3 Water Module

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Policies included in the Regional Plan in accordance with the NPS on Freshwater Management

The National Policy Statement on Freshwater Management 2011 (issued by notice in the Gazette on 12 May 2011) directs regional councils to include two policies in their Regional Plans. Council resolved to include these Policies in its Regional Plan on 28 July 2011.The policies are designed as interim measures to be included in plans until such time as plans can be amended through the First Schedule process to give effect to the Freshwater NPS.

Policy A4 of the NPS on Freshwater Management

1. When considering any application for a discharge the consent authority must have regard to the following matters:

    a. the extent to which the discharge would avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water and
    b. the extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.

2. This policy applies to the following discharges (including a diffuse discharge by any person or animal):
    a. a new discharge or
    b. a change or increase in any discharge –

    of any contaminant into fresh water, or onto or into land in circumstances that may result in that contaminant (or, as a result of any natural process from the discharge of that contaminant, any other contaminant) entering fresh water.

3. This policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management takes effect on 1 July 2011.

Policy B7 of the NPS on Freshwater Management

1. When considering any application the consent authority must have regard to the following matters:

    a. the extent to which the change would adversely affect safeguarding the life-supporting capacity of fresh water and of any associated ecosystem and
    b. the extent to which it is feasible and dependable that any adverse effect on the life-supporting capacity of fresh water and of any associated ecosystem resulting from the change would be avoided.

2. This policy applies to:

    a. any new activity and
    b. any change in the character, intensity or scale of any established activity –

    that involves any taking, using, damming or diverting of fresh water or draining of any wetland which is likely to result in any more than minor adverse change in the natural variability of flows or level of any fresh water, compared to that which immediately preceded the commencement of the new activity or the change in the established activity (or in the case of a change in an intermittent or seasonal activity, compared to that on the last occasion on which the activity was carried out).

3.1 Water Resources

Background and Explanation

The Waikato Region's distinctive character is largely derived from the scenic and aesthetic impressions of its lakes, rivers and wetlands*. The character of Waikato's water bodies is diverse, reflecting the large variety of water types including the Waikato River, Lake Taupo, wild rivers, mountain streams and ground water. Associated human uses and values of these water bodies* are diverse and range from domestic and community water supply, irrigation, drainage, electricity generation and waste assimilation through to recreational use and fishing. Water bodies are vitally important to the Region and need to be managed in a sustainable manner. This will ensure that those uses and values, and the natural character of water bodies and their margins, including amenity values, visual characteristics, contact recreation, fisheries, wildlife and aquatic habitat are provided for.

The natural environment is an interconnected system and the processes that occur between water, land, and vegetation are complex and interdependent. It is artificial to deal with these as separate components, and efforts have been made in this Plan to identify and maintain the linkages when creating objectives, policies and methods to manage these resources. Water is a key component of the environment as it is the sustainer of life and the transporter in the system. Water is therefore in demand to sustain and promote life, and the transport or carrying role means that poor resource management in one area can impact on a large downstream area.

A wide range of resource uses place pressure on water resources. Whilst some water bodies contain naturally high levels of some heavy metals or dissolved colour, the introduction of contaminants* from human uses into water bodies can have a significant effect on water quality. Contaminants can be introduced from either point sources or non-point sources:

a) Point sources* include:

i) industrial discharges
ii) sewage discharges
iii) stormwater systems
iv) farm effluent discharges

b) Non-point sources* include:

i) surface run-off from intensive land uses
ii) stock in waterways
iii) agrichemical application
iv) fertiliser application
v) leaching from land uses such as agriculture
vi) diffuse discharges in urbanised areas.

Waikato Regional Council will address non-point source discharges through a combination of education and encouragement and conditions on permitted activities, to gradually change identified inappropriate farming practice. However, more stringent conditions and standards may be used in regulatory methods in the future if no improvement in water quality is detected.

Other pressures occur from the taking or impounding of water. This can affect the availability of the resource and its quality and impact on the associated aquatic ecosystems.

Table 3-1 provides information from the SOE Report about water quality in seven zones based on river catchments and broad ecological features, including geology, climate (altitude, winter temperature), vegetation cover and land use. Table 3-1

indicates that the quality and recreational status of the lower catchments of the major rivers is moderate to poor.

Table 3-1 General Water Quality Status of the Main River Areas

River Area	Aquatic Ecosystem Health	Contact Recreational Status
Upper Waikato River	Good	Good
Lower Waikato River	Moderate	Poor
Upland Waikato	Moderate	Poor
Lowland Waikato	Moderate	Poor
Hauraki	Moderate	Poor
Waipa	Moderate	Poor
Coromandel	Good	Moderate
West Coast	Good	Poor
Taupo Tributaries	Good	Good

For the Lower Waikato River, three major discharges contribute about 20 percent of the summer load of nitrogen to the river as a whole,6 while the remaining point sources probably contribute less than 10 percent. This means that non-point sources and the accumulation of small discharges have a major effect on lowland water quality. Point source loads are even less significant as sources of faecal bacteria to the river as a whole. In this case, three major point sources contribute less than 5 percent of the total faecal load found in the lower river.7 The other point sources are small by comparison, with the three largest discharges indicating that most of the bacteria in the lower river must come from non-point sources. The main sources of these contaminants are likely to be from stock in waterways, effluent discharges to water and run-off from intensive agricultural land uses.

Geothermal Water*
Resource management issues concerning geothermal water, as defined by s2(1) of the RMA, are specifically identified and discussed in Module 7 of this Plan. Refer also Section 3.1.3 of this Plan.

Coastal Marine Area (CMA)*
Waikato Regional Council has an RCP that addresses the management of the coastal resources of the CMA. This Plan recognises the importance of the CMA and acknowledges that it is important to manage the freshwater resources of the Region so that they do not adversely impact on it.

Tangata Whenua
Waikato Regional Council considers it important that the management of water resources in the Region reflects the values and aspirations of both Maori and non-Maori.

For further information refer to Module 2, Matters of Significance to Maori.

Issue and Objective
The following issue and objective are applicable to all the chapters in this Water Module. They set the higher order issues and will be cross-referenced throughout the document. A brief discussion will be found in each chapter describing the relationship of the objective to the issue addressed in the chapter and integration matters. The policies that describe what Waikato Regional Council will do to achieve the objective

6 NIWA (1997) Plant Nutrients in the Waikato River-Effects, Mass Flows, and a Procedure for Calculating Required Reductions. NIWA Client Report EVW70205/2. National Institute of Water & Atmospheric Research, Hamilton. 36 p.

7 NIWA (1997) Waikato River Microbiological Water Quality. NIWA Client Report EVW70209. National Institute of Water & Atmospheric Research, Hamilton. 34 p.

are found in Chapters 3.2 to 3.9 of this Plan and are developed specifically in relation to the issue addressed in each of those chapters.

3.1.1 Issue

The following aspects of the issue apply to all activities throughout the Plan:

a) Point source discharges into water bodies can cause deterioration in water quality and the values for which the water body is being managed.

b) The cumulative effects of non-point source discharges have a significant adverse effect on the water quality of many water bodies in the Region, particularly:
- **i) intensification of land use increases nutrients entering water bodies from diffuse sources, causing nuisance plant growth and poor water clarity**
- **ii) unrestricted stock access to water bodies may case nutrient enrichment and high suspended sediment loads in water bodies**
- **iii) soil disturbance may cause high suspended sediment loads in water bodies**
- **iv) contaminated ground water, seeps and springs flowing to surface water bodies and high levels of phosphorus, nitrogen and faecal coliforms adversely affect contact recreation uses of lowland rivers and lakes in Hauraki and the lower Waikato River and it tributaries**
- **v) ground water quality has degraded due to elevated levels of some contaminants in vulnerable shallow aquifers where land is intensively used, such as in the Hamilton Basin and Pukekohe areas**
- **vi) taking and impounding of water can have cumulative effects and can reduce water quality and quantity.**

c) Increasing demand by people and communities to be able to use water in areas where demand exceeds, or is likely to exceed, supply reduces the range of foreseeable uses of that water.

d) The ability of people and communities to provide for their needs may be limited by inefficient use of the finite water resources.

e) Modification of flow regimes through water takes, damming and diversion can adversely affect water bodies, particularly:
- **i) instream ecological/biological values**
- **ii) recreational values**
- **iii) potential uses of water resource**
- **iv) reduced water quality and quantity.**

f) Damage to the coastal environment, surface water bodies and their margins (including caves) by land use activities, destruction of vegetation, discharges, bank erosion, channelisation structures, modification of flow regimes and changes in water or bed level can:
- **i) reduce instream ecological values**
- **ii) lead to an overall reduction in natural character of water bodies and their margins.**

g) Contamination of both spiritual and physical attributes of water quality, depletion of flows and other disruption to water bodies has the potential to adversely affect the relationship tangata whenua as Kaitiaki have with their identified taonga, the freshwater fishery and flora and fauna in and on the margins of water bodies.

h) The mauri of water can be degraded by changes to flow regimes, discharges of point and non-point source contaminants, over abstraction, drilling and drainage of wetlands. These changes can adversely affect the relationship tangata whenua as Kaitiaki have with water and their taonga, such as waahi tapu, and native flora and fauna that have customary and traditional uses that are in or on the margins of water bodies.

i) The mauri of water is degraded by contaminants and over abstraction and in turn has negative impacts on the mana of Kaitiaki.

j) Deep ground water takes can cause drawdown effects that affect the ability of other users to access the resource, and may reduce the sustainable yield of the resource.

k) Shallow ground water takes can cause adverse effects on surface water by reducing base flow, water quality and water levels in wetlands and lakes.

l) Drainage, surface and ground water takes and land use activities in and around wetlands and cave systems can adversely affect their water levels leading to:

i) reduction of their extent or threatening their continued existence

ii) loss of their natural character.

m) Not enabling the use and development of water resources in the Region may compromise the ability of people and communities to provide for their social, cultural and economic wellbeing and for their health and safety.

3.1.2 Objective

The management of water bodies in a way which ensures:

a) that people are able to take and use water for their social, economic and cultural wellbeing

b) net improvement[8] of water quality across the Region

c) the avoidance of significant adverse effects on aquatic ecosystems

d) the characteristics of flow regimes are enhanced where practicable and justified by the ecological benefits

e) the range of uses of water reliant on the characteristics of flow regimes are maintained or enhanced

f) the range of reasonably foreseeable uses of ground water and surface water are protected

g) inefficient use of the available ground surface water resources is minimised

h) an increase in the extent and quality of the Region's wetlands

i) that significant adverse effects on the relationship tangata whenua as Kaitiaki have with water and their identified taonga such as waahi tapu, and native flora and fauna that have customary and traditional uses in or on the margins of water bodies, are remedied or mitigated

j) the cumulative adverse effects on the relationship tangata whenua as Kaitiaki have with water their identified taonga such as waahi tapu, and native flora and fauna that have customary and traditional uses that are in or on the margins of water bodies are remedied or mitigated

k) the management of non-point source discharges of nutrients, faecal coliforms and sediment to levels that are consistent with the identified purpose and values for which the water body is being managed

l) the natural character of the coastal environment, wetlands and lakes and rivers and their margins (including caves), is preserved and protected from inappropriate use and development

m) ground water quality is maintained or enhanced and ground water takes managed to ensure sustainable yield

n) shallow ground water takes do not adversely affect values for which any potentially affected surface water body is managed

o) concentrations of contaminants leaching from land use activities and non-point source discharges to shallow ground water and surface waters do not reach levels that present significant risks to human health or aquatic ecosystems

[8] For guidance on the interpretation of the term "net" in the plan refer to the policy framework in this Chapter in conjunction with Section 1.3.3 of the RPS.

p) that the positive effects of water resource use activities and associated existing lawfully established infrastructure are recognised, whilst avoiding, remedying or mitigating adverse effects on the environment.

Principal Reasons for Adopting the Objective

The objective sets out the desired end point for management of water bodies in the Region, and is relevant to all chapters in the Water Module as well as other chapters that directly or indirectly affect water bodies, for example chapters dealing with river and lake bed structures, and accelerated erosion.

Part a) sets up the policy framework for enabling activities within the Plan and recognises that people and communities within the Region should be able to take water and carry out activities such as the generation of electricity, water abstraction or waste water discharge, provided adverse effects are avoided, remedied or mitigated.

Part b) recognises that Waikato is a large, diverse Region and water quality varies greatly. There are areas that have high or good quality water and there are areas that need improving, which is illustrated by Table 3-1 in this Chapter. The quality of water can be adversely affected by the discharge of contaminants, which produces adverse effects such as a decrease in amenity values, human health problems, and loss of flora and fauna. The net improvement objective sets a goal to achieve an overall improvement in water quality for the Region's water bodies over time. For guidance on interpretation of this expression refer to the policy framework in this Chapter in conjunction with Section 1.3.3 of the RPS.

The importance of aquatic ecosystems is reflected in part c). The aquatic ecosystems of the Region's water bodies are a significant component of the natural resources and biodiversity of the Region. It is important to avoid significant adverse effects on aquatic ecosystems as they are linked to the fisheries and recreational values that the water bodies provide.

Flow regimes as provided for in parts d) and e) are primarily affected by the demand for water from a particular source. While some sources in the Region are plentiful, others are limited. When excessive water is taken from water bodies, water quality can be degraded affecting instream uses, aquatic habitats, recreational uses, aesthetic character, supporting ecosystems and other environmental values. Flow regimes are also affected by water storage and water flow control structures.

Part f) recognises the need to protect water resources for the future and refers to the full range of uses, that encapsulate everything from water availability for ecosystem maintenance, to human drinking and irrigation needs.

There is only a limited water resource available for use in the Region. Part g) recognises that as the demands for this resource continue to increase, it will be important to ensure efficient use of the resource if benefits to the community are to be maximised.

Land uses in lowland parts of the Region rely on drainage to maintain productive farming activity. However in part h) wetlands (including peatlands) are recognised as vital ecosystems that contain a rich variety of flora and fauna. They often have a role in helping to reduce flooding and water pollution and are highly valued by individuals, local communities and tangata whenua. Drainage, taking of water and catchment works can affect the habitat and character of wetlands by changing flow regimes. Land use and development such as reclamation, peat mining and deposition of landfill material can also have significant adverse effects. Refer to Chapters 3.6 and 3.7 of this Plan for provisions relating to drainage and wetland management where there is a direct conflict between drainage and wetland protection.

The mauri of water resources is dependent on the physical and spiritual health of the water. Contamination or degradation of water has the effect of diminishing its mauri. Tangata whenua who take an active role as Kaitiaki are involved in the spiritual and physical aspects of their local natural resources, and as such are best placed to identify taonga and customary and traditional uses of those resources. Part i) recognises the relationship tangata whenua have with the water and the importance of avoiding large scale or irreversible adverse effects when managing the other stated objectives of water quality, flow regimes and wetlands.

Part j) recognises that there are effects which may be smaller scale but which together add up to adversely affect waahi tapu, fisheries and other taonga; and which are more easily remedied or mitigated as they occur, through resource consent conditions or non-regulatory methods such as education or incentives.

Part k) lists the main contaminants within non-point or diffuse source discharges that are adversely affecting water bodies and which the Water Module and parts of the rest of the Plan such as the Accelerated Erosion, Discharges to Land and River and Lake Beds chapters will need to address.

Many of the Region's lakes, rivers, wetlands and the surrounding margins of land, have natural character values, where the influence of nature dominates the influence of humans, despite most areas being modified in some way. Part l) recognises the need to consider the effect of use and development on the natural character of the coastal environment, water bodies and their margins. The Plan's jurisdiction in the coastal environment takes over from that of the RCP on the landward side of mean high water spring. Although the inland boundary of the coastal environment will vary, it is generally understood to be where the coast is no longer a significant element.

Part m) recognises that the groundwater resource is valued for its existing general good quality and availability. The objective introduces the concept of sustainable yield into the management of groundwater takes. The adoption of this concept means that when managing the use and development of the regional groundwater resource, Waikato Regional Council will ensure the reasonably foreseeable needs of future generations are met by avoiding the adverse effects identified in Policy 3.3.3(2).

Part n) recognises that stream depletion can occur when groundwater takes are near surface water bodies where there is a connection between ground and surface water.

Part o) recognises that non-point source and land based discharges that may have minor adverse effects on their own, will have a cumulative adverse effect if they reach waterbodies at concentrations adversely affecting non human life or levels exceeding human health guidelines.

The importance of water use activities and existing lawfully established infrastructure is recognised in part p). The use of water resources, for example for community water supply and generating electricity, generates wide-ranging benefits. The value of these activities needs to be recognised while ensuring that their adverse effects on the environment are appropriately addressed.

The issue statement identifies that karst systems are an important aspect of the Region's water resources While no objective specifically refers to water related issues in cave and karst environments, achieving the objectives related to water quality, aquatic ecosystems and water quantity will ensure that water in the Region's karst areas is managed appropriately.

3.1.3 Clarification of the Relationship between Water and Geothermal Modules

a) Objectives and Policies

The RMA definition of 'water' encompasses all water, including 'geothermal water' (both terms are defined in s2of the RMA). The Geothermal Module of this Plan identifies and discusses resource management issues that specifically concern geothermal water and sets out objectives and policies applying to geothermal water and the effects of the take, use, and discharge of geothermal energy and fluid on other resources, including fresh water.

Objectives and policies applying to other activities relating to fresh water are contained within this module.

b) Rules

This module contains rules addressing the taking, use, and associated discharge of fresh water. However, some of the rules within Module 3 address the taking, use or associated discharge of small amounts of both geothermal water and fresh water. Where this is the case, it is specifically stated in the rule. Module 3 rules that specifically state that they include geothermal water, are as follows:

Rule 3.3.4.11 which applies to the taking of water for well or aquifer testing purposes.
The rules within Section 3.5.8, which apply to discharges from well or aquifer testing.
The rules within Chapter 3.8, which apply to drilling activities.

The Geothermal Module also includes Rules 7.6.6.1 to 7.6.6.3, which address other activities in the vicinity of Significant Geothermal Features. Where activities in the vicinity of Significant Features are regulated by Rules 7.6.6.1 to 7.6.6.3 they are not also covered by rules elsewhere in the Plan.

3.1.4 Monitoring Options

Objective	Indicators/ Measurements	Types of Monitoring	Information Source
People are able to take and use water for their social, economic and cultural wellbeing.	Enquiries, submissions and complaints. Water quality indicators.	Regional trend monitoring, investigations and surveys.	Perception surveys database. Regional economy database. Complaints, enquiries and submissions database. Water quality database.
Net improvement of water quality across the Region.	Water quality indicators. Ecosystem health.	Regional trend monitoring. Compliance monitoring.	Water quality and ecology databases. Compliance monitoring database.
The avoidance of significant adverse effects on aquatic ecosystems.	Water quality indicators. Ecosystems health.	Regional trend monitoring. Compliance monitoring.	Water quality and ecology databases. Compliance monitoring database.
The characteristics of flow regimes enhanced where practicable and justified by ecological benefits.	Flow records. Water quality indicators. Ecosystems health. Water level fluctuation and variability.	Regional trend monitoring. Compliance monitoring.	Water quantity and ecology databases. Compliance monitoring database.
The range of uses of water reliant on the characteristics of flow regimes maintained or enhanced.	Flow records. Water quality indicators. Ecosystem health. Water level fluctuation and variability.	Regional trend monitoring. Compliance monitoring.	Water quantity and ecology databases. Compliance monitoring database.
The range of reasonably foreseeable uses of ground and surface water are protected.	Flow records. Water quality indicators. Ecosystem health. Water level fluctuation and variability.	Regional trend monitoring. Compliance monitoring.	Water quantity and ecology databases. Compliance monitoring databases
Inefficient use of the available ground and surface water resources is minimised.	Compliance with crop irrigation guidelines. Efficient use of water. Number of water permits transferred.	Regional trend monitoring. Compliance monitoring.	Water quantity and ecology databases. Compliance monitoring databases.
An increase in the extent and quality of the Region's wetlands.	Area of wetlands. Land cover. Land use. Ground water table. Area of wetlands in reserve or covenanted.	Regional trend monitoring. Compliance monitoring.	Vegetation and wetlands database. Compliance monitoring database.
That significant adverse effects on the relationship tangata whenua have with their identified taonga such as waahi tapu, and native flora and fauna in or on the margins of water bodies that have customary or traditional uses, are avoided.	Complaints from tangata whenua. Damage to areas of significance to tangata whenua.	Regional trend monitoring. Compliance monitoring.	Iwi/Maori databases. Perception surveys database.
That cumulative adverse effects on the relationship that tangata whenua have with their identified taonga such as waahi tapu, and native flora and fauna in or on the margins of water bodies that have customary or traditional uses, are remedied or mitigated.	Complaints from tangata whenua. Damage to areas of significance to tangata whenua.	Regional trend monitoring. Compliance monitoring.	Iwi/Maori databases. Perception surveys database.

Objective	Indicators/ Measurements	Types of Monitoring	Information Source
The management of non-point source discharges of nutrients, faecal coliforms and sediment to levels that are consistent with the identified purpose and values for which the water body is being managed.	Water quality indicators. Ecosystem health.	Regional trend monitoring. Compliance monitoring. Investigations and surveys.	Water quality and ecology databases. Compliance monitoring database. Dairy shed database. Perception surveys database.
The natural character of wetlands and lakes and rivers and their margins, (including caves) is preserved and protected from inappropriate use and development.	Water quality indicators. Ecosystem health.	Regional trend monitoring. Compliance monitoring. Investigations and surveys.	Water quality and ecology databases. Compliance monitoring database. Dairy shed database. Perception surveys database.
Ground water quality is maintained or enhanced and ground water takes managed to ensure sustainable yield.	Water quality indicators. Ecosystem health.	Regional trend monitoring. Compliance monitoring.	Water quantity database. Water wells database. Geothermal database.
Shallow ground water takes do not adversely affect values for which any potentially affected surface water body is being managed.	Water quality indicators. Ecosystem health.	Regional trend monitoring. Compliance monitoring.	Water quantity database. Water wells database. Geothermal database.
Concentrations of contaminants leaching from land use activities and non point source discharges to shallow ground water and surface waters do not reach levels that present significant risks to human health.	Water quality indicators. Ecosystem health.	Regional trend monitoring. Compliance monitoring.	Water quantity database. Water wells database. Geothermal database.
That the positive benefits of water resource use activities and associated existing lawfully established infrastructure are recognised, whilst avoiding, remedying or mitigating adverse effects on the environment.	Economic Indicators. Enquiries, submissions and complaints.	Regional trend monitoring, investigations and surveys.	Perception surveys database. Regional economy database. Complaints, enquiries and submissions database.

3.2 Management of Water Resources

The Relationship Between Chapter 3.2 and the Rest of the Water Module

This Chapter contains a set of the general policies and methods that apply to the management of water quality and flow regimes in the Region. This generic policy regime is to be read in conjunction with the more specific policies and methods that appear in the other issues or resource specific chapters of this Plan. Taken as a whole the policies give effect to the over-arching objectives of Module 1 and the Water Management Objective of Chapter 3.1.

The water management classification system defined in this Chapter acts in conjunction with the more specific objectives and policies in other relevant chapters of this Plan to achieve Objective 3.1.2 a), b), c) and p). The classes also assist in achieving other objectives (for example 3.1.2 d) and n)).

Water Management Classes

The water management classification system established in this Chapter is one of a range of management tools that is used in the Region to balance the use, development and protection of the water resource.

The reasons for developing water management classes are set out in the Waikato RPS under the issues of water quality and flow regimes. Implementation methods in this section provide direction for the development and application of water quality classes through regional plans.

The classifications highlight characteristics of water bodies in the Region that are important for both resource users and their ecological and recreational values. The characteristics that are identified are all potentially threatened by the resource management issues identified in Section 3.1.1 of the Plan.

3.2.1 Issue

Refer to Issue 3.1.1.

3.2.2 Objective

Refer to Objective 3.1.2.

3.2.3 Policies

Policy 1: Management of Water Bodies

Manage all water bodies to enable a range of water use activities, whilst ensuring that a net improvement in water quality across the Region is achieved over time through:

a) Classifying and mapping water bodies based on the characteristics for which they are valued and implementing the classification through a mixture of regulatory and non-regulatory methods.
b) Maintaining overall water quality in areas where it is high, and in other water bodies, avoiding, remedying or mitigating cumulative degradation of water quality from the effects of resource use activities.
c) Enhancing the quality of degraded waterbodies.
d) Providing for the mitigation and remediation of adverse effects in accordance with Section 1.3.3 of the Waikato Regional Policy Statement.

e) Recognising the positive benefits to people and communities arising from use or development of water resources and by taking account of existing uses of water and the associated lawfully established infrastructure.

Policy 2: Managing Degraded[9] Water Bodies

Enhance the quality of degraded water through improved management of activities that affect water bodies so that::

a) For activities controlled by rules in the Plan:
   i) discharges to water will not further degrade water quality with respect to those parameters of the relevant class(es) for that water body that are not currently met
   ii) land-based treatment systems will be promoted where soil type and drainage will allow, and where adverse effects are less than the adverse effects of direct discharges into water
   iii) water allocation takes into account the additional adverse effect of reduced flow in degraded waters on aquatic ecosystems and human uses and values.
b) For activities covered by non-regulatory methods in the Plan, promote:
   i) land management methods that reduce non-point source discharges
   ii) riparian management that mitigates the effect of non-point source discharges on water bodies.

Policy 3: Natural Character

Recognise, and where relevant provide for, the following characteristics when considering the preservation of the natural character of lakes and rivers and their margins and the protection of them from inappropriate use and development:

a) Diversity and composition of aquatic and riparian habitat.
b) Topography and physical composition of river and lake beds and the course of the river.
c) The natural flow characteristics and hydraulic processes (such as sediment transport) of rivers and streams or the pattern and range of water level fluctuations that occur naturally in rivers and lakes.
d) Any significant natural features of the lakes and rivers and their margins.

Policy 4: Waikato Region Surface Water Class

Enable the use of all surface water bodies in the Region, provided that:

a) Any significant adverse effects on existing aquatic ecosystems are avoided, remedied or mitigated.
b) Intake structures are designed to minimise fish entrapment.
c) Any conspicuous change in visual colour or clarity is avoided, remedied or mitigated.
d) The water body is not tainted or contaminated to the extent that it is unpalatable or unsuitable for consumption by humans after treatment (equivalent to coagulation, filtration and disinfection).
e) The water body is not tainted or contaminated to the extent that it is unsuitable for irrigation or stock watering.

Policy 5: Natural State Water Class

The purpose of the natural state water class is to protect the flow regime, water quality and riparian and aquatic habitat for indigenous species in order to maintain the aesthetic and intrinsic values derived from the unmodified or largely unmodified nature of the catchment. These are outstanding waterbodies and important habitats because they are unmodified or substantially unmodified by human intervention.

[9] Degraded water bodies are those which are modified such that the purpose and characteristics of the relevant classes as defined by Policies 4 to 7 are not met. Environmental monitoring and indicators will be used in future to provide guidance on which water bodies in the Region are considered degraded.

Policy 6: Contact Recreation Water Class

The purpose of the contact recreation class is to provide a safe water quality environment for contact recreation in all rivers, streams, and lakes with significant contact recreational use by:

a) Avoiding reductions in clarity that make the water unsuitable for contact recreation.
b) Avoiding contamination to levels that represent a significant risk to human health or to levels that would render the water body unsuitable for contact recreation.
c) Avoiding the development of bacterial and/or fungal growths that are visible to the naked eye.
d) Avoiding the development of periphyton growths or mats to the extent that they cover more than 25% of the bed of the water body.

Policy 7: Fishery Class

The purpose of the fishery class is to maintain or enhance existing water quality and aquatic habitat in water bodies that currently support a diverse range of fish species and fish habitats with significant conservation values[10], or which support significant recreational, traditional or commercial fisheries so that for these fisheries, trout or indigenous fish can complete their life cycles and/or maintain self-sustaining populations and managed trout and indigenous fisheries can be sustained.

This will include consideration of the need to:

a) Minimise fish entrapment at water intake structures.
b) Minimise adverse effects on fish spawning patterns in areas where spawning occurs
c) minimise adverse effects of sediment loads and other contaminants on fish or their habitat.
d) Maintain water temperatures and dissolved oxygen levels that are suitable for aquatic habitat and spawning.
e) Ensure that fish living in these waters are not rendered unsuitable for human consumption by the presence of contaminants.
f) Minimise structural or temperature barriers and changes in flow regimes that would otherwise prevent fish from completing their life cycle and/or maintaining self sustaining populations, including migration and spawning.
g) Minimise the adverse effects of physical disturbance to aquatic habitat.

Exception

- The main stem of the Waikato River (from Lake Taupo to Port Waikato) and the main stem of the Hinemaiaia River from the HB dam to the base of the HA dam are mapped "Significant Trout Fisheries and Trout Habitat" Water Class. However, it is acknowledged that significant trout spawning does not occur in these main stems. Accordingly, matters relating to trout spawning habitat in Policy 7 do not apply to the main stem of the Waikato River or the specified stretch of the main stem of the Hinemaiaia but do apply to their respective tributaries.

Policy 8: Reasonable Mixing

The zone of reasonable mixing is the area within which a discharge into water (including any discharge that occurs subsequent to a discharge onto or into land) does not need to achieve the standards specified in the water management class for the receiving water body. The size of the mixing zone must be minimised as far as is practicable and will be determined on a case-by-case basis, including consideration of the following matters:

a) The nature of the effluent, including its flow rate, composition and contaminant concentrations.

[10] Fish habitats with significant conservation values are those with a diverse range of indigenous fish species or populations of rare or threatened indigenous fish.

b) River flow rate and flow characteristics.
c) The design of the outfall.
d) The depth, velocity and rate of mixing in the receiving water body.
e) Existing contaminant concentrations in the receiving water body both upstream and downstream of the discharge point and the assimilative capacity of the water body.
f) The frequency of the discharge.
g) The speed with which any contaminants will be diluted.
h) The ability of the discharger to alter the location of the discharge and the mixing characteristics of the outfall so as to ensure that adverse effects of the discharge beyond the zone of non-compliance are not inconsistent with the purpose for which the water body is being managed.
i) Whether the discharger has taken all practicable steps to minimise the concentration and volume of contaminants at source.
j) Any effects of the mixing zone on other users of the water body.
k) The extent of adverse effects within the mixing zone.

Explanation and Principal Reasons for Adopting the Policies

The policies and water management classes detailed in this Chapter have been developed as an overarching policy framework for managing aspects of the Region's surface waters addressed by Objective 3.1.2 a), b), c), d) and e) of the Plan. Where resource use activities are likely to affect water quality, this policy framework is referred to in the more specific policy frameworks that appear elsewhere in the Plan. The other chapters of this Plan contain policies and methods that specifically address the other objectives of the water module.

Policy 1 sets the overall direction for Waikato Regional Council's management of the Region's water resources with particular regard to the achievement of Objective 3.1.2 a), b) and c). The policy provides a direct link between the classification methods applied in this Plan and the Regional Policy Statement. In particular, it clarifies the implementation of the net improvement approach as set out in Section 1.3.3 of the RPS and provides clear recognition of the value of existing infrastructure. Further guidance is provided by the water management classes which describe the purposes and characteristics for which water bodies will be managed in Policies 4 to 7.

Policy 2 describes in further detail how the net improvement objective and Policy 1 will be pursued in the case of water bodies that are considered to be degraded. The focus of the Policy is to achieve an enhancement in water quality in degraded water bodies compared with the actual water quality in those water bodies existing at the time of determining a resource consent application, including the effects on water quality of any existing discharge which is subject to an application for a new consent.

Natural character is a set of interdependent qualities that together give an area its recognisable character, and this will vary widely through the Region. **Policy 3** sets out the aspects of natural character that will be considered in regional plan changes, as well as in the consideration of any relevant consent application that affects the coastal environment on the landward side of mean high water spring, and water bodies and their margins. The policy lists the aspects of natural character that fall within the functions of a regional council. Other aspects fall within the functions of territorial authorities.

Policies 4 to 7 provide a statement of the purpose for which a water body will be managed when it is classified as a specific class or classes. The policies also provide assessment criteria to guide the case-by-case assessment of resource consent applications.

Policy 4 describes the purpose of the Waikato Region Surface Water Class. This class applies to all surface water bodies of the Region and implements Objective 3.1.2 a). This class clearly identifies that the water resources of the Region should be available to be used in accordance with Objective 3.1.2 a) and e) provided that adverse effects are adequately avoided, remedied or mitigated.

The other Water Management Classes identify only those waters that are significant in relation to particular characteristics. For example, although indigenous fish may be found in many streams throughout the Waikato Region, only those waters that have been investigated by fisheries experts and found to contain either significant diversity or populations of indigenous fish have been identified in that class and shown in the Water Management Class Maps. Likewise, Contact Recreation Class waterbodies are those that are subject to significant contact recreational use by the community.

Policy 5 sets out the overall purpose of the Natural State Water Class which identifies those waters within the Region that are in a naturally unmodified or substantially unmodified state. These Natural State Waters are valued for their aesthetic and intrinsic values and are highly valued as sources of high biodiversity, stable flow regimes and high water quality. For these reasons, use of and discharges to Natural State Waters have been controlled by rules in the other chapters of this Water Module.

Policy 7, Fishery Class, describes the purpose for which water bodies mapped as Significant Indigenous Fisheries and Habitat and Significant Trout Fisheries and Trout Habitat, are to be managed. It lists the matters that need to be considered when assessing resource consent applications that have the potential to affect the fishery values of these water bodies. This class does not distinguish between areas that are significant habitat, and areas which are also significant spawning locations. It is noted that not all Fishery Class water bodies are significant spawning areas. Two specific examples of these are given in the exception to the policy (the main stem of the Waikato River and a section of the main stem of the Hinemaiaia River).

Policy 8 provides assessment criteria to help guide decisions on the size of mixing zone that is reasonable for any given discharge. The policy explicitly extends the concept of reasonable mixing to discharges onto or into land that may result in contaminants entering water. This means that the reasonable mixing test will be applied to land disposal of effluent. This is necessary to ensure that any subsequent effects on surface water from discharges to land are managed appropriately. To minimise the extent of the non-compliance zone in accordance with this policy, mixing needs to be as rapid as practicable. The effect of the policy is that the size of the mixing zone that is considered reasonable will be minimised. In many instances this will mean that the size of the reasonable mixing zone will be the outermost extent of the initial mixing zone.

3.2.4 Implementation Methods – Water Management Classes and Standards

3.2.4.1 Water Management Classes

Waikato Regional Council will implement water management classes:

a) by using water quality standards for each class as a basis for compliance with relevant permitted activity rules
b) by having regard to the policy of each class when assessing activities requiring resource consents that affect water bodies
c) by using the Standards to provide guidance for consent applicants as one possible means of achieving the purpose of the class as described in the policies in Section 3.2.3
d) by applying the strictest standard for permitted activities where more than one water management class applies to a water body

e) by having regard to all of the relevant water management class policies that apply to a water body when making decisions on resource consent applications and where two policies address the same issue particular regard will be had to the more stringent policy in regard to this issue
f) as a desired environmental outcome for non-regulatory methods in the Plan that relate to water bodies
g) to provide Territorial Authorities with guidance for managing the effects of land use activities on water bodies
h) by allowing new information on the standards and considerations, or the area covered by any class, to be included in assessments of resource consents.

Advisory Note:

- This class does not apply to geothermal surface water, that is, water heated to above 30 degrees Celsius. Policies 6, 7, 8, 9, 10 and 13 of Chapter 7.4 provide guidance on how the uses and values of the surface outflows of geothermal water will be managed.

3.2.4.2 Waikato Region Surface Water Class Standards

For resource consent applications Method 3.2.4.1 sets out how the classes will be had regard to.

The standards listed must be met where referred to in relevant permitted activity rules. The standards shall apply:

a) after reasonable mixing of any contaminant or water with the receiving water and disregard the effect of any natural perturbations that may affect the water
b) to all surface water irrespective of whether the waters may also be subject to other water classification standards.

Standards

a) The following shall not be allowed if they have any significant adverse effects on existing aquatic ecosystems:
    i) changes in dissolved oxygen
    ii) changes in flow regimes due to instream structures
    iii) changes in pH
    iv) increases in deposition of bed sediments
    v) increases in undesirable biological growths
    vi) discharge of a contaminant.
b) As a result of added heat, the water temperature shall not be changed by more than three degrees Celsius.
c) All water intake structures shall be screened with a mesh aperture size not exceeding three millimetres in diameter at locations less than 100 metres above mean sea level, or five millimetres in diameter at locations greater than 100 metres above mean sea level.
d) The maximum intake velocity for any water intake structures shall not exceed 0.3 metres per second.
e) Any discharge into, or utilisation of, the water resource shall not cause a conspicuous change in visual colour or clarity.
f) The discharge of suspended solids shall comply with the standards in Section 3.2.4.5.
g) The water shall not be tainted or contaminated so as to make it unpalatable or unsuitable for consumption by humans after treatment (equivalent to coagulation, filtration and disinfection).
h) The water shall not be tainted or contaminated so as to make it unsuitable for irrigation.

Advisory Note:

- This class does not apply to geothermal surface water, that is, water heated to above 30 degrees Celsius. Policies 9 and 10 of Chapter 7.4 provide guidance on how the uses and values of the surface outflows of geothermal water will be managed.

3.2.4.3 Natural State Water Class

For resource consent applications Method 3.2.4.1 sets out how the classes will be had regard to.

The standards listed must be met where referred to in relevant permitted activity rules. The standards shall apply:

a) after reasonable mixing of any contaminant or water with the receiving water and disregard the effect of any natural perturbations that may affect the water
b) to all surface water mapped as Natural State Water Class on the Water Management Class Maps, excluding those areas listed in Table 3-2 below.

Standards

Water quality and flow regimes of Natural State Waters shall not be altered in any way that may compromise their aquatic riparian habitat value for indigenous species. The standards will not apply in those locations listed in Table 3-2.

Table 3-2 Locations Where Natural State Water Class Standard Does Not Apply

Holder of Surface Water Take	Map Reference
Matamata-Piako District Council	T13:554-003
Matamata-Piako District Council	T13:508-034
Matamata-Piako District Council	T13:554-003
Matamata-Piako District Council	T13:553-006
Matamata-Piako District Council	T14:639-798
Thames Coromandel District Council	T11:613-622
Waipa District Council	S15:955-503
Waipa District Council	S15:977-504
Otorohanga District Council	T16:400-257
Otorohanga District Council	T16:377-277
Taupo District Council	U18:733-723
Franklin District Council	R13:637-214
Hauraki District Council: Walmsley Dam	T13:2761839 ; 6423371
Hauraki District Council: Waitete Dam 1	T13: 2759327 ; 6421505
Hauraki District Council: Waitete Dam 2	T13: 2758962 ; 6421135
Hauraki District Council: Waikino Dam	T13: 2754515 ; 6419391
Hauraki District Council: Mackaytown Dam	T13: 2752221 ; 6418039
Hauraki District Council: Waitawheta Intake	T13: 511 ; 416
Hauraki District Council: Ohinemuri Dam No. 1	T13: 2750159; 6420650
Hauraki District Council: Ohinemuri Dam No. 2	T13: 2749946; 6420781
Hauraki District Council: Puriri Intake	T12: 2747900; 6439779
Hauraki District Council: Kaimanawa Intake	T13: 2751398; 6429247

3.2.4.4 Contact Recreation Water Class

For resource consent applications Method 3.2.4.1 sets out how the classes will be had regard to.

The standards listed must be met where referred to in relevant permitted activity rules. The standards shall apply:

a) after reasonable mixing of any contaminant or water with the receiving water and disregard the effect of any natural perturbations that may affect the water
b) to all surface water mapped as Contact Recreation Class on the Water Management Class Maps.

Standards

a) Visual Clarity:
   i) The black disk horizontal visibility* of the waters shall be greater than 1.6 metres.
b) Contaminants:
   i) The median concentration of *E. coli* of at least seven samples taken throughout the bathing season (1 December to 1 March) in dry weather conditions shall not exceed 126 *E. coli* per 100 millilitres. Sampling is to be undertaken between 9 am and 6 pm, at a depth of 300 millimetres. Single-sample maximum shall not exceed 235 *E. coli* per 100 millilitres.
   ii) The waters shall not be rendered unsuitable for contact recreation activities by the presence of contaminants.
c) Undesirable Biological Growths:
   i) Bacterial and/or fungal slime growth shall not be visible to the naked eye as plumose growths or mats.
   ii) The seasonal maximum cover of stream or river beds by periphyton as filamentous growths or mats (> 3 millimetres thick) shall not exceed 40 percent and the biomass on the bed shall not exceed 100 milligrams chlorophyll a[11] per square metre over a representative reach.

3.2.4.5 Fishery Class

For resource consent applications method 3.2.4.1 sets out how the classes will be had regard to.

The standards listed must be met where referred to in relevant permitted activity rules. The standards shall apply:

a) after reasonable mixing of any contaminant or water with the receiving water and disregard the effect of natural perturbations that may affect the water
b) to all surface water mapped as Significant Trout Fisheries and Trout Habitat Class or Significant Indigenous Fisheries and Fish Habitat Class on the Water Management Class Maps.

Standards

a) Significant Indigenous Fisheries and Fish Habitat:
   i) All water intake structures shall be screened with a mesh aperture size not exceeding 1.5 millimetres in diameter at locations less than 100 metres above mean sea level, or three millimetres in diameter at locations greater than 100 metres above mean sea level.
   ii) The maximum intake velocity for any water intake structures shall not exceed 0.3 metres per second.

11 Chlorophyll a is a common photosynthetic pigment in plants.

iii) The discharge of suspended solids shall comply with the standards in Section 3.2.4.6.
iv) No structure or activity that will prevent the natural passage of fish or has the potential to do so, shall be constructed or undertaken unless provision is made for the maintenance of fish passage both upstream and downstream.
v) Where water is to be taken or diverted from or into any water, sufficient flow and/or water depth shall be maintained to allow for the unimpeded passage of fish at all times and for the maintenance of fish habitat and spawning.
vi) As a result of added heat, the temperature of the water shall not be changed by more than 3 degrees Celsius. The temperature of the water shall not be caused to exceed 25 degrees Celsius as a result of added heat and shall not adversely affect the passage or spawning of fish.
vii) Ammoniacal-nitrogen shall not exceed 0.88 grams of nitrogen per cubic metre.

b) Significant Trout Fisheries and Trout Habitat:
i) All water intake structures shall be screened with a mesh aperture size not exceeding three millimetres in diameter.
ii) The maximum intake velocity for any water intake structures shall not exceed 0.3 metres per second.
iii) The discharge of suspended solids shall comply with the standards in Section 3.2.4.5.
iv) As a result of added heat, the temperature of the water shall not be changed by more than 3 degrees Celsius, and shall not exceed 20 degrees Celsius at any time. Where spawning occurs the temperature shall not be caused to exceed 12 degrees Celsius between May and September.
v) Where water is to be taken or diverted from or into any water body, sufficient flow and/or water depth shall be maintained to allow for the unimpeded passage of fish at all times and for the maintenance of fish habitat and spawning.
vi) The discharge shall not cause dissolved oxygen to fall below 80 percent of saturation concentration. If the concentration of dissolved oxygen in the receiving environment is below 80 percent saturation concentration, any discharge into the water shall not lower it further.
vii) Fish shall not be rendered unsuitable for human consumption by the presence of contaminants.
viii) Ammoniacal-nitrogen shall not exceed 0.88 grams of nitrogen per cubic metre.
ix) No structure or activity that will prevent the natural passage of fish or has the potential to do so, shall be constructed or undertaken unless provision is made for the maintenance of fish passage both upstream and downstream.

Advisory Note:

- With respect to structures in flowing water bodies, liaison with DoC regarding the requirements of the Freshwater Fish Regulations 1993 should be undertaken and also refer to Chapter 4.2 of this Plan.

Exception:

- The main stem of the Waikato River (from Lake Taupo to Port Waikato) and the main stem of the Hinemaiaia River from the HB dam to the base of the HA dam are mapped "Significant Trout Fisheries and Trout Habitat" Water Class. However, it is acknowledged that significant trout spawning does not occur in these main stems (as distinct from their tributaries). Accordingly, for the avoidance of doubt, it is recorded that those components of b) iv) and v) specific to spawning do not apply to the main stem of the Waikato River or the specified stretch of the main stem of the Hinemaiaia River but do apply to their respective tributaries.

3.2.4.6 Suspended Solids Standards

The environmental effects of suspended solids discharges for activities requiring consent will be assessed on a case-by-case basis and appropriate standards set.

The following suspended solids standards must be met where referred to in relevant permitted activity rules relating to discharges, or activities that may result in a discharge, to surface water bodies:

a) The activity or discharge shall not increase the concentration of suspended solids in the receiving water by more than 10 percent; and either
b) The suspended solids concentration of the discharge shall not exceed 100 grams per cubic metre; or
c) The activity or discharge shall not result in any of the following receiving water standards being breached:
    i) in Indigenous Fisheries and Fish Habitat Class waters – 80 grams per cubic metre suspended solids concentration
    ii) in Significant Trout Fisheries and Trout Habitat Class waters – 25 grams per cubic metre suspended solids concentration
    iii) in Contact Recreation Class waters – black disc horizontal visibility greater than 1.6 metres.

Standards a), b) and c) apply, except where the suspended solids concentration in the receiving water is greater, at the time and location of discharge or of undertaking the activity, than the standards specified. Then there shall not be any increase (i.e. further deterioration) in the receiving water suspended solids concentration as a result of the activity or discharge.

The point at which compliance with this standard shall be measured is:

i) For rivers and streams (including Hydro Electricity Reservoirs): at a distance downstream of the discharge point (or site of the activity) which is no more than three times the width of the river or stream and which in any instance does not exceed 200 metres from the point of discharge.
ii) For lakes (other than Hydro Electricity Reservoirs): at a distance no more than 15 metres from the location of the discharge or the activity.

Advisory Notes:

- As Hydro Electricity Reservoirs have significant flows it is more appropriate to use the river compliance point (maximum of 200m from point of discharge), rather than one intended for lakes with very low current or flow velocities.
- With respect to the erection, reconstruction, placement, alteration or removal of structures in the beds of lakes and rivers where suspended solids concentrations are increased due to disturbance of the bed, but a new discharge of suspended solids to water has not occurred, then Rule 4.2.21 in Chapter 4.2 of this Plan will apply.

3.2.4.7 Standards for Maximum and Minimum Flows and Levels

There are a number of maximum and minimum flows and levels that have been established under the Water and Soil Conservation Act 1967 and were adopted as provisions in the Transitional Regional Plan. These flows and levels are carried over into this Plan. New levels have also been established under the Resource Management Act 1991 and the Waikato Regional Plan.

1. Lake Waahi Lake Level

Minimum water level for Lake Waahi is 7.8 metres (Moturiki datum).

2. Mangatawhiri River and Tributaries

Minimum acceptable flows for the Mangatawhiri River and its tributaries as are follows:

Stream/River	Site	Map Reference	Minimum Acceptable Flow (l/s)
Pouraureroa	Pendergast Rd	S12:957418	30.0
Pokeno	Hitchens Rd	S12:895374	19.0
Taniwhaora	End Deans Rd	S12:907385	10.5
Waipunga	SH 2	S12:918403	14.0
Waipunga	SH 2	S12:922407	7.0
Waipunga	SH 2	S12:933409	3.0
Pouraureroa	Pendergast Rd	S12:957418	30.0
Mangatawhiri	SH 2	S12:997427	252.0
Mangatawhiri	SH 1	S12:915358	360.0

3. **Lake Kimihia Lake Level**
   Minimum water level for Lake Kimihia is 8.0 metres (Moturiki datum).

4. **Lake Hakanoa Lake Level**
   Minimum water level for Lake Hakanoa is 8.51 metres (Moturiki datum).

5. **Lake Rotokauri Lake Level**
   Minimum level for Lake Rotokauri is 22.5 metres (Moturiki datum).

6. **Lake Whangape Lake Level**
   Minimum water level for Lake Whangape is 4.91 metres (Moturiki datum).

7. **Lake Mangakaware Lake Level**
   Minimum water level for Lake Mangakaware is 29.1 metres (Moturiki Datum).

8. **Lake Mangahia Lake Level**
   Minimum water level for Lake Mangahia is 36.8 metres (Moturiki Datum).

9. **Lake Komakarau Lake Level**
   Minimum water level for Lake Komakarau is 21.9 metres (Moturiki Datum).

10. **Lake Koromatua Lake Level**
    Minimum water level for Lake Koromatua is 39.13 metres (Moturiki Datum).

11. **Lake Kainui**
    Minimum water level for Lake Kainui is 24.81 metres (Moturiki Datum).

12. **Lake Ruatuna**
    Minimum water level for Lake Ruatuna is 38.61 metres (Moturiki Datum).

13. **Lake Maratoto**
    Minimum water level for Lake Maratoto is 51.3 metres (Moturiki datum).

14. **Lake Areare**
    Minimum water level for Lake Areare is 22.5 metres (Moturiki datum).

15. **Lake Kareaotahi**
    Minimum water level for Lake Kareaotahi is 48.5 metres (Moturiki datum).

16. **Lake Rotomanuka**
    Minimum water level for Lake Rotomanuka is 50.1 metres (Moturiki datum).

Advisory Note:

- Any activity that changes or lowers the minimum water levels set by this Method by altering a structure or disturbing or excavating the bed of a river or lake requires a resource consent under Discretionary Activity Rule 4.2.4.4 or Discretionary Activity Rule 4.3.4.4.

3.2.4.8 Investigation

Waikato Regional Council will investigate:

1. Community uses and values for water quality, including tangata whenua uses and values.
2. Standards required to protected identified values.
3. Status of water quality in water bodies.
4. Methods for improving degraded water bodies.

Explanation and Principal Reasons for Adopting Methods 3.2.4.1 to 3.2.4.8

Method 3.2.4.1 sets out how the water management classes established in the policies will be implemented. The method draws the distinction between the use of numerical standards derived in subsequent methods and applied to relevant permitted activities, non-regulatory methods or plan effectiveness monitoring and the narrative purpose statements provided in the policies which are intended to provide assessment criteria for consent applications. For resource consents the standards provide guidance and certainty as to one possible means of achieving compliance with the purpose of the water class.

The standards that are listed in **Methods 3.2.4.2** to **3.2.4.6** are derived either from the Third Schedule of the RMA or from the best available technical information. The numerical standards define thresholds below which Council is confident that the water bodies will always be suitable for the purpose for which they are being managed. These thresholds may be exceeded as a consequence of case-by-case assessment of site specific matters through the consent process provided that the objectives of the Plan are being achieved.

Method 3.2.4.6 implements the water management class policies by setting out a consistent set of standards for suspended solids concentrations in discharges and receiving water that can be applied throughout the Region. This set of standards applies where referred to in relevant permitted activity rules and may provide guidance as to one possible means of achieving the relevant water management class policy.

Method 3.2.4.7 recognises previous investigations and public consultation that has been involved in establishing minimum lake levels and stream flows. To maintain consistent management of the water bodies the established levels have been adopted from the Transitional Regional Plan. In addition new levels have been derived through the RMA consent process and the Waikato Regional Plan and included for certain lakes where consented structures have been installed. The levels for these lakes are also included in resource consent conditions for the structures.

It is noted that the minimum water level for each lake relates directly to the invert level of the control structure. Under certain natural climatic events, such as droughts, the minimum lake level could fall below the level set in Method 3.2.4.7.

Method 3.2.4.8 provides for continued information to be gathered regarding uses and values with respect to water bodies. This method also ties in with Waikato Regional Council's environmental monitoring which will continue to have a strong focus on the quality of water in the Region. The areas of investigation indicated in this method will be used to update and improve the Water Management Class Maps and associated standards when the Plan is reviewed. It will also provide information for identifying and improving degraded water bodies.

3.2.5 Environmental Results Anticipated

1. Net improvement in regional water quality.
2. Areas of significant indigenous fisheries habitat maintained and enhanced.
3. Areas of trout fisheries and spawning habitat maintained and enhanced.
4. Qualities of Natural State Waters are protected.
5. Suitability of surface water for contact recreation maintained and enhanced.
6. Suitability of water for human consumption maintained and improved.

3.2.6 Monitoring Options

Refer to Section 3.1.4.

3.3 Water takes

Background and Explanation

Chapters 3.3 and 3.4 comprise of issues, objectives, policies and implementation methods which set out the Plan's approach to the protection, allocation and use of the Region's surface and groundwater resources (excluding geothermal water which is addressed elsewhere in the Plan). These chapters are based upon the following broad approach:

The need for a carefully managed water allocation regime

- The Waikato River Co-Management framework introduces a range of co-management (refer to definitions) principles that give effect to agreements between Waikato River Iwi and the Crown regarding all aspects of the management of the Waikato River and its catchment. This includes, but is not limited to, the development of the Vision and Strategy which is the primary direction setting document for the Waikato River and activities within its catchment affecting the Waikato River. This water allocation regime must give effect to the Vision and Strategy which is now part of the Waikato Regional Policy Statement.
- Recognition that the overarching purpose of the Vision and Strategy is to restore and protect the health and wellbeing of the Waikato River for present and future generations and that this is a key priority in the development of a water allocation model. Any allocation regime must give effect to that overarching purpose.
- Having regard to the overarching purpose of the Vision and Strategy, recognition that in many parts of the region, demand for surface water and groundwater resources exceeds, or has the potential to exceed, the ability of the surface and groundwater resources to sustainably meet all such demand and so a carefully managed water allocation regime is necessary. The allocation regime should also ensure that the taking and subsequent use of water does not cause further degradation of the water quality of the Waikato River.

Priorities recognised in setting and implementing allocable flows and sustainable yields

- Objectives which ensure that in establishing allocation regimes, effect is given to the overarching purpose of the Vision and Strategy to restore and protect the health and wellbeing of the Waikato River. The objectives should reflect the special relationship of iwi with particular water bodies and accordingly provide for iwi involvement in determining and reviewing the allocable and environmental flows for those water bodies. The objectives should also ensure that water is available to meet the reasonable needs of individual and communities; continued water is available for renewable energy generation and cooling of the Huntly Power Station, water for in-stream requirements during water shortages and droughts is available and that decisions on water allocation take account of the contaminant assimilative capacity of water bodies.
- Policies which, subject to achieving the overarching purpose of the Vision and Strategy, establish allocable and environmental flows from surface water and sustainable yields from groundwater based on a range of factors including mātauranga Māori. The policies should also provide for the input of iwi in determining any allocable and environmental flows, and allocation priorities, with respect to the Waikato River Catchment, as well as state how ground and surface water will be allocated. Priority for consideration for allocation reflects the purpose of protecting and enhancing the health and wellbeing of the Waikato River and achieving a net improvement in water

quality, and subject to this has been given to water for domestic or municipal supply and replacement of existing water takes.

- Rules reflect the overarching purpose of the Vision and Strategy to restore and protect the health and wellbeing of the Waikato River and achieve a net improvement in water quality, and subject to this, the priority given to domestic or municipal supply and replacement of existing takes in the policies. The rules also ensure that there is not the ability of one abstractor to take the entire allocable flow of a river without adequate consultation with neighbours.
- Chapter 3.3 includes policies which state which matters the Council will have particular regard to in assessing a resource consent application. In particular, these require applications to take or use water from the Waikato River to demonstrate that the proposed activity will not detract from the overarching purpose of restoring and protecting the health and wellbeing of the Waikato River.

Relevant information is made available to resource users

- Water Allocation maps are included in the Plan to illustrate the catchments in which the allocable flows and sustainable yields in Tables 3-5 and 3-6 apply.

The efficient allocation and use of water

- Common review dates for various sub-catchments in the Region are included as is requirements for water metering.
- Chapter 3.3 contains rules restricting permitted takes. The level of permitted takes is capped at the primary allocable flow.
- Rules are included in Chapter 3.4 which permit the transfer of surface water permits and control the transfer of groundwater permits.
- Policy and rules are included in Chapter 3.4 which manage the use of water. In particular rules are included which control the use of water for crop and pasture irrigation in the catchment of the Waikato River from the Karapiro Dam to the Taupo Control gates or in the catchments of Lakes Taharoa, Maratoto, Serpentine (North, South and East), Rotomanuka, Mangahia, Rotongaro, Okowhao, Whangape, Waikare, Kuratau, Mangakaware, Ohinewai, Waahi, and Rotokawau, and Whangamarino wetland, Kopuatai peat dome, wetlands listed in Section 3.7.7 of the Waikato Regional Plan, and the Opuatia wetland.

Clear and equitable management of water shortage conditions

- Policies are included that clearly state what a water shortage is, the priority to apply during water shortages and how restrictions shall be applied.

The policies and rules in this chapter do not relate to the allocation and management of Geothermal Water unless explicitly stated otherwise. The allocation and management of geothermal energy and geothermal water is addressed in Module 7 – Geothermal.

The provisions in Chapter 3.3 do not apply to the taking of water for a dam or diversion where water passes through or over the dam or diversion in the river channel. Such takes are managed by the policies and rules in Chapter 3.6.

3.3.1 Issue

In addition to the effects addressed in Issue 3.1.1, the taking and use of water can give rise to, or must respond to, the following:

a) The taking of water can reduce the ability of water bodies to assimilate contaminants from point and non-point sources. In relation to the Waikato River catchment this is inconsistent with giving effect to the overarching purpose of restoring and protecting the health and wellbeing of the Waikato River for present and future generations.

b) The allocation and use of water, if not managed appropriately, can adversely affect the restoration and protection of the health and well-being of the Waikato River as well as the spiritual, physical and economic wellbeing, identity and cultural practices of those iwi whose mana and mauri the river represents.

c) The inefficient allocation and use of water within the Region can significantly reduce the benefits to be derived from the use of the resource.

d) The allocation of water currently used for the generation of electricity to other uses will reduce existing electricity generation, and this can have adverse effects on the social and economic wellbeing of people and communities.

e) The allocation of water to activities other than domestic or municipal supply may have the potential to compromise the renewal of existing domestic or municipal supply takes and the granting of future applications for reasonably justified and foreseeable domestic or municipal supply needs.

f) Existing water takes contribute to the social and economic wellbeing of people and communities and in some cases significant investment relies on the continuation of those takes.

g) The ability to provide for the growing social and economic needs of people and communities, is dependent on water being available, where possible, to accommodate growth both in individuals' and communities' domestic needs and production and community activity (including rural-based activities such as agriculture, perishable food processing and industry).

h) The unmanaged taking of water during periods of shortage, or over allocation of water resources, can:

   i) significantly impact on the quality of the Region's water bodies;

   ii) compromise the ability of individuals and communities, to provide for their essential water use requirements, including domestic or municipal supply or for stock watering, and may result in adverse effects on the environment.

   iii) reduce the ability of water bodies and estuaries to transport sediment, with consequent increases in flooding and stream bank instability

   iv) increase the risk of salt water intrusion to aquifers on account of high seasonal demandincreased threats to estuarine ecosystems on account of adverse changes to the quantity and quality of fresh water inflows.

i) Some catchments are currently allocated in excess of the combined primary and secondary flows set in Table 3-5 and that exceedence should be phased out over time.

j) The unmanaged transfer of permits for the taking of water limits the potential to fully utilise the allocable resource, may limit the range of reasonably foreseeable uses and may result in adverse effects on the environment.

k) The individual and cumulative effects of the taking of water may;

   i) constrain the ability to protect and enhance the health and wellbeing of the Region's water bodies, and result in the degradation of water quality and aquatic habitat

ii) impact on cultural relationships with the water bodies in the Region

iii) limit the availability of water for other actual and potential uses

iv) compromise the generation of electricity from renewable energy sources and cooling of the Huntly Power Station.

Explanation:

This issue addresses matters which are either not included in Issue 3.1.1 or which are included but are not clearly attributable to water allocation and use. Part a) acknowledges that the taking of water out of a water body reduces its ability to assimilate (dilute) contaminants and that this may compromise the legitimate use of the resource for this purpose. The transfer of permits is a mechanism by which greater efficiency of use may be achieved and which should not be overly constrained by plan rules. Part aa) reflects the Vision and Strategy for the Waikato River which has as the overarching purpose of restoring and protecting the health and wellbeing of the Waikato River for present and future generations. Part b) also recognises and acknowledges the importance of the relationship of Waikato River Iwi with the region's waterways and in particular the Waikato River and how this may be impacted by the taking and use of water.

Part c) recognises that the inefficient allocation and use of water can reduce the benefits of the use of the resource, to other users.

Part d) recognises that water allocated to electricity generation has significant social and economic benefits.

Part e) reflects that increasing demand and competition for water resources has the potential to lead to over allocation of those resources and compromise the ability to provide for the health and wellbeing of existing communities and for their future growth.

Part f) recognises that many existing uses of water are associated with significant and productive activities that contribute to economic and community well-being and depend on a secure supply of water.

Part h) recognises that unmanaged taking of water during water shortages and over allocation of water resources can significantly compromise the quality of the Region's water resources, as well as the ability of individuals and communities to provide for their essential water use. When water shortages or over allocation of resources occur there may not be enough water to supply everyone's needs, and to avoid adverse effects on the environment. Therefore takes need to be appropriately managed to ensure that adverse effects on the environment are avoided, and domestic or municipal supply can be maintained and future growth of communities can be provided for.

Part i) recognises that in some catchments the existing abstractions exceed the Table 3-5 allocable flows. This has occurred for a number of reasons, including:

a) users being unaware of, or disregarding rules regulating water takes;

b) the cumulative effect of numerous small resource consents continuing to be granted in heavily allocated catchments;

c) assessment of minimum and allocable flows in some catchments resulting in a reduction in the amount of water available for allocation; and

d) assessment of minimum and allocable flows in some catchments being conservatively set in the absence of a detailed ecological investigation.

The NPS on Freshwater Management requires allocation limits to be set and defines 'over-allocation'. Chapters 3.3 and 3.4 were developed prior to the release of the Operative NPS and it was not intended that an exceedence of an allocable flow as set out in Table 3-5 would be considered to be 'over-allocation' as defined in the NPS. The flows in Table 3-5 have been set to achieve Objective 3.3.2 and they also determine the activity status of water take consent applications. The activities identified in Policy 6 are enabled to achieve aspects of Objective 3.3.2.

Part j) recognises that the unmanaged transfer of permits can result in situations where the reverse is the case and parties may hoard the resource or make inefficient use of existing permits in order to maximise economic returns from trading. Part k) recognises that the cumulative effects of takes of water, particularly large numbers of un-recorded permitted takes, can be significant and can, under some circumstances, impact on the consented taking and use of water. Without management, and if appropriate, capping of these small takes, this effect could significantly detract from the ability of other users to provide for their social, economic and cultural well being.

Part k) Sub-clause (iii) further recognises that the benefits to be derived from the use and development of renewable energy are a matter to which particular regard shall be had under Section 7(j) of the Resource Management Act 1991. The taking of water from the catchments upstream of the Karapiro Dam including the Waikato River and Lake Taupo, can cumulatively impact on the generation of electricity from renewable energy sources and the cooling of the Huntly Power Station. As well as being a valued natural resource in its own right, Lake Taupo also plays an integral role in the flexible operation of the Waikato Hydro Scheme through providing critical hydro storage capacity which can be relied on to provide a buffer during drier periods. As such, this issue has year-round relevance. The Tongariro Power Scheme (TPS) and the Waikato Hydro Scheme work as an integrated system. The TPS draws water from four catchments (Whanganui, Whangaehu, Moawhango and Waikato River) and diverts the water into Lake Taupo. The water diverted from outside the Waikato River catchment plays a significant role in both providing additional flow to the Waikato Hydro Scheme and the cooling system at HPS.

3.3.2 Objective

In addition to Objective 3.1.2, the management of water allocation and use in a way which ensures:

a) Giving effect to the overarching purpose of the Vision and Strategy to restore and protect the health and wellbeing of the Waikato River for present and future generations.

b) The availability of water to meet the existing and the reasonably justified and foreseeable future domestic or municipal supply requirements of individuals and communities and the reasonable needs for an individual's animal drinking water requirements.

c) The recognition of the significant community benefits that derive from domestic or municipal supply takes.

d) The efficient allocation and the efficient use of water.

e) No further allocation of water that exceeds the primary allocation in Table 3-5 that reduces the generation of electricity from renewable energy sources.

f) The recognition that existing water takes contribute to social and economic wellbeing and in some cases significant investment relies on the continuation of those takes, including rural-based activities such as agriculture, perishable food processing and industry.

g) The continued availability of water for cooling of the Huntly Power Station.

h) Sufficient water is retained instream to safeguard the life supporting capacity of freshwater, including its ecosystem processes and indigenous species and their associated ecosystems.

i) That decisions regarding the allocation and use of water take account of the need to avoid the further degradation of water quality, having regard to the contaminant assimilative capacity of water bodies.

j) Subject to Objectives a) to h) above, the availability of water to meet other future social, economic and cultural needs of individuals and communities (including rural-based activities such as agriculture, perishable food processing and industry).

Principal Reasons for Adopting the Objective:

This objective addresses matters which are either not included in Objective 3.1.2 or which are included but are not clearly attributable to water allocation and use.

The purpose of Part a) is to ensure that the Vision and Strategy for the Waikato River which has as the overarching purpose of restoring and protecting the health and wellbeing of the Waikato River for present and future generations is given effect.

The purpose of Part b) is to protect the ability of communities to grow and still have certainty that they will be able to provide adequately for their reasonable and efficient domestic or municipal supply needs. This is a matter of priority for the Waikato Regional Council. The certainty could be provided by limiting the duration of other take consents in order to ensure that water remains available to meet the growth needs of communities, imposing conditions on other take consents which provide for review of the volume of water taken, or even declining to grant other consents, where appropriate. The purpose of Part c) is to guide decision-makers to give priority to the taking of water for domestic or municipal supplies. However, future growth requirements will need to be reasonably justified in a Water Management Plan. The purpose of Part d) is to ensure that water is allocated in a manner that promotes economic, technical and dynamic efficiency and that it is used in a manner that is efficient. The purpose of Part f) is to recognise the importance of existing takes.

Section 7(j) of the RMA provides for electricity generation from renewable energy sources as a matter to which Council must have particular regard. This legislative requirement is acknowledged in part e) and in appropriate policies in this Chapter. The purpose of part e) is to ensure that any reduction in electricity generation from renewable energy sources is confined to that resulting from takes falling within the primary allocation. Part g) acknowledges the importance of the Huntly Power Station to the national electricity supply system, and foreshadows making the renewal of the existing cooling water take a controlled activity.

During periods of water shortage or as a result of over allocation, in stream values are often compromised by the continued taking of water without appropriate guidance on methods for management of low flow situations. Part h) and subsequent policies and rules seek to avoid these effects and maintain environmental flows in stream values.

Part i) and the parallel objectives in Chapters 3.5 and 3.6 ensure that when allocating water, considering discharges to water or the damming and diverting of water, both the effects on water quality and contaminant assimilative capacity and allocable flow are considered.

The purpose of Part j) is to recognise the importance of water for future uses other than electricity generation and domestic or municipal supply.

3.3.3 Policies

Policy 1: Establish Allocable and Minimum Flows for Surface Water

(Implements Objective 3.1.2 a), b), c), d), e), g), i) j) k) l) o) and p) and Objective 3.3.2. Also refer to Section 3.2.3 Policy 2 a)iii))

Establish and review allocable and minimum flows for surface water bodies which are to be used when assessing authorised water takes and resource consent applications from surface water bodies while having particular regard to the following matters:

a) Giving effect to the overarching purpose of the Vision and Strategy to restore and protect the health and wellbeing of the Waikato River for present and future generations.

b) The recognition of the relationship between tangata whenua with water bodies and providing for tangata whenua input in determining their values and interests, and reviewing the allocable and minimum flows for those surface water bodies.

c) The maintenance and enhancement of water quality in accordance with the policies in Chapter 3.2 of this Plan.

d) The avoidance of further degradation of water quality having regard to the contaminant assimilative capacity of water bodies.

e) The benefits of flow regime variability, including sediment transport and natural flushing and flood flows.

f) The avoidance of significant adverse effects on in stream ecological values and biodiversity and the remediation or mitigation of adverse effects otherwise.

g) The protection of wetlands and areas of significant indigenous vegetation and significant habitats of indigenous fauna.

h) The security of existing, efficient take and use of water and the associated lawfully established infrastructure.

i) Maintenance and enhancement of tangata whenua uses and values of water, including the ability to exercise kaitiakitanga and measures to protect and enhance the mauri of water bodies.

j) Maintenance of identified recreational and intrinsic values and the natural character of rivers.

k) The benefits derived from the use of water for, or directly associated with, the generation of electricity from renewable energy sources and the cooling of the Huntly Power Station.

l) The benefits derived from the existing take and consumptive use of water for people's social, economic and cultural wellbeing.

m) The benefits to be derived from the efficient take and use of water for reasonably foreseeable future consumptive uses, and in particular existing and reasonably justified and foreseeable future needs for domestic or municipal supply and the reasonable needs for an individual's animal drinking water.

n) The effects of climate change on surface water resources.

Advisory Notes:

- Refer to Method 3.3.4.6 Development of Minimum and Allocable Flows for Surface Water Bodies and Sustainable Yields for Aquifers on how Policy 1 will be implemented.
- Information on the level of allocation from surface water bodies as listed in Table 3-5 can be found on Waikato Regional Council's website (water allocation calculator)

Policy 2: Determining the level of minimum flows, primary, secondary and water harvesting allocable flows

(Implements Objective 3.1.2 a), b), c), d), e), g), i), j), k), l), o) and p) and Objective 3.3.2. Also refer to Section 3.2.3 Policy 2 a)iii))

When implementing Policy 1, the Waikato Regional Council shall:

a) Except as provided for in clause (e) below, determine minimum flows having particular regard to Policy 1 above following detailed habitat and river studies. Where such studies have not been undertaken, the minimum flow shall be set at 90% of the one in five year 7-day low flow (Q_5) for streams with a mean flow greater than 5 cumecs and 95% of the Q_5 for streams with a mean flow less than 5 cumecs. One function of the minimum flow is to determine when water take restrictions commence.

b) Except as provided for in clause (e) below, determine primary allocable flows having particular regard to Policy 1 above, the need to safeguard the minimum flow and the desirability of providing a high level of reliability for allocated water. To achieve that, primary allocable flows shall be set on the basis of the difference between the minimum flow and the Q_5 flow. If the minimum flow is greater than the Q_5 the allocable flow is zero.

c) Except as provided for in clause (e) below, determine secondary allocable flows as that portion of the Q_5 flow that can be taken from a river with a lower level of reliability and which does not compromise the reliability of the primary allocable flow. The level of the secondary allocable flow shall be deemed to be the portion of the flow between the primary allocable flow and 30% of Q_5 except as otherwise specified in Table 3-5.

d) In addition to the primary and secondary allocable flows, provide for surface water harvesting at an amount up to 10% of the river's flow at times when the flow is greater than the median flow immediately upstream of the point of the take. However, surface water harvesting shall not be allowed in catchments upstream of Karapiro Dam.

e) Determine the primary allocable flow at Karapiro Dam to be set at 5% of the Q_5 flow in order to provide for existing authorised water takes in the catchment above Karapiro while protecting electricity generation from the Waikato Hydro Scheme. While in other catchments of the region, the primary allocable flow is the fraction of the Q_5 flow remaining after the minimum flow has been specified (as in clause b above), in the catchment above Karapiro the primary allocable flow of 5%of Q_5 has been set first and the minimum flow is simply the remaining fraction of the Q_5 flow (95%). In reality, the Waikato Hydro Scheme uses all water remaining in the river (i.e. after any water that is authorised to be taken from within the primary allocable flow has been abstracted) to generate electricity in a renewable manner. The water used for electricity generation includes both the minimum flow component and all variable flows above the primary allocation. The entire variable flow is used to generate electricity and so no secondary allocable flow is specified in Table 3-5 and no surface water harvesting is able to be undertaken in the catchments above the Karapiro dam.

Policy 3: Determining the combined level of surface water allocation within a catchment

(Implements Objective 3.1.2 b), c), d), e) i) j) k) l) and o) and Objective 3.3.2. Also refer to Section 3.2.3 Policy 2 a)iii))

In determining the combined level of surface water allocation in catchments and the activity classification of a particular surface water take, in accordance with Policies 8 and 9 and the associated rules the Waikato Regional Council shall:

a) Assess all the takes on a net take basis at the point of take and at each affected downstream reach;

b) Assess all the takes for the months of the year for which the particular take will be authorised to abstract water;

c) Classify the particular surface water take on the basis of the relevant reach in the catchment (part a)) and the time of year (part b)) that gives the most onerous activity classification

Advisory Note:

- Where summer allocation fully utilises the primary and secondary allocable flows (given in Table 3-5), this does not preclude the further allocation of water during other parts of the year, with a more preferable activity classification than would apply to a summer allocation, if the allocation for the other parts of the year is less than the combined primary and secondary allocable flows.

Policy 4: Establish Sustainable Yields from Groundwater

(Implements Objective 3.1.2 f) and m) and Objective 3.3.2 b))

Establish, set and review sustainable yields from groundwater resources which are to be used when assessing authorised water takes and resource consent applications from aquifers while having particular regard to the following matters:

a) Giving effect to the overarching purpose of the Vision and Strategy to restore and protect the health and wellbeing of the Waikato River for present and future generations.

b) The recognition of the relationship between tangata whenua with groundwater resources and providing for tangata whenua input in determining their values and interests, and reviewing the sustainable yields for those groundwater resources.

c) The protection of groundwater resource from salt intrusion

d) The need to ensure that any groundwater discharges into surface waters are not reduced such that there is a resultant significant adverse effect on in-stream uses and values (including wetlands and karst systems) and on other allocated use

e) The need to ensure groundwater depletion or dewatering of aquifers does not result in significant adverse effects on resource availability

f) The maintenance of groundwater quality in accordance with the policies in Chapter 3.2 of this Plan

g) The benefits derived from the take and consumptive use of groundwater for people's social, economic and cultural wellbeing

h) The loss of benefits derived from the generation of electricity that can result from groundwater takes above Karapiro

i) The benefits to be derived from the efficient take and use of groundwater for reasonably foreseeable future consumptive uses, and in particular for domestic or municipal supply and the reasonable needs for an individual's animals drinking water

j) The maintenance of security of existing, efficient take and use of water and the associated lawfully established infrastructure

k) Maintenance of tangata whenua uses and values

l) The effects of climate change on groundwater resources

m) The avoidance of a reduction in recharge groundwater flows to Geothermal Systems.

Advisory Notes:

- Refer to Method 3.3.4.6 Development of Minimum and Allocable Flows for Surface Water Bodies and Sustainable Yields for Aquifers on how Policy 4 will be implemented.
- Information on the level of allocation from the aquifers as listed in Table 3-6 Sustainable Yields from Aquifers can be found on Waikato Regional Council's website (water allocation calculator).

Policy 5: Determining sustainable yields

(Implements Objective 3.1.2 f) and m) and Objective 3.3.2 b))

Sustainable Yields shall be determined having particular regard to Policy 4 following detailed investigation of aquifers. In the absence of a Sustainable Yield being determined, a management level will be set on a conservative basis having particular regard to Policy 4 using a water balance methodology that takes account of:

a) Average annual recharge over the aquifer

b) Area of land above the aquifer

c) Distribution of groundwater users

The management level represents a portion of an aquifer's likely recharge and will be used as a trigger point for the setting of a sustainable yield.

Policy 6: Certain Exceedences of Table 3-5 Allocable Flows not to Represent Over-allocation for the Purposes of the Freshwater NPS

(Implements Objective 3.1.2 and 3.3.2)

Takes that may exceed the combined primary and secondary allocable flows in Table 3-5 in order to achieve one or more limbs of Objective 3.3.2 for the following types of activities do not represent "over-allocation" as defined in the Interpretation section of the National Policy Statement for Freshwater Management 2011:

a) In recognition of Objective 3.3.2(b) and 3.3.2(c) and the statutory requirement to provide potable water for people and communities, takes to meet the existing and reasonably justified and foreseeable domestic or municipal supply requirements of individuals and communities where a water management plan which meets the requirements of Method 8.1.2.2 has been provided.

b) In recognition of Objective 3.3.2(f), takes to meet existing and reasonably justified needs for milk cooling or dairy shed wash down where applications for those takes are lodged prior to 1 January 2015.

c) In recognition of Objective 3.3.2(b) and 3.3.2(f), takes relying on section 14(3)(b) of the Resource Management Act that were occurring prior to 15 October 2008.

Policy 7: How Surface Water Takes Will Be Classified in Catchments Where Existing Takes Exceed the Table 3-5 Allocable Flows

(Implements Objective 3.1.2 and 3.3.2)

In the catchments where the combination of all authorised water takes exceeds the combined primary and secondary allocable flows in Table 3-5 the Waikato Regional Council will manage the further allocation of surface water by classifying the taking of surface water on a net take basis as:

a) A Controlled Activity for existing domestic or municipal supply takes that comply with Policy 9(a);

b) A Controlled Activity for existing milk cooling and dairy shed wash down takes where applications to authorise those takes are lodged prior to 1 January 2015;

c) A Restricted Discretionary Activity for water harvesting takes undertaken in accordance with Policy 20;

d) A Discretionary Activity for takes relying on section 14(3)(b) of the Resource Management Act that were not existing prior to 15 October 2008;

e) A Discretionary Activity for all other existing and replacement takes;

f) A Discretionary Activity for any take that is a zero net take;

g) A Discretionary Activity for new takes for domestic or municipal supplies that comply with Policy 9(d); and

h) A Non-complying Activity for any other new take.

Policy 8: How Surface Water Takes Will Be Classified in Catchments that do not Exceed the Table 3-5 Allocable Flows

(Implements Objective 3.1.2 a), f) and p) and Objective 3.3.2 b), e) and i))

Except as provided for in Policy 9 the Waikato Regional Council will manage the allocation of surface water in catchments that do not exceed the combined primary and secondary allocable flows in Table 3-5 on a net take basis by:

a) Classifying takes as being authorised without the need for resource consent if such takes:

   i) Are allowed by s14(3)(b) RMA purposes, except as restricted in part b) of this policy and in any associated rules, or

   ii) Do not exceed 15 cubic metres per day, except for the main stems of the Waikato River downstream of Lake Taupo and the Waipa River downstream of Otorohanga in which case takes shall not exceed 30 cubic metres per day, and except as provided for in part ca) of this policy and in any associated rules, or

   iii) Are temporary takes up to 150 cubic metres per day except as provided for in part ca) of this policy and in any associated rules.

b) Classifying as a controlled activity any take existing at 15 October 2008 that was for the purposes of milk cooling or dairy shed wash down provided the effects of the take are avoided, remedied or mitigated

c) Classifying as a non-qualifying s14(3)(b) take and a discretionary activity any take which was not existing prior to 15 October 2008 and would otherwise be allowed by s14(3)(b) of the RMA except that when assessed in combination with all other existing authorised water takes within the same catchment, is for a rate greater than 100 percent of the primary allocable flow in Table 3-5

d) Except where part e) v) of this Policy applies, classifying as a discretionary activity any supplementary take or temporary take which might otherwise be a permitted activity, when the net take, assessed in combination with all other existing authorised water takes within the same catchment, is for a rate greater than 100 percent of the primary allocable flow identified in Table 3-5.

e) Classifying all other applications for takes in the following manner:

   i) As a controlled activity when the net take, assessed in combination with all other existing authorised water takes within the same catchment, is for a rate less than or equal to 70 percent of the primary allocable flow identified in Table 3-5

   ii) As a controlled activity for cooling water at the Huntly Power Station when the net take does not exceed 0.7 cumecs

   iii) As a restricted discretionary activity when the net take, assessed in combination with all other existing authorised water takes within the same catchment, is for a rate exceeding 70 percent and up to and including 100 percent of the primary allocable flow identified in Table 3-5

   iv) Except where part (e)(v) of this policy applies, as a discretionary activity when the net take, assessed in combination with all other existing authorised water takes within the same catchment, is for a rate greater than 100 percent of the primary allocable flow but is less than the combined primary and secondary allocable flow identified in Table 3-5.

   v) As a non-complying activity when the net take, assessed in combination with all other existing authorised water takes within the same catchment is for a rate that would be greater than the combined primary and secondary allocable flow identified in Table 3-5.

f) Classifying as a non-complying activity all applications for takes of water from natural state water bodies, wetlands and lakes (excluding artificial lakes, hydro electricity reservoirs, Lake Rotoaira and Lake Taupo).

g) Assigning all new and existing resource consent holders a priority level for the whole or part of the consent to apply when water shortage restrictions occur.

Advisory Note

- Under s14(3)(b) of the RMA, the taking and using of water for an individual's reasonable domestic needs and the reasonable needs of an individual's animals drinking water requirements are allowed without a resource consent, provided they do not, and are not likely to, have an adverse effect on the environment.
- Under Policies 8 c) and 8 d) only new takes that cause the primary allocation to be exceeded require resource consents. In other words, if a take was permitted or allowed immediately prior to a catchment reaching the point of full primary allocation, it remains a permitted or allowed take, as the case may be, after that point is reached provided the nature and scale of that take remains unchanged.

Policy 9: How Surface Water Takes for Domestic or Municipal Supply Will Be Classified

(Implements Objective 3.1.2 f) and Objective 3.3.2 b) and c))

The Waikato Regional Council will manage water allocation in catchments to ensure the availability of water to meet the existing and reasonably justified and foreseeable domestic or municipal supply requirements of individuals and communities by:

a) Classifying applications for takes for domestic or municipal supply to replace resource consents as controlled activities provided that:

i) At the time of application the take was an authorised water take; and

ii) There is no increase in the nature, rate and volume of the take from that previously authorised; and

iii) A water management plan which meets the requirements of Method 8.1.2.2 has been provided.

b) Classifying as a controlled activity applications for takes not previously authorised for domestic or municipal supply when the net take, assessed in combination with all other existing authorised water takes within the same catchment, is for a rate less than or equal to 70 percent of the primary allocable flow identified in Table 3-5.

c) Classifying as a restricted discretionary activity applications for takes not previously authorised for domestic or municipal supply when the net take, assessed in combination with all other existing authorised water takes within the same catchment, is for a rate exceeding 70 percent and up to and including 100 percent of the primary allocable flow identified in Table 3-5.

d) Classifying as a discretionary activity applications for takes not previously authorised for domestic or municipal supply which exceed 100 percent of the primary allocable flow identified in Table 3-5 or exceed 100% of the combined primary and secondary allocable flows identified in Table 3-5.

e) Classifying all applications for takes for domestic or municipal supply as a non-complying activity where a water management plan which meets the requirements of Method 8.1.2.2 has not been provided.

Policy 10: How Groundwater Takes will be Classified

(Implements Objective 3.1.2 m))

The Waikato Regional Council shall manage the taking of groundwater resources in a manner that meets the criteria for establishing Sustainable Yields from groundwater resources listed in Policy 4 by:

a) Classifying takes as being authorised without the need for resource consent if such takes:

i) Are allowed by s14(3)(b) RMA purposes, except as restricted in part c) of this policy and in any associated rules, or

ii) Do not exceed 15 cubic metres per day except as provided for in part d) of this policy and in any associated rules, or

iii) Are temporary takes up to 150 cubic metres per day except as provided for in part d) of this policy and in any associated rules; or

iv) Are takes for well and aquifer testing up to 2500 cubic metres per day and a pumping duration of less than three days

b) Classifying as a controlled activity any take existing at 15 October 2008 that was for the purposes of milk cooling or dairy shed wash down provided the effects of the take are avoided, remedied or mitigated.

c) Classifying as a non-qualifying s14(3)(b) take and a discretionary activity any take which was not existing prior to 15 October 2008 and would otherwise be allowed under s14(3)(b) of the RMA except that when assessed in combination with all other existing authorised water takes within the same aquifer it exceeds the Sustainable Yield in Table 3-6

d) Classifying as a discretionary activity any supplementary take or temporary take which might otherwise be a permitted activity when the take, assessed in combination with all other existing authorised water takes within the same aquifer, is for a rate greater than 100 percent of the Sustainable Yield identified in Table 3-6.

e) Using Management Levels to indicate when there is increasing demand from an aquifer.

f) Classifying as a discretionary activity all applications for domestic or municipal supply takes for groundwater where a water management plan which meets the requirements of Method 8.1.2.2 has been provided.

g) Classifying all other applications for takes of groundwater in the following manner:

   i) As a discretionary activity, or

   ii) As a non-complying activity if a relevant Sustainable Yield is provided in Table 3-6 and the rate of take in combination with all other existing authorised water takes within the same aquifer is greater than the relevant Sustainable Yield value.

h) Classifying all new and existing resource consent holders a priority level(s) for the whole or part of the consent to apply when water shortage restrictions occur.

i) Notwithstanding Policies a) to h), assessing the nature of hydraulic connection (if any) between groundwater takes and surface water bodies and, if there is such a connection as defined by Policy 12 w), having regard to relevant parts of Policy 11 and Policy 12 when making decisions on groundwater takes.

j) Including Sustainable Yields by way of a Plan Change when sufficient information is available and when needed to address significant adverse effects of groundwater takes.

k) Classifying all applications for groundwater takes for domestic or municipal supply as a non-complying activity where a water management plan which meets the requirements of Method 8.1.2.2 has not been provided.

Advisory Notes:

- Management Levels are not used in Policy 10 to determine the activity status of groundwater takes. Method 3.3.4.9 provides the framework for utilising Management Levels in managing groundwater and setting sustainable yields in Table 3-6.
- Under Policy 10 c) only new takes that cause the Sustainable Yield to be exceeded require resource consents. In other words, if a take was allowed immediately prior to an aquifer reaching the point of full Sustainable Yield, it remains an allowed take after that point is reached provided the nature and scale of that take remains unchanged.
- Under Policy 10 g) ii)) only new takes that cause the Sustainable Yield to be exceeded are non-complying activities. In other words, if a take was permitted or consented as a controlled or discretionary activity immediately prior to an aquifer reaching the point of full Sustainable Yield, it remains a permitted or consented take as a controlled or discretionary activity, as the case may be, after that point is reached provided the nature and scale of that take remains unchanged.

Policy 11: Consent Application Assessment Criteria – Surface Water

(Implements Objectives 3.1.2 and 3.3.2)

When assessing resource consent applications for surface water takes and/or any associated water use, the effects of these activities shall be assessed individually and cumulatively with all other existing or authorised (or currently applied for) water take and use activities. In doing so the Council shall have particular regard to the following matters:

a) Whether the proposed take would adversely affect the restoration and protection of the health and wellbeing of the Waikato River

b) The effect of the activity on the relationship of tangata whenua and their culture and traditions with their ancestral lands, water, sites, wahi tapu and other taonga

c) Phasing out any existing allocation of surface water that exceeds the combined primary and secondary allocable flows in Table 3-5, or exceeds the water harvesting limits in Policy 20 b) by 31 December 2030 in accordance with Policy 19

d) Whether the applicant has demonstrated a need for the volume and rate of water sought, taking into account the applicant's seasonal and rotational requirements (if any), and has proposed appropriate water efficiency measures including an assessment of measures to be taken to reduce the take and use during water shortage conditions as defined in Policy 17

e) The need to ensure that surface water is available for existing and reasonably justified and foreseeable future domestic or municipal supply needs identified in a water management plan that meets the requirements of Method 8.1.2.2, stock drinking water requirements and fire fighting purposes

f) The significant social and economic benefits associated with the take and use of water for domestic or municipal supply

g) With the exception of water harvesting undertaken in accordance with Policy 20 and Rule 3.3.4.22 and takes associated with renewable electricity generation, any need to limit the duration of a water take consent, impose conditions to provide for the review of the volume of water taken pursuant to a consent, or to decline to grant a water take consent, all in order to enable domestic or municipal supply takes required for future growth.

h) Restricting takes that exceed the primary allocation in Table 3-5 and which reduce the amount of water that would otherwise be available for renewable electricity generation or be used for cooling of the Huntly Power Station, including in particular any takes from the Waikato River catchment upstream of the HPS mixing zone that when assessed in combination with all other authorised water takes would exceed 100% of the primary allocable flows in Table 3-5

i) The significance of the social and economic benefits that derive from existing takes and the significance of the investment that relies on the continuation of those takes

j) The potential adverse effects on existing users of granting a consent which may result in the allocation of a catchment exceeding the combined primary and secondary allocable flows in Table 3-5

k) Subject to the matters listed in a), e) and h) of this Policy, the social and economic benefits that may arise from the take and use of water (including rural-based activities such as agriculture, perishable food processing and industry.)

l) The net effect of the take on water quality in the water body from which the water will be taken i.e. whether the further degradation of water quality is avoided (having regard to the flow rates and contaminant concentrations in that water body)

m) Whether the applicant has demonstrated adequate consideration of alternative water sources including water harvesting and water reuse and that the current application is industry good practice

n) The effects on the water body of any associated discharge of contaminants, (either point source or diffuse) arising from the take and use

o) Whether existing lawful takes will be adversely affected, including those granted by neighbouring regional councils where water bodies cross regional boundaries

p) Impacts on, and integration with, other existing authorised uses of the relevant water body (including customary uses)

q) Whether Tangata Whenua uses and values, including the mauri of water, are maintained or enhanced

r) The effects on ecological values and biodiversity and the benefits of the natural flow regime variability, including sediment transport and natural flushing and flood flows

s) The need to ensure that water bodies are not over-allocated (having regard to the current allocation limits of the water body as indicated by Table 3-5 and to the provisions of Policy 6, Policy 9 and Method 3.3.4.10.k)

t) In the case of an application for the replacement of an existing resource consent, whether the applicant has demonstrated a continued need for the volume and rate of water, taking account of seasonal and rotational requirements, applied for based on water use records, the efficiency of the use of the resource, any enforcement action taken by Council in respect to the previous consent and use of industry good practice

u) Any improvements in water take and use infrastructure, and whether adequate metering, data collection and leak detection mechanisms are adopted

v) The effects of the abstraction on wetlands, areas of significant indigenous vegetation, or significant habitats for indigenous fauna

w) The effects of the take and associated intake structure on fish passage and fish migration, and the potential for the entrainment of aquatic organisms

x) Whether appropriate mitigation measures are to be implemented, including the maintenance of adequate environmental flows or flow regimes, the location of the abstraction, the maintenance of fish passage, the application of riparian planting, or other measures;

y) Using site specific flow measurement methods where practicable to ensure compliance with water restrictions

z) Demonstration that physical access to the water does not adversely affect any other land and/or property owner

aa) In the case of temporary transfers; the extent to which the consent has already been given effect to on the site which the original consent relates

bb) The requirements of the National Environmental Standard for Human Drinking water.

Policy 12: Consent Application Assessment Criteria – Groundwater

(Implements Objectives 3.1.2 and 3.3.2)

When assessing resource consent applications for groundwater takes and/or any associated water use, the effects of these activities shall be assessed individually and cumulatively with all other existing (or currently applied for) water take and use activities. In doing so the Council shall have particular regard to the following matters:

a) Whether the proposed take would adversely affect the restoration and protection of the health and wellbeing of the Waikato River

b) The effect of the activity on the relationship of tangata whenua and their culture and traditions with their ancestral lands, water, sites, wahi tapu and other taonga

c) Whether the applicant has demonstrated a need for the volume and rate of water sought, taking into account the applicant's seasonal and rotational requirements (if any) and has proposed appropriate water efficiency measures including an assessment of measures to be taken to reduce take and use during water shortages as defined in Policy 17

d) The need to ensure that groundwater is available for existing and reasonably justified and foreseeable domestic or municipal supply needs identified in a water management plan that meets the requirements of Method 8.1.2.2, stock drinking water requirements and fire fighting purposes

e) Whether the applicant has demonstrated adequate consideration of alternative water sources including water harvesting and water reuse and that the current application is the industry good practice

f) Whether, in the case of an application for the replacement of an existing resource consent, the applicant has demonstrated a continued need for the volume and rate of water applied for, taking account of the applicant's seasonal and rotational requirements (if any), based on water use records, the efficiency of the use of the resource, any enforcement action taken by Council in respect to the previous consent and use of industry good practice

g) Whether existing lawful takes of both either ground and surface water will be adversely affected including those granted by neighbouring regional councils where water bodies cross regional boundaries

h) Impacts on, and integration with, other existing authorised uses of the relevant water body (including customary uses)

i) Any improvements in water take and use infrastructure and whether adequate metering, data collection and leak detection mechanisms are adopted

j) Whether tangata whenua uses and values, including the mauri of water, are maintained or enhanced

k) The need to ensure that aquifers are not over-allocated (having regard to the Sustainable Yield of the aquifer as indicated by Table 3-6) or as indicated by estimates of groundwater catchment boundary; groundwater flow budget, including estimates of recharge and discharge within the catchment; and groundwater allocation within the groundwater catchment)

l) Any demonstrated return flow to the aquifer resulting from the use of the abstracted groundwater, including irrigation return water

m) Whether surface water instream uses, values and flows are adversely affected, including the base flows of streams, springs and the water levels of wetlands and lakes

n) Whether potential for saltwater intrusion is avoided

o) Where Sustainable Yields have not been set in Table 3-6 potential for loss of recharge to other aquifers

p) Where Sustainable Yields have not been set in Table 3-6 potential adverse effects from aquifer compaction and ground surface subsidence

q) Potential for contamination of ground or surface water e.g. nutrient contamination due to excessive leaching

r) Potential for interference effects on neighbouring bores to the extent the neighbouring bore owner would be prevented from obtaining their lawfully established water allocation requirements. An applicant may mitigate the adverse effects by:

    i) locating the pump intake of affected neighbouring bore(s) at a greater depth with the bore; or

    ii) Deepening existing bores or drilling new bores for neighbouring landowners to a deeper level; or

    iii) Providing an alternative water source agreed to by all affected parties

s) Whether the proposed, or existing, bore is capable of extracting the quantity applied for

t) Whether appropriate mitigation measures are to be implemented, including but not limited to, alternative rates and timing of abstractions, provision of alternative water supplies, water conservation options in times of reduced water availability

u) Possible monitoring methods that will be used for monitoring of a type and scale appropriate for the activity, including but not limited to measurement and recording of water use, measurement and recording of levels, sampling and assessment of water quality and fresh water biota

v) Demonstration that physical access to the water does not adversely affect any other land and/or property owner

w) The nature of hydraulic connection (if any) between the groundwater resource from which water is proposed to be taken and surface water bodies will generally be assessed on a case by case basis by evaluating:

i) groundwater depletion of surface water bodies (i.e. the replacement of abstracted groundwater by flows from surface water bodies); and

ii) where no Table 3-6 Sustainable Yield has been identified for the groundwater resource, groundwater interception (i.e. the reduction of groundwater flows to surface water bodies)

Where the case by case assessment demonstrates that there is a hydraulic connection and the assessed maximum surface water body depletion and interception loss (in cubic metres per day) calculated for the term of the consent exceeds 15 cubic metres per day then the Waikato Regional Council will assess the nature of the effect of the groundwater take on surface water bodies having particular regard to the relevant parts of Policy 11.

The nature of hydraulic connection does not need to be assessed and the groundwater take need not be assessed against Policy 11 or Policy 12(x) where:

iii) the physical separation between the surface water body(s) and the underlying groundwater table is large enough to ensure that if there was a lowering of the groundwater table from pumping this would not impact the surface water body (as calculated for streams using the Advisory Note at the end of this Policy); or

iv) the take is allowed by s14(3)(b) of the RMA, or is less than 15 cubic metres per day (the maximum allowed by Permitted Activity Rule 3.3.4.12; or

v) the take is temporary and is allowed by Permitted Activity Rule 3.3.4.14; or

vi) the take is for well or aquifer testing and is allowed by Permitted Activity Rule 3.3.4.15; or

vii) the take is a renewal of a groundwater take consent within the Waikato River catchment upstream of the HPS mixing zone* and the take was authorised at 15 October 2008

Except in the circumstances described under (iv) to (vii) above, the nature of hydraulic connection shall always be assessed for groundwater takes within the Waikato River catchment upstream of the Karapiro Dam unless a Table 3-6 Sustainable Yield has been set for the groundwater resource from which the groundwater take is to occur.

x) Restricting groundwater takes in circumstances where there is a hydraulic connection between the groundwater resource from which the applicant proposes to take groundwater and a surface water body and the take will reduce the amount of water that would otherwise be available for renewable electricity generation or be used for cooling of the Huntly Power Station, including in particular any groundwater takes from the Waikato River catchment upstream of the HPS mixing zone whose surface flow depletion effects, when assessed in combination with all other authorised water takes, would exceed 100% of the primary allocable flows in Table 3-5

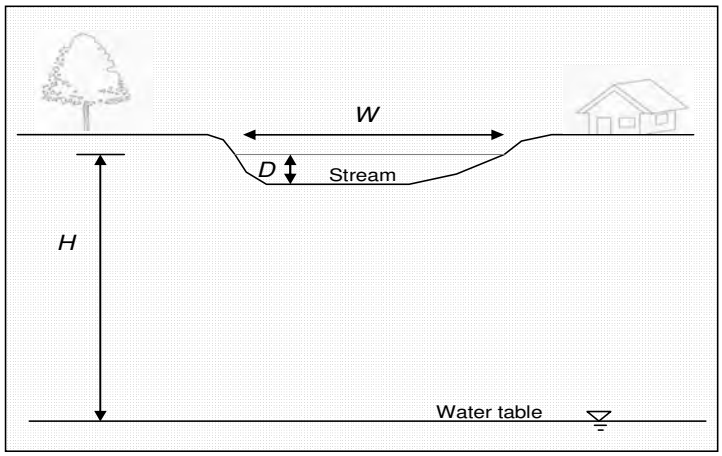
y) In the case of temporary transfers the extent to which consent has already been given effect to on the site which the original consent relates

z) The requirements of the National Environmental Standard for Human Drinking Water

aa) Whether the take is efficient having regard to, amongst other things, the depth of the proposed bore(s) within an aquifer.

Advisory Notes for Policy 12 w)

- The physical separation described in Policy 12 w) iii) for streams exists when:
  i. the depth to the water table (H) below a stream that occurs within the area affected by the groundwater abstraction is greater than five times the maximum depth of water in the stream (D), i.e. H ≥ 5D, and
  ii. the depth to the water table below any potential affected stream surface (H) is greater than twice the stream width (W) i.e. H ≥ 2W.
- For the avoidance of doubt, the water table (H) is the level below the land surface at which the subsurface material is fully saturated with water.



Policy 13: Non-Complying Activities within the Waikato River Catchment above Huntly and Karapiro

(Implements Objectives 3.1.2 and 3.3.2 e) and g))

Generally, non-complying activity applications for surface water takes within the Waikato River catchment upstream of the HPS mixing zone shall not be granted unless the take:

a) Is a zero net take; or

b) Replaces a consented take for an activity listed in Policy 15 a)v); or

c) Achieves a higher level of renewable electricity generation within the Waikato River catchment than would otherwise be achieved were the consent declined; or

d) Is located between the Karapiro Dam and the HPS mixing zone but would not adversely affect electricity generation from the Huntly Power Station.

Policy 14: Non-Complying Activities outside Waikato River Catchment and below Huntly within Waikato River Catchment

(Implements Objectives 3.1.2 and 3.3.2)

Generally, non-complying activity applications for a takes located anywhere in the Region outside of the catchment area covered by Policy 13 shall not be granted unless the take:

a) Is a zero net take, or

b) Replaces a consented take for an activity listed in Policy 15 a)v); or

c) Achieves a higher level of electricity generation that would otherwise be achieved were the consent declined, or

d) Is for the ecological enhancement of wetlands, or

e) Avoids the further degradation of water quality as provided for in Chapter 3.2 of this Plan.

Policy 15: Consent Duration for the Taking of Water

(Implements Objectives 3.1.2 and 3.3.2)

a) Subject to Policy 19, the Waikato Regional Council will generally ensure that all resource consents for the take of surface and groundwater shall have a term no longer than 15 years except those consents:

   i) for domestic or municipal supply.

   ii) for the primary purpose of, or directly associated with, electricity generation.

   iii) which are assessed as having a zero net take and do not restrict the further allocation of water.

   iv) for the purpose of managing the flow or level regimes of rivers or aquifers (e.g. other dewatering and/or water level control, ecological purposes, pit or lake filling for rehabilitation and flood control, mine water management) where the take does not or is not likely to during the consent term limit other users from being allocated water, or result in any adverse effects listed in Policy 1 and 4.

   v) for large scale, capital intensive industrial facilities such as mines, dairy factories, pulp mills and water harvesting infrastructure.

b) Consents granted for the activities listed in a) i) to v) above shall be for a term that is appropriate in the circumstances and that term may exceed 15 years.

c) Consents for takes other than those listed in a) i) to v) above may be granted for a duration shorter than 15 years where appropriate in order to ensure the availability of water to meet the existing and reasonably justified and foreseeable future domestic or municipal supply needs identified in a water management plan the meets the requirements of Method 8.1.2.2.

d) All consents for takes, except surface water zero net takes, shall include provision for a review within one year of the completion of a relevant catchment investigation undertaken in accordance with Method 3.3.4.9 and, if applicable, a consequent change to the Waikato Regional Plan being proposed.

Policy 16: Water Take Recording and Reporting

(Implements Objectives 3.1.2 and 3.3.2)

Except as provided for in part g) of this policy, as a means of assessing compliance with consents for the taking of water, the Waikato Regional Council will require resource consent holders, through conditions to:

a) Install a tamper-proof water-measuring device to manufacturer's specifications with:

   i) a minimum accuracy under field conditions of +/- 5 percent for piped takes or +/- 8 percent for open channel takes, and

   ii) a pulse output if optimum recording is required by Table 3-4,

b) Provide an "as built" plan of the installed water measuring device prior to giving effect to any consent to take water

c) Record and report water take data for all consented surface water takes at a frequency and in a manner described in Table 3-4

d) Record water take data for all consented groundwater takes at a frequency and in a manner to achieve:

i) Minimum recording on a weekly basis and minimum reporting twice yearly in January and June for all consented groundwater takes less than 1500 cubic metres per day, or

ii) Minimum recording and reporting on a daily basis with data logger for all consented groundwater takes greater than 1500 cubic metres per day, or

iii) Reduced or enhanced recording and reporting requirements as determined by the Waikato Regional Council as appropriate in response to the adverse effects associated with the groundwater take.

e) Complete a calibration(s) of the water measuring device and a water use audit(s) during the term of the consent at a frequency and to the standard specified in the consent conditions.

f) In any situation where it is physically not practical to meet parts a) to e) in Policy 16 the following shall apply:

i) The consent holder shall establish a methodology for estimating the amount of water taken, and shall obtain the approval of the Consent Authority that the method is appropriate for the type of take, and the time frame for collecting water use data.

ii) The consent holder shall record the volume of water taken, using the methodology established in Policy 16 part f) i), at a minimum of daily intervals for surface water takes and at least weekly intervals for groundwater takes and keep records of each date and corresponding water use measurement.

iii) The water use records shall be submitted to the consent authority, at intervals of at least one year.

g) Parts a) to e) of this policy shall not generally apply to authorised takes of less than 50 cubic metres per day using pumps with a capacity of 2 litres per second or less. The 50 cubic metres per day shall be inclusive of any water taken under s14(3)(b) of the RMA.

Table 3-4: Surface Water Take and Use - Recording Type and Frequency

Instantaneous Rate of Take l/s	
Waikato & tributaries < 65 l/s Other catchments < 20 l/s	**Waikato & tributaries > 65 l/s Other catchments > 20 l/s**
Basic Recording and Reporting ➢ Minimum recording frequency - weekly (increased frequency may be required at The Waikato Regional Council's discretion) ➢ Minimum reporting frequency – paper records, twice yearly in January and June (recording and reporting by loggers and telemetry may be required at The Waikato Regional Council's discretion)	**Optimum Recording and Reporting** ➢ Minimum recording frequency - daily (increased frequency may be required at The Waikato Regional Council's discretion) ➢ Recording by tamper-proof data logger ➢ Minimum reporting frequency – daily (reporting by telemetry may be required at The Waikato Regional Council's discretion) ➢ Where telemetry is unavailable a lower frequency may be provided for at the discretion of the Waikato Regional Council.

Policy 17: Water Shortage Conditions

(Implements Objective 3.3.2 b), e) and h))

a) When a catchment or aquifer is in a water shortage condition restrictions on abstractions will include, but will not be limited to: rostering (day on, day off abstractions); rationing or cessation and will occur as provided for in Policy 18 and in accordance with Standard 3.3.4.27

b) Restrictions will apply to all existing consents, unless those consents already contain conditions requiring the restriction or cessation of taking at times of low flow in which case the consent conditions shall prevail over part a) of this Policy. Every new and replacement consent for taking water will include either conditions that assign a priority level to apply to the whole or part of the consent in a water shortage condition as provided in Policy 18 or specific conditions appropriate to the particular take and water body in a water shortage condition having regard to Policy 1.

c) When a catchment or aquifer is in a water shortage condition the Waikato Regional Council may issue water shortage direction as provided for under s329 of the Resource Management Act.

Policy 18: Levels of Priority to Apply During Water Shortages

(Implements Objective 3.3.2 b), e) and h))

a) The level of priority to apply during water shortage conditions in surface water (SW) bodies, in descending level of importance is as follows:

   i) Priority SW-A activities: takes which have a zero net take, or for fire fighting

   ii) Priority SW-B activities: stock watering supplies, takes for animal welfare and sanitation (including shed wash down and milk cooling), takes for perishable food processing, takes associated with electricity generation, all permitted and s14(3)(b) RMA takes, and takes for domestic or municipal supply.

   iii) Priority SW-C activities all other takes allocated within the primary allocable flow as defined in Table 3-5.

   iv) Priority SW-D activities: all other takes allocated water above the primary allocable flow as defined in Table 3-5 and temporary takes of short duration.

   v) Priority SW-E activities: takes for water harvesting.

b) The level of priority to apply during water shortage conditions in groundwater (GW) aquifers, in descending level of importance, is as follows:

   i) Priority GW-A activities: will include groundwater takes allocated as discretionary activities.

   ii) Priority GW-B activities: will include groundwater takes allocated as non complying activities.

Policy 19: Phasing Out Exceedences of the Table 3-5 Allocable Flows

(Implements Objective 3.1.2 a), b), c) and d) and 3.3.2 b), e) and h))

In catchments managed under Policy 7 the Waikato Regional Council will:

a) Generally not decline applications lodged before 1 January 2015 relating to existing takes where there is no increase in the amount of the take;

b) Seek to phase out exceedences of the combined primary and secondary allocable flows set in Table 3-5 by 31 December 2030 by implementing, in the following priority order, parts a), c), l), d), f), e), h), b), k) and i) of Method 3.3.4.10 and by reviewing the minimum and allocable flows in accordance with Method 3.3.4.9;

c) Except for any take that is a zero net take, generally decline, or grant for a lesser volume or for a lesser duration, replacement applications lodged on or after 1 January 2015 if the continued implementation of Policy 19(b) is unlikely to result in the phasing out of any exceedence of the combined primary and secondary allocable flows set in Table 3-5 by 31 December 2030.

Policy 20: Surface Water Harvesting

(Implements Objective 3.1.2 c), g) and p))

Except as restricted by Policies 13 and 14, in addition to the primary allocation and secondary allocation set out in Table 3-5, an allocation at higher flows from rivers may be provided as a restricted discretionary activity:

a) if the take is not within the Waikato River Catchment upstream of the Karapiro Dam; and

b) in circumstances where water is only taken when the river flow is greater than the median flow, and the total amount of water taken by way of water harvesting does not exceed 10% of the flow in the river at the time of abstraction.

Policy 21: Shared Use and Management of Water

(Implements Objective 3.1.2 a) and g))

The Waikato Regional Council will promote shared use and management of water that, subject to ongoing compliance with individual resource consent conditions:

a) allows water users the flexibility to work together to make the best use of available water

b) allows water users to share water abstraction and reticulation infrastructure provided that it is fit for its purpose.

3.3.4 Implementation Methods – Water Takes

3.3.4.1 Environmental Education

(Method to implement Section 3.3.3 Policies 8 and 9)

The Waikato Regional Council will through ongoing environmental education programmes:

a) encourage the use of alternative water resources where there is over allocation

b) encourage consent holders to review their current water takes to ensure water use is still required and their use of water is efficient (see Chapter 3.4 of this Plan)

c) inform landowners and water users about the in-stream and groundwater values that need to be considered when assessing water take applications

d) inform the community about water management and allocation as contained in the Variation. The implications for all water users will be identified.

3.3.4.2 Integration with Territorial Authorities

(Method to implement Section 3.3.3 Policy 9)

The Waikato Regional Council will work with Territorial Authorities to:

a) develop appropriate land use provisions in district plans to avoid, remedy, or mitigate adverse effects of land use on groundwater aquifer yields, aquifer water quality, spring protection, river flows and wetland water levels;

b) encourage and assist territorial authorities to adopt, through respective LTCCP processes, water demand management tools to plan and manage future projected water use;

c) encourage the preparation of water management plans in accordance with Section 8.1.2.2 and applications to vary existing resource consent conditions to require existing domestic or municipal supply water takes to be undertaken in accordance with the water management plan.

3.3.4.3 Water User Groups/Voluntary Agreements

(Method to implement Section 3.3.3 Policies 17, 18, 19 and 21)

The Waikato Regional Council will, in order to assist and support the community to understand water management and allocation as an essential element of restoring and protecting water bodies:

a) promote water user groups, or voluntary agreements between water users, to schedule takes and manage allocations.

b) initiate and support water user groups to assist with allocations during times of restrictions or when the catchment is fully or over allocated.

c) provide, where available, accurate technical information on which user groups can make decisions.

The Waikato Regional Council will further investigate how water user groups can be used to:

a) assist with management of water allocated to abstractors;

b) provide opportunities for shared investment in, and optimal use of water transport and storage infrastructure;

c) make best use of available water.

3.3.4.4 Estimating Permitted Takes and s14(3)(b) Takes

(Method to implement Section 3.3.3 Policies 8 and 9)

In order to accurately assess the level of permitted takes and water takes for reasonable stock and domestic needs (s14(3)(b) of the RMA), the Waikato Regional Council will maintain a model to estimate the level of permitted takes. In consultation with stakeholders the Waikato Regional Council will also undertake audits of actual use in selected areas to coincide with relevant catchment investigation dates.

3.3.4.5 Investigations

(Method to implement Section 3.3.3 Policy 4)

The Waikato Regional Council will continue to monitor aquifers and surface waters to ensure water use is sustainable and in areas of high use will develop sustainable yield limits and allocable flows. The council will develop means of making water allocation information readily available to the public.

3.3.4.6 Development of Minimum and Allocable Flows for Surface Water Bodies and Sustainable Yields for Aquifers

(Method to implement Section 3.3.3 Policies 1, 2, 3 and 4)

In determining allocable flows, minimum flows and sustainable yields, the Waikato Regional Council will:

a) Work with its iwi co-management partners and make use of a variety of recognised assessment methods as appropriate to the particular conditions, including maatauranga Maaori. In determining which combination of technical methods is most appropriate, guidance will be taken from any Integrated River Management Plan, any relevant planning document recognised by an iwi authority and lodged with the Council to the extent that its content has a bearing on water allocation, and the Ministry for the Environment – Environmental Flow Guidelines for Instream Values May 1998, or any subsequent update

b) Consult with key affected parties including tangata whenua representatives, existing consent holders, domestic or municipal suppliers, Fish and Game New Zealand, Department of Conservation, industry organisations and local area water user groups.

All new entries into Tables 3-5 and 3-6 will be included by way of a Plan Change under the First Schedule of the RMA.

3.3.4.7 Groundwater Depletion of Surface Water

(Method to implement Section 3.3.3 Policy 10(i))

Waikato Regional Council will manage the surface water depletion effects identified by Policy 10 i) and Policy 12 w) using either one or both of the following methods.

a) A groundwater take will have surface water restrictions imposed where there is a hydraulic connection between the two systems, and a restriction of the groundwater take will result in an increase in surface water flows during times of restrictions.

b) Where a groundwater take is assessed under Policy 10 i) as impacting on surface water resources and this cannot be solely managed with restrictions on the groundwater take, the reduction in surface water flow occasioned by the groundwater take will be quantified and included in the surface water allocation regime used for assessing the cumulative allocation for the surface water takes in Chapter 3.3. The remainder of the groundwater take (the actual rate of take less the amount quantified as being a reduction in surface water flow) will be allocated against the sustainable yield in Table 3-6.

3.3.4.8 Assessment of hydrological flow statistics for water allocation

(Method to implement Section 3.3.3 Policy 1)

The Waikato Regional Council will maintain a technical report detailing the calculation of flow statistics used for water allocation at key flow recorder sites in the Region, including methods to remove the influence of existing surface water takes. In the Waikato River catchment upstream of the Karapiro Dam this includes the Council developing a model to remove the influence of the eight Waikato River hydro-generation dams, the Lake Taupo outlet gates and the Tongariro Power Scheme on the hydrology of the catchment for implementing Standard 3.3.4.27 f). The model shall be independently peer reviewed.

The flow statistics in the technical report will typically be reassessed five yearly, unless there are any significant changes to the flow regime in which case the technical report will be reassessed as soon as practical thereafter. The technical report will be published on the Waikato Regional Council website.

Advisory Note:

- The Council will make available to stakeholders a peer review of the model described in this method and the results of periodic reviews of the data used in this model.

3.3.4.9 Review Allocable Flows/Sustainable Yields

(Method to implement Section 3.3.3 Policy 1)

Waikato Regional Council will review minimum flows and primary and secondary allocable flows of surface water or the Sustainable Yields in aquifers when:

a) Targets and measures are incorporated into either the Vision and Strategy for the Waikato River promulgated under the Waikato River Co-management framework or the regional plan; or

b) Investigations indicate that the matters listed in Section 3.3.3 Policies 1 and 4 cannot be provided for at current minimum or allocable flows; or

c) Investigations indicate that the matters listed in either Policy 1 or 4 can be provided for at a different level of allocation than allowed for in either Table 3-5 or 3-6 respectively and that no adverse effects that are more than minor will occur; or

d) The allocation reaches or exceeds 70 percent of the primary allocable flow for catchments listed as “all other catchments” in Table 3-5; or

e) The allocation reaches or exceeds 70 percent of Management Level listed in Table 3-6; or

f) Actual or potential adverse effects are occurring within a catchment due to high demand for surface or groundwater or when tangata whenua values as noted in Section 3.3.3 Policies 1 and 4 are shown to be adversely affected; or

g) Investigations indicate that climate change is affecting surface water flows and sustainable yields in groundwater; or

h) Investigations demonstrate that there are significant improvements in water quality which could enable more water to be allocated for out of stream uses; or

i) Investigations indicate that the matters listed in Section 3.3.3 Policies 1 and 4 cannot be provided for at current minimum flows and primary and secondary allocable flows; or

j) Catchment investigation date listed in Table 3-4A occurs; or

k) Any significant changes to the inflow regime that occur in relation to the Waikato River catchment upstream of Karapiro Dam.

Table 3-4A Catchment Investigation Dates

Note:

Refer to water allocation maps 'Catchment Investigation Dates'.

Catchment or Sub-Region	Catchment Investigation Date - and on each 15th anniversary thereafter
Coromandel Peninsula (from the Waihou Catchment north)	1 July 2010
Waihou River including the sections of the streams which have their headwaters in the Waikato Region and their mouth in Bay of Plenty Region	1 July 2012
Piako River and all catchments flowing to the Firth of Thames along the Hunua and Hapuakohe Ranges	1 July 2014
West Coast (From Taranaki regional boundary to Auckland regional boundary excluding the Waikato Catchment)	1 July 2015
Waikato River (1) - Lake Taupo catchment above Huka Falls	1 July 2016
Waikato River (2) - Huka Falls to Karapiro Dam	1 July 2017
Waikato River (3) - Karapiro Dam to Ngaruawahia at confluence of Waipa (including the Waipa River)	1 July 2019
Waikato River (4) - Ngaruawahia at confluence of Waipa (excluding the Waipa River) to Mercer Bridge	1 July 2021
Waikato River (5) - Mercer Bridge to Waikato River Mouth	1 July 2023

3.3.4.10 Phasing Out Exceedences of the Table 3-5 Allocable Flows

(Method to implement Section 3.3.3 Policy 19)

Exceedences of the Table 3-5 allocable flows will be phased out by some or all of the following methods:

a) Ceasing any new allocation of water (not including the replacement of previously consented taking of water subject to the requirements of s124B of the RMA after 9 August 2008)

b) Encouraging voluntary reductions or promoting water augmentation/harvesting

c) Reviewing conditions of existing consents to determine if any efficiency gains can be made, including through altering the volume, rate or timing of the take provided this does not invalidate the exercise of the consent for its original purpose

d) Shared reduction across the catchment either by consent review for existing takes or as resource consents for takes expire. Shared reductions may also be achieved by anticipating the expiry of existing consents in a catchment

e) Rostering users, so they are not all taking at once or alternatively reducing the rate of permissible takes

f) Directing new applications or replacement of existing resource consents consider alternatives to the water take or to other potential sources of water (e.g. groundwater, water harvesting)

g) Temporarily restricting the taking of water by the issuing of a water shortage direction under section 329 of the RMA

h) Encouraging the establishment of catchment groups or voluntary agreements between water users to achieve necessary reductions in catchment water use

i) Reduce permitted takes, excluding those provided for by s14 (3)(b) of the RMA, through a pro rata reduction in the rate of take and where necessary through a reduction in the daily permitted volume via a plan change

j) Undertake an assessment of sustainable yield or allocable flow in accordance with Method 3.3.4.9

k) Where there is an increase in allocation of water for domestic or municipal supply in a catchment where allocation exceeds 100% of the primary allocation in Table 3-5, there may be shared reduction across the catchment (taking into account the relative efficient use of the water taken) of all industrial, commercial or agricultural users of water (not being water used for human drinking purposes or human sanitation purposes), either by consent review or as consents expire. For the purpose of this provision industrial takes do not include takes associated with the generation of electricity from renewable energy sources.

l) Where the allocation of water for milk cooling and dairy shed wash down allowed by Rules 3.3.4.12, 3.3.4.13, 3.3.4.19 and 3.3.4.20 results in allocation exceeding 100% of the primary allocable flows in Table 3-5, the Council may as a priority reduce that over allocation by reducing the amount of water allocated by existing consents to other dairy sector production land use activities (including pasture irrigation) before applying shared reductions across all other sectors. Except that, in the case of surface water, this provision shall only apply to the extent that the reduction achieved by the dairy sector equals the amount of water consented for milk cooling and dairy shed wash down under Rules 3.3.4.19 and 3.3.4.20, less the water allowed to be taken by those consent holders under Rule 3.3.4.13.

3.3.4.11 Conditions relating to Water Management Plans

(Method to implement Section 3.3.3 Policy 9 and Section 3.4.3 Policy 2)

The Waikato Regional Council will require a water management plan that meets the requirements of Method 8.1.2.2 to be submitted with any application for a resource consent for domestic or municipal supply, and will impose conditions on any consent granted requiring:

a) Regular reviews of the water management plan;

b) Reporting on the effectiveness of the plan in achieving water conservation and water demand management;

c) Reporting on:

   i) Updated forecasted water demand;

   ii) The basis on which those forecasts have been prepared (including breakdown on forecast requirements for domestic or municipal supply use);

   iii) The maximum daily take required during the next reporting period and the rationale for this;

   iv) Any uncertainties associated with growth data used in the calculation of future demand;

   v) In light of (i) to (iv), whether any reduction in the maximum daily water takes for the next reporting period is considered appropriate;

d) Regular reviews of consent conditions to give effect to the matters identified in (b) and (c) above.

3.3.4.12 Permitted Activity Rule – Supplementary Groundwater Takes

(Implements Section 3.3.3 Policy 10 a)ii)

In addition to the taking of groundwater as allowed by s14(3)(b) of the RMA

1. The taking of up to 1.5 cubic metres per day on sites equal to or less than one hectare; or
2. The taking of up to 1.5 cubic metres per day on sites where the well is within 600 metres of the coastal marine area; or
3. The taking of up to 15 cubic metres of groundwater per day on all other sites

by means of a well is a **permitted activity** subject to the following conditions:

a) The take(s) shall be within a single site.

b) The site of the activity shall not be within 100 metres of a Significant Geothermal Feature except for those features that are Recent Sinter or Hydrothermal Eruption Craters containing no geothermal pools or discharging geothermal features in which case the take shall not be located within 20 metres of the feature.

c) The activity shall not result in salt water intrusion or any other contamination of the aquifer.

d) The total of all takes from the aquifer does not exceed the Sustainable Yield if listed in Table 3-6.

Exception

This rule does not apply to:

- The taking of geothermal energy and water.
- The taking of water for a dam or diversion. Such takes are managed by the policies and rules in Chapter 3.6.

Advisory Notes:

- The drilling and construction of a well for a water take is provided for under Rules 3.8.4.6, 3.8.4.7 and 3.8.4.8. Rule 3.3.4.8 provides control over the location of new wells.
- Under s14(3)(b) of the RMA, the taking and using of water for an individual's reasonable domestic needs and stock drinking water requirements are allowed without a resource consent, provided they do not, and are not likely to, have an adverse effect on the environment. Water taken under Parts 1, 2 and 3 of this rule is in addition to that which may be taken for an individual's domestic and stock watering needs.
- Where a site with an existing permitted supplementary groundwater take is acquired by the owner of an adjacent site that also has an existing permitted supplementary groundwater take, both takes continue to be permitted activities.
- Rules governing the take of geothermal energy and water are found in Module 7: Geothermal of this Plan.
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3.3.4.13 Permitted Activity Rule - Supplementary Surface Water Takes

(Implements Section 3.3.3 Policy 8 a)ii)

In addition to the taking of surface water as allowed by s14(3)(b) of the RMA

1. The taking of up to 1.5 cubic metres per day of water (calculated on a net take basis) from sites equal to or less than one hectare; or
2. The taking of up to 30 cubic metres per day of water (calculated on a net take basis) from the main stem of the Waipa River downstream of Otorohanga (SH 31 bridge at Otorohanga) or from the main stem of the Waikato River downstream of Lake Taupo from sites that adjoin either of those rivers; or

3. The taking of up to 15 cubic metres per day of water (calculated on a net take basis) from all other sites

from surface water is a **permitted activity** subject to the following conditions:

a) The take(s) shall be within a single site.

b) The net rate of the take, assessed in combination with all other authorised water takes, (all calculated on a net take basis) shall not exceed 100 percent of the primary allocable flows for catchments specified in Table 3-5.

c) Any water take under this rule shall not be used for the same purpose for which a water take consent is held for the same site (so that the total water allocated to the site is accounted for within the consented amount to ensure no double accounting).

d) The intake structure shall comply with the screen and velocity standards as set out in the Water Management Class for that water body (refer Chapter 3.2 of this Plan).

e) The intake structure shall comply with the provisions in Rule 4.2.10.1 of this Plan.

f) The water take shall not be from a water body classified as Natural State Water in the Water Management Class Maps.

Exception

This rule does not apply to:

- The taking of geothermal energy and water; or to
- Takes from wetlands or lakes (excluding artificial lakes and Lake Taupo).
- The taking of water for a dam or diversion. Such takes are managed by the policies and rules in Chapter 3.6.

Advisory Note:

- Under s14(3)(b) of the RMA, the taking and using of water for an individual's reasonable domestic needs and stock drinking water requirements are allowed without a resource consent, provided they do not, and are not likely to, have an adverse effect on the environment. Water taken under Parts 1, 2 and 3 of this rule is in addition to that which may be taken for an individual's domestic and stock watering needs.
- Where a site with an existing permitted supplementary surface water take is acquired by the owner of an adjacent site that also has an existing permitted supplementary surface water take, both takes continue to be permitted activities.
- Rules governing the take of geothermal energy and water are found in Module 7: Geothermal of this Plan.
- The assessment of cumulative allocation in this rule does not include that allocated by 3.3.4.22 Restricted Discretionary Activity Rule – Surface Water Harvesting.

3.3.4.14 Permitted Activity Rule – Temporary Takes

(Implements Section 3.3.3 Policies 8 a)iii), 10 a)iii))

The taking of up to 150 cubic metres of water per day (calculated on a net take basis for surface water takes) for no more than five days per annum from any river or aquifer is a **permitted activity** subject to the following standards and terms:

a) The net rate of the take, assessed in combination with all other authorised water takes, shall not exceed 100 percent of the primary allocable flows for catchments specified in Table 3-5.

b) For groundwater takes the well is not within 600 metres of the coastal marine area and the total rate of the take in combination with all other takes from the aquifer does not exceed the Sustainable Yield if listed in Table 3-6.

c) The intake structure shall comply with the screen and velocity standards as set out in the Water Management Class for that water body (see Chapter 3.2 of this Plan) and with the provisions in Rule 4.2.10.1 of this Plan.

d) This rule shall not apply when water restrictions are in place in accordance with Standard 3.3.4.27.

e) Written notice of the location, time and duration of take shall be provided to the Waikato Regional Council 10 working days before works commence.

Exceptions

This rule does not apply to:

- the taking of geothermal energy and water; or to
- takes from wetlands or lakes (excluding artificial lakes and Lake Taupo).
- The taking of water for a dam or diversion. Such takes are managed by the policies and rules in Chapter 3.6.

Advisory Note:

- The assessment of cumulative allocation in this rule does not include that allocated by 3.3.4.22 Restricted Discretionary Activity Rule – Surface Water Harvesting.

3.3.4.15 Permitted Activity Rule - Well or Aquifer Testing

(Implements Section 3.3.3 Policy 10 a) iv))

The taking of groundwater for well or aquifer testing purposes (including water with a temperature in excess of 30 degrees Celsius) is a **permitted activity** subject to the following conditions:

a) No test or tests for a well shall exceed a pumping period in excess of three days in duration.

b) The rate of take shall not exceed 2,500 cubic metres or 2,500 tonnes per day.

c) The site of the activity shall not be within 100 metres of a Significant Geothermal Feature except for those features that are Recent Sinter or Hydrothermal Eruption Craters containing no geothermal pools or discharging geothermal features in which case the take shall not be located within 20 metres of the feature.

d) The Waikato Regional Council shall be notified in writing at least one week in advance of tests with a pumping period in excess of 24 hours.

e) Records of the pump test(s) shall be kept by the owner, detailing flow rates, draw downs, and any information analysis. Copies shall be forwarded to the Waikato Regional Council within one month of completion.

f) Where the temperature of the water taken exceeds 30 degrees Celsius the following additional information shall be provided in writing to the Waikato Regional Council within one month of completing testing:
   i) location of take and discharge
   ii) geological log
   iii) well/aquifer test results
   iv) map of any deviated drilling
   v) temperature/pressure profiles.

Advisory Notes:

- The drilling and construction of a well for a water take will require resource consent under Rule 3.8.4.8.
- Refer also to Rules 3.5.8.1 and 3.5.8.2 regarding the discharge of well and aquifer testing water.

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3.3.4.16 Controlled Activity Rule - Taking of Surface Water

(Implements Section 3.3.3 Policy 8 e)i) and Policy 9 b))

Except as permitted by **Rules 3.3.4.13** and **3.3.4.14** of this Plan, the taking of surface water up to and including 70 percent of the allocable flow identified in Table 3-5 is a **controlled activity** (requiring resource consent) subject to the following standards and terms:

a) The net rate of the take, assessed in combination with all other authorised water takes (all calculated on a net take basis), shall not exceed 70 percent of the primary allocable flows for catchments specified in Table 3-5

b) The water take location shall not be within a water body classified as Natural State Water on the Water Management Class Maps.

c) Where the take is for a domestic or municipal supply a water management plan which meets the requirements of Method 8.1.2.2 shall be provided.

d) All applications to take water under this rule shall be assessed on a net take basis[7]

Exception

This rule does not apply to:

- The taking of geothermal energy and water.
- The taking of water for a dam or diversion. Such takes are managed by the policies and rules in Chapter 3.6.

Waikato Regional Council reserves control over the following matters:

i) Measures to restore and protect the health and wellbeing of the water body for present and future generations

ii) The timing of abstraction, the (net) volume of water allocated and the rate at which water is abstracted, including daily and seasonal requirements and duration and timing of peak daily take rate, having regard to the efficiency and use of the water allocated and having regard to the matters contained in Policy 11.

iii) The carrying out of measurements, samples, analyses, inspections, recording and reporting having regard to the matters contained in Policy 16.

iv) Measures to avoid, remedy, or mitigate any adverse effects associated with the intake structure.

v) Measures to satisfy the intake velocity and screening requirements for the protection of aquatic fauna having regard to standards identified in the Water Management Class standards in Section 3.2.4.

vi) The level(s) of priority to apply during water shortage conditions having regard to the matters contained in Policy 18 and Standard 3.3.4.27.

vii) Abstraction restrictions during water shortage conditions (including suspension of abstraction and rostering) having regard to the matters contained in Policies 17, 18 and Standard 3.3.4.27.

viii) The duration of the resource consent having regard to the matters contained in Policy 15 and Policy 18 and to future demands for water for domestic or municipal supply from the surface water body to which the application applies.

ix) Review date with respect to the catchment investigation date as detailed in Method 3.3.4.9 and Table 3-4A.

[7] This means an applicant must provide information in an AEE to demonstrate this standard is met

x) The effect of the activity on the relationship of tangata whenua and their culture and traditions with their ancestral lands, water, sites, wahi tapu and other taonga.

xi) Measures to maintain and enhance tangata whenua uses and values of water, the ability to exercise kaitiakitanga, and measures to protect and enhance the mauri of water bodies.

xii) The need for and content of a water management plan as appropriate to the nature and scale of the proposed activity in accordance with Method 8.1.2.2.

xiii) Measures to ensure that the net take is achieved whenever any consent granted under this rule is being exercised.

Advisory Notes:

- The level of cumulative authorised abstraction occurring within a catchment is reported on the Waikato Regional Council website
- Information requirements to enable the assessment of any application under this rule are as set out in Section 8.1.2.1of this Plan.
- Rules governing the take of geothermal energy and water are found in Module 7: Geothermal of this Plan.
- Rule 3.3.4.16 applies to all abstractors, including people/organisations taking water for domestic or municipal supply.
- Any resource consent granted under this rule shall include a condition specifying the amount of water taken as a net take.
- The assessment of cumulative allocation in this rule does not include that allocated by 3.3.4.22 Restricted Discretionary Activity Rule – Surface Water Harvesting.
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3.3.4.17 Controlled Activity Rule – Taking of Surface Water for Cooling Water for the Huntly Power Station

(Implements Section 3.3.3 Policy 8 e)ii))

The taking of surface water from the Waikato River for cooling water at the Huntly Power Station is a **controlled activity** (requiring resource consent) subject to the following standards and terms;

a) The net take by Huntly Power Station shall not exceed 0.7 cubic metres per second.

b) All applications to take water under this rule shall be assessed[8] on a net take basis.

Waikato Regional Council reserves control over the following matters:

i) Measures to restore and protect the health and wellbeing of the water body for present and future generations.

ii) The timing of abstraction, the quantum of the net take, the timing thereof and volume of water allocated and the rate at which water is abstracted, including daily and seasonal requirements and duration and timing of peak daily take rate, having regard to the efficient use of the water by the existing infrastructure and having regard to the matters contained in Policy 11.

iii) The carrying out of measurements, samples, analyses, inspections, recording and reporting having regard to the matters contained in Policy 16.

iv) Measures to avoid, remedy or mitigate any adverse effects associated with the taking of water including the intake structure.

v) Abstraction restrictions during water shortage conditions (including suspension of abstraction, rostering) having regard to the matters contained in Policies 17, 18 and Standard 3.3.4.27.

[8] This means an applicant must provide information in an AEE to demonstrate this standard is met

vi) Measures to satisfy the intake velocity and screening requirements for the protection of aquatic fauna.

vii) The duration of the resource consent having regard to the matters contained in Policy 15 and to future demands for water for domestic or municipal supply from the surface water body to which the application applies.

viii) Review date with respect to the catchment investigation date as detailed in Method 3.3.4.9 and Table 3-4A.

ix) The effect of the activity on the relationship of tangata whenua and their culture, and traditions with their ancestral lands, water, sites, wahi tapu and other taonga.

x) Measures to maintain and enhance tangata whenua uses and values of water, the ability to exercise kaitiakitanga, and measures to protect and enhance the mauri of water bodies.

xi) Measures to ensure that any discharge taken into account when calculating the net take is being exercised whenever any consent granted under this rule is being exercised.

Advisory Note:

- Any resource consent granted shall include a condition specifying the quantum of the net take.
- The assessment of cumulative allocation in this rule does not include that allocated by 3.3.4.22 Restricted Discretionary Activity Rule – Surface Water Harvesting.

3.3.4.18 Controlled Activity Rule – Replacing Authorised Taking of Surface Water for Domestic or Municipal Water Supply

(Implements Section 3.3.3 Policy 9 a))

Except as permitted by **Rule 3.3.4.13** any taking of surface water for the purposes of domestic or municipal supply is a **controlled activity** (requiring resource consent) subject to the following standards and terms:

a) The take is described by Policy 9(a).

b) The applicant shall prepare and provide a water management plan which meets the requirements of Methods 8.1.2.2.

c) All applications to take water under this rule shall be assessed on a net take basis.

The Waikato Regional Council reserves control over the following matters:

i) Measures to restore and protect the health and wellbeing of the water body for present and future generations.

ii) The timing of abstraction, the (net) volume of water allocated and the rate at which water is abstracted, including daily and seasonal requirements and duration and timing of peak daily take rate, having regard to the efficiency of the use of the water allocated and having regard to the matters contained in Policy 11.

iii) The carrying out of measurements, samples, analyses, inspections, recording and reporting having regard to the matters contained in Policy 16.

iv) The extent and location of riparian fencing and planting having regard to the applicant's Riparian Vegetation Management Plan, the nature of the existing land use in the riparian margins, the length of riparian margin within the property adjacent to the intake structure, the scale of the take and the benefits of fencing and planting in the vicinity of the point of take relative to other locations.

v) Measures to satisfy the intake screening requirements for the protection of aquatic fauna.

vi) Measures to avoid, remedy, or mitigate any adverse effects associated with the intake structure.

vii) The level(s) of priority to apply during water shortage conditions having regard to the matters contained in Policy 18 and Standard 3.3.4.27.

viii) Abstraction restrictions during water shortage conditions (including suspension of abstraction, rostering) having regard to the matters contained in Policies 17, 18 and Standard 3.3.4.27.

ix) The duration of the resource consent and future demands for domestic or municipal supply for water from the surface water body to which the application applies having regard to the matters contained in Policy 15 and Policy 19.

x) Review date with respect to the catchment investigation date as detailed in Method 3.3.4.9 and Table 3-4A.

xi) The content and implementation of a water management plan submitted in compliance with standard and term b) of this rule.

xii) The effect of the activity on the relationship of tangata whenua and their culture and traditions with their ancestral lands, water, sites, wahi tapu and other taonga.

xiii) Measures to maintain and enhance tangata whenua uses and values of water, the ability to exercise kaitiakitanga, and measures to protect and enhance the mauri of water bodies.

xiv) Measures to ensure that the net take is achieved whenever any consent granted under this rule is being exercised.

Exception

This rule does not apply to:

- The taking of geothermal energy and water.
- The taking of water for a dam or diversion. Such takes are managed by the policies and rules in Chapter 3.6.

Advisory Note:

- The level of cumulative authorised abstraction occurring within a catchment is reported on the Waikato Regional Council website
- Any resource consent granted under this rule shall include a condition specifying the amount of water taken as a net take.
- The assessment of cumulative allocation in this rule does not include that allocated by 3.3.4.22 Restricted Discretionary Activity Rule – Surface Water Harvesting.

3.3.4.19 Controlled Activity Rule – Taking of Surface Water for Existing Milk Cooling and Dairy Shed Wash Down

(Implements Section 3.3.3 Policies 6 b), 7 b) and 8 b))

Except as provided for by Rule 3.3.4.13 any taking of surface water described in 1 or 2 below for the purposes of milk cooling or dairy shed wash down is a **controlled activity**:

1. For applications lodged prior to 1 January 2015 for takes that were existing prior to 15 October 2008 in catchments where the net rate of the take when assessed in combination with all other authorised water takes (all calculated on a net take basis) exceeds 100 percent of the combined primary and secondary flows set in Table 3-5; or
2. For takes in catchments where the net rate of the take when assessed in combination with all other authorised water takes (all calculated on a net take basis) does not exceed 100 percent of the combined primary and secondary flows set in Table 3-5

subject to the following standards and terms:

a) The water take shall not be from a water body classified as Natural State Water in the Water Management Class Maps.

b) The take shall be for a single site

c) The net amount of water taken is proven to be the same or less than that occurring prior to 15 October 2008.

d) All stock on the property for which the water is taken and used shall be excluded from the river from which the take occurs by way of fencing, provided that the property owner also owns the land adjacent to that water body.

e) A Riparian Vegetation Management Plan which meets the requirements of Method 3.3.4.28 shall be provided for the property for which the water is taken and used on and that plan shall specify the location and length of any streams whose riparian margins are to be planted and the proposed timing of that planting.

f) The reticulation network for the water taken shall include leak detection mechanisms.

g) All applications to take water under this rule shall be assessed on a net take basis.

h) Any water take under this rule shall be deemed to include (as the first 15 cubic metres per day of such takes) all water that is permitted for the site pursuant to Rules 3.3.4.12 and 3.3.4.13 (so that the total water allocated to the site is accounted for within the consented amount to ensure no double accounting).

Waikato Regional Council reserves control over the following matters:

i) Measures to restore and protect the health and wellbeing of the water body for present and future generations.

ii) The extent and location of riparian fencing and planting having regard to the applicant's Riparian Vegetation Management Plan, the nature of the existing land use in the riparian margins, the length of riparian margin within the property adjacent to the intake structure, the scale of the take and the benefits of fencing and planting in the vicinity of the point of take relative to other locations.

iii) Adequacy and nature of mechanisms used to identify and remedy leaks.

iv) The timing of abstraction, the (net) volume of water allocated and the rate at which water is abstracted, including daily and seasonal requirements and duration and timing of peak daily take rate, having regard to the efficiency and use of the water allocated, the number of cows milked (as at October 2008) and having regard to the matters contained in Policy 11 and Policy 19.

v) The carrying out of measurements, samples, analyses, inspections, recording and reporting having regard to the matters contained in Policy 16.

vi) Measures to avoid, remedy, or mitigate any adverse effects associated with the intake structure.

vii) Measures to satisfy the intake velocity and screening requirements for the protection of aquatic fauna having regard to standards identified in the Water Management Class standards in Section 3.2.4.

viii) The level(s) of priority to apply during water shortage conditions conditions having regard to the matters contained in Policy 18 and Standard 3.3.4.27.

ix) Abstraction restrictions during water shortage conditions (including suspension of abstraction and rostering) having regard to the matters contained in Policies 17, 18 and Standard 3.3.4.27.

x) The duration of the resource consent having regard to Policy 15 and to future demands for water for domestic or municipal supply from the surface water body to which the application applies.

xi) Review date with respect to the catchment investigation date as detailed in Method 3.3.4.9 and Table 3-4A.

xii) The effect of the activity on the relationship of tangata whenua and their culture, and traditions with their ancestral lands, water, sites, wahi tapu and other taonga.

xiii) Measures to maintain and enhance tangata whenua uses and values of water, the ability to exercise kaitiakitanga, and measures to protect and enhance the mauri of water bodies.

xiv) Measures to ensure that any discharge taken into account when calculating the net take is being exercised whenever any consent granted under this rule is being exercised

Advisory Note:

- Any resource consent granted shall include a condition specifying the quantum of the net take.
- For the purpose of determining the maximum volume of take as at 15 October 2008 the Waikato Regional Council shall have regard to water use monitoring records held by the applicant, or where no such records exist, shall generally calculate the volume based on the number of cows proven by the applicant to have been milked on the subject site at that time multiplied by 70 litres per cow.
- Information requirements to enable the assessment of any application under this rule are as set out in Section 8.1.2.1 of this Plan.
- Under Rule 4.2.18.1 of this Plan a consent is required for planting and fencing within 10 metres (except in the Hauraki District Council and Aka Aka Otaua Drainage areas where a 15 metre distance applies) of the water bodies listed in Table 4-1. The consent requirements of Rule 4.2.18.1 will be dealt with contemporaneously by WRC when assessing consent applications under Rule 3.3.4.19.

3.3.4.20 Controlled Activity Rule – Taking of Groundwater for Existing Milk Cooling and Dairy Shed Wash Down

(Implements Section 3.3.3 Policy 10b))

Except as permitted by Rule 3.3.4.12 any taking of groundwater for the purposes of milk cooling and dairy shed wash down is a **controlled activity** subject to the following standards and terms:

a) The take shall be for a single site .

b) The take is from a well:
   i) Greater than 600 metres from the coastal marine area or 100 metres from a lake or stream; or
   ii) Greater than 100 metres from a Significant Geothermal Feature except for those features that are Recent Sinter or Hydrothermal Eruption Craters containing no geothermal pools or discharging geothermal features in which case the take shall not be located within 20 metres of the feature; or
   iii) Greater than 100 metres from any other wells, except if the other well is also owned by the applicant.
   iv) With the upper extent of the screen being at a depth greater than 40 metres below ground level.

c) The take shall not result in salt water intrusion or any other contamination of the aquifer.

d) The net amount of groundwater taken is proven to be the same or less as was occurring prior to 15 October 2008

e) The reticulation network for the water taken shall include leak detection mechanisms

f) The well(s) used for the taking of water are registered with Waikato Regional Council.

g) Any water take under this rule shall be deemed to include (as the first 15 cubic metres per day of such takes) all water that is permitted for the site pursuant to Rules 3.3.4.12 and 3.3.4.13 (so that the total water allocated to the site is accounted for within the consented amount to ensure no double accounting)

Waikato Regional Council reserves control over the following matters:

i) Adequacy and nature of mechanisms used to identify and remedy leaks.

ii) The timing of abstraction, the (net) volume of groundwater allocated and the rate at which groundwater is abstracted, including daily and seasonal requirements and duration and timing of peak daily take rate, having regard to the efficiency and use of the groundwater allocated having regard to the number of cows milked (as at October 2008), to the matters contained in Policy 12, and to the matters contained in Policy 11 where appropriate.

iii) The carrying out of measurements, samples, analyses, inspections, recording and reporting having regard to the matters contained in Policy 16.

iv) Measures to avoid, remedy, or mitigate any adverse effects associated with the abstraction, including drawdown interference effects on neighbouring groundwater takes.

v) Abstraction restrictions during water shortage conditions (including suspension of abstraction and rostering) having regard to the matters contained in Policies 17, 18 and Standard 3.3.4.27.

vi) The duration of the resource consent having regard to the matters contained in Policy 11 and to future demands for water for domestic or municipal supply from the groundwater body to which the application applies.

vii) Review date with respect to the catchment investigation date as detailed in Method 3.3.4.9 and Table 3-4A.

viii) The effect of the activity on the relationship of tangata whenua and their culture~~,~~ and traditions with their ancestral lands, water, sites, wahi tapu and other taonga.

ix) Measures to maintain and enhance tangata whenua uses and values of water, the ability to exercise kaitiakitanga, and measures to protect and enhance the mauri of water bodies.

Advisory Note:

- Information requirements to enable the assessment of any application under this rule are as set out in Section 8.1.2.1 of this Plan. In addition, assessment shall also take into account the matters identified in Policies 1 - 14 of Section 3.3.3.
- For the purpose of determining the maximum volume of take as at 15 October 2008 the Waikato Regional Council shall have regard to water use monitoring records held by the applicant, or where no such records exist, shall generally calculate the volume based on the number of cows proven by the applicant to have been milked on the subject site at that time multiplied by 70 litres per cow.
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3.3.4.21 Restricted Discretionary Activity Rule – The Taking of Surface Water

(Implements Section 3.3.3 Policy 8 e) iii) and Policy 9 c))

1. Any taking of surface water unable to comply with **Rules 3.3.4.16, 3.3.4.17** or **3.3.4.18**; or

2. The taking of surface water exceeding 70 percent and up to and including 100 percent of the primary allocable flow of water from catchments as identified in Table 3-5

is a **restricted discretionary activity** (requiring resource consent) subject to the following standards and terms:

a) The net rate of the take, assessed in combination with all other authorised water takes (all calculated on a net take basis), shall not exceed 100 percent of the primary allocable flows for catchments specified in Table 3-5;

b) Where the take is for a domestic or municipal supply a water management plan which meets the requirements of Method 8.1.2.2 shall be provided;

c) All applications to take water under this rule shall be assessed on a net take basis.[9]

Exception

This rule does not apply to:

- The taking of geothermal energy and water.
- The taking of water for a dam or diversion. Such takes are managed by the policies and rules in Chapter 3.6.

The Waikato Regional Council restricts its discretion over the following matters:

i) Measures to restore and protect the health and wellbeing of the water body for present and future generations.

ii) The matters contained in Policy 11.

iii) The timing of abstraction, the (net) volume of water allocated and the rate at which water is abstracted, including daily and seasonal requirements and duration and timing of peak daily take rate, having regard to the efficiency and use of the water allocated.

iv) Where the application is for a domestic or municipal supply the content and implementation of a water management plan.

v) The carrying out of measurements, samples, analyses, inspections, recording and reporting having regard to the matters contained in Policy 12.

vi) Measures to avoid, remedy, or mitigate any adverse effects associated with the intake structure.

vii) Measures to satisfy the intake screening requirements for the protection of aquatic fauna.

viii) The level(s) of priority to apply during water shortages having regard to the matters contained in Policy 18 and Standard 3.3.4.27.

ix) Abstraction restrictions during water shortage conditions (including suspension of abstraction and rostering) having regard to the matters contained in Policies 17, 18 and Standard 3.3.4.27.

x) The duration of the resource consent and future demands for domestic or municipal supply for water from the surface water body on which the application applies having regard to the matters contained in Policy 15 and Policy 19.

xi) Review date with respect to the catchment investigation date as detailed in Method 3.3.4.9 and Table 3-4A.

xii) The effect of the activity on the relationship of tangata whenua and their culture, and traditions with their ancestral lands, water, sites, waahi tapu and other taonga.

xiii) Measures to maintain and enhance tangata whenua uses and values of water, the ability to exercise kaitiakitanga, and measures to protect and enhance the mauri of water bodies.

xiv) Measures to ensure that the net take is achieved whenever any consent granted under this rule is being exercised.

[9] This means an applicant must provide information in an AEE to demonstrate this standard is met.

Advisory Notes:

- The level of cumulative authorised abstraction occurring within a catchment is reported on the Waikato Regional Council website
- Rules governing the take of geothermal energy and water are found in Module 7: Geothermal, of this Plan.
- Information requirements to enable the assessment of any application under this rule are as set out in Section 8.1.2.1 of this Plan.
- Any resource consent granted under this rule shall include a condition specifying the amount of water taken as a net take.
- The assessment of cumulative allocation in this rule does not include that allocated by 3.3.4.22 Restricted Discretionary Activity Rule – Surface Water Harvesting.

3.3.4.22 Restricted Discretionary Activity Rule – Surface Water Harvesting

(Implements Section 3.3.3 Policy 20)

The taking of surface water (calculated on a net take basis) for the purposes of water harvesting is a **restricted discretionary activity** (requiring resource consent) subject to the following standards and terms:

a) The take shall not occur in the Waikato River catchment upstream of the Karapiro Dam

b) In circumstances where water is only taken when the river flow is greater than the median flow, and the total amount of water taken by way of water harvesting shall not exceed 10% of the flow in the river at the time of abstraction,

c) All applications to take water under this rule shall be assessed on a net take basis[10].

d) The take shall cease if the average flow for the previous seven days falls below the median flow.

Waikato Regional Council restricts its discretion over the following matters:

i) Measures to restore and protect the health and wellbeing of the water body for present and future generations;

ii) The matters contained in Policy 11.

iii) The timing of abstraction, the (net) volume of water allocated and the rate at which water is abstracted, including daily and seasonal requirements and duration and timing of peak daily take rate, having regard to the efficiency and use of the water allocated.

iv) The carrying out of measurements, samples, analyses, inspections, recording and reporting having regard to the matters contained in Policy 16.

v) Measures to avoid, remedy, or mitigate any adverse effects associated with the intake structure.

vi) Measures to satisfy the intake velocity and screening requirements for the protection of aquatic fauna having regard to standards identified in the Water Management Class standards in Section 3.2.4.

vii) The level(s) of priority to apply during water shortage conditions having regard to the matters contained in Policy 18 and Standard 3.3.4.27.

viii) Abstraction restrictions during water shortage conditions (including suspension of abstraction and rostering) having regard to the matters contained in Policies 17, 18 and Standard 3.3.4.27.

ix) The duration of the resource consent having regard to the matters contained in Policy 15 and Policy 19.

[10] This means an applicant must provide information in an AEE to demonstrate this standard is met

x) Review date with respect to the catchment investigation date as detailed in Method 3.3.4.9 and Table 3-4A.

xi) The effect of the activity on the relationship of tangata whenua and their culture, and traditions with their ancestral lands, water, sites, wahi tapu and other taonga.

xii) Measures to maintain and enhance tangata whenua uses and values of water, the ability to exercise kaitiakitanga, and measures to protect and enhance the mauri of water bodies.

xiii) The need for and content of a water management plan as appropriate to the nature and scale of the proposed activity in accordance with Method 8.1.2.2.

xiv) Effects on the generation of electricity.

xv) Measures to ensure that the net take is achieved whenever any consent granted under this rule is being exercised.

xvi) Measures monitor and manage the take to ensure water is only taken when the river flow is greater than the median flow, and the total amount of water taken by way of water harvesting shall not exceed 10% of the flow in the river at the time of abstraction.

Advisory Note:

- Any resource consent granted shall include a condition specifying the quantum of the net take.
- Information requirements to enable the assessment of any application under this rule are as set out in Section 8.1.2.1 of this Plan.
- With regard to monitoring and managing the water harvesting take, the Waikato Regional Council's preference is for electronic measuring devices that provide real time monitoring information to the applicant and the Council with respect to the times when the water harvesting is occurring and with respect to the gauged median flow of surface water in the river.

3.3.4.23 Discretionary Activity Rule – Surface Water Takes

(Implements Section 3.3.3 Policy 7e) and f), Policy 8 c), d) e)iv)) and Policy 9 d)

The taking of surface water that:

1. Is a non-qualifying s14(3)(b) take described by Policy 8 c) or
2. Is a supplementary take or a temporary take described by Policy 8 d), or
3. Except as provided for by Rules 3.3.3.17, 3.3.4.18 and 3.3.4.19, is a take that when assessed in combination with all other authorised water takes (all calculated on a net take basis), exceeds the primary allocable flow but is less than the combined primary and secondary allocable flows in Table 3-5, or
4. Is an existing take described by Policy 7(e); or
5. Is a zero net take described by Policy 7(f); or
6. Is a new take for domestic or municipal supply described by Policy 7(g) and Policy 9(d); or

is a **discretionary activity** (requiring resource consent) subject to the following standards and terms:

a) The water take shall not be from a Natural State water body, wetland or lake (excluding artificial lakes, hydro electricity reservoirs, Lake Rotoaira and Lake Taupo.

b) Except in relation to applications for domestic and municipal supply, for existing surface takes in catchments exceeding the combined primary and secondary flows in Table 3-5 a Riparian Vegetation Management Plan which meets the requirements of Method 3.3.4.28 shall be provided for the property for which the water is taken and used on and that plan shall specify the location and length of any streams whose riparian margins are to be planted and the proposed timing of that planting.

c) For domestic or municipal supply takes the applicant must have prepared a water management plan which meets the requirements of Section 8.1.2.2 of this Plan and that water management plan must be made available to the Waikato Regional Council and the Waikato River Iwi within whose rohe the take is located.

d) All applications to take water under this rule shall be assessed on a net take basis.

e) Any water take under this rule shall include all water that is permitted for the site pursuant to Rules 3.3.4.12 and 3.3.4.13 (so that the total water allocated to the site is accounted for within the consented amount to ensure no double accounting).

Exception
This rule does not apply to:

- The taking of geothermal energy and water.
- The taking of water for a dam or diversion. Such takes are managed by the policies and rules in Chapter 3.6.

Advisory Notes:

- The level of cumulative authorised abstraction occurring within a catchment is reported on the Waikato Regional Council website.
- Information requirements to enable the assessment of any application under this rule are as set out in Section 8.1.2.1 of this Plan.
- In general, takes assessed in combination with all other existing authorised water takes which exceed 100 percent of the combined primary and secondary allocable flow identified in Table 3-5 are a non-complying activity in accordance with Rule 3.3.4.26.
- Any resource consent granted under this rule shall include a condition specifying the amount of water taken as a net take.
- Under Rule 4.2.18.1 of this Plan a consent is required for planting and fencing within 10 metres (except in the Hauraki District Council and Aka Aka Otaua Drainage areas where a 15 metre distance applies) of the water bodies listed in Table 4-1. The consent requirements of Rule 4.2.18.1 will be dealt with contemporaneously by WRC when assessing consent applications under Rule 3.3.4.23.

3.3.4.24 Discretionary Activity Rule – Groundwater Takes

(Implements Section 3.3.3 Policy 10 c), f), g)i))

The taking of groundwater that, when assessed in combination with all other authorised takes from the same aquifer:

1. Is a supplementary take, temporary take or well and aquifer testing take that does not comply with **Rules 3.3.4.12**, **3.3.4.14** or **3.3.4.15**; or
2. Is a non-qualifying s14(3)(b) take described by Policy 10 c); or
3. Does not exceed the Sustainable Yield if listed in Table 3-6; or
4. Is from an aquifer that is not listed in Table 3-6; or
5. Is for domestic or municipal supply takes where a water management plan is provided that meets the requirements of Method 8.1.2.2 of this Plan.

is a **discretionary activity** (requiring resource consent)

Exception

This rule does not apply to the taking of geothermal energy and water.

Advisory Notes:

- Information requirements to enable the assessment of any application under this rule are as set out in Section 8.1.2.1 of this Plan.

- Rules governing the take of geothermal energy and water are found in Module 7: Geothermal of this Plan.
-

3.3.4.25 Non-Complying Activity Rule – Surface Water Takes From Wetlands, Natural State Water Bodies and Lakes

(Implements Section 3.3.3 Policy 8 f))

Notwithstanding any other rule in this Plan, the taking of water (calculated on a net take basis) from Natural State water bodies, wetlands (that are referred to in Section 3.7.7 of the this Plan or meet the criteria of Appendix 3 of the RPS) and lakes (excluding artificial lakes, hydro electricity reservoirs, Lake Rotoaira and Lake Taupo) is a **non-complying activity** (requiring resource consent) subject to the following standard and term:

a) All applications to take water under this rule shall be assessed on a net take basis[11].

Advisory Notes:

- For the avoidance of doubt, the lake impounded by the Rangipo Dam on the Tongariro River is a hydro electricity reservoir and Lake Elliot (Grid Reference NZMS 260 U17 753836) is an artificial lake.
- Information requirements to enable the assessment of any application under this rule are as set out in Section 8.1.2.1 of this Plan.
- Any resource consent granted under this rule shall include a condition specifying the amount of water taken as a net take.
- The assessment of cumulative allocation in this rule does not include that allocated by 3.3.4.22 Restricted Discretionary Activity Rule – Surface Water Harvesting.
-

3.3.4.26 Non-Complying Activity Rule - Water Takes

(Implements Section 3.3.3 Policy 8 e)v)), Policy 9 e) and Policy 10 g)ii))

Except as provided in **Rules 3.3.4.17, 3.3.4.18**, **3.3.4.19, 3.3.4.20, 3.3.4.23, 3.3.4.24** and **3.3.4.25** and the takes described by Policy 6 the taking of groundwater or surface water (surface water calculated on a net take basis) that:

1. Is for a surface water take which when assessed in combination with all other authorised water takes exceeds the combined primary and secondary allocable flows in Table 3-5; or
2. Is for a surface water harvesting take which when assessed in combination with all other authorised surface water harvesting water takes exceeds the limits set in Policy 20 b); or
3. Is for a groundwater take which exceeds the Sustainable Yields (if listed) in Table 3-6, or
4. Is for domestic or municipal supply and a water management plan developed in accordance with Method 8.1.2.2 has not been provided to the Waikato Regional Council and to the Waikato River Iwi within whose rohe the take is located.

is a **non-complying activity** (requiring resource consent)

Exception

This rule does not apply to:
- The taking of geothermal energy and water.
- The taking of water for a dam or diversion. Such takes are managed by the policies and rules in Chapter 3.6.

[11] This means an applicant must provide information in an AEE to demonstrate this standard is met

Advisory Notes:

- Information requirements to enable the assessment of any application under this rule are as set out in Section 8.1.2.1 of this Plan
- Rules governing the take of geothermal energy and water are found in Module 7: Geothermal of this Plan.
- Any resource consent granted under this rule in relation to a surface water take shall include a condition specifying the amount of water taken as a net take.
- The assessment of cumulative allocation in this rule does not include that allocated by 3.3.4.22 Restricted Discretionary Activity Rule – Surface Water Harvesting.

3.3.4.27 Standard - How Water Shortage Restrictions Shall Apply

(Implements Section 3.3.3 Policies 8 g), 10 h), 17 and 18)

a) Restrictions on water takes directly from surface water bodies will occur in the following manner and order, unless existing water take resource consents already contain conditions requiring the restriction or cessation of taking at times of river low flow or in other circumstances in which case the resource consent conditions shall prevail:

   i) Priority SW-E users will be required to cease taking if the average flow for the previous seven days falls below the median flow.

   ii) Priority SW-D users will be required to cease their taking if the average flow for the previous seven days is less than the minimum flows specified in Table 3-5.

   iii) Priority SW-C users will be required to reduce their net daily take rate by 50 percent of the authorised amount (when averaged over any two consecutive days, unless undertaken in accordance with Part c) of this Standard) when river flows fall below the minimum flows specified in Table 3-5, three or more days after part a) ii) of this Standard has been implemented.

   iv) If the river flow falls below the minimum flows specified in Table 3-5, seven or more days after part a) iii) of this Standard has been implemented:

      - Priority SW-C users will be required to reduce their net daily take rate by 75 percent of the authorised amount (which reduction must be effected on any one day, not averaged over four days unless undertaken in accordance with Part c) of this Policy), and
      - Priority SW-B users will be required to reduce their net daily take rate (averaged over any two consecutive days unless undertaken in accordance with Part c) of this Standard) by 15 percent of the authorised amount.
      - Priority SW-A users will not be required to reduce their net daily net take rate

b) Where there are no SW-D users the restrictions specified in a) iii) will be implemented if the average flow for the previous seven days is less than the minimum flow in Table 3-5.

c) The Waikato Regional Council may issue Water Shortage Directions under s329 RMA if surface water flows continue to fall below the minimum flow after implementing parts a) ii), iii), or iv) of this Standard.

d) Restrictions under parts a) ii), iii), or iv) of this Standard may be implemented by water user groups, voluntary agreements between water users, or transfer of water permits as approved by the Waikato Regional Council.

e) Priority GW-A and GW-B users taking directly from groundwater will not be restricted except as provided for under s329 RMA (Water Shortage Direction) by Policy 19 and Methods 3.3.4.9, 3.3.4.7 and 3.3.4.10.

f) In the Waikato River catchment upstream of Karapiro Dam, restrictions will be deemed to occur when calculated natural flows (calculated for the relevant natural inflows to Lake Taupo and the Waikato River above Karapiro Dam) fall below the minimum natural flows calculated using the relevant minimum flow percentages in Table 3-5.

Advisory Note

- Standard 3.3.4.27 part f), 'natural flows' are flows where the influence of the eight Waikato River hydro-generation dams, Lake Taupo outlet gates and the Tongariro Power Scheme on the hydrology of the catchment have been removed. These flows will be determined by the model referred to in Method 3.3.4.8.

3.3.4.28 Standard – How riparian planting and stock exclusion fencing shall apply

(Implements Section 3.3.3 Policies 7, 11 n) and 11 x))

The contents of a Riparian Vegetation Management Plan prepared as part of a consent application to take water shall meet the following requirements:

a) Extent of riparian fencing and planting:

   i) Notwithstanding Rules 4.3.5.4 and 4.3.5.5, where stock are or are likely to be present, riparian fencing and planting should generally be undertaken within the property along the full extent of the water body from which the take occurs, or the equivalent length of tributary water bodies on the property or another property in the catchment;

   ii) All fencing undertaken should generally be permanent and effectively exclude all livestock present;

   iii) Where stock exclusion fencing is not required (i.e. there are no livestock on the affected property) or is already in place, riparian planting should generally be undertaken within the property along the full extent of the water body, or the equivalent length of tributary water bodies.

b) Timeframes for implementation of fencing and/or planting:

   i) Fencing must be completed within 3 years of a water take consent being granted;

   ii) Riparian planting must be progressively completed over the term of the water take consent;

   iii) Where stock exclusion fencing is not required (i.e. there are no livestock on the affected property) or is already in place, riparian planting must be progressively completed over the term of the water take consent.

c) Minimum riparian width:

   i) Fences must be set back a minimum of 3 metres from the top of the bank[12],

   ii) Riparian planting must be undertaken within the full extent of the riparian setback. Where fencing is not required the riparian margin which is planted must be at least 3 metres wide from the top of the bank.

d) Planting requirements:

   i) Where no suitable planting already exists, a minimum of 80% of riparian plantings shall be made up of native plant species appropriate to the characteristics of the site and catchment (e.g. climate, size of stream, flood risk, erosion, local native flora, potential, and slope);

   ii) Plantings must be undertaken at a density of no less than 2500 stems per hectare and shall be maintained (including replacement of losses and control of pest species) accordingly during the term of the consent.

[12] See Glossary definition of Bed*

Advisory Note:

- Fencing and riparian planting may be undertaken on a property other than the property containing the water body from which the water is taken provided that property is in the same catchment. As a guide Waikato Regional Council will generally require riparian fencing and planting over a length equivalent to the full extent of the water body within the property from which the take occurs. However, depending on the site-specific circumstances, the Waikato Regional Council may modify this requirement by altering the extent of fencing and/or planting.

Table 3-5: Allocable Flows for Surface Water

- Refer to water allocation maps 'Surface Water Allocation Catchments,' as directed by the relevant map and catchment numbers in this table to identify the catchment areas to which the allocable and minimum flows relate:
- For catchments where the allocable or minimum flow is the same for the upland and lowland sub-catchments (e.g. Hapuakohe Range (Piako catchment)) information is only listed in the section of the table relating to the lowland sub-catchments.
- Table 3-5 specifies the percentage of the Q_5 flow which is able to be allocated and the portion required for the minimum flow as established in Policy 1 and Policy 2. The Q_5 flow will need to be calculated at the point of take and at each affected downstream reach. The Waikato Regional Council in many cases will be able to provide known values of Q_5 for many locations in the region. However, where these are unknown applicants will need to provide a calculation of the Q_5 flow.

Catchment	Upland Catchments				Lowland Catchments			
	Flows: % of Q_5			Map # (catchment #)	Flows: % of Q_5			Map # (catchment #)
	Primary Allocable	Secondary Allocable	Minimum		Primary Allocable	Secondary Allocable	Minimum	
Hakarimata range	5	25	95	4 (68)	20	10	80	4 (51)
Hapuakohe Range (Piako catchment)	N/A	N/A	N/A	N/A	5	25	95	3 (238)
Kairoa	N/A	N/A	N/A	N/A	30	0	70	1 (118)
Kaniwhaniwha (Pirongia)	N/A	N/A	N/A	N/A	0	30	100	4/7 (86)
Karapiro Stream	10	20	90	6(48)	30	0	70	6 (7)
Kirikiriroa	N/A	N/A	N/A	N/A	30	0	70	4 (8)
Kiwitahi (Piako R)	N/A	N/A	N/A	N/A	5	25	95	5/6 (242)
Komakorau	N/A	N/A	N/A	N/A	30	0	70	4/5 (9)
Mangaio (Pirongia)	N/A	N/A	N/A	N/A	20	10	80	7 (87)
Mangakara (Pirongia)	N/A	N/A	N/A	N/A	20	10	80	7 (88)
Mangakaware	N/A	N/A	N/A	N/A	30	0	70	7 (12)
Mangakotukutuku	N/A	N/A	N/A	N/A	0	30	100	4 (80)
Mangamauku - Domestic or municipal supply only. (Pirongia)	N/A	N/A	N/A	N/A	30	0	70	7 (89)
Mangamutu (Te Kura)	5	25	95	9 (66)	20	10	80	9 (38)
Mangaokewa	5	25	95	9/10 (49)	20	10	80	9/10 (10)
Mangaone	N/A	NA	N/A	N/A	20	10	80	6 (110)
Mangaonua	10	20	90	6 (107)	30	0	70	6 (141)
Mangaorongo (inc. some minor streams on Waipa R)	0	30	100	10 (56)	20	10	80	7/9/10 (11/72)
Mangaotama	N/A	NA	N/A	N/A	30	0	70	7 (13)
Mangapapa (Piako R)	N/A	NA	N/A	N/A	5	25	95	6 (241)

Catchment	Upland Catchments				Lowland Catchments			
	Flows: % of Q_5			Map # (catchment #)	Flows: % of Q_5			Map # (catchment #)
	Primary Allocable	Secondary Allocable	Minimum		Primary Allocable	Secondary Allocable	Minimum	
Mangapiko (inc. some minor streams on Waipa R)	10	20	90	8 (82)	20	10	80	7/8 (17/81)
Mangapu	10	20	90	9 (50)	30	0	70	9 (18)
Mangarapa (Mangapu)	N/A	NA	N/A	N/A	5	25	95	9/10 (19)
Mangatangi and Ruaotehuia	Auckland Regional Plan continues to apply pursuant to section 81(1) of the Resource Management Act 1991			1 (114)	20	10	80	1 (178)
Mangatawhiri	Auckland Regional Plan continues to apply pursuant to section 81(1) of the Resource Management Act 1991			1 (400)	30	0	70	1 (101)
Mangatutu (Puniu R.)	0	30	100	8/10 (57)	5	25	95	8/10 (20)
Mangauika - Domestic or municipal supply only. (Pirongia)	N/A	NA	N/A	N/A	30	0	70	7 (90)
Mangawara (inc. minor streams on Waikato R)	10	20	90	3/4/5 (58/59)	20	10	80	4/5 (21)
Mangawawa - Domestic or municipal supply only. (Pirongia)	N/A	NA	N/A	N/A	30	0	70	7 (91)
Mangawhero	N/A	NA	N/A	N/A	30	0	70	6/8 (23)
Mangawhero (Te Kawa)	N/A	NA	N/A	N/A	30	0	70	7/8 (22)
Mangawhero South (Sth Otorohanga)	5	25	95	10 (60)	20	10	80	9 (25)
Moakurarua	0	30	100	7/9 (61)	10	20	90	7 (26)
Mystery Creek	N/A	NA	N/A	N/A	30	0	70	8 (27)
Ngakoaohia (Pirongia)	N/A	NA	N/A	N/A	0	30	100	7 (92)
Ngaruawahia sub catchments (exc. Waikato R. main stem)	0	30	100	4 (73)	30	0	70	4 (74)
Ngutunui (Moakurarua)	N/A	NA	N/A	N/A	0	30	100	7 (94)

Catchment	Upland Catchments				Lowland Catchments			
	Flows: % of Q_5			Map # (catchment #)	Flows: % of Q_5			Map # (catchment #)
	Primary Allocable	Secondary Allocable	Minimum		Primary Allocable	Secondary Allocable	Minimum	
Nukuhau (inc. minor streams on Waikato R)	N/A	NA	N/A	N/A	0	30	100	4 (77)
Ohote	N/A	NA	N/A	N/A	30	0	70	4 (33)
Ongaruhe (inc. neighbouring tributaries of the Waipa R)	10	20	90	7/9 (63)	30	0	70	7 (62)
Opitonui (Coromandel)	0	30	100	14 (277)	10	20	90	14 (354)
Orahiri (inc. some minor streams on Waipa R)	0	30	100	9 (64)	30	0	70	9 (34)
Parker Lane	N/A	NA	N/A	N/A	30	0	70	1 (119)
Piako	10	20	90	3/5/6 (251)	30	0	70	3 (237)
Pokaiwhenua	30	0	70	11 (99)	10	20	90	11 (299)
Puniu	0	30	100	8/10 (65)	10	20	90	7/8 (35)
Rangitukia (Pirongia)	N/A	NA	N/A	N/A	0	30	100	7 (95)
Stony (Coromandel)	Refer to “All other Coromandel Peninsula catchments” upland			15 (369)	10	20	90	15 (360)
Tapu (Coromandel)	N/A	NA	N/A	N/A	10	20	90	14 (150)
Te Kowhai (inc. some minor streams on Waipa R)	N/A	NA	N/A	N/A	30	0	70	4 (36/37)
Te Pahu (Pirongia)	N/A	NA	N/A	N/A	0	30	100	7 (96)
Topehahae (Piako R)	N/A	NA	N/A	N/A	5	25	95	5/6 (243)
Torepatutahi	10	20	90	12 (233)	15	15	85	12 (263)
Tutaenui	30	0	70	1/2 (367)	15	15	85	1/2 (115)
Waikanae – East Coast (Coromandel)	Refer to “All other Coromandel Peninsula catchments” upland			13 (365)	10	20	90	13 (366)
Waikato R Nth Cambridge minor tributaries (exc. Waikato R. main stem)	N/A	NA	N/A	N/A	30	0	70	4/6/8 (108)

Catchment	Upland Catchments				Lowland Catchments			
	Flows: % of Q_5			Map # (catchment #)	Flows: % of Q_5			Map # (catchment #)
	Primary Allocable	Secondary Allocable	Minimum		Primary Allocable	Secondary Allocable	Minimum	
Waikato River mainstem only downstream of HPS mixing zone to the mouth. Different levels of allocation occur upstream of HPS mixing zone, Karapiro Dam and on tributaries as specifically listed or accounted for in "All other catchments" in this Table	N/A	NA	N/A	N/A	10 as provided for by "All other catchments" in this Table	0	90 as provided for by "All other catchments" in this Table	New Map
Waikato River mainstem only downstream of Karapiro Dam to the HPS mixing zone Different levels of allocation occur for the reach above Karapiro Dam and on tributaries as specifically listed or accounted for in "All other catchments" in this Table	N/A	NA	N/A	N/A	10 as provided for by "All other catchments" in this Table	0	90 as provided for by "All other catchments" in this Table	New Map
Waikato River, Cumulative allocation at the point of Karapiro Dam. Different levels of allocation may occur within this catchment as specifically listed or accounted for in "All other catchments" in this Table	N/A	NA	N/A	Not mapped	5	0	95 This minimum flow is relevant for the purposes of applying Rule 3.3.4.27 f)	Map 1 Waikato River Catchments 1 and 2, Index Map, Maps 6,8,10,11,12 (227, 99, 299, 233, 263)
Waikato River, Cumulative allocation at the point of Huka Falls. Different levels of allocation may occur within this catchment as specifically listed or accounted for in "All other catchments" in this Table	N/A	NA	N/A	Not mapped	1.84	0	98.16 This minimum flow is relevant for the purposes of applying Rule 3.3.4.27 f)	17 (396)
Waikawau – East Coast (Coromandel)	Refer to "All other Coromandel Peninsula catchments" upland			13 (363)	20	10	80	13 (364)
Waikeria (Puniu R.)	N/A	NA	N/A	N/A	20	10	80	8/10 (39)
Waikoha (Pirongia)	N/A	NA	N/A	N/A	20	10	80	4 (97)
Waipa (Sth Otorohanga)	5	25	95	10 (67)	10	20	90	9/10 (40)

Catchment	Upland Catchments				Lowland Catchments			
	Flows: % of Q_5			Map # (catchment #)	Flows: % of Q_5			Map # (catchment #)
	Primary Allocable	Secondary Allocable	Minimum		Primary Allocable	Secondary Allocable	Minimum	
Waipa R minor tributaries (exc. Waipa R. main stem)	N/A	NA	N/A	N/A	30	0	70	4/7 (52/53/69)
Waitakaruru	5	25	95	3 (246)	10	20	90	3 (236)
Waitoa (Piako R)	N/A	NA	N/A	N/A	5	25	95	6 (240)
Waitomo (inc. some minor streams on Waipa R)	0	30	100	9 (155)	30	0	70	9 (41)
Waiomu (Coromandel)	N/A	NA	N/A	N/A	5	25	95	14 (355)
Wentworth (Coromandel)	Refer to "All other Coromandel Peninsula catchments" upland			15 (359)	15	15	85	15 (358)
Whakapipi	30	0	70	1/2 (368)	15	15	85	1/2 (117)
Whangamaroro (Coromandel)	Refer to "All other Coromandel Peninsula catchments" upland			14 (279)	5	25	95	14 (353)
Wharekawa (Coromandel)	10	20	90	15 (283)	20	10	80	15 (357)
Whareroa (Coromandel)	Refer to "All other Coromandel Peninsula catchments" upland			13 (361)	10	20	90	13 (362)
Whenuakite 1 Aug to 30 Nov	N/A	NA	N/A	N/A	0	30	193	16 (280)
Whenuakite 1 Dec to 31 July (10am to Midnight)	N/A	NA	N/A	N/A	0	30	120	16 (280)
Whenuakite 1 Dec to 31 July (Midnight to 10am)	N/A	NA	N/A	N/A	0	30	193	16 (280)
All other Coromandel Peninsula catchments (refer to advisory notes)	5	25	95	N/A	10	20	90	N/A

Catchment	Upland Catchments				Lowland Catchments			
	Flows: % of Q_5			Map # (catchment #)	Flows: % of Q_5			Map # (catchment #)
	Primary Allocable	Secondary Allocable	Minimum		Primary Allocable	Secondary Allocable	Minimum	
All other catchments (excluding Coromandel Peninsula) (Refer to advisory notes)	5	25	95	Not mapped	10	20	90	Not mapped

Advisory Notes:

- For the default catchments listed in Table 3-5 as "all other catchments (excluding Coromandel Peninsula)" the division between upland and lowland catchments is defined by the mean flow of the stream regardless of catchment location. An upland stream is defined as having a mean flow of less than 5 cubic metres per second (m^3/s). Conversely a lowland stream is defined as having a mean flow of more than 5 cubic metres per second (m^3/s).
- Coromandel Peninsula covers all catchments north of the Waihou and Ohinemuri catchments. The 20 m amsl elevation contour defines the division between lowland and upland reaches for the main stem channel.
- The default minimum flows presented for the lowland Coromandel catchments do not protect the ecosystem against issues relating to dissolved oxygen. Investigations indicated that streams with more than 2 km of stream length from the 20 m amsl elevation contour to the coastal marine have an intermediate to high likelihood of oxygen being a critical issue for determining environmental flow requirements.
- The default minimum flows presented for the Coromandel catchments may not protect the transitional zone of intermediate gradient between upland and lowland areas. These zones can have high values for fish and invertebrates as they provide less harsh hydrological conditions, and stony streams dominated by run-riffle habitats that are favoured by many fish and invertebrate species.
- As indicated by Policy 3, any utilisation of the secondary allocable flow in all tributary streams of the Waikato River above Karapiro (including those flowing into Lake Taupo) is contingent upon the take also not exceeding the primary allocable flow at Karapiro, which is 5% of the Q_5 flow.
- Information on the level of allocation from surface water bodies as listed in Table 3-5 can be found on Waikato Regional Council's website (water allocation calculator).

Table 3-6: Sustainable Yields from Aquifers

- Refer to water allocation maps 'Management Level – Assessed Aquifers', as directed by the relevant map and catchment numbers in Table 3-6.
- In Table 3-6 where N/A appears in the column relating to Sustainable Yield, the necessary evaluation of sustainable yield has yet to be undertaken. When a Sustainable Yield is set it supersedes the Management Level.
- The determination of Sustainable Yields may result in the inclusion of more refined information. This may include delineation of aquifers laterally and with depth, and improved mapping of aquifer extents.

Aquifer	Management Level m^3 (x1000) per year	Sustainable Yield m^3 (x1000) per day	Aquifer Map #
Cooks Beach	450	N/A	2
Hahei	75	N/A	2
Kuaotunu West	80	N/A	1
Matarangi	1400	N/A	1
Opoutere	650	N/A	3
Pauanui	900	N/A	3
Whangamata - Moana Point	400	N/A	4
Whangamata	1200	N/A	4
Whangapoua	180	N/A	1
Whiritoa	350	N/A	4
Hamilton basin - North	105200	N/A	8
Hamilton basin - South	42000	N/A	9
Hamilton basin - West	37500	N/A	9
Northern Hauraki	165000	N/A	6
Southern Hauraki	335000	N/A	10
Pukekawa	20000	N/A	5
Pukekohe	12000	N/A	5
Waiuku - Discharge zone	9000	N/A	5
Waiuku - Recharge zone	5500	N/A	5
Reporoa Basin - East of Waikato River	39000	N/A	13
Reporoa Basin - Torepatutahi recharge zone	5000	N/A	13
Reporoa Basin - Torepatutahi discharge zone	9000	N/A	13

Aquifer	Management Level m^3 (x1000) per year	Sustainable Yield m^3 (x1000) per day	Aquifer Map #
Reporoa Basin - West of Waikato river	16500	N/A	13
Putaruru	9000	N/A	12
Tokoroa/Kinleith	25000	N/A	12
Taupo Township	1100	N/A	14
Waihi Basin shallow aquifer (refer to advisory note)	4800	N/A	7
Waihi Basin deep aquifer (refer to advisory note)	1200	N/A	7
Waipa	320000	N/A	11

Advisory Notes:

- Information on the level of allocation from the aquifers as listed in Table 3-6 Sustainable Yields from Aquifers can be found on Waikato Regional Council's website (water allocation calculator).
- For the Waihi Basin, the contact between the upper and lower aquifers is commonly marked by the transition from gravel boulder beds or dacite to several metres of iron-stained, clay rich weathered andesite rock. This thickness varies from 0.5 to 30 metres. The lower aquifer rocks can be distinguished from upper aquifer by the presence of fine-grained pyrite throughout the rock mass.

3.4 Efficient Use of Water

Background and Explanation

Historically, water resources in the Waikato Region have not generally been used efficiently. This can largely be attributed to water being perceived as a free public resource, plentiful in supply and generally available to anyone wishing to use it. Waikato Regional Council considers the promotion of water use efficiency to be an important resource management issue. This means ensuring when water is in high demand its use is maximised (i.e. wastage is minimised) and the adverse effects of that use are minimised. Decisions by regional councils regarding water takes are becoming increasingly focused on promoting the efficient use of water, that is, ensuring that when water is allocated it is for a justifiable purpose and the quantity taken represents a reasonable allocation for the proposed use.

Section 14 of the RMA regulates the **take, use, damming and diversion** of water. These activities are not permitted unless expressly allowed by a rule in a regional plan (or in any relevant proposed regional plan) or a resource consent. The only uses of water that are allowed by the RMA are:

a) an individual's reasonable domestic needs (s14(3)(b)(i))

b) the reasonable needs of an individual's animals for drinking water (s14(3)(b)(ii)) and

c) fire fighting purposes.

The uses stated in parts a) and b) are allowed, provided the use does not, or is not likely to, have an adverse effect on the environment.

Regional councils can also make provisions to facilitate the transfer of water take permits (or interest in water take permits) from site to site (s136 of the RMA). If no such provision is made in the Plan, then permit transfers are to be considered by Council on a case-by-case basis through the process set out in s136 of the RMA. In water-short catchments, or where the water resources are almost fully allocated, permit transfers could be an important mechanism for achieving efficient water use.

The policies and rules in this chapter do not relate to the allocation and management of Geothermal Water unless explicitly stated otherwise. The allocation and management of geothermal energy and geothermal water is addressed in Module 7 – Geothermal.

The provisions in Chapter 3.4 do not apply to the use of water associated with a dam or diversion where the water passes through or over the dam or diversion in the river channel. Such takes are exclusively covered by the policies and rules in Chapter 3.6.

3.4.1 Issue

Refer to Issues 3.1.1 & 3.3.1

The use of water for poorly planned or poorly managed crop and pasture irrigation can result in increased discharges of nutrients to either surface water or groundwater.

Explanation

Irrigating farm land in a poorly planned or poorly managed manner can result in nutrients from the land leaching into the groundwater or surface water, thus causing a further degradation of water quality.

3.4.2 Objective

Refer to Objectives 3.1.2 & 3.3.2

3.4.3 Policies

Policy 1: Manage the Use of Water

(Implements Objective 3.1.2 a), b), o) and p) and Objective 3.2.2 b))

Manage, through permitted activities and resource consents, the use of water, any associated discharge of water onto or into land in a manner that ensures that:

a) The overarching purpose of the Vision and Strategy to restore and protect the health and wellbeing of the Waikato River for present and future generations is given effect to

b) The further degradation of water quality is avoided

c) Any adverse changes to natural flow regimes are avoided as far as practicable and otherwise mitigated

d) Adverse effects on the relationship tangata whenua as Kaitiaki have with water are avoided, remedied or mitigated

e) Adverse effects on in-stream ecological values are avoided, remedied or mitigated

f) Adverse effects on wetlands that are habitats for significant indigenous vegetation and significant habitats for indigenous fauna are avoided, remedied, or mitigated

g) Adverse effects on groundwater quality are avoided as far as practicable and otherwise mitigated

h) Does not result in an adverse effect relating to the objectives in Chapter 5.2 of this plan

i) The benefits to be derived from the efficient take and use of water for reasonably foreseeable future uses, and in particular for domestic or municipal supply, are maintained and/ or enhanced.

Policy 2: Efficient Use of Water

(Objective 3.1.2 a), f) and g) and Objective 3.3.2 d))

Ensure the efficient use of water by:

a) Requiring the amount of water taken and used to be reasonable and justifiable with regard to the intended use and where appropriate:

   i) For domestic or municipal supplies is justified by way of a water management plan.
   ii) For industry, implementation of industry good practice, in respect of the efficient use of water for that particular activity/industry.
   iii) For irrigation, the following measures in relation to the maximum daily rate of abstraction, the irrigation return period and the seasonal or annual volume of the proposed take:
      - A maximum seasonal allocation reliability of up to 9 out of 10 years
      - A minimum application efficiency of 80 percent (even if the actual system being used has a lower application efficiency), or on the basis of a higher efficiency where an application is for an irrigation system with a higher efficiency

b) Requiring consideration of water conservation and minimisation methods, such as leak detection and loss monitoring as integral parts of water take and use consent applications to ensure no significant wastage of water resources

c) Raising awareness amongst the regional community about water efficiency issues and techniques

d) Facilitating the transfer of water take permits, provided the transfer does not result in effects that are inconsistent with the purpose of the relevant Water Management Class, as identified by the policies in section 3.2.3 and the water classes in section 3.2.4

e) Promoting investigation of alternatives to the water take, alternative water sources, water harvesting (excluding the Waikato River catchment above Karapiro Dam) and seasonal storage, as an integral part of water take and use consent applications.

f) Promoting shared use and management of water through water user groups or other arrangements where there is increased efficiency in the use and allocation of water.

Advisory Note:

- When considering the efficiency of any proposed take and/or use of water Waikato Regional Council will refer to the most up to date guidelines and/or industry codes of practice relevant to that use.
- The Waikato Regional Council recognises that the Territorial Local Authorities will need to balance efficiency gains with financial impacts and will work with Territorial Local Authorities to ensure this is considered through the LTCCP processes.

Policy 3: Transfer of Water Permits

(Implements Objective 3.1.2 a), g) and p) and Objective 3.3.2)

Provide for the temporary or permanent transfer of the whole or part of a surface water or groundwater take permit through rules, provided the transfer:

a) Results in the Vision and Strategy promulgated under the Waikato River Co-management framework being given effect to

b) Does not result in effects that are inconsistent with the purpose of the relevant Water Management Class, as identified by the policies in section 3.2.3 and the water classes in section 3.2.4

c) Does not result in adverse effects on tangata whenua uses and values

d) Does not increase the net take and surface water allocation over the prescribed level in the original permit

e) Does not result in a groundwater allocation over the prescribed Sustainable Yield in Table 3-6

f) Is consistent with the objectives and policies of this Plan

g) Does not cause adverse effects on springs or other surface water bodies

h) In the case of temporary or partial transfers, is between parties who have metering and reporting at the appropriate recording and reporting level as defined in Table 3-4

i) In the case of groundwater, the location, nature and scale of the take are unchanged

j) Does not result in adverse effects on existing users

k) Does not involve the transfer of takes for domestic or municipal supply from the main stem of the Waikato River downstream of the Huntly Power Station to upstream of the Huntly Power Station

3.4.4 Implementation Methods – Transfer of Water Take Permits

3.4.4.1 Environmental Education

(Method to implement Section 3.4.3 Policy 3)

Waikato Regional Council will, through environmental education programmes, raise the awareness of the community about transferring water permits by undertaking the following:

1. Providing information about the process for the transfer of permits between resource users
2. Providing educational material promoting the efficient use and conservation of water to minimise waste discharges
3. Providing information on the positive benefits to be derived from the efficient use of water.

3.4.4.2 Consents for Transfer of Water

(Method to implement Section 3.4.3 Policy 3)

To improve efficient use and efficient allocation of water applicants for the take and use of water may consider applying for:

1. A single take consent that may cover multiple locations. This may be used either by an individual or a group of individuals; such as provided for by Section 3.3.3 Policy 21 Water User Groups.
2. A transfer consent so that water can be taken at multiple locations.
3. A single use consent where more than one site is being utilised by the consent holder, where a use consent is required.
4. For the avoidance of doubt, when separate applications are made for either a take consent, use consent, or transfer consent, the separate applications retain their relevant rule provisions for each consent, rather than a bundling of the applications.

3.4.4.3 Permitted Activity Rule - Transfer of Surface Water and Groundwater Take Permits

(Implements Section 3.4.3 Policy 3)

In accordance with s136(2)(b)(i) of the RMA, the temporary or permanent transfer of the whole or part of a permit holder's interest in a water permit for the taking of surface and groundwater to:

1. Any person or occupier of the site in respect of which the permit is granted, or
2. To another person on another site (for surface water take permits only)

is a **permitted activity** subject to the following conditions:

a) The permit does not pertain to the transfer of geothermal water, and

b) The transfer is within the same catchment to any point downstream (excluding downstream tributaries) of the location to which the permit applies or is within the same hydro electricity reservoir on the Waikato River; and

c) The Water Management Class (refer Section 3.2.4) as identified in the Water Management Class Maps, is the same at the new site as that to which the water permit pertains, or the class at the new site specifies the same or less restrictive intake screening and intake velocity requirements than the site to which the permit applies; and

d) written notice signed by the transferor and transferee is given to the Waikato Regional Council five working days prior to the transfer, specifying:
   i) full names and addresses of transferor and transferee
   ii) if the whole permit is not being transferred, the portion of the water permit being transferred
   iii) proposed daily volume (cubic metres per day) and rate (litres per second of take at both sites

iv) the number of the permit to be transferred and the number of the use permit held by each party
v) the location of new take and use site (shown on a map or identified by NZMS 260 map reference)
vi) the date of transfer
vii) description of purpose for which water is to be used
viii) whether the transfer is permanent or temporary and, if temporary, the date on which the transfer ceases.

e) The permit shall retain the same conditions (excluding location) and priority for water shortage restrictions, and, excluding screening and intake requirements as specified in part c) above.

f) In the case of partial or temporary transfers of more than five days per annum, all parties to the transfer shall have metering and reporting at the appropriate recording and reporting level as defined in Table 3-4.

g) The water taken under the permit (or the net take for surface takes) shall not exceed the volume allocated by the original permit.

h) The permit shall be transferred only to parties who hold a current consent for the use of water or to parties whose intended use of the water is permitted by a rule in the plan.

i) In the case of partial or temporary transfers of more than five days per annum the transferor must have given full effect to the purpose of the permit prior to any transfer taking place.

j) This rule shall not apply to the transfer of a groundwater take permit to another location within the same aquifer or to another aquifer.

k) This rule does not apply to the transfer of domestic or municipal supply take permits, except where the transfer is to another person or organisation that will be using the water for domestic or municipal supply.

Advisory Notes

- Pursuant to s136(3) of the RMA, the transfer has no effect until written notice of the transfer is received by Waikato Regional Council.
- Section 136(5) of the RMA provides that when notification of the transfer has occurred, the permit or that part of the permit transferred shall be deemed to be cancelled, and the permit or part transferred shall be deemed to be a new permit subject to the same conditions as the original permit.
-

3.4.4.4 Restricted Discretionary Activity – Transfer of Surface and Groundwater Take Permits

(Implements Section 3.4.3 Policy 3)

1. Any transfer of a water permit that is unable to comply with **Rule 3.4.4.3**: or
2. The temporary or permanent transfer of the whole or part of a permit holder's interest in a water permit for the taking of groundwater

is a **restricted discretionary activity** (requiring resource consent) subject to the following standards and terms:

a) The Water Management Class (refer Section 3.2.4) as identified in the Water Management Class Maps, is the same at the new site as that to which the water permit pertains, or the class at the new site specifies the same or less restrictive intake screening and intake velocity requirements than the site to which the permit applies.

b) The permit shall retain the same conditions (excluding location) and priority for water shortage restrictions, and, excluding screening and intake requirements as specified in part a) above.

c) The transfer is within the same catchment.

d) In the case of temporary or partial transfers, all parties to the transfer shall have metering and reporting at the appropriate recording and reporting level as defined in Table 3-4.

e) The permit does not pertain to the taking of geothermal water.

f) The transfer is to another site within the same aquifer.

g) The transfer is to a location at which the aquifer has the same or greater transmission and storage characteristics.

h) The transfer shall not adversely affect any lawfully established efficient groundwater abstraction, which existed prior to transfer of the take.

i) The water taken under the permit (or the net take for surface takes) shall not exceed the volume allocated by the original permit.

j) Any transfer on the main stem of the Waikato River upstream of Karapiro Dam is within the same hydro electricity reservoir or is downstream.

k) This rule does not apply to the transfer of domestic or municipal supply take permits, except where the transfer is to another person or organisation that will be using the water for domestic or municipal supply. Notwithstanding that, this rule does not apply to the transfer of takes for domestic or municipal supply from the main stem of the Waikato River downstream of the Huntly Power Station to upstream of the Huntly Power Station.

Waikato Regional Council restricts its discretion over the following matters:

i) The timing of abstraction, the (net) volume of water allocated and the rate at which water is abstracted, including daily and seasonal requirements and duration and timing of peak daily take rate, having regard to the efficiency of the water allocated and having regard to Chapter 3.3 Policy 11 and Chapter 3.4 Policy 1.

ii) The proposed use of the water.

iii) Volume of water allocated for crop irrigation, having regard to crop water requirements and efficiency of use and Chapter 3.4 Policy 2.

iv) The level(s) of priority to apply during water shortages having regard to Chapter 3.3 Policy 18 and Standard 3.3.4.27.

v) Abstraction restrictions during water shortage condition (including suspension of abstraction and rostering) having regard to Policies 17, 18 and Standard 3.3.4.27 of Chapter 3.3.

vi) The duration of the resource consent having regard to Policy 15 of Chapter 3.3 and to future demands for water for domestic or municipal supply from the surface water body to which the application applies.

vii) Measures to avoid, remedy, or mitigate the adverse effects of water takes on the purpose of the Water Management Classes identified in Section 3.2.4.

viii) The carrying out of measurements, samples, analyses, inspections, and reporting having regard to Chapter 3.3 Policy 16.

ix) Measures to satisfy the intake screening requirements for the protection of aquatic fauna.

x) Measures to avoid, remedy, or mitigate any adverse effects associated with the intake structure.

xi) Effects on any waahi tapu or other taonga from the activity.

xii) Effects on the relationship of tangata whenua and their culture and traditions with the site and any waahi tapu or other taonga affected by the activity.

xiii) Effects on the ability of tangata whenua to exercise their kaitiaki role in respect of any waahi tapu or other taonga affected by the activity.

xiv) Effects on existing users, including generation from renewable energy sources.

Advisory Notes:

- Information requirements to enable the assessment of any application under this rule are as set out in Section 8.1.2.3 of this Plan.
-

3.4.4.5 Non-Complying Activity Rule – Transfer of Surface and Groundwater Take Permits

(Implements Section 3.4.3 Policy 3)

Any transfer of a water take permit that is not able to comply with **Rule 3.4.4.4** is a **non-complying activity** (requiring resource consent).

Advisory Notes:

- Information requirements to enable the assessment of any application under this rule are as set out in Section 8.1.2.3 of this Plan. In addition, assessment shall also take into account the matters identified in Policies 1- 14 of Section 3.3.3.

3.4.5 Implementation Methods – The Use of Water

3.4.5.1 Environmental Education

(Method to implement Section 3.4.3 Policies 1 and 2)

Waikato Regional Council will, through environmental education programmes, raise the awareness of the community about efficient water use practices by undertaking the following:

1. Providing information regarding the adverse environmental and pasture production effects associated with inefficient irrigation of pastures
2. Providing information regarding the efficient use and conservation of water by householders and resource users
3. Providing information about the use of transferable permits between resource users
4. Providing educational material promoting the efficient use and conservation of water by industries to minimise waste discharges
5. Providing information on the positive benefits to be derived from the efficient use of water
6. Providing climate information measured by the Waikato Regional Council in order to improve the information base for positive irrigation management
7. Providing information on best irrigation practices to improve the efficient use of water.

3.4.5.2 Good Practice

***(*Method to implement Section 3.4.3 Policy 2)**

Waikato Regional Council will, in conjunction with organisations, industries and individuals, provide guidance to develop, implement and undertake efficient water use practices, including:

1. Developing guidelines for water use efficiency
2. Promoting the reuse of water where appropriate
3. Promoting water efficient technology
4. Promoting 'water efficient' crops.

3.4.5.3 Crop and Pasture Monitoring Programme

(Method to implement Section 3.4.3 Policy 2)

Waikato Regional Council will undertake a crop and pasture irrigation monitoring programme in conjunction with commercial vegetable growers, farmers and associated industries to develop and test a set of guidelines to ensure sound scientific justification for consideration in relation to consent applications.

3.4.5.4 Permitted Activity Rule – Use of Water

(Implements Section 3.4.3 Policy 1)

Except as restricted by **Rules 3.4.5.6, 3.4.5.7** and **3.4.5.8** the use (as restricted by s14 of the RMA) of water is a **permitted activity** subject to the following conditions:

a) The use of water shall comply with the water management class standards in section 3.2.4 of this Plan.

Exception

This rule does not apply to:

- The use of geothermal energy and water. Such uses are managed by the policies and rules in Module 7 – Geothermal
- The use of water for a dam or diversion. Such uses are managed by the policies and rules in Chapter 3.6.

Advisory Note:

- Any subsequent discharge of water or contaminants arising from the use of water authorised by this rule may require separate resource consent under the rules in Chapters 3.5 and 5.2 of this Plan.
-

3.4.5.5 Restricted Discretionary Activity Rule – Use of Water

(Implements Section 3.4.3 Policy 1)

The use of water (as restricted by s14 of the RMA), that cannot comply with **Rule 3.4.5.4** is a **restricted discretionary activity** (requiring resource consent).

Waikato Regional Council restricts its discretion over the following matters:

i) Measures to avoid, remedy, or mitigate the adverse effects on water quality allocated having regard to Chapter 3.3 Policies 11 and 12 and Chapter 3.4 Policies 1 and 2.

ii) Measures to avoid, remedy of mitigate any adverse effects on neighbouring properties allocated having regard to Chapter 3.3 Policy 11 and Chapter 3.4 Policies 1 and 2.

iii) The method, rate, volume and timing of application of the water allocated having regard to Chapter 3.3 Policy 11 and Chapter 3.4 Policies 1 and 2.

iv) Effects on any waahi tapu or other taonga from the activity.

v) Effects on the relationship of tangata whenua and their culture and traditions with the site and any waahi tapu or other taonga affected by the activity.

vi) Effects on the ability of tangata whenua to exercise their kaitiaki role in respect of any waahi tapu or other taonga affected by the activity.

vii) Measures to avoid the contamination of land as a result of the use of water having regard to Chapter 3.4 Policies 1 and 2.

3.4.5.6 Permitted Activity Rule – Use of Water for Crop and Pasture Irrigation

(Implements Section 3.4.3 Policy 1)

Except as restricted by **Rules 3.4.5.7** and **3.4.5.8** the use (as restricted by s14 of the RMA) of water and any associated discharge of water onto or into land for irrigated crop and irrigated pasture purposes is a **permitted activity** subject to the following conditions:

a) The water shall not be applied in a way or at a rate that causes the water holding capacity of the soil within the plant root zone (rhizosphere) to be exceeded.

b) The rate of irrigation shall not exceed the infiltration rate of soil and any run-off or ponding of irrigated water shall be minimised.

c) Seasonal and monthly irrigation water balances shall be used to demonstrate that the amount of irrigation water applied does not exceed the irrigation demand by more than 20%. The irrigation water balances must be used to manage water irrigation and must be made available to the Waikato Regional Council on request. The irrigation water balances shall specify:
   i) Area of land irrigated
   ii) Area of land irrigated
   iii) Crop(s) type and crop rotation dates
   iv) Volume of water irrigated
   v) Start and end date of irrigation season
   vi) Seasonal irrigation demand.

d) The activity shall not result in any direct application of contaminants to any water body.

e) Any discharge of contaminants into air arising from the activity shall comply with the permitted activity condition in Section 6.1.8 except where the matters addressed in Section 6.1.8 are already addressed by conditions on resource consents for the site.

f) The activity shall not result in the contamination of land.

Advisory Note

- Rule 3.4.5.6 condition d) is intended to apply to the application of contaminants that are discharged into water body without contact with the surrounding land. The condition does not apply to any non-point source discharge into a water body as a result of the activity.

3.4.5.7 Controlled Activity Rule - Use of Water for Crop and Pasture Irrigation

(Implements Section 3.4.3 Policy 1)

1. Any use of water that cannot comply with **Rule 3.4.5.6**; and

2. The use of water, and any associated discharge of water onto or into land for irrigated crop and irrigated pasture purposes in the catchment of the Waikato River from the Karapiro Dam to the Lake Taupo Control gates or in the catchments of Lakes Taharoa, Maratoto, Serpentine (North South and East), Rotomanuka, Mangahia, Rotongaro, Okowhao, Whangape, Waikare, Kuratau, Mangakaware, Ohinewai, Waahi, and Rotokawau, and Whangamarino wetland, Kopuatai peat dome, wetlands listed in Section 3.7.7 of the Waikato Regional Plan, and the Opuatia wetland

is a **controlled activity** (requiring resource consent) subject to the following standards and terms:

a) Seasonal and monthly irrigation water balances shall be used to demonstrate that the amount of irrigation water applied does not exceed the irrigation demand by more than 20%. The irrigation water balances must be used to manage water irrigation and must be made available to the Waikato Regional Council on request. The irrigation water balances shall specify:
   i) Area of land irrigated
   ii) Crop(s) type and crop rotation dates

iii) Volume of water irrigated

iv) Start and end date of irrigation season

v) Seasonal irrigation demand.

Waikato Regional Council reserves control over:

i) The quality and contents of a seasonal and monthly irrigation water balances prepared under condition a) of this rule having regard to Chapter 3.4 Policies 1 and 2.

ii) Measures to avoid, remedy, or mitigate the adverse effects on water quality having regard to Chapter 3.3 Policies 11 and 12 and Chapter 3.4 Policies 1 and 2.

iii) Measures to avoid, remedy, or mitigate the adverse effects on other properties having regard to Chapter 3.3 Policies 11 and 12 and Chapter 3.4 Policies 1 and 2

iv) The method, rate, volume and timing of application of the water having regard to Chapter 3.3 Policies 11 and 12 and Chapter 3.4 Policies 1 and 2.

v) Effects on any waahi tapu or other taonga from the activity.

vi) Effects on the relationship of tangata whenua and their culture and traditions with the site and any waahi tapu or other taonga affected by the activity.

vii) Effects on the ability of tangata whenua to exercise their kaitiaki role in respect of any waahi tapu or other taonga affected by the activity.

viii) Measures to avoid the contamination of land as a result of the use of water having regard to Chapter 3.4 Policies 1 and 2.

Advisory Notes:

- Users of fertilisers and agrichemicals are referred to Rule 3.9.4.9 and Chapter 6.2 of this Plan. In respect of agrichemicals and fertiliser use, it is recommended that in order to minimise leaching of nutrients and pesticides, all practicable steps should be taken to comply with the New Zealand Fertiliser Manufacturers' Research Association Code of Practice for Fertiliser Use (1998) (in the case of fertilisers) and NZS 8409:2004 Management of Agrichemicals (in the case of agrichemicals).
- The use of soil moisture monitoring equipment can maximise efficient water use by reducing pumping times and water take volumes.
- Information requirements to enable the assessment of any application under this rule are as set out in Section 8.1.2.4 of this Plan.
-

3.4.5.8 Discretionary Activity Rule – Use of Water for Crop and Pasture Irrigation

(Implements Section 3.4.3 Policy 1)

The use of water, and any associated discharge of water onto or into land for irrigated crop and irrigated pasture purposes in the catchment of the Waikato River from the Karapiro Dam to the Lake Taupo Control gates or in the catchments of Lakes Taharoa, Maratoto, Serpentine (North South and East), Rotomanuka, Mangahia, Rotongaro, Okowhao, Whangape, Waikare, Kuratau, Mangakaware, Ohinewai, Waahi, and Rotokawau, and Whangamarino wetland, Kopuatai peat dome, wetlands listed in Section 3.7.7 of the Waikato Regional Plan, and the Opuatia wetland that cannot comply with **Rule 3.4.5.7** is a **discretionary activity** (requiring resource consent).

Advisory Notes:

- Information requirements to enable the assessment of any application under this rule are as set out in Section 8.1.2.4 of this Plan.

3.5 Discharges*

Background and Explanation

This section addresses the following discharges onto land and into water:

a) General rule – all discharges not covered by the following specific rules.
b) Discharges into lakes and wetlands.
c) Broiler chicken farm effluent discharges.
d) Farm dairy effluent, stock truck effluent, stand-off pad and feed pad effluent.
e) Discharge of biosolids and non-hazardous by-products from industrial and trade premises.
f) On-site sewage discharges.
g) Well and aquifer testing discharges.
h) Tracer discharges.
i) Pumped drainage and flood water discharges.
j) Stormwater discharges.

Relationship between Discharges to Land and Discharges to Water

There is an increasing trend to discharge contaminants to land instead of directly to water. As noted in Chapter 5.2 of this Plan, these discharges can contaminate soils and have a range of adverse effects more closely related to land and soil issues. Ultimately, these discharges can also adversely affect water quality and habitat. This Chapter focuses on those discharges to land that could have adverse effects on water quality and aquatic habitat but are less likely to have significant adverse effects on land and soil resources.

The following discharges can have significant adverse effects for land and soil resources as well as water, and are addressed in Chapter 5.2:

i) Cleanfill.
ii) Overburden.
iii) Farm dumps.
iv) Offal holes.
v) Composting.
vi) Landfills.
vii) Dust suppressants.

3.5.1 Issue

Refer to Issue 3.1.1 and 5.2.1.

3.5.2 Objective

Discharges of contaminants to water undertaken in a manner that:

a) does not have adverse effects that are inconsistent with the water management objectives in Section 3.1.2
b) does not have adverse effects that are inconsistent with the discharges onto or into land objectives in Section 5.2.2
c) Ensures that decisions regarding the discharge of contaminants to water do not reduce the contaminant assimilative capacity of the water body to the extent that allocable flows as provided for in Chapter 3.3 are unable to be utilised for out of stream uses.

Principal Reasons for Adopting the Objective

The objectives outlined in Sections 3.1.2 and 5.2.5 of this Plan apply for the purpose of this Chapter. These objectives adequately address the resource management issues associated with water without the need to develop further objectives in this Chapter.

Part c) and the parallel objectives in Chapters 3.3 and 3.6 ensures that when allocating water or considering discharges to water or the damming and diverting of water, both the effects on contaminant assimilative capacity and allocable flow are accounted for.

3.5.3 Policies

Policy 1: Enabling Discharges to Water that will have only Minor Adverse Effects

Enable through permitted and controlled activity rules, discharges to water that due to their nature, scale and location will:

a) avoid adverse effects on surface water bodies that are inconsistent with policies in Section 3.2.3 of this Plan
b) not increase the adverse effects of flooding or erosion on neighbouring properties
c) ensure that any adverse effects of sediment on aquatic habitats are confined to a small area relative to the habitat as a whole or are temporary, and the area will naturally re-establish habitat values comparable with those prevailing before commencement of the activity
d) not result in significant effects on the Coastal Marine Area as identified in the Waikato Regional Coastal Plan, wetlands[18] that are areas of significant indigenous vegetation and/or significant habitats of indigenous fauna, cave ecosystems or lakes
e) not have adverse effects that are inconsistent with the policies for air quality provided in Section 6.1.3 of this Plan.

Policy 2: Managing Discharges to Water with More than Minor Adverse Effects

Control, through resource consents, discharges to water that are likely to have more than minor adverse effects so that:

a) adverse effects on surface water bodies that are inconsistent with the policies in Section 3.2.3 of this Plan are avoided as far as practicable and otherwise remedied or mitigated
b) the discharge causes no significant adverse effects from flooding or erosion
c) there are no significant adverse effects from downstream siltation
d) there are no significant adverse effects on the Coastal Marine Area, wetlands19 that are areas of significant indigenous vegetation and/or significant habitats of indigenous fauna, cave ecosystems or lakes
e) any subsequent discharges to air do not have adverse effects that are inconsistent with the policies for air quality provided in Section 6.1.3 of this Plan.

Policy 3: Alternatives to Direct Discharge to Water

Land-based treatment systems will be promoted where soil type and drainage will allow and where adverse effects are minor or are less than those from a direct discharge to water. If the economic burden of adopting land treatment is unacceptable, provision will be made for a phased introduction of land treatment over an agreed period of time.

Policy 4: Discharges to Land

Ensure that the discharge of contaminants onto or into land maximises the reuse of nutrients and water contained in the discharge

Advisory Note:

- The adverse effects of discharges of contaminants onto or into land and soil and subsequent adverse effects on water quality and air are addressed in the policies in Section 5.2.3 of the Plan.

[18] Refer to Appendix 3 of the RPS
[19] Refer to Appendix 3 of the RPS

Policy 5: Ground Water

Minimise the adverse effects of discharges onto or into land on ground water quality by ensuring that they:

a) do not compromise existing or reasonably foreseeable uses of ground water
b) avoid adverse effects on surface water bodies that are inconsistent with the policies in Section 3.2.3 of this Plan as far as practicable and otherwise, remedy or mitigate those effects
c) are not inconsistent with the policies in Section 3.8.3 that manage the effects of drilling and discharges associated with drilling on ground water quality.

Policy 6: Tangata Whenua Uses and Values

Ensure that the relationship of tangata whenua as Kaitiaki with water is recognised and provided for to avoid significant adverse effects and remedy or mitigate cumulative adverse effects on:

a) the mauri of water
b) waahi tapu sites
c) other identified taonga.

Policy 7: Stormwater Discharges

Encourage at-source management and treatment of stormwater discharges to reduce water quality and water quantity effects of discharges on receiving waters.

Explanation and Principal Reasons for Adopting the Policies

Policy 1 allows for the discharge of contaminants to water where adverse effects of the discharge will not be more than minor. This acknowledges that a number of low impact and existing discharges occur within the Region without compromising the purpose for which a particular body of water is being managed or having other adverse effects that are not acceptable. The cross reference to Chapter 6.1 is necessary because many discharges of this nature have the potential to generate objectionable effects of odour or other aerosols. Activities that are likely to breach these standards will not be enabled by permitted activities and are instead covered by Policy 2.

Policy 2 ensures that any discharge of contaminants to water does not result in significant flooding, erosion or siltation. The significance of flooding, erosion or siltation effects needs to be considered on a case-by-case basis taking into account the receiving environment. For instance, erosion or flooding effects on neighbouring properties are clearly more than minor and therefore are not to be enabled, but in many circumstances they are not of such significance that they must be avoided at all costs. The level of effect that is considered significant will depend on the circumstances of the discharge. Significant adverse effects on the Coastal Marine Area are identified by the objectives and policies of the Waikato Regional Coastal Plan. Significant adverse effects on wetlands, lakes and caves are identified by the objectives of this Plan. In terms of Policy 2, any effect that is not significant can be remedied or mitigated through the consent process so that the objectives of the Plan are met.

Policies 3 and **5** acknowledge that the discharge of contaminants onto or into land is an appropriate alternative to direct discharges to water where soil conditions and topography allow and where the adverse effects would be less. It is also recognised that by applying wastes to land that available nutrients and water can be reused.

All four of these policies recognise that discharges to water or land can have adverse effects beyond the receiving environment by cross referencing to objectives for managing these resources in Chapters 5.2 and 6.1.

Policy 5 recognises that ground water quality can be adversely affected by inappropriate use of soils to treat waste discharges. Correct design and operation of on-site sewage systems and land-based treatment systems is required to avoid adverse effects on the ground water resources.

Policy 6 recognises that the Council is obliged by s6 of the RMA to recognise and provide for the relationship of tangata whenua with water, waahi tapu sites and other taonga. This policy gives priority to the concerns of Maori based on their status as tangata whenua and as Kaitiaki, whilst maintaining the ability of Council to consider the concerns of other groups who are not tangata whenua. The phrasing addresses the concerns of tangata whenua who exercise kaitiakitanga over specific resources, ahead of other Maori submitters to a resource consent who have a relationship that is not based on the present day exercise of kaitiakitanga. The Policy emphasises the need for tangata whenua to identify water bodies and areas that are of significance to them. In order to implement this policy, Waikato Regional Council and tangata whenua who are Kaitiaki will need to follow the process set out in Module 2 of this Plan.

Policy 7 refers to statutory and non-statutory means which Waikato Regional Council can use to encourage methods of managing stormwater at its source and treating stormwater prior to its discharge to receiving waters. These include the resource consent process and the development and implementation of stormwater management plans. These detail the way in which stormwater networks are operated and include methods to avoid, remedy or mitigate the adverse effects of stormwater discharge.

3.5.4 Implementation Methods – Discharges

3.5.4.1 Environmental Education*

Waikato Regional Council will, through environmental education programmes:

1. Raise awareness of the use of land treatment as an environmentally sound method of treating some waste streams where soils allow, and recycling the nutrients and water they contain, as an alternative to disposal to water.
2. Encourage waste reduction and reuse programmes in industry and the community to minimise waste discharge volumes.
3. Raise awareness of the adverse effects of:
   a) urban stormwater discharges on water quality
   b) household water introduced into stormwater systems.

3.5.4.2 Promotion

Waikato Regional Council will encourage and promote industry research into effluent management practices, specifically:

1. Land-based irrigation systems.
2. Methods for improving effluent quality.
3. New technologies for managing agricultural effluents.

3.5.4.3 Part XII RMA Enforcement

Waikato Regional Council will apply for enforcement orders, issue abatement notices and use other enforcement mechanisms in Part XII of the RMA, where, as a result of inappropriate discharge practices, significant adverse effects on water bodies occur, including:

1. Significant adverse effects on water quality.
2. Significant downstream flooding or erosion.
3. Significant downstream siltation.

Advisory Note:

- Refer also to enforcement methods regarding adverse effects on soil and air quality in Section 5.2.6.1 of this Plan.

3.5.4.4 Permitted Activity Rule – Discharges of Water to Water – General Rule

Except as expressly provided for by other rules in this Plan any discharge of water (excluding geothermal water), into water is a **permitted activity** subject to the following conditions:

a) There shall be no adverse effect on water quality of the receiving water body.
b) Any adverse erosion effects occurring as a result of the discharge to be remedied as soon as practicable.
c) There shall be no adverse effects from increased water levels downstream of the discharge point.
d) The Waikato Regional Council shall be notified in writing of the discharge, its volume, contaminant concentrations and the water quality of the receiving water body 10 working days prior to the discharge commencing.

Exclusion to Rule 3.5.4.4
Discharges of geothermal water are excluded from this rule. The effects of these activities are managed by the rules in Chapter 7 of this Plan.

3.5.4.5 Discretionary Activity Rule – Discharges – General Rule

Any discharge of a contaminant into water, or onto or into land, in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water, that is not specifically provided for by any rule, or does not meet the conditions of a permitted or a controlled activity rule in this Plan, is a **discretionary activity** (requiring resource consent).

Advisory Note:

- Information requirements to enable the assessment of any application under this Rule are set out in Section 8.1.2.2 of this Plan. In addition, assessment shall also take into account the matters identified in the policies in Section 3.5.3 of this Plan.

3.5.4.6 Non-Complying Activity Rule – Discharges into other Water Bodies

The discharge of contaminants (not including stormwater or contaminants associated with the take and use of geothermal water), into Natural State Water Bodies or wetlands[20] that are areas of significant indigenous vegetation and/or significant habitats of indigenous fauna or cave entrances or lakes (excluding artificial lakes and Lake Rotoaira) is a **non-complying activity** (requiring resource consent).

Exclusion to Rule 3.5.4.6:
Discharges of geothermal water are excluded from this rule. The effects of these activities are managed by the rules in Chapter 7 of this Plan.

Advisory Notes:

- Information requirements to enable the assessment of any application under this Rule are set out in Section 8.1.2.2 of this Plan. In addition, assessment shall also take into account the matters identified in the policies of Section 3.5.3 of this Plan.

Explanation and Principal Reasons for Adopting Methods 3.5.4.1 to 3.5.4.6

The methods in this section apply across the whole chapter. The non-regulatory methods have been focused on supporting activities permitted as a consequence of Policy 1 and ensuring that while these activities have been enabled, their potential adverse effects are still adequately managed. For instance, **Method 3.5.4.1** uses environmental education to promote the reuse and recycling of liquid effluents and

[20] Refer to Appendix 3 of the RPS.

wastes. Irrigation of effluent onto land, where appropriate, achieves this as well as meeting cultural and spiritual objections concerning effluent disposal to water. Likewise, **Method 3.5.4.2** recognises that improved treatment technology is an important area that needs further research. This recognises concern that pond and barrier ditch systems may not be sustainable in certain parts of the Waikato Region owing to the intensity of agriculture and associated discharges. **Method 3.5.4.3** acknowledges that enforcement will continue to be an option for Waikato Regional Council when significant adverse effects occur as a result of discharges.

Rule 3.5.4.4 and **Rule 3.5.4.5** are general rules that apply to all discharges not otherwise enabled by this Plan. They provide certainty and clarity for resource users. Rule 3.5.4.4 implements Policy 1 by enabling discharges of water into water where the discharge will have no adverse effects. These discharges currently require resource consent under the presumptions of the RMA. The intent of this rule is that such discharges will be permitted where there is no increase in any parameters (e.g. temperature and contaminant load) of water quality in the receiving environment. The Rule does not enable discharges that will adversely change the composition of water and, therefore, have an adverse effect on water quality. The kinds of discharges to be enabled by this Rule would include discharges of diverted ground water from dewatering operations. The condition requiring that Waikato Regional Council be notified is essential to give the community a chance to ensure that the discharge can really comply with the Rule.

Rule 3.5.4.6 recognises the high values of our natural state areas and the scarcity and fragile nature of our lake, wetland, and cave systems, and regulates discharges of contaminants to them. Discharges in these environments could have significant irreversible adverse effects. The non-complying status of this Rule sends the signal that these activities should be discouraged but also allows opportunity for consent to be granted in cases where the effects of the activity can be shown to be minor and where granting a consent is not contrary to the objectives and policies of the Plan.

3.5.5 Implementation Methods – Farm Effluent Discharges

3.5.5.1 Permitted Activity Rule – Discharge of Farm Animal Effluent onto Land

The discharge of contaminants onto land outside the Lake Taupo Catchment from the application of farm animal effluent, (excluding pig farm effluent), and the subsequent discharge of contaminants into air or water, is a **permitted activity** subject to the following conditions:

a) No discharge of effluent to water shall occur from any effluent holding facilities.
b) Storage facilities and associated facilities shall be installed to ensure compliance with condition a).
c) All effluent treatment or storage facilities (e.g. sumps or ponds) shall be sealed so as to restrict seepage of effluent. The permeability of the sealing layer shall not exceed $1x10^{-9}$ metres per second.
d) The total effluent loading shall not exceed the limit as specified in Table 3-8, including any loading made under Rules 3.5.5.2 and 3.5.5.3, 3.5.6.2, 3.5.6.3 or 3.5.6.4.
e) The maximum loading rate of effluent onto any part of the irrigated land shall not exceed 25 millimetres depth per application.
f) Effluent shall not enter surface water by way of overland flow, or pond on the land surface following the application.
g) Any discharge of contaminants into air arising from this activity shall comply with permitted activity conditions in Section 6.1.8 of this Plan.
h) The discharger shall provide information to show how the requirements of conditions a) to g) are being met, if requested by the Waikato Regional Council.
i) The discharge does not occur within 20 metres of a Significant Geothermal Feature*.

j) Where fertiliser is applied onto the same land on which farm animal effluent has been disposed of in the preceding 12 months, the application must be in accordance with Rule 3.9.4.11.

Advisory Notes:

- Dischargers should note that many territorial authorities have specific rules which set minimum separation distances between treatment or disposal systems, adjoining properties, roadways and houses.
- In relation to sealing effluent treatment or storage facilities as referred to in condition c), the permeability requirement of $1x10^{-9}$ metres per second can generally be met through standard compaction procedures on soils with more than 8 percent clay. If the soil has less clay than this, special measures may be required (e.g. an artificial liner). Also, clays may not be suitable for storage facilities that are regularly emptied or are left dry for some time. Waikato Regional Council can provide advice on soil types and sealing requirements.
- Effluent treatment and storage facilities should be constructed in accordance with the publication 'Dairying and the Environment – Managing Farm Dairy Effluent' (1996) by the Dairying and the Environment Committee. Copies of this guideline are available from the New Zealand Dairy Research Institute, Private Bag 11029, Palmerston North.
- With regard to the effluent application rate in condition d), the standard of 150 kilograms of nitrogen per hectare per year can be converted into a minimum irrigation area and a maximum depth of effluent that can be applied each year. To do this for farm dairy effluent the following factors must be known or estimated:
  a) The amount of nitrogen excreted by the cow – this can vary greatly (depending upon the composition of pasture, fertiliser use and animal management in the milking shed), but generally averages about 20 grams per cow per day.
  b) The volume of nitrogen excreted by the cow – this can vary greatly (depending upon the amount of water used for washing down the yard), but averages a volume of 50 litres per cow per day.
  c) The average lactation period – this is the average number of days that the cows are milked per season. It depends upon the potential of an area for dairy farming, and pasture management practices. A typical lactation period for cows in the Waikato Region is about 270 days, and can range from 190 days up to 300 days. It is important that each farmer consider their individual situation when estimating lactation period.
- Using the average values as specified, 150 kilograms of nitrogen per hectare per year equated to both:
  a) a land area requirement of 360 square metres per cow (i.e. about one hectare per 27 cows)
  b) an annual effluent loading rate of 75 millimetres per year.
- Discharges of contaminants into or onto land within 20 metres of a Significant Geothermal Feature are addressed by Rules 7.6.6.1 to 7.6.6.3 of this Plan. Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.
- To comply with condition f) application rates need to be adjusted for soil and seasonal climatic conditions. Generally, ponding should not occur if the application depth requirements in condition e) are complied with and the instantaneous application rates (per second) are appropriate to these conditions. In practice, implementation of this condition will acknowledge that some minor ponding on the land, for short durations may occur where there are areas of soil compaction.

Table 3-3 Nitrogen Loading Rate Calculations For Grazed Pasture

Total N/cow/year	=	20 g/cow/day x 270
	=	5.4 kg
Nitrogen loading rate	=	150 kg N/ha/year
Land area required/cow	=	5.4/150
	=	0.036 ha
	=	360 m2
Nitrogen loading rate	=	150 kg N/ha/year
land area required/ 100 cows	=	5.4 100/150
	=	3.6 ha

Sources of Data/Assumptions (Dairy Farm Effluent Management, 1995. Waikato Regional Council)

1. Total N/cow/day = 20 g
2. Nitrogen loading rate = 150 kg N/ha/year.
3. Typical lactation period = 270 days.

- For the avoidance of doubt, Rule 3.5.5.2 is deemed to cover the periodic desludging of pond and barrier ditch systems and land application of sludge provided that the effluent application rate is less than 150 kilograms of nitrogen per hectare per year. Sludge can be applied to land at a higher rate than 150 kilograms per hectare of nitrogen but this would then be a discretionary activity subject to Rule 3.5.5.4.
- Discharges of farm animal effluent within the Lake Taupo Catchment are to be managed by rules 3.10.5.1 to 3.10.5.12.

3.5.5.2 Permitted Activity Rule – Discharge of Feed Pad and Stand-Off Pad Effluent onto Land

The discharge of feed pad and stand-off pad effluent to land outside the Lake Taupo Catchment and the subsequent discharge of contaminants to air is a **permitted activity** subject to the following conditions:

a) The pad shall be sealed, so as to restrict seepage of effluent. The permeability of the sealing layer for such treatment or storage facilities shall not exceed 1x10-9 metres per second.
b) There shall be no run-off or discharge of pad effluent into surface water.
c) Materials used to absorb pad effluent or the effluent itself when spread on land as a means of disposal shall not exceed the limit specified in Table 3-8 inclusive of any loading made under Rules 3.5.5.1, 3.5.5.3, 3.5.6.2, 3.5.6.3 and 3.5.6.4.The pad shall be located at least 20 metres from surface water.
d) Any discharge of contaminants into air arising from this activity shall comply with permitted activity conditions in Section 6.1.8 of this Plan.
e) The discharger shall provide information to show how the requirements of this rule are being met, if requested by the Waikato Regional Council.
f) The discharge shall not occur within 20 metres of a Significant Geothermal Feature*.
g) Where fertiliser is applied onto the same land on which farm animal effluent has been disposed of in the preceding 12 months, the application must be in accordance with Rule 3.9.4.11.

Advisory Notes:

- Discharges of contaminants into or onto land within 20 metres of a Significant Geothermal Feature are addressed by Rules 7.6.6.1 to 7.6.6.3 of this Plan. Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.
- It is considered good practice to locate these pads on firm dry land where there is no risk of run-off into surface water bodies.
- In order to comply with condition b) it is likely that stand-off pads and feed pads will need to be located outside of the floodplain of any water body.
- In relation to sealing feed pads and stand-off pads as referred to in condition a) the permeability requirement of $1x10^{-9}$ metres per second can generally be met through standard compaction procedures on soils with more than 8 percent clay. It the soil has less clay than this, special measures may be required (e.g. an artificial liner). Also, clays may not be suitable for storage facilities that are regularly emptied or are left dry for some time. Waikato Regional Council can provide advice on soil types and sealing requirements.
- When siting feed pads it is recommended that farmers also check the requirements of the relevant District Plan which may control issues such as buffer distances from neighbouring properties.
- Surface waters under condition b) include all road side drains.
- Discharges of farm animal effluent within the Lake Taupo Catchment are to be managed by rules 3.10.5.1 to 3.10.5.12.

3.5.5.3 Controlled Activity Rule – Existing Discharge(s) of Effluent from Pig Farms onto Land

The discharge of contaminants from the application of pig farm effluent onto land outside the Lake Taupo Catchment, and the subsequent discharge of contaminants into air, where:

1. The discharge(s) from the pig farms were lawfully established as at 1 May 2007

2. The total effluent loading rate onto pasture shall not exceed the limit specified in Table 3-8including any loading made under Rules 3.5.5.1, 3.5.5.2, 3.5.6.2, 3.5.6.3 and 3.5.6.4, and
3. the maximum loading rate of effluent onto any part of the irrigated land does not exceed 50 kilograms of nitrogen per hectare per application, or
4. the discharge does not occur within 20 metres of a Significant Geothermal Feature*

is a **controlled activity** (requiring resource consent) subject to the following standards and terms:

a) No discharge of effluent to water shall occur from any effluent holding premises.
b) Storage facilities and associated facilities shall be installed to ensure compliance with standard a).
c) All effluent treatment or storage facilities (e.g. sumps or ponds) shall be sealed so as to restrict seepage of effluent. The permeability of the sealing layer for such treatment or storage facilities shall not exceed $1x10^{-9}$ metres per second.
d) Effluent shall not enter surface water by overland flow, or pond on the land surface following the application.
e) Any discharge of contaminants into air arising from this activity shall comply with permitted activity conditions in Section 6.1.8 of this Plan.
f) Where fertiliser is applied onto the same land on which farm animal effluent has been disposed of in the preceding 12 months, the application must be in accordance with Rule 3.9.4.11.
g) The activity shall have no verified complaint/s of objectionable odour or particulate matter that has resulted in enforcement action being taken against the discharger in the two years prior to the consent application.

Waikato Regional Council reserves control over the following matters:

i. The means of controlling any elevation in ground water nitrogen concentrations.
ii. The standard of sealing storage facilities.
iii. The means of controlling objectionable odour.
iv. The means of avoiding spraydrift.
v. Effluent loading rates.
vi. The contingency measures to ensure that there are no adverse effects on surface water in the event of mechanical failure or prolonged wet weather.
vii. Provisions to monitor compliance with the consent conditions and the effects on the environment.
viii. Location of discharge to land.

Advisory Notes:

- Discharges of contaminants into or onto land within 20 metres of a Significant Geothermal Feature are addressed by Rules 7.6.6.1 to 7.6.6.3 of this Plan. Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.
- In relation to sealing effluent treatment or storage facilities as referred to in condition c), the permeability requirement of $1x10^{-9}$ metres per second can generally be met through standard compaction procedures on soils with more than 8 percent clay. If the soil has less clay than this, special measures may be required (e.g. an artificial liner). Also, clays may not be suitable for storage facilities that are regularly emptied or are left dry for some time. Waikato Regional Council can provide advice on soil types and sealing requirements.
- Effluent treatment and storage facilities should be constructed in accordance with the publication 'Dairying and the Environment – Managing Farm Dairy Effluent' (1996) by the Dairying and the Environment Committee. Copies of this guideline are available from the New Zealand Dairy Research Institute, Private Bag 11029, Palmerston North.
- Discharges of farm animal effluent within the Lake Taupo Catchment are to be managed by rules 3.10.5.1 to 3.10.5.12.

3.5.5.4 Discretionary Activity Rule – Discharge of Effluent onto Land

The discharge of farm animal effluent onto land outside the Lake Taupo Catchment, and the subsequent discharge of contaminants to air, in a manner which does not comply with Rules 3.5.5.1, 3.5.5.2 and 3.5.5.3 is a **discretionary activity** (requiring resource consent).

Exclusion to Rule 3.5.5.4:
Discharges of contaminants within 20 metres of Significant Geothermal Features* are excluded from this rule. The effects of these activities are managed by Rules 7.6.6.1 to 7.6.6.3 of this Plan.

Advisory Note:

- Information requirements to enable the assessment of any application under this Rule are set out in Section 8.1.2.2 of this Plan. In addition, assessment shall also take into account the matters identified in the policies of Chapter 3.5 of this Plan.
- Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.
- Discharges of farm animal effluent within the Lake Taupo Catchment are to be managed by rules 3.10.5.1 to 3.10.5.12.

3.5.5.5 Discretionary Activity Rule – Discharge of Treated Effluent to Water

Except as provided for by Rule 3.5.4.6 the discharge of treated farm animal effluent outside the Lake Taupo Catchment into surface water is a **discretionary activity** (requiring resource consent).

Advisory Note:

- Information requirements to enable the assessment of any application under this Rule are set out in Section 8.1.2.2 of this Plan. In addition, assessment shall also take into account the matters identified in the policies of Section 3.5.3 of this Plan.
- Discharges of farm animal effluent within the Lake Taupo Catchment are to be managed by rules 3.10.5.1 to 3.10.5.12.

3.5.5.6 Prohibited Activity Rule – Discharge of Untreated Animal Effluent

The discharge of untreated farm animal effluent into water is a **prohibited activity**.

Table 3-4 Nitrogen Loading Rates for Various Land Users

Land Use Type	Max. N Loading Rate (kg N/ha of spayed land/year)
Grazed pasture	150
Cut and carry grass (hay, silage)	600
Pinus radiate	150
Eucalyptus (coppice)	250
Maize silage	200

Explanation and Principal Reasons for Adopting Methods 3.5.5.1 to 3.5.5.6

The permitted activity rules in this Chapter enable a range of discharges of farm animal effluents onto land in accordance with Policies 1, 2 and 3. This effluent has value as a fertiliser substitute, and irrigating it onto land can reduce the amount of other fertiliser that is needed. The advisory notes make it clear that when determining fertiliser requirements in addition to the effluent, care should be taken with nitrogen management (refer to Section 3.9.7) because applying high rates of nitrogen to land (through effluent and/or fertiliser) may cause water quality problems by increasing nitrate contamination of ground water. Council acknowledges that the application of farm animal effluent onto soil may contribute to minor increases in the concentration of

contaminants leached from the soil to groundwater, and that discharge is allowed under this rule. However, it is Council's expectation that effluent irrigation will be undertaken in a way that most effectively allows effluent contained contaminants to be captured and treated by the biologically active topsoil, taking into account the capacity of the soil to absorb the effluent and the potential for preferential flow. Separate methods are provided in Section 3.10 to manage discharges of animal effluent within the Taupo Catchment.

Rule 3.5.5.2 provides for treatment and reuse of effluent from feed pads and stand-off pads back onto land. Stand-off pads are temporary holding areas used to prevent the damage of paddocks during wet periods. Feed pads and stand-off pads are being used more in the Region as a tool for stock and pasture management. This is encouraged as it prevents paddocks and soils from being damaged by pugging during wet conditions. This Rule provides direction for management of wastes and enables this activity to occur subject to some basic environment precautions.

Rule 3.5.5.3 provides for discharge of treated pig farm effluent into or onto land where the discharge(s) from pig farm were lawfully established as at 1 May 2007. The risk of objectionable odour from buildings containing pigs or from pond effluent is greater than for any other type of animal effluent, but as odour intensity and dispersion is known for existing farms, adequate conditions can be placed on consents.

Rules 3.5.5.4 and 3.5.5.5 apply to all other farm animal effluent discharges outside the Lake Taupo Catchment that do not meet the standards and conditions set out in Rules 3.5.5.1, 3.5.5.2 and 3.5.5.3. This allows appropriate conditions to be set on any consent granted on a case-by-case basis. Conditions requiring mitigation measures may be imposed on controlled and discretionary activity consents. When considering options for mitigation measures, Waikato Regional Council will have regard to the ease of practical integration into farm management systems and the effectiveness of the measure to mitigate the anticipated adverse environmental effects. Options for mitigation of adverse environmental effects may include:

a) The fencing of water courses to prevent stock access.
b) The planting of streamside areas.
c) The creation of sediment traps in small drains.
d) Vegetation management in drains.
e) The protection of wetlands.

Rule 3.5.5.6 prohibits all discharges of untreated farm dairy effluent into water due to the significant adverse effects such discharges have on water bodies. This sends a clear signal that the discharge of raw effluent to water is not acceptable in the Region.

3.5.6 Implementation Methods – Discharge of Biosolids* and Sludges or Liquids from Activated Sludge Treatment Processes to Land

3.5.6.1 Good Practice

Waikato Regional Council will, in conjunction with organisations, industry groups and individuals, provide guidance on good practice techniques for the reuse of biosolids and non-hazardous by-products from industrial and trade premises as soil conditioners or fertiliser substitutes.

3.5.6.2 Permitted Activity Rule – Discharge of Sludges and Liquids from Activated Sludge Treatment Processes to Land

The discharge of sludges and liquids from activated sludge treatment processes onto or into land outside the Lake Taupo Catchment and any consequent discharge of contaminants to air is a **permitted activity** subject to the following conditions:

a) There shall be no direct discharge to water.
b) The material shall not enter surface water by overland flow.
c) The material shall not contain any human/animal pathogens or hazardous substances.
d) The total nitrogen loading onto grazed pasture shall not exceed the limits as specified in Table 3-7, including any loading made under Rules 3.5.5.1, 3.5.5.2, 3.5.5.3 and 3.5.6.3.
e) The discharger shall maintain daily records of the volume discharged to each paddock or relevant area and the concentration of nitrogen in the discharge in, as a minimum, monthly samples.
f) The records required under condition e) shall be made available to the Waikato Regional Council upon request.
g) The maximum loading rate of effluent onto any part of the irrigated land shall not exceed 25 millimetres depth per application.
h) The material shall either
    i) not be stored for longer than eight hours prior to application, or
    ii) have been stabilised by storage and dewatering for a period of at least 6 months.
i) The discharge location should provide for the following buffer zones between the discharge area and neighbouring land uses or sensitive environments:
    i) 300 metres from any school, residential zone or rural residential zone as identified by the relevant district plan
    ii) 150 metres from any residence or building of regular occupation such as community halls, marae and public or community facilities
    iii) 50 metres from any property boundary
    iv) 10 metres from any surface water body
    v) 20 metres from a Significant Geothermal Feature*.
j) Any discharge to air arising from this activity shall comply with the permitted activity conditions in Section 6.1.8 of this Plan.
k) Where fertiliser is applied onto the same land on which activated biosolids have been disposed of in the preceding 12 months, the application must be in accordance with Rule 3.9.4.11.
l) The soil pH where the biosolids are discharged is not less than pH 5.5.

Advisory Notes:

- Discharges of contaminants into or onto land within 20 metres of a Significant Geothermal Feature are addressed by Rules 7.6.6.1 to 7.6.6.3 of this Plan. Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

3.5.6.3 Controlled Activity Rule – Discharge of Biosolids and Sludges and Liquids from Activated Sludge Treatment Processes

The discharge of biosolids or sludges and liquids from activated sludge treatment processes onto or into land outside the Lake Taupo Catchment, and any subsequent discharge to air, that is not permitted by Rule 3.5.6.2 is a **controlled activity** (requiring resource consent) subject to the following standards and terms:

a) Concentrations of pathogens or hazardous substances in the material shall not exceed the values given in Table 3-9.
b) The discharge shall not:
    i) result in ponding where the contaminant remains on an area of more than 10 square metres 24 hours after being irrigated.
    ii) cause a direct discharge to surface water or ground water.
c) The discharge shall not occur within 20 metres of a Significant Geothermal Feature*.
d) Any discharge to air arising from this activity shall comply with the permitted activity conditions in Section 6.1.8 of this Plan.
e) The soil pH where the biosolids are discharged is not less than pH5.5.

Waikato Regional Council reserves control over the following matters:

i) The season during which the discharge can occur.
ii) The frequency at which the discharge can occur at the same location.
iii) The maximum annual nitrogen loading rate for the discharge site given the proposed land use.
iv) Measures to manage the effects of contaminants such as heavy metals, mineral salts or hazardous substances on the long-term health of the soil resource and on the existing and range of foreseeable uses of the soil resource.
v) The means of controlling objectionable odour.
vi) Measures to avoid significant adverse effects of the activity on tangata whenua values of the site.
vii) Measures for managing effects of the discharge upon the soil's hydraulic loading capacity and compaction.
viii) Measures to ensure that adverse effects on nearby land uses, water bodies or areas of significant indigenous vegetation, significant habitats of indigenous fauna[21] and significant natural features such as cave and karst systems are avoided, remedied or mitigated.
ix) The maximum level of soil contamination that is acceptable at the application site.
x) The method of application.
xi) Separation distances from sensitive areas.
xii) Record keeping and nutrient budgeting.

Advisory Notes:

- Discharges of contaminants into or onto land within 20 metres of a Significant Geothermal Feature are addressed by Rules 7.6.6.1 to 7.6.6.3 of this Plan. Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.
- Biosolids that carry the registered Biosolids Quality Mark (BQM) accreditation are likely to comply with this Rule.

3.5.6.4 Discretionary Activity Rule – Other Discharges of Biosolids and Sludges and Liquids from Activated Sludge Treatment Processes

The discharge of biosolids into water or onto or into land that does not comply with Rules 3.5.6.2 and 3.5.6.3 is a **discretionary activity** (requiring resource consent).

Exclusion to Rule 3.5.6.4:

Discharges of contaminants (not including stormwater or contaminants associated with the take and use of geothermal water), into Natural State Water Bodies, natural wetlands (that are habitat for indigenous vegetation or fauna communities), cave entrances or lakes (excluding artificial lakes and Lake Rotoaira) are excluded from this rule. The effects of these activities are managed by Rule 3.5.4.6 of this Plan.

Exclusion to Rule 3.5.6.4:

Discharges of contaminants within 20 metres of Significant Geothermal Features are excluded from this Rule. The effects of these activities are managed by Rule 7.6.6.1 to 7.6.6.3 of this Plan.

Advisory Note:

- Information requirements to enable the assessment of any application under this Rule are set out in Section 8.1.2.2 of this Plan. In addition, assessment shall also take into account the matters identified in the policies of Section 3.5.3 of this Plan.
- Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

[21] Refer to Appendix 3 of the RPS.

Table 3-5 Pathogen and Contaminant levels

E.coli	<100 MPN/g
Campylobacter	<1/25g
Salmonella	<1/25g
Enteric Viruses	<1 PFU/4g
Helminth ova	<1/4g
Arsenic	20 mg/kg dry weight
Cadmium	1 mg/kg dry weight
Chromium	600 mg/kg dry weight
Copper	100 mg/kg dry weight
Lead	300 mg/kg dry weight
Mercury	1 mg/kg dry weight
Nickel	60 mg/kg dry weight
Zinc	300 mg/kg dry weight
DDT/DDD/DDE	0.5 mg/kg dry weight
Aldrin	0.02 mg/kg dry weight
Dieldrin	0.02 mg/kg dry weight
Chlordane	0.02 mg/kg dry weight
Heptachlor and Heptachlor epoxide	0.02 mg/kg dry weight
Hexachlorobenzene (HCB)	0.02 mg/kg dry weight
Hexachlorocyclohexane (Lindane)	0.02 mg/kg dry weight
Benzene Hexachloride (BHC)	0.02 mg/kg dry weight
Total polychlorinated biphenyls	0.02 mg/kg dry weight
Total dioxin TEQ	0.00003 mg/kg dry weight

Explanation and Principal Reasons for Adopting Methods 3.5.6.1 to 3.5.6.4

Method 3.5.6.1 identifies that guidelines defining good practice techniques are a valuable tool in managing the effects of these discharges. Waikato Regional Council will provide guidance on the development of these guidelines. In particular, good practice guides need to focus on means of applying these wastes to land so that neither soils nor ground water are contaminated as a consequence of over-application or application during the wrong season.

The rule framework in **Rules 3.5.6.2 to 3.5.6.4** recognises that biosolids and other non-hazardous by-products from industrial or trade premises can be suitable for use as soil conditioners and fertiliser substitutes in accordance with Policies 1, 2 and 4. However, because of their source, these substances may contain hazardous contaminants to levels that will contaminate soil or water. Due to their source and typical composition, these substances may also generate objectionable levels of odour. Because of these risks, some control must be exercised to ensure that the substance will not contaminate soils, generate odours or result in contamination of surface and ground water.

Only discharges of biosolids, sludges and liquids from activated sludge treatment processes are permitted by these Rules. The treatment process that they have been subject to means that the objectionable odours associated with anaerobic processes are largely removed. For example, material can be processed through a clarifier and aerated, resulting in an activated sludge. Provided they are applied in the same way as other fertilisers such as farm animal effluent, the risk of adverse effects is minimal.

Rule 3.5.6.4 provides for the beneficial reuse of biosolids sourced from municipal wastewater treatment plants and industrial sources provided that contaminants within the biosolid are sufficiently low that there is little risk of creating a new contaminated

site through continual application of the material. The contaminant levels in Table 3-8 are derived from the Guidelines for the Safe Application of Biosolids in New Zealand (NZWWA, 2003). To ensure that the objectives and policies in Chapter 5.2 of the Plan are achieved, the levels are set at the contaminant levels deemed by that guideline to be acceptable from 2012 rather than the less conservative values recommended from 2003 - 2012. With this exception, biosolids or other effluents that have obtained registered Biosolids Quality Mark accreditation or equivalent are enabled by this Rule.

As biosolids can be high in nutrients, it is not appropriate to allow their discharge within the Taupo catchment as a Permitted or Controlled Activity. For this reason, the discharge of biosolids to land in the Taupo catchment is a Discretionary Activity under rule 3.5.6.4. Such discharges may also be assessed in accordance with the Taupo land use rules 3.10.5.1 to 3.10.5.12 if they result from farming activities.

3.5.7 Implementation Methods – On-Site Sewage Discharges

3.5.7.1 Integrated Management

Whilst recognising that the Council has primary responsibility for managing the adverse effects of discharges from on-site sewage systems, Waikato Regional Council will work with territorial and health authorities to identify locally appropriate solutions where effects on the environment from on-site domestic sewage discharges are found to be unsustainable. This is to include:

1. Outlining responsibilities for administration of regional rules in order to promote inter agency efficiency and effectiveness.
2. Promoting land use controls in district plans to discourage the use of inappropriate systems in sensitive receiving environments or where existing systems are shown to be inadequate.
3. Initiate plan changes in sensitive receiving environments or where existing systems are shown to be inadequate.
4. Recognising and making practical provision for management and maintenance of on-site sewage systems to ensure that the objectives of this Plan are achieved.

3.5.7.2 Plan Change

As a matter of priority, develop a change to the Waikato Regional Plan and, if necessary, Waikato RPS addressing the following matters:

1. Refining the rules in this Plan to provide greater flexibility and clarity for resource users, including provision of design requirements for in-ground renovation where necessary.
2. Identifying where systems are having adverse effects on ground water.
3. Investigating how the Australia/New Zealand Standard for the Management of On-Site Sewage Systems AS/NZ1547:2000 can be integrated in the rules.
4. Amending rules to address adverse effects in sensitive receiving environments or where existing systems are shown to be inadequate.
5. Developing processes in conjunction with territorial authorities to ensure sewage systems are upgraded where appropriate.
6. Record keeping and monitoring, including records of system location, design and maintenance history.
7. Monitoring and enforcing compliance with regional rules.
8. Cost recovery.
9. Links to responsibilities under other legislation especially the Health Act 1956 and Waste Management Plans prepared under the Local Government Act 1974.

3.5.7.3 Good Practice

Waikato Regional Council will, in conjunction with territorial authorities, industry groups and individuals, provide guidance in the development and use of guidelines and codes

of practice promoting environmental practices and new technology designed to avoid, remedy or mitigate the adverse effects of on-site sewage disposal systems. In particular, Waikato Regional Council will promote the use of Auckland Regional Council (1994) On-Site Wastewater Disposal from Household and Institutions (TP5822) or any update or equivalent code of practice.

3.5.7.4 Permitted Activity Rule – Discharge of Domestic Sewage from Existing On-Site Systems

The discharge of domestic sewage effluent (including grey water but not including stormwater) into land outside the Lake Taupo Catchment from an on-site domestic sewage treatment and disposal system that was lawfully established or authorised before the date of notification of this Plan (28 September 1998), is a **permitted activity** subject to the following conditions:

a) The volume of effluent to be discharged from any one system shall not exceed 1.3 cubic metres per day averaged over any one month period.
b) There shall be no direct discharge of effluent into water.
c) During times of normal wet winter groundwater level, there shall be at least 600 millimetres separation distance between the groundwater level and the bottom of the disposal trench.
d) The discharge shall not result in any objectionable effects from odour beyond the boundary of the subject property.
e) For discharges from systems installed after 11 July 1994, the effective disposal area* for any treatment and disposal system shall be no less than 2,500 square metres.
f) For discharge from properties which, at the date of authorisation of the systems exceeded 2,500 square metres, this Rule shall not apply where, subsequently, the effective disposal area* is reduced to less than 2,500 square metres.
g) For discharges from properties which, at the date of authorisation of the system, were less than 2,500 square metres, this Rule shall not apply where, subsequently, the effective disposal area is reduced.
h) The discharge shall not occur within 20 metres of a Significant Geothermal Feature.
i) Should the treatment and/or disposal system fail to the extent that either the treatment system or disposal system needs to be substantially replaced, and an effluent outlet filter is not part of the system, one should be fitted as part of the system reinstatement. If the property is less than 2,500 square metres and there are two or more on-site wastewater treatment systems (septic tanks) within 50 metres of the disposal field, the reinstated system shall meet the conditions of Rule 3.5.7.6.

Advisory Notes:

- The process for assessing odour is specified in Section 6.4.1.3 of the Plan.
- Discharges of contaminants into or onto land within 20 metres of a Significant Geothermal Feature are addressed by Rules 7.6.6.1 to 7.6.6.3 of this Plan. Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.
- These existing systems will generally be adequate provided that land and soil conditions are suitable and that regular filter cleaning and desludging is undertaken.
- If discharges from an existing septic tank or number of septic tanks are resulting in water users or ecosystems being adversely affected, Council reserves the right to take enforcement action to require the owners of the systems to comply with their duties under s17 of the RMA.
- Discharges of domestic sewage within the Lake Taupo Catchment are to be managed by rule 3.10.6.1 to 3.10.6.4 or rule 3.5.7.7.

[22] Gunn, I. 1994: On-Site Wastewater Disposal From Households And Institutions. *Auckland Regional Council Environment Technical Publication no.58 (2nd ed.)*, Auckland Regional Council, Auckland.

3.5.7.5 Permitted Activity Rule – Discharge of Domestic Sewage from New On-Site Systems

The discharge of domestic sewage effluent (including grey water but not stormwater) onto or into land outside the Lake Taupo Catchment from an on-site domestic sewage treatment and disposal system lawfully established or authorised after the date of notification of this Plan (28 September 1998), is a **permitted activity** subject to the following conditions:

a) The volume of effluent to be discharged from any one system shall not exceed 1.3 cubic metres per day averaged over any one month period.
b) The minimum total septic tank size shall be no less than 3,000 litres.
c) There shall be no direct discharge of effluent into water.
d) During times of normal wet winter groundwater level, there shall be at least 600 millimetres separation distance between the groundwater level and the bottom of the disposal trench.
e) The discharge shall not result in any objectionable odour beyond the boundary of the subject property.
f) The effective disposal area* for any one treatment and disposal system discharge shall be not less than 2,500 square metres. The discharge shall no longer comply with this Rule where the effective disposal area* is subsequently reduced to less than 2,500 square metres.
g) The sewage disposal system shall not be sited within 20 metres of a Natural State Water Body or Fisheries Class Water Body as specified in the Water Management Class Maps, and 10 metres from any other surface water body.
h) The sewage disposal system shall not be sited within 30 metres of any potable water supply well unless the well is drawing from a separate, confined aquifer.
i) The discharge shall not occur within 20 metres of a Significant Geothermal Feature.
j) The septic tank shall be fitted with an effluent outlet filter.
k) The wastewater system shall be designed and installed such that there will be no adverse change in groundwater quality as a result of the discharge, or in combination with other discharges.

Advisory Notes:

- The process for assessing odour is specified under Section 6.4.1.3 of the Plan.
- It is recommended that on-site systems are designed, constructed, operated and maintained in accordance with (Auckland Regional Council 2004 On-site Wastewater Systems Design and Management Manual – Technical Publication Third Edition).
- Discharges of contaminants into or onto land within 20 metres of a Significant Geothermal Feature are addressed by Rules 7.6.6.1 to 7.6.6.3 of this Plan. Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.
- Discharges of domestic sewage within the Lake Taupo Catchment are to be managed by rule 3.10.6.1 to 3.10.6.4 or rule 3.5.7.7.

3.5.7.6 Permitted Activity Rule – Discharge of Sewage from Improved On-Site Domestic Sewage Treatment and Disposal Systems

Except as provided for by Rule 3.5.7.5, the discharge of domestic sewage effluent (including grey water but not including stormwater) onto or into land outside the Lake Taupo Catchment from an on-site domestic sewage treatment and disposal system is a **permitted activity** subject to the following conditions:

a) The volume of effluent to be discharged shall not exceed three cubic metres per day averaged over any one month period.
b) The design, construction, operation and maintenance of the system shall meet the following standards:
    i) pre-treatment of effluent to a standard not to exceed concentrations of 20g/m^3 of Biological Oxygen Demand and 30g/m^3 of suspended solids

ii) during times of normal wet winter groundwater level, there shall be at least 600 millimetres separation distance between the groundwater level and the bottom of the disposal trench or 300 millimetres between the groundwater level and dripper irrigation lines, where dripper irrigation lines are used and the design loading rate for effluent disposal is less than five millimetres/day.

iii) there shall be no adverse change in groundwater quality as a result of the discharge, or in combination with other discharges

iv) there shall be no adverse change in surface water quality as a result of the discharge, or in combination with other discharges

v) there shall be no direct discharge of effluent into groundwater or surface water.

c) The discharge shall not result in any objectionable effects from odour beyond the boundary of the subject property.

d) The sewage disposal system shall not be sited within 30 metres of a Natural State Water Body or Fisheries Class Water Body as specified in the Water Management Class Maps, and 10 metres from any other surface water body.

e) Written proof of compliance with this Rule shall be provided to the Waikato Regional Council on require in the form of either:

i) certification by a person who is qualified and experienced in the field of on-site sewage treatment and disposal that the system will consistently satisfy the above standards taking into account the relevant site constraints, or

ii) documentation which demonstrates achievement of the standards.

f) The discharge shall not occur within 20 metres of a Significant Geothermal Feature.

Advisory Notes:

- The process for assessing odour is specified under Section 6.4.1.3 of the Plan.
- Discharges of contaminants into or onto land within 20 metres of a Significant Geothermal Feature are addressed by Rules 7.6.6.1 to 7.6.6.3 of this Plan. Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.
- Discharges of domestic sewage within the Lake Taupo Catchment are to be managed by rule 3.10.6.1 to 3.10.6.4 or rule 3.5.7.7.

3.5.7.7 Discretionary Activity Rule – Other On-Site Sewage Discharges

The discharge of domestic sewage effluent from on-site domestic sewage treatment and disposal systems onto or into land and any subsequent discharges of contaminants into air, in a manner which does not comply with Rules 3.5.7.4 to 3.5.7.6 and Rules 3.10.6.1 to 3.10.6.4 is a **discretionary activity** (requiring resource consent).

Exclusion to Rule 3.5.7.7:

Discharge of contaminants within 20 metres of Significant Geothermal Features are excluded from this rule. The effects of these activities are managed by Rule 7.6.6.1 to 7.6.6.3 of this Plan.

Advisory Note:

- Information requirements to enable the assessment of any application under this Rule are set out in Section 8.1.2.2 of this Plan. In addition, assessment shall also take into account the matters identified in the policies in Section 3.5.3 of this Plan.
- Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

3.5.7.8 Prohibited Activity Rule – Discharges of Untreated Human Effluent to Water

The discharge of untreated human effluent to water is a **prohibited activity**.

Explanation and Principal Reasons for Adopting Methods 3.5.7.1 to 3.5.7.8

Method 3.5.7.1 and 3.5.7.2 promote inter-agency integration. The management of on-site sewage discharges is a function that is shared by a number of agencies with overlapping responsibilities. Where a 'problem area' is identified, it is appropriate that Waikato Regional Council, the relevant territorial and health authorities and the community are all involved in addressing the issue. Reference to 'locally appropriate' solutions acknowledges that there is no single prescription for dealing with these issues and that community input to developing a solution is important. Waikato Regional Council acknowledges that the continued operation of on-site systems in some high-density areas may not be sustainable in the long term. In such circumstances, the appropriate course of action will be a Plan change allowing input from potentially affected parties.

With regard to the administration of the regional rules for on-site sewage, territorial authorities have in the past provided a 'one stop shop' for people. This has involved combining an advisory and checking role with regard to the on-site sewage rules with their own building and drainage permitting functions. This has been an efficient and practical arrangement, which has suited both the territorial authorities and Waikato Regional Council. The general practice has been for territorial authorities to refer any matters to Waikato Regional Council if they consider that the applicability of the rules to a specific proposal is unclear, or if there are questions of rule interpretation. As part of the implementation of these methods, these administrative arrangements will need to be reviewed and formally agreed upon.

Method 3.5.7.3 indicates Waikato Regional Council's support for the development of codes of practice or 'good practice' guides that seek to avoid the adverse effects of on-site disposal. These are an effective method of improving practice particularly if their development involves input from both practitioners and planners in the field.

The permitted activity **Rules 3.5.7.4 to 3.5.7.6** apply to domestic on-site wastewater discharges outside the Lake Taupo Catchment, and implement Policies 1, 2 and 3. Permitted activity rules 3.10.6.1 to 3.10.6.4 apply to domestic on-site wastewater discharges within the Lake Taupo Catchment. This is because it would be unreasonable to require all existing systems to be updated without direct evidence of their failure. The thresholds for volume and depth of unsaturated ground are based on the design assumptions that would have been applied when those systems were installed and represent a maximum reasonable flow rate from a large household or small institution. The minimum property size of 2,500 square metres is set at a level that should not lead to adverse effects on groundwater quality provided the system is maintained. If the system is not being maintained adequately, the property size decreases so that the effective disposal area is less or the system fails completely owners will be required to upgrade their technology to meet the criteria provided by Policy 1.

Rule 3.5.7.5 sets out the requirements for new systems using older technology. These systems are still suitable in situations where the effective disposal area is large enough and located correctly and the system is subject to regular maintenance.

Rule 3.5.7.6 reflects the fact that modern on-site sewage treatment/disposal technology has made significant advances in recent years. Modern systems designed with regard to the range of site factors affecting performance can overcome most of the problems associated with the use of standard septic tanks. Any system designed to

take account of the various site factors and which can be demonstrated to achieve the environmental standards of **Rule 3.5.7.6** should be permitted. These standards seek to prevent adverse effects on water quality and soils. In particular, they seek to protect existing uses of ground water and require that there is no degradation of surface water quality.

Under this Rule the maximum discharge volume of three cubic metes per day (condition c)) would provide for the equivalent of approximately 15 persons average occupancy. This Rule caters for many small amenities such as motels and clubrooms. This volume is significantly higher than that allowed for household septic tanks. The difference reflects the comparative levels of risk associated with the different systems and the better performance that is expected from a site-specifically designed system. The specification of an upper volume limit in the rules is considered appropriate. Volumes greater than this (with proportionately greater potential adverse environmental effects) should be evaluated on a case-by-case basis through the consent process.

Documentation which demonstrates that the on-site effluent disposal system installed achieves the standards (condition e) may be in the form of a letter or certificate outlining the specifications of a system and compliance with the standards.

Rule 3.5.7.7 requires on-site sewage discharges that fall outside of the scope of the permitted activity rules to be assessed as discretionary activities in accordance with Policies 1 and 3 of this Chapter. This provides for these discharges to be assessed against s104 of the RMA on a case-by-case basis.

Rule 3.5.7.8 prohibits the discharge of untreated human effluent into water. This is necessary to avoid the potential adverse effects of such discharges, to ensure consistency with the manner in which untreated animal effluent is addressed in the Plan and to align the Plan provisions with marine pollution regulations.

3.5.8 Implementation Methods – Well and Aquifer Testing Discharges

3.5.8.1 Permitted Activity Rule – Well and Aquifer Discharges

The discharge of water (including geothermal water) from well or aquifer testing into water, and/or onto or into land is a **permitted activity** subject to the following conditions:

a) The discharge shall not cause visually noticeable iron flocculation* in the receiving waters.
b) Any discharge to water shall comply with the suspended solids standards as set out in Section 3.2.4.5.
c) The duration of the discharge shall not exceed three days.
d) The discharge shall not result in flooding on any downstream property.
e) Any erosion occurring as a result of the discharge shall be remedied as soon as practicable.
f) The discharge shall not cause a temperature change of more than three degrees Celsius at any point downstream greater than three times the stream width at the point of discharge.
g) There shall be no discharge to any Significant Geothermal Feature.

Advisory Note:

- The activity of taking water for well and aquifer testing must comply with Rule 3.3.4.9, otherwise a consent for taking water must be obtained.
- Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

3.5.8.2 Controlled Activity Rule – Well and Aquifer Testing Discharges

The discharge of water (including geothermal water) from well or aquifer testing into water, or onto land that does not comply with Rule 3.5.8.1 is a **controlled activity** (requiring resource consent) subject to the following standards and terms:

a) The discharge shall comply with the suspended solids standards as set out in Section 3.2.4.5.
b) There shall be no discharge to any Significant Geothermal Feature.

Waikato Regional Council reserves control of the following matters:

i. The quality and temperature of the discharge.
ii. The rate/volume and duration of the discharge.
iii. Measures to avoid, remedy or mitigate the effects on downstream water levels.
iv. Measures to ensure that there is no associated erosion or scour at the point of discharge.
v. Location of the discharge.

Advisory Notes:

- The activity of taking water for well and aquifer testing must comply with Rule 3.3.4.9, otherwise a consent for taking water must be obtained.
- The activities covered in Rule 3.5.8.2 are well and aquifer testing discharges that will:
  a) cause a degree of noticeable iron flocculation in receiving waters, and/or
  b) be of a longer than usual duration, and/or
  c) cause adverse effects on neighbouring properties, and/or
  d) change the temperature of the receiving surface water body.
- Information requirements to enable the assessment of any application under this Rule are set out in Section 8.1.2.2 of this Plan. In addition, assessment shall also take into account the matters identified in the policies of Sections 3.5.3 and 7.4 of this Plan.
- Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

Explanation and Principal Reasons for Adopting Methods 3.5.8.1 and 3.5.8.2

The discharge of any water associated with well or aquifer testing is restricted by s15 of the RMA and may only occur if allowed by a rule in a plan or by a resource consent. Generally, the discharge of water associated with well and aquifer testing will have insignificant adverse effects on the receiving environment. In accordance with Policies 1 and 3, **Rule 3.5.8.1** therefore allows for these discharges provided a number of conditions are met. High iron concentrations in the water discharged have the potential to adversely affect fish by causing suffocation due to gill blockage. Small amounts of iron in the receiving water are visually detectable allowing easy monitoring of this condition. Suspended solids have the potential to adversely affect aquatic life and have been limited to a level, that will protect instream uses and values.

Rule 3.5.8.2 provides for well and aquifer testing which is not permitted by Rule 3.5.8.1 to be assessed as a controlled activity. This provides an appropriate level of scrutiny for more significant proposals, and the opportunity for site specific consideration of consent conditions.

3.5.9 Implementation Methods – Tracer Discharges

3.5.9.1 Permitted Activity Rule – Discharge of Dye and Salt Tracers

The discharge of dye and salt tracer material, excluding radioisotope tracers, into water is a **permitted activity** subject to the following conditions:

a) The dye or salt tracer material discharged shall not exceed 20 litres of dye in solution or 10 kilograms of salt or 100 litres of salt solution.

b) Waikato Regional Council and the relevant territorial authority shall be notified, in writing, of the proposed discharge at least 24 hours before the discharge. Such notification shall include:
   i) persons responsible for the discharge including contact details
   ii) purpose of the tracer programme
   iii) description of the tracer programme
   iv) nature of the tracer (i.e. type, colour, product name/description)
   v) discharge location and timing
   vi) duration of discharge.

c) There shall be no discharge to any Significant Geothermal Feature.

d) The dye or salt tracer material shall not be a hazardous substance in terms of the Hazardous Substances and New Organisms Act 1996.

Advisory Note:

- Tracer discharges that are undertaken in accordance with s330 of the RMA are exempt from this Rule.
- Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

3.5.9.2 Discretionary Activity Rule – Discharge of Tracer Materials

The discharge of tracer material to water which does not comply with Rule 3.5.9.1 is a **discretionary activity** (requiring resource consent).

Advisory Note:

- Information requirements to enable the assessment of any application under this Rule are as set out in Section 8.1.2.2 of this Plan. In addition, assessment shall also take into account the matters identified in the policies of Section 3.2.3 of this Plan.

Explanation and Principal Reasons for Adopting Methods 3.5.9.1 and 3.5.9.2

Section 15 of the RMA restricts the discharge of contaminants into water unless the discharge is expressly allowed by a rule in a regional plan or by a resource consent. Dye and tracer materials that are non-toxic or inert generally do not have adverse environmental effects. In accordance with Policy 1, **Rule 3.5.9.1** therefore allows the discharge of dye and salt tracers into water bodies provided certain conditions are met including ecotoxicity levels and the quantity of tracer used. The Rule encourages the use of non-toxic tracers instead of tracers that are toxic or carcinogenic.

With regard to **Rule 3.5.9.2**, there are several tracers that have the potential to cause adverse environmental effects. Radioisotopes, for example, are recognised as having an associated radioactive hazard. Other dyes or tracers which may have toxic or carcinogenic* effects include organic compounds such as pesticides, or microbial tracers e.g. some viruses. Dyes range in toxicological concern. It is illegal for example, to use Rhodamine B as a water tracer in the United States whereas Rhodamine WT is relatively safe. For these reasons Rule 3.5.9.2 provides for the discharge of all other tracer materials to water bodies to be assessed as discretionary activities.

3.5.10 Implementation Methods – Drainage Water Discharges

3.5.10.1 Permitted Activity Rule – Take, Diversion and Discharge of Water Pumped from Drainage and Flood Control Schemes

The take, diversion and discharge of pumped water to water from drainage districts and river control schemes lawfully established or authorised before the date of notification of this Plan (28 September 1998) is a **permitted activity** subject to the following conditions:

a) Any erosion occurring as a result of the discharge shall be remedied as soon as practicable.

b) The discharge shall not exacerbate the effects of flooding on properties downstream of the discharge point except in accordance with approved scheme design.
c) The discharge shall not result in the lowering of water levels in any wetlands[23] that are areas of significant indigenous vegetation and/or significant habitats of indigenous fauna.
d) The discharge shall not cause dissolved oxygen to fall below 80 percent of saturation concentration. If the concentration of dissolved oxygen in the receiving water body is below 80 percent, the discharge shall not lower it further.
e) The discharge shall comply with the suspended solids standards in Section 3.2.4.5.
f) The discharge shall not contain any material which will cause the production of conspicuous oil or grease films, scums or foams, or floatable suspended materials at any point downstream that is a distance greater than three times the width of the stream at the point of discharge.
g) The activity shall not disturb any archaeological site or waahi tapu as identified at the date of notification of this Plan, in any district plan, in the NZ Archaeological Association's Site Recording Scheme, or by the Historic Places Trust except where Historic Places Trust approval has been obtained
h) In the event of any waahi tapu that is not subject to condition g) being identified by the Waikato Regional Council to the person undertaking the activity, the activity shall cease insofar as it may affect the waahi tapu. The activity shall not be recommenced without the approval of the Waikato Regional Council.

Advisory Note:

- Where a waahi tapu site is identified whilst undertaking the activity, the process that Waikato Regional Council will follow in order to implement condition h) is set out in Section 2.3.4.22 of this Plan.

3.5.10.2 Controlled Activity Rule – Take, Diversion and Discharge of Water Pumped from Existing Drainage and Flood Control Schemes

The take, diversion and discharge of pumped drainage and floodwater to water from drainage districts and river control schemes lawfully established or authorised before the date of this plan (28 September 1998) that does not comply with or is not permitted by Rule 3.5.10.1 is a **controlled activity** (requiring resource consent).

Waikato Regional Council reserves control over the following matters:

i) Measures to prevent erosion or scour at the point of the discharge
ii) Measures to prevent flooding effects on properties downstream of the discharge point, which have not been addressed by the scheme design approval process.
iii) Measures to prevent adverse effects on any wetland that is an area of significant indigenous vegetation or habitat of significant indigenous fauna[24].
iv) Measures to ensure the discharge does not adversely affect the receiving water body in a manner which is inconsistent with the relevant Water Management Classes identified in Section 3.2.4

3.5.10.3 Discretionary Activity Rule – Discharge of Pumped Drainage Water

The take, diversion and discharge of pumped drainage and floodwater to water that does not comply with, or is not permitted by Rule 3.5.10.1 or Rule 3.5.10.2 is a **discretionary activity** (requiring resource consent).

Advisory Note:

- Information requirements to enable the assessment of any application under this Rule are as set out in Section 8.1.2.2 of this Plan. In addition, assessment shall also take into account the matters identified in the policies in Section 3.2.3 of this Plan.

[23] Refer to Appendix 3 of the RPS.
[24] Refer to Appendix 3 of the RPS.

Explanation and Principal Reasons for Adopting Methods 3.5.10.1 to 3.5.10.3

There are a large number of floodwater discharges associated with flood control scheme works in the Waikato Region. These include the Lower Waikato/Waipa Control Scheme, the Waihou Valley Scheme, the Piako River Scheme, some small scale private floodwater schemes and emergency discharges. Water is actively managed under these schemes to prevent flooding of land. The schemes include the discharge of flood drainage water from floodgates and pumps.

In accordance with Policy 1, **Rule 3.5.10.1** allows the discharge of flood and drainage water from existing schemes provided that a number of conditions are met. In particular, the discharge of water shall not cause flooding or erosion, lower any water levels in significant wetlands and lakes, and shall not cause the production of oils, greases, scums and foams. These conditions provide an appropriate level of environmental protection. Where existing schemes do not meet these conditions they must be authorised by controlled activity **Rule 3.5.10.2**. The controlled status of this rule recognises the often significant infrastructure involved in such schemes and the fact that land users make decisions based on the continued existence of these schemes. Takes, diversions and discharges associated with new schemes will need to be authorised by discretionary activity **Rule 3.5.10.3**.

3.5.11 Implementation Methods – Stormwater Discharges

3.5.11.1 Good Practice

Waikato Regional Council will, in conjunction with territorial authorities, organisations, industry groups and individuals discharging stormwater, provide guidance to develop and implement good practices or appropriate codes of practice.

3.5.11.2 Integration with Territorial Authorities

Waikato Regional Council will work with territorial authorities to ensure the integrated management of stormwater in the Region by:

1. Ensuring territorial authorities inform Waikato Regional Council of significant resource consent applications that are likely to adversely affect the quality of stormwater discharges.
2. Ensuring Waikato Regional Council has input into district plan development and reviews.
3. Working with territorial authorities to identify and manage contaminated sites.

3.5.11.3 Stormwater Management

Waikato Regional Council will work with resources users (including territorial authorities) to:

1. Find ways to mitigate adverse effects of existing stormwater discharges;
2. Promote the development of stormwater management plans which record the way in which the stormwater network is operated, including methods to avoid, remedy or mitigate the adverse effects of stormwater discharge; and
3. Promote alternative methods for the treatment and disposal of stormwater from existing and new subdivisions and development.

Advisory Note:

- For stormwater discharges in the Lake Taupo Catchment, refer to Policy 13 in section 3.10.3 and Method 7 in section 3.10.4.

3.5.11.4 Permitted Activity Rule – Discharge of Stormwater to Water

The discharge of stormwater to surface water (including geothermal water) is a **permitted activity** subject to the following conditions:

a) The discharge shall not originate from a catchment that includes any high risk facility[25], contaminated land*, operating quarry or mineral extraction site unless there is an interceptor system* in place.
b) Any erosion occurring as a result of the discharge shall be remedied as soon as practicable.
c) The catchment shall not exceed one hectare for discharges that originate from urban areas.
d) There shall be no adverse increase in water levels downstream of the discharge point which causes flooding on neighbouring properties, as a result of the discharge.
e) The discharge shall comply with the suspended solids standards in Section 3.2.4.6.
f) The discharge shall not contain any material which will cause the production of conspicuous oil or grease films, scums or foams, or floatable suspended materials at any point downstream that is a distance greater than three times the width of the stream at the point of discharge.
g) The discharge shall not contain concentrations of hazardous substances that may cause significant adverse effects on aquatic life or the suitability of the water for human consumption after treatment.
h) There shall be no discharge to any Significant Geothermal Feature.

For the purposes of conditions a) and g) levels of hazardous substances in stormwater or sediments that comply with the following guidelines and standards, in relation to the substances that they address will be deemed to be complying with the conditions:

i) Licences under the Hazardous Substances and New Organisms Act 1996 for the use of the substance in New Zealand specifying discharge and receiving water standards for the substance.
ii) Health and Environmental Guidelines for Selected Timber Treatment Chemicals (Ministry for the Environment, Ministry of Health, 1997).
iii) Environmental Guidelines for Water Discharges from Petroleum Industry Sites in New Zealand (Ministry for the Environment, 1998).
iv) Guidelines for Assessing and Managing Contaminated Gasworks Sites in New Zealand (Ministry for the Environment, August 1997).
v) Australian/New Zealand Water Quality Guidelines For Fresh And Marine Waters, (Australian & New Zealand Environment & Conservation Council, 2001).

For the purposes of this Rule, 'urban area' includes the inner city or town and built up environments, irrespective of local body administrative boundaries, that are serviced by roads where the speed limit is 80 kilometres an hour or less.

Advisory Note:

- Rules controlling discharge structures are set out in Section 4.2.10.
- Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

3.5.11.5 Permitted Activity Rule – Discharge of Stormwater Onto or Into Land

The discharge of stormwater (including geothermal water) onto or into land is a **permitted activity** subject to the following conditions:

[25] As listed in Section 3.5.12.

a) The discharge shall not originate from a catchment that includes any high risk facility[26] or contaminated land* unless there is and interceptor system* in place.
b) The discharge shall be below a rate that would cause flooding outside the design discharge soakage area, except in rain events equivalent to the 10% Annual Exceedence Probability design storm or greater. Any exceedence shall go into designated overland flow paths.
c) There shall not be any overland flow resulting in a discharge to surface water, except in rain events equivalent to the 10% Annual Exceedence Probability design storm or greater; then there shall be no adverse surface water effects as a result of the discharge.
d) Any erosion occurring as a result of the discharge shall be remedied as soon as practicable.
e) The discharge shall not contain concentrations of hazardous substances that may cause significant adverse effects on aquatic life or the suitability of the water for human consumption after treatment.

For the purposes of conditions a) and e) of this rule, the levels of hazardous substances in stormwater or sediments that comply with the following guidelines and standards, in relation to the substances that they address will be deemed to be complying with the condition:

i) Licences under the Hazardous Substances and New Organisms Act 1996 for the use of the substance in New Zealand specifying discharge and receiving water standards for the substance.
ii) Health and Environmental Guidelines for Selected Timber Treatment Chemicals (Ministry for the Environment, Ministry of Health,1997).
iii) Environmental Guidelines for Water Discharges from Petroleum Industry Sites in New Zealand (Ministry for the Environment, 1998).
iv) Guidelines for Assessing and Managing Contaminated Gasworks Sites in New Zealand (Ministry for the Environment, August 1997).
v) Australian/New Zealand Water Quality Guidelines For Fresh And Marine Water, (Australian & New Zealand Environment & Conservation Council, 2001).

3.5.11.6 Controlled Activity Rule – Discharge of Stormwater Onto or Into Land

The discharge of stormwater (including geothermal water) onto or into land that does not comply with Rule 3.5.11.5 is a **controlled activity** (requiring resource consent) subject to the following standards and terms:

a) The discharge shall be below a rate that would cause overland flow leading to a discharge to surface water, except in rain events equivalent to the 10% Annual Exceedence Probability design storm or greater. Any exceedence shall go into designated overland flow paths.

Waikato Regional Council reserves control over the following matters:

i. Measures used to control erosion or flooding.
ii. Measures to avoid, remedy or mitigate the effects of the discharge on groundwater quality.
iii. Measures (including contaminant loading rates) to ensure that the soil at the site is not contaminated by the discharge to a level that will affect the range of existing and foreseeable uses of the site.
iv. Measures for avoiding, remedying or mitigating the effects of maintaining stormwater treatment systems.
v. Information and monitoring requirements.

[26] As listed in Section 3.5.12.

vi. Measures to avoid, remedy or mitigate the effects of the discharge on surface water bodies.
vii. Measures to avoid, remedy or mitigate adverse effects on neighbouring property.

3.5.11.7 Controlled Activity Rule – Discharge of Stormwater Into Water

The discharge of stormwater to surface water (including geothermal water) that is lawfully established at the time of notification of this Plan (28 September 1998) and does not comply with Rule 3.5.11.4 is a **controlled activity** (requiring resource consent) subject to the following standards and terms:

a) The discharge shall not contain concentrations of hazardous substances that are causing significant adverse effects on aquatic life or the suitability of the water for human consumption after treatment.

Waikato Regional Council reserves control over the following matters:

i. Measures used to control erosion or flooding.
ii. Measures to avoid, remedy or mitigate the effects of the discharge on the receiving water bodies.
iii. Measures for avoiding, remedying or mitigating the effects of maintaining stormwater treatment systems.
iv. Information and monitoring requirements.
v. The degree of compliance with discharge or receiving water standards for any hazardous substance in relevant New Zealand Standards, Guidelines or licences issued under the Hazardous Substances and New Organisms Act 1996.

3.5.11.8 Discretionary Activity Rule – Discharge of Stormwater

The discharge of stormwater into water, and/or into or onto land which does not comply with Rules 3.5.11.4, 3.5.11.5, 3.5.11.6 and 3.5.11.7 is a **discretionary activity** (requiring resource consent).

Advisory Notes:

- Information requirements to enable the assessment of any application under this Rule are set out in Section 8.1.2.2 of this Plan. In addition, assessment shall also take into account the matters identified in the policies of Section 3.2.3 of this Plan.
- Rules controlling discharge structures are set out in Section 4.2.10 of this Plan.

Explanation and Principal Reasons for Adopting Methods 3.5.11.1 to 3.5.11.8

The non-regulatory methods for stormwater management implement Policy 7 by encouraging at-source management and treatment of stormwater prior to its discharge to receiving waters. **Method 3.5.11.1** supports initiatives to develop, implement and manage stormwater discharges, for example, codes of practice, guidelines, environmental management systems, best practicable options and good practices. The oil industry is one that has produced a detailed code of practice that addresses management of stormwater discharges from service stations. Other treatment options for stormwater include the use of grassy swales, sumps or artificial wetlands, and the diversion of the 'first flush' into trade waste systems.

Methods 3.5.11.2 and **3.5.11.3** promote the need for integrated management of stormwater with territorial authorities. Given that territorial authorities own and manage the large majority of stormwater systems in the Region, they are clearly very influential in terms of the standards and technology adopted. If Waikato Regional Council wishes to bring about improvements in these areas, it needs to work with territorial authorities and have regard to the practical constraints which exist and the communities' ability to pay for improvements.

Under the RMA, the discharge of stormwater to water may only occur if it is expressly allowed by a rule in a regional plan or by a resource consent. In accordance with Policy 1, **Rule 3.5.11.4** allows the discharge of stormwater only from area that are not likely to cause contamination. The nature of the catchment from which stormwater is derived is an important factor influencing the risk of adverse effects from discharges. Consequently, discharges from contaminated land and those high risk facilities identified in Section 3.2.4.5, are not permitted activities unless there is an interceptor system in place.

In accordance with Policies 2 and 3, **Rule 3.5.11.5** provides for the discharge of stormwater to land provided that the stormwater is not sourced from either contaminated land or high-risk facilities unless there is an interceptor system in place. Land-based disposal is promoted in preference to water-based disposal as a way to ensure that accidental spills of contaminants are not directly discharged into water bodies. Land-based disposal is also consistent with tangata whenua views.

Rule 3.5.11.6 allows the discharge of stormwater onto land from stormwater catchments draining high risk facility sites, provided the specific standard and term is complied with. Waikato Regional Council has reserved its control over issues relating to the effects of the discharge on the natural and human uses and values of the water, flooding, erosion, soil contamination and change in water levels downstream from the discharge.

Rule 3.5.11.7 identifies that consent applications for existing discharges of stormwater will not be declined by Waikato Regional Council, despite the fact that they have potential to have adverse effects on the environment from the contaminants present. Control is reserved over a number of matters related to environmental effects, so that conditions can be placed on the consent, which will ensure any effects are minor.

Any stormwater discharge into water or onto and/or land that does not comply with the permitted or controlled activity rules is a discretionary activity under Rule 3.5.11.8. This allows for any adverse effects to be assessed against the criteria set out in the RMA.

3.5.12 High Risk Facilities

The following is a list of high risk facilities:

Activity	Reason for High Risk Classification
1. Mechanical workshops and service stations.	These sites use and handle large volumes of oils and other petroleum products. Spillages of these substances are not uncommon, hence the greater risk of stormwater discharges to the environment.
2. Printers.	Relatively large quantities of dyes and paints are handled at these sites. The risk of spillages is relatively high.
3. Spray painting facilities.	Paints can not only be spilt at these sites but can enter stormwater as a consequence of drift from spray painting operations.
4. Meat, fish and shellfish processing industries.	Wastes from these industries can typically have a high BOD. This can cause significant adverse effects.
5. Dairy products processing.	Wastes from these industries can typically have a high BOD. This can cause significant adverse effects.
6. Waste management sites (transfer stations, compost sites, landfills etc.).	Litter, hazardous substances and high BOD wastes can all enter stormwater systems from these sites.
7. Truck wash facilities	The activity of truck washing can was hazardous contaminants of trucks as well as sediments and wastes from

Activity	Reason for High Risk Classification
	spillages on site.
8. Unenclosed manufacturing and bulk storage of fertiliser.	Fertilisers can give rise to high levels of nutrient in stormwater discharges. Where fertilisers are manufactured or stored in such a way that fertilisers can enter stormwater the risk of adverse effects is unacceptably high.
9. Textile fibre and textile processing industries where dying and washing of fabric occurs.	Large quantities of dye and high BOD wastes (from wool scourers for instance) are handled on these site. The risk of spillages that could enter stormwater is high.
10. Tanneries and leather finishing.	Large quantities of dye and high BOD wastes are handled on these sites. The risk of spillages that could enter stormwater is high.
11. Footwear manufacture.	Large quantities of dye and high BOD wastes are handled on these sites. The risk of spillages that could enter stormwater is higher.
12. Manufacture of paper and paper products.	Hazardous substances such as chlorine based bleaches and dyes are regularly handled on these sites. The risk of spillages etc. entering stormwater can be high.
13. Manufacture or processing of chemicals, and of petroleum, coal, rubber and plastic products.	The risk of spillages associated with hazardous substances used in these industries can be high.
14. Manufacture of clay, glass, plaster, masonry, asbestos and related mineral products.	The risk of spillages associated with hazardous substances used in these industries can be high.
15. Manufacture of fabricated metal products, machinery and equipment.	The risk of spillages associated with hazardous substances used in these industries can be high.
16. Electroplaters, Foundries, galvanizers and metal surfacing.	The risk of spillages associated with hazardous substances used in these industries can be high.
17. Concrete batching plants and, asphalt manufacturing plants.	The risk of spillages associated with hazardous substances used in these industries can be high.
18. Stock saleyards.	High BOD run-off can be associated with these sites.
19. Bakeries.	Outside washing of trays, dishes and pans can result in high BOD, fats, greases and detergents entering stormwater systems.
20. Car wash and valet services.	High oil, solvent and solid discharges can occur from these activities.
21. Commercial laundries (excluding self-service laundrettes and Laundromats).	The risk of spillages associated with detergents, alkalis and salts used in this industry can be high.
22. Furniture/wood manufacturing and refinishing industries.	Some of these industries work outside extensively, usually with no stormwater treatment, Contaminants such as sawdust, glues and alkali stripper solution in the stormwater coming of these sites can include high solids, BOD and high pH.
23. Timber preservation, treatment and storage sites where chemically treated timber is sorted.	A range of hazardous substances are used on these sites (e.g. Copper Chrome, Arsenic, Boron and copper-quinoline compounds). In addition, timber treatment chemicals have been shown to be able to leach from treated wood in storage.

3.5.13 Environmental Results Anticipated

1. A reduction in the number of treated effluent discharges to surface waters and an increase in those utilising land-based treatment systems.
2. Improved water quality as a result of reduced point source discharges to surface waters.
3. More recycling of effluent and minimisation of farm nutrient loss.
4. Avoidance of contamination of ground water by on-site sewage discharges in new areas.
5. Reduced incidence of 'public health' issues associated with on-site sewage disposal.
6. Uses and values identified by the Water Management Classes protected.
7. The quality of stormwater discharges improved.
8. A trend toward land-based disposal of stormwater.

3.5.14 Monitoring Options

Refer to Section 3.1.4.

3.6 Damming and Diverting

Background and Explanation

Damming activities in the Region can include farm dams, water supply dams or hydro dams. A diversion occurs when stopbanks, farm drainage canals, culverts, weirs, gauging structures and stormwater systems change natural flow patterns or where an activity involves the relocation of a watercourse through channel straightening or other works.

Activities that are intended to lower the water table, such as land drainage, can result in the movement of water from lakes and wetlands*. This constitutes a diversion of ground and/or surface water.

Section 14 of the RMA restricts the damming and diversion of water unless allowed by a regional rule or a resource consent. This chapter acknowledges that dams and diversions can have positive effects or only minor adverse effects. It therefore allows some activities to occur as permitted or controlled activities.

Relationship to Chapter 4.2 River and Lake Bed Structures

The damming and diverting of water cannot generally take place without a structure in the bed of a river. The issues, objectives and policies of this Chapter relate to the adverse effects of damming and diverting of water and any associated structures. Chapter 4.2 (River and Lake Bed Structures) deals with the adverse effects of the structure where damming and diverting does not occur.

3.6.1 Issue

In addition to the issues identified in Chapters 3.1 and 4.2, damming and/or diversion of water can have the following adverse effects:

a) Increased risk of flooding on neighbouring properties.
b) Increased risk of erosion of the bed and banks of lakes, rivers and streams.
c) Obstruction of fish passage to the extent that indigenous fish or trout cannot complete their lifecycles.
d) Increased channelisation of river systems leading to aquatic habitat loss.

3.6.2 Objective

Damming and/or diverting of water undertaken in a manner that:

a) Does not have adverse effects that are inconsistent with the water management objectives in Section 3.1.2.
b) Does not have adverse effects that are inconsistent with the river and lake bed structures objectives in Section 4.2.2.
c) Does not obstruct fish passage where it would otherwise occur in the absence of unnatural barriers, so that trout or indigenous fish can complete their lifecycle.
d) Results in no increase in the adverse effects of flooding or land instability hazards.
e) Results in no loss of existing aquatic habitats as a consequence of channelisation of rivers.
f) Increases the use of off-stream dams for water supply purposes as an alternative to dams in perennial streams.
g) ensures that decisions regarding the damming and diverting of water take account of the consequent loss of water quality and any associated reduction in contaminant assimilative capacity, minimum flows and allocable flows for out of stream uses as provided by Section 3.3.3 Policy 1 and Table 3-5 of Chapter 3.3.

Principal Reasons for Adopting the Objectives

The objective acknowledges that the objectives for water management in Section 3.1.2 and for the management of structures on the beds of rivers and lakes in Section 4.2.2 need to be applied to the effects of damming and diverting of water where they are relevant to the effects of the activity. In addition to these objectives, there are a number of effects of damming and diverting of water that are different from the other issues addressed in the Plan.

Part c) identifies that a major consequence of damming and diverting of water is the blocking of fish passage. For a number of indigenous fish species and trout in some areas such as Lake Taupo, the ability to migrate is a critical component in their lifecycle. If they cannot migrate to spawning areas or to adult habitat, the fishery will become unsustainable. Dams and diversions in water bodies that are important for fish spawning or habitat must provide means by which fish can pass the structure if it is necessary for them to do so.

Part d) identifies that the damming and diverting of water can cause flooding or erosion effects on neighbouring properties. This is due to the inevitable changes in water levels and velocities as a consequence of the damming and diversion of water. The objective identifies that no increase in the adverse effects should be allowed to occur as a consequence of damming and diverting of water. It should be noted that where a neighbour consents to the effect of flooding on their property the effect should no longer be considered to be adverse.

Part e) addresses effects of channelisation of rivers through stopbanks, drainage and flood control schemes. These schemes have sometimes been installed with little consideration of their effects on habitat. These schemes can have the effect of denying access of indigenous fish to important spawning habitat. The objective acknowledges that restoration of the habitat to the former state is not an option. Existing damage to habitat cannot be remedied as the schemes provide important community benefits. However, if new works are undertaken they will need to mitigate their adverse effects on habitat by enhancing currently degraded habitat or creating new habitat.

Part f) acknowledges that off-stream damming, an activity increasingly occurring in the Region, can have a range of positive outcomes that Council wishes to encourage. In particular, off-stream damming can mitigate the effects of flood flows and reduce the need for damming of perennial waterways and the associated adverse effects. The increase use off-stream dams to store water in the wet seasons will also reduce reliance on surface water takes and lead to more efficient use of water.

Part g) and the parallel objectives in Chapters 3.3 and 3.5 ensures that when allocating water or considering discharges to water or the damming and diverting of water, both the effects on contaminant assimilative capacity and allocable flow are accounted for.

3.6.3 Policies

Policy 1: Off-Stream Dams and Dams or Diversions on Ephemeral Streams

Enable through permitted activity rules the use of off-stream dams, or dams and diversions on ephemeral streams where:

a) Adverse effects on surface water bodies that are inconsistent with the policies in Section 3.2.3 of this Plan are avoided.
b) The use, erection, reconstruction, placement, alteration or extension of structures on the beds of lakes or rivers associated with the activity avoid adverse effects that are inconsistent with the policies in Section 4.2.3.

c) The damming and diversion does not increase the adverse effects of flooding or erosion on neighbouring properties.
d) Changes in the catchment and sediment transport processes have no significant adverse effects on water quality, aquatic habitat and flow regimes in perennial streams.
e) Any significant adverse effect on cave systems are avoided or mitigated.
f) Any adverse effects on wetlands27 that are areas of significant indigenous vegetation and/or significant habitats of indigenous fauna are avoided, remedied or mitigated in accordance with Policies 1 and 2 of Chapter 3.7.
g) Existing legal public access to and along lakes and rivers is maintained where appropriate.

Policy 2: Damming and Diverting of Water in Perennial Water Bodies

Manage the damming and diverting of water in perennial water bodies in a manner that ensures:

a) Adverse effects on surface water bodies that are inconsistent with the policies in Section 3.2.3 of this Plan are avoided as far as practicable and otherwise remedied or mitigated.
b) Adverse effects of the use, erection, reconstruction, placement, alteration or extension of structures on the beds of lakes or rivers associated with the activity that are inconsistent with the policies in Section 4.2.3 are avoided as far as practicable and otherwise remedied or mitigated.
c) That the activity will not obstruct fish passage of trout and/or indigenous fish to complete their lifecycle where it would otherwise occur in the absence of unnatural barriers.
d) The adverse effects of flooding or erosion on neighbouring properties are avoided, remedied or mitigated.
e) Changes in the catchment and sediment transport processes have no significant adverse effects on water quality, habitat and flow regimes in perennial streams.
f) Any significant adverse effect on cave systems are avoided or mitigated.
g) Any adverse effects on wetlands[28] that are areas of significant indigenous vegetation and/or significant habitats of indigenous fauna are avoided, remedied or mitigated in accordance with Policies 1 and 2 of Chapter 3.7.

Policy 3: Tangata Whenua* Uses and Values

Ensure that the relationship of tangata whenua as Kaitiaki with water is recognised and provided for, to avoid significant adverse effects and remedy or mitigate cumulative adverse effects on:

a) the mauri of water,
b) waahi tapu sites,
c) other identified taonga.

Policy 4: Wetlands and Peat Lakes

Enhance or maintain the extent and quality of the Region's wetlands by encouraging activities that will either maintain or reinstate agreed water levels in wetland areas or peat lakes.

[27] Refer to Appendix 3 of the RPS
[28] Refer to Appendix 3 of the RPS

Policy 5: Existing Lawfully Establishing Damming and Diverting

Enable through permitted and controlled activity rules, the continued operation of dams and diversions that were lawfully established prior to the notification date (28 September 1998) of this Plan where the adverse effects of those activities are avoided, remedied or mitigated in accordance with the policies of this Plan.

Explanation and Principal Reasons for Adopting the Policies

Policy 1 identifies that off-stream dams and dams in ephemeral streams can have significant positive effects in terms of reducing the need for water takes during dry seasons and thereby protecting in-stream values and providing for efficient use of water. The policy has been implemented through permitted and controlled activity rules where the activities are of a scale that the adverse effects identified in the policy are unlikely to occur.

Policy 2 recognises that the damming and diverting of water in other circumstances has the potential to adversely affect and alter a number of water body characteristics, and therefore a regulatory regime is warranted.

Policy 3 recognises that Council is obliged by s6 of the RMA to recognise and provide for the relationship of tangata whenua with water, waahi tapu sites and other taonga. The policy gives priority to the concerns of tangata whenua who are Kaitiaki of an area and emphasises the need for tangata whenua to identify water bodies and areas that are of significance to them if they want decision-makers to take them into account when managing the adverse effects of damming and diverting on the environment. In order to implement this policy, Waikato Regional Council and tangata whenua who are Kaitiaki will need to follow the processes set out in Module 2.

Policy 4 recognises that damming and diverting of water can serve to enhance the quality and quantity of the Region's wetlands and ought to be encouraged where this is the case. This Policy will enable the construction of structures to maintain water levels and will encourage attempts to mitigate the effects of other activities by enhancing wetlands.

Policy 5 recognises that the Region and the country has derived considerable benefit from a range of existing lawfully established damming and diverting activities such as the dams on Waikato River, flood control schemes and the Tongariro Power Development. The Policy indicates that where the activities are having minor adverse effects or adverse effects that the community has accepted, the activities have been given greater certainty through use of permitted and controlled activity rules. This direction implements Section 3.13 of the RPS and the policies in Module 1. Benefits outweigh the adverse ongoing negatives, which are minor, and therefore there is no need or intention to discontinue the use.

3.6.4 Implementation Methods – Damming and Diverting

3.6.4.1 Integration with Territorial Authorities

Waikato Regional Council will work with territorial authorities and share information regarding the damming and diverting of water, particularly with respect to co-ordinating the consent process with any requirements of the Building Act 1991.

3.6.4.2 Environmental Education*

Waikato Regional Council will, through environmental education programmes, support and actively promote the awareness of resource users about the adverse effects associated with the building of dams, damming of water, and the diversion of water including:

a) the negative effects associated with the damming and the diversion of streams and rivers,
b) methods to avoid, remedy or mitigate the adverse effects of such structures and activities,
c) the benefits of fish passes, and the need to ensure such provisions are maintained,
d) the advantages of off-stream damming*, damming of ephemeral streams, and damming that enhances the quality and quantity of the Region's wetlands.

3.6.4.3 Good Practice

Waikato Regional Council will, in conjunction with resource users, provide guidance in the development and use of good practices that are designed to avoid, remedy or mitigate the adverse effects of the damming and diverting of water and maximise the positive effects.

3.6.4.4 Permitted Activity Rule – Small Dams and Damming Water

1. The damming of water and its diversion, taking, and discharging related to its passage through, past or over the dam, in any off-stream area or ephemeral river or stream or artificial watercourse, and
2. The use, erection, reconstruction, placement, alteration or extension of any associated structure in or on the bed of an ephemeral river or stream, where:
    i) the catchment area is less than one square kilometre (100 hectares), and
    ii) the maximum retained water depth in the pond is less than three metres, and
    iii) the dam retains not more than 20,000 cubic metres of water except that:
        a) the damming shall not affect Significant Geothermal Features
        b) the dam shall not occur in a cave system;

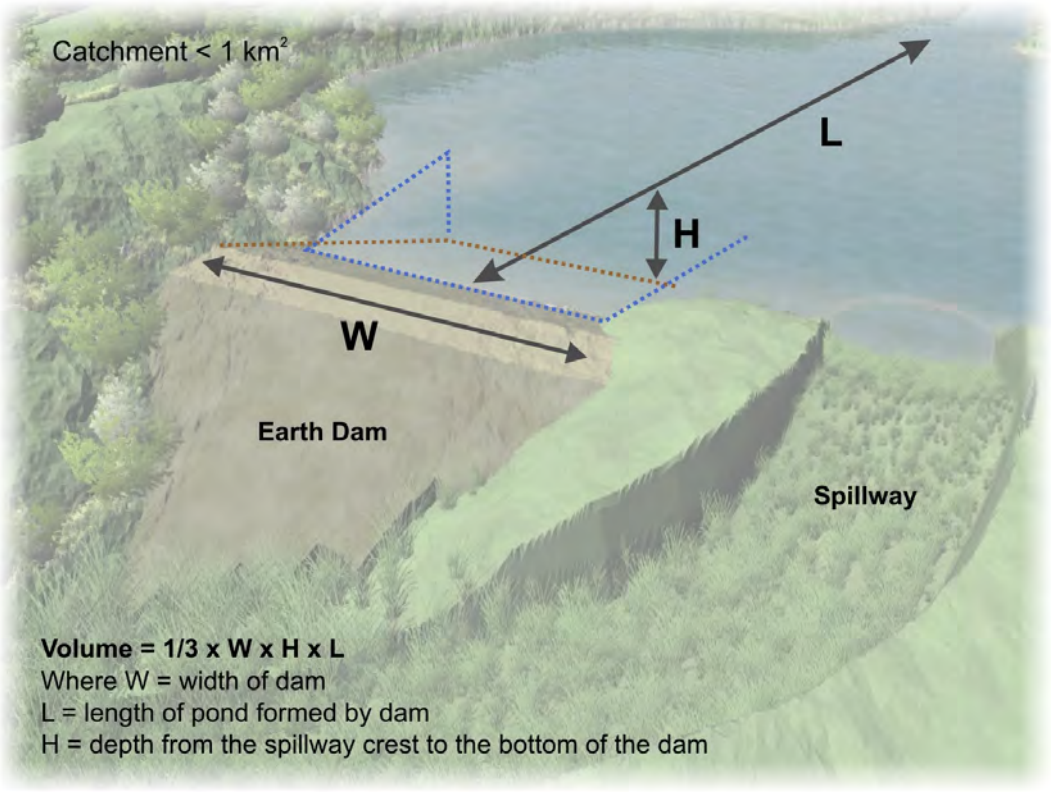
is a **permitted activity** subject to the following conditions:

a) The dammed water is not a Natural State Water Body as identified in the Water Management Class Maps.
b) The dammed water shall not raise water levels on neighbouring properties.
c) Any erosion or scour as a result of the dam and associated discharges shall be remedied as soon as practicable.
d) The damming or discharge of water from the dam shall not increase the potential for land instability.
e) A spillway must be constructed to prevent the dam being overtopped, and the spillway shall be designed to pass the probable maximum flood.
f) The spillway shall be constructed on underlying parent material.
g) The activity shall not disturb any archaeological site or waahi tapu as identified at the date of notification of this Plan, in any district plan, in the NZ Archaeological Association's Site Recording Scheme or by the Historic Places Trust except where Historic Places Trust approval has been obtained.
h) In the event of any waahi tapu that is not subject to condition g) being identified by the Waikato Regional Council to the person undertaking the activity, the activity shall cease insofar as it may affect the waahi tapu. The activity shall not be recommenced without the approval of the Waikato Regional Council.
i) The structure shall be maintained in a structurally sound condition at all times.
j) Any discharge from construction works associated with the structure shall comply with the suspended solid standards as set out in Section 4.2.21.

Advisory Notes:

- Dam construction guidelines are available from Waikato Regional Council (Guidelines for the Construction of Small, Homogenous Earthfill Dams).
- This Rule does not permit the extractive taking of water from a river or stream (including any dam). Extractive taking of water is addressed in Chapter 3.3.

- All dams are also required to comply with the requirements of the Building Act 1991 as specified in the Building Code and administered by territorial authorities.
- Damming that affects Significant Geothermal Features is addressed in Rules 7.6.6.1 to 7.6.6.3. Significant Geothermal Features are defined in the Glossary and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.
- Small dams in perennial waters for creation and enhancement are enabled by Rule 3.6.4.16.
- The probable maximum flood needs to be determined on case-by-case basis but generally can be determined by taking the one percent exceedance probability and multiplying the flow by a factor of 1.6.
- Guidelines for the construction of spillways and dams are contained in Section 3.6.7.
- Where a waahi tapu site is identified whilst undertaking the activity, the process that Waikato Regional Council will follow in order to implement condition h) is set out in Section 2.3.4.22 of this Plan.
- To measure the depth and volume of water contained in the dam use the following equation:



3.6.4.5 Permitted Activity Rule – Existing Lawfully Established Damming of Perennial Water Bodies

The damming of water and its diversion, taking and discharging related to its passage through, past or over the dam; and the use or alteration of any associated structure, that was lawfully established or authorised before the date of notification of this Plan, where:

1. The catchment area is less than one square kilometre (100 hectares), and
2. The maximum retained water depth in the pond is less than three metres, and
3. The dam retains not more than 20,000 cubic metres of water, and
4. The damming shall not affect Significant Geothermal Features;

is a **permitted activity** subject to the following conditions:

a) The dammed water shall not raise water levels on neighbouring properties.
b) The structure shall provide for the safe passage of fish both upstream and downstream.
c) A spillway must be constructed to prevent the dam being overtopped, and the spillway shall be designed to pass the probable maximum flood.

d) Any erosion or scour as a result of the dam and associated discharges shall be remedied as soon as practicable.
e) The structure shall be maintained in a structurally sound condition at all times.
f) Any discharge from construction works associated with the structure shall comply with the suspended solid standards as set out in Section 4.2.21.
g) The activity shall comply with any conditions that are part of a resource consent for an activity granted before the date of notification of this Plan other than conditions relating to review or expiry.
h) Any change in the activity shall not change the character or increase the scale or intensity of any adverse effects of the activity on the environment.
i) The activity shall not disturb any archaeological site or waahi tapu as identified at the date of notification of this Plan, in any district plan, in the NZ Archaeological Association's Site Recording Scheme or by the Historic Places Trust except where Historic Places Trust approval has been obtained.
j) In the event of any waahi tapu that is not subject to condition i) being identified by the Waikato Regional Council to the person undertaking the activity, the activity shall cease insofar as it may affect the waahi tapu. The activity shall not be recommenced without the approval of the Waikato Regional Council.

Advisory Notes:

- Any person or persons damming flowing water bodies should liaise with DoC regarding the requirements of the Freshwater Fish Regulations 1983.
- The probable maximum flood needs to be determined on a case-by-case basis but generally can be determined by taking the one percent exceedance probability and multiplying the flow by a fact of 1.6
- Guidelines for the construction of spillways and dams are contained in Section 3.6.7.
- This rule does not permit the extractive taking of water from a river or stream (including any dam). Extractive taking of water is addressed in Chapter 3.3.
- If any of these conditions are not complied with, then the activity is a controlled activity in accordance with Rule 3.6.4.10. If the activity is a new dam it is subject to Rule 3.6.4.14.
- All dams are also required to comply with the requirements of the Building Act 1991 as specified in the Building Code and administered by territorial authorities.
- Damming that affects Significant Geothermal Features is addressed in Rules 7.6.6.1 to 7.6.6.3. Significant Geothermal Features are defined in the Glossary and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.
- Small dams in perennial waters for creation and enhancement are enabled by Rule 3.6.4.16.
- Where a waahi tapu site is identified whilst undertaking the activity, the process that Waikato Regional Council will follow in order to implement condition j) is set out in Section 2.3.4.22 of this Plan.

3.6.4.6 Permitted Activity Rule – Existing Lawfully Established Stopbanks

The damming or diversion of water by way of a stopbank, where the activity was lawfully established or authorised before the date of notification of this Plan, is a **permitted activity** subject to the following conditions:

a) The activity shall comply with any conditions that are part of a resource consent for an activity granted before the date of notification of this Plan other than conditions relating to review or expiry.
b) Any change in the activity shall not change the character or increase the scale or intensity of any adverse effects of the activity on the environment.
c) The activity shall not disturb any archaeological site or waahi tapu as identified at the date of notification of this Plan, in any district plan, in the NZ Archaeological Association's Site Recording Scheme or by the Historic Places Trust except where Historic Places Trust approval has been obtained.
d) In the event of any waahi tapu that is not subject to condition c) being identified by the Waikato Regional Council to the person undertaking the activity, the activity shall cease insofar as it may affect the waahi tapu. The activity shall not be recommenced without the approval of the Waikato Regional Council.
e) The structure shall be maintained in a structurally sound condition at all times.

f) The structure shall provide for the safe passage of fish both upstream and downstream.

Advisory Notes:

- All stopbanks are also required to comply with the requirements of the Building Act 1991 as specified in the Building Code and administered by territorial authorities.
- The discharge of diverted or impounded floodwater is a permitted activity under Rule 3.5.10.1.
- Where a waahi tapu site is identified whilst undertaking the activity, the process that Waikato Regional Council will follow in order to implement condition d) is set out in Section 2.3.4.22 of this Plan.

3.6.4.7 Permitted Activity Rule – Existing Lawfully Established Diversions and Discharges

Unless authorised by **Rules 3.6.4.6** and **3.6.4.8**, the diversion and any consequent discharge of water from a diversion and the use or alteration of any associated structure, where:

1. The activity was lawfully established or authorised before the date of notification of this Plan
2. Any discharge only occurs within the catchment of origin

is a **permitted activity** subject to the following conditions:

a) The activity shall be undertaken and structures maintained in a manner that does not increase adverse effects of flooding on any land or property owned or occupied by any person.
b) The structure shall provide for the safe passage of fish both upstream and downstream.
c) The structure shall be maintained in a structurally sound condition at all times.
d) Any change in the activity shall not change the character, or increase the scale or intensity of any adverse effects of the activity on the environment.
e) Where the diversion and discharge occurs as part of a stormwater system, the activity must comply with all of the conditions of Rules 3.5.11.4 and 3.5.11.5.
f) Any discharge from construction works associated with the structure shall comply with the suspended solid standards as set out in Section 4.2.21.
g) The activity shall not disturb any archaeological site or waahi tapu as identified at the date of notification of this Plan, in any district plan, in the NZ Archaeological Association's Site Recording Scheme or by the Historic Places Trust except where Historic Places Trust approval has been obtained.
h) In the event of any waahi tapu that is not subject to condition g) being identified by the Waikato Regional Council to the person undertaking the activity, the activity shall cease insofar as it may affect the waahi tapu. The activity shall not be recommenced without the approval of he Waikato Regional Council.
i) Any erosion occurring as a result of the activity shall be remedied as soon as practicable.

Advisory Notes:

- If any of these conditions are not complied with, then the activity is a controlled activity under Rule 3.6.4.11.
- Any diversion and discharge that affects Significant Geothermal Features is addressed in Rules 7.6.6.1 to 7.6.6.3. Significant Geothermal Features are defined in the Glossary and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.
- Where a waahi tapu site is identified whilst undertaking the activity, the process that Waikato Regional Council will follow in order to implement condition g) is set out in Section 2.3.4.22 of this Plan.

3.6.4.8 Permitted Activity Rule – Diversions and Discharges in Artificial Watercourses and Drainage Systems

Unless restricted by **Rule 3.7.4.6**, the diversion and any consequent discharge of water within an established artificial watercourse* or drainage system, undertaken after the date of notification of this Plan is a **permitted activity** subject to the following conditions:

a) The catchment area above the diversion shall not exceed two square kilometres.
b) No discharge shall be made outside of the natural catchment of the drainage system.
c) The activity shall be undertaken and structures maintained in a manner that does not increase adverse effects of flooding on any land or property owned or occupied by any person.
d) The activity shall not disturb any archaeological site or waahi tapu as identified at the date of notification of this Plan, in any district plan, in the NZ Archaeological Association's State Recording Scheme or by the Historic Place Trust except where Historic Places Trust approval has been obtained.
e) In the event of any waahi tapu that is not subject to condition d) being identified by the Waikato Regional Council to the person undertaking the activity, the activity shall cease insofar as it may affect the waahi tapu. The activity shall not be recommenced without the approval of the Waikato Regional Council.
f) Any discharge from construction works associated with the structure shall comply with the suspended solid standards as set out in Section 4.2.21.
g) The structure shall provide for the safe passage of fish both upstream and downstream.
h) Where the diversion occurs in a waterway classified as Indigenous Fisheries in the Water Management Class Maps the operator of the diversion shall notify the Waikato Regional Council of its location three weeks prior to the construction of the diversion.
i) Any erosion occurring as a result of the activity shall be remedied as soon as practicable.

Advisory Notes:

- Refer also Rule 3.7.4.6 which concerns diversions and/or discharges (by way of drain construction) in the proximity of wetlands.
- This Rule does not override any requirements of drainage authorities where the activity occurs within drainage scheme areas.
- Where a waahi tapu site is identified whilst undertaking the activity, the process that Waikato Regional Council will follow in order to implement condition e) is set out in Section 2.3.4.22 of this Plan.

3.6.4.9 Controlled Activity Rule – Offstream Damming and Damming Ephemeral Streams and Damming of Artificial Watercourses

Unless authorised by **Rule 3.6.4.4**, the damming of water in any off-stream area, ephemeral river or stream or artificial watercourse, and any associated:

1. Diversion, taking, and discharging of water related to the passage of water through, past, or over the dam, or
2. Use, erection, reconstruction, placement, alteration or extension of any associated structure in or on the bed of an ephemeral river or stream;

is a **controlled activity** (requiring resource consent) subject to the following standards and terms:

a) The dammed water shall not raise water levels on neighbouring properties.
b) Any erosion or scour as a result of the dam and associated discharges shall be remedied as soon as practicable.
c) Spillways or other mechanisms shall be provided so that the dam can safely pass the probable maximum flood.

d) The activity shall not disturb any archaeological site or waahi tapu as identified at the date of notification of this Plan, in any district plan, in the NZ Archaeological Association's State Recording Scheme or by the Historic Place Trust except where Historic Places Trust approval has been obtained.
e) In the event of any waahi tapu that is not subject to standard and term d) being identified by the Waikato Regional Council to the person undertaking the activity, the activity shall cease insofar as it may affect the waahi tapu. The activity shall not be recommenced without the approval of the Waikato Regional Council.
f) The structure shall be maintained in a sound condition.
g) The diversion and discharge does not affect Significant Geothermal Features.
h) The dam does not occur in a cave system.

Waikato Regional Council reserves control over the following matters:

i. The location and size of the dam.
ii. The dam design and construction methods.
iii. Sediment control practices during construction.
iv. Effects on any waahi tapu or other taonga from the activity.
v. Effects on the relationship of tangata whenua and their culture and traditions with the site and any waahi tapu or other taonga affected by the activity.
vi. Effects on the ability of tangata whenua to exercise their kaitiaki role in respect of any waahi tapu or other taonga affected by the activity.
vii. Measures to control the stability of the land bordering the dammed water.
viii. Measures to ensure the safe passage of flood water as a result of dam storage capacity being exceeded.
ix. The timing of the works.
x. The passage of fish both upstream and downstream.
xi. The quantity or flow rate of water released from the dam, including maintenance of residual flow.
xii. The quality of water discharged from the dam.
xiii. Measures to avoid, remedy or mitigate adverse effects on areas of significant indigenous vegetation and significant habitats of indigenous fauna[29].

Advisory Notes:

- This Rule does not permit the taking of water from a river or stream (including any dam). Taking of water is addressed in Chapter 3.3.
- Any diversion and discharge that affects Significant Geothermal Features is addressed in Rules 7.6.6.1 to 7.6.6.3. Significant Geothermal Features are defined in the Glossary and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.
- Guidelines for the construction of spillways and dams are contained in Section 3.6.7.
- Where a waahi tapu site is identified whilst undertaking the activity, the process that Waikato Regional Council will follow in order to implement condition e) is set out in Section 2.3.4.22 of this Plan.
- The imposition of consent conditions under matters iv), v) and vi) shall take into account the policy direction provided in Policies 1 and 2 in Section 2.3.3 in addition to specific policies in this Chapter of the Plan.

3.6.4.10 Controlled Activity Rule – Existing Lawfully Established Damming of Perennial Water

Unless authorised by **Rule 3.6.4.5** any:

1. Damming of water
2. Diversion, taking, and discharging of water related to the passage of water through, past, or over the dam
3. Use or alteration of any associated structure;

that was lawfully established or authorised before the date of notification of this Plan is a **controlled activity** (requiring resource consent).

[29] Refer to Appendix 3 of the RPS

Waikato Regional Council reserves control over the following matters:

a) Measures to provide for the passage of fish, both upstream and downstream, including whether passage is appropriate or necessary.
b) Upstream and downstream water levels, residual flows and water quality.
c) Screening of intake and diversion structures.
d) Intake velocities.
e) Measures to manage erosion effects (including destabilisation of bed and banks of river).
f) Measures to identify and manage the risk of dam failure.
g) Stability of the land bordering the dam.
h) Measures to manage discharges to water from the use or alteration of the dam structure.
i) Measures to avoid, remedy or mitigate any adverse effect on areas of significant indigenous vegetation and/or significant habitats of indigenous fauna[30], significant natural features, significant geothermal features and natural character, excluding effects on Significant Geothermal Features of the operation of the Waikato River system for hydroelectric Generation as authorised by resource consents commencing 12 April 2006.
j) Measures to avoid, remedy or mitigate any effects on other uses of the river or stream.
k) The quantity or flow rate of water released from the dam.
l) Volume and rate of any take or diversion.
m) Techniques for ensuring the safe passage of flood water.
n) Effects on any waahi tapu or other taonga from the activity.
o) Effects on the relationship of tangata whenua and their culture and traditions with the site and any waahi tapu or other taonga affected by the activity.
p) Effects on the ability of tangata whenua to exercise their kaitiaki role in respect of any waahi tapu or other taonga by the activity.
q) Measures to avoid, remedy or mitigate adverse effects of the operation on downstream sediment transport processes.
r) Measures to avoid, remedy or mitigate adverse effect on downstream infrastructure.

Exclusion:

This Rule shall not apply to:

a) Damming or diverting of geothermal water that affects a Significant Geothermal Feature; or
b) any activity specified in s13(1) of the Resource Management Act carried out in, on, under or over the bed of a water body that is a Significant Geothermal Feature.

Advisory Notes:

- Any person or persons damming flowing water bodies should liaise with DoC regarding the requirements of the Freshwater Fish Regulations 1983.
- This rule does not permit the taking of water from a river or stream (including any dam). Taking of water is addressed in Chapter 3.3.
- The imposition of consent conditions under matters xiv), xv) and xvi) shall take into account the policy direction provided in Policies 1 and 2 in Section 2.3.3 in addition to specific policies in this Chapter of the Plan.
- Significant Geothermal Features are defined in the Glossary and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.
- To give effect to RPS 3.7.3, Policy One, Implementation Method 1, Waikato Regional Council (Waikato Regional Council) has not reserved control over the effects on Significant Geothermal Features of the operation of the Waikato River System for hydroelectric generation as authorised by consents commencing 12 April 2006.

[30] Refer to Appendix 3 of the RPS.

3.6.4.11 Controlled Activity Rule – Existing Lawfully Established Diversions and Discharges

Unless authorised by Rule 3.6.4.7 the diversion and any consequent discharge of water from a diversion where the activity was lawfully established or authorised before the date of notification of this Plan is a **controlled activity** (requiring resource consent) subject to the following standards and terms:

a) Any discharge shall only occur within the catchment of origin.
b) The activity shall be undertaken and structures maintained in a manner that does not increase adverse effects of erosion or flooding any neighbouring land.
c) Any structures shall be maintained in a structurally sound condition at all times
d) Any change in the activity shall not change the character, or increase the scale or intensity of any adverse effects of the activity on the environment.
e) With the exception of the operation of the Waikato River system for hydroelectric generation as authorised by consents commencing 12 April 2006, the activity does not affect a Significant Geothermal Feature.
f) The activity does not disturb any archaeological site or waahi tapu as identified at the date of notification of this Plan, in any district plan, in the NZ Archaeological Association's Site Recording Scheme or by the Historic Places Trust except where Historic Places Trust approval has been obtained.
g) In the event of any waahi tapu that is not subject to standard and term f) being identified by the Waikato Regional Council to the person undertaking the activity, the activity shall cease insofar as it may affect the waahi tapu. The activity shall not be recommenced without the approval of the Waikato Regional Council.
h) Where the diversion and discharge occurs as part of a stormwater system, the activity must comply with all of the conditions of Rules 3.5.11.4 and 3.5.11.5.
i) Any erosion occurring as a result of the activity shall be remedied as soon as practicable.

Waikato Regional Council reserves control over the following matters:

i) Measures to provide for the passage of fish, both upstream and downstream, including whether passage is appropriate or necessary.
ii) Upstream and downstream water levels, residual flows and water quality.
iii) The volume and rate of any take or diversion.
iv) Screening of intake and diversion structures.
v) Intake and discharge velocities.
vi) Measures to manage erosion effects (including destabilisation of beds and banks of river).
vii) Effects on the activity on natural character.
viii) Safe passage of flood water.
ix) Effects on any waahi tapu or other taonga from the activity.
x) Effects on the relationship of tangata whenua and their culture and traditions with the site and any waahi tapu or other taonga affected by the activity.
xi) Effects on the ability of tangata whenua to exercise their kaitiaki role in respect of any waahi tapu or other taonga affected by the activity.
xii) Measures to identify and manage the risk of dam failure.
xiii) Stability of the land bordering the dam.
xiv) Measures to manage discharges to water from the use or alteration of the dam structure.
xv) Measures to avoid, remedy or mitigate any adverse effect on areas of significant indigenous vegetation, significant habitats of indigenous fauna[31], significant natural features and natural character, excluding effects on Significant Geothermal Features of the operation of the Waikato River system for hydroelectric Generation as authorised by resource consents commencing 12 April 2006.

[31] Refer to Appendix 3 of the RPS.

xvi) Measures to avoid, remedy or mitigate any affects on other uses of the river or stream.
xvii) The quantity or flow rate of water released from the dam.

Advisory Notes:

- Any person or persons damming flowing water bodies should liaise with DoC regarding the requirements of the Freshwater Fish Regulations 1983.
- Significant Geothermal Features are defined in the Glossary and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.
- To give effect to RPS 3.7.3, Policy One, Implementation Method 1, Waikato Regional Council (Waikato Regional Council) has not reserved control over the effects on Significant Geothermal Features of the operation of the Waikato River System for hydroelectric generation as authorised by consents commencing 12 April 2006.
- Where a waahi tapu site is identified whilst undertaking the activity, the process that Waikato Regional Council will follow in order to implement standard and term g) is set out in Section 2.3.4.22 of this Plan.
- The imposition of consent conditions under matters ix), x) and xi) shall take into account the policy direction provided in Policies 1 and 2 in Section 2.3.3 in addition to specific policies in this Chapter of the Plan.

3.6.4.12 Controlled Activity Rule – Wetland and Lake Level Control Structures

The following activities:

1. The use, erection, reconstruction, placement, alteration or extension of any structure, for the purpose of maintaining or establishing minimum water or bed levels of peat lakes and wetlands and any associated bed disturbance, in or on the bed of a lake or river; and
2. Any associated damming of water

are **controlled activities** (requiring resource consent), subject to the following standards and terms:

a) The structure shall be maintained in a structurally sound condition at all times.
b) All construction materials and equipment shall be removed from the river or lake bed on the completion of that activity.
c) No contaminants (including, but not limited to, oil, hydraulic fluids, petrol, diesel, other fuels, paint or solvents) shall be released to water from the activity.
d) The activity does not disturb any archaeological site or waahi tapu as identified at the date of notification of this Plan, in any district plan, in the New Zealand Archaeological Association's Site Recording Scheme, or by the Historic Places Trust, except where the Historic Places Trust approval has been obtained.
e) Any erosion occurring as a result of the structure shall be remedied as soon as practicable.
f) The structure shall be fixed in place to prevent it being washed away in the event of a flood.

Waikato Regional Council reserves control over the following matters:

i) Measures to control the effect of the activity on areas of significant indigenous vegetation and significant habitats of indigenous fauna[32].
ii) The passage of fish both upstream and downstream.
iii) The minimum water or bed level at the outlet of the lake or wetland.
iv) Measures to prevent damage to riparian vegetation or soil.
v) The design and location of the structure.
vi) The potential effects on bed and bank stability and water quality.
vii) Measures to control the effect of the activity on upstream or downstream properties.
viii) Measures to control the effect the activity will have on any lawfully established structures.

[32] Refer to Appendix 3 of the RPS.

ix) Effects on any waahi tapu or other taonga from the activity.
x) Effects on the relationship of tangata whenua and their culture and traditions with the site and any waahi tapu or other taonga affected by the activity.
xi) Effects on the ability of tangata whenua to exercise their kaitiaki role in respect of any waahi tapu or other taonga affected by the activity.
xii) Measures to ensure consistency with criteria as set out in any applicable Water Management Classes in this Plan.

Notification:

Applications for resource consent for activities under this Rule will be considered without notification provided that written approval of parties directly affected by the lake or wetland level is obtained in accordance with s94(1)(c)(ii) of the RMA.

Advisory Notes:

- The use, erection, construction, placement, alteration or extension of a structure in or on the bed of a river or lake that does not comply with this Rule is a discretionary activity in accordance with Rule 4.2.4.2.
- Any person or persons damming flowing water bodies should liaise with DoC regarding the requirements of the Freshwater Fish Regulations 1983.
- All stopbanks are also required to comply with the requirements of the Building Act 1991 as specified in the Building Code and administered by territorial authorities.
- The information Waikato Regional Council will require to assess any application under this Rule is set out in Section 8.1.3.1.
- The imposition of consent conditions under matters, ix), x) and xi) shall take into account the policy direction provided in Policies 1 and 2 in Section 2.3.3 in addition to specific policies in this Chapter of the Plan.

3.6.4.13 Discretionary Activity Rule – Stopbanks, Diversions and any Associated Discharges of Water

Where the diversion and subsequent discharge of water does not comply with **Rules 3.6.4.6, 3.6.4.7, 3.6.4.8, 4.2.9.1, 4.2.9.2 or 4.2.9.3** any:

1. Damming or diversion of water by way of a stopbank, and
2. Diversion of water, and
3. The use, erection, reconstruction, placement, alteration or extension of any structure on or in the bed of a river or stream associated with the above activities that:
   i) is undertaken after the date of notification of this Plan, or
   ii) affects a Significant Geothermal Feature
   iii) does not occur in a cave system;

is a **discretionary activity** (requiring resource consent).

Advisory Notes:

- The information Waikato Regional Council will require to assess any application under this Rule is set out in Section 8.1.2.4.
- The construction of stopbanks can affect wetlands by raising water levels. Depending on location, relevant controls may appear in the RCP or the relevant district plan.
- Damming that affects Significant Geothermal Features is addressed in Rules 7.6.6.1 to 7.6.6.3. Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

3.6.4.14 Discretionary Activity Rule – New Dams/Damming of Water

Except as provided for by **Rules 3.6.4.4, 3.6.4.9, 3.6.4.10** and **3.6.4.12** the following activities, if undertaken after the date of notification of this Plan:

1. Damming of water and associated diversion, taking and discharging of water related to the passage of water through, or past or over the dam
2. The use, erection, reconstruction, placement, alteration of extension of any structure in or on the bed of a river or stream associated with the above activities;

provided they do not:

a) occur in any perennial river or stream that is classified as Natural State in the Water Management Class Maps
b) affect Significant Geothermal Features

is a **discretionary activity** (requiring resource consent).

Advisory Notes:

- Any person or persons wishing to dam perennial water bodies should liaise with DoC regarding the requirements of the Freshwater Fish Regulations 1983.
- This Rule does not permit the taking of water from a river or stream (including any dam). Taking of water is addressed in Chapter 3.3.
- Damming that affects Significant Geothermal Features is addressed in Rules 7.6.6.1 to 7.6.6.3. Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

3.6.4.15 Non-Complying Activity Rule – New Dams/Damming of Water in Natural State Water Bodies

Unless authorised by **Rule 3.6.4.14,** the following activities:

1. The damming of water in any perennial river or stream identified as Natural State in the Water Management Class Maps.
2. Any associated diversion, taking and discharging of water related to the passage of water through, or past or over the dam
3. The use, erection, reconstruction, placement, alteration or extension of any structure in or on the bed of a river or stream associated with the above activities;

undertaken after the date of notification of this Plan, are **non-complying activities** (requiring resource consent).

Advisory Notes:

- Any person or persons wishing to dam perennial water bodies should liaise with DoC regarding the requirements of the Freshwater Fish Regulations 1983.
- Information requirements to enable the assessment of any application under this Rule are set out in Section 8.1.31. In addition, assessment shall also take into account the matters identified in Policy 2 of Section 4.2.3.
- Damming that affects Significant Geothermal Features is addressed in Rules 7.6.6.1 to 7.6.6.3. Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

3.6.4.16 Controlled Activity Rule – New Small Dams in Perennial Waters for Creation and Enhancement of Wetlands

The damming of water on a perennial water body, and its diversion, taking and discharging related to its passage through, past or over the dam, and the use of alteration of any associated structure, where:

1. The dam is for the purposes of wetland creation or enhancement
2. The catchment area is less than one square kilometre (100 hectares)
3. The maximum water depth is less than three metres measured from the upstream toe of the dam structure and/or the dam retains not more than 20,000 cubic metres of water except that:
   a) the damming shall not affect Significant Geothermal Features
   b) the dam shall not occur in a cave system;

is a **controlled activity** (requiring resource consent) subject to the following standards and terms:

a) The dammed water shall not raise water levels on neighbouring properties.

b) Any erosion or scour as a result of the dam and associated discharges shall be remedied as soon as practicable.
c) The structure shall be maintained in a structurally sound condition at all times.
d) Any discharge from construction works associated with the structure shall comply with the suspended solid standards as set out in Section 4.2.21.
e) The activity shall not disturb any archaeological site or waahi tapu as identified at the date of notification of this Plan, in any district plan, in the NZ Archaeological Association's Site Recording Scheme or by the Historic Places Trust except where Historic Places Trust approval has been obtained.
f) In the event of any waahi tapu that is not subject to condition e being identified by the Waikato Regional Council to the person undertaking the activity, the activity shall cease insofar as it may affect the waahi tapu. The activity shall not be recommenced without the approval of the Waikato Regional Council.
g) There shall be no direct take from the dam.

Waikato Regional Council reserves control over the following matters:

i. Measures to provide for the passage of fish, both upstream and downstream.
ii. Upstream and downstream water levels and residual flows.
iii. Measures to identify and manage the risk of dam failure.
iv. Measures to ensure stability of the land bordering the dam.
v. Measures to avoid, remedy or mitigate any effects on water quality (including temperature, effect of livestock access and nutrients).
vi. The quantity or flow rate of water released from the dam.
vii. Safe passage of flood water.
viii. Measures to avoid, remedy or mitigate adverse effects of the operation on downstream sediment transport processes.
ix. The construction and design of spillways and dams.
x. The process used to fill the dam (including effects on downstream water users).
xi. Measures to avoid, remedy or mitigate adverse effects on areas of significant indigenous vegetation and significant habitats of indigenous fauna[33].

Advisory Notes:

- Any person or persons damming flowing water bodies should liaise with DoC regarding the requirements of the Freshwater Fish Regulations 1983.
- All dams are also required to comply with the requirements of the Building Act 1991 as specified in the Building Code and administered by territorial authorities.
- Damming that affects Significant Geothermal Features is addressed in Rules 7.6.6.1 to 7.6.6.3. Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.
- The probable maximum flood needs to be determined on a case-by-case basis but generally can be determined by taking the one percent exceedance probability and multiplying the flow by a factor of 1.6.
- The rule does not permit the taking of water from a river or stream (including any dam). Taking of water is addressed in Chapter 3.3.

3.6.4.17 Controlled Activity Rule - Coffer Dams

The following activities;

1. The temporary diversion of water, and
2. The use, erection, reconstruction, placement, alteration or extension of a temporary diversion structure; and
3. Any associated deposition of construction materials, and
4. Any associated bed disturbance, and
5. Any discharge of sediment associated with construction activities;

[33] Refer to Appendix 3 of the RPS

in, on, under or over the bed of a river or lake for the purpose of maintaining an existing lawfully established structure are **controlled activities** (requiring resource consents) subject to the following standards and terms;

a) The diversion structure shall be maintained in a structurally sound condition at all times.
b) All construction materials and equipment shall be removed from the river or lake bed on the completion of the activity.
c) No contaminants (including, but not limited to, oil, hydraulic fluids, petrol, diesel, other fuels, paint or solvents but excluding sediment) shall be released to water from the activity.
d) The activity shall not disturb any archaeological site or waahi tapu as identified at the date of notification of this Plan, in any district plan, in the New Zealand Archaeological Association's Site Recording Scheme, or by the Historic Places Trust, except where Historic Places Trust approval has been obtained.
e) Any erosion occurring as a result of the structure shall be remedied as soon as practicable.
f) Any structure built with materials not naturally present in the bed of the river shall be fixed in place to prevent it being washed away in the event of a flood.
g) The entire structure shall be removed immediately after completion of the works that it was built to assist and the bed of the river or lake shall be reinstated to its original state.
h) The Waikato Regional Council shall be notified of the commencement date of the works and of the removal date of the structure.
i) The activity shall not affect Significant Geothermal Features.

Waikato Regional Council reserves control over the following matters:

i. The design, location and size of the structure.
ii. The degree to which the structure is able to restrict the cross sectional area of the river.
iii. The length of time that the temporary dam/diversion structure will remain in place.
iv. The construction materials and methods used and when construction is to occur.
v. The dewatering on the inside of the structure and any necessary fish recovery.
vi. Measures to control the adverse effects of the structure on navigation safety.
vii. Measures to control the effect of the activity on areas of significant indigenous vegetation and significant habitats of indigenous fauna.
viii. The passage of fish both upstream and downstream.
ix. Measures to control the discharge of sediment.
x. Measures to prevent damage to riparian vegetation or soil.
xi. The potential effects on bed and bank stability and water quality.
xii. Measures to control the effect of the activity on upstream or downstream properties, including flooding or erosion.
xiii. Measures to control the effect of the activity on any lawfully established structures.
xiv. Effects on any waahi tapu or other taonga from the activity.
xv. Effects on the relationship of tangata whenua and their culture and traditions with the site and any waahi tapu or other taonga affected by the activity.
xvi. Effects on the ability of tangata whenua to exercise their kaitiaki role in respect of any waahi tapu or other taonga affected by the activity.
xvii. Measures to ensure consistency with criteria as set out in any applicable Water Management Classes in this Plan.

Advisory Notes:

- The use, erection, reconstruction, placement, alteration or extension of a structure in or on the bed of a river or lake that does not comply with this Rule is a discretionary activity in accordance with Rule 4.2.4.2.
- The diversion of water that does not comply with this Rule is a discretionary activity in accordance with Rule 3.6.4.13.

- Any person or persons damming flowing water bodies should liaise with DoC regarding the requirements of the Freshwater Fish Regulations 1983.
- The information Waikato Regional Council will require to assess any application under this Rule is set out in Section 8.1.3.1.
- Any of the activities that are listed in Rule 3.6.4.17 that affect Significant Geothermal Features are addressed in Rules 7.6.6.1 to 7.6.6.3. Significant Geothermal Features are defined in the Glossary, and in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

Explanation and Principal Reasons for Adopting Methods 3.6.4.1 to 3.6.4.17

Method 3.6.4.1 will assist in achieving integrated management of natural and physical resources*. Regional councils and territorial authorities have overlapping responsibilities in regard to dam structures and the damming and diverting of water. Under s30(1)(e) of the RMA, Waikato Regional Council has a responsibility to control the damming and diversion of water and control the quantity, level and flow of water in any water body. Section 31(e) of the RMA provides territorial authorities with the control of any actual or potential effects of activities in relation to the surface of waters in rivers and lakes. Territorial authorities are also responsible for ensuring that the design and construction of large dams are consistent with the Building Act 1991 and Building Code. This is critical in terms of ensuring dam safety.

Method 3.6.4.2 supports and actively promotes the raising of awareness amongst resource users about both the adverse effects associated with the building of dams and the damming and diverting of water and the positive effects that the use of offstream dams and dams on ephemeral watercourses can have. The reason for adopting this method is that greater awareness of these issues by resource users is likely to be instrumental in bringing about improved practices.

Method 3.6.4.3 recognises that the importance of good practice guides such as guidelines for the "*Construction of Small Homogeneous Earth Dams*" and the New Zealand Society on Large Dam publication '*Dam Safety Guidelines*' (1991). If resource users have good, practical information, positive environmental changes will come voluntarily in many cases, rather than through a reliance on regulation.

Damming of water at the scale and location permitted in **Rule 3.6.4.4** is likely to have minor adverse effects. The Rule encourages the use of off-stream dams and dams in ephemeral water bodies, as the potential effects on ecosystems, fisheries and downstream users arising from these structures are significantly less than can arise from dams on permanently flowing water. There are a number of existing dams within the Region that are located in these areas, which are having either positive effects or minor adverse effects. **Rules 3.6.4.9** provides for large dams.

Rule 3.6.4.5 recognises that in most cases, existing damming by small dams, does not have significant adverse effects on the environment, and should be permitted to continue without the need to go through a resource consent process. A three metre water height restriction is suggested, as a large number of dams up to this size have been lawfully established within the Waikato Region, and do not cause significant adverse effects. This rule also applies only to dams where the catchment size and volume of water stored are below certain thresholds. Dams larger than the thresholds specified could have a range of adverse effects on the downstream environment or downstream users, and it is appropriate that they be routinely reviewed through the consent process to ensure appropriate safeguards are in place. This is done through **Rule 3.6.4.10**, which controls the renewal of consents for existing large dams in the Region. Large dams can significantly reduce downstream flows below their natural rates when water is stored behind them. At times when flows are naturally low, such as during a drought, further flow reductions may threaten aquatic flora and fauna downstream.

Rules 3.6.4.6 and **3.6.4.7** recognise that generally, the effects of existing stopbanks and small existing diversions have been through the consent process and are of a scale and nature that does not justify ongoing costs associated with consents. To attempt to restore the diverted waters back to their pre-diversion state is likely to have significant adverse effects, and is generally not practicable. New stopbanks and new or large existing diversions are addressed in **Rules 3.6.4.11** and **3.6.4.13**.

Rule 3.6.4.8 applies to land drainage activities in those areas where drainage is achieved by artificial, constructed drains and does not affect identified wetlands protected by Chapter 3.7. The adverse effects of such activities are generally minor as they do not relate to natural water bodies and associated aquatic values are generally low. Diversions and/or discharges which result in land drainage and which are located in close proximity to wetlands are regulated by Rule 3.7.4.6 rather than by this Rule as the effects of such drainage on wetland areas can be significant. Where the activity is proposed to be located within a drainage scheme area, it is important to note that this rule does not override any requirements of the relevant drainage authority.

Rule 3.6.4.12 acknowledges that water levels in a number of peat lakes and wetlands in the Region are reducing due to historical land drainage activities in their vicinity. These areas are valuable habitat for indigenous flora and fauna. The only way to maintain or enhance these wetland areas is to construct and maintain water level control structures such as weirs or dams. The Rule gives agencies and individuals with management responsibilities for wetland areas some certainty that they will get resource consents for such structures provided that they are properly constructed and managed.

Rule 3.6.4.14 acknowledges damming of water in a flowing water body can have significant adverse effects and is likely to adversely affect water quality, flow regimes, aquatic ecosystems, bed and bank stability, recreational use and tangata whenua values.

Rule 3.6.4.15 discourages damming where it will adversely effect Natural State Water Bodies or Significant Geothermal Features by making them non-complying activities. These environments have been identified as having special values that could be irreversibly damaged should damming occur in their areas.

Rule 3.6.4.16 is restricted to wetland creation and enhancement. This activity is encouraged by the policies in the Plan due to the positive environmental effects that this activity can have. For instance, dams of this nature are likely to have planted margins thereby minimising any potential increase in water temperature, and livestock access will be restricted therefore reducing any nutrient inputs and risks of bank instability. The Rule does not apply to dams where there is any extractive take due to the effects that such a take could have on downstream water users, aquatic habitat and sediment transport processes.

Rule 3.6.4.17 provides for the temporary diversion of water where it is for the purpose of maintaining an existing lawfully established structure. Properly managed,such dams can be an effective means of maintaining other structures and minimising the effects on the stream bed, neighbouring properties and aquatic habitat.

3.6.5 Environmental Results Anticipated

1. An increase in the use of off-stream dams and dams in ephemeral water bodies for water supplies/water harvesting and establishment of wetland areas.
2. The uses and values of water identified in the Water Management Classes in the Water Management Class Maps maintained.
3. Provision for tangata whenua values regarding the diversion and mixing of waters.

4. Fewer new dams on perennial water bodies.
5. Continuous fish passage along streams and rivers classified for Indigenous Fisheries where it would otherwise occur in the absence of unnatural barriers.

3.6.6 Monitoring Options

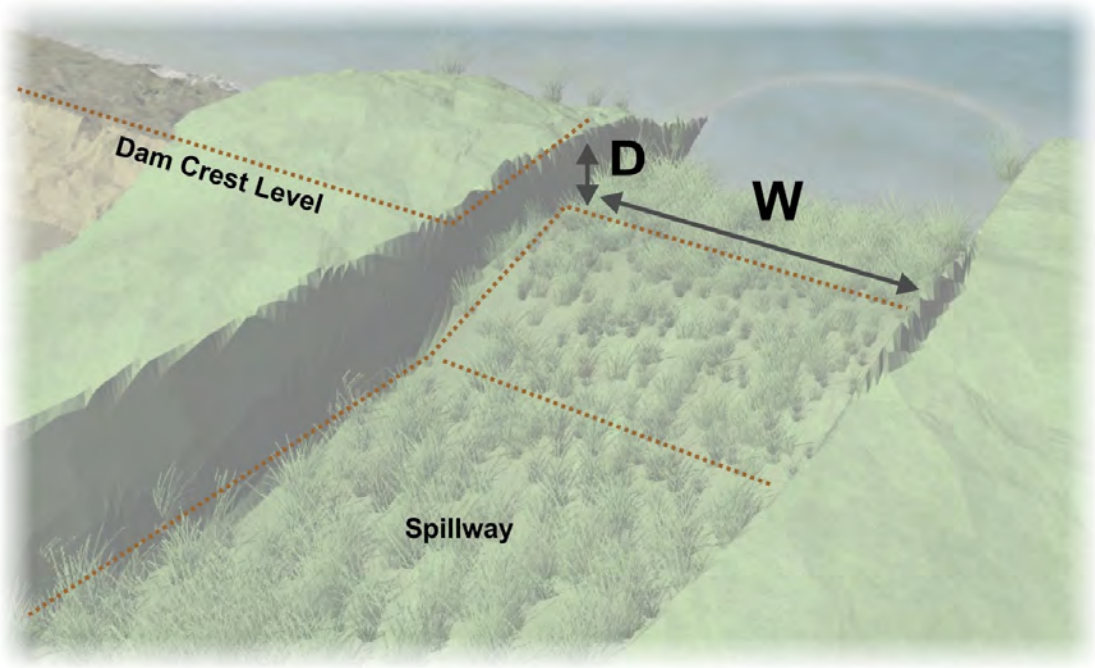
In addition to the Monitoring Options identified in Chapter 3.1, the following will be used to monitor the effectiveness of the objectives that are unique to this Chapter:

Objectives	Indicators/ Measurements	Types of Monitoring	Information Source
Does not have adverse effects that are inconsistent with the water management objectives in Section 3.1.2.	Refer to monitoring options for Water Management Objective 3.1.2.	Refer to monitoring techniques for Water Management Objective 3.1.2.	Refer to information sources for monitoring options for Water Management Objective 3.1.2.
Does not have adverse effects that are inconsistent with the river and lake bed structures objectives in Section 4.2.2.	Refer to monitoring options for River and Lake Bed structures Objective 4.2.2.	Refer to monitoring techniques for River and Lake Bed structures Objectives 4.2.2.	Refer to information sources for monitoring options for River and Lake Bed structures Objective 4.2.2.
Does not obstruct fish passage, so that trout and/or indigenous fish can complete their lifecycle.	Fish populations and diversity. Culvert and floodgate investigations.	Regional trend monitoring. Compliance and effects monitoring. Community monitoring. External databases. Catchment surveys.	Resource consent database. Compliance monitoring. Care groups. Iwi. Department of Conservation Fish and Game Freshwater fish database. Culvert database.
Results in no increase in the adverse effects of flooding or land instability hazards.	Land cover. Extent and frequency of flood events or large scale land instability.	Regional trend monitoring. Compliance and effects monitoring. Community monitoring. External databases. Investigations and surveys.	Water quantity database. Land use/cover database. Resource consent database. Compliance monitoring. Territorial authorities. Regional economy data. Complaints.
Results in no loss of existing aquatic habitats as a consequence of channelisation of rivers.	Fish populations and diversity.	Catchment surveys.	Freshwater fish database.
Increases the use of off-stream dams for water supply purposes as an alternative to dams in perennial streams.	Number of off-stream dams and dams in ephemeral streams.	Investigations and surveys.	Investigations and surveys.

3.6.7 Spillway Requirements

Weir Width Requirements (m)

		Catchment Size km^2				
		0.2	**0.4**	**0.6**	**0.8**	**1**
Depth (m)	**0.3**	-	-	-	-	-
	0.5	7	-	-	-	-
	1.0	3	4	4	6	6
	1.5	2	2	3	3	4
	5.0	-	2	2	2	3



3.6.7.1 Calculation Assumptions

There have been several assumptions made to generate the above guidelines for spillway requirements.

- The Rational Method was used to estimate flows.
- The rainfall event was assumed to be a 50 year event multiplied by 1.6 which was then used to derive the maximum required spillway flow.
- An average for the Region was used.
- The dam is assumed to be full when the rainfall event occurs.
- Rainfall time of concentration has been assumed to be dependent on the catchment size by the following table:

Time of concentration relative to catchment size

Catchment Size km^2	0.2	0.4	0.6	0.8	1.0
Assumed Time of Concentration (m)	10	20	30	30	30

- The run-off coefficients were also assumed to be dependent on the catchment size:

Run-off coefficient relative to catchment size

Catchment Size (km^2)	0.2	0.4	0.6	0.8	1.0
Run-off Coefficient	0.8	0.8	0.7	0.7	0.6

The weir flow calculations were derived using the following formula:

$q=2/3*H*(2/3*g*H)^{1/2}$

where: q = flow (m^3)/meter width (m)
H = depth of water about the weir crest (m)
G = gravity (9.81m^2/s)

3.7 Wetlands*

3.7.1 Issue

Refer to Issue 3.1.1.

3.7.2 Objective

Refer to Objective 3.1.2.

3.7.3 Policies

Policy 1: Control Land Drainage in Areas Adjacent to Identified Wetlands and Within Wetlands

Ensure that land drainage activities within wetlands that are areas of significant indigenous vegetation and/or significant habitats of indigenous fauna[34], or immediately adjacent to wetlands identified in Section 3.7.7, are undertaken in a manner that avoids changes in water level that lead to:

a) shrinking or loss of the wetland, or
b) accelerated dewatering and oxidation, or
c) significant adverse effects on tangata whenua values of the wetland, or
d) adverse effects of flooding on neighbouring properties, or
e) significant adverse effects on the relationship tangata whenua as Kaitiaki have with the wetland, or
f) adverse effects on the natural character of wetlands or
g) adverse effects on the ability to use the wetlands for recreational purposes

and remedy or mitigate otherwise.

Policy 2: Non-Regulatory Methods

Use a mixture of non-regulatory methods (including education and incentives) to achieve an increase in the extent and quality of the Region's wetlands.

Explanation and Principal Reasons for Adopting the Policies

The Region's wetlands containing regionally and internationally significant areas that are highly valued for their conservation and natural values. For these reasons Waikato Regional Council considers it appropriate to protect wetlands.

Under s68(1)(a) of the RMA, Waikato Regional Council cannot write regional rules for the purpose of protecting areas of regional significance. However, where significant areas have been identified, Waikato Regional Council is able to develop regional rules that restrict diversion of water within or immediately adjacent to them. This is because one of the greatest threats to wetlands is from land drainage. It is through this mechanism that Waikato Regional Council will assist in the protection of wetlands as indicated by **Policy 1** and Section 3.7.3.

The wetlands listed for the purpose of restricting drainage in adjacent areas, are selected on the basis that they are legally protected and have clearly defined boundaries. They are also the wetlands that are most likely to be affected by adjacent drainage activities. The Kopouatai and Torehape Peat Domes and the Whangamarino Wetland have been identified in the Waikato Conservancy Conservation Management Strategy (1996), as being areas requiring protection. These areas also meet the

[34] Refer to Appendix 3 of the RPS.

requirements of criterion 1 (Indigenous vegetation or habitat that has been specifically set aside by statute or covenant for protection and preservation) in Appendix 3: Criteria for Determining Significant Indigenous Vegetation and Significant Habitats of Indigenous Fauna in the Waikato RPS.

It is acknowledged that the list in Section 3.7.7 does not represent all the wetlands in the Waikato Region threatened by adjacent drainage. It is considered to be a starting point from which Waikato Regional Council can assist in the protection of the Region's wetlands. This list may be added to through reviews of this Plan.

The purpose of **Policy 2** is to indicate that Waikato Regional Council will use a number of non-regulatory methods to achieve an increase in the extent and quality of the Region's wetlands. Non-regulatory methods can achieve the objective in a number of ways including educating people about wetlands, thereby encouraging them to protect these areas by providing additional financial resource with which to undertake protection. This policy approach focuses on all wetlands and also seeks ways of promoting the creation/remediation of wetlands and having a co-ordinated inter-agency approach to the management of these areas.

3.7.4 Implementation Methods – Wetlands

3.7.4.1 Promote an Inter-agency Approach to Managing Wetlands

Waikato Regional Council will promote an inter-agency approach in conjunction with territorial authorities, Department of Conversation, tangata whenua, affected landowners, Fish and Game New Zealand, public health authorities, neighbouring regional councils and other interested parties, to:

1. prepare joint strategies to protect wetland areas,
2. consider preparation of a Waikato Wetlands Accord to set regional objectives for wetland management,
3. prepare guidelines on good practice for wetland management.

3.7.4.2 Promote Creation/Enhancement/Remediation of Wetlands

Waikato Regional Council will promote and support the creation of new wetlands and/or the enhancement/remediation of degraded wetlands to:

1. industry, as an environmental enhancement method
2. private landowners seeking to maximise recreational and/or wildlife values
3. resource consent applicatants as a mitigation method where appropriate, for both regional council and territorial authority resource consents
4. owners of sites where the adverse effects referred to in Policy 1 occur.

3.7.4.3 Environmental Education*

Waikato Regional Council will, through environmental education programmes in conjunction with territorial authorities and Department of Conservation and other interested parties, help the community to:

1. understand the values of wetlands, including small wetlands,
2. undertake remediation of degraded wetlands,
3. adopt land management and drain maintenance practices which avoid loss or damage to wetlands.

3.7.4.4 Economic Incentives

Waikato Regional Council will consider providing funding contributions for the promotion and implementation of initiatives that provide for the protection and creation of wetlands within the Waikato Region.

3.7.4.5 Water or Bed Level Setting for Significant Peat Lakes and Wetlands

Waikato Regional Council will undertake a water or bed level setting exercise, in conjunction with landowners, territorial authorities, tangata whenua, DoC, Fish and Game New Zealand, owners of hydroelectric generation dams and other interested parties, to determine appropriate minimum water and/or bed levels for the purpose of promoting the sustainable management of significant peat lakes and wetlands in the Region.

Waikato Regional Council will prepare variations/changes to the Plan to include minimum bed/water levels for peat lakes. On the basis of presently available information it is proposed to undertake the variations/changes in the following order:

First variation/change	Second variation/change	Third variation/change
Lake Ngaroto	Lake Rotopiko	Lake Whakatangi
Lake Maratoto	Lake Hotoananga	Hendersons Pond
Lake Milicich	Lake Areare	Lake Posa
Lake Kareotahi	Lake Rotomanuka	Lake Potaka
		Lake Rotongata
		Lake Pikopiko
		Lake Rotopataka

3.7.4.6 Discretionary Activity Rule – Creation of New Drains and Deepening of Drain Invert Levels

The following activities:

1. the creation of new drains for the purposes of managing water tables, or
2. the deepening (relative to the wetland level) of the invert level (bed) of lawfully established or authorised drains constructed prior to the date of notification (28 September 1998) of this Plan

in areas within 200 metres of the legal property boundaries of any wetland listed in Section 3.7.7 are **discretionary activities** (requiring resource consent) (except where the location of that activity is hydrologically isolated* from the wetland).

Advisory Notes:

- Information requirements to enable the assessment of any application under this Rule are set out in Sections 8.1.2.4 and 8.1.2.5. In addition, assessment shall also take into account the matters identified in Policy 1 of Section 3.7.3.
- This Rule should be read in conjunction with Rules 3.6.4.4 to 3.6.4.12 in Chapter 3.6.

3.7.4.7 Discretionary Activity Rule – Drainage of Wetlands

The following activities:

a) the creation of drains after the date of notification of this Plan (28 September 1998), and
b) the deepening (relative to the wetland water level) of the invert level (bed) of lawfully established or authorised drains constructed prior to the date of notification of this Plan (28 September 1998)

within a wetland that is an area of significant indigenous vegetation and/or significant habitat of indigenous fauna[35] are **discretionary activities** (requiring resource consent).

Advisory Notes:

- Information requirements to enable the assessment of any application under this Rule are set out in Sections 8.1.2.4 and 8.1.2.5. In addition, assessment shall also take into account the matters identified in Policy 1 of Section 3.7.3.
- This rule should be read in conjunction with Rules 3.6.4.4 to 3.6.4.12 in Chapter 3.6.
- For guidance as to wetlands that are habitat for indigenous vegetation or fauna communities and wetlands that do not meet this criterion refer to the photographs in Section 3.7.8.

Explanation and Principal Reasons for Adopting Methods 3.7.4.1 to 3.7.4.7

The above methods provide a range of non-regulatory and regulatory methods as provided for in the policies in Section 3.7.4 to achieve Objective 3.1.2. These methods will be used to address the adverse effects of activities on wetlands. Other methods in Chapters 3.4, 3.5, 3.6, 4.2, 4.3, 5.1 and 5.2 also affect the management of wetlands in the Region. For a full list of objectives, policies and methods affecting wetlands refer to the rule guide and key word index at the start of the Plan.

Method 3.7.4.1 is included because currently, significant wetlands and the areas adjacent to them, are subject to the controls of Waikato Regional Council, territorial authorities and Department of Conversation. The activities of landowners may impact upon these areas. In order to ensure the continued viability of these wetlands, Waikato Regional Council will promote an inter-agency approach to their management. This approach would potentially involve preparing joint strategies with the Department of Conversation, territorial authorities, affected landowners, Fish and Game New Zealand and other interested parties to protect these areas. This could involve consideration of a Waikato Wetlands Accord to set regional objectives for wetland management. Such an accord may include guidelines on good practice for wetland management.

Method 3.7.4.2 is included to encourage and support the enhancement/remediation of degraded wetlands and the creation of new wetlands. These activities may take place as part of an industry environment enhancement programme or by private landowners seeking to maximise recreational and wildlife opportunities. The creation or enhancement/remediation of wetlands could also be considered as part of mitigation for activities requiring resource consents from Waikato Regional Council or territorial authorities.

Environmental education, as provided for in **Method 3.7.4.3**, is intended to provide resource users with information about how they can improve their land management practices. Waikato Regional Council's Environmental Education Strategy will be used to assist the community to adopt land use practices that avoid damage to and loss of wetlands, to undertake remediation of degraded wetlands, and to understand the values of wetlands.

Method 3.7.4.4 includes initiatives such as the promotion of New Projects Policy and allows Waikato Regional Council to, in partnership with other organisations, groups or

[35] Refer to Appendix 3 of the RPS.

individuals, provide funding to protect and create wetlands. Economic incentives may be used in circumstances where financial considerations are an obstacle to protecting and creating wetland areas. In order to qualify for funding, applicants must apply to Waikato Regional Council and meet certain specified criteria depending on the purpose of the fund.

Method 3.7.4.5 acknowledges that a level-setting exercise requires specific technical information on each peat lake or wetland that is to have a level set. Waikato Regional Council is progressively collecting the information necessary to set levels and will incorporate minimum water or bed levels into the Plan as indicated.

The purpose of **Rule 3.7.4.6** is to assist in the protection of the identified wetland areas as listed in Section 3.7.7. It is acknowledged that this list is not comprehensive. This list includes only those identified wetlands that have land drainage systems on their boundary and may be impacted by the activities discussed in this Chapter. The areas to which the Rule applies are within 200 metres of the wetlands identified in Section 3.7.7. This rule will assist by controlling the adverse effects of land drainage activities or management of water tables that may occur in areas immediately adjacent to wetlands. The deepening of existing adjacent drains results in more water being diverted from wetland areas thus lowering water levels, which in turn damages plant and animal communities within the area.

Rule 3.7.4.6 also prevents the uncontrolled construction of new drains in these areas, which have the same effects as the deepening of the invert levels or beds of existing drains. Some forms of shallow drainage may be acceptable within 200 metres of the wetlands listed in Section 3.7.7 and these would need to be assessed through the consents process. The rule does not prevent maintenance of existing drains to their current depths within 200 metres of a regionally significant wetland area as listed in Section 3.7.7.

Rule 3.7.4.7 is included to control drainage within wetland areas that are habitat for indigenous vegetation and fauna communities. Smaller wetlands may provide important functions, particularly in terms of movement of mobile wildlife and generally providing wildlife habitat. This is consistent with Appendix 3 of the Waikato RPS.

3.7.5 Environmental Results Anticipated

1. No further loss or degradation of areas of significant wetlands.
2. Wetland areas protected and enhanced.

3.7.6 Monitoring Options

Refer to Section 3.1.4.

3.7.7 Table of Wetlands in the Waikato Region for Rule 3.7.4.6

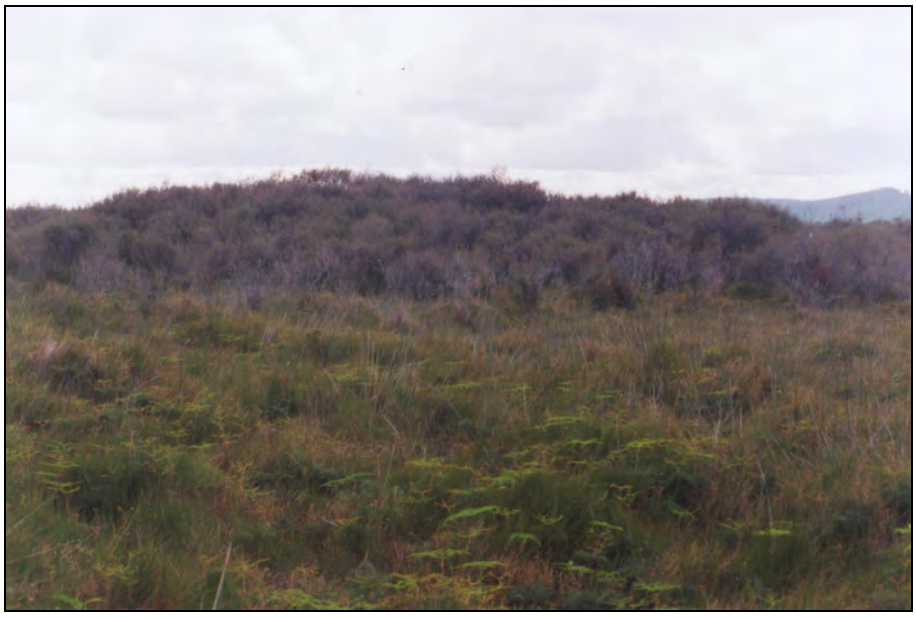
Wetland	Area	Ecological Values
Kopouatai Peat Dome Government Purpose Reserve (Wetland Management).	9238.44 ha.	Raised Peat Bog on a small graben with some mineralised swamp. Largest remaining peat dome in New Zealand. Reservoir catchment and flood protection values. The largest remaining freshwater wetland in New Zealand. Fauna values include banded rail, Marsh Crake, Australasian Bittern, North Island Fernbird, Spotless Crake, Black Mudfish. Flora values include Kahikatea. Listed as a RAMSAR site of international significance.
Flax Block Wildlife Management Reserve.	810.7 ha.	River floodplain with mineralised wetland. Totally dominated by willow forest. Fauna values include Australasian Bittern, North Island Fernbird and Spotless Crake. Historic and cultural values include flax harvesting
Torehape Wetland Management Reserve.	653.87 ha.	Remnant peat dome that has been drained and burnt. Fauna values include North Island Fernbird. Flora values include *Sphagnum cristatum* communities, *Sporadanthus traversii* and other rare wetland species.
Opuatia Swamp Wildlife Management Reserve	78.6 ha.	Waikato River floodplain with peat and semi-mineralised wetland. Fauna values include Australasian Bittern, North Island Fernbird and Spotless Crake. Good quality wetland habitat.
Lake Whangape (Wildlife Management) Reserve, Lake Whangape Marginal Strip, Awaroa Swamp Wildlife Management Reserve.	1694.02 ha.	Former oxbow of the Waikato River with large shallow natural lake with modified margins. Fauna values include Australasian Bittern, Black Swan, common waterfowl, native fish. Cultural and historical values include many Maori sites and traditional eel fishery.
Whangamarino Wetland Management Reserve. Whangamarino Government Purpose Reserve.	4870.75 ha. 322.60ha.	Three shallow basins and river floodplain with wetland, mineralised swamps and peat domes. NI Fernbird, Spotless Crake, Marsh Crake, Banded Rail, Brown Teal, Grey Tea, Black Swan, Australasian Bittern, Galaxiade fish species, Black Mudfish. Historic values include former pa sites on eastern margins. Cultural values, traditional food source and flax farming. Listed as a RAMSAR site of international significance.
North Shepherd Wetland	68 ha	Fish and Game New Zealand (Auckland/Waikato Region) owned wetland that is part of the Whangamarino wetland.
Central Shepherd Wetland	78 ha	Fish and Game New Zealand (Auckland/Waikato Region) owned wetland that is part of the Whangamarino wetland.
South Shepherd Wetland	248 ha	Fish and Game New Zealand, Auckland/Waikato Region owned wetland that is part of the Whangamarino wetland.
Eastern Whangamarino	354 ha	Fish and Game New Zealand, Auckland/Waikato Region owned wetland that is part of the Whangamarino wetland.
Moanatuatua Peat Scientific Reserve.	73.99 ha.	Remnant peat dome. Fauna values – NI Fernbird, common waterfowl and waders, and Black Mudfish. Very high scientific values.
Lake Rotomanuka Wildlife Management Reserve.	36.56 ha	Relatively deep and eutrophic lake divided by a raupo swamp into two lakes. High values, New Zealand Dabchick, Whirligig Beetle, Australasian Bittern, Black Mudfish. Large number of waterfowl and waders. High quality wetland habitat.
Lake Serpentine Wildlife Management Reserve	30.30 ha.	A shallow eutrophic peat lake with a partially modified mineralised swamp margin. Important wildlife habitat values, New Zealand Dabchick, Scaup, Australasian Bittern, Spotless Crake, White Heron, Banded Rail. Historic values include a pa site.
Lake Ngarotoiti Wildlife Management Reserve	7.840 ha.	Small shallow hypereutrophic modified peat lake. Lake habitat for waterfowl species.

Wetland	Area	Ecological Values
Lake Rotokawau (Black Lake) Stewardship Land.	405.17 ha	Peat lake draining into Lake Waikare with large area of peat bog and semi-mineralised wetland. Fauna, Australasian Bittern, North Island Fernbird, Spotless Crake and Black Mudfish. Moderate to high botanical values. Good quality wetland particularly fringes of lake.
Lake Waikare Marginal Strips Lake Waikare Stewardship Land (2 plots). South shore Recreation Reserve – lake Waikare Wildlife Refuge.	18.06 ha. 1.04 ha.	Lake and wetland margins. Fauna, Australasian Bittern, North Island Fernbird, common waterfowl. Traditional eel fishery.
Tokaanu Swamplands – Stewardship Land.	362.30 ha.	Wetland, delta feature, pumice alluvium, peaty and ash soils. Outstanding biodiversity, wetland ecosystem and associated species. Part of South Taupo wetland that has been recommended for listing as a RAMSAR site of international significance.
Stump Bay Recreation Reserve and Stewardship Area.	179.23 ha – Reserve 53.93 ha. – Stewardship area.	Flat wetland bordering shore of Lake Taupo. Pumice beach ridges and peaty soils. Outstanding wetland habitat supporting important populations of Bittern, Spotless Crake, Fernbird and wide range of waterfowl. Part of South Taupo wetland that has been recommended for listing as a RAMSAR site of international significance.
Waiotaka Scenic Reserve	29.18 ha.	Wetland boring shore of Lake Taupo, beach ridges, pumice and greywacke alluvium. Outstanding wetland habitat supporting important populations of Australasian Bittern, Spotless Crake, Fernbird and wide range of waterfowl. Part of South Taupo wetland that has been recommended for listing as a RAMSAR site on international significance.
Waimarino River Recreation Reserve.	61.29 ha.	Wetland, lagoon, beach ridges, rhyolite dome. Outstanding wetland habitat containing Fernbird, Bittern, Spotless Crake, Banded Rail, wide range of waterfowl, Wainuia Snails. Part of South Taupo wetland that has been recommended for listing as a RAMSAR site of international significance.
Lake Ngaroto	150.00 ha	Administered by the Waipa District Council currently undergoing an intensive restoration programme. The lake has high recreational values as well as a high wildlife population.
Lake Areare Part Horsham Dowms Wildlife Management Reserve	39.9600 ha	Wetland Community. Breeding and habitat for common waterfowl and waders.
lake Hotoananga Part Horsham Downs Wildlife Management Reserve	9.2730 ha	Wetland Community. Breeding and habitat for common waterfowl and waders.
Lake Pikopilo Part Horsham Downs Wildlife Management Reserve	6.1350ha	Wetland Community. Breeding and habitat for common waterfowl and waders.
Lake Kaituna (lake B) Part Horsham Downs Wildlife Management reserve	20.5300	Fauna values include large number of waterfowl and waders, eels, spotless crake, possibly banded rail. Important feeding and breeding habitat for waterfowl.
Lake 'E' (Hurrel's Lake Wildlife Refuge)	8.0100 ha	Shallow eutrophic lake, Habitat for waterfowl
Lake Ruatuna Wildlife Management Reserve	18.1800ha	shallow eutrophic peat lake with highly modified margins. Utilised by waterfowl and protected bird species including NZ dabchick, scaup and spotless crake.
Ohinewai Stewardship Land	27.6800 ha	Peatlake on the Waikato River floodplain. Fauna values include common wetland birds and waterfowl. Good quality wetland habitat.

Wetland	Area	Ecological Values
Lake Rangiriri (Kopuera) Wildlife Management Reserve	83.4500 ha	Eutrophic lake on Waikato River floodplain with wetland margins. Fauna values include Australasian bitter, North Island fernbird, spotless crake and common waterfowl. Historic values include a pa site and Rangiriri battle site adjacent. Good quality wetland habitat.
Lake Rotongaro Wildlife Management Reserve	482.4000 ha	Eutrophic shallow lake on the Waikato river floodplain. Fauna values include Australasian bittern and large numbers of ducks, swan and geese. Flora values include native macrophytes. Good quality wetland habitat.
Lake Okowhao Government Purpose (Wildlife Management) Reserve	22.6190 ha	Lake on the Waikato River floodplain with good riparian margins. Fauna values include Australasian bittern, spotless crake and waterfowl. Flora values include native macrophytes. Representative example of wetland habitat with good riparian margin.
Lake Cameron	3.375 ha	A small but ecologically significant lake, surrounded on two sides by residential subdivision. It is a true peat lake with deep peat on the west and south. It is home to waterfowl and waders.
Lake Mangakaware	74.86 ha	This lake has a large buffer of land in public ownership right around the lake. Although highly modified it has enormous potential to be restored to a high ecological status. It contains a high waterfowl population.
Lake Maratoto	17.71 ha	True peat lake in private ownership (some covenanted). The lake is over 11,000 years old and over 75% of the margin has a dense cover of native peat/wetland vegetation. It is considered the second most pristine of the Waipa peat lakes. It has a high and dense waterfowl population.
Lake Mangahia	9.375 ha	Peat lake in private ownership. It has the highest ecological values of all lakes in the Waipa District. Part of the fringe is under covenant. This lake is severely threatened by adjacent land development. It has a high waterfowl population.

3.7.8 Examples of Wetlands

For the purposes of this Plan, the following photographs are indicative of wetland areas that Rule 3.7.4.7 applies to.



Paul Champion, NIWA

Kahikatea forest, Awaroa Wildlife Management Reserve

3.8 Drilling*

Background and Explanation

The effects of drilling and its associated activities that are addressed in this Plan include:

i) Contamination of ground water, surface water and soils by drilling fluids.
ii) Reduction in ground water quality by contamination from surface water run-off, other surface water and other ground water sources.
iii) Fuels and other hazardous substances on drill sites contaminating soils and surface water.
iv) Accelerated soil erosion*.
v) Vegetation removal to create drilling pads and drill rig access.
vi) Well placement causing adverse drawdown effects on other ground water users.
vii) Loss of artesian water or aquifer pressure both in the short and long term.
viii) Flow between previously isolated water bodies.
ix) Adverse effects on geothermal characteristics.
x) Loss of geothermal fluid/pressure both in the short and long term.
xi) Blow-outs (i.e. uncontrolled well discharges) in geothermal wells.

The effects listed in vi) and v) are addressed in Chapter 5.1 while the remainder of the effects are addressed in this Chapter. The magnitude of these effects is influenced by the physical setting of the site, the scale of the drilling operation, the type of drilling, duration of activity, and the hydrology and water quality at the site. Generally, however, effects are minor where good practices are adhered to.

3.8.1 Issue

In addition to the issues identified in Chapter 3.1 of this Plan, drilling can have the following adverse effects:

a) Drilling below the water table may cause contamination from inappropriate drilling fluids, mixing of previously isolated aquifers and loss of aquifer pressure/level.
b) Contamination of soils by inappropriate drilling fluids to levels that present significant risk to human health or the wider environment.
c) Adverse effects on geothermal features, geothermal fluid/pressure and blow-outs in geothermal wells.

3.8.2 Objective

Drilling activities undertaken in a manner that:

a) is consistent with the objectives in Section 3.1.2,
b) is consistent with the objectives in Section 5.2.2,
c) prevents significant adverse effects from the mixing of previously isolated aquifers,
d) does not result in significant adverse effects from a loss of aquifer pressure/level,
e) is consistent with the objectives in Section 7.2.2,
f) does not result in blow-outs in geothermal wells.

Principal Reasons for Adopting the Objective

The drilling of holes and the discharge of materials/fluids associated with drilling holes has the potential to adversely affect water and soil quality. Any major drilling activity can affect the physical, chemical and biological characteristics of water and soil, and thereby potentially affect other uses and values of those resources.

The objectives in Section 3.1.2 address the adverse effects of drilling activities on ground and surface water quality, flow regimes and tangata whenua concerns with respect to the mixing of waters and disturbance of sites of significance. In addition to these objectives there are a number of effects that are specific to drilling activities and therefore included in the objectives in this Chapter.

Drilling and its associated activities, have the potential to cause adverse effects on the flow regimes (hydrology) of ground water. Of primary concern is the adverse effect that opening up long term conduits between hydraulic units can have on ground water systems.

Part d) of objective 3.8.2 acknowledges that Waikato Regional Council needs to ensure that the discharge of drilling fluids onto or into land does not lead to the contamination of soil.

Parts e) and f) of objectives 3.8.2. recognise the potential problems that drilling into geothermal systems can create. Drilling in a geothermal system has the potential to affect geothermal characteristics in the same system but not necessarily adjacent to the hole. Unsafe practices while drilling in geothermal systems can result in blow-outs.

3.8.3 Policies

Policy 1: Effects of Drilling Activities

Manage the effects of drilling and any associated discharges in a manner that avoids significant adverse effects on the quality of ground water, surface water and soils from:

a) contamination by drilling fluids,
b) contamination of ground water by contaminants in surface water,
c) mixing of previously isolated aquifers,
d) loss of aquifer pressure/level,
e) disturbance of waahi tapu and other identified sites of significance to tangata whenua as Kaitiaki,
f) inappropriate drilling in geothermal systems.

Policy 2: Enable Drilling Activities

Enable drilling activities without the need for a resource consent where:

a) the drilling does not intercept the water table, or
b) the drilling is of a temporary nature, and
c) sealing and abandonment of the drill hole will not allow conduits between aquifers, and
d) no hazardous substances are introduced to ground water, and
e) there is no disturbance of waahi tapu or other identified sites of significance to tangata whenua as Kaitiaki, and
f) there are no adverse effects on Significant Geothermal Features or loss of geothermal fluid or pressure.

Explanation and Principal Reasons for Adopting the Policies

Policy 1 relates to the specific effects of drilling activities that Waikato Regional Council wants to manage. Drilling fluids can contaminate ground water, soils and

surface water. Drilling has the potential to provide conduits between previously isolated aquifers that allow mixing of waters. Lack of sealing or inappropriate abandonment may lead to a loss of aquifer pressure/level. Contamination of water, mixing of waters or disturbance of waahi tapu and other sites of significance to tangata whenua all cause significant adverse effects on the relationship that tangata whenua have with the water and the land. Drilling in geothermal systems has the potential to cause damage to other features in the system and also may lead to blow-outs in wells. If drilling activities are carried out using good practice these effects can be minimised or avoided.

Policy 2 recognises that where effects of drilling are minor, Waikato Regional Council will enable these activities provided that the conditions can be met. The Policy lists the effects to be avoided.

3.8.4 Implementation Methods – Drilling

3.8.4.1 Good Practice

Waikato Regional Council will, in conjunction with organisations, industry groups and individuals, develop good practice techniques for drilling, well construction, maintenance and abandonment of wells and drill holes.

3.8.4.2 Part XII RMA Enforcement

Waikato Regional Council will apply for enforcement orders, issue abatement notices and use other enforcement mechanisms in Part XII of the RMA where non-compliance with conditions of rules or consents gives rise to the following effects:

a) Significant contamination of ground water, surface water, or soils.
b) Uncontrolled leakage of ground water or significant loss of aquifer pressure.
c) Discharges that:
    i) lead to land instability hazards
    ii) adversely affect waahi tapu and archaeological sites.

3.8.4.3 Permitted Activity Rule – Discharge of Drilling Fluids

The discharge of water and drilling fluids from holes or wells onto or into land, or into ground water, is a **permitted activity** subject to the following conditions:

a) There shall be no discharge to surface water, or discharge to land where contaminants may enter surface water.
b) Drilling fluids shall be freshwater-based or air-based.
c) Bentonite, and cement may be used. Other products, including polymers and surfactants, may be used provided that the product is not a hazardous substance in terms of the Hazardous Substances and New Organisms Act 1996.
d) The discharge shall not be located within 20 metres of any Significant Geothermal Feature*.

Advisory Note:

- Significant Geothermal Features are defined in the Glossary and, in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

3.8.4.4 Discretionary Activity Rule – Discharge of Drilling Fluids

The discharge of water and drilling fluids from holes or wells onto or into land, or into ground water, which does not comply with Rule 3.8.4.3 is a **discretionary activity** (requiring resource consent).

Advisory Note:

- Information requirements to enable the assessment of any application under this rule are set out in Section 8.1.2.6. In addition, assessment shall also take into account the matters identified in Policy 1 of Chapter 3.8.

3.8.4.5 Permitted Activity Rule – Drilling Above the Water Table

The drilling of holes above the water table is a **permitted activity.**

3.8.4.6 Permitted Activity Rule – Temporary Drilling Below the Water Table

Except where classified as a non-complying activity by Rule 3.8.4.9, the drilling of holes below the water table is a **permitted activity** subject to the following conditions:

a) Holes drilled shall be sealed and abandoned within two days of the completion of drilling.
b) Holes drilled shall be at least 100 metres from any water supply well.
c) Holes drilled shall be sealed and managed such that leakage of water or contaminants to or from the ground surface is prevented.
d) Holes drilled shall be sealed and abandoned in a manner that prevents cross-contamination between different water bodies, or changes in water pressure.
e) The activity shall not disturb any archaeological site or waahi tapu as identified at the date of notification of this Plan, in any district plan, in the NZ Archaeological Association's Site Recording Scheme, or by the Historic Places Trust except where Historic Places Trust approval has been obtained.
f) In the event of any waahi tapu that is not subject to condition e) being identified by the Waikato Regional Council to the person undertaking the activity, the activity shall cease insofar as it may affect the waahi tapu. The activity shall not be recommenced without the approval of the Waikato Regional Council.
g) Within any geothermal system, the depth of any holes drilled shall not be greater than 250 metres vertically down from the well head.

Exclusion:

The drilling of blast holes, seismic shot holes or similar, where the hole will be destroyed upon construction, and where the adverse effects on ground water are addressed through resource consents, are exempted from conditions a), b), c) and d) of this Rule.

Advisory Notes:

- Also refer to Rule 5.1.4.14 of this Plan relating to the disturbance of soil, including vegetation destruction.
- Where a waahi tapu site is identified whilst undertaking the activity, the process that Waikato Regional Council will follow in order to implement condition f) is set out in Section 2.3.4.22 of this Plan.
- The drilling of blasting holes in mineral extraction sites is permitted under this rule.
- Significant Geothermal Features are defined in the Glossary and, in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

3.8.4.7 Controlled Activity Rule – Drilling Below the Water Table

The drilling of holes or wells below the water table where the hole or well is not permitted by, or does not comply with, Rule 3.8.4.6 and which is not classified as a non-complying activity by Rule 3.8.4.9, is a **controlled activity** (requiring resource consent) subject to the following standards and terms:

a) All drilled holes/wells shall be constructed, maintained and/or abandoned so that they shall not cause cross-contamination between hydraulic units (aquifers) in any water including ground water and geothermal water.

b) Holes drilled shall be at least 100 metres away from and Significant Geothermal Feature and shall not be into geothermal water within a Protected or Research Geothermal System.
c) All holes/wells shall be managed and maintained such that leakage of water or contaminants to or from the ground surface is prevented.
d) Materials used for well construction shall be of such quality and strength to enable the well to be completed without casing or seal leakage during construction or subsequent well operation.
e) Wells used for potable water supply shall be located at least 30 metres from any on-site sewage disposal system.
f) Wells used for water supply purposes, shall be located at least 50 metres from a lake or stream, and 100 metres from Mean High Water Springs*.
g) A log for each drilled hole/well shall be forwarded to the Waikato Regional Council within two months of completion of drilling. Each log shall show:
    i) the location of the hole/well
    ii) date of completion
    iii) duration of drilling
    iv) depth and diameter of the hole/well
    v) the method of drilling
    vi) full construction details
    vii) the subsurface geology
    viii) results of any tests undertaken during drilling, including permeability, temperature and water quality
    ix) a site diagram.
h) The activity shall not disturb any archaeological site or waahi tapu as identified at the date of notification of this Plan, in any district plan, in the NZ Archaeological Association's Site Recording Scheme, or by the Historic Places Trust except where Historic Places Trust approval has been obtained.
i) In the event of any waahi tapu that is not subject to standard and term g) being identified by the Waikato Regional Council to the person undertaking the activity, the activity shall cease insofar as it may affect the waahi tapu. The activity shall not be recommenced without the approval of the Waikato Regional Council.

Waikato Regional Council reserves control over the following matters:

i. Measures to avoid, remedy or mitigate the adverse effects of the activity on soil and water quality.
ii. Measures to avoid, remedy or mitigate the effects on other users of water.
iii. Monitoring, sampling and analysis requirements.
iv. The location and depth of drilling.
v. Any measures necessary to rehabilitate the land following the completion of the activity.
vi. Measures to avoid, remedy or mitigate the effect of the activity on areas of significant indigenous vegetation and significant habitats of indigenous fauna[36].
vii. The requirements for bonds to ensure appropriate control and abandonment of deep geothermal wells.
viii. Measures taken to remove wastes introduced to the hole/well during drilling and construction.

Notification:

Applications for resource consents for activities under this Rule will be considered without notification or the need to obtain written approval of affected persons, in accordance with s94(1)(b) of the RMA.

Advisory Notes:

- A resource consent may be required for the taking of water. Refer to the rules in Chapter 3.3 of this Plan.

[36] Refer to Appendix 3 of the RPS.

- Note that water takes in the Pukekohe area may be restricted from upper volcanic aquifers.
- Information requirements to enable the assessment of any application under this rule are set out in Section 8.1.2.6. In addition, assessment shall also take into account the matters identified in Policy 1 of Chapter 3.8.
- Where a waahi tapu site is discovered whilst undertaking the activity, the process that Waikato Regional Council will follow in order to implement standard and term h) is set out in Section 2.3.4.22 of this Plan.
- For Development and Limited Development Geothermal Systems, Significant Geothermal Features, including significant geothermal vegetation or habitat, are listed in Tables 7-5 and 7-6 and defined on the maps in section 7-10 of this plan.
- Research and Protected Geothermal Systems are mapped in Section 7.9 of this Plan. Significant Geothermal Features for these systems are defined by Feature Type in the Glossary in Appendix 1.

3.8.4.8 Discretionary Activity Rule – Drilling Below the Water Table

The drilling of holes or wells below the water table that is not permitted by, or does not comply with, Rules 3.8.4.6 or 3.8.4.7 and which is not classified as a non-complying activity under Rule 3.8.4.9, is a **discretionary activity** (requiring resource consent).

Advisory Note:

- Information requirements to enable the assessment of any application under this Rule are set out in Section 8.1.2.6. In addition, assessment shall also take into account the matters identified in Policy 1 of Chapter 3.8.
- Significant Geothermal Features are defined in the Glossary and, in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

3.8.4.9 Non-Complying Activity Rule – Drilling of Holes below the water table near Geothermal Features

The drilling of new holes or new wells below the water table within:

a) 50 metres of the following geothermal water features within Development Geothermal Systems and Limited Development Geothermal Systems as shown on maps in Section 7.10 of this Plan:
   i) Horohoro springs (features 3,5, and 6)
   ii) Waipapa Stream springs
   iii) Orakonui Springs at Ngatamariki (features A - J)
   iv) Waikato River springs (features 1 – 4)
   v) Lake Rotokawa and springs
   vi) Hall of Fame spring
   vii) Otumuheke and Kathleen springs (features A and B)
   viii) Alum Lake at Wairakei
   ix) Waipahihi spring (Onekeneke Stream)
   x) Whangapoa springs (features 1 – 3)
   xi) Tokaanu Hot Springs (features 1 - 16); or

b) 100 metres of any geothermal feature in a Small, Research or Protected Geothermal System that naturally discharges liquid geothermal water, whether continuously or occasionally, or that is prevented from discharging by an activity that is not lawfully established

is a **non-complying activity** (requiring resource consent).

3.8.4.10 Permitted Activity Rule – Discharge of Water from Drilling

The discharge of up to 30 cubic metres of water arising from drilling activity into water, and onto or into land is a **permitted activity** subject to the following conditions:

a) The discharge shall not cause visually noticeable iron flocculation in the receiving waters.
b) Any discharge to water shall comply with the suspended solid standards as set out in section 3.2.4.5.
c) The discharge shall not result in flooding on any downstream property.

d) Any erosion occurring as a result of the discharge shall be remedied as soon as practicable.
e) The discharge shall not cause a temperature change of more than 3º C at any point downstream which is three times the stream width at the point of discharge or which in any instance does not exceed 200 metres from the point of discharge.
f) There shall be no discharge to any Significant Geothermal Feature.

Advisory Note:

- Significant Geothermal Features are defined in the Glossary and, in Development and Limited Development Geothermal Systems, identified on maps in Section 7.10 of this Plan.

Explanation and Principal Reasons for Adopting Methods 3.8.4.1 to 3.8.4.9

Method 3.8.4.1 promotes the development of good practice. Good practices can be designed to avoid, remedy or mitigate any adverse effects that may occur as a result of the use and development of the ground water resource. Industry standards, guidelines and codes for practice have been developed for soil and rock drilling and deep geothermal drilling and are supported by Waikato Regional Council. These include:

a) Environment Standard NZS4411:2001 for Environmental Soil and Rock Drilling.
b) New Zealand Standard 2403:1991 Code of Practice for Deep Geothermal Wells.
c) Safety Guidelines for Shallow Geothermal Wells, Mining Inspection Group, Ministry of Commerce, 1996.

These documents detail good practice for drilling and well construction and are regarded as minimum requirements for drilling.

Method 3.8.4.2 indicates that where non-compliance with rules or consents relating to the drilling of holes and discharge of drilling fluids results in significant adverse effects on land and water, Waikato Regional Council will consider taking enforcement action. Enforcement action can be by way of enforcement order, abatement notice or another mechanism under Part XII of the RMA. This could prohibit a person from commencing, or require them to cease, an activity related to drilling. The reason for adopting this method is that potentially serious effects may occur as a result of non-compliance.

Rule 3.8.4.3 permits the discharge of drilling fluids to land or into ground water where the effects of doing so are likely to be minor.

Drilling operations where the discharge of drilling fluids does not meet the conditions in Rule 3.8.4.3 will be assessed as discretionary activities under **Rule 3.8.4.4**. **Rule 3.8.4.5** has been included in the Plan for clarity as drilling above the water table is permitted under s9 of the RMA.

With regard to **Rule 3.8.4.6**, there is a large amount of drilling undertaken below the water table for geotechnical or similar investigation purposes where the hole is backfilled and sealed without long term connection to the surface, or between aquifers being constructed. For the purposes of this Rule, resource investigation includes, but is not limited to, geotechnical, mineral and foundation investigations. The short duration of the activity creates a temporary conduit only and hence reduced potential for adverse effects. Provided these holes are immediately sealed and abandoned in compliance with the conditions described, the potential for ongoing adverse environmental effects is minimal. The 100 metre separation condition reduces the likelihood of any contamination of water supplies from drilling activities. Condition g) has been included to minimise the risk of drilling into a pressurised geothermal system.

Rule 3.8.4.7 provides for resource users to drill holes below the water table. The collection of drill-log information required in these conditions is important for monitoring purposes, and will enable Waikato Regional Council to build a regional database and make appropriate and informed resource management decisions. The requirements

for appropriate construction and sealing are included to ensure there will be no cross-contamination of hydraulic units or aquifers. In recognition of the minor effects likely to arise from drilling activities, consent applications need not be notified under this Rule. There may be instances where bonds will be required for geothermal drilling.

Rule 3.8.4.8 provides for drilling that does not comply with the controlled activity rule. Given the uncertain status and values in geothermal systems that have not been classified, and where there are potential risks associated with drilling activities (particularly increased pressures in deeper holes in geothermal systems) Waikato Regional Council wishes to retain its discretion over drilling in those areas.

Under **Rule 3.8.4.9** applications for resource consents to construct wells within 50 meters of a Geothermal Water Feature in a Development Geothermal System or Limited Development Geothermal System and mapped in section 7.10 of this Plan or 100 metres of any geothermal feature in a Small, Research, or Protected Geothermal System that naturally discharges liquid thermal water, will be assessed as non-complying activities. This acknowledges the protection status of these features and is consistent with the policy directions in this Plan in relation to Significant Geothermal Features (See Section 7.4).

3.8.5 Environmental Results Anticipated

1. Drilling activities undertaken without causing significant adverse effects on water and soil quality, aquatic flora and fauna, and other water users.
2. Drilling and well construction undertaken such that uncontrolled leakage of ground water and geothermal fluid to the surface or between ground water bodies is avoided.
3. Well head completion effective in the prevention of preferential entry of contaminants from the surface.
4. No blow-outs in geothermal wells.

3.8.6 Monitoring Options

Objective	Indicators/ Measurements	Types of Monitoring	Information Source
Achieves the objectives in Section 3.1.2. Prevents adverse effects from the mixing of previously isolated aquifers.	Develop and update indicator for trends in number and satisfactory completion of wells that are drilled Update indicators for trends in ground water quality.	Regional trend monitoring	Water quality database. Water quantity database. Water ecology database. Ground water database. Geothermal database.
Does not result in adverse effects of a loss of aquifer pressure/level. And, Does not result in blow-outs in geothermal wells.	Update indicators for water level monitoring. Develop and update indicator for trends in number and satisfactory completion of wells that are drilled.	Regional trend monitoring, compliance and effects monitoring.	Water quality database. Water quantity database. Water ecology database. Ground water database. Geothermal database. Resource consents database. Compliance monitoring database.
Is consistent with the objectives in Chapter 7.2.	See monitoring tables in Chapter 7.2.	See monitoring tables in Chapter 7.2.	See monitoring tables in Chapter 7.2.
Is consistent with the objectives in Section 5.2.2.	Effective design and completion.	Compliance and effects monitoring	Ground water database. Resource consents database. Compliance monitoring database.

3.9 Non-Point Source Discharges*

Background and Explanation

This Chapter addresses the adverse effects of non-point source discharges on water bodies in the Waikato Region. The chapter focuses on means to reduce the adverse effects of these discharges, promotes the use of streamside management and seeks to have the adverse effects of livestock access to water bodies managed. This is achieved using a range of non-regulatory methods and permitted activity rules for the discharge of fertiliser and for livestock access to water bodies.

3.9.1 Issue

Refer to Issue 3.1.1.

3.9.2 Objective

Refer to Objective 3.1.2.

3.9.3 Policies

Policy 1: Land Use Effects

Reduce the adverse effects of non-point source discharges arising from land use practices and activities by:

a) minimising the leaching and run-off of contaminants including fertilisers*, faecal matter, agrichemical* residues, and sediment into water bodies (surface and ground water)
b) avoiding bed and bank erosion and instability
c) recognising and avoiding the effects of non-point discharges on the relationship tangata whenua as Kaitiaki have with water
d) avoiding, remedying or mitigating adverse effects on rivers, lakes, wetlands and their margins so as to maintain and enhance natural character.

Policy 2: Streamside (Riparian) Management

Promote the use of streamside management that:

a) recognises the importance of existing appropriate riparian vegetation
b) promotes new planting of appropriate riparian vegetation
c) reduces sediment and other contaminants entering the water body
d) improves habitat for aquatic life
e) Improves bank stability.

Policy 3: Livestock Access to Water Bodies

Use a mixture of non-regulatory methods (education and incentives) and a permitted activity rule to manage the adverse effects of livestock access to water bodies.

Explanation and Principal Reasons for Adopting the Policies

The approach adopted in the policies in Section 3.9.3 is to reduce the adverse effects of non-point source discharges through the use of non-regulatory methods and permitted activity rules in this chapter while also relying on regulatory methods in other chapters. For example, rules in Chapter 5.1 restrict the removal of riparian vegetation in order to prevent stream bank erosion. These sorts of rules assist in reducing the adverse effects of non-point source discharges. Apart from within the Lake Taupo Catchment, Waikato Regional Council is taking a non-regulatory approach to

management of non-point source discharges as it considers this is the most effective method for changing behaviour in the long term.

Policy 1 recognises that land use practices can have significant impacts on water bodies. The purpose of the policy is to indicate how Waikato Regional Council will address the adverse effects of non-point source discharges arising from land use. As indicated in the paragraph above these may occur through non-regulatory mechanisms or through rules in other chapters.

Policy 2 recognises that management of the vegetation adjacent to waterways plays a significant role in improving water quality, enhancing aquatic ecosystems and promoting the maintenance of beds and bank stability. Streamside management can also be used to restrict livestock access to water bodies and involves managing the area adjacent to water bodies rather than just planting trees. For example, it may involve fencing to keep livestock out of the water body or managing grazing in adjacent paddocks in a manner that reduces adverse effects from occurring. This Policy also promotes the planting of appropriate riparian vegetation which is vegetation that is suited to the particular conditions at a site, is the correct vegetation for the intended purpose and is indigenous vegetation that is of local genetic stock if possible.

The scope for regulating non-point source discharges is limited due to the complex and hidden nature of the contaminants. Compliance is difficult to monitor or enforce and severe economic impacts would result from wholesale regulation of land use. However, more stringent measures may be justified in the future to protect particularly sensitive receiving environments. In the case of the Lake Taupo Catchment, the management of effects of non-point source discharges is undertaken via a mix of regulatory and non-regulatory methods as detailed in Section 3.10.

The purpose of **Policy 3** is to indicate how Waikato Regional Council will address the adverse effects of livestock access to water bodies. Livestock in water bodies can cause erosion of beds and banks, channel widening, deepening and shallowing by trampling of the beds and banks, water quality problems due to direct effluent inputs and sedimentation disturbances. Livestock access in combination with other activities also contributes to a significant cumulative decline in aquatic habitat quality throughout the Region. Implementation methods in Section 4.3.5 also deal with this issue and in Rule 4.3.5.4 provides a permitted activity rule to address the adverse effects of livestock entering and crossing the beds and banks or rivers and lakes.

3.9.4 Implementation Methods – Non-Point Source Discharges

Advisory Notes:

- There are a number of other parts of the Plan that refer to activities and issues regarding non-point source discharges. These are:
  a) Education about avoiding adverse effects of livestock in water bodies (Method 4.3.5.1).
  b) Rules 4.3.5.4 and 4.3.5.5 regarding livestock entering and crossing the beds and banks of rivers and lakes.
  c) Education about avoiding, remedying or mitigating the adverse effects of land use (Method 5.1.4.1).
  d) Land management practices that may contribute sediment to water bodies (Method 5.1.4.2).
  e) Rule 5.1.4.12 in respect of soil cultivation adjacent to the beds of rivers and lakes.
  f) Management of non-point source discharges in the Lake Taupo Catchment (Methods in Section 3.10).
  g) Rules 5.1.4.14 and 5.1.4.15 in respect of soil disturbance and vegetation clearance activities adjacent to water bodies, Rule 5.1.4.16 in respect of Coromandel catchments and Rule 5.1.4.17 for areas immediately adjacent to sinkholes or cave entrances.
  h) Water bodies and banks of water bodies that are sensitive to spray drift (Method 6.2.4.5).

3.9.4.1 Good Practice

Waikato Regional Council will encourage the use of good practice in land use activities and practices that reduce non-point source discharges. Waikato Regional Council will,

in conjunction with organisations and industry groups, provide guidance in the development, implementation and review of good practice guidelines and codes of practice for land use activities which cause non-point source discharges.

Advisory Notes:

- A good practice guide for fertiliser application is included in Section 3.9.7 of this Plan.

3.9.4.2 Environmental Education*

Waikato Regional Council will, through environmental education programmes, raise the awareness within the community about appropriate land management practices and streamside management. In particular, regarding:

1. the positive effects of enhanced streamside management as a means of mitigating adverse effects on water quality and aquatic ecosystems,
2. the exclusion of livestock from the beds and banks of water bodies,
3. the fencing of streamside areas,
4. the effects of land use on ground water quality and the promotion of well head protection,
5. methods of fertiliser use and application that minimise adverse effects on water quality and aquatic ecosystems,
6. appropriate plants for enhancing riparian areas and pest control techniques for animal and plant pests.

Advisory Note:

- There are close links between this Method and Method 5.1.4.1 (Accelerated Erosion) and Method 4.3.5.1 (River and Lake Bed Disturbances) in of this Plan.

3.9.4.3 Integration with Territorial Authorities

Waikato Regional Council will work with territorial authorities to promote:

1. management options which seek to avoid or minimise the adverse effects of non-point source discharges into water,
2. integration of regional and district plans for land use which have potential adverse effects on water bodies,
3. a co-ordinated approach to stormwater management and land use activities in areas with degraded water bodies.

3.9.4.4 Economic Incentives

Waikato Regional Council will consider financial support of projects that would assist significantly with minimising the impacts of land use activities on water bodies.

3.9.4.5 Streamside Enhancement Fund

Waikato Regional Council will make available a fixed contestable fund, reviewed annually, to support and facilitate streamside management. Investigations will be undertaken to identify areas in the Region that are most at risk with respect to adverse effects on water quality, or will benefit most from streamside enhancement. The results of this will be utilised when considering applications to the fund.

3.9.4.6 Risk Based Investigations

Waikato Regional Council will carry out a risk-based analysis to identify riparian areas and water bodies which are particularly sensitive to land use effects such as sediment and faecal material entering water, and establish priority areas to encourage and implement good practice with regard to streamside management.

3.9.4.7 Livestock Access

If the current extent of adverse effects attributed to livestock having access to water bodies is not reduced significantly at the time of plan review or by 2005, whichever is the sooner, then rules to exclude livestock from water bodies identified in Method 3.9.4.6 as being particularly sensitive to land use effects, will be implemented as part of the plan review or by way of a plan change.

3.9.4.8 Nutrient Research

Waikato Regional Council will undertake and where appropriate encourage investigation into:

1. the adverse effects of fertiliser use and nutrients on water bodies
2. farm management techniques that make the most efficient use of nutrients inputs while minimising leaching
3. methods to prevent nutrient contamination of water bodies.

3.9.4.9 Fertiliser Use

If the current extent of adverse effects attributable to fertiliser reaching ground and surface water is not reduced significantly at the time of plan review by 2005, whichever is the sooner, then rules to control fertiliser use, or nitrogen leaching, on land adjacent to water bodies identified in Method 3.9.4.6 as being particularly sensitive to land use effects, will be implemented as part of the plan review or by way of a plan change.

3.9.4.10 Part XII RMA Enforcement

Waikato Regional Council will apply for enforcement orders, issue abatement notices and use other enforcement mechanisms in Part XII of the RMA where any of the following adverse effects on water bodies occur as a result of inappropriate land use practices:

1. Severe bed or bank erosion, and/or;
2. Significant discharge of sediment or nutrients or other contaminants to water bodies leading to:
    a) significant adverse effects on aquatic life, or
    b) significant adverse effects on the uses and values of water bodies, or
    c) significant adverse effects on other users of water, or
    d) significant adverse effects on water quality, or
    e) Water Management Classes being compromised.
3. The direct discharge of fertiliser into water resulting in significant adverse effects on water quality.

3.9.4.11 Permitted Activity Rule – Fertiliser Application

The discharge of fertiliser* into air and onto or into land outside the Lake Taupo Catchment is a **permitted activity** subject to the following conditions:

a) The discharge shall not result in any objectionable odour or particulate matter beyond the subject property boundary.
b) The discharge does not result in any avoidable direct application of fertiliser to any water body.
c) Where the fertiliser is being used in other than domestic gardening situations the fertiliser must be applied in accordance with the NZ Fertiliser Manufacturers Research Association, 1998 (updated 2002): Code of Practice for Fertiliser Use.
d) A nutrient management plan of the type specified in Table 3-10 must be used to plan fertiliser application where nitrogen fertiliser is being applied at rates greater than 60 kg/N/ha/year.

e) The contents of the nutrient management plan required by condition d) must be made available to the Waikato Regional Council upon request.

f) A nutrient management plan shall be provided to Waikato Regional Council on request in accordance with condition d) where fertiliser is to be applied to an area of land that has also had farm animal effluent applied to it within the preceding 12 months.

Table 3-10 Nutrient Management Requirements by Land Use Type

Land Use Type	Nutrient Management Plan Requirements
All Land Uses applying more than 60Kg N/ha/yr	A nutrient management plan must be prepared that, as a minimum records the following information for at least nitrogen (N) and phosphate (P) (in units of kg of N and P per hectare per year) : • Inputs from fertiliser. • Inputs from other sources such as manures, green crops and soil mineralization. • Outputs in product. • Results of soil testing for levels of **available** N and P. • Documentation of consideration given to climatic and soil conditions for the life of the crop to account for the effects of rainfall and irrigation on the potential for N and P leaching through the soil in to ground and surface water. • Practices that will be implemented to reduce nutrient and sediment losses from the property and to avoid, remedy or mitigate adverse effects on the environment.
Pastoral	The nutrient management plan specified above must be developed based on the outputs of either Overseer (Agresearch) or any other nutrient management planning tool that meets the criteria set out in the fifth advisory note below.
Commercial Vegetable and Fruit Production, Arable/Mixed Cropping and Livestock or any other land use not otherwise captured in this table	From 1 January 2011, the nutrient management plan specified above must be developed based on the outputs of any nutrient management planning tool that meets the criteria set out in the fifth advisory note below.

Advisory Notes:

- The discharge of fertiliser into air and onto or into land that does not comply with Rule 3.9.4.11 is a discretionary activity in accordance with Rule 3.5.4.5.
- Application of fertiliser should follow the good practice guide on fertiliser use in Section 3.9.7 and any other relevant industry nutrient management tools, including "Doing it Right" (the Franklin Sustainability Project, 2002).
- The processes for determining the objectionable effects of odour or particulate matter beyond the property boundary are set out in Chapter 6.4 of this Plan.
- This rule does not specify a nutrient leaching rate for the model. It is Waikato Regional Council's intention to survey modelled leaching rates and if necessary develop rules that specify nutrient leaching rates for sensitive locations in accordance with Method 3.9.4.8.
- In order to comply with the requirements of this Rule Nutrient Management Planning tools other than Overseer and SPASMO must:
  a) Be a Crown Research Institute, University or Industry developed model that has successfully completed commercial trials commensurate with climatic, terrain and soil conditions expected to be encountered in the Waikato Region.
  b) Be able to predict annual, seasonal or crop nutrient losses at either a paddock or total crop area scale with a margin of error no more than 30%.
  c) Have been calibrated against current versions of either Overseer or SPASMO, or versions that are no more than 3 years old, and any departures from those models when using identical data sets documented and explained.
  d) Have product maintenance and support currently available as of the date of use or guaranteed for a period of one year.

- A register of nutrient management planning tools that meet the criteria set out in the above advisory note is maintained by Waikato Regional Council. If by 2011 models that meet these criteria have not been developed for the subject crop or land use, a model based on the crop or land use with the most similar nutrient leaching behaviour will be acceptable.

Explanation and Principal Reasons for Adopting Methods 3.9.4.1 to 3.9.4.11

The above methods provide a range of non-regulatory methods as provided for in the policies in Section 3.9.3. There is also one permitted activity rule for the discharge of fertiliser into air and onto or into land outside the Lake Taupo catchment.

Method 3.9.4.1 encourages Waikato Regional Council to work with organisations, industry groups and individuals in the development and use of good practices that are designed to avoid, remedy or mitigate the adverse effects of non-point source discharges as a result of land use activities. This approach encourages good practice and practical measures which ensure adverse effects, are avoided or are minor. The good practices can be captured and promoted in guideline documents. Appropriate existing guidelines are:

a) Dairying and the Environment: Farm management issues[37].
b) Code of Practice for Fertiliser Use[38].
c) NZ Forest Code of Practice[39].
d) Design guidelines for earthworks, tracking and crossings[40].
e) Riparian Management Guidelines[41].
f) Section 3.9.7 (Use of Fertilisers) of this Plan.
g) The Fonterra Accord.
h) Doing it Right: Franklin Sustainability Project Guide to Sustainable Land Management.
i) New Zealand Deer Farmers Landcare Manual.

Method 3.9.4.2 provides that Waikato Regional Council will use environmental education programmes to raise the community's awareness regarding non-point source discharges and land use effects on water bodies.

Working with local communities and care groups is also encouraged as an important mechanism for increasing community awareness and ensuring that streamside areas are managed in an appropriate manner. Support could include facilitation and information to existing care groups and encouragement, planning information and advice to assist new care groups or community initiatives. These types of groups have a major input into enhancing and establishing streamside areas that are important in terms of managing non-point source discharges.

Method 3.9.4.3 promotes integrated management between Waikato Regional Council and territorial authorities. This is important because, although Waikato Regional Council has a direct role in managing water quality, territorial authorities control the effects of land use under s31 of the RMA, and to this extent, Waikato Regional Council and territorial authorities need to work together to jointly manage this issue.

Economic incentives in **Method 3.9.4.4** are also promoted as a way of managing land use effects. Through such incentives, Waikato Regional Council can support projects that assist with minimising the impacts of land use activities on water bodies. This includes the provision made under Section 3.4.9 of the Waikato RPS allowing territorial

[37] Heatley, P.R. 1998: *Dairying and the Environment: Farm management issues*. Dairying and the Environment Committee, Palmerston North.
[38] NZ Fertiliser Manufacturers Research Association. 1998: *Code of Practice for Fertiliser Use*. NZ Fertiliser Manufacturers Research Association. Newmarket, Auckland.
[39] Visser, R. and Smith, M 1993: *New Zealand Forest Code of Practice* (2nd Ed.) Logging Industry Research Organisation. LIRO, Rotorua.
[40] Waikato Regional Council. 1995: Design guidelines for earthworks, tracking and crossings: A practitioner's technical guide to minor effects based activities. *Waikato Regional Council Technical Publication no. 1995/8*. Waikato Regional Council, Hamilton.
[41] Collier, K., Cooper, A.B., Davies-Colley, R.J., Rutherford, J.C., Smith, C.M., and Williamson, R.B. 1995: *Managing riparian zones: a contribution to protecting New Zealand rivers and streams*. Department of Conversation, Wellington.

authorities to apply for financial assistance from Waikato Regional Council. This is particularly in regard to the acquisition of esplanade areas where regionally significant values or resources are involved, or where Waikato Regional Council considers assistance is necessary to achieve the objectives and policies of this Plan or the Waikato RPS.

The implementation of streamside management areas and the establishment of riparian vegetation has been proven to avoid and mitigate the effects of non-point source discharges. **Method 3.9.4.5** promotes the development of a publicly available streamside management fund. It is proposed to develop a fixed contestable fund in Council's Annual Plan budget.

Method 3.9.4.6 describes an undertaking by Waikato Regional Council to build on preliminary riparian management and non-point source discharge reports to develop a system which will provide guidance as to the location, method and extent of riparian management within the Region.

Method 3.9.4.7 gives an early indication of future methods such as a regulatory "backstop" that Waikato Regional Council will use, where voluntary action by landowners has not taken place and where significant adverse effects of unrestricted livestock access are still occurring. Rules in Section 4.3.5 provide for livestock entering or crossing the beds and banks of rivers and lakes.

Method 3.9.4.8 encourages research into the adverse effects of fertiliser use, farming techniques to minimise leaching and other methods that reduce nutrient contamination. Such research will result in a better understanding of the effects of nutrients on water bodies and which will in turn lead to development of farm management techniques and other methods that better utilise nutrients and reduce the adverse effects on water bodies. Research can be undertaken by Waikato Regional Council or outside organisations with an interest in nutrient management.

Method 3.9.4.9 recognises that it may be necessary to impose restrictions on the use of fertiliser or nitrogen leaching in addition to supporting voluntary compliance with the New Zealand Fertiliser Manufacturers' Research Association Code of Practice for Fertiliser Use 1998, in order to manage land and water in the Region to reduce adverse effects of non-point source discharges.

Section 17 of the RMA places a duty on every person to avoid, remedy or mitigate adverse environmental effects. **Method 3.9.4.10** promotes the use of Part XII of the RMA, where poor land management practices and decisions result in significant adverse effects on the water quality of streams and rivers. In these situations, Waikato Regional Council will apply to take enforcement action by way of an enforcement order, abatement notice or other mechanism under Part XII or the RMA. This may require a person to cease, or prohibit from commencing, an activity that may result in those effects occurring. Apart from within the Lake Taupo Catchment, Waikato Regional Council is taking a non-regulatory approach to management of non-point source discharges as it considers this is the most effective method for changing behaviour in the long term. However, there is also a mechanism needed to require improvement or remediation in the event of serious effects caused by inappropriate land use practices.

Research has shown that fertilisers are a source of phosphate and nitrate in the Region's water bodies. These contaminants enter water where fertilisers are leached out of the soils and enter either surface or ground water. **Rule 3.9.4.11** acknowledges that, while the inappropriate use of fertilisers can adversely affect water quality, the use of fertilisers should be a permitted activity. The Rule does not permit the discharge of fertilisers into water. Should this occur causing significant adverse effects on water, Waikato Regional Council is able to use Part XII enforcement. To assist resource users understand their obligations under a range of industry codes of practice a good

practice guide based on the key points of those codes is attached in Section 3.9.7 of this Plan. Waikato Regional Council will monitor the adverse effects of fertiliser use on water quality. If monitoring shows that the adverse effects of fertiliser use are unsustainable, Waikato Regional Council may consider reviewing its non-regulatory approach when the Plan is reviewed.

3.9.5 Environmental Results Anticipated

1. Net improvement in ground water and surface water quality across the Region.
2. Net increase in riparian and streamside management areas in the Region.
3. Reduction in sediment yields from bed and bank instability.
4. Ground water protected for drinking water purposes.
5. Uses and values identified by the Water Management Classes are protected.

3.9.6 Monitoring Options

Refer to Section 3.1.4.

3.9.7 Guidance Notes for the Use of Fertiliser

a) Waikato Regional Council supports the New Zealand Fertiliser Manufacturers' Research Association Code of Practice for Fertiliser Use 1998 with the exception that Waikato Regional Council recommends a maximum nitrogen loading rate not to exceed 150 kilogram/hectare/year for animal effluent irrigated pasture (compared to 200 kilogram/hectare/year recommended by the Code). The maximum nitrogen loading rate should include all sources of applied nitrogen including fertiliser, biosolids and irrigated farm effluent.

b) The publication 'Nitrogen Fertiliser Use on Waikato Dairy Farms: Bulletin One – August 1995: Waikato Regional Council' is available free of charge from Waikato Regional Council. This addresses time and rate of nitrogen applications, influence of other factors on effectiveness of nitrogen applications, minimisation of adverse environmental effects and avoidance of excessive nitrogen use. Waikato Regional Council is proposing to publish a further, similar guide related to fertiliser use on commercial vegetable production.

c) Landowners should maintain a nutrient budget model for their properties in order to demonstrate compliance with conditions in Rule 3.9.4.11.

d) Considerable care should be taken when irrigating fertilised areas. In this regard, refer to Rule 3.4.4.5 concerning the use of water for irrigation purposes. Compliance with the conditions for that Rule should ensure no significant adverse effects from irrigation of fertilised land.

e) Care must also be taken when fertilising areas of land that have been subject to applications of farm animal effluent within the preceding 12 months. Refer to Rule 3.9.4.11 condition f) in this respect.

f) All practical steps should be taken to avoid direct discharge of fertiliser to water. This activity is not permitted under the RMA or this Plan and, subject to the level of any adverse effects, constitutes an offence regarding which Waikato Regional Council may take enforcement action.

g) Where fertiliser application is proposed near property boundaries, the operator is encouraged to notify any neighbours that might be affected by the fertiliser application.

h) Where fertiliser is being applied onto an area of more than one hectare, the operator is encouraged to undertake the application using certified or calibrated equipment. The Spreadmark Certification scheme operated by the New Zealand Groundspread Fertilisers Association is an example of a certification scheme that provides certainty that the fertiliser is being applied at an even rate and distribution pattern.

i) Operators are encouraged to identify and have regard to all locations that are sensitive to the effects of fertiliser (e.g. wetlands, streams, lakes, ponds or

neighbours' houses) and identify means to minimise the effect of fertilisers on these areas.

j) Operators are encouraged to keep good fertiliser application records including the following:
   i) nutrient requirements of the crop(s)
   ii) date of the fertiliser applications
   iii) timing of cultivation and the are of land cultivated
   iv) fertiliser application rates (kilogram/hectare) and method(s) of application
   v) the areas of land in hectares that was cropped and fertilised
   vi) the type(s) of fertilisers used,
   vii) the crop harvest,
   viii) the nutrient budget for fertiliser applied onto areas where biosolids or effluents are also applied as a fertilised substitute.

3.10 Lake Taupo Catchment[42]

Area covered by Chapter 3.10 – Lake Taupo Catchment

This chapter applies to land within the Lake Taupo catchment. The map at 3.10. shows the general catchment boundary. The Waikato Regional Plan Lake Taupo Catchments Maps are available electronically or for viewing at Waikato Regional Council or Taupo District Council offices on request.

Background and Explanation

Lake Taupo is the largest lake in New Zealand. It is known for its dramatic vistas, deep clear near pristine waters, superb trout and volcanic heritage.

Ngati Tuwharetoa is the iwi with mana whenua in the Lake Taupo catchment*. Generations of Ngati Tuwharetoa have lived within the Taupo rohe, and as a result, have developed tikanga and kawa that reflect a special and unique relationship with the environment. Taupo nui-a-Tia, 'the great cloak of Tia,' is their taonga. Ngati Tuwharetoa are Treaty partners with the Crown and hold legal title to the bed of the Lake and its tributaries. Accordingly, Ngati Tuwharetoa are the kaitiaki of the Lake.

A 1998 community survey identified 14 values about the Lake that are most important to the Taupo community. Tuwharetoa Maori Trust Board, Waikato Regional Council, Taupo District Council and other agencies and organisations are working together to protect these values for the future as part of the 2020 Taupo-nui-a-Tia action plan[43]. The Variation to The Proposed Waikato Regional Plan focuses on protecting a subset of those values – most importantly, clear water in the Lake, high water quality feeding into the Lake and good trout fishing. All of these values are of local, regional and national significance. Central Government has identified the water quality of Lake Taupo as a national sustainable development issue in its Sustainable Development Action Programme.

Scientific evidence[44] gathered over the past 30 years shows that the water quality of the Lake is declining. Lake Taupo's excellent water quality is reflected by extremely low levels of plant nutrients and phytoplankton. Unlike many other lakes, nitrogen availability rather than phosphorus, limits phytoplankton growth in Lake Taupo. Development and intensification of the surrounding rural and urban land has increased the amount of nitrogen entering the Lake through ground water and rivers. This has promoted algal and phytoplankton growth in the Lake.

More specifically, there has been an increase in chlorophyll a (an indicator of the amount of tiny, free-floating algae) in the Lake's surface waters between 1994 and 2003. There have also been increases in the amount of nitrate nitrogen in the bottom

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[42] This chapter is commonly referred to as Variation No. 5 or the "Taupo Variation". The Waikato Regional Council proposed a variation to the Regional Plan to protect water quality in Lake Taupo by managing land use and nutrient discharges. The Variation is Chapter 3.10. The Environment Court confirmed the provisions of this variation on Friday, 17 June 2011. The variation became operative on Thursday, 7 July 2011.

[43] A three year project (2001-2004) funded by the Ministry for the Environment to develop a long-term plan for the sustainable development of the Lake Taupo catchment. This was a joint project by Tuwharetoa Maori Trust Board and Waikato Regional Council and involved a range of key partners. The project addressed 14 different community values for the catchment, including a sub-set of values related to water quality.

[44] Rae, R, Hawes, I, Chague-Goff, C and Gibbs, M (2000): Nuisance plant growths in the shallow littoral zone of Lake Taupo. NIWA Client Report CHC00/75. NIWA, Christchurch.
Spigel, R, (2001): A coupled hydrodynamic-ecosystem study of Lake Taupo – A preliminary model. NIWA Client Report CHC01/52. NIWA, Christchurch.
Elliot, AH and Stroud, MJ (2001): Prediction of nutrient loads entering Lake Taupo under various land use scenarios. NIWA Client Report EVW01224. NIWA, Hamilton.
Hall, JA, Payne, GW and White, E (2002): Nutrient bioassays on phytoplankton from Lake Taupo. NIWA Client Report EVW01229. NIWA, Hamilton.
Hawes, I (2003): Lake Taupo near-shore periphyton survey. NIWA Client Report HAM2002-029. NIWA, Hamilton.
Spigel, R, Howard-Williams, C, Hawes, I and James, M (2003): Predictions of water quality changes in Lake Taupo under different nitrogen loadings: Further refinements and application of a coupled hydrodynamic-ecosystem model. NIWA Client Report CHC2002-042. NIWA, Christchurch.
Gibbs, MM, Rutherford, JC and Hawes, I (2002): Lake Taupo Long Term Monitoring Programme 2000-2001, with a review of accumulated data since 1994. NIWA Client Report HAM2002-029. NIWA, Hamilton.
Howard-Williams, C, Gibbs, MM, Viner, AB, James, MR and Schwarz, A-M (1994): Review and Report on the Accumulated Data on Lake Taupo to 1993. Consultancy Report No. EVW003. NIWA, Hamilton.

waters of the Lake just before winter when the Lake's bottom waters mix with its surface.

Nutrients such as nitrogen and phosphorus are a staple food for plant life, promoting healthy, vigorous growth. Nitrogen is of particular concern because the increasing amounts of nitrogen in the Lake are feeding the growth of tiny free-floating algae in the water. Some algae are able to make their own nitrogen and their growth is controlled by the amount of phosphorus entering the Lake.

More algae in the water reduces the water's clarity. There are also more nutrient dependent weeds and slimes growing in sheltered waters near lakeshore settlements. Potentially toxic algae have, for the first time in 2001, and then again in Autumn 2003, bloomed unexpectedly in the Lake, resulting in health warnings being issued for Whakaipo Bay and Omori. All these factors are unmistakable signs that the Lake's water quality is slowly deteriorating. Because Lake Taupo is a complex and sensitive ecosystem, the changes being seen now are cause for serious concern. Overseas experience shows that in similar deep, low nutrient lakes, an increasing load of nutrients almost always results in increased algal growth and reduced water clarity. If left unchecked Lake Taupo will no longer be a clear blue lake with exceptional water quality.

Table 3-10 summarises the current water quality characteristics.

Table 3-6 Mean and standard deviation for four water quality variables measured at Lake Taupo deep water monitoring site

Water Quality Characteristic	Mean	Standard Deviation
Total Nitrogen (mg/m3)	70.3	19.1
Total Phosphorus (mg/m3)	5.57	1.4
Chlorophyll a (mg/m3)	1.18	0.6
Secchi depth (m)	14.6	2.7

Note: Statistics based on Lake Taupo data set, January 1999 to December 2003 inclusive.

The Cause of the Problem

Historically, the Lake had extremely low levels of nitrogen and other nutrients, which has limited the growth of nuisance plants in its waters. Before land around the Lake was developed, only very low concentrations of nitrogen entered the Lake from rain falling on the Lake and groundwater draining areas of indigenous vegetation. Today, groundwater draining from under pine forests, and water diverted into the Lake from the Tongariro Power Development (TPD) contains low concentrations of nutrient similar to indigenous vegetation. These levels cannot be reduced further.

Major land development in the catchment occurred in the middle of last century. The change to more intensive land uses around the Lake has increased the amount of nutrient and sediment entering the Lake. Much has been done by landowners over the years to protect the Lake from sediment, through extensive stream fencing, tree planting and land retirement under the Taupo Catchment Control Scheme. Landowners planted forestry in the eastern catchment and lakeshore reserves were created. All of these actions can be expected to aid management of phosphorus additions to the Lake, although recent data is showing slight increases in Lake water phosphorus concentrations. As yet phosphorus does not pose the same risk to Lake water quality as nitrogen. The role of phosphorus in this context will continue to be examined. Unfortunately, past landowner and agency efforts haven't been enough to counter increases in nitrogen leaching* from rural land and wastewater systems.

The Lake responds very slowly to the many biophysical processes that control the movement of nitrogen from the land to the Lake. Nitrogen moves down into the soil

and into groundwater, which in turn moves very slowly into streams and then into the Lake. This means that land use changes that occurred decades ago will continue to increase nitrogen inputs into the Lake via groundwater. Because of this time lag between what happens on the land and its effect on the Lake, it is only in recent years that the impact of the land conversion started in the 1930s has been seen in the Lake.

Although domestic wastewater discharges represent a relatively small proportion of the nitrogen entering the Lake, a number of studies have shown that discharges from community wastewater treatment plants and concentrations of on-site wastewater systems near the lakeshore, can have disproportionate effects in shallow near-shore waters[45]. Such discharges can increase the risk of weed and algae growth in shallow waters, as well as create a health risk from wastewater pathogens.

Nitrogen naturally enters the Lake from sources such as the atmosphere and decaying plant matter. Human activities have increased the amount of nitrogen entering the Lake. Scientific measurement and modelling indicate that pastoral farm land contributes most (93 percent) of the nitrogen leaching to the Lake which has been generated from human activities (manageable nitrogen), with urban stormwater and wastewater being a smaller localised nitrogen source (7 percent)[46]. Nitrogen concentrations in streams draining pastoral sub-catchments have increased by between 50 percent to 300 percent in all measured streams since the 1970s[47].

Community Consultation

Given the scientific information that levels of nitrogen in the Lake were increasing and were likely to affect Lake water quality into the future, Waikato Regional Council was faced with two key options in October 2000:

- Do nothing and accept the deterioration of Lake water quality into the future
- Take action to reduce nitrogen entering the Lake to protect water quality.

The paper *Issues and Options for Managing Water Quality In Lake Taupo*[48] was prepared and circulated amongst stakeholders and the general public, seeking feedback on four different options for Lake water quality:

1. Better water quality than now, with much less intensive land use in the catchment
2. Maintain current water quality by reducing nitrogen output from existing land uses and preventing further land use intensification.
3. Slightly lower water quality than now, with existing land use remaining the same but no further intensification.
4. Lower water quality. Do nothing to change land use in the catchment.

Based on feedback received at earlier public meetings, Waikato Regional Council identified that Option 4 of doing nothing or Option 1 of trying to improve water quality substantially were not favoured by the community. For this reason, the options paper focused on Options 2 and 3.

During 2001 the Waikato Regional Council decided to pursue Option 2 – maintain current water quality in Lake Taupo by reducing nitrogen output from existing land uses and preventing further intensification. This decision was based on two factors:

- community expectation for a clean Lake[49]

45 Hawes, I. (2003). Lake Taupo Near-shore Periphyton Survey. NIWA, Hamilton, May 2003;
Hawes, I. and Smith, R. (1993a). Effect of Localised Nutrient Enrichment on the Shallow Epilithic Periphyton of Oligotrophic Lake Taupo, New Zealand. New Zealand Journal of Marine and Freshwater Research 27:365-372;
Hawes, I. and Smith, R. (1993b). Influence of Environmental Factors on the Growth in Culture of a New Zealand Strain of the fast-spreading alga Hydrodictyon reticulatum (water net). Journal of Applied Phycology 5:437-445;
Rae, R., Hawes, I., Chague-Goff, C., and Gibbs, M. (2000). Nuisance Plant Growths in the Shallow Littoral Zone of Lake Taupo. NIWA, Christchurch, October 2000.

46 Elliot, AH and Stroud, MJ (2001): Prediction of nutrient loads entering Lake Taupo under various land use scenarios. NIWA Client Report EVW01224. NIWA, Hamilton. Updated by Waikato Regional Council in January 2004: see document # 885692.

47 Vant, B (2002): Inflows to Lake Taupo: nutrients and water ages. Technical Report TR02/18. Waikato Regional Council, Hamilton.

48 Waikato Regional Council (2000): Issues and Options for Managing Water Quality in Lake Taupo (document # 633814).

49 Stewart, C, Johnston, D, Rosen, M, Boyce, W, (2000): Public involvement in environmental management of Lake Taupo; preliminary results of the 1999 survey. Institute of Geological and Nuclear Sciences Limited science report 2000/7.

- a legislative mandate under the Resource Management Act to sustainably manage land in order to protect water quality, further reinforced by objectives and policies in the Waikato Regional Policy Statement.

Nitrogen Loads and Catchment Modelling

The actual amount of nitrogen discharges from the land within the catchment is not known as it has not been measured. Waikato Regional Council has developed a nutrient budget for the Lake, which estimates that nitrogen loads entering the Lake (from natural and human-generated sources) are about 1360 tonnes per year. This load compares with a pre-development or natural nitrogen load entering the Lake of about 650 tonnes per year. Therefore about 710 tonnes per year of nitrogen can be attributed to human-generated sources.

Due to the time lag between the land and the Lake, current nitrogen leaching on the land and nitrogen loads entering the Lake are not in equilibrium. Therefore, if the only action taken was to hold nitrogen discharges on the land at current levels, this would not maintain current water quality.

The amount of nitrogen yet to come before equilibrium is reached with current land use has been estimated at between 30% and 41% of the annual manageable load attributed to human-generated. No one can say for certain how much nitrogen is in transit in the groundwater on its way to the Lake.

Previous studies concluded that there would need to be at least a 20 percent reduction to ensure Lake water quality would eventually stabilise at current levels.[50] Therefore, a target nitrogen reduction of 20 percent of the manageable (human-generated) load, was considered a scientifically defensible target to maintain the current water quality of the Lake. It is estimated that it will be 2080 before equilibrium between nitrogen loads from the land and loads entering the Lake will be achieved.

The research and science involved with the issue of water quality decline in Lake Taupo does not provide absolute certainty. Estimates have been made with the best knowledge of the day but these may be refined as continued monitoring and modelling is carried out.

Social and Economic Costs Associated with Nitrogen Management

In August 2001, Waikato Regional Council formally agreed to liaise with Taupo District Council and Central Government on implementing land use change, including investigating funding options. This followed a July agreement from the Minister for the Environment to enlist Governmental support for the project with the view of developing a "whole of government" approach.

After considering a range of options to achieve the 20 percent reduction of nitrogen, Waikato Regional Council proposed a strategy that comprised regulation supported primarily by changes on Government land. The Government considered and revised this proposal in July 2003, proposing that the Government consider contributing to a joint public fund to assist the transition to more sustainable land use in the catchment.[51]

The funding partners (Central Government, Waikato Regional Council and Taupo District Council) agreed that the project costs should be shared 45 percent by Government, 33 percent by the Regional community, and 22 percent by the District

Gravitas Research and Strategy Limited (2004): Environmental Attitudes, Awareness and Actions, 2003: A survey of residents of the Waikato Region. Waikato Regional Council Technical Report 2004/01.
Stewart, C, Leonard, G, Johnston, D, Huser B (2004): Effectiveness of communication tools developed by the 2020 Taupo-nui-a-Tia environmental management project. Geological and Nuclear Sciences Limited science report.

50 Hamilton, D., Wilkins, K., (2004): review of Science underpinning the 20 percent nitrogen reduction Target for Lake Taupo. Centre for Biodiversity and Ecology Research, University of Waikato. Report prepared for the Ministry for the Environment.

51 This decision is recorded in the Cabinet Business Committee Paper CBC (03) 54, available from the Ministry for the Environment.

community. In December 2003, the Minister for the Environment announced that Government would commit $36.7 million towards the joint fund.

The contributions from Regional and District communities were outlined when Waikato Regional Council and Taupo District Council released their draft Long-Term Council Community Plan (LTCCP) documents in early 2004. Both Councils' judgement was that although landowners contribute significantly to the need for action, regulation alone is not likely to be successful because it is inherently unfair for most of the cost to fall on rural landowners. The effects currently seen in the Lake relate to Central and Local Government and landowner actions and practices since the middle of last century. Landowners have developed their properties in good faith, as until recently, there has been no community or regulatory requirement to manage non point source discharges of nutrient from rural land. If regulation alone was proposed, the rural community and infrastructure would decline as farmers exit the industry.

In their decisions on their respective LTCCP's in June 2004, Waikato Regional Council and Taupo District Council made an overall judgement that funding was needed to achieve community change that leads to catchment land being used for productive uses that can sustain the local community (including pastoral landowners) as well as protect the Lake. Both Councils recognised that social, cultural, economic and environmental well-being is important for the local community. As a result, the nitrogen reduction using financial assistance approach proposed, is more likely to be successful than a rules only approach.

The joint public fund is intended to permanently remove 20 percent of the manageable nitrogen in the catchment through securing permanent change on individual properties to a lower nitrogen leaching land use.

No Precedent Effect

The Objective, Policies and implementation methods contained in Chapter 3.10 have been developed to address the decline in Lake Taupo water quality in the context of the unique set of circumstances which apply in the Lake Taupo catchment. In doing so the Waikato Regional Council does not intend to create a precedent, either direct or indirect, for any other catchments or water bodies and does not consider that any precedent is created.

Issues of water quality decline in other catchments or water bodies in the Waikato Region will be investigated by the Waikato Regional Council as the need arises. If necessary, regional plan provisions and implementation methods will be developed that are appropriate for the specific circumstances of those catchments or water bodies, following appropriate community consultation and the consideration of efficiency, effectiveness, costs and benefits as required under section 32 of the Resource Management Act.

3.10.1 Issues

Environmental Quality Issues

Issue 1: Lake Taupo water quality decline - Effect on environmental values

Increases in nutrient discharges primarily from farming land uses but also wastewater disposal in the Lake Taupo Catchment have threatened the Lake's water quality, resulting in:

a) Increases in nitrogen in the surface waters of the Lake
b) Increases in nitrate nitrogen in the bottom waters of the Lake
c) More microscopic particles of nutrient dependant algae
d) Increases in blue-green algae blooms
e) Increases of algal slimes and other diatoms in shallow water
f) Blooms of filamentous green algae along the Lake edge.

Expansion of settlements and associated sewage treatment facilities, and the resulting leaching of contaminants near the lakeshore, has had localised adverse effects on the shallow near-shore water environment including:

a) Filamentous algae that coats rocks with a slippery surface
b) Some nutrient dependent macrophytes, taking up clear swimming space close to the shore
c) Periphyton that washes up on the shore, causing unpleasant odours
d) Increased risk of adverse health effects when near-shore waters are used for recreation.

If nutrient discharges continue at the same level or increase, then the adverse effects will worsen and will result in a further decline in lake water quality.

Issue 2: Lake Taupo water quality decline - Effect on community values

The changes outlined in Issue 1 will be difficult to reverse, with the potential to significantly affect:

a) Icon status of Lake Taupo and associated social and cultural value to local, regional and national communities
b) Mana of Ngati Tuwharetoa as kaitiaki of the Lake
c) Economic benefits to the local community from recreation and tourism activities
d) Amenity and landscape values associated with the Lake
e) Human health
f) Natural character of the Lake
g) The Lake's trout fishery
h) The Lake's ecological health.

Social, cultural and economic effects

Issue 3: Social, cultural and economic effects associated with nitrogen management

Managing the discharges referred to in Issue 1 will have adverse social, cultural and economic effects on individuals and communities in the Lake Taupo Catchment, such as:

a) Increased cost of compliance through new regulation and monitoring
b) Nitrogen limits will reduce the range and types of land use options undertaken, particularly for pastoral, shrub land and forestry landowners
c) Reduction in land values for some pastoral, forest and undeveloped land
d) Reduction in farm income, to the point that farms may become unprofitable or not viable

e) Preventing the opportunity to develop new or existing land uses where that development will result in a net increase of nitrogen to the lake
f) Effects on the wider community and social and cultural structures such as declines in school rolls, rural services, and local businesses
g) Limits on traditional Maori settlements of Papakainga or Marae buildings.

3.10.2 Objectives

Objective 1: Maintenance of the current water quality of Lake Taupo

The effects of nutrient discharges in the catchment are mitigated such that by 2080 the water quality of Lake Taupo is restored to its 2001 levels as indicated by:

Water Quality Characteristic	Mean	Standard Deviation
Total Nitrogen (mg/m^3)	70.3	19.1
Total Phosphorus (mg/m^3)	5.57	1.4
Chlorophyll a (mg/m^3)	1.18	0.6
Secchi depth (m)	14.6	2.7

Note: Statistics based on Lake Taupo data set, January 1999 to December 2003 inclusive

Objective 2: Effect on Lake Taupo water quality from land use activities

Land use activities which result in nitrogen leaching, particularly farming, are managed to facilitate the restoration of the water quality characteristics of Lake Taupo to their 2001 levels.

Objective 3: Avoidance of near-shore effects from wastewater

No greater concentrations of domestic wastewater nitrogen or pathogens in shallow near-shore waters of Lake Taupo in the vicinity of wastewater treatment and disposal systems.

Objective 4: Economic costs minimised and social and cultural effects mitigated

Economic costs of managing land use activities to achieve Objective 1 are minimised, and spread across local, regional and national communities. Social and cultural effects of managing land use activities to achieve Objective 1 are mitigated.

Principal Reasons for Adopting the Objectives

Objective 1 sets a long-term goal for Lake water quality. The baseline date for water quality characteristics to be compared against is centred on 2001, as this was the year that Waikato Regional Council made a public resolution that regulatory action would be taken to protect water quality of Lake Taupo.

There is a long time lag between nitrogen leached from land uses and the effect on the Lake because of the time taken for nitrogen to travel through the soil profile into groundwater and then eventually into the Lake, where it is fully mixed. This means that there is some nitrogen leached from land use change that occurred decades ago that has entered groundwater, but hasn't yet entered the Lake. Objective 1 sets long-term water quality characteristics which reflect a sustainable load of nitrogen to the Lake. This load to the Lake has been estimated to be 1200 tonnes of nitrogen per year. It is expected though, that this amount will rise over the next few decades as nitrogen in transit eventually reaches the Lake. This nitrogen in transit is estimated to be 20 percent of the nitrogen load coming from human-generated (and therefore manageable) sources.

The objective lists the water quality characteristics that will be used to characterise the water quality of Lake Taupo when the effectiveness of the objective is assessed. Waikato Regional Council undertakes regular monitoring of a wide range of water quality characteristics, but Total Nitrogen, Total Phosphorus, chlorophyll a and secchi depth have been chosen as most directly related to nitrogen in the Lake.

Objective 2 recognises that in order to achieve the long term water quality goal in Objective 1, activities which result in nitrogen leaching, particularly farming activities, need to be managed. This is in recognition of the large proportion of manageable nitrogen in the Lake Taupo catchment which results from farming activities.

Objective 3 recognises that discharges from community wastewater treatment plants and cumulative discharges from on-site wastewater treatment plants can cause localised increases in nitrogen and wastewater pathogens in shallow, near-shore waters, in addition to their overall contribution to nitrogen levels in the catchment. Satisfying the objective will mean that adverse health and amenity effects from increased discharges are prevented. The degree to which the objective is met can be measured by comparing water quality (nitrogen and pathogen levels) near discharges, with water quality in areas that would not be affected by discharges, accompanied by other tests such as dye tests as necessary.

Objective 4 recognises that managing land use activities to achieve Objective 1 could make some existing rural land uses unviable if they were required to achieve reductions in nitrogen, leaving many people in financial hardship. If no action is taken to reduce the impact on particular sectors of the community, there will be significant adverse social, cultural and economic effects on those sectors. Flow-on effects to the wider community, such as decline in local business, may also result. The objective seeks to minimise these impacts and ensure costs are spread across local, regional and national communities. The objective also creates an expectation of a higher level of involvement in managing change between the regulatory authority and affected landowners than has historically occurred.

3.10.3 Policies

To achieve Objectives 1, 2, 3, and 4

Policy 1: Tangata whenua values and interests

Recognise:

a) That Lake Taupo and land owned by the tribe within the Lake Taupo catchment is a tribal taonga for Ngati Tuwharetoa, who is the owner of the Lake bed.
b) The role of Ngati Tuwharetoa as kaitiaki of the Lake and owners of the Lake Bed, and that, accordingly, groups and individuals within Ngati Tuwharetoa ought to be able to participate in decision making processes related to adverse effects on the environment which impinge on tangata whenua values.
c) That Ngati Tuwharetoa has a unique cultural and spiritual relationship with Lake Taupo and their ancestral lands within the catchment of Lake Taupo.
d) That historical factors have inhibited Ngati Tuwharetoa's ability to develop their ancestral lands within the catchment of Lake Taupo.
e) That the nature of Ngati Tuwharetoa's relationship with and the form of its tenure of the land in the catchment of Lake Taupo are such that members of the iwi are unlikely and in some cases legally unable voluntarily to relinquish their interest in that land and have comparatively less ability to transfer their interests to land outside the catchment than do landowners generally.
f) That the unique relationship described in matters (a) – (e) above mean that it is appropriate to enable Ngati Tuwharetoa to develop their currently undeveloped or forested lands in a manner and to an extent that has no long term adverse effect on the water quality of Lake Taupo.

To achieve Objectives 1, 2 and 3

Policy 2: Identification of Lake Taupo as an Outstanding Waterbody in the Waikato Region

Ensure that activities do not adversely affect the significant characteristics of Lake Taupo that make it an outstanding water body in the Waikato region:

a) New Zealand's largest clear blue lake resulting from exceptional water quality (as defined by water quality characteristics) in that it, in most locations and most times, surpasses the New Zealand drinking water standards and is of higher quality than all Waikato Regional Council's ecological health and recreation standards.
b) High level of natural character of the margins of the Lake and inflowing streams due to the extent of wilderness, surrounding landscape and geological features and lack of built environment around much of the Lake.
c) Status as tribal taonga for Ngati Tuwharetoa.
d) Internationally renowned trout fishery.
e) Ability to support a wide range of indigenous fauna and flora.
f) Commercial opportunities based on the Lake's natural features and values, which provide local and national economic benefit.

To achieve Objectives 1, 2 and 4

Policy 3: Cap nitrogen outputs from land in the catchment

Avoid catchment-wide increases of nitrogen leaching from land by placing limits on the annual average amount of nitrogen leached by:

a) Enabling low nitrogen leaching activities, within specified nitrogen limits.
b) Managing other nitrogen leaching activities using the OVERSEER^{TM} model to determine nitrogen discharge allowances for each individual property, based on the single best year (year with the highest leaching value) of nitrogen leached between July 2001 and June 2005, and on an ongoing basis, manage the annual average of nitrogen leached through Nitrogen Management Plans.
c) All consents granted which determine a Nitrogen Discharge Allowance for an individual property, shall:
    i) have a common expiry date of 31 July 2036; and
    ii) the consents shall provide for opportunities to review and amend the consent conditions under Section 128 of the Act, including the Nitrogen Discharge Allowance, within 12 months of new or amended rules regulating the discharge or leaching of nitrogen from land use activities in the Taupo catchment becoming operative in terms of Clause 20(1) of the First Schedule to the RMA.

To achieve Objectives 1, 2 and 3

Policy 4: Reduce nitrogen outputs from land use activities and wastewater

By 2020, implement and complete actions that will ensure, over the long term, the permanent removal from the Lake Taupo catchment of 20 percent of total annual manageable load of nitrogen leached from land use activities and wastewater.

Policy 5: Review of Nitrogen Reduction Target and its Method of Achievement

Review of the Policy 4 nitrogen removal target and its method of achievement to be commenced by June 2018 having regard to:

a) The water quality of the Lake in terms of the water quality characteristics tabulated in Objective 1, and water quality in inflowing tributaries and groundwater.
b) The cumulative total amount of nitrogen leaching from all land uses within the Taupo Catchment and the nitrogen loads reaching the Lake from other.
c) The reductions in nitrogen leaching from land use within the catchment that have been achieved by the activities of the Lake Taupo Protection Trust and other measures.
d) The reduction in the amount of nitrogen discharged from wastewater systems
e) The current estimates of the nitrogen load already in transit to the lake in surface water and groundwater as a result of manageable land use activities within the catchment.
f) The need to determine whether the nitrogen removal target should be increased in light of matters (a) to (e) above in recognition of the fact that while a figure of 20 percent is appropriate over the ten year life of the Plan, scientific opinion in 2007 was is that in the longer term a figure in the range of 30 percent to 40 percent may be more appropriate.
g) The need to determine whether Policy 4 should be achieved by regulatory or non-regulatory methods. Should regulatory methods be required, consideration shall be given to the options available for the reduction of nitrogen leaching from existing land uses and other potential land uses within in the catchment during the relevant planning period.

Policy 6: Phosphorus and water quality

Ensure phosphorus discharges from land do not get to levels where they could adversely affect water quality in Lake Taupo and inflowing tributaries, and ensure management practices are sufficient to continue to avoid adverse effects.

Policy 7: Landowner involvement in catchment management

Promote sound working relationships between landowners in the catchment and Waikato Regional Council, that:

a) Ensure compliance with regulation
b) Confirm that the regulatory auditing process is fair and transparent
c) Ensure landowners have access to relevant information about current research and development initiatives, nitrogen management practices and overall progress in achieving the Lake target
d) Assist landowners to identify, define and implement nitrogen management practices and new technology that is relevant to their business and their property nitrogen limit
e) Assist the process of mutual understanding between the parties, and the joint development of solutions.

Policy 8: Determining Applications under Rule 3.10.5.9

When considering applications for resource consent under Rule 3.10.5.9 (Non-complying Activity Rule – Land uses and associated discharges of nitrogen to land that do not Comply with Rules 3.10.5.1 – 3.10.5.8) the consent authority shall have regard to:

a) The need to generally avoid any long term increase in the volume of nitrogen entering the Lake over and above that which was occurring during the July 2001 to June 2005 benchmark period;

b) The effectiveness of any mitigation services or works proposed by the applicant to offset potential increases in the amount of nitrogen leaching from the applicant's land in recognition of (a) above;
c) Where the proposed mitigation services or works described under b) above will not offset all potential increases in the amount of nitrogen leaching from the applicant's land, in terms of potential adverse effects on the applicant's economic wellbeing, whether the land in question would be rendered incapable of reasonable use if the application is declined;
d) The acceptability of using alternative nutrient leaching models if those models are demonstrated to provide results of a comparable robustness to those produced using the OVERSEER™ model in recognition of (a) above;
e) In all cases, the cumulative effect of applications previously granted under Rule 3.10.5.10 in terms of the total cumulative annual mass load of increased nitrogen discharges that have been authorised under the Rule relative to the 20 percent of total annual manageable load of nitrogen leached from farming land use activities and wastewater to be removed from the Lake Taupo Catchment by 2020.

Policy 9: Cap nitrogen outputs from wastewater sources

Ensure new or existing domestic on-site and community wastewater systems do not cause an increase in leaching of wastewater nitrogen to the Lake.

To achieve Objective 3

Policy 10: Domestic wastewater management in Near-shore Zone*

Ensure new on-site and community domestic wastewater systems within the Lake Taupo Near-shore Zone achieve a high standard of nitrogen and pathogen removal, and that existing domestic wastewater systems within the Near-shore Zone are reticulated if practicable, or upgraded if they are likely to cause increased concentrations of nitrogen or wastewater pathogens in shallow near-shore waters.

To achieve Objective 4

Policy 11: Papakainga and Marae Wastewater Discharges

Notwithstanding Policies 9 and 10, provide for the development of new on-site wastewater servicing for papakainga housing or Marae buildings provided that:
a) Additional wastewater nitrogen is offset where practicable and minimised where it cannot be offset;
b) The cumulative effect of additional nitrogen leaching as a result of this policy is inconsequential in terms of Objective 1;
c) Near shore effects are avoided.

Policy 12: Public Fund to share costs of reducing nitrogen from rural land in the Lake Taupo catchment

Ensure a public fund assists research and development of low nitrogen leaching land uses and management alternatives, and contributes to a permanent reduction in nitrogen outputs from farming land use activities. The administration of a public fund that is contributed to by local, regional and national communities, shall follow the guiding principles of:
a) Cost effectiveness
b) Certainty of permanent nitrogen removal
c) No adverse environmental consequences
d) Maximum nitrogen removal in minimum timeframe
e) Open and transparent process.

Policy 13: Effectiveness of the Public Fund

Review progress of the public fund after 2010 and initiate changes to the mechanism for achieving Objective 4 if substantial progress has not been made on Policies 4 and 12 by that time. The following factors will be considered during the review:

a) The extent to which agreements in process have achieved the 20 percent Nitrogen reduction target
b) The extent to which the fund has been efficient and effective in achieving permanent nitrogen removal and whether modifications to the criteria are necessary
c) The extent to which the administration of the fund has been efficient and effective and whether modification to the representation, structure or reporting are necessary.

Policy 14: Nitrogen Trading (Offsetting)

Permit the transfer of Nitrogen Discharge Allowances around the catchment of Lake Taupo, by ensuring any increases in nitrogen leaching are offset by corresponding and equivalent reductions in nitrogen leaching within the Lake Taupo catchment

Explanation and Principal Reasons for Adopting Policies 1 to 14

Policy 1: Identification of Lake Taupo as an Outstanding Waterbody in the Waikato Region. Outstanding natural features are considered a matter of national importance under s6 b) of the Resource Management Act 1991. The water body of Lake Taupo is an outstanding natural feature in the Region. The values and characteristics listed in the policy are exceptionally high in Lake Taupo and its surrounding margins, inflowing streams and wetlands. In addition, the 2020 Taupo-nui-a-Tia Action Plan identifies the Lake and its catchment as having a number of aspects highly valued by Ngati Tuwharetoa and the wider community. By identifying Lake Taupo as an outstanding waterbody, appropriate recognition can be afforded to it in all aspects of management.

Policy 2: Tangata whenua values. It is appropriate that the relationship Ngati Tuwharetoa has with the Lake be a key consideration in determining how protecting Lake Taupo can be achieved. Ngati Tuwharetoa are kaitiaki of the Lake, owners of the Lake bed and the catchment of the Lake is within their rohe or tribal area. They are a partner with local and central government regarding Lake management and will continue to be involved in future decision-making processes that relate to effects on resources of concern for tangata whenua.

Policy 3: Cap nitrogen outputs from land in the catchment. Policy 3 caps nitrogen loads on the land at 'existing' levels so that there will be no incremental increases in the future. The policy ensures nitrogen is capped on individual properties by setting an initial allowance or 'allocation' of nitrogen, based on recent historical nitrogen leaching output (2001-2005). The process of nitrogen allocation is made explicit in the two sub clauses. Part a) refers to low nitrogen leaching activities such as forestry and land with very low stocking levels or fertiliser application being able to continue, as long as basic standards are met. Part b) will apply to typical farming activities, and sets out how initial allocation or 'benchmarking' of nitrogen is allocated per property, and how land use activities shall be managed on an ongoing basis. Part c) recognises that any consents granted in the process of nitrogen allocation should be of a sufficient duration to enable farmers to realise the value of investments made during the consented period, while not compromising Council's ability to give effect to any revisions to Plan provisions made in future Plan reviews.

Policy 4: Reduce Nitrogen Outputs from Farming Land Use Activities and Wastewater. Policy 4 focuses on the nitrogen leached from current land uses and wastewater, rather than the amount of nitrogen measured in the Lake. The amount to be removed is intended to equal nitrogen load increases already in transit in groundwater (known colloquially as "the load to come"). It will ensure that the slowly rising total annual load of nitrogen is reduced back down to a sustainable level to protect Lake water quality over the long-term. Current scientific opinion suggests that the "load to come" ranges from 30 percent to 40 percent of manageable nitrogen currently being leached. However, it is estimated that only 5 percent of manageable nitrogen currently being leached is likely to enter the Lake by 2020 (or around 15% of the total "load to come"). These estimates take account of the fact that not all of the nitrogen discharged in the catchment travels towards the Lake, due to nitrogen dissipating through chemical and biological processes collectively called 'nitrogen attenuation'. The other aspect in estimating the amount of nitrogen which needs to be removed is that only human generated sources that can be managed downwards are taken into account, because natural sources of nitrogen to the Lake cannot be reduced further. Manageable sources originate from farming activities and human sewage.

The policy states that 20 percent of the manageable nitrogen currently being leached from land uses needs to be permanently removed from the total, so that it does not enter the Lake. While 20 percent is less than current scientific opinion on the amount of manageable nitrogen which needs to be permanently removed, it is clear that the long term water quality of the Lake will not be compromised over the ten year life of the Plan and that the nitrogen removal target can be increased if necessary at the time the Plan provisions are reviewed. Further, there are significant social and economic costs associated with increasing this target which, pursuant to Waikato Regional Council's section 32 analysis, cannot be justified at this time.

In respect of human sewage wastewater, installation of appropriate reticulation or upgrading of community wastewater systems is an essential component of achieving a 20 percent reduction. In respect of wastewater, a 20 percent overall reduction in nitrogen is expected to be achieved through reticulation of currently unsewered communities and upgrading community treatment plants where practicable. Determination of whether the target is reached can be made via a combination of measuring nitrogen discharges from community systems and modelling discharges from on-site systems. For the purpose of determining whether a 20 percent reduction in wastewater nitrogen has been achieved since the Variation was notified, unless more accurate information is obtained, the baseline wastewater nitrogen should be considered to be 21 tonnes per year, a figure derived from section 4.6.1 of the s32 evaluation (2007) for the Taupo Variation. Where there are community wastewater treatment plant discharges or communities serviced by on-site wastewater systems near the lakeshore, there is also increased potential for adverse effects on near-shore Lake water quality.

Policy 5: Review of Nitrogen Reduction Target. At the time that the Plan was notified in 2005 there were limitations regarding knowledge of the dynamics of nitrogen leaching processes in the catchment (including the nitrogen load still to come from historical land uses and the extent to which existing nitrogen discharges need to be reduced to achieve Objective 1); the likely effectiveness over the life of the Plan of the mechanisms in the Plan; the efficacy of the other mechanisms beyond the Plan and the RMA that have been implemented to reduce nitrogen discharge levels (including the allocation of funds to the Lake Taupo Protection Trust to achieve a 20% reduction in nitrogen discharge levels by 2020); and the availability over the life of the Plan of technologies or management techniques that would enable the impacts of nitrogen discharges to be reduced. Section 79 of the RMA 1991 requires that a review of the Plan shall be commenced no later than 10 years of it becoming operative. It is therefore appropriate that a review of the nitrogen removal target be commenced by

2018 taking into account the actual water quality of the Lake at that time, together with the amount of nitrogen leaching authorised, the amount of nitrogen leaching that has been removed by the actions of the Lake Taupo Protection Trust or otherwise, and the latest predictions of the nitrogen load still to come from historical land uses. Current scientific opinion is that there may be a need to increase the Nitrogen reduction target. Based on the above matters Waikato Regional Council will determine whether or not the original reduction target of 20% needs to be increased in the longer term, namely for the period after 2020. Waikato Regional Council will also review the methods by which the target is to be achieved, including regulatory and non-regulatory methods. Ratepayers and tax payers are funding the initial reduction target of 20% to avoid unacceptable social and economic effects on affected land users. If this fundamental premise changes in the future such that sufficient funding for any increased reduction target is not available, then all other options for achieving any further reductions will need to be reviewed. Different ways of achieving that would need to be evaluated at that time.

Policy 6: Phosphorus and water quality. Phosphorus is currently not having an adverse effect on water quality in Lake Taupo. Past catchment management by landowners and agencies to protect riparian areas and control soil erosion, as well as existing Waikato Regional Plan controls on soil disturbance, has reduced immediate risk of increased amounts of phosphorus entering the Lake. However, the strong interrelationship between nitrogen and phosphorus means that an increase in phosphorus could threaten Lake water quality. Waikato Regional Council regularly monitors Total Phosphorus as a water quality characteristic. In this way a 'watching brief' is kept on the nutrient.

Policy 7: Landowner involvement in catchment management. Implementation of the nitrogen cap through a regulatory regime and resource consents means a closer relationship with all landowners in the catchment will need to be established. This is particularly important for farming landowners, as determining nitrogen allowances and compliance with the rules will require a more one to one relationship between landowners and Waikato Regional Council staff than exists at the time of notification. It is important that this is recognised and the appropriate assistance and resources are provided.

Policy 8: Determining Applications under Rule 3.10.5.9. Under section 104D(1) of the RMA applicants need to show that their proposed activity will either have minor adverse effects on the environment or that it is not contrary to the objectives and policies of the Plan. One of those tests needs to be satisfied before the consent authority can grant the application. One of those tests needs to be satisfied before the consent authority can grant the application. If considered in isolation, it is possible that the potential adverse effects of any increased discharge of nitrogen from a single property could be argued to be minor in a catchment wide context. This could undermine the intent of the Plan with regard to capping nitrogen discharges at existing levels and consequently policy guidance is required on the matters that need to be taken into account when considering and deciding such applications.

The objectives and policies in the Plan give specific guidance on achieving a catchment-wide cap on discharges of nitrogen to the Lake. Consequently Policy 8(a) provides that long term exceedances of the catchment-wide cap should be generally avoided, although in some situations it may be appropriate to grant short term discharges of nitrogen that would breach the catchment-wide cap. This may for example be for the purposes of research and testing of new potential mitigation services or works.

Policy 8(b) recognises that avoiding breaches of the cap can be achieved through the use of effective mitigations measures.

Policy 8(c) recognises that in some exceptional circumstances it may be acceptable to breach the catchment-wide cap on a long term basis, but only where the resultant land would be rendered incapable of reasonable use.

Policy 8(d) provides flexibility for consent applicants to demonstrate that they are not breaching the catchment-wide cap through the use of nutrient leaching models other than OVERSEER™.

Finally, Policy 8(e) recognises that in all cases the cumulative amount of additional nitrogen discharges authorised in the catchment (relative to the catchment-wide cap) should be taken into account as this will have a direct impact on the achievement of the nitrogen reduction target in accordance with Policy 4 and therefore the long term water quality objective, Objective 1.

Policy 9: Cap nitrogen outputs from wastewater sources. Policy 9 supports Objective 1 by ensuring that wastewater discharges from new on-site or community systems do not result in additional nitrogen leaching to the Lake. Existing wastewater systems are also to be managed so that even if wastewater volumes are increased (such as due to expanding a community treatment plant), this does not result in additional nitrogen leaching to the Lake. This could be achieved by such methods as increasing nitrogen removal efficiency of the treatment or disposal system, or by offsetting increases by reducing other nitrogen sources.

Policy 10: Domestic wastewater management in Near-shore Zone. Nitrogen and wastewater pathogens leaching from wastewater systems near the Lake edge can have localised effects on the Lake's near-shore waters, increasing the risk of algal slimes, weed growth, unpleasant odours and health risks. These adverse effects degrade the recreational and amenity values associated with the Lake edge. Scientific research undertaken on these effects from wastewater systems suggests that conventional on-site domestic wastewater systems, particularly where there are many systems in close proximity, should not be located within 200 metres of the Lake edge. A Near-shore Zone has been defined where new on-site wastewater systems will need to be capable of a high standard of nitrogen and pathogen removal. The Near-shore Zone also includes all properties within lakeshore communities identified for sewerage reticulation upgrading. Where it is impracticable to reticulate systems in the Near-shore Zone (such as may be the case for isolated systems) these systems will need to be upgraded if they are likely to cause an increase in nitrogen or wastewater pathogens in shallow near-shore waters.

Policy 11: Papakainga and Marae Wastewater Discharges. Sections 6(e) and 8 of the Resource Management Act require that the Plan recognise and provide for the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga, and take into account the principles of the Treaty of Waitangi. Papakainga and associated Marae are a unique form of settlement, which allow hapu to provide for their social, cultural and economic well-being, are located on ancestral land where there has been a long period of continuous occupation, and are recognised by the Te Ture Whenua Maori Act 1993 and the Maori Land Court. In these respects, it is important that the protections for Lake Taupo water quality do not prevent Maori from providing for future housing needs on papakainga land, and expanding Marae facilities. As many papakainga and Marae areas do not have a nitrogen source which can be used to offset additional wastewater nitrogen, there needs to be a special provision to allow new wastewater systems on papakainga and Marae land, even if the additional wastewater nitrogen cannot be completely offset.

The special provision is by way of a specific restricted discretionary rule for new papakainga wastewater systems and wastewater systems servicing associated Marae buildings. While the intention of this provision is to provide for new on-site wastewater servicing for papakainga housing and Marae buildings, the policy recognises that use

of the rule must not threaten the ability to achieve Objective 1 and Objective 3. For the purpose of determining whether the cumulative effects as a result of the provision are more than inconsequential, the periodic assessments required by Method 3 will be referred to.

Policy 12: Public Fund to share costs of reducing nitrogen from rural land in the Lake Taupo catchment. A public fund of 81.5 million dollars contributed by district, regional and national communities has been established through an extensive community and government process between 2001 and 2004. The philosophy behind the establishment of the fund is to minimise the cost of social change from interventions to achieve permanent nitrogen reduction, thus meeting Objective 3. The major portion of this fund is to achieve permanent land use change through the purchase of land or nitrogen allowances from landowners in the Lake Taupo Catchment. The aim is for the fund to reduce nitrogen leaching in the catchment by at least 20 percent over 15 years following set up of the administration of the fund in 2005. Research and development, benchmarking, and administration of the fund make up the remainder of the fund. Although the direct day to day control of the public fund is through a mechanism set up under the Local Government Act, it is important that there is general policy direction provided on the purpose of the fund.

Policy 13: Effectiveness of the Public Fund. The public fund is the component of the Lake Taupo policy framework that ensures there is a 20 percent reduction in nitrogen leached in the catchment, in a way that achieves Objective 4. Considerable public money has been invested on the mechanism of a public fund to achieve this target, therefore it is essential that the fund's effectiveness is monitored and reviewed after a suitable amount of time has elapsed for it to be able to demonstrate progress.

Policy 14: Nitrogen Trading (Offsetting). It is appropriate to provide for some flexibility in land use management where nitrogen leaching over the whole catchment stays within the capped limits. This enables landowners to change their nitrogen discharge allowances while ensuring there are no adverse effects on Lake water quality. Nitrogen trading (or offsetting) is a mechanism that enables redistribution of nitrogen discharge allowances and land use change within the catchment.

3.10.4 Non-regulatory implementation methods

3.10.4.1 2020 Taupo-nui-a-Tia Action Plan

(to achieve Policies 1 to 10)

Waikato Regional Council will support the implementation of the 2020 Taupo-nui-a-Tia Action Plan through:

a) Working with the 2020 Taupo-nui-a-Tia Joint Management Group to discuss and co-ordinate work priorities, budgets and opportunities for working together
b) Developing effective relationships between the diverse agencies and groups in the Lake Taupo catchment
c) Funding implementation of the Action Plan through the Long-Term Council Community Plan
d) Yearly review of Waikato Regional Council actions, to ensure that existing actions are effective and monitored, and further actions are included as appropriate.

3.10.4.2 Taupo District Council Long-Term Council Community Plan

(to achieve Policies 4, 9 and 10)

Waikato Regional Council will advocate for provision for community wastewater upgrades and reticulation in the Taupo District Council Long Term Council Community Plan, particularly the reticulation and centralised treatment of sewage from lakeshore settlements including:

- Hatepe
- Waitetoko
- Oruatua/Tauranga Taupo
- Te Rangiita
- Waihi Village.

3.10.4.3 Monitoring and Review of Lake Taupo Water Quality

(to achieve Policies 3, 4, 6, 9, 10 and 11)

As part of the Waikato Regional Council's monitoring responsibilities Council will:

a) Ensure regular and on-going monitoring of water quality characteristics in Lake Taupo, inflowing tributaries and groundwater, and periodically analyse data and assess water quality trends.
b) Carry out five-yearly water aging of groundwater and surface water tributaries in 2008 and 2013.
c) Ongoing use of expert technical advice to assess the information in light of whether the long-term water quality goal will be achieved.
d) In 2015 carry out an analysis of the need for further plan intervention as a result of monitoring and assessment carried out in a-c.
e) Carry out five yearly assessments of the effects of community septic tank discharges on near shore water quality.
f) Carry out five yearly assessments of the cumulative effect of new papakainga and Marae wastewater discharges established under rule 3.10.6.6 on Lake water quality.
g) If as a result of the monitoring and assessment carried out in a) to c) above there is evidence that any of the effects described in S70(1)(c) to (g) of the RMA 1991 are likely to occur or are occurring, promptly undertake an analysis of the need for plan intervention.

3.10.4.4 Tangata Whenua Partnership

(to achieve Policy 2)

Waikato Regional Council will continue to work with Ngati Tuwharetoa in the spirit of partnership and in accordance with the memorandum of understanding established by the two parties, and through the memorandum establish processes to enable individuals and groups within Ngati Tuwharetoa to participate in decision making processes.

3.10.4.5 Research into Development and Implementation of Markets for Nitrogen Trading (or offsetting)

(to achieve Policy 14)

Waikato Regional Council will, with Central Government, Taupo District Council and affected landowners, support and facilitate research into the practical implementation of markets for nitrogen trading (or offsetting) between properties in the Lake Taupo catchment.

Waikato Regional Council will provide a central notice board to advertise nitrogen for sale/wanted.

Waikato Regional Council will, in cooperation with Taupo Lake Care and other interested and affected landowners, develop, periodically update and make available a Guideline that addresses the trading of nitrogen discharge allowances (NDA) within the Lake Taupo catchment. The Guideline will, as a minimum, address:

a) Waikato Regional Council's role in NDA trading;
b) How NDA trading occurs including an explanation of the necessary RMA process required to amend an NDA;

c) The use of OVERSEER ™ in the NDA trading process;
d) Leasing a NDA or trading a NDA for a limited period of time;
e) The implications of fixed duration consents for NDA trading;
f) How NDA trades will be affected by the review of the Plan;
g) The involvement of the Lake Taupo Protection Trust in NDA trading.

3.10.4.6 Recording of Non-Complying Consents Granted

(to achieve Policy 8)

Waikato Regional Council will maintain a publicly available database of consents granted, and applications declined, for activities that may result in nitrogen leaching from the land under Rule 3.10.5.9 (Non-Complying Activity Rule – Land Uses that do not comply with Rules 3.10.5.1 – 3.10.5.8).

The database will record for applications granted:

a) The site location;
b) The area (in hectares) of land to which the consent relates;
c) The nature of the land use activity;
d) The amount (in kgN/ha/year and also in total kgN/year for the site) of nitrogen leaching potential consented over and above the Nitrogen Discharge Allowance for the site calculated from the July 2001 to June 2005 benchmark data.

The database will record for applications declined:

a) The site location;
b) The area (in hectares) of land to which the consent application related;
c) The nature of the land use activity;
d) The amount (in kgN/ha/year and also in total kgN/year for the site) of nitrogen leaching potential that was applied for over and above the Nitrogen Discharge Allowance for the site calculated from the July 2001 to June 2005 benchmark data.

3.10.4.7 Wastewater Management

(to achieve Policies 4, 9 and 10)

Develop and implement in conjunction with Taupo District Council a management system for on-site wastewater in the Taupo Catchment that is consistent with Australia/New Zealand Standard 1547:2000.

3.10.4.8 Integrated Management of Wastewater

(to achieve Policies 4, 9 and 10)

Work with Taupo District Council and other stakeholders to:

a) Ensure integrated management of on-site wastewater
b) Ensure domestic wastewater systems chosen for new subdivisions and individual properties represent the Best Practicable Option, and include provision for nitrogen reduction
c) Advocate for centralised wastewater servicing of new subdivisions where such servicing is practicable
d) Ensure major stakeholders, including designers, manufacturers, installers and users of on-site wastewater systems, are provided with information, advice and discussion forums that help them carry out their wastewater management responsibilities appropriately and in line with Australia/New Zealand Standard 1547:2000
e) Promote practices to ensure non-domestic point source discharges such as stormwater and industrial discharges do not adversely affect Lake water quality

f) Support joint initiatives with the Bay of Plenty Regional Council and Rotorua District Council for testing treatment efficiencies of advanced wastewater treatment systems.

3.10.4.9 Public Fund

(*to achieve Policies 4 and 12)*

Waikato Regional Council will, in conjunction with Ngati Tuwharetoa and funding partners Taupo District Council and Central Government, continue to be a member of a Joint Committee of a charitable trust called the Lake Taupo Protection Trust, which is a Council Controlled Organisation that:

a) Comprises a board of technical people as Trustees appointed by the Joint Committee
b) Implements strategies to permanently reduce nitrogen from rural land use activities by 20 percent
c) Contracts appropriately skilled persons to provide advice and nutrient modelling support and education in the nitrogen benchmarking process, as the first phase of achieving a nitrogen cap for farming land uses

3.10.4.10 Review of Effectiveness of Public Fund

(to achieve Policy 13)

Waikato Regional Council will, in conjunction with the other members of the Joint Committee, Ngati Tuwharetoa, Taupo District Council and Central Government, initiate a review after 2010 of the Council Controlled Organisation's effectiveness toward achieving the nitrogen reduction target using public funding.

3.10.4.11 Education, Advice and Extension for Rural Land Use Activities Under a Nitrogen Cap

(to achieve Policies 3 and 7)

Waikato Regional Council will, in conjunction with any existing or new body with an interest in sustainable catchment management, investigate and develop land management activities and land uses that will maintain or reduce nitrogen leached from land in Lake Taupo catchment, including:

a) Providing advice through identification of Certified Nutrient Management advisors who are appropriately qualified in sustainable nutrient management in New Zealand agroecosystems to assist landowners to make changes to farm management practices or change land use under a nitrogen capping regime
b) As part of implementation develop templates that link land management practices with expected nitrogen leached
c) Co-ordinating development and updating of codes of practice and best management practices for existing land uses in the catchment
d) Supporting and facilitating research and development into profitable and viable rural land uses that prevent catchment-wide increases in nitrogen outputs
e) Supporting and facilitating research and development into methods for reducing the manageable load of nitrogen leached from farming land use activities including through on farm, riparian and in-stream practices
f) Advocate that managers of Government farm land in the Lake Taupo Catchment take on a leadership role in the investigation and implementation of low nitrogen leaching farming activities.
g) Facilitating periodic (being not less than annual unless agreed otherwise) consultative meetings between farming representatives within the Lake Taupo catchment and the providers of the OVERSEER™ Nutrient Budgeting Model to allow the farming representatives to discuss their nutrient management planning needs and for the providers to discuss proposed amendments to the model.

3.10.4.12 Landowner Involvement in Catchment Management

(to achieve Policies 3 and 7)

Establish a catchment management body that is supported and represented by regulatory authorities, Ngati Tuwharetoa and private owners of pastoral, forestry and undeveloped rural land, that has a formal reporting and advisory role to Waikato Regional Council on matters related to the transition to sustainable rural land uses in the Lake Taupo catchment, including:

a) Research needs
b) Extension and advice
c) Monitoring and auditing processes for rural land use consents.

3.10.4.13 Education for Rural Land Use Activities on Phosphorus Management

(to achieve Policy 6)

Develop, implement and regularly review an environmental education strategy that educates farmers on agronomic optimums for soil phosphorus levels.

Explanation and Principal Reasons for Adopting Methods 3.10.4.1 – 3.10.4.13

Method 3.10.4.1 implements most of the Lake Taupo policies because 2020 Taupo-nui-a-Tia is an integrated sustainable development strategy for the Lake Taupo Catchment. It has been developed jointly by tangata whenua, the community and local and central Government agencies and identifies threats to community values that require action. The health of Lake Taupo is a key community value. Its implementation will therefore provide a significant contribution to ensuring the Lake's health will not degrade long-term.

Method 3.10.4.2 implements Policies 4, 9 and 10, which ensure nitrogen leaching from wastewater is reduced and the adverse effects from wastewater are avoided. Because it is a Taupo District Council responsibility to reticulate settlements, Waikato Regional Council will advocate for planned upgrading to occur through the Council's Long-Term Council Community Plan. Currently Taupo District Council has committed to a progressive upgrading and reticulation programme and this is supported and recognised by Waikato Regional Council as a means of helping achieve the Lake water quality targets.

Method 3.10.4.3 implements Policies 3, 4 and 6. It is essential that monitoring of Lake characteristics is carried out on a regular basis to determine whether action is indeed making progress towards the Lake objectives. For instance, it is important to keep a check on levels of phosphorus, due to its relationship with nitrogen in maintaining Lake water quality. S79 of the RMA 1991 requires that a review of the Plan shall be commenced no later than 10 years of it becoming operative. 2015 is a reasonable timeframe for analysing need for policy intervention given the water ageing assessment will occur in approximately 2008 and 2013. Clause e) is to ensure data is collected which will indicate the extent to which Objective 3 is being satisfied. Clause f) is in recognition that the papakainga and Marae wastewater rule (Rule 3.10.6.6) has potential to allow a more than inconsequential increase in nitrogen leaching to the Lake. It is very important that the Regional Council keeps a check on additional nitrogen from new papakainga or Marae wastewater discharges, to help inform consent decisions under this rule. Clause g) is intended to ensure that there is an appropriate response if any of the effects in S70(1)(c) to (g) are likely to occur or are occurring at any time before the 10 year review required under S79 of the RMA 1991. Existing monitoring information indicates that these S70(1) effects are unlikely to occur. Nevertheless, S70(1)(c) to (g) essentially set minimum water quality standards, and it is appropriate to monitor and assess water quality on an ongoing basis and to determine

whether any further plan intervention is necessary if those minimum standards are not being met.

Method 3.10.4.4 implements Policy 2, which recognises Ngati Tuwharetoa's partnership role in managing Lake Taupo. Waikato Regional Council has a governance agreement with Ngati Tuwharetoa and this method envisages that both parties continue to develop sound working relationships to achieve the Plan's objectives.

Method 3.10.4.5 supports Policy 14 by investigating practical issues around implementing the nitrogen offsetting regime for the Lake Taupo Catchment.

Method 3.10.4.6 Under Rule 3.10.5.9 applications will be considered from land users who wish to undertake activities that may result in nitrogen leaching from their land at a rate over and above that provided for in the Nitrogen Discharge Allowance for the site as calculated from the July 2001 to June 2005 benchmark data, or where the applicant does not propose to offset that increase by achieving a decrease in nitrogen leaching on another property in the catchment.

As applications under Rule 3.10.5.9 will be for non-complying activities it may be necessary under section 104D(1)(a) of the RMA to determine whether the effects of the proposed activity will be more than minor. One of the potential adverse effects to be considered in that regard is the cumulative effect on Lake Taupo of successive consents granted under Rule 3.10.5.9. To achieve that assessment a robust record of such consents is required. A record of applications declined will also provide useful information to decision makers.

Method 3.10.4.7 implements Policies 4, 9 and 10 by improving the management of on-site domestic wastewater systems in the catchment. AS/NZS 1547:2000 provides guidance on best management practice. The standard recognises that good management of systems is the single most important factor in ensuring systems function properly over the long-term. This is particularly necessary for the advanced treatment plants being encouraged in the Taupo catchment.

Method 3.10.4.8 also implements Policies 4, 9 and 10. It recognises that there are many parties involve in wastewater management and that there are benefits in these parties working together to achieve integrated management. By working with Taupo District Council and other stakeholders such as the wastewater industry, developers and homeowners, we can ensure that appropriate wastewater solutions are adopted for new developments and existing communities, and ensure these solutions are well managed.

Method 3.10.4.9 implements Policies 4 and 12, which establish a public fund for reducing nitrogen leaching in the catchment and its on-going implementation. The method sets up the administration of the fund through a Joint Committee and Council Controlled Organisation that will buy up nitrogen from the catchment.

Method 3.10.4.10 implements Policy 13, and provides for a review of the effectiveness of the fund to ensure it achieves the 20 percent target. The method ensures the Joint Committee initiates a review and determines the effectiveness of the Council Controlled Organisation set up as a charitable trust called Lake Taupo Protection Trust. Ongoing monitoring of Lake Taupo Protection Trust performance targets will be undertaken and reported by Lake Taupo Protection Trust. Public input will be gained through Draft Annual Plans put out by Waikato Regional Council and Taupo District Council under the Local Government Act.

Method 3.10.4.11 implements Policies 3 and 7. It recognises that farmers will need information and advice that will help them to farm under the new land use and discharge rules regime. Farmers will need to understand how their farm management

practices influence the quantity of nitrogen leaching from their land so that they are able to maximise production while remaining within their nitrogen cap. The method is intended to assist research and development into viable low nitrogen land uses and practices that will mitigate the nitrogen leached from farming land uses. This is a key component of the Lake Taupo policy framework and, as such, requires a proactive stance from Waikato Regional Council. This method is specific in establishing a commitment by Waikato Regional Council to be actively involved with relevant agencies and organisations and facilitate appropriate research and development.

Method 3.10.4.12 implements Policies 3 and 7. The method establishes a catchment body that provides effective liaison and more formal landowner involvement in decision making processes.

Method 3.10.4.13 implements Policy 6 which recognises that appropriate management practices can be promoted to continue to avoid adverse effects of Phosphorus discharges on Lake water quality.

3.10.5 Implementation Methods – Land Use and Discharge Controls

Introduction to the Rules

The purpose of these rules is to implement the policies that adopt nitrogen capping and offsetting to protect the water quality of Lake Taupo. The rules manage existing and new nitrogen leaching activities either as permitted activities with standards, or as controlled activities that determine landowner nitrogen discharge allowances. The rules require that farmers obtain land use consents. Discharges of nitrogen arising from land use activities are authorised by a separate permitted activity rule.

Low nitrogen leaching activities

Low nitrogen leaching activities are permitted with standards (Rules 3.10.5.1 and 3.10.5.2). For low density farming (such as rural residential lots) stocking standards are provided on a per hectare basis. If these standards are not met, landowners must apply for a land use consent under the controlled activity rule (3.10.5.3). Non-farming activities are permitted under Rule 3.10.5.2.

Farming Activities

Farming activities existing as at the date of notification of this Plan (9 July 2005) are allowed but require a resource consent under 3.10.5.3 controlled activity rule. A process called benchmarking is required under this rule, which determines nitrogen discharge allowances for farming activities through the application of a nutrient budgeting model called OVERSEER™ Farm information used to determine the nitrogen allowance will be sourced from the period of July 2001 to June 2005. This will determine the annual nitrogen allowance that property must adhere to. In recognition that farmers and Waikato Regional Council will need time to collate and analyse this information, consents are not expected to be granted for approximately two years after the rules are proposed. Thus, the rule states that it does not come into effect until 1 July 2007. The rule also states that ongoing nitrogen leaching management shall be undertaken through Nitrogen Management Plans.

Offsetting and Trading

Landowners have flexibility to increase or decrease nitrogen leaching through an offsetting mechanism in the rules. Increases in nitrogen leaching can only occur where there are corresponding decreases in nitrogen leaching elsewhere in the catchment. Overall, there must be no net increase in nitrogen leaching within the catchment. A nitrogen leaching activity such as pastoral farming may decide to reduce the amount of nitrogen leached, thus releasing nitrogen for use by another landowner who wishes to

change to a higher nitrogen leaching activity (for example conversion of non-nitrogen fixing plantation forestry planted into unimproved land to lifestyle blocks). This flexibility to offset changes in nitrogen leaching is facilitated through the consent process and enables nitrogen to be traded between landowners. Offsetting is provided for as a controlled activity rule for existing farming activities (3.10.5.7) and also in Rule 3.10.5.8. The controlled activity Rule 3.10.5.8 authorises an increase in nitrogen leaching (subject to offsetting on another property), for land not being farmed when the Plan was notified. In such a case, the new land use must be authorised by permitted activity Rule 3.10.5.1 or controlled activity Rule 3.10.5.3.

Low nitrogen leaching activities such as lifestyle blocks, that either exist at the time of the notification of this Plan or are established under Rules 3.10.5.3 and 3.10.5.8, are not given the opportunity to enter into offsetting arrangements in the rules.

Summary of Rules

Land Uses and Discharges	Activity Status
Low nitrogen leaching farming activities (Rule 3.10.5.1)	**Permitted** (e.g. rural residential lots) if low stocking rate and fertiliser standards are met. Note: wastewater rules in 3.10.6 apply.
Nitrogen leaching non-farming activities (Rule 3.10.5.2)	**Permitted** (e.g. indigenous vegetation, forestry, existing golf courses)
Nitrogen leaching farming activities (Rule 3.10.5.3)	**Controlled** (e.g. drystock, dairy farms and land with livestock that doesn't meet rule 3.10.5.1) to establish Nitrogen Discharge Allowances for properties & Nitrogen Management Plans that ensure no increase in nitrogen leaching in the future UNLESS corresponding decreases in nitrogen leaching are achieved elsewhere in the catchment as an offset.
Flexibility for Maori Land (Rule 3.10.5.4)	**Controlled** Provides a limited development allowance for Maori land of 2 kgN/ha/year above relevant deemed background leaching rates
Flexibility for Non-Maori Land (Rule 3.10.5.5)	**Controlled** Provides a limited development allowance for Non-Maori land of 2 kgN/ha/year above relevant deemed background leaching rates
Part Sale of a Farm (Rule 3.10.5.6**)**	**Controlled** Provides for division of benchmarked NDA upon the part sale of a farm
Nitrogen Trading (Offsetting) (Rule 3.10.5.7)	**Controlled** Provides for nitrogen trading (offsetting) to occur
Nitrogen offsetting for new nitrogen leaching activities (Rule 3.10.5.8)	**Controlled** (e.g. first and second non-nitrogen fixing plantation forestry planted into unimproved land changing to rural residential) to enable increased nitrogen leaching where there is a corresponding decrease in nitrogen leaching elsewhere in the catchment as an offset.
Land use activities that don't meet the rules (Rule 3.10.5.9)	**Non-complying**
Associated discharges of nitrogen, effluent, and fertiliser (Rule 3.10.5.10)	**Permitted** Authorises discharges of nitrogen, effluent, and fertiliser associated with the land use activities authorised by rules 3.10.5.1 to 3.10.5.9
Associated discharges to air (Rule 3.10.5.11)	**Permitted** Authorises discharges to air associated with the land use activities authorised by rules 3.10.5.1 to 3.10.5.9
Deemed Leaching Rates (Rule 3.10.5.12)	Establishes the relevant deemed leaching rates for landuse in the catchment.

3.10.5.1 Permitted Activity Rule – Low Nitrogen Leaching Farming Activities

The use of land in the Lake Taupo catchment that may result in nitrogen leaching from the land and entering water:

1. for farming activities which were existing as at the date of notification of this Rule (9 July 2005); and
   i) the land has not been subject to a consent pursuant to Rule 3.10.5.3, 3.10.5.6, 3.10.5.7, 3.10.5.8 or 3.10.5.9; or
   ii) where the land has been subject to a consent pursuant to Rule 3.10.5.3, 3.10.5.6, 3.10.5.7, 3.10.5.8 or 3.10.5.9 and the land has a Nitrogen Discharge Allowance sufficient to allow for at least 8 kilograms of nitrogen per hectare per year for farming plus 3.5 kilograms of nitrogen per year for any advanced wastewater system in accordance with Rule 3.10.6.3 or 10 kilograms of nitrogen per year for any conventional wastewater system in accordance with Rule 3.10.6.4; or
2. for land which was not used for farming activities at the date of notification of this Rule, and where any nitrogen increase has been authorised by a resource consent granted under Rule 3.10.5.7 or 3.10.5.8 and the land has a Nitrogen Discharge Allowance sufficient to allow for at least 8 kilograms of nitrogen per hectare per year for farming plus 3.5 kilograms of nitrogen per year for any advanced wastewater system in accordance with Rule 3.10.6.3 or 10 kilograms of nitrogen per year for any conventional wastewater system in accordance with Rule 3.10.6.4.

is a **permitted activity** if the following conditions are met:

Advisory Note:

- This Rule in part provides for land that has either been leaching high nitrogen levels or has resource consent to do so, to convert to low leaching land use activities (e.g. lifestyle blocks, forestry, etc.).

a) Where the land is not used to graze stock, no more than 75 kilograms of nitrogen per hectare per year shall be applied to the land. Where the land is used to graze stock, the maximum number of animals shall be equivalent to any one row of Table 3.10.5.1 below:

Table 3.10.5.1 – Stock Limits

Animal Type	Maximum number of animals permitted per hectare	Maximum number of animals permitted per 10 hectares
Dairy cow	0.55	5.5
Beef cattle	0.8	8
Calf	3.3	33
Horse	0.8	8
Sheep	7.7	77
Deer	3.3	33
Goat	10	100
Alpaca or Llama	3.3	33
Pig (free range)	2.5	25

b) Progeny of animals grazed under condition a) (such as lambs and calves) are permitted provided that no additional feed is brought on to the property except feed that is supplied as per standard industry practice to meet animal welfare requirements during the period of weaning and stocking rates return to the stock limits outlined in condition a) between 1 April and 31 July each year.

c) Non-grazing domestic animals including cats, dogs, chickens and ducks that are kept for domestic purposes are permitted and are not to be taken into account for the purposes of this rule.

and provided also that:
Where a land use is authorized as a permitted activity by this Rule, the subject land shall not be used to offset any nitrogen leaching increase elsewhere in the catchment.

Advisory Notes:

- This Rule in part provides for land that has either been leaching high nitrogen levels or has resource consent to do so, to convert to low leaching land use activities (e.g. lifestyle blocks, forestry, etc.).
- The area of land used to calculate animal density excludes any area of land used for buildings, lawns or gardens.
- Wastewater systems must be authorised by the wastewater rules in section 3.10.6.
- The application of 75 kilograms of nitrogen per hectare per year in a non-grazing situation, or grazing at the limits in Table 3.10.5.1 is equivalent to 8 kilograms per hectare per year nitrogen leaching rate.

3.10.5.2 Permitted Activity Rule – Nitrogen Leaching Non-Farming Activities

The use of land in the Lake Taupo catchment:

1. Where the land was not used for farming activities at the date of notification of this Rule (9 July 2005); or
2. Where a non-farming landuse activity is established after the date of notification of this Rule (9 July 2005) and involves no:
   i) nitrogen fertiliser applied to land (except that authorised in condition a), b) or c) of this rule); or
   ii) animal grazing
3. That is for planted production forestry including grazing of animals and cropping ancillary to that land use

that may result in nitrogen leaching from the land and entering water is a **permitted activity** if the following standards, terms and conditions are met:

a) Where the use of land is for planted production forestry:
   i) Spot application of nitrogen fertiliser in conjunction with planting shall not exceed 30 grams of nitrogen per tree.
   ii) Broadcast application of nitrogen fertiliser at any time shall not exceed 240 kilograms per hectare of nitrogen per application.
   iii) Broadcast application of nitrogen fertiliser shall not occur between 1 June and 31 August.
   iv) A nutrient analysis of foliage must be used to plan fertiliser application and must be made available to the Waikato Regional Council upon request.
   v) Except where plantations are severely deficient (where visual symptoms of nitrogen deficiency are evident), broadcast application shall be made in conjunction with thinning and pruning operations.
   vi) The application of nitrogen fertiliser shall not result in any avoidable direct application of fertiliser to any water body.
b) Where the use of land is for erosion rehabilitation, nitrogen fertiliser may be applied during erosion area rehabilitation.
c) Where the use of land is for domestic gardening (meaning gardening not undertaken for commercial purposes) nitrogen fertiliser may be applied to land at a rate no greater than the manufacturers' recommendation.

and provided also that:
Where land use is authorised by this rule, the subject land shall not be used to offset any nitrogen leaching increase elsewhere in the catchment.

Advisory Notes

- The nitrogen fertiliser application rates specified in Rule 3.10.5.2(a)(i) to (iii) are specific to the geology and soil conditions present in the Lake Taupo catchment.
- Rule 5.1.5(n) relating to soil conservation and vegetation removal also applies to the activities covered under Rule 3.10.5.2.

3.10.5.3 Controlled Activity Rule – Nitrogen Leaching Farming Activities

The use of land in the Lake Taupo catchment for any farming activity existing as at the date of notification of this Rule (9 July 2005) that does not meet the conditions for permitted activities under Rule 3.10.5.1 and which may result in nitrogen leaching from the land and entering water is **a permitted activity until 1 July 2007, after which it will be a controlled activity,** subject to the following conditions, standards and terms:

Standards, terms and conditions to be met by applicants to enable them to seek consent under this Rule:

Benchmarking in order to determine Nitrogen Discharge Allowance

a) Benchmark data for a minimum of 12 consecutive months during the period July 2001 to June 2005 shall be submitted to Waikato Regional Council as part of any application for consent under this Rule. The benchmark data shall comprise the parameters and information contained in Table 3.10.5.3. The amount of nitrogen leached from farming activities shall be calculated by Waikato Regional Council's Benchmarking Contractors using the OVERSEERTM Model Version 5.4.3 and the benchmark data. The nitrogen leached shall include any nitrogen arising from the application of farm animal effluent, pig farm effluent, feed pad effluent, stand-off pad effluent, and fertiliser onto land (those activities require authorisation under rules 3.5.5.1 to 3.5.5.5 and rule 3.9.4.11 outside of the Taupo catchment). The amount of nitrogen leached in the single best year (being the 12 consecutive months with the highest leaching value) over the July 2001 to June 2005 period shall be the Nitrogen Discharge Allowance for the land to which the controlled activity consent applies.

Waikato Regional Council reserves control over the following matters:

i) The specification of the Nitrogen Discharge Allowance in kgN/ha/year and total kgN/year for the land to which the controlled activity consent applies as determined under standard and term a);
ii) The requirement for a Nitrogen Management Plan (NMP) for the land to which the controlled activity consent applies if the farm management practices represented by the benchmarking data referred to in standard and term a) are altered. The OVERSEERTM Model Version 5.4.3 shall be used to calculate the nitrogen leached from the land to which the controlled activity consent applies inclusive of the altered farm management practices and this shall form the basis of the NMP. The NMP shall demonstrate that the nitrogen leached from the proposed farming activities complies with the benchmarked Nitrogen Discharge Allowance. The NMP shall be provided to the Waikato Regional Council within 10 working days of the farm management practices being altered;
iii) The self monitoring, record keeping, information provision and site access requirements for the holders of resource consents required to demonstrate ongoing compliance with the Nitrogen Management Plan;
iv) The circumstances and timeframes under which the resource consent conditions may be reviewed, provided that any review of a consent condition specifying the Nitrogen Discharge Allowance shall only occur when regional plan provisions

have been made operative which specify a new target for the amount of nitrogen entering Lake Taupo and which requires that target to be achieved by the reduction of the Nitrogen Discharge Allowance specified in any resource consent;

v) The duration of the resource consent;

vi) The circumstances under which resource consents granted under this Rule can be surrendered either in whole or part pursuant to s138 of the RMA.

Notification:
Notice of controlled activity applications received in accordance with this Rule does not need to be served if there are no leasehold interests applying to the land to which the application relates.

Table 3.10.5.3 – Guidance for Nitrogen Discharge Allowance

Information to be provided to enable benchmarking to occur
Identification of the land area (farm) to which the consent application relates.
A map or aerial photograph showing the different blocks within the farm.
Annual stocking rate (numbers, types and classes) including a breakdown by stock class for each month.
A description of the farm management practices used on each block including (where applicable): (a) ground cover – pasture, crops, non-grazed areas (including forestry, riparian and tree areas) (b) stock management – lambing/calving/fawning dates and percentages, any purchases and sales and associated dates, types and age of stock (c) fertiliser management practices - types, quantities, rates of application and details of varying procedures for different blocks (d) winter management of cattle grazed off – including the use of feed pads, grazing off or standoff pads (e) crop management practices – area cultivated, method of cultivation, crop types, rotations, timing of sowing and harvesting, resulting use of crop, where and when it is fed out on farm or when it is exported and where to (f) supplementary feed brought onto the farm - feed type, annual tonnage, dry matter content, feed quality, nitrogen content (g) use of nitrification inhibitors and any other verifiable nitrogen leaching inhibitors **Advisory Note:** Where any of the matters (a) to (g) have not been implemented on a particular block then that should be stated.
Copies of any available annual accounts to verify the above information. Copies of any available invoices or receipts for purchases of stock, fertiliser, supplements imported or exported
Farm animal effluent, pig farm effluent, feed pad and stand-off pad effluent management including; (a) area of land used for irrigation (b) annual nitrogen loading rate and nitrogen load rate per application (c) instantaneous application rate
Clean water irrigation in terms of areas, rates and systems

Advisory Notes:

Notification

If there are leasehold interests applying to the land to which an application relates, then the tests for service in the RMA 1991 apply.

Nitrogen Discharge Allowance

- Nitrogen Discharge Allowance means the maximum amount of nitrogen allowed to leach from land, as determined in accordance with Rule 3.10.5.3, Rule 3.10.5.6, 3.10.5.7, 3.10.5.8 or 3.10.5.9. A Nitrogen Discharge Allowance will be specified as a condition of any consent granted under this rule and will be described as the kilograms of nitrogen per hectare per year and the total kilograms (or tonnage) of nitrogen per year permitted to be leached from the land to which the consent relates, each year.

Benchmark data

- Benchmark data means the parameters and information for farming activities during the benchmarking period under Rule 3.10.5.3 a) listed in Table 3.10.5.3. In the absence of benchmark information being provided the WRC will use appropriate default numbers for any necessary inputs to the OVERSEER™ model (such default numbers will generally be around 75% of normal catchment average values for those inputs).

OVERSEER™ Model

- The OVERSEER™ Model is a nutrient management computer model produced by AgResearch, FertResearch and the Ministry of Agriculture and Forestry, which provides estimates of the annual fate of nitrogen, phosphorus, potassium and other nutrients in kilograms per hectare per year.

Nitrogen Management Plan

- The benchmark data for the selected best year comprises the initial Nitrogen Management Plan. A separate Nitrogen Management Plan is not required unless the benchmarked farming practices are to be altered. In that case a separate Nitrogen Management Plan must be prepared showing that the proposed farming activities will comply with the farm's benchmarked Nitrogen Discharge Allowance, by using the Version 5.4.3 of the OVERSEER™ Model and relevant parameters listed in Table 3.10.5.3. A farm's Nitrogen Management Plan thereafter remains valid until such time as the consent holder again proposes a change to farming practices, such that the new farming practices are no longer consistent with the existing Nitrogen Management Plan. At that point a revised Nitrogen Management Plan is required, using Version 5.4.3 of the OVERSEER™ Model, to again demonstrate that the changed farming practices will not result in the breach of the Nitrogen Discharge Allowance for the farm.

Duration

- Policy 3 (c) provides guidance regarding the duration of the resource consent.

Monitoring and Compliance

- Farm management practices will be monitored to ensure that the Nitrogen Discharge Allowance for the land to which the controlled activity consent applies, has not been exceeded.

Offsetting Nitrogen

- Once a Nitrogen Discharge Allowance has been determined for the land to which the consent applies, any further increase in nitrogen leaching must be offset by a corresponding and equivalent decrease in nitrogen on one or more other properties in the Lake Taupo catchment. The increase shall be secured by way of a change to the Nitrogen Discharge Allowance.
- If the Nitrogen Discharge Allowance for the land to which the consent applies is to be changed, either through the sale or purchase of a nitrogen discharge entitlement, or through the sale or purchase of part of a farm, the consent holder will first need to either apply for a change to the consented Nitrogen Discharge Allowance pursuant to s127 of the RMA or seek a new consent under Rules 3.10.5.6 or 3.10.5.7.

3.10.5.4 Controlled Activity Rule – Development of Ngati Tuwharetoa Undeveloped and Forested Land

The use of land, in the Lake Taupo catchment which may result in nitrogen leaching from the land and entering water is a **controlled activity** subject to the following conditions, standards and terms:

a) All of the land subject to the application is Maori land within the meaning of Section 4 of the Te Ture Whenua Maori Act 1993;
b) This Rule shall only enable increases in nitrogen leaching in respect of that part of the land subject to the application which as at 9 July 2005 comprised unimproved land or non-nitrogen fixing plantation forest;
c) All or part of the land subject to the application is proposed to be developed in a manner that may result in an increase in nitrogen leaching from that land;
d) The total cumulative amount of additional nitrogen leached from all land authorised for development under this rule shall not exceed 11,000 kilograms per annum by 30 June 2017;
e) The average amount of nitrogen leaching from that part of the land subject to the application, once the proposed development is in place, shall not exceed 2 kilograms of nitrogen per hectare per year plus the relevant deemed nitrogen leaching rate defined in Rule 3.10.5.12 for unimproved land or non-nitrogen fixing plantation forest;
f) No resource consent or combination of resource consents under this Rule shall allow an increase in average nitrogen leaching in respect of any land that exceeds 2 kilograms of nitrogen per hectare per year;
g) The potential to increase the amount of nitrogen able to leach from the land subject to the application above the deemed nitrogen leaching rate shall not be transferable across land boundaries;
h) Where the nitrogen leaching authorised by this rule is for the discharge of domestic wastewater effluent (including grey water but not stormwater) from any new conventional wastewater systems onto or into land, standards, terms and conditions (a) to (n) of Rule 3.10.6.4 shall apply;
i) Where the nitrogen leaching authorised by this rule is for the discharge of domestic wastewater effluent (including grey water but not stormwater) from any new advanced wastewater systems onto or into land, standards, terms and conditions (a) to (o) of Rule 3.10.6.3 shall apply;
j) Conventional wastewater systems shall not be installed within the near shore zone;

and provided also that:

Where a land use is authorised as a controlled activity by this Rule, the subject land shall not be used to offset any nitrogen leaching increase elsewhere in the catchment.

Matters of Control

Waikato Regional Council reserves control over the following matters:

i) The specification of the Nitrogen Discharge Allowance in kgN/ha/year and total kgN/year for the land subject to the application;
ii) The requirement to maintain a Nitrogen Management Plan for the land subject to the application;
iii) Version 5.4.3 of the OVERSEER™ model shall be used to demonstrate that any changes to the Nitrogen Management Plan, undertaken during the duration of any resource consent granted under this rule, will not lead to an exceedance of the Nitrogen Discharge Allowance for the land subject to the application;
iv) The self monitoring, record keeping, information provision and site access requirements for the holders of resource consents required to demonstrate ongoing compliance with the Nitrogen Management Plan;
v) Restrictions on the use of wastewater systems and the monitoring, maintenance and reporting requirements for those systems;

vi) The circumstances and timeframes under which the resource consent conditions may be reviewed;
vii) The duration of the resource consent; and
viii) The circumstances under which resource consents granted under this rule can be surrendered either in whole or part pursuant to s138 of the RMA; and

Notification:

Notice of controlled activity applications received in accordance with this rule does not need to be served.

Advisory Notes:

- Rule 3.10.5.4 is intended to provide for the development of Maori land that was undeveloped or forested land at the date of notification of Variation 5 – Lake Taupo Catchment (9 July 2005). However, for the avoidance of doubt, it is noted that Maori land that contains some developed land is not precluded from the rule provided the nitrogen leaching from the proposed development together with any nitrogen leaching from existing development does not exceed the upper limit on the average annual leaching of nitrogen set by conditions d) and e) of this rule.
- Refer to the Advice Notes under Rule 3.10.5.3 as they guidance they provide is relevant to consents issued under this Rule

3.10.5.5 Controlled Activity Rule – Development of Non-Ngati Tuwharetoa Forestry and Undeveloped Land

The use of land in the Lake Taupo catchment which may result in nitrogen leaching from the land and entering water is a **controlled activity** subject to the following conditions, standards and terms:

a) As at 9 July 2005 the land comprised unimproved land or non-nitrogen fixing plantation forest;
b) The land does not comprise Crown owned land or land that is explicitly covered by Rule 3.10.5.4(a);
c) All or part of the land subject to the application is proposed to be developed in a manner that may result in an increase in nitrogen leaching from that land;
d) The total cumulative amount of additional nitrogen leached from all land authorised for development under this rule shall not exceed 3,100 kilograms per annum by 30 June 2017;
e) The average amount of nitrogen leaching from the land subject to the application, once the proposed development is in place, shall not exceed 2 kilograms of nitrogen per hectare per year plus the relevant deemed nitrogen leaching rate defined in Rule 3.10.5.12 for unimproved land or non-nitrogen fixing plantation forest;
f) No resource consent or combination of resource consents under this Rule shall allow an increase in average nitrogen leaching in respect of any land that exceeds 2 kilograms of nitrogen per hectare per year;
g) The potential to increase the amount of nitrogen able to leach from the land subject to the application above the deemed nitrogen leaching rate shall not be transferable across land boundaries;
h) Where the nitrogen leaching authorised by this rule is for the discharge of domestic wastewater effluent (including grey water but not stormwater) from any new conventional wastewater systems onto or into land, standards, terms and conditions (a) to (n) of Rule 3.10.6.4 shall apply;
i) Where the nitrogen leaching authorised by this rule is for the discharge of domestic wastewater effluent (including grey water but not stormwater) from any new advanced wastewater systems onto or into land, standards, terms and conditions (a) to (o) of Rule 3.10.6.3 shall apply;
j) Conventional wastewater systems shall not be installed within the near shore zone;

and provided also that:

Where a land use is authorised as a controlled activity by this Rule, the subject land shall not be used to offset any nitrogen leaching increase elsewhere in the catchment.

Matters of Control

Waikato Regional Council reserves control over the following matters:

i) The specification of the Nitrogen Discharge Allowance in kgN/ha/year and total kgN/year for the land subject to the application
ii) The requirement to maintain a Nitrogen Management Plan for the land subject to the application;
iii) Version 5.4.3 of the OVERSEER™ model shall be used to demonstrate that any changes to the Nitrogen Management Plan, undertaken during the duration of any resource consent granted under this rule, will not lead to an exceedance of the Nitrogen Discharge Allowance for the land subject to the application;
iv) The self monitoring, record keeping, information provision and site access requirements for the holders of resource consents required to demonstrate ongoing compliance with the Nitrogen Management Plan;
v) Restrictions on the use of wastewater systems and the monitoring, maintenance and reporting requirements for those systems;
vi) The circumstances and timeframes under which the resource consent conditions may be reviewed;
vii) The duration of the resource consent; and
viii) The circumstances under which resource consents granted under this rule can be surrendered either in whole or part pursuant to s138 of the RMA.

Notification:

Notice of controlled activity applications received in accordance with this rule does not need to be served.

Advisory Note

- Refer to the Advice Notes under Rule 3.10.5.3 as they guidance they provide is relevant to consents issued under this Rule

3.10.5.6 Controlled Activity Rule - Division of Nitrogen Discharge Allowance Upon Sale or Disposal of Land

The use of land in the Lake Taupo catchment for any farming activity authorised under Rule 3.10.5.3, Rule 3.10.5.8 or Rule 3.10.5.9 where the benchmarked Nitrogen Discharge Allowance is intended to be altered as a result of the sale or disposal of part of a farm is a **controlled activity**, subject to the following conditions, standards and terms:

Standards, terms and conditions to be met by applicants to enable them to seek consent under this Rule:

a) The land sold or disposed of and the balance land on the original farm shall each be allocated a sufficient Nitrogen Discharge Allowance to allow for the intended use of that land; provided that the sum of each allocation shall not total more than the Nitrogen Discharge Allowance that pertained to the farm prior to the sale or disposal of land; and it shall not be less than that permitted under Rules 3.10.5.1 or 3.10.5.2.
b) The allocation of a Nitrogen Discharge Allowance under a) shall only be to land formerly included within the farm to which the authorised Nitrogen Discharge Allowance under Rule 3.10.5.3, 3.10.5.6, 3.10.5.7, 3.10.5.8 or 3.10.5.9 applied.
c) Amended Nitrogen Management Plans shall be prepared for the land sold or disposed of and the balance land on the original farm to demonstrate that the nitrogen leached from the proposed farming activities complies with the altered

Nitrogen Discharge Allowance for that land. The amended Nitrogen Management Plans shall include as a minimum the parameters and information contained in Table 3.10.5.3. Version 5.4.3 of the OVERSEER™ Model shall be used to calculate whether the nitrogen leached from the proposed farming activities under the amended Nitrogen Management Plans complies with the altered Nitrogen Discharge Allowances for the land. The amended Nitrogen Management Plans shall be submitted to Waikato Regional Council as part of any application for consent under this Rule.

d) Where the land disposed of involves more than one new property a) to c) of this Rule shall apply to each property.

Matters of Control

Waikato Regional Council reserves control over the following matters:

i) The specification of the Nitrogen Discharge Allowance in kgN/ha/year and total kgN/year for the land to which the controlled activity consent applies;

ii) The requirement for a Nitrogen Management Plan (NMP) for the land to which the controlled activity consent applies if the farm management practices represented in the NMPs referred to in standard and term c) are altered. The OVERSEER™ Model Version 5.4.3 shall be used to calculate the nitrogen leached from the land to which the controlled activity consent applies inclusive of the altered farm management practices and this shall form the basis of the NMPs. The NMPs shall demonstrate that the nitrogen leached from the proposed farming activities complies with the benchmarked Nitrogen Discharge Allowance. The NMPs shall be provided to the Waikato Regional Council within 10 working days of the farm management practices being altered.

iii) The self-monitoring, record-keeping, information provision and site access requirements for the holders of resource consents required to demonstrate ongoing compliance with the Nitrogen Management Plan;

iv) The circumstances and time-frames under which the resource consent conditions may be reviewed, provided that any review of a consent condition specifying the Nitrogen Discharge Allowance shall only occur when regional plan provisions have been made operative which specify a new target for the amount of nitrogen entering Lake Taupo and which requires that target to be achieved by the reduction of the Nitrogen Discharge Allowance specified in any resource consent;

v) The duration of the resource consent;

vi) The circumstances under which resource consents granted under this Rule can be surrendered either in whole or part pursuant to s138 of the RMA.

Notification:

Notice of controlled activity applications received in accordance with this rule does not need to be served.

3.10.5.7 Controlled Activity Rule - Offsetting (Trading) a Nitrogen Discharge Allowance for high leaching land

The use of land in the Lake Taupo catchment for any farming activity authorised under Rule 3.10.5.3, Rule 3.10.5.6 or Rule 3.10.5.9 where the benchmarked Nitrogen Discharge Allowance is intended to be altered as a result of nitrogen trading or offsetting is a **controlled activity**, subject to the following conditions, standards and terms:

Advisory Note:

- This Rule provides for trading of Nitrogen between existing high leaching farms. Nitrogen trading involving currently low nitrogen leaching land is provided for by Rule 3.10.5.8.

Standards, terms and conditions to be met by applicants to enable them to seek consent under this Rule:

a) Any increase in the benchmarked Nitrogen Discharge Allowance must be offset by a corresponding and equivalent decrease in the benchmarked Nitrogen Discharge Allowance on one or more other properties in the Lake Taupo catchment.
b) Amended Nitrogen Management Plans shall be prepared for the land that is subject to both the increase and decrease of nitrogen leached. The amended Nitrogen Management Plans shall include as a minimum the parameters and information contained in Table 3.10.5.3. Version 5.4.3 of the OVERSEER™ Model shall be used to calculate whether the nitrogen leached from the proposed farming activities under the amended Nitrogen Management Plans complies with the altered Nitrogen Discharge Allowances for the land. The amended Nitrogen Management Plans shall be submitted to Waikato Regional Council as part of any application for consent under this Rule.
c) Where the nitrogen trading or offsetting involves more than one property a) and b) of this Rule shall apply to each property.

Matters of Control

Waikato Regional Council reserves control over the following matters:

i) The specification of the Nitrogen Discharge Allowance in kgN/ha/year and total kgN/year for the land to which the controlled activity consent applies;
ii) The requirement for a Nitrogen Management Plan (NMP) for the land to which the controlled activity consent applies if the farm management practices represented in the NMPs referred to in standard and term b) are altered. The OVERSEERTM Model Version 5.4.3 shall be used to calculate the nitrogen leached from the land to which the controlled activity consent applies inclusive of the altered farm management practices and this shall form the basis of the NMPs. The NMPs shall demonstrate that the nitrogen leached from the proposed farming activities complies with the benchmarked Nitrogen Discharge Allowance. The NMP shall be provided to the Waikato Regional Council within 10 working days of the farm management practices being altered;
iii) The self-monitoring, record-keeping, information provision and site access requirements for the holders of resource consents required to demonstrate ongoing compliance with the Nitrogen Management Plan;
iv) The circumstances and time-frames under which the resource consent conditions may be reviewed, provided that any review of a consent condition specifying the Nitrogen Discharge Allowance shall only occur when regional plan provisions have been made operative which specify a new target for the amount of nitrogen entering Lake Taupo and which requires that target to be achieved by the reduction of the Nitrogen Discharge Allowance specified in any resource consent;
v) The duration of the resource consent;
vi) The circumstances under which resource consents granted under this Rule can be surrendered either in whole or part pursuant to s138 of the RMA.

Notification:

Notice of controlled activity applications received in accordance with this rule does not need to be served.

3.10.5.8 Controlled Activity Rule –Offsetting (Trading) a Nitrogen Discharge Allowance to Low Leaching Land

Any use of land in the Lake Taupo catchment that is classified Rural Environment in the Taupo District Plan and does not meet Rules 3.10.5.1, 3.10.5.2 and 3.10.5.3 and which will increase the leaching of nitrogen from that land, excluding leaching from wastewater systems, is a **controlled activity** subject to the following conditions, standards and terms:

Advisory Note:

- This Rule provides for trading of Nitrogen involving currently low nitrogen leaching land. Nitrogen trading involving existing high leaching farms is provided for by Rule 3.10.5.7

Standards, terms and conditions to be met by applicants to enable them to seek consent under this Rule:

Nitrogen Trading (Offsetting)

a) The proposed increase in nitrogen leaching shall be offset by a corresponding and equivalent decrease in nitrogen leaching on one or more other properties in the Lake Taupo catchment. The amount of nitrogen leaching increase shall determine the Nitrogen Discharge Allowance for the land.

b) Information shall be provided that shows that the corresponding and equivalent decrease in nitrogen leaching is to be secured by way of resource consent granted under this Rule or a s127 change to an existing resource consent.

Standards, terms and conditions to be met by the holders of consents granted under this Rule:

Nitrogen Management Plan

c) Except where the pre-existing activity continues to be permitted by Rule 3.10.5.1, and where the new nitrogen leaching land use authorised by this rule is farming, the application shall include a Nitrogen Management Plan which uses Version 5.4.3 of the OVERSEER™ model to demonstrate that the nitrogen leached from the proposed farming activities complies with the proposed Nitrogen Discharge Allowance for the land.

Matters of Control

Waikato Regional Council reserves control over the following matters:

i) The specification of the Nitrogen Discharge Allowance in kgN/ha/year and total kgN/year for the land to which the controlled activity consent applies;

ii) The requirement for a Nitrogen Management Plan (NMP) for the land to which the controlled activity consent applies if the farm management practices represented in the NMP referred to in standard and term c) are altered. The OVERSEER™ Model Version 5.4.3 shall be used to calculate the nitrogen leached from the land to which the controlled activity consent applies inclusive of the altered farm management practices and this shall form the basis of the NMP. The NMP shall demonstrate that the nitrogen leached from the proposed farming activities complies with the benchmarked Nitrogen Discharge Allowance. The NMP shall be provided to the Waikato Regional Council within 10 working days of the farm management practices being altered;

iii) The self monitoring, record keeping, information provision and site access requirements for the holders of resource consents required to demonstrate ongoing compliance with the Nitrogen Management Plan;

iv) The circumstances and timeframes under which the resource consent conditions may be reviewed, provided that any review of a consent condition specifying the Nitrogen Discharge Allowance shall only occur when regional plan provisions have been made operative which specify a new target for the amount of nitrogen

entering Lake Taupo and which requires that target to be achieved by the reduction of the Nitrogen Discharge Allowance specified in any resource consent;

v) The duration of the resource consent;

vi) The circumstances under which resource consents granted under this Rule can be surrendered either in whole or part pursuant to s138 of the RMA; and

Notification:

Notice of controlled activity applications received in accordance with this rule does not need to be served.

Advisory Notes:

Nitrogen Discharge Allowance

- Nitrogen Discharge Allowance means the maximum amount of nitrogen allowed to leach from land, as determined in accordance with Rule 3.10.5.3, 3.10.5.6, 3.10.5.7, 3.10.5.8 or 3.10.5.9. A Nitrogen Discharge Allowance will be specified as a condition of any consent granted under this rule and will be described as the kilograms of nitrogen per hectare per year and the total kilograms (or tonnage) of nitrogen per year permitted to be leached from the land to which the consent relates, each year.

OVERSEER™ Model

- The OVERSEER™ Model is a nutrient management computer model produced by AgResearch, FertResearch and the Ministry of Agriculture and Forestry, which provides estimates of the annual fate of nitrogen, phosphorus, potassium and other nutrients in kilograms per hectare per year.

Offsetting Nitrogen

- Once a Nitrogen Discharge Allowance has been determined for the land to which the consent applies, any further increase in nitrogen leaching must be offset by a corresponding and equivalent decrease in nitrogen on one or more other properties in the Lake Taupo catchment. The increase shall be secured by way of a change to the Nitrogen Discharge Allowance.
- If the Nitrogen Discharge Allowance for the land to which the consent applies is to be changed, either through the sale or purchase of a nitrogen discharge entitlement, or through the sale or purchase of part of a farm, the consent holder will first need to either apply for a change to the consented Nitrogen Discharge Allowance pursuant to s127 of the RMA or seek a new consent under Rules 3.10.5.6 or 3.10.5.7.

3.10.5.9 Non Complying Rule – Land Uses that do not Comply with Rules 3.10.5.1-3.10.5.8

The use of land in the Lake Taupo catchment for land use activities that do not meet Rules 3.10.5.1 to 3.10.5.8 and may result in nitrogen leaching from the land and entering water is a **non-complying activity**.

Advisory Notes:

- Policy 8 provides guidance regarding the matters to be considered when deciding applications made under rule 3.10.5.9.

3.10.5.10 Permitted Rule – Nitrogen, effluent, and fertiliser discharges associated with Land Uses authorised under rules 3.10.5.1 to 3.10.5.9

The discharge of nitrogen, effluent, and fertiliser onto or into land arising from the land use activities authorised under rules 3.10.5.1 to 3.10.5.9 in circumstances which may result in contaminants entering water, where the discharge would otherwise contravene section 15(1) of the RMA, is a **permitted activity** subject to the following conditions:

a) The application of farm animal effluent, (excluding pig farm effluent), shall comply with conditions a to c, e, f and h to j of rule 3.5.5.1;

b) The discharge of feed pad and stand-off pad effluent shall comply with conditions a, b and e to g of rule 3.5.5.2. Additionally the pad shall be located at least 20 metres from surface water;

c) The application of pig farm effluent onto land shall comply with standards and terms 3, a, c, d and f of rule 3.5.5.3.

d) The application of fertiliser into air and onto or into land shall comply with conditions a, b and c of rule 3.9.4.11.

Advisory Notes:

- If the conditions specified in rule 3.10.5.10 a) to c) cannot be met then a separate discharge consent will be required under rule 3.5.5.4
- Dumps and offal holes on production land are authorised by rules 5.2.6.1 to 5.2.6.4. Those rules establish conditions that must be met.
- Composting on production land is authorised by rules 5.8.2.1 and 5.2.8.2. Those rules establish conditions that must be met.
- The discharge of sludges and liquids from activated sludge treatment processes (biosolids) onto or into land requires a discharge permit under rule 3.5.6.4.

3.10.5.11 Permitted Rule – Discharges to air associated with Land Uses authorised under rules 3.10.5.1 to 3.10.5.9

The discharge of contaminants into air arising from the land use activities authorised under rules 3.10.5.1 to 3.10.5.9 is a **permitted activity** if the discharge to air complies with the permitted activity conditions in Section 6.1.8 of this Plan.

Advisory Notes:

- Non-compliance with the conditions specified in section 6.1.8 will result in the need for a discharge to air permit under rule 6.1.9.2.

3.10.5.12 Nitrogen Leaching Rates

For the purposes of determining nitrogen leaching amounts under Rules 3.10.5.1 to 3.10.5.9 the following nitrogen leaching rates shall be applied where relevant:

a) Use of land described under Rule 3.10.5.1 has a leaching rate of 8 kilograms per hectare per year

b) Use of land described under Rule 3.10.5.2 has the following leaching rates:
   i) Unimproved land (including gorse and broom scrubland) 2 kilograms of nitrogen per hectare per year;
   ii) Non-nitrogen fixing plantation forest land 3 kilograms of nitrogen per hectare per year

c) Use of land for farming activities except under Rule 3.10.5.1, that may result in nitrogen leaching from the land and entering water, has a nitrogen leaching rate of an amount calculated using Version 5.4.3 of the OVERSEER™ nutrient budgeting model

d) An advanced wastewater system in accordance with Rule 3.10.6.3 has a leaching rate of 3.5 kilograms of nitrogen per year

e) A conventional wastewater system in accordance with Rule 3.10.6.4 has a leaching rate of 10.0 kilograms of nitrogen per year.

Explanation and Principal Reasons for Adopting Methods 3.10.5.1 to 3.10.5.12

Rules 3.10.5.1 to 3.10.5.12 reflect the grandparenting approach to allowing nitrogen discharges, which is dependent on capping existing nitrogen leaching activities at their current rate (averaged since 2001) as of the notification of the Plan. The rules ensure existing land uses are permitted or controlled (granting existing nitrogen leaching) but

are locked into meeting standards ensuring no increase in nitrogen leaching. However, nitrogen offsetting has been added to the grandparenting approach to allow land use flexibility and increases in nitrogen leaching where corresponding decreases can be achieved. Development flexibility for forestry and undeveloped land is also provided for. The ability to trade (or offset) with other landowners has also been provided for.

3.10.6 Implementation Methods – Domestic Wastewater Treatment and Land Application

The domestic wastewater rules primarily aim to ensure that there is no increase in nitrogen leaching to the Lake as a result of new or existing on-site domestic wastewater systems, and to ensure that systems are appropriately designed, installed and maintained.

Existing Domestic On-site Wastewater Discharges
On-site wastewater systems near the lakeshore (those systems in the Near-shore Zone) are managed differently to other systems, as they not only increase nitrogen leaching to the Lake, but also increase the potential for near-shore effects such as health risks and nuisance plant growths. Existing systems in the Near-shore Zone are therefore permitted for a period of time allowing for replacement by Taupo District Council reticulated wastewater schemes, after which, remaining on-site systems will become controlled activities. On-site systems outside the Near-shore Zone are permitted for the life of the Plan provided conditions are satisfied.

New Domestic On-site Wastewater Discharges
Apart from a special case of a rule for new wastewater discharges from papakainga housing and Marae, rules for new on-site wastewater systems allow conventional septic tank style systems on sections greater than four hectares, but require advanced nitrogen reducing wastewater systems for smaller sections, with a minimum property size of 0.5 hectares. Because new wastewater discharges potentially increase the nitrogen leaching from a site, there must be some other decrease in nitrogen leaching to compensate. To ensure this is the case, new on-site wastewater discharges are generally only permitted if:

1. The site was used for farming activities* at the time the rule was notified, and after the new wastewater system is installed, will have nitrogen discharges limited by Permitted Land Use Rule 3.10.5.1, or
2. The land use is managed via a consent that makes allowance for the nitrogen leaching from the new on-site wastewater system.

The following table summarises the new wastewater rules and shows how they interrelate with the land use rules where appropriate.

Summary of Wastewater Rules

On-site Wastewater Discharge	Activity Status
Existing on-site wastewater discharge in Near-shore Zone	**Permitted** with conditions (Rule 3.10.6.1) until 30th June 2013 and **Controlled** activity (Rule 3.10.6.5) thereafter
Existing on-site wastewater discharge outside Near-shore Zone	**Permitted** with conditions (Rule 3.10.6.2)
New advanced on-site wastewater discharge on properties greater than 5000 square metres (or 2500 square metres if subdivision consent is granted before 9 July 2005)	**Permitted** with conditions (Rule 3.10.6.3) provided Permitted Land Use Rule 3.10.5.1 is satisfied, or the land use is consented under 3.10.5.3, 3.10.5.4 or 3.10.5.5.
New conventional on-site wastewater discharge on properties greater than 4 hectares	**Permitted** with conditions (Rule 3.10.6.4) provided Permitted Land Use Rule 3.10.5.1 is satisfied, or the land use is consented under 3.10.5.3, 3.10.5.4 or 3.10.5.5.
New papakainga and Marae wastewater discharges	**Restricted discretionary** activity (Rule 3.10.6.6) subject to standards and terms
Other on-site wastewater discharges	**Discretionary** under Rule 3.5.7.7 of the Proposed Waikato Regional Plan

3.10.6.1 Permitted Activity Rule - Discharge of Domestic Wastewater from Existing On-site Systems Within the Near-shore Zone

The discharge of domestic wastewater effluent (including grey water but not stormwater) onto or into land from an on-site domestic wastewater treatment and land application system in the Lake Taupo Near-shore Zone lawfully established or authorised before the date of notification of this rule is a **permitted activity** until 30th June 2013, subject to the following conditions:

a) During times of normal wet winter groundwater level there shall be at least 600 millimetres separation distance between the highest groundwater level and the bottom of the land application trench.
b) The volume of effluent to be discharged from any one system shall not exceed 1.3 cubic metres per day averaged over any one month period, or 3 cubic metres per day if the discharge was previously authorised by Rule 3.5.7.6 of the Waikato Regional Plan.
c) There shall be no overland flow or surface ponding of effluent.
d) The discharge shall not result in any objectionable effects from odour beyond the boundary of the subject property.
e) The owner of the wastewater system shall obtain and supply to the Taupo District Council, at intervals not exceeding 3 years, a report from a Waikato Regional Council approved inspector, certifying that the wastewater treatment and disposal system is fit for purpose, and complies with the conditions of this rule. The report shall also include any recommended maintenance or repairs required. Such maintenance/repairs shall be carried out within 3 months of the date of the report. The first inspection is required by 9 July 2008.
f) Septic tanks shall be desludged before the combined sludge and scum layers occupy 50 percent of the tank depth, or within the time period recommended for desludging during the inspection required by condition e) of this rule.

Advisory Notes:

- It is recommended that the on-site wastewater system is managed in accordance with the following principles:
  - Avoid discharging the following to the wastewater system: non-biodegradable chemicals, sanitary napkins, dental floss, kitty litter, coffee grounds, paper towels, oil and fat, paint, pesticides, high strength detergents;
  - Do not use, or minimise the use of, garbage disposal units;
  - Minimise water usage such as by installing water reduction fixtures on water outlets and ensuring taps are not left running or leaking;
  - Ensure rain gutters do not discharge to the wastewater system;
  - Do not pave over the land application area, and ensure vehicles and stock do not have access to the land application area;
  - If the land application area is grassed, ensure it is mowed regularly so grass does not become rank;
  - If an effluent outlet filter is fitted to the wastewater system, it should be inspected annually and cleaned if slime build-up is blocking the filter orifices.
- The Waikato Regional Plan Lake Taupo Catchment Maps indicate the location of the Near-shore Zone.
- In any given case, the precise location of the inland extent of the near shore zone boundary will need to be defined on a case by case basis.
- Wastewater discharges which do not comply with Rules 3.10.6.1, 3.10.6.2, 3.10.6.3, 3.10.6.4, 3.10.6.5 and 3.10.6.6 are to be assessed as discretionary activities under Rule 3.5.7.7 of the Waikato Regional Plan.

3.10.6.2 Permitted Activity Rule – Discharge of Domestic Wastewater from Existing On-site Systems Outside the Near-shore Zone

The discharge of domestic wastewater effluent (including grey water but not stormwater) onto or into land from an on-site domestic wastewater treatment and land application system outside the Lake Taupo Near-shore Zone, lawfully established or authorised before the date of notification of this rule, is a **permitted activity**, subject to the following conditions:

a) During times of normal wet winter groundwater level there shall be at least 600 millimetres separation distance between the highest groundwater level and the bottom of the land application trench.
b) The volume of effluent to be discharged from any one system shall not exceed 1.3 cubic metres per day averaged over any one month period, or 3 cubic metres per day if the discharge was previously authorised by Rule 3.5.7.6 of the Waikato Regional Plan.
c) There shall be no overland flow or surface ponding of effluent.
d) The discharge shall not result in any objectionable effects from odour beyond the boundary of the subject property.
e) Septic tanks shall be desludged before the combined sludge and scum layers occupy 50 percent of the tank depth
f) This rule shall no longer apply where a property is subdivided such that the land area of the property serviced by the on-site system is reduced to less than four hectares.
g) Should the treatment and/or land application system fail to the extent that either the treatment system or land application system needs to be substantially replaced, if an effluent outlet filter is not part of the system, it shall be fitted as part of the system reinstatement.
h) The discharge shall not occur within 20 metres of a Significant Geothermal Feature.

Advisory Notes:

- It is recommended that the on-site wastewater system is managed in accordance with the following principles:
  - Avoid discharging the following to the wastewater system: non-biodegradable chemicals, sanitary napkins, dental floss, kitty litter, coffee grounds, paper towels, oil and fat, paint, pesticides, high strength detergents;
  - Do not use, or minimise the use of, garbage disposal units;
  - Minimise water usage such as by installing water reduction fixtures on water outlets and ensuring taps are not left running or leaking;
  - Ensure rain gutters do not discharge to the wastewater system;
  - Do not pave over the land application area, and ensure vehicles and stock do not have access to the land application area;
  - If the land application area is grassed, ensure it is mowed regularly so grass does not become rank;
  - If an effluent outlet filter is fitted to the wastewater system, it should be inspected annually and cleaned if slime build-up is blocking the filter orifices.
- For the purpose of condition g), if a property is subdivided such that this rule no longer applies, the discharge would need to be authorised by Rule 3.10.6.3 or by consent under Rule 3.5.7.7 of the Proposed Waikato Regional Plan.
- For the purpose of condition h), it is envisaged that 'substantially replaced' would be where the septic tank is replaced, or at least half of the land application system is replaced, or other works of similar scale.
- The Waikato Regional Plan Lake Taupo Catchment Maps indicate the location of the Near-shore Zone.
- In any given case, the precise location of the inland extent of the near shore zone boundary will need to be defined on a case by case basis.
- Wastewater discharges which do not comply with Rules 3.10.6.1, 3.10.6.2, 3.10.6.3, 3.10.6.4, 3.10.6.5 and 3.10.6.6 are to be assessed as discretionary activities under Rule 3.5.7.7 of the Waikato Regional Plan.

3.10.6.3 Permitted Activity Rule – New Nitrogen Removing On-site Wastewater Systems

The discharge of domestic wastewater effluent (including grey water but not stormwater) onto or into land from an on-site wastewater treatment and land application system, established after the date of notification of this rule (9 July 2005), where the property:

1. is 5000 square metres or larger and the property satisfies land use rule 3.10.5.1; or
2. is 2500 square metres or larger, and less than 5000 square metres, and has been granted subdivision consent prior to the date of notification of this rule

is a **permitted activity**, subject to the following conditions:

Wastewater Treatment Plant

a) The wastewater treatment plant shall be water tight, and protected from stormwater ingress.
b) Effluent from the wastewater treatment plant shall not exceed concentrations of: 20 g/m3 Biochemical Oxygen Demand, 30 g/m3 Suspended Solids, 25 g/m3 Total Nitrogen.
c) The wastewater treatment plant shall be installed in such a way that ensures easy access for sampling of effluent after treatment and before discharge to the land application area, and easy access for regular plant maintenance activities.

Land Application Area

d) The land application system shall be pump dosed, with the pump having a high-level alarm system.
e) The land application system shall consist of a dripper irrigation system set in a topsoil layer 100 to 200 millimetres below the ground surface or, if the slope of the land application area is less than 15 degrees, dripper lines may be set on the ground surface and covered by bark or similar material anchored by a durable netting.
f) The land application system shall be designed and installed such that during times of normal wet winter groundwater level there shall be at least 300 millimetres separation distance between the highest groundwater level and the dripper lines.
g) The loading rate shall not exceed 5 millimetres per day (5 litres per square metre).
h) The volume of effluent to be discharged from any one system shall not exceed 2 cubic metres per day averaged over any one month period.
i) There shall be no overland flow or surface ponding of effluent.
j) The discharge shall not result in any objectionable effects from odour beyond the boundary of the subject property.
k) The discharge shall not occur within 20 metres of a Significant Geothermal Feature, 20 metres of a water supply bore, or 20 metres of a surface water body.

Management and Information

l) Prior to installation of the on-site wastewater treatment and land application system, the property owner shall provide to the Taupo District Council a Site Assessment and Design Report drafted in accordance with AS/NZS 1547:2000, which contains sufficient information to demonstrate that the wastewater treatment and land application system is designed and will be appropriately located such that the conditions of this rule can be satisfied.
m) After the wastewater system has been installed, and prior to closing over and commissioning of the treatment and land application components, the property owner shall obtain a Post Installation Wastewater System Certificate from a Waikato Regional Council approved inspector, which states that the wastewater treatment and land application system has been installed in accordance with the

Site Assessment and Design Report, and in accordance with the manufacturer's specifications.

n) The wastewater treatment and land application system shall be subject to a Servicing and Maintenance Contract that ensures the system is inspected at least every six months from the date of commissioning, and in accordance with the manufacturer's specifications. The maintenance contract shall ensure that during the six monthly inspections, a sample of effluent is taken from the outlet stage of the treatment system, and prior to the land application system, and tested for Total Nitrogen. Sampling shall follow APHA protocol. Inspection reports and sampling results shall be provided to the Taupo District Council within two months of each inspection.

o) Prior to commissioning of the on-site wastewater system, the owner shall supply to the Taupo District Council a copy of:

   i) The Site Assessment and Design Report (required by condition l), details of the wastewater treatment plant, and of the type and location of the effluent distribution system;

   ii) A copy of the Post Installation Wastewater System Certificate (required by condition m);

   iii) A copy of the Servicing and Maintenance Contract (required by condition n);

Advisory Notes:

- Land application systems and wastewater treatment units should be designed, sited and constructed in accordance with sections 4.2, 4.3 and 4.5, and Appendices 4.2A - 4.2D, 4.3A3 and 4.5A - 4.5D of the On-site Domestic Wastewater Management Standard AS/NZS 1547:2000. Where not covered by this standard, design, siting and construction details should be in accordance with Auckland Regional Council's 2004 On-site Wastewater Disposal From Households and Institutions – Technical Publication 58, unless otherwise stated in the conditions of this rule.
- The Site Assessment and Design Report should be provided on the appropriate template provided by the Waikato Regional Council, and in accordance with the guidance provided in AS/NZS 1547:2000 for Site and Soil Evaluation Reports and Design Reports.
- Wastewater discharges which do not comply with Rules 3.10.6.1, 3.10.6.2, 3.10.6.3, 3.10.6.4, 3.10.6.5 and 3.10.6.6 are to be assessed as discretionary activities under Rule 3.5.7.7 of the Waikato Regional Plan.

3.10.6.4 Permitted Activity Rule – New Conventional On-site Wastewater Systems

The discharge of domestic wastewater effluent (including grey water but not stormwater) onto or into land from an on-site wastewater treatment and land application system, established after the date of notification of this rule (9 July 2005), where the property:

1. is outside the Lake Taupo Near-shore Zone; and
2. is on a property four hectares or larger and satisfies rule 3.10.5.1

is a **permitted activity**, subject to the following conditions:

Wastewater Treatment System

a) The wastewater treatment system shall be water tight, and protected from stormwater ingress.

b) Where the treatment system consists of a septic tank, it shall have the capacity stated in the following table and shall be fitted with an effluent outlet filter.

Design Population Equivalent (persons)	Number of Bedrooms	Tank Capacity (litres)
1-5	3	3000
6-7	4	3500
8	5	4000

9-10	6	4500

Land Application System

c) The land application system shall be designed and installed such that the effluent will spread evenly through the whole length of the effluent distribution lines.

d) The land application system shall be designed and installed such that during times of normal wet winter ground water level there shall be at least 600 millimetres separation distance between the highest groundwater level and the bottom of the land application trench, unless secondary treated effluent is discharged through a dripper irrigation system in which case the separation distance shall be at least 300 millimetres.

e) The loading rate shall be in accordance with Technical Sheet 5-2, Summary of Land Disposal Methods and Recommended Loading Rates vs. Soil Category, Appendix D, On-site Wastewater Systems: Design and Management Manual, Auckland Regional Council Technical Publication 58 (2004), unless secondary treated effluent is discharged, in which case the loading rate shall not exceed 5 millimetres per day (5 litres per square metre).

f) The volume of effluent to be discharged from any one system shall not exceed 2 cubic metres per day averaged over any one month period.

g) There shall be no overland flow or surface ponding of effluent.

h) The discharge shall not result in any objectionable effects from odour beyond the boundary of the subject property.

i) The discharge shall not occur within 20 metres of a Significant Geothermal Feature, 30 metres of a water supply bore, or 200 metres of a surface water body.

Management and Information

j) Prior to installation of the on-site wastewater treatment and land application system, the property owner shall provide to the Taupo District Council a Site Assessment and Design Report drafted in accordance with AS/NZS 1547:2000, which contains sufficient information to demonstrate that the wastewater treatment and land application system is designed and will be appropriately located such that the conditions of this rule can be satisfied.

k) After the wastewater system has been installed, and prior to closing over and commissioning of the treatment and land application components, the property owner shall obtain a Post Installation Wastewater System Certificate from a Waikato Regional Council approved inspector, which states that the wastewater treatment and land application system has been installed in accordance with the Site Assessment and Design Report, and in accordance with the manufacturer's specifications.

l) Prior to commissioning of the on-site wastewater system, the owner shall supply to the Taupo District Council:

m) A copy of the Site Assessment and Design Report (required by condition j), details of the wastewater treatment plant, and the type and location of the land application system.

n) A copy of the Post Installation Wastewater System Certificate (required by condition k)

o) Septic tanks shall be desludged before the combined sludge and scum layers occupy 50 percent of the tank depth.

p) There shall be no more than one conventional wastewater system per four hectares of land area.

Advisory Notes:

- It is recommended that the on-site wastewater system is managed in accordance with the following principles:
  - Avoid discharging the following to the wastewater system: non-biodegradable chemicals, sanitary napkins, dental floss, kitty litter, coffee grounds, paper towels, oil and fat, paint, pesticides, high strength detergents;
  - Do not use, or minimise the use of, garbage disposal units;

- Minimise water usage such as by installing water reduction fixtures on water outlets and ensuring taps are not left running or leaking;
- Ensure rain gutters do not discharge to the wastewater system;
- Do not pave over the land application area, and ensure vehicles and stock do not have access to the land application area;
- If the land application area is grassed, ensure it is mowed regularly so grass does not become rank;
- The effluent outlet filter should be inspected annually and cleaned if slime build up is blocking the filter orifices.

- Land application systems and wastewater treatment units should be designed, sited and constructed in accordance with sections 4.2, 4.3 and 4.5, and Appendices 4.2A - 4.2D, 4.3A3 and 4.5A - 4.5D of the On-site Domestic Wastewater Management Standard AS/NZS 1547:2000. Where not covered by this standard, design, siting and construction details should be in accordance with Auckland Regional Council's 2004 On-site Wastewater Disposal From Households and Institutions – Technical Publication 58, unless otherwise stated in the conditions of this rule.
- The Site Assessment and Design Report should be provided on the appropriate template provided by the Waikato Regional Council, and in accordance with the guidance provided in AS/NZS 1547:2000 for Site and Soil Evaluation Reports and Design Reports.
- For the purpose of condition o), if a property is subdivided such that this rule no longer applies, the discharge would need to be authorised by Rule 3.10.6.3 or by consent under Rule 3.5.7.7 of the Proposed Waikato Regional Plan
- Wastewater discharges which do not comply with Rules 3.10.6.1, 3.10.6.2, 3.10.6.3, 3.10.6.4, 3.10.6.5 and 3.10.6.6 are to be assessed as discretionary activities under Rule 3.5.7.7 of the Waikato Regional Plan.
- The Waikato Regional Plan Lake Taupo Catchment Maps indicate the location of the Near-shore Zone.

3.10.6.5 Controlled Activity Rule - Wastewater Systems in the Near Shore Zone after 30th June 2013

The discharge of domestic wastewater effluent (including grey water but not stormwater) onto or into land from an on-site domestic wastewater treatment and land application system in the Lake Taupo Near-shore Zone, which was authorised by Rule 3.10.6.1, and which does not satisfy the conditions of Rule 3.10.6.3, is a **controlled activity** (requiring resource consent) on and after 30th June 2013 subject to the following conditions, standards and terms:

a) During times of normal wet winter groundwater level, there shall be at least 600 millimetres separation distance between the highest groundwater level and the bottom of the land application trench, unless secondary treated effluent is discharged through a dripper irrigation system in which case the separation distance shall be at least 300 millimetres.
b) The volume of effluent to be discharged from any one system shall not exceed 1.3 cubic metres per day averaged over any one month period, or 3 cubic metres per day if the discharge was previously authorised by Rule 3.5.7.6 of the Waikato Regional Plan
c) There shall be no overland flow or surface ponding of effluent.
d) The discharge shall not result in any objectionable effects from odour beyond the boundary of the subject property.
e) If the wastewater system is within the area of benefit of a reticulated community wastewater treatment system, it shall be connected to the system as soon as practicable.

Waikato Regional Council reserves control over the following matters:

i) Wastewater system upgrades to avoid health or environmental effects;
ii) Wastewater system upgrades to avoid near shore effects either individually or in combination with other on-site wastewater systems;
iii) Wastewater system upgrades to avoid effects on any water supply bore;
iv) Restrictions on the use of the wastewater system;

v) Monitoring, maintenance and reporting requirements;
vi) The circumstances under which the consent conditions may be reviewed.

Notification:
Pursuant to s94D(3) of the Resource Management Act 1991, notice of controlled activity applications received in accordance with this rule, does not need to be served.

Advisory Note:

- Wastewater discharges which do not comply with Rules 3.10.6.1, 3.10.6.2, 3.10.6.3, 3.10.6.4, 3.10.6.5 and 3.10.6.6 are to be assessed as discretionary activities under Rule 3.5.7.7 of the Waikato Regional Plan.
- The Waikato Regional Plan Lake Taupo Catchment Maps indicate the location of the Near-shore Zone.

3.10.6.6 Restricted Discretionary Activity Rule – New Papakainga and Marae Wastewater Discharges

The discharge of domestic wastewater effluent (including grey water but not stormwater) from papakainga or Marae buildings, onto or into land from an on-site domestic wastewater treatment and land application system in the Lake Taupo catchment, established after the date of notification of this rule, is a **restricted discretionary activity** (requiring resource consent) subject to the following conditions, standards and terms:

a) The discharge does not comply with Rules 3.10.6.1, 3.10.6.2, 3.10.6.3, 3.10.6.4 or 3.10.6.5.
b) The wastewater system is established to provide wastewater servicing of papakainga housing or Marae buildings on Maori land within the meaning of Section 2 and Section 129 (1)(a) and (b) of the Te Ture Whenua Maori Act 1993.
c) The volume of effluent to be discharged from any one system shall not exceed 2 cubic metres per day averaged over any one month period.
d) The wastewater system shall not be located within the area of benefit of a reticulated community wastewater treatment system.
e) A management plan shall be submitted demonstrating how the papakainga and Marae buildings will be developed and how wastewater will be managed.
f) Papakainga wastewater services shall not be used for commercial purposes.

Waikato Regional Council restricts its discretion over the following matters:

i) Methods to avoid effects, either individually or in combination with other on-site wastewater systems, on near shore Lake Taupo waters, other surface water or ground water bodies, domestic water supply bores and Significant Geothermal Features; (Note: These methods can include wastewater system design, controls on the use of the wastewater system, and may allow for low tech wastewater solutions if appropriate);
ii) Methods to achieve Policy 9;
iii) Methods to avoid health risks associated with on-site wastewater disposal;
iv) Monitoring, maintenance and reporting requirements;
v) The circumstances under which the consent conditions may be reviewed.

Notification:
Pursuant to s94D of the Resource Management Act 1991 applications received in accordance with this rule do not need to be notified and notice of applications does not need to be served**.**

Advisory Note:

- Wastewater discharges which do not comply with rules 3.10.6.1, 3.10.6.2, 3.10.6.3, 3.10.6.4, 3.10.6.5 and 3.10.6.6 are to be assessed as discretionary activities under rule 3.5.7.7 of the Waikato Regional Plan.

Explanation and Principle Reasons for Adopting Methods 3.10.6.1 to 3.10.6.6

Rule 3.10.6.1 permits discharges from existing domestic on-site wastewater systems within the near-shore zone until 30th June 2011, after which it is anticipated that most of these systems will have been replaced by reticulated community wastewater systems. Remaining discharges from systems in this zone would then become Controlled Activities under rule 3.10.6.5. Policy 8 indicates that these remaining systems will be upgraded if they are causing a risk of near-shore effects.

Rule 3.10.6.2 permits discharges from existing wastewater systems outside the Near-shore Zone. Conditions are to ensure these systems are appropriately managed and maintained so that treatment performance is maximised within the capabilities of each system.

Rules 3.10.6.3 and 3.10.6.4 permit discharges from new advanced nitrogen reducing systems and new conventional systems respectively. Conditions require that these systems perform, and are established at a density, which ensures they do not result in increased nitrogen leaching to the Lake.

Rule 3.10.6.6 permits new or additional wastewater discharges from papakainga and associated Marae buildings. The rule recognises that some papakainga may be in areas where power and access are limited, and therefore provides flexibility for wastewater solutions, while ensuring the Lake is protected.

3.10.7 Environmental Results Anticipated

1. By 2080, indicators of Lake Taupo water quality are at 2001 levels
2. Reduction in nutrient influenced weeds and algae in shallow near-shore water in Lake Taupo
3. By 2011, no domestic wastewater pathogens detected in shallow near-shore water in Lake Taupo
4. No long-term adverse effects on the social and economic wellbeing of Lake Taupo communities as a result of nitrogen leaching controls

3.10.8 Procedure for Monitoring Objectives, Policies and Methods

Objective	Indicators/ Measurement	Types of Monitoring	Information Source
2001 water quality levels in Lake Taupo maintained by 2080.	Water quality indicators. Area of land with nitrogen restrictive covenants in the catchment. Reductions in wastewater nitrogen achieved by TDC community system upgrades and reticulation. Compliance with land use consent benchmarked nitrogen conditions.	Regional trend monitoring, water aging, investigations and surveys, compliance monitoring.	Water quality and ecology databases, water wells database, compliance monitoring database, district council community wastewater monitoring, Council Controlled Organisation public fund covenant database.
Farming activities which result in nitrogen leaching are managed to maintain the 2001 water quality characteristics of Lake Taupo.	Water quality indicators. Area of land with nitrogen restrictive covenants in the catchment. Compliance with land use consent benchmarked nitrogen conditions.	Regional trend monitoring, water aging, investigations and surveys, compliance monitoring.	Water quality and ecology databases, water wells database, compliance monitoring database, Council Controlled Organisation public fund covenant database.
Wastewater treatment and disposal does not result in additional nitrogen or wastewater pathogens in shallow near-shore waters, relative to background levels of nitrogen or pathogens leached from existing land uses close to the Lake	Water quality indicators. Occurrence of nutrient-influenced weeds in near-shore waters.	Regional trend monitoring, investigations and surveys, compliance monitoring.	Water quality and ecology databases, water wells database, compliance monitoring database, district council community wastewater monitoring.
Social and economic costs of intervention to achieve Objective 1 are minimised, and spread across local, regional and national communities.	Enquiries, submissions and complaints. Extent of compliance with regulation.	Regional trend monitoring, investigations and surveys.	Perceptions surveys database, regional economy database, complaints, enquiries and submissions database.

3.10.9 Map of Lake Taupo Catchment