in urban areas in the region. Reducing contaminants in these discharges have the potential to incur significant costs. Territorial authorities are responsible for almost all stormwater infrastructure, and therefore the discharges, in most of the region. Finding workable alternatives to Rule 2 that promote improvements to stormwater discharges will need to involve territorial authorities. To this end Greater Wellington has begun working with territorial authorities on a Stormwater Action Plan for the Wellington Region. The preparation of the Stormwater Action Plan will assist the development of alternative stormwater rules that are effective.

Rule 3: Controlled activity for stormwater discharges	Stormwater discharges that do not meet conditions 1 and 2 of Rule 2 are controlled activities. Standards are included in Rule 3 to ensure that standards for discharges in section 107 of the Act are met. Controls can be put on the measures in place to avoid or mitigate the effects of discharges. Stormwater discharges occur as a result of rainfall and cannot be "turned off", Hence, discharges of stormwater to land or water must occur and controlled activity status is appropriate for discharges that meet identified standards.
Rule 4: Controlled activity for discharges to groundwater which are contaminated only by heat	
Rule 5: Discretionary activity for all remaining discharges to freshwater.	The "default" rule for discharges to water requires resource consents for all discharges that are not permitted, controlled or non-complying. This rule reflects the "default" position of the Act which requires a resource consent unless a plan states otherwise.

Rule 6: Non-complying activity for discharges to wetlands, lakes and rivers, with surface water to be managed in its natural state	Rule 6 applies to water bodies in the Region identified as having a high degree of natural character. For example, rivers in Forest Parks are included in this category. It is appropriate for these water bodies to be managed in their natural state. In practice, the management of water quality in its "natural state" means that discharges should be of no worse quality than the water body itself. Policy 5.2.1, together with policy 4.2.10, provide for identified rivers to be managed in their natural state and for adverse effects to be avoided. A non-complying status for this rule means that these policies must be satisfied. This rule is an effective way to manage water bodies with a high degree of natural character.
Rule 7: Permitted activity for minor abstractions.	Rule 7 of the operative Regional Freshwater Plan allows the taking of 20 cubic metres (20,000 litres) of water per day as a permitted activity, subject to conditions. The Lower Hutt groundwater zone is the only water body excluded from Rule 7. There has been no monitoring of the implementation of this rule but feedback has been received from staff and members of the public on the rule. It appears to be effective in situations when there is plenty of water in streams and groundwater aquifers. The following specific situations have been brought to the Council's attention where the rule is not worked well. • Each permitted water take is linked to a legal title and water taken from a water body can significantly increase as a result of subdivision because the amount is multiplied by the number of lots created by subdivision

	• 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 stock use because it has been taken by upstream users. In addition, because there is no requirement to provide us with information we don't know: • Where permitted takes occur, how many there are, or how much water is taken – this is overcome by some extent by the requirement to obtain a resource consent to construct a bore • where there may be adverse effects as a result of several takes • where streams or wetlands may dry up as a result of permitted water takes. When it was prepared, the intention of Rule 7 was to include the taking or use of water for the reasonable needs of animals for drinking water and for reasonable domestic needs within the 20 cubic metres allowed by the rule. Since making the rule operative, the Council has received a legal opinion that taking and use of water for the reasonable needs of animals and reasonable domestic needs are permitted by section 14(1)(b) of the RMA. This opinion is supported by a recent amendment to section 30 of the RMA, which clarifies that rules about allocation do not include taking and use of water for the reasonable needs of animals and reasonable domestic needs. Therefore, any permitted take of water under the present rule is in addition to the taking and use of water for the reasonable needs of animals and reasonable domestic needs.

Rule 8: Permitted activity for damming and diversion of water by existing structures.	Rule 8 permits damming and diversion of water by existing legal structures. For example, an existing legal stopbank does not require a resource consent for the because it diverts water or an existing legal weir does not require a resource consent for the damming of water. Problems have arisen over whether structures are "legal" or not. It can be difficult to establish the legality of a structure prior to the RMA. However, the legality of structures is an issue whether or not it results in the damming or diversion of water or whether or not resource consent is required. Adverse effects of diverting or damming water by existing structures has already occurred and there is usually no benefit in requiring resource consents. A potential problem that could arise with rule 8 is when water flows are manipulated so that flows downstream dry up. For example, Rule 8 allows the damming of water behind existing structures without any conditions about downstream flow. This rule allowed all the water in the Karori reservoir to be held back so that it could be released to flush out an algal bloom downstream. Meanwhile the downstream flow dried up. When it is reviewed, a condition should be added to the rule that addresses downstream flows.

Rule 9: Permitted activity for minor diversion of water from an intermittently flowing stream.	Rule 9 provides for the diversion of up to 1.5 cubic metres per sec from an intermittently flowing stream. In practice this provides for diversions when works are occurring that effect small streams, for example during subdivision. We do not know have effective the rule is because it has not been monitored.
Rule 9A Permitted activity for diversion of water from an artificial watercourse or drain.	Rule 9A was included in a plan change in 2002, which was made operative in 2003. It provides for diversions of water in artificial water courses (eg. water races) and drains (defined in the plan). The rule includes conditions that include no adverse effects water levels of any river, lake and wetland. Although, there has been no monitoring of the rule, no feedback has been received that the rule is not effective.
Rule 9B: Permitted activity for diversion of groundwater.	Rule 9B was included in a plan change in 2002, which was made operative in 2003. It provides for diversions of groundwater. The rule includes conditions that include no adverse effects water levels of any river, lake and wetland. Although, there has been no monitoring of the rule, no feedback has been received that the rule is not effective.
Rule 15: Discretionary activity for bore construction.	Rule 15 makes all bore construction discretionary. A consistent approach across the region that requires resource consents that can be declined is needed because of growing pressure on water resources. The definition of 'bore' should explicitly cover instances where a hole is dug in the ground – is a shallow pit a bore?

Rule 16: Discretionary activity for taking, use, damming or diversion of water.	The "default" rule for taking, use daming and diverting water requires resource consents for all discharges that are not permitted, controlled or non-complying. This rule reflects the "default" position of the Act which requires a resource consent unless a plan states otherwise.
Rule 17: Non complying activity for damming in rivers with a high degree of natural character.	Rule 17 applies to rivers in the Region identified as having a high degree of natural character. For example, rivers in Forest Parks are included in this category. It is appropriate for these rivers to be managed with an emphasis on their natural flows. Policy 4.2.10, provides for adverse effects to be avoided. A non-complying status for this rule means that this policy must be satisfied. This rule is an effective way to manage water bodies with a high degree of natural character.
Rule 19: Taking water from the Lower Hutt groundwater zone that would cause the maximum rate of takes authorised by resource consents to exceed 32.85 million cubic metres per year is a non-complying activity.	The Lower Hutt groundwater zone provides water supply for domestic use in Porirua, Wellington, Hutt and Upper Hutt Cities. The safe yield of aquifers in the zone is 32.85 million cubic metres per year. The effect of the rule is to require resource consents for new uses that can only be granted if the safe yield is not exceeded or the new uses have less than minor adverse effects. This is an effective approach.
Rule 20: Environmental standards for minimum operating levels for the Lower Hutt groundwater zone.	An environmental standard with minimum groundwater levels for aquifers is an effective way to manage the groundwater zone.
Rule 21: Environmental standards for minimum operating levels for the Moroa shallow aquifer.	An environmental standard with minimum groundwater levels for the Moroa shallow aquifer is an effective way to manage aquifer.

Rule 22: Permitted activity for maintenance, repair, replacement, extensions, additions and alterations to structures.	Some issues of interpretation have arisen with this rule. In clause (2) does the cross-sectional area of the structure include area that is not part of the physical structure, eg. air space between the handrails of a bridge. A comment has been received that Rule 22 allows people to replace undersized culverts with new undersized culverts, but does not allow people to upgrade and install larger diameter culverts that would have lesser environmental effects. Maintenance etc. may not apply to new structures put in place after 25 January 1997. This needs to be clarified.
Rule 23: Permitted activity for extensions of existing linear rock protection.	
Rule 24: Permitted activity for placement of vegetative bank protection structures.	
Rule 25 Permitted activity for river crossings in intermittently flowing streams.	The definition of intermittent stream may need changing. Intermittently flowing water ways are ones which most of the time don't flow, but in periods of wet weather do. The way the definition is worded, we now have a situation where a developer can culvert or bridge a wetland type stream as a permitted activity just because during a drought it (reportedly) stopped running. Regulatory officers have no way of validating whether a stream is intermittently flowing or not. There is no readily available test involving fauna, flora, catchment size & permeability etc.
Rule 26: Permitted activity for small dams.	The use of 10,000 cubic metres of water should be 1,000 cubic metres of water in clause (1).

Rule 27: Permitted activity for sediment retention weirs in intermittently flowing streams.	
Rule 28: Permitted activity for laying pipes, ducts, and cables across intermittently flowing streams.	
Rule 29: Permitted activity for staff gauges.	
Rule 30: Permitted activity for fences.	
Rule 31: Permitted activity for small bridges.	
Rule 32: Permitted activity overhead cables.	
Rule 33: Permitted activity for removal or demolition of structures.	
Rule 34: Permitted activity for activities in or on structures.	

Rule 35: Permitted activity for entry or passage.	Rule 35 does not place any limits on the frequency of entry or passage across a river or lake bed. For example, crossing a river in a vehicle may not be a problem but doing it repeatedly in the same location may have an adverse effect on the river bed. The crossing rule does not make it clear that crossing should be by the most direct route, and that driving along the river in the water is not permitted. Car parking on a river beach is a common practice along much of the Hutt River, and has negligible environmental impact. It may be worth making it explicit in the rule that this is OK where vehicles do not damage the beach or enter the water.
Rule 36: Permitted activity for clearance of flood debris from rivers and lakes.	
Rule 37: Permitted activity for "beach" recontouring.	
Rule 38: Permitted activity for minor sand and gravel extraction.	
Rule 39: Permitted activity for maintenance of drains.	Rule 39 permits drain clearance. It should have a condition relating to returning eels (that get dug out) and possibly 'time exclusions' to avoid sensitive times of year.

Rule 40: Permitted activity for removal of vegetation.	This rule is allowing people to dig out the streams with significant disturbance to the beds in the name of sometimes dubious flood control gains. There would be less environmental effects if weeds in and beside streams were allowed to be strayed with particular herbicides as a Permitted Activity and diggers required resource consents.
Rule 41: Permitted activity for planting.	
Rule 42: Permitted activity for urgent works.	Rule 42 is not needed as the ability to act quickly in an emergency is provided for by the emergency provisions of the RMA. It needs to be made clear that the rule only applies to local authorities or network utility operators. Rule 42 allows urgent works to be undertaken if it is necessary to protect existing permanent dwellings etc. as a permitted activity. It needs to clarify that consents may be required for the on-going maintenance of work which may have been established under this rule.
Rule 43 Controlled activity for maintenance, repair, replacement, extensions, additions and alterations to structures	
Rule 44: Controlled activity for removal or demolition of structures.	
Rule 45: Controlled activity for cables.	

Rule 46: Controlled activity for pipelines.	Under this rule the placement of pipelines in or under river or lake beds is a controlled activity. However there is no such allowance for a pipeline over a river of lakebed, therefore it ends up being discretionary under rule 49, with less potential for adverse effects. However, any potential flood effects of placing a structure over a river need to be considered in some way
Rule 47: Controlled activity for culverts, weirs, fords, and bridges in rivers and streams.	
Rule 48: Controlled activity for placement of impermeable erosion protection structures.	Control hasn't been reserved over ongoing maintenance of new rip rap structures, so this can only be included in conditions by using paragraph (8) of the rule. New rip rap structures were not "existing" when the plan was notified, therefore maintenance is not allowed under Rule 22, and the activity is provided for by 48 so the application cannot be processed under Rule 49, which would have given wider discretion for the type of conditions attached to the consent. Rule 48 needs to either allow conditions to be attached for ongoing maintenance of the structure or the default rule (Rule 49) needs to be re-written so that applications can be processed under the rule if parties agree.
Rule 48A Restricted discretionary activity for uses of land within the Waiohine Floodway, the Lower Ruamahanga River Floodway, and the Hutt River Floodway.	

Rule 49: Discretionary activity for uses of river and lake beds.	
Rule 49A: Discretionary activity for vehicles on stopbanks.	
Rule 50: Non-complying activity for reclamation of the beds of lakes or rivers, excluding Lake Wairarapa.	
Rule 51: Prohibited activity for reclamation of the bed of Lake Wairarapa.	This rule is consistent with the national water conservation order for Lake Wairarapa.

Table 3. Assessment of the Implementation of Methods in the Fresh Water Chapter of the RFP

Methods	Assessment of Implementation
Method 8.1.1: Investigate, with tangata whenua, methods of identifying, recording, and protecting sites of special value to the tangata whenua to give effect to Policy 4.2.1. Where appropriate, the Council will: • help establish appropriate protocols for managing such information, including the use of silent files, the development of a waahi tapu inventory, and iwi planning documents; and • consider the inclusion of a table of sites of special value to the tangata whenua in this Plan by way of a Plan change..	This Method has not been implemented.
Method 8.1.2: Provide opportunities for tangata whenua to participate in the resource consent process of the Council by: 1. giving relevant tangata whenua notice, through iwi authorities (and hapu, where necessary), of all notified consent applications to the Council that are for resource consents required under the Plan; and 2. informing tangata whenua, where appropriate, through iwi authorities (and hapu, where necessary), of non-notified consent applications to the Council that are for resource consents required under the Plan; and 3. encouraging consent applicants to consult with relevant tangata whenua about consent applications that will affect the rohe of the tangata whenua; and	Method 8.1.2 has been implemented in full.

4. appointing tangata whenua representatives as hearing commissioners or to hearing committees where appropriate, and holding pre-hearing meetings and or hearings on marae at the request of the tangata whenua and with the agreement of the applicant; and 5. helping provide for tikanga Maori in the consent hearing process by: (a) the provision of interpretation services for the presentation of te reo Maori provided that reasonable notice is given of the intention to present submissions in Maori; and (b) exclusion of the public from hearings and restricting the public release of evidence, in accordance with section 42 of the Resource Management Act, when this is necessary to avoid offence to tikanga Maori and the disclosure of the location of waahi tapu.	
Method 8.1.3: Liaise with tangata whenua over water resource issues in the Region, including water quality and quantity, and the use of river and lake beds.	Liaison with tangata whenua over water resource issues in the region has occurred, generally through Ara Tahi.
Method 8.2.1: Work with territorial authorities to develop appropriate land use provisions in district plans in order to avoid, remedy, or mitigate the adverse effects of land use on natural and amenity values, and on access	Methods 8.2.1 and 8.2.1 have been implemented through advocacy on district plans and resource consents for land uses that are processed by territorial authorities. The response from territorial authorities has been variable. There are shortcomings in the approach because district plans don't always provide suitable land use controls (eg. earthworks and vegetation clearance controls).

Method 8.2.2: Advocate for the maintenance and enhancement of natural and amenity values and access to water bodies through the resource consent process to ensure that land use consents issued by territorial authorities are not inconsistent with the objectives and policies in Plan	Greater Wellington considers territorial authority resource consents for land use, and makes submissions on land use effects on water resource issues. The response from territorial authorities has been variable. There are shortcomings in the approach because district plans don't always provide suitable land use controls (eg. earthworks and vegetation clearance controls).
Method 8.2.3: Work with the Wellington Fish and Game Council, the Department of Conservation, territorial authorities, and tangata whenua over any alterations that may be necessary to Appendices 2, 3 and 4, as a result of new information which may come to hand.	The Wellington Fish and Game Council have assisted Greater Wellington in a review of our freshwater fishery by reviewing important rivers for trout. The Department of Conservation have reviewed its list of nationally threatened fish species and are identifying rivers that are nationally important for biodiversity through the process for central governments National Water Programme of Action. No changes are proposed to Appendices 2, 3, and 4 at the present time.
Method 8.3.4: Assist the Department of Conservation with their efforts to promote landowners' and river bed users' knowledge of nationally threatened plants listed in Part B of Appendix 2, their locations, and how they can be protected.	This method has not been implemented.

Method 8.3.5: Co-ordinate and develop a regional strategy for wetlands with the involvement of landowners, interest groups, tangata whenua, and territorial authorities, which could include the following approaches: • encouraging the creation of support groups to focus on wetland management issues and share information at the local level; and • making technical information and advice available to landowners including the preparation of user friendly information on the Act and wetland management; and • promoting awareness about the values of wetlands and the importance of protecting wetlands through such avenues as field days, visiting landowners, schools, and a newsletter to landowners.	The Wetland Action Plan was prepared and approved by Greater Wellington in 2003. The action plan includes details of how the Council is implementing this method. The Council is now supporting a number of Care Groups working on wetlands. The Wetland Incentive Programme, which is promoted by the Wetland Action Plan, provides funding and support for landowners restoring wetlands. A number of publications are now available to assist people restoring wetlands. These include *The beginners guide to wetland restoration, Common native wetland plants in the Wellington Region* and *Understanding the 'wet' in wetlands*.
Method 8.3.6: Work with territorial authorities to develop appropriate provisions in district plans which acknowledge landowner issues and the significance of wetlands to the Region.	Greater Wellington considers all district plans and changes to them, and makes submissions on wetland issues. There are shortcomings in application of this method because: • district plans don't always provide suitable land use controls (earthworks and vegetation clearance controls) for the protection of wetlands • it is sometimes unclear whether land use controls lie with Greater Wellington or the territorial authority because there is uncertainty about whether a wetland is in within (regional council control) or outside (territorial authority control) a river or lake bed.

	• In practice, there is usually a poor understanding of wetland hydrology, which makes wetland management via this policy unrealistic.
Method 8.3.7: Encourage co-operation from other organisations and agencies to aid in the preparation of information about regionally significant freshwater fish species. Such information will include species' location, life cycle and habitat requirements, and management.	The Freshwater Ecosystems Programme has collected information on the region's freshwater fishery that is now available to all staff and other organisations. This information includes: the distribution of species in rivers of the region, barriers to fish passage, how to mitigate the effects of fish passage barriers, critical habitat requirements, spawning/life history information and migration times.
Method 8.3.1: Prepare Floodplain Management Plans for the Otaki, Waikanae, and Hutt Rivers to help avoid or mitigate the adverse effects arising from the flood hazard.	This method has been implemented.
Method 8.3.2 Carry out flood hazard assessments for all major floodplains in the Region and the Waiwhetu Stream, the Wainuiomata River, Pinehaven Stream, the Mangaone Stream, the Mangaroa River and the Waitohu Stream.	This method has been implemented.
Method 8.3.3: Complete River Management Scheme Reviews for the Waiohine River, the upper Ruamahanga River, the Waipoua River, the Lower Wairarapa Valley, and the Mangaterere River.	This method has been implemented.
Method 8.3.4: Maintain and enhance flood mitigation assets in river beds of the Region.	This method has been implemented. Implementation has been assisted by the preparation of asset registers for all flood mitigation assets in the region.

Method 8.3.5: Work with territorial authorities to ensure Policy 4.2.19, which allows the maintenance of existing lawful flood mitigation works on floodplains, is recognised in district plans.	This method has, generally, been implemented successfully.
Method 8.3.6: Work with territorial authorities to ensure flood hazard information is made available to them and is included in district plans.	Flood hazard information has been provided to territorial authorities and relevant material included in district plans in many instances.
Method 8.3.7: Together with territorial authorities, provide information to assist members of the community to avoid, remedy, or mitigate the adverse effects arising from the flood hazard.	There is ongoing implementation of this method.
Method 8.3.8: Together with territorial authorities, promote flood warning and community preparedness programmes for communities located on floodplain	There is ongoing implementation of this method.
Method 8.4.1: Use its regular information publications to update the public about the quality of water in the rivers, lakes, aquifers, and wetlands in the Region.	Greater Wellington prepares annual report cards on the state of water quality in the region and a comprehensive State of the Environment Report is prepared every 6 years.
Method 8.4.2: Work with territorial authorities to develop appropriate land use provisions in district plans in order to minimise adverse effects on freshwater quality.	Greater Wellington considers all district plans and changes to them, and makes submissions on freshwater quality issues. There are shortcomings in this approach because: • district plans don't always provide suitable land use controls (earthworks and vegetation clearance controls) for the protection of water bodies

	• territorial authorities will sometimes not control land use effects on water quality because they consider it is a regional council responsibility • In practice, there is usually a poor understanding of water quality management by territorial authorities, which makes effective management via this method unrealistic.
Method 8.4.3: Advocate the maintenance or enhancement of water quality through the resource consent process so that consents issued by territorial authorities do not adversely affect water quality.	Greater Wellington considers territorial authority resource consents for land use, and makes submissions on freshwater quality issues. There are shortcomings in this approach because: • district plans don't always require resource consents for land uses that effect water quality(eg. earthworks and vegetation clearance controls) • territorial authorities will sometimes not control land use effects on water quality because they consider it is a regional council responsibility • In practice, there is usually a poor understanding of water quality management by territorial authorities, which makes effective management via this method unrealistic.
Method 8.4.4: Facilitate the reporting of pollution incidents and unauthorised discharges through the promotion of a Pollution Hotline.	The pollution response "hotline" is now an integral part of the Council's operations.
Method 8.4.5: Develop a resource kit to provide information on the causes, effects, signs and symptoms of poor water quality and ways of avoiding or remedying such problems.	This method is implemented through SMACK kits that enable water quality to be measured by "non-experts". These kits are now used by Care Groups, schools and community groups.

Method 8.4.6: Work with territorial authorities to collect quantitative data on any effects which urban stormwater discharges have on fresh water resources, particularly in the Makoura Stream, Waiwhetu Stream, and Porirua Stream.	Stormwater quality and the quality of urban streams has been investigated with the assistance of territorial authorities, in some cases. Bacterial (*E. Coli*) contamination of urban streams exceeds health guidelines for recreation in most samples taken in recent years. This is the result of cross contamination of stormwater by sewage. Investigation of other contaminants of stormwater has focussed on the Porirua Harbour and stormwater and stream beds flowing into Wellington and Porirua Harbours. These investigations have shown that heavy metals, such as lead and zinc, poly-organic chlorines (pesticides) and polyaromatic hydrocarbons exceed recommended guidelines for aquatic life in some sampling of the sea bed, stream beds, and the water column.
Method 8.4.7: Promote the use of alternative methods, where they are appropriate, for the treatment and/or disposal of stormwater from new subdivisions such as: • the use of water permeable surfaces in new developments to reduce the volume of stormwater leaving a site (e.g., grass swales); and • the use of soak pits for the disposal of stormwater on site, where the soil type is suitable for this purpose; and • the collection (and on-site storage) of stormwater from roofs for re-use (e.g., watering gardens); and • the use of constructed wetlands.	Not much progress has been made on the adoption of alternatives to stormwater piping and discharge without any treatment. Greater Wellington has committed to working with territorial authorities to develop a Stormwater Action Plan for the region. Treatment approaches indicated in this method, and others that are suitable in the region, will be considered in the preparation of the Stormwater Action Plan.

Method 8.4.8: Provide information and conduct publicity campaigns to raise awareness about the adverse effects of disposing of contaminants into stormwater drains and promote alternative means of disposal of liquid contaminants. Protocols will be developed, in consultation with the Traffic Safety Branch of the Police, the Fire Service, Transit NZ and the Territorial Authorities of the Region, about practical ways to reduce contamination of water caused by road crashes and spills on roads.	Through its social marketing campaign, *Be the Difference,* Greater Wellington has raised awareness of stormwater's harmful effects and promoted personal action among residents about what they can do to help keep streams clean. The Council has also prepared a brochure *Save the drain for rain* that sets out stormwater issues and makes suggestions about how to dispose of common household wastes that avoids putting them in stormwater drains. Greater Wellington has meet with the Traffic Safety Branch of the Police, the Fire Service, Transit NZ about the development of protocols to reduce contamination of water caused by road crashes and spills on roads. A rule has been inserted in the Regional Plan for Discharges to Land that addresses this issue and will be considered for the Regional Freshwater Plan when it is reviewed.
Method 8.4.10: Organise a forum/workshop on riparian management in the Region, involving all interested people, tangata whenua and organisations, with the aim of identifying issues of regional importance and priority areas which would benefit from improved riparian management. **Method 8.4.11:** Provide technical support and advice to landowners wishing to implement riparian management on their properties, and assist landowners in developing plans for individual properties.	The Council has implemented methods for riparian management during, or resulting from the development of a Riparian Strategy to minimise impacts of rural land use on freshwater. It was adopted in 2002. The strategy includes pilot projects at the Enaki Stream near Carterton, the Kakariki Stream near Waikanae and the Karori Stream near Wellington, and funding through the *Streams alive* programme for riparian work in high priority catchments. Ration and Glendhu Creeks, the Waitohu, Karori, Owhango and Waihora Streams and the Otaki , Mangaroa, Wainuiomata, Kaiwhata, Waiohine and Upper Ruamahanga Rivers all qualify for *Streams Alive* funding. In other catchments, Greater Wellington will provide landowners with information and advice about riparian management.

Method 8.4.12: Prepare a booklet, in consultation with the agricultural community, detailing the benefits and costs of different riparian management techniques available for mitigating/avoiding the adverse effects of surface run-off of sediment and contaminants; enhancing in-stream habitat for fish and other aquatic organisms, and reducing river bank erosion. **Method 8.4.13:** Investigate other means for providing riparian zones in severely degraded areas, or other methods. This could include use of Task Force Green, or Conservation Corps programmes. **Method 8.4.14:** Implement appropriate riparian management practices in areas under the management or ownership of the Council which are adjacent to water bodies.	
Method 8.5.1: Use its regular information publications to inform the public of: • the minimum flows of rivers and streams; and • the portion of the core allocation remaining available for allocation in each river or stream shown in Table 6.1; and • the proportion of the safe yield which has been allocated for each aquifer.	Greater Wellington prepares annual report cards on the state of water quality in the region and a comprehensive State of the Environment Report is prepared every 6 years.

Method 8.5.2: Work with territorial authorities to develop appropriate land use provisions in district plans in order to minimise adverse effects of land use on aquifer yields, river low flows, and lake and wetland water levels.	Greater Wellington considers all district plans and changes to them, and makes submissions on freshwater quantity issues.
Method 8.5.3: Advocate for the maintenance of water quantity in water bodies through the resource consent process to ensure that land use consents issued by territorial authorities do not adversely effect aquifer yields, river low flows, or lake or wetland levels.	Greater Wellington considers territorial authority resource consents for land use, and makes submissions on land use effects on water quantity issues.
Method 8.5.4: Gather further hydrological, biological, ecological and water quality information as may be necessary to ensure that the objectives and policies of the Plan are achieved in relation to the water takes and flows presented in Tables 6.1 to 6.5.	Flow data is collected in all rivers identified in table 6.1. Relevant information has been is reported in the Council's state of the environment reports, most recently *Measuring up 2005*. Since the Regional Freshwater Plan became operative, instream habitat assessments have been done on the Wainuiomata, Hutt, Waikanae, Waipoua, Kopuaranga, Mangatarere and Upper Ruamahanga Rivers. Data on groundwater has also been collected and is also reported in the Council's state of the environment reports. Review of safe yields of the Waikanae, Hutt, Martinborough, Parkvale and Kahutara groundwater zones are complete. Safe yields for the Waikanae and Hutt groundwater zones are satisfactory, but results from the Wairarapa groundwater zones hint at flaws in previous methodology, prompting a comprehensive review of the Wairarapa groundwater zones that is now underway.

Method 8.5.5: Where practicable, obtain more information to establish desirable minimum flows and approaches to water allocation such as those used in Policy 6.2.1 for the following water bodies where there is potential for water shortages to occur: • Donalds Creek; • Kells Stream; • Mangatarere Stream and catchment; • Moroa/Battersea/Otakura Stream system; • Papawai Stream; • Parkvale/Booths Creek system; • Poterau Stream; • Taunui River; • Taueru River; • Kuripuni Stream; • Boar Bush Stream; • Taits Creek; • Huangarua River; • Makoura Stream; • Ruamahanga River at Wardells; • Ruamahanga River at Mount Bruce; • Turanganui River; and • Waipoua River.	Work is progressing on this method. To date we have completed work and notified plan changes that establish minimum flows and water allocation for the Mangatarere Stream, upper Ruamahanga River and Waipoua. Priorities have been identified for addressing the other rivers and work has begun on the Tauweru River and Otukura Stream.

Method 8.5.6: Use its regular publications to inform users about the benefits of water conservation and the most effective water conservation techniques. **Method 8.5.7:** Promote with other agencies water conservation and efficient use of water through public education and awareness programmes. **Method 8.5.8:** Promote and undertake research into methods that may lead to better water conservation and efficient use, for example, determining the best irrigation methods for areas with different land uses and soil types. **Method 8.5.9:** Encourage water audits by major water users and suppliers to identify areas of wastage and opportunities to conserve or use water more efficiently.	The Utilities Services Division, which supplies Porirua, Wellington, Hutt and Upper Hutt Cities with water, promotes water conservation through print, radio and television. Territorial authorities are carrying out programs to reduce water loss from residential supply and closed pipe reticulation. Irrigation studies in the Wairarapa have been completed that include *Soil classification and characterisation* and *Hydraulic response of Wairarapa soils to irrigation*. However, sufficient work has not yet been completed to translate the findings into conditions on resource consents. To ensure that an adequate amount of water is allocated for this use, while preventing water wastage, a maximum irrigation rate (350 m^3/ha/week) is specified in the Regional Freshwater Plan. To help ensure fair and appropriate allocation of water in the future, a tool for estimating crop water requirements based on soil and climate combinations in the Wairarapa should be developed.
Method 8.5.10: Investigate the use of transferable water permits as a technique for more efficiently allocating water between competing users by: 1. Seeking to ensure that, over the next five years, the Council's knowledge of water resources identified as under pressure is adequate, including: (a) knowledge of users and uses; (b) knowledge of the extent and nature of any adverse effects of water abstractions (including adverse effects relating to the location of the abstraction) on those water bodies; and	Parts (1) and (2) of this method are being implemented through the councils monitoring and investigation of freshwater resources and the collection of information on resource consents. The Recent State of the Environment Report (2005) has gathered together information about resources that are under pressure. Parts (3) and (4) of the method have not been implemented.

(c) appropriate databases, monitoring, enforcement and management systems are in place. 2. Reviewing fresh water resources in the Region that are under pressure, or that are likely to be under pressure, before December 2004 (within five years of this Plan becoming operative). 3. Choosing up to five water bodies that are identified as being under pressure as part of the review, including as an input to this choice a general invitation for groups of water abstractors to nominate their water resource for investigation if they so wish. 4. Assessing, for at least two of these water bodies, whether it is worthwhile to develop proposed rules to permit transfers under section 136(2)(b)(i) of the Act for inclusion in the Regional Freshwater Plan and assessing whether it is worthwhile to develop other methods of facilitating transferability of water permits.	
Method 8.5.11: Investigate the feasibility of employing "user committees" to assist in minimising the effects of any water restrictions on consent holders.	A report that implemented this method was completed in 2003. The use of “User Committees” was not recommended.
Method 8.6.1: Produce and distribute a pamphlet detailing the best practicable options for the installation and siting of culverts in rural areas and identify where landowners can seek further advice.	A brochure *Fish friendly culverts and rock ramps in small streams* has been prepared for landowners.

Method 8.6.2: Promote the inclusion of provisions in district plans that make the subdivision, use and development of land on the floodplain, including the river corridor, inappropriate where: • the effect of flooding increases risk to human life, health, and safety; or • the effect of flooding has significant adverse effects on private or community property, flood flows, or flood mitigation structures and works.	Greater Wellington considers all district plans and changes to them, and makes submissions on freshwater flooding issues.
Method 8.6.3: Promote the inclusion of provisions in district plans to protect the structural integrity and effectiveness of lawful flood mitigation structures and works on floodplains from the effects of subdivision, use, and development.	Greater Wellington considers all district plans and changes to them, and makes submissions on freshwater quantity issues.
Method 8.6.4: Encourage the use of indigenous trees and flaxes for river bank stability purposes, where it is practical to do so, and encourage plantings of indigenous species within river corridors for flood mitigation purposes.	This method is being implemented through the Council's Riparian Strategy discussed in relation to Method 8.4.10 to 8.4.14.

Method 8.6.5: Encourage fencing outside the beds of rivers and lakes where it is a practical option for mitigating the effects of stock grazing on rivers.	This method is being implemented through the Council's Riparian Strategy discussed in relation to Method 8.4.10 to 8.4.14. The Council is also party to the Dairying and Clean Streams Accord along with Fonterra, MfE and the Ministry of Agriculture and Forestry. In our region, Fonterra and Greater Wellington have drawn up an Action Plan to implement the Accord that includes: • The exclusion of dairy cattle from 50 per cent of streams, rivers and lakes by 2007, and 90 per cent by 2012. • Fifty per cent of regular crossing points to have bridges or culverts by 2007, 90 per cent by 2012. • Fifty per cent of regionally significant wetlands to be fenced by 2005, 90 per cent by 2007.
Method 8.6.6: Work with the Department of Conservation to identify the rivers and reaches of rivers used for nesting by indigenous birds and the times of year this occurs.	This method has not been implemented