BEFORE THE ENVIRONMENT COURT

Decision No. [2011] NZEnvC 163

IN THE MATTER	of the Resource Management Act 1991
AND	
IN THE MATTER	of appeals under clause 14 of the First Schedule to the Act
BETWEEN	CARTER HOLT HARVEY LIMITED
	(ENV-2007-AKL-000345)
AND	ENVIRONMENTAL DEFENCE SOCIETY
	(ENV-2007-AKL-000337)
AND	FEDERATED FARMERS OF NEW ZEALAND
	(ENV-2007-AKL-000342)
AND	LAKE TAUPÖ FOREST TRUST, LAKE ROTOAIRA FOREST TRUST AND LAKE TAUPÖ FOREST MANAGEMENT LIMITED
	(ENV-2007-AKL-000351)
AND	TAUPÖ LAKE CARE INCORPORATED
	(ENV-2007-AKL-000336)
AND	TUWHARETOA MÄORI TRUST BOARD
	(ENV-2007-AKL-000352)
	Appellants
AND	FONTERRA CO-OPERATIVE GROUP LIMITED

THE SEAL OF THE NEW ZEALAND ENVIRONMENT COURT

NGATI TUWHARETOA AGRICULTURAL GROUP

LAKES AND WATERWAYS ACTION GROUP

TAUMATA PLANTATIONS LIMITED

CGE BURGESS FAMILY ESTATE

Section 274 parties

AND

WAIKATO REGIONAL COUNCIL

Respondent

Hearing: On the papers pursuant to section 279 of the Act

Court: Environment Judge R G Whiting
Environment Commissioner M P Oliver
Environment Commissioner H M Beaumont

FINAL DECISION OF THE ENVIRONMENT COURT

A. The provisions of RPV5 of the Waikato Regional Plan attached to this decision are confirmed and attached to this decision.

B. Costs are reserved. Any application is to be filed within 15 working days of this decision.

REASONS FOR DECISION

[1] The Court issued interim decision A123/2008, in regards to this matter, relating to Proposed Variation 5 to the Waikato Regional Plan (**'RPV5'**). At [207] the parties were directed to make specific changes to the provisions of RPV5 and further directions were made requiring planning witness caucusing and as a final result after consultation with all parties, a memorandum and final set of provisions were to be filed with the Court for consideration.

[2] The parties have since been involved in witnesses caucusing and Court assisted mediation and are now in a position to file the final provisions of RPV5 to the Waikato Regional Plan. The Court received a memorandum signed by all parties with the final provisions of RPV5 attached on 3 June 2011

[3] We have read and considered the provisions that have been filed and are satisfied that they reflect the directions in the Courts interim decision.

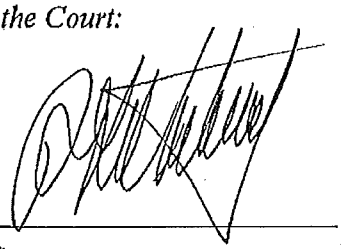
[4] We therefore make the following orders;

A. The provisions of RPV5 to the Waikato Regional Plan are confirmed and attached to this decision.

B. Costs are reserved. Any applications are to be filed within 15 working days from the date of this decision.

SIGNED at AUCKLAND this 17th day of June 2011

For the Court:



R G Whiting

Environment Judge

Proposed Waikato Regional Plan Variation 5 - Lake Taupo Catchment

CLEAN VERSION (INCORPORATING ALL AMENDMENTS) PROVIDED TO THE ENVIRONMENT COURT WITH THE JOINT MEMORANDUM OF THE PARTIES DATED 20 DECEMBER 2010

Table of Contents

Area covered by Variation No. 5 – Lake Taupo Catchment		1
3.10 Variation 5 – Lake Taupo Catchment		2
Background and Explanation		2
The Cause of the Problem		3
Community Consultation		4
Nitrogen Loads and Catchment Modelling		5
Social and Economic Costs Associated with Nitrogen Management		5
No Precedent Effect		6
3.10.1	Issues	7
3.10.2	Objectives	8
3.10.3	Policies	9
3.10.4	Non-regulatory implementation methods	17
3.10.5	Implementation Methods – Land Use and Discharge Controls	23
	Introduction to the Rules	23
3.10.7	Environmental Results Anticipated	37
3.10.8	Procedure for Monitoring Objectives, Policies and Methods	37

Area covered by Variation No. 5 – Lake Taupo Catchment

This Variation applies to land within the Lake Taupo catchment. The attached map in Appendix 2 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.

3.10 Variation 5 – Lake Taupo Catchment

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[1]. 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[2] 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 waters of the Lake just before winter when the Lake's bottom waters mix with its surface.

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1 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 Environment Waikato 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.

2 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.

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.

The following table summarises the current water quality characteristics:

Table 1: 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/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

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[3]. 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)[4]. Nitrogen concentrations in streams draining pastoral sub-catchments have increased by between 50 percent to 300 percent in all measured streams since the 1970s[5].

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*[6] 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[7]

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3 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.

4 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 Environment Waikato in January 2004: see document # 885692.

5 Vant, B (2002): Inflows to Lake Taupo: nutrients and water ages. Technical Report TR02/18. Environment Waikato, Hamilton.

6 Environment Waikato (2000): Issues and Options for Managing Water Quality in Lake Taupo (document # 633814).

- 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.[8] 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

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7 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.
Gravitas Research and Strategy Limited (2004): Environmental Attitudes, Awareness and Actions, 2003: A survey of residents of the Waikato Region. Environment Waikato 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.

8 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.

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.[9]

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 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 Variation Five – Lake Taupo Catchment 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.

[9] This decision is recorded in the Cabinet Business Committee Paper CBC (03) 54, available from the Ministry for the Environment.

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 dependent 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.

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™ 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:

1. have a common expiry date of July 2034; and
2. 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 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 Environment Waikato'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 Environment Waikato 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. 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

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

Method 1 *to achieve Policies 1 to 10*

2020 Taupo-nui-a-Tia Action Plan
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.

Method 2 *to achieve Policies 4, 9 and 10*

Taupo District Council Long-Term Council Community Plan
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.

Method 3 *to achieve Policies 3, 4, 6, 9, 10 and 11*

Monitoring and Review of Lake Taupo Water Quality
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.

Method 4 *to achieve Policy 2*

Tangata Whenua Partnership
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.

Method 5 *to achieve Policy 14*

Research into Development and Implementation of Markets for Nitrogen Trading (or offsetting)
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) Environment Waikato'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.

Method 6 *to achieve Policy 8*

Recording of Non-Complying Consents Granted
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.

Method 7 *to achieve Policies 4, 9 and 10*

Wastewater Management
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.

Method 8 *to achieve Policies 4, 9 and 10*

Integrated Management of Wastewater
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.

Method 9 *to achieve Policies 4 and 12*

Public Fund
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

Method 10 *to achieve Policy 13*

Review of Effectiveness of Public Fund
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.

Method 11 *to achieve Policies 3 and 7*

Education, Advice and Extension for Rural Land Use Activities Under a Nitrogen Cap
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.

Method 12 *to achieve Policies 3 and 7*

Landowner Involvement in Catchment Management
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.

Method 13 *to achieve Policy 6*

Education for Rural Land Use Activities on Phosphorus Management
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 1 - 12

Method 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 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 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 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 5 supports Policy 14 by investigating practical issues around implementing the nitrogen offsetting regime for the Lake Taupo Catchment.

Method 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 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 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 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 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 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 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 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

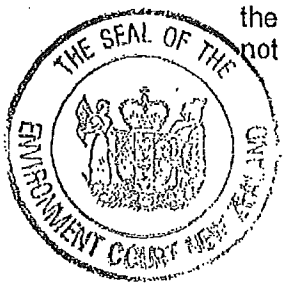
The purpose of these rules is to implement the policies that adopt nitrogen capping and offsetting to protect the water quality of Lake Taupo. The rules manage existing and new nitrogen leaching activities either as permitted activities with standards, or as controlled activities that determine landowner 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:

- 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.
   ii) 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 OVERSEER™ 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 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.

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 stand off 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;

f) 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;

g) 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;

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 advanced wastewater systems onto or into land, standards, terms and conditions (a) to (o) of Rule 3.10.6.3 shall apply;

i) 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

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.

Rule 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 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 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.

Rule 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.

Rule 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.

Rule 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:

1 Unimproved land (including gorse and broom scrubland) 2 kilograms of nitrogen per hectare per year;

2 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.

3.10.7 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.

Appendix I: Consequential amendments to Proposed Waikato Regional Plan (Appeals Version)

Abbreviations: PA – Permitted Activity, CA – Controlled Activity, DA – Discretionary Activity, E&PR – Explanation and Principal Reasons for Adopting Objective, Policy or Methods

Section	Item	
3.5.5.1	PA rule	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 to air, is a permitted activity subject to the following conditions:
3.5.5.2	PA rule	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:
3.5.5.3	CA rule	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:
3.5.5.4	DA rule	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).
3.5.5.5	DA rule	The discharge of treated farm animal effluent outside the Lake Taupo Catchment into surface water is a discretionary activity (requiring resource consent).
3.5.5.1 3.5.5.2 3.5.5.3 3.5.5.4 3.5.5.5	Add advisory note	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	E&PR – add sentence to end of first paragraph	Separate methods are provided in Section 3.10 to manage discharges of animal effluent within the Taupo Catchment.
3.5.5	E&PR – amend first sentence in 4th paragraph	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.
3.5.6.2	Amend PA rule	The discharge of activated biosolids 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:
3.5.6.3	Amend CA rule	The discharge of biosolids 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:
3.5.6	E&PR – add paragraph to end of section	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.
3.5.7.4	Amend PA rule	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:
3.5.7.5	Amend PA rule	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 lawfully established or authorised after the date of notification of this Plan (28 September 1998), is a permitted activity subject to the following conditions:
3.5.7.6	Amend PA rule	Except as provided for by Rule 3.5.7.5, 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 is a permitted activity subject to the following conditions:
3.5.7.4 3.5.7.5 3.5.7.6	Add advisory note	Discharges of domestic sewage within the Lake Taupo catchment are to be managed by rules 3.10.6.1 to 3.10.6.4, or rule 3.5.7.7
3.5.7.7	Amend DA rule	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).
3.5.7	E&PR – amend 1st sentence paragraph 4 and add 2nd sentence.	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.
3.5.11.3	Add advisory note to method	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.
3.9.3	E&PR – Amend 4th sentence of 1st paragraph	Apart from within the Lake Taupo catchment, Environment Waikato 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.
3.9.3	E&PR – Amend 3rd sentence of 3rd paragraph and add 4th sentence	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.
3.9.4	Add Advisory Note f)	f) Management of non-point source discharges in the Lake Taupo catchment (Methods in Section 3.10).
3.9.4.11	Amend PA rule	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:
3.9.4	E&PR – Amend 2nd sentence of 1st paragraph	There is one permitted activity rule for the discharge of fertiliser into air and onto or into land outside the Lake Taupo catchment.
3.9.4	E&PR – Amend 5th sentence of second to last paragraph	Apart from within the Lake Taupo catchment, Environment Waikato is taking a non-regulatory approach to management of non-point source discharges as it generally considers this is the most effective method for changing behaviour in the long-term.
5.2.8.1	Add condition to PA rule	e. If the discharge is within the Lake Taupo catchment, the compost shall be sourced within the property it is discharged to.
5.2.8	E&PR - Add two sentences after 1st sentence of paragraph 2	Rule 5.2.8.1 permits small scale composting, such as on an orchard or farm. Even at this small scale, if many landowners import organic material into the Taupo catchment, nutrient effects with respect to the Lake may be

		unacceptable. For this reason the rule applies outside the Lake Taupo catchment, or within the catchment if the compost is sourced from the property it is discharged to.
Glossary	Add seven items to Glossary of Terms	Certified Nutrient Management Advisors: A person who is registered with the Council and who holds a qualification from a tertiary education institution that provides knowledge and skills required to achieve a high standard of sustainable nutrient management in common New Zealand agroecosystems, including Dairying, Sheep and Beef, Cropping and Horticulture. The qualification must cover the following topics: a) Soil patterns, land use and climate b) Nutrients and nutrient cycles c) Diagnostics: soil and plant testing d) Nutrient transfer to the aquatic environment e) Best management practices for protecting the aquatic environment f) Issues with contaminants in fertilisers and by-products g) Determination of nutrient requirements h) Sustainable Nutrient Management i) Complying with the Code of Practice for Fertiliser Use j) Use and familiarity with the OVERSEER™ Model k) The regulatory requirements for nutrient management in the Waikato Regional Plan, including knowledge of the rules that apply in the Lake Taupo Catchment. l) Practical experience in the preparation of nutrient management plans For the avoidance of doubt, a person who has both a Certificate of Completion in Sustainable Nutrient Management in New Zealand Agriculture and a Certificate of Completion in Advanced Sustainable Nutrient Management from Massey University satisfies these requirements. Farming Activities: The grazing of animals or the growing of produce, including crops, market gardens and orchard produce but not including planted production forest and ancillary grazing of animals or cropping. Lake Taupo Catchment: For the purposes of Chapter 3.10 of the plan, the Lake Taupo Catchment includes all land within the geographical catchment which slopes and/or drains into Lake Taupo, as shown in the Waikato Regional Plan Lake Taupo Catchment Maps. Note: if a property spans the catchment boundary full records and management details for that farming entity will be required in order to assess activities within the catchment. There is no intention to require compliance with the Lake Taupo Catchment rules outside the catchment shown in the Map. Lake Taupo Near-shore Zone: The area of land from the Lake water margin at RL357.25, extending 200 metres inland. Where an urban area has residences served by on-site wastewater systems within 200 metres of the RL357.25 water level, the Near-shore Zone extends to include all properties within this urban area which are served by on-site wastewater systems. Nitrogen Leaching: The loss of nitrogen to the environment via percolation through soil.

		Papakainga: A traditional layout of residential accommodation where dwellings are erected to exclusively house members of a whanau, hapu or iwi, on land which is owned by the whanau, hapu or iwi, and is located on Maori land within the meaning of Section 2 and Section 129 (1)(a) and (b) of Te Ture Whenua Maori Act 1993. Wastewater: Effluent from domestic on-site wastewater treatment plants (including septic tanks and package plants) and public or private community wastewater treatment plants.