Introduction

These plan change provisions apply to the Lake Rotorua surface and groundwater catchment, as shown in Map xx. Note this map is correct as at xxx [date].

Insert Map

This plan change gives effect to the following requirements in the Regional Policy Statement:*

Policy WL 3B: Establish limits for the total amount of specified contaminants that enter the receiving waters within a catchment at risk including:

(a) Contaminants to be managed to avoid compromising public health and each catchment's ecology, mauri, fishability, swimmability and aesthetics;

(b) For the Rotorua Te Arawa Lakes the amount of nitrogen and phosphorus that can enter each lake in order to achieve its target trophic level index; and

(c) For Lake Rotorua the total amount of nitrogen that enters the lake shall not exceed 435 tonnes per annum.

Policy WL 5B: Allocate among land use activities the capacity of Rotorua Te Arawa lakes and other water bodies in catchments at risk to assimilate contaminants within the limits established in accordance with Policy WL 3B having regard to the following principles and considerations:

(a) Equity/Fairness, including intergenerational equity;

(b) Extent of the immediate impact;

(c) Public and private benefits and costs;

(d) Iwi land ownership and its status including any Crown obligation;

(e) Cultural values;

(f) Resource use efficiency;

(g) Existing land use;

(h) Existing on farm capital investment; and

(i) Ease of transfer of the allocation.

Policy WL 6B: Require, including by way of rules, the managed reduction of any nutrient losses that are in excess of the limits established under Policy WL 3B by ensuring that:

(a) Rural production land use activities minimise their loss of nutrients as far as is reasonably practicable by implementing on-farm best management practices;

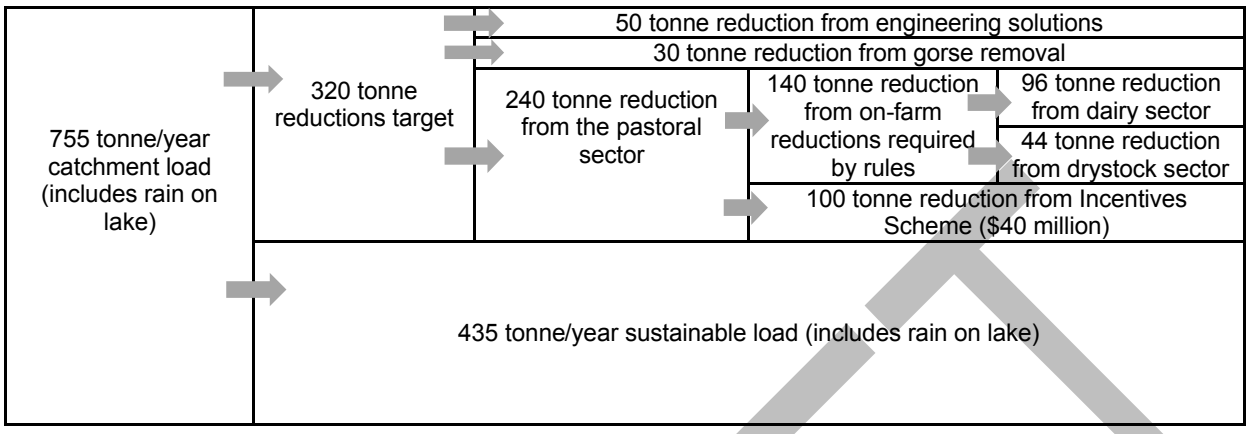
(b) Any land use change that is required within the Rotorua Te Arawa lakes catchments to achieve the limits takes into account an equitable balancing of public and private costs and benefits; and

(c) No discharges shall be authorised beyond 2032 that results in the limit for Lake Rotorua being exceeded. A catchment intermediate target for the managed reduction of nitrogen loss is to be set to achieve 70% of the required reduction from 746 t/yr to 435 t/yr by 2022.

**This is provided for informational purposes only and not part of the plan change. These provisions are from the Operative Regional Policy Statement for the Bay of Plenty, and are not open for submission.*

The nitrogen load to Lake Rotorua will be reduced through an integrated programme of land use nitrogen reductions (NDAs – Nitrogen Discharge Allowances), engineering solutions, incentives and gorse conversion. This package of interventions forms the Integrated Framework. The Integrated Framework was developed through the Lake Rotorua Stakeholder Advisory Group process and adopted by Council on September 2013 as being the preferred approach to allocating nitrogen to land use activities in the Lake Rotorua catchment. It provides the basis for the proportional nitrogen reductions being implemented through the rules and for the allocation methodology.

Figure 1: Lake Rotorua Integrated Framework



The Integrated Framework contains the following proportional reductions in the allocation methodology:

Sector	ROTAN 2011 Area (ha)	ROTAN 2011 Load (tN/yr)	2032 Sector allocation (tN/yr)	Reduction (tN/yr)	Proportional reductions from sector as % of sector load (tN/yr)
Dairy	5050	273.2	176.8	96.4	35.3%
Drystock	16125	253.2	209.6	43.6	17.2%

Whilst this plan change includes rules to reduce nitrogen loss, both nitrogen and phosphorus need to be managed in the long term for the betterment of Lake Rotorua's water quality. Phosphorus is managed through Policy LR P2 of this plan change.

Objectives (What)

This plan change does not include new objectives but relies on the following Objectives from the Operative RPS and Operative RWLP:

Regional Policy Statement Objective 28: Enhance the water quality in the lakes of the Rotorua District and other catchments at risk

Regional Water and Land Plan Objective 11: The water quality in the Rotorua lakes is maintained or improved to meet the Trophic Level Index of 4.2 for Lake Rotorua

These Objectives are provided for informational purposes only and not part of the plan change. They are not open for submission.

Policies (How)

Policies LR P1 to LR P19 apply to the management of nutrient loss in the Lake Rotorua surface water and groundwater catchment.

LR P1 To reduce nitrogen losses to Lake Rotorua to achieve the sustainable nitrogen load set out in the Regional Policy Statement

LR P2 To recognise the benefit the management of phosphorus loss has on reducing nitrogen loss.

Nitrogen allocation

LR P3 To allocate the pastoral, forestry and houseblock sectors of the sustainable lake load, and manage nitrogen leaching from properties within the groundwater catchment as follows.

Sector	Sector area (ha) (ROTAN 2011)	Sustainable lake load by sector (tN) (ROTAN 2011)	Sector proportion reduction (Integrated Framework)	N leaching rate by sector (tN/ha/yr) (OVERSEER 6.2)
Dairy	5024	234.1	35.3%	
Drystock	16998	345.9	17.2%	
Forestry	19420	54.0		
• Production forestry				2.5
• Bush/scrub				3
House blocks	490	26.0		

LR P4 To allocate Nutrient Discharge Allowances to dairy and drystock sectors on a block basis as follows:

Sector	Sector average (kgN/ha/yr) (OVERSEER 6.2)	Range description (kgN/ha/yr) (OVERSEER 6.2)
Dairy	46.6	39-52
Drystock	20.4	16-32

6.1.3 figures to be updated to 6.2.0 figures.

LR P5 To determine Nutrient Discharge Allowances in accordance with Schedule One for all properties that require resource consent for nitrogen loss.

Managed Reduction

LR P6 To require nitrogen loss reductions from all pastoral properties that require a resource consent.

LR P7 To achieve managed reduction by using Nitrogen Management Plans that set five year nitrogen reduction targets for individual properties, and achieve the required total reduction for the property by the timeframe set in the Regional Policy Statement.

Use of Rules

To permit nitrogen loss from:

a. Plantation forestry, native bush and pastoral properties less than 10 hectares with low intensity land use from 31 October 2017.

b. Properties between 10 and 40 hectares between 31 October 2017 and 31 June 2022 provided there is no increase in land use intensity and information reporting conditions are met.

LR P8 To require resource consents for nitrogen loss from all properties over 40 hectares by 31 October 2017, and from properties between 10 and 40 hectares by 1 July 2022.

LR P9 To classify land use activity applications that submit a Nutrient Management Plan (NMP) demonstrating managed reduction to reach the specified Nitrogen Discharge Allowance (NDA) by 2032, as controlled activities.

LR P10 To classify land use activity applications that do not contain Nutrient Management Plans to achieve managed nitrogen reduction as non complying activities.

LR P11 Placeholder - Subdivision

LR P12 To phase the implementation of rules requiring resource consent as follows:

a. Nitrogen loss from properties 40 hectares or larger that can assess nitrogen loss using Overseer are required to have a resource consent by 31 October 2017.

b. Nitrogen loss from properties that can not assess nitrogen loss using Overseer are required to have a resource consent by 1 July 2022.

c. Nitrogen loss from properties less between 10 and 40 hectares, or properties less than 10 hectares that do not meet the low intensity land use definition are required to have a resource consent by 1 July 2022.

d. Nitrogen loss from properties that were not within the Regional Water and Land Plan Rule 11 Lake Rotorua surface water catchment but are within the Lake Rotorua groundwater catchment are required to have a resource consent by 1 July 2022.

Use of Overseer

LR P13 To use Overseer version 6.2.0 and subsequent versions to assess nitrogen loss from properties.

LR P14 To consider nitrogen budgets for nitrogen loss, if Overseer cannot be readily used for a property's specific land use. Consideration of whether nitrogen budgets are used will take into account:

a. The ability to reliably estimate a property's long-term nutrient loss

b. The acceptability of information inputs, for example, verifiable leaching rates

c. The potential availability of suitably skilled and qualified persons to develop nitrogen budgets

Information Requirements

LR P15 To require:

(a) all properties less than 10 hectares that do not have low intensity land use, and

(b) all properties over 10 hectares,

to supply information that will be used to monitor compliance with either permitted activity status or resource consent conditions.

Consent Duration

LR P16 To grant controlled activities with a consent duration of twenty years and grant shorter term consents for other activity classes. The duration of the shorter term consents will reflect the management proposals to ensure that nitrogen losses will be reduced to the required level by 2032.

Declining Consent

LR P17 To decline the renewal of short term consents that show inadequate nitrogen loss reductions.

Trading/Offsetting

LR P18 To enable the movement of NDA between properties (when authorised by Council) to encourage efficient outcomes.

Adaptive Management

LR P19 To recognise the balance between certainty and the use of best science/good data by using:

a. the 435 tonne sustainable load RPS value

b. the 755 tonne ROTAN 2011 value

c. OVERSEER 6.2.0 for allocation purposes

d. the sector reductions within the Integrated Framework

and implementing adaptive management through:

i. science reviews
ii. policy reviews under the Resource Management Act 1991
iii. five year nitrogen management plan planning timeframes
iv. proportional nitrogen leaching reductions.

Methods (non-regulatory)

Need to change number so it reads LR M1 instead of P

LR P1 Regional Council will supply information to Rotorua District Council for inclusion on Land Information Memorandum that:

(a) clearly identifies rural properties that lie within the Lake Rotorua groundwater catchment boundary and are subject to these nitrogen management rules; and

(b) advises landowners of pastoral properties identified in LR M1(a) to contact the Bay of Plenty Regional Council for further information.

LR P2 Regional Council will review and publish the science that determined the limits set in the RPS and the Regional Water and Land Plan for Lake Rotorua on a five yearly basis. These reviews may include:

a) review of trends in N, P, Chla, algal blooms, clarity, TLI for inflows, in-lake and outflow where relevant

b) review of progress towards catchment N target (for example, 70% of catchment target by 2022)

c) review of 435 tN/yr and P (external and internal, nominally 37 tP/yr) targets and any other N and P load combinations to meet the TLI of 4.2 i.e. lake model reruns. This may necessitate:

i. review and rerun of the lake model (or successor model), including its ability to replicate recent years data

ii. review and rerun of ROTAN (or successor model), including N loss rates, groundwater trends and attenuation rates, including Overseer or similar estimates

iii. assessing the efficacy and risks of alum dosing and assessment of land-based phosphorus mitigation

d) review of relevant New Zealand and international lake remediation science

e) recommendations

LR P3 Regional Council will:

(a) Develop and maintain an overall Rule Implementation Plan

(b) Report on the achievement of the Implementation Plan outcomes on a 5 yearly basis through plan effectiveness reporting

(c) Develop and maintain a Nitrogen Discharge Allowance (NDA) register, that will monitor catchment progress towards meeting the 2032 sustainable load to the lake

(d) Provide land advisory services and incentives to support land use management change and land use change that reduces nitrogen and phosphorus loss in the catchment

(e) Encourage industry good practices to be implemented on pastoral properties to reduce nitrogen and phosphorus loss in the catchment

The Operative Regional Policy Statement outlines the following approach to address cross boundary issues specific to Waikato Regional Council.

Regional Policy Statement Method 10: Liaise on cross boundary issues specific to Waikato Regional Council

Liaise with Waikato Regional Council to ensure:

(a) Any regional plans for that part of the Rotorua Lake catchment within the Waikato region achieve the objectives set for the lake, particularly in relation to managing land use and nutrient discharge levels.

**This is provided for informational purposes only and not part of the plan change. This method is provided for informational purposes only and not part of the plan change. It is not open for submission.*

Draft Rules

Rules LR R1 to LR R9 apply to the management of nitrogen loss in the Lake Rotorua groundwater catchment.

General Advice notes for rules

1 The rules will have legal effect once this plan change is notified.

2 These rules manage nitrogen loss from land use (non-point source) only. Other provisions in the Regional Water and Land Plan that manage land, water and discharges still apply. Point source discharges in the Lake Rotorua groundwater catchment will continue to be managed by Rule 11F.

3 Any grazing or lease arrangements need to comply with these rules and property owners are ultimately responsible for compliance.

4 All resource consents required under Rules LR R7 to LR R8 will be registered against the property title.

Rule Summary Table

Placeholder

LR R1 Permitted - Nitrogen loss from plantation forestry or native bush

The loss of nitrogen from plantation forestry or native bush in the catchment of Lake Rotorua is a permitted activity, subject to the following conditions:

Conditions:

(a) Plantation forestry is not part of a pastoral farming property or farming enterprise whereby the total area grazed is 10 hectares or less; and

(b) Land remains in plantation forestry with no more than a two year interval between harvest and replantation or the land is permanently retired; or

(c) Land remains in native bush and is not used for pastoral grazing

(d) No increase in nitrogen loss

Advice Note:

1 Rules 2, 2A, 2B, 2C, 3, 3A, in the Regional Water and Land Plan manage vegetation clearance and forest harvesting in the Lake Rotorua catchment.

2 Properties with pastoral grazing are managed by rules LR R2 – LR R9

LR R2 Permitted - Nitrogen loss from low intensity land use on properties less than 10 hectares, or properties with an effective area less than 10 hectares

The loss of nitrogen from:

(a) low intensity land use on properties less than 10 hectares, or

(b) properties with an effective area less than 10 hectares,

in the catchment of Lake Rotorua is a permitted activity, subject to the following conditions:

Conditions:

(a) The effective area is 10 hectares or less.

(b) No increase in nitrogen loss

(c) The land use contains no more than the stocking rates listed in Schedule Three over the effective area at any point in time.

(d) None of the following activities are undertaken on the effective area:

(i) Commercial cropping including forage crops, fodder crops and maize

(ii) Commercial horticulture including nurseries, orchards, vineyards and perennial vegetables

Advice Note:

1 Schedule Three provides permitted activity stocking rates that enable landowners to calculate stock unit numbers to meet the requirements of this rule.

2 After 1 July 2022, nitrogen loss from properties that do not meet Rules LR R1, LR R2 or LR R6 will require consent

LR R3 Permitted - Until 30 June 2022, nitrogen loss from properties less than 10 hectares that do not meet Rule LR R2

The loss of nitrogen from properties less than 10 hectares in the catchment of Lake Rotorua that do not comply with the conditions of Rule LR R2 is a permitted activity until 30 June 2022, subject to the following conditions:

Conditions:

(a) The effective area is 10 hectares or less.

(b) There is no increase in the effective area, nitrogen loss or land use intensity, including an increase in stocking rates, conversion of forestry to another land use or conversion to a more intensive land use after [date this plan change is notified].

(c) Landowners must submit annual land use information records, as prescribed in Schedule Two, to the Regional Council by 31 October 2017 and each year thereafter.

Advice Note

1 If properties less than 10 hectares do not meet the conditions of LR R3, they will be managed by Rule LR R6 or LR R7.

LR R4 Permitted - Until 30 June 2022, nitrogen loss from properties between 10 hectares and 40 hectares

The loss of nitrogen from properties between 10 hectares and 40 hectares in the catchment of Lake Rotorua is a permitted activity until 30 June 2022, subject to the following conditions:

Conditions:

(a) The effective area is between 10 and 40 hectares

(b) There is no increase in effective area, nitrogen loss or land use intensity, including an increase in stocking rates, conversion of forestry to another land use or conversion to a more intensive land use after plan change notification

(c) Landowners must submit annual land use information records, as prescribed in Schedule Two, to the Regional Council by 31 October 2017 and each year thereafter.

Advice Note

1 If properties between 10 and 40 hectares do not meet the conditions of LR R4, they will be managed by Rule LR R9 or those property owners could opt to be managed by Rule LR R5 before the required date of 1 July 2022.

LR R5 **Permitted - Until 30 June 2022, nitrogen loss from properties in the Lake Rotorua groundwater catchment not previously managed by Rule 11 the Regional Water and Land Plan**

The loss of nitrogen from properties in the groundwater catchment of Lake Rotorua that were not previously subject to Rules 11 to 11F (inclusive) of this regional plan, is a permitted activity until 30 June 2022, subject to the following conditions:

Conditions:

(a) The majority (greater than 50% by title area) of the property has not been previously managed by nutrient management rules in the Regional Water and Plan.

(b) There is no increase in effective area, nitrogen loss or land use intensity, including an increase in stocking rates, conversion of forestry to another land use or conversion to a more intensive land use after plan change notification

(c) Landowners must submit annual land use information records, as prescribed in Schedule Two, to the Regional Council by 31 October 2017 and each year thereafter.

Advice Note:

1 If properties in the Lake Rotorua groundwater catchment not previously by Rule 11 in the Regional Water and Land Plan do not meet the conditions of LR R5, they will be managed by Rule x

2 After 1 July 2022 properties permitted by LR R5 will require consent unless it can be demonstrated the nitrogen loss from a property meets the requirements of LR R6.

3 Regional Council will provide access to electronic templates and geospatial mapping to assist landowners to comply with permitted activity information requirements.

4 If the land is leased, or contract grazed/cropped, then the landowner should specify rule requirements in the lease/contract.

5 For the avoidance of doubt, this rule is for properties that are not in the surface water catchment of Lake Rotorua, but are in the groundwater catchment of Lake Rotorua.

LR R6 **Permitted - From 1 July 2022, nitrogen loss from properties that is less than xkg N/ha/yr**

The loss of nitrogen from properties in the Lake Rotorua catchment, where the nitrogen loss is less than x kg nitrogen per hectare per year is a permitted activity, subject to the following condition:

Conditions:

(a) Landowners must submit an annual Overseer file, prepared by a nutrient management advisor, demonstrating nitrogen loss is less than the nitrogen loss rate generated by the permitted activity reference file / xkg N/ha/yr.

Advice Note:

1. Under Overseer version 6.2.0, this reference file is x kg N/ha/yr. See schedule x

LR R7 Controlled - From 1 July 2022, nitrogen loss from properties less than 40 hectares do not meet the permitted activity conditions

The loss of nitrogen from properties in the Lake Rotorua catchment where:

(a) The property is less than 40 hectares, and

(b) The activity does not comply with the permitted activity conditions in Rules LR R1 to LR R6

is a controlled activity from 1 July 2022, subject to the following conditions:

Conditions:

(a) The effective area is less than 40 hectares

(b) A 2032 Nitrogen Discharge Allowance (NDA) and relevant intermediary targets, in accordance with Schedule Three, have been determined for the property

(c) A Nitrogen Management Plan has been prepared and updated for the property, in accordance with Schedule Five, by a nutrient management advisor and demonstrates managed reduction to meet the property's relevant intermediary target and Nitrogen Discharge Allowance (NDA) by 2032

(d) If the subject property is leased, landowner approval is provided

Bay of Plenty Regional Council reserves control over the following:

(a) The specification of the 2032 Nitrogen Discharge Allowance (NDA) for the land subject to the application

(b) Circumstances that may require a review of consent conditions including change to property size, disposal of land, subdivision and NDA movement between properties

(c) Content and implementation of the NMP, in accordance with Schedule Five

(d) Certification that NMP complies with Schedule Five

(e) Information inputs required for Overseer modelling or when relevant nitrogen budgets

(f) Self-monitoring, record keeping, information provision and site access requirement to demonstrate on-going compliance with the farm nitrogen plan.

LR R8 Controlled - From 31 October 2017, nitrogen loss from properties that are 40 hectares or greater

The loss of nitrogen from properties in the Lake Rotorua catchment where the property is greater than 40 hectares, is a controlled activity from 1 July 2022, subject to the following conditions:

Conditions:

(a) Nitrogen losses from the land use can be readily modelled using Overseer

(b) A 2032 Nitrogen Discharge Allowance (NDA) in accordance with Schedule Three, has been determined for the property

(c) A Nitrogen Management Plan, NMP, has been prepared and updated for the property, in accordance with Schedule Five, by a nutrient management advisor that demonstrates managed reduction to meet the intermediary targets and Nitrogen Discharge Allowance (NDA) by 2032.

(d) If any part of the property is leased, landowner approval for proposed mitigation on their land is provided.

(e) If the property received an allowable nitrogen loss rate under existing Regional Water and Land Plan provisions, that nitrogen loss rate must not be exceeded.

Bay of Plenty Regional Council reserves control over the following:

(a) The specification of the 2032 Nitrogen Discharge Allowance (NDA) for the land subject to the application

(b) Circumstances that may require a review of consent conditions including change to property size, disposal of land, changes in lease arrangements, subdivision and NDA movement between properties

(c) Content and implementation of the Nitrogen Management Plan (NMP), in accordance with Schedule Five

(d) Certification that Nitrogen Management Plan (NMP) complies with Schedule Five

(g) Information inputs required for Overseer modelling or when relevant nitrogen budgets

(e) Self-monitoring, record keeping, information provision and site access requirement to demonstrate on-going compliance with the nitrogen management plan

General Advice notes for Nitrogen Loss rules

1 Templates for consent applications and information reporting requirements will be provided electronically and in hard copy

2 In instances where the property boundary extends into the groundwater catchment, only the area in the groundwater catchment is subject to these rules. The parts of the property within the groundwater catchment requiring consent will receive an Nitrogen Discharge Allowance (NDA) and will have to comply with these nitrogen loss rules. However the regional council will encourage a holistic farm planning approach.

3 Rule 20 in the Water and Land Management Plan manages fertiliser application to land that may enter waterways

4 Rule 11F in the Water and Land Management Plan manages point source discharges in the Lake Rotorua catchment

5 Rule 37 in the Water and Land Management Plan manages discharges to water and land

6 There may be administrative charges under section 36 or financial contributions under section 108 of the Act

7 Applications for controlled activities will not be notified

8 Activities that might contribute to an increase in nitrogen loss include xx

9 Provision for early adopters (eg property owners who do not meet permitted activity but wish to submit NMP before they are required in 2022)

LR R9 Non-complying – Loss of nitrogen from land use activities that do not meet the conditions of permitted or controlled rules

(a) The loss of nitrogen from land use activities in the in the Lake Rotorua catchment, where the activity is not permitted under Rules LR R1, LR R2, LR R3, LR R4, LR R5 or LR R6

(b) Not a controlled activity under Rules LR R7 or LR R8,

is a non-complying activity.

Definitions

Block:

Dairy: *includes* the effective area in the milking platform, fodder and effluent but *excludes* runoff (e.g. dairy support) and forest.

Dairy support: The land use which includes heifer grazing or the wintering off of cows either on the dairy farm (generally referred to as "runoff") or on drystock farms that lease part of their land to dairying operations. Note: This land use has a different nitrogen allowance than dairy, see Schedule One for an explanation of the calculations.

Drystock: *includes* the effective area in sheep, beef, cropping and dairy support but *excludes* forest.

Effective Area: The part of the property that is actively grazed and/or cultivated.

Houseblock:

Horticulture: *includes* the effective area used for nurseries, orchards, vineyards and perennial vegetables

Land management block: The land management block as used by OVERSEER with the following block categories – pastoral, fodder crop, cut and carry, fruit, vegetable or arable cropping, trees and scrub, riparian, wetland and house.

Low intensity land use: The land use contains no more than the stocking rates listed in Schedule Three over the effective area at any point in time between 1 March to 31 July and none of the following activities are undertaken on the effective area:

(i) Commercial cropping including forage crops, fodder crops and maize

(ii) Commercial horticulture including nurseries, orchards, vineyards and perennial vegetables

Managed reduction: In relation to nutrients and water quality, managed reduction means planned progressive lowering of excess nutrient losses; where a target date exists, the progressive lowering is to reach the nutrient limit by that date.

Native bush: Areas of native forest or scrub containing naturally occurring tree species. (Note native forest defined in RPS)

Nitrogen budget: A nitrogen budget means a statement of the total nitrogen balance for a particular farm property or farming enterprise, taking into account all the nitrogen inputs and all the outputs. It must be prepared or approved:

(a) using standard protocols recognised and approved by the Bay of Plenty Regional Council; and

(b) by a suitably qualified and experienced person

Nutrient Management Advisor: An appropriately qualified and experienced person who has completed both the "Intermediate" and the "Advanced" courses in "Sustainable Nutrient Management in New Zealand Agriculture" conducted by Massey University

Plantation forestry: The planting, maintenance and/or harvesting of tree species for commercial purposes and for the purposes of this rule the plantation forestry area does not include grazing of stock.

Permanently retired: The permanent removal of plantation forestry and agricultural production to enable a natural reversion back to native bush cover (or a land use with the same nitrogen loss rate as forest).

Property/Properties: the land described in a particular certificate of title, or a group of contiguous certificates of title owned or leased by the same owner or lease holder, or land which is designated as a road or reserve, or is Maori land.

For the purposes of this plan change, property includes all rural zoned properties but excludes

- properties in the rural settlement zones
- properties in the lakeside settlement zones
- properties less than 2000 square meters

For the purposes of this plan change a "property" may include:

- land described in certificates of title that are not contiguous, but are in close proximity to each other and within the same groundwater catchment; and / or
- land described in certificates of title that are owned or leased by different owner(s)or leaseholder(s)
- an aggregation of parcels of land held in single or multiple ownership (whether or not held in common ownership) that constitutes a single farming operating unit.

Stock unit: The "revised stock unit" system, as developed by Woodford and Nicol (2004) – this equates to stock with an annual feed intake of 6000 MJ ME (megajoules of metabolisable energy).

Suitably Qualified and Experienced Person: A person who either:

- has completed both the "Intermediate" and the "Advanced" courses in "Sustainable Nutrient Management in New Zealand Agriculture" conducted by Massey University and has at least 5 years work experience in a land use/farm advisory role. Or
- A person who is approved in writing by the Regional Council.

Schedule One – Methodology to determine Nutrient Discharge Allowances (NDA)

To be developed

Start Point

The starting point on which allocation is based and nitrogen management begins from, and the 2032 required positions, are set out in Table One below:

Rules category	Rule 11 status	2017 Nitrogen start point	2032 NDA
Greater than 40 ha	Benchmarked	Actual Benchmark.	Actual Benchmark and landuse applied to allocation methodology.
	Not benchmarked	Derived Benchmark. Function of 2002-03[1] landuse and 2001-04 sector average ***unless evidence of substantial change.***	Derived Benchmark and landuse applied to allocation methodology.
10-40 ha Consented	Benchmarked	Actual Benchmark.	Actual Benchmark and landuse applied to allocation methodology.
	Not Benchmarked[2]	Derived Benchmark. Function of 2002-03 landuse and 2001-04 sector average ***unless evidence of substantial change.***	Derived Benchmark and landuse applied to allocation methodology.
10-40 ha 2017 Permitted 2022 Consented	Benchmarked	Actual Benchmark.	Actual Benchmark and landuse applied to allocation methodology.
	Not Benchmarked	Derived Benchmark. Function of 2002-03 landuse and 2001-04 sector average ***unless evidence of substantial change.***	Derived Benchmark and landuse applied to allocation methodology.

Table One

Notes of clarification

- NDAs are for land uses that can be readily modelled by Overseer and will only be required for area within the Lake Rotorua groundwater catchment.
- Need to explain the effective land use of dairy, drystock, bush and forest for each property using scenarios.
- Any consent applications later than 2017 date can apply for a controlled activity but an immediate nitrogen loss reduction would be required so that the starting point aligns with where nitrogen loss would have been if managed reduction had started in 2017
- Need to write in the NDA must be calculated or approved by Regional Council
- Need statement saying gorse to be treated same as bush/scrub
- Circumstances when NDAs might be altered and how this will be managed including disposal of land, subdivision, planned additional houseblocks and trading - Each resulting property is allocated a new NDA (the sum of NDAs for each resulting property will not exceed the original total NDA) and amended NMPs for each property is submitted to Council

NDA Calculations

1. Take current or derived benchmark
2. Apply a standard % reduction for all blocks except:
    a. Those blocks where the benchmark is below the lower NDA range boundary

    Or

    b. Those blocks where applying the standard % reduction would cause the NDA to fall below the lower NDA range boundary

    where in both cases the NDA is set at the lower range boundary.
3. Following the standard reduction, any block that is above the upper NDA range boundary is moved down to that boundary.

A property's NDA equals the sum of the blocks.

The combination of parameters and figures in the table below creates an allocation approach that achieves the required reductions and sector contributions within the Integrated Framework:

	Dairy	Drystock
Standard % reduction	31.3%	18.0%
NDA Average	46.6	20.4
Lower NDA range boundary	39.0	16.0
Upper NDA range boundary	52.0	32.0
Sector contribution	35.3%	17.2%

6.1.3 figures to be updated to 6.2.0 figures.

Additional Matters

- Exceptional circumstances may exist that imply a need to assess amendments to NDA calculations on a case by case basis. This may include consideration of previous mitigation and lawfully consented activities.
- Areas of trees that were grazed and that were benchmarked as pastoral will be allocated the relevant tree NDA plus the NDA attributed to the benchmarked nutrients of the block.

Movement of NDA between properties

- Any NDA that is moving between properties (such as through a trade) must be authorised by the Regional Council to confirm the NDA source and NDA destination, and legal basis for the movement.
- Any NDA movement will require consequential change to the NMPs for the source and destination properties to be submitted to Council.
- Any NDA that is moved between properties can only be added to existing NDA and cannot be added to a properties managed reduction pathway to increase discharges.

Schedule Two – Information Requirements Permitted Activities:

(a) Contact details of landowner (or if relevant the leaseholder)

(b) Legal description of the land and farm identifier as provided by Regional Council

(c) A map or aerial photograph showing the boundaries or land areas of the farming property and land use cover including pasture, horticulture, crops, fodder crops and non-grazed areas (including forestry, riparian and tree areas).

And where applicable:

(a) Stocking rate (numbers, classes and ages) including a breakdown by month

(b) Type, quantity and timing of effluent and fertiliser applications

(c) Type area and planting dates for crops

(d) Type and quantity of supplementary feed

This information is to be collated for the period 1 July to 30 June each year and be provided to the Regional Council annually, no later than 31 of October of each year.

Schedule Three – Permitted Activity Stocking Rates

The following stocking rates show how many animals allowed per hectare of effective area to comply with the permitted activity rule LR R2.

Stock class	Animal/ha	Ha/animal
Pony	1.9	0.53
Pony brood mare w/ foal	1.4	0.71
Small hack	1.4	0.71
Small hack broodmare w/ foal	1.1	0.91
Large hack	0.9	1.11
Thoroughbred	0.9	1.11
Large hack broodmare w/ foal	0.8	1.25
Dairy bull	1.2	0.83
Dairy cow	0.7	1.43
Dairy heifer < 2 years age	1.6	0.63
Dairy heifer calf	1.8	0.56
Beef bull	1.2	0.83
Beef cow	1	1.00
Steer/bull <2 years age	1.5	0.67
Heifer < 2 years age	1.6	0.63
Steer calf < 1 year	2.2	0.45
Heifer calf < 1 year	2.2	0.45
Ram	12.7	0.08
Adult ewe	10.4	0.10
Sheep <2 years of age	14.3	0.07
Sheep <1 years of age	19.1	0.05
Bucks & does < 1 year	22.9	0.04
Angora does	10.4	0.10
Feral does	12.7	0.08
Feral bucks & wethers	22.9	0.04
Stag	4.9	0.20
Breeding hind	6.3	0.16
Hind < 2 year	8.8	0.11
Hind fawn <1 year	28.8	0.03
Stag < 2 year	4.1	0.24
Stag fawn < 1 year	22.9	0.04

Alpaca	14.3	0.07
Llama	7.1	0.14

For animal species not listed in Schedule X (e.g. outdoor pigs), the corresponding maximum stocking rate under permitted Rule LR R2 is 10 revised stock units (RSU) per hectare. Note that an RSU corresponds to an annual animal feed intake of 6000 MJ ME (megajoules of metabolisable energy) which in turn equates to an annual pasture drymatter intake of approximately 550 kg.

Schedule Four – Version Control of Overseer

Introduction

The OVERSEER® nutrient budget model is updated from time to time with new versions that reflect:

- Improvements to the model algorithms and the user interface
- Additions of new farm systems, farm practices and mitigation options
- Fixing software bugs.

While each of these Overseer version updates represents progressive improvements, they may result (to varying degrees) in different nitrogen leaching outputs, even though the same farm inputs are entered. Some version updates will impact some farms, and some farm practices, more than others.

It is therefore appropriate to adopt an Overseer version control method that:

- Enables the latest version of Overseer to be used for every assessment and so take advantage of the best available science
- Adjusts a property's "start-point" nitrogen loss, intermediate nitrogen targets and 2032 NDA in a way that enables a fair comparison with the property's current nitrogen leaching rate
- Maintains reasonable NDA relativity between farms i.e. maintains the overall integrity of the nitrogen allocation method in Schedule 2
- Is understandable to landowners
- Enables effective compliance and reporting.

Overseer Reference Files

Overseer "reference files" have been established for a hypothetical dairy and hypothetical drystock farm. The Overseer input parameters for each of these files are in Appendix XX. In summary, each reference file is based on:

- A simplified and hypothetical 100 ha farm
- Input parameters selected to give a nitrogen leaching loss approximately at the mid-point in the two pastoral sector NDA ranges i.e. in Overseer version 6.2.0:
    - 21.4 kgN/ha/yr for drystock
    - 46.6 kgN/ha/yr *[These numbers are subject to confirmation in 6.2.0, but are indicative]*

In addition to the two pastoral farm reference files, it is also necessary to define reference nitrogen losses for native tree blocks, plantation tree blocks (typically pinus radiata) and house blocks as these may change in future Overseer versions. Together, these five land uses constitute the "major land uses" underpinning the NDA method.

Each property's nitrogen targets (start point, intermediate 2022 and 2027 targets, and 2032 NDA) will be calculated as set out in A, B and C below:

A. Setting initial nitrogen loss targets in Overseer Version 6.2.0 and as percentages of reference files

1. The property's land use and 2017 start point are described in accordance with its 2001-2004 land uses and nitrogen losses, consistent with its 2001-2004 nutrient benchmark, being (in preference order) an actual Rule 11 benchmark value or a derived benchmark value in accordance with Method ZZ).
2. The 2032 NDA is calculated once in accordance with Schedule 2 using Overseer version 6.2.0, being a sum of each of the land uses occurring in 2001-2004 (drystock, dairy, native/bush, forestry and house block)

3. The reduction increment for each five year period (corresponding to managed reduction) is deemed to be one third of the total reduction required over the 15 year period from 2017 to 2032, unless otherwise prescribed in the property's resource consent application, NMP and resource consent conditions.
4. The reference file N loss rates for each major land use is calculated once using Overseer version 6.2.0, using the file input parameters in Schedule ZZ.
5. The target N loss rates (start point, intermediate 2022 and 2027 targets, and 2032 NDA) are then expressed as a percentage of the relevant reference file(s) N loss rates.
6. The relevant land uses, areas and reference percentage rates are set out in a table within consent conditions *(reference relevant rules here)*, consistent with Table YY below
7. The quantitative NDA values and intermediate targets may be included in the resource consent as an Advice Note column, consistent with Table YY below.

B. Updating reference files for subsequent Overseer versions

8. The reference files for the five major land uses are rerun upon each new Overseer version release, using the file input parameters in Schedule ZZ, with the N loss results (in kgN/ha/yr) made publicly available by Council.

C. Use of updated reference files

9. A property's nitrogen targets are reassessed by applying the property's relevant reference percentage rates (from step 6 above) to the updated reference file N loss rates. This reassessment shall be carried out when any of the following occurs:
    (a) Upon updating the NMP at the standard five-year renewal, and:
    (b) When the NMP needs to be updated to reflect actual or proposed changes in the property's nitrogen management, including any sale or purchase of NDA
    (c) Upon the landowner requesting a reassessment.

Table YY: Example description of ONE hypothetical property with multiple land uses - NDA expressed relative to reference file values

2001-04	Example advice note columns using Overseer v6.2, kgN/ha/yr						N targets expressed as a % of ref file				
Land use	start point	2022 target	2027 target	2032 NDA	5yr red'n	ref file	start point	2022 target	2027 target	2032 NDA	5yr red'n
drystock	41	38	35	32	3	21	195%	181%	167%	152%	14%
dairy	73	65	57	49	8	47	155%	138%	121%	104%	17%
bush	3	3	3	3	0	3	100%	100%	100%	100%	0%
forestry	2.5	2.5	2.5	2.5	0	2.5	100%	100%	100%	100%	0%

Table notes:

- All quantitative nitrogen loss rates are per year values
- The 2022 N target is indicative of managed reduction and in this example assumes a linear reduction from a 2017 start point to the 2032 NDA for each land use type. This equates to achieving one third of the total reduction in N losses across each five year period (2017-2022; 2022-2027; 2027-2032).

Schedule Five – Nitrogen Management Plan Requirements

The aim of the Nitrogen Management Plan is to manage nutrient reduction so the property meets the NDA by 2032.

A Nitrogen Management Plan shall be prepared in accordance with A or B below by a Suitably Qualified and Experienced Person.

The Nitrogen Management Plan shall take into account all sources of nitrogen associated with the farming activity and identify all relevant nitrogen management practices and mitigation measures.

The Nitrogen Management Plan must identify how the Nitrogen Discharge Allowance for the individual property will be achieved by no later than 2032.

The plan requirements will apply to:

1 A plan prepared for an individual property or individual farming enterprise; or

2 A plan prepared for an individual property which is part of a farming enterprise or a collective of pastoral properties.

A Nitrogen Management Plans prepared for an individual farm property or a farming enterprise as part of an industry environment management programme approved by the Bay of Plenty Regional Council.

B Nutrient Management Plans prepared for an individual farm property or a farming enterprise that are not derived from an industry environment management programme.

Nitrogen Management Plans shall contain as a minimum:

1 Property details
   - (a) Physical address
   - (b) Name of a contact person
   - (c) Description of ownership structure
   - (d) Legal description of the land and farm identifier as provided by Regional Council
   - (e) Name and contact details of the person responsible for managing the property if different from above.

2 A map(s) or aerial photograph at a scale that clearly shows:
   - (a) The boundaries of the property
   - (b) The boundaries of the main land management blocks on the property

3 The starting point on which allocation is based, relevant intermediary planning targets and the Nitrogen Discharge Allowance allocated to the property that must be achieved by 2032.

4 Any nitrogen benchmark under Rule 11 of the Regional Water and Land Plan.

5 A description of how each of the following management objectives, where relevant, will be met.

(a) *Nitrogen management:* To minimise nitrogen losses and achieve the Nitrogen Discharge Allowance allocated to the property by 2032. The Nitrogen Management Plan must include:

(i) A nitrogen budget for the property that matches the current system or use of the system.

(ii) A pathway, including a schedule of mitigations, that demonstrates managed reduction to achieve the intermediary planning targets and the 2032 NDA.

(iii) The specific data and records that will be kept to measure performance against the specific targets defined in 6(a)ii.

(iv) A description of any specific risks related to nitrogen leaching and runoff risks.

(b) *Phosphorus management:* To identify the environmental risks associated with phosphorus and sediment loss from the subject property, the significance of those risks and management practices to be implemented to avoid or reduce the risks.

(c) *Effluent management:* To manage the risks associated with the operation of effluent systems to ensure effluent systems are compliant 365 days of the year.

(d) *Gorse management:* To manage gorse that adversely affects water quality.

(e) Water irrigation management: To operate water irrigation systems in a way that minimises nitrogen losses from the property.

(f) *Fertiliser management:* To manage the risks associated with the application of fertiliser. Fertiliser must be applied in accordance with the Code of Practice for Nutrient Management [2007]; and either

(i) the Spreadmark Code of Practice;

or

(ii) (b) With spreading equipment that is maintained and self-calibrated to Spreadmark Code of Practice standards.

6 Nitrogen budgets must be prepared using the OVERSEER Nutrient Budget model (or an alternative model approved by the Bay of Plenty Regional Council) in accordance with Policy XX.

7 Nitrogen Management Plans shall be updated at no more than five yearly intervals from 1 June 2017, in response to a significant farm system change or movement of NDAs between properties, or alternatively by agreement with the Chief Executive. All updated Nitrogen Management Plans must meet the intent of the original Nitrogen Management Plan and include an updated nitrogen budget.

8 Any NDA that is moving between properties (such as through a trade) must be authorised by the Regional Council. Any NDA movement will require consequential change to the NMPs for the source and destination properties.

The information requested by the Bay of Plenty Regional Council shall be provided in an electronic format compatible with Regional Council information systems and may include but shall not be limited to the following reports from Overseer or their equivalent if an alternative model is used: Nutrient Budget, Nitrogen, Summary, Nitrogen Overview.

- Must require all records for nitrogen budgets at B7 to be retained for X years.
- Must require all records identified at B6(a)iv. to be supplied XX for properties over 40ha or as requested.