APPENDIX 2

CHANGES SOUGHT BY FEDERATED FAMERS TO PROPOSED PLAN CHANGE 10 SHOWN AS TRACK CHANGES AS AT 26 APRIL 2017

INTRODUCTION

The Lake Rotorua Integrated Nutrient Management provisions are being introduced into the Bay of Plenty Regional Water and Land Plan as a separate subject.

Objectives, Policies and methods are contained in Part II of the Bay of Plenty Regional Water and Land Plan (RWLP) and the rules (including the definitions and schedules) are contained in Part III. Both parts of this subject are identified by the unique identifier "LR".

Scope

These plan change provisions apply to the Lake Rotorua groundwater catchment, as shown in Map LR 1, excluding land outside BoPRC boundaries.

Scope is restricted to the integrated management of rural land use activities and legacy sources which contribute nutrient loads (nitrogen and phosphorous) to Lake Rotorua.

Contributing land use activities include agriculture, horticulture, cropping, forestry, gorse, lifestyle blocks, ~~urban sewage and stormwater~~, non-reticulated septic systems and point source discharges.

Contributing legacy sources include lake bed sediments and old groundwater.

Purpose

The general purpose is to achieve the purpose of the Resource Management Act – the promotion of sustainable management in the Lake Rotorua catchment.

The purpose of PC10 is to assess progress to date within the nutrient management framework set out in the RWLP, and to reframe regulatory and non-regulatory methods for improved alignment of individual and collective resources to reduce the impact of current and legacy nutrient loads.

The objective is to maintain the trajectory of reductions in nutrient losses to Lake Rotorua to support achievement of the RWLP TLI objective.

In the period 2020-2023, the Rotorua Lakes WMA process will review values, objectives, limits and methods for the Lake Rotorua catchment, preliminary to a further plan change to give effect to implementation of the National Policy Statement for Freshwater Management ("NPS-FM") 2014.

Integrated Nutrient Management Framework

The Integrated Nutrient Management Framework is designed to ensure that:

- Interventions are well-informed by science and well-targeted to deliver outcomes in the most efficient and effective manner.
- Incentive Funding is invested wisely and well to deliver enduring outcomes for the Lake and for the lake catchment community.

This **integrated** nutrient management framework includes:

- Nitrogen and Phosphorous
- ~~Rural and urban~~
- Source and transport and sink
- Regulatory and non-regulatory methods

It is a **tiered** nutrient management framework:

- **Enterprises:** focus on mitigating **current** land use at **source**
  - ~~urban responsibility for "best practicable option"~~
  - ~~rural responsibility for "reasonably practicable " industry best practices~~ Rural production land use activities minimise their loss of nutrients as far as is reasonably practicable by implementing on-farm best practices
  - **Industry** in the lead on best practice development/extension and reporting sector progress
  - Industry prioritise sub-catchments for one-on-one support, eg, dairy prioritise Awahou/Waimehia/Waitete for development of Sustainable Milk Plans; Beef & Lamb prioritise Ngongotaha/Waitete for development of Land and Environment Plans
  - Overseer nutrient budgets used as farm decision support tool and track progress against managed reduction targets
  - Farmers maintain compliance with industry commitments, eg, Sustainable Dairy Accord; and with BoPRC and RDC rules for farm activities, eg, farm effluent, stock exclusion, earthworks
  - **Farmers pay** to implement industry best practice guidelines specific to the farm context to reduce nutrient losses

- **Sub-catchments**: focus on attenuating **legacy** loads along the **transport** pathways
  - Prioritise sub-catchments to develop sub-catchment action plans
  - Use models to help prioritise; then groundtruth with science tools, eg, LIDAR; and with landowners, eg, the lay of the land and the opportunities
  - **Independent** coordination; supported by science, plus Council Land Management officers; plus sub-catchment committee of landowners/lifestylers/urban
  - Develop flexibility mechanisms, eg, TDRs, baseline-and-credit trading, offsets for new entrants/developments
  - **Incentives Fund pays** for best-bang-for-buck enduring solutions; either permanent landuse change or "green" infrastructure or to enable farm reconfigurations

- **Lake:** focus on mitigating **legacy** internal load, ie, the **sink**
  - prioritise interventions to improve ecological health and recreation/aesthetics
  - Improve understanding of nutrients/invasive plants/cyanobacteria dynamics
  - **Science** to the forefront, develop integrated modelling capability
  - Develop short/medium/longterm solutions for managing internal nutrient loads
  - **BoPRC** in the lead, working with the Rotorua Te Arawa Lakes Strategy Group

It is a **staged** nutrient management framework:

- Phase One 2005-2015
  - Capping nutrient losses from farms (Rule 11)
  - Very strong programme of underpinning science and R&D
  - Trialling innovations and interventions

- **Phase Two 2016-2022**
  - Extend the 'benchmark and cap" rules to catchment properties outside Rule 11
  - Industry prioritise resources to support farmer achievement of the 2022 Pastoral Managed Reduction Target
  - Develop sub-catchment action plans to prioritise opportunities to reduce legacy nutrients along the source-treatment-sink pathway
  - Broaden the scope for the Incentives Fund to improve uptake and targetting of best-bang-for-buck enduring solutions
  - Review Rotan load estimates and attenuation factors; undertake Science Review 2017
  - Re-assess nutrient loads; agree reduction targets at multiple scales – catchment, sub-catchment, sector, ~~city,~~ rural properties and farms

- Phase Three 2020-2023 Rotorua Lakes WMA

- Stocktake catchment progress; review/refresh/finetune the values/objectives/limits/methods/rules for Lake Rotorua

Lake Rotorua Integrated Nutrient Management

This plan change gives effect to ~~the following~~ ~~requirements~~ provisions in the Regional Policy Statement.

This plan change provides for a staged implementation of these ~~requirements~~ provisions. This includes RPS Policy WL 6B (c): a catchment intermediate ~~Managed Reduction T~~ 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.

Table LR 1: Lake Rotorua ~~Integrated~~ Nitrogen Management Framework – indicative annual ~~catchment~~ loads and managed reductions~~ targets

Modelled Steady State Load to the Lake	**~~Required~~ Managed Reductions~~ Targets to 2022**			**~~Sustainable~~ Target Lake Load**
~~755~~ 716 tN/yr catchment load ~~(includes~~ excludes rain on lake 30t) **360 t/N Bed load**	~~320~~ 311 tN/yr RPS reductions target ~~(excludes rain on lake 30t)~~ ~~196~~ 218 tN/yr MRT by 2022	50 tN/yr reduction from engineering solutions by 2022 30 tN/yr reduction from gorse removal by 2022 100 tN/yr reduction from Incentives Scheme by 2022 ~~240 tN/yr reduction from the pastoral sector~~	~~140~~ 131 tN/yr reduction from ~~on-farm~~ pastoral sector reductions ~~required by rules~~ ~~16~~ 38t N/yr by 2022 ~~100 tN/yr reduction from Incentives Scheme~~	~~96~~ 90 tN/yr reduction from dairy sector (69%) ~~11~~ 26 tN/yr by 2022 (69%) ~~44~~ 41 tN/yr reduction from drystock sector (31%) ~~5~~ 12 tN/yr by 2022 (31%)	**~~435~~ 405 tN/yr ~~sustainable~~ target load** (~~includes~~ excludes rain on lake 30t)

Table notes: (a) The values used are based on OVERSEER® 5.4 ~~for pastoral land uses~~ and reflect ~~the best science~~ ROTAN 2011 estimates of nitrogen entering the lake; catchment loads and attenuation factors are currently being re-estimated in Overseer 6.2

(b) tN/yr is the load to the lake in "tonnes of nitrogen per year" assuming no attenuation

Table LR 2: Indicative Pastoral farming sector loads and proportional reductions

Sector	ROTAN[1] 2011 Area (ha)	ROTAN 2011 Load (tN/yr)	2032 Sector allocation 2022 pastoral MRT (tN/yr)	Reduction (tN/yr)	Proportional reductions from sector as % of sector load
Dairy	5,050	273.2	176.8 262	96.4 11	35.3% 4%
Drystock	16,125	253.2	209.6 248	43.6 5	17.2% 2%

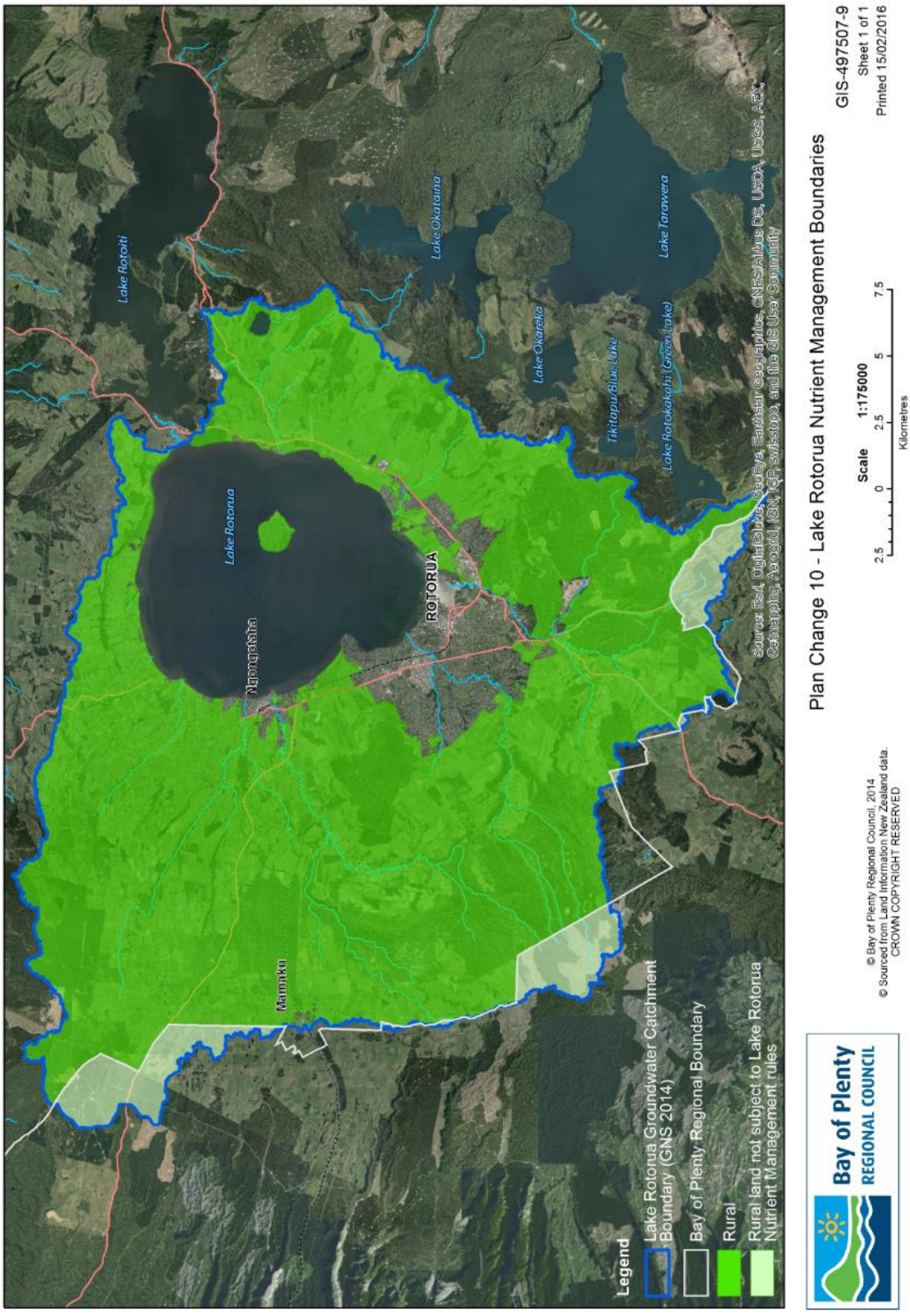
Table note: The values used are based on OVERSEER® 5.4 numbers and reflect the best science estimates of nitrogen entering the lake as modelled by ROTAN 2011, assuming no attenuation. The dairy and drystock areas are effective grazing areas (including fodder crops).

Table LR 3: Indicative Sector contributions.

Sector		Sector area (ha)	(Integrated Framework)	Sustainable Rotan lake load by sector (tN/yr)	Average nitrogen loss rate to achieve target sustainable lake load (kgN/ha/yr)	Rotan 2010 Standard nitrogen loss rates (kgN/ha/yr)
Dairy		5,016	35.3%	324 273	64.5 35	56
Drystock		16,266	17.2%	416 236	25.6 13	16
Forestry		19,215				
• Plantation Forestry		8,946		22.5 72.2		2.5 4
• Bush/Scrub • Puarenga forest		10,269		30.9 6.4		3 4
Gorse						
House blocks		468		20.2		43.2
Lifestyle		1,053			12	16
RLTS		300		56.1	140	187
Septic Tanks		308		25.8	64	85
Urban/UOS		3,353		33.7	7.5	10

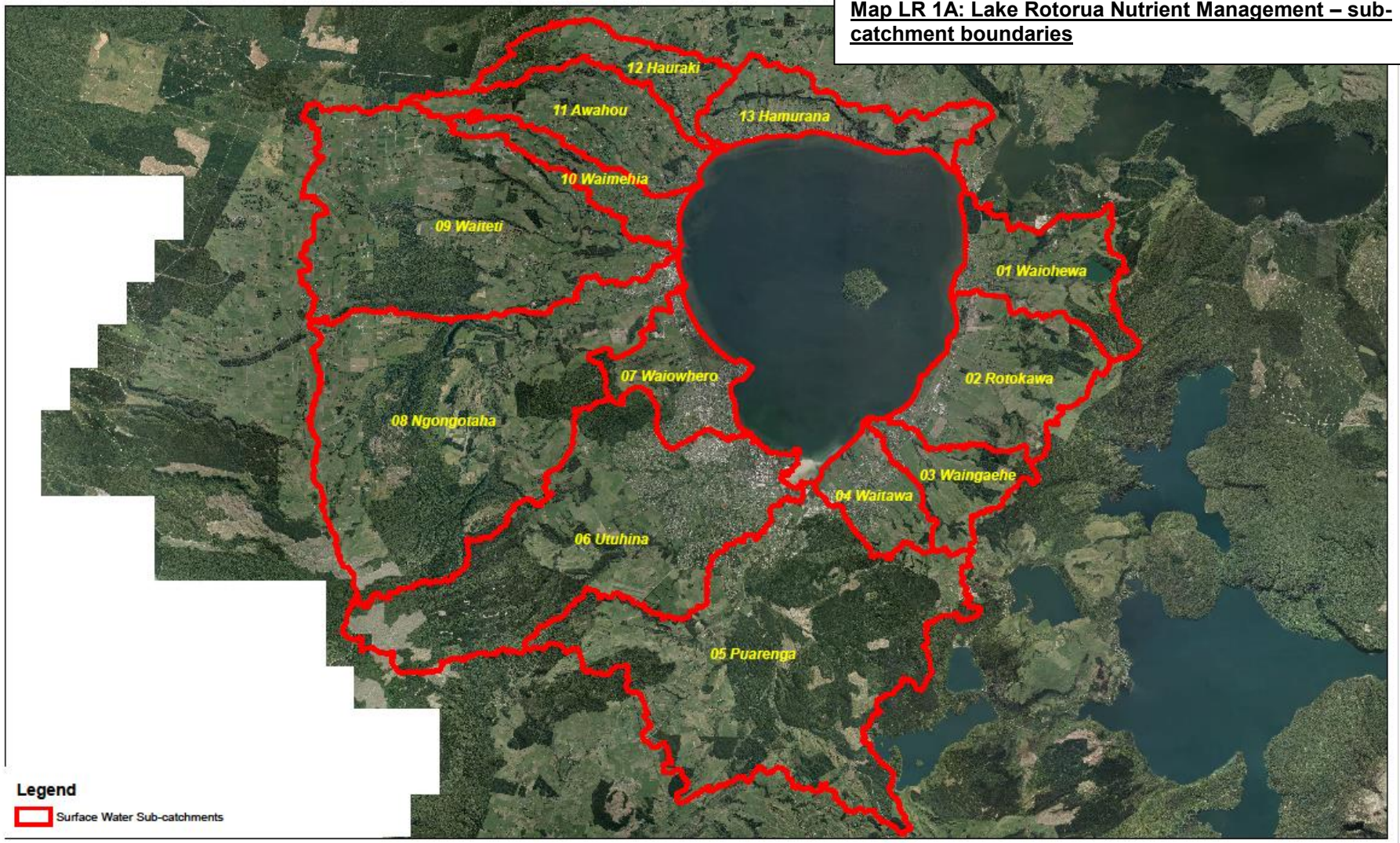
Table note: dairy and drystock all values are OVERSEER® 6.2.0 5.4 numbers derived from Rotan 2011.. All assume no attenuation, including RLTS and Puarenga forest.
Gorse was not included as a separate category in Rotan 2011, but has subsequently been determined to be a significant source

[1] ROTAN is the Rotorua and Taupō Nutrient Model. This is a geographic information system based catchment hydrology and water quality model developed to predict nitrogen yields and exports in the catchment under different scenarios.



Map LR 1: Lake Rotorua Nutrient Management – Groundwater Catchment Boundary and Rural Land.

Map LR 1A: Lake Rotorua Nutrient Management – sub-catchment boundaries



Lake Rotorua Surface Water Sub-catchments

Scale 1:115,672

1,000 0 1,000 2,000 3,000 4,000 5,000

Metres

Sheet 1 of 1
Printed 13/04/2016

POLICIES

LR P1 To reduce nitrogen losses ~~from land~~ to Lake Rotorua to support achievement of the Lake TLI objective, ~~and achieve the 2032 sustainable lake load 2022 managed reduction target as required by~~ established in ~~the Regional Policy Statement~~ and to monitor this target through science and policy reviews.

LR P2 To ~~manage~~ reduce phosphorus loss to Lake Rotorua to support achievement of the Lake TLI objective ~~through the implementation of management practices that will be detailed in Nitrogen Management Plans prepared for individual properties/farming enterprises~~. and to monitor this target through science and policy reviews.

LR P3 To ~~recognise the balance between certainty and the~~ use ~~of~~ the best science and good environmental data in the management of ~~nitrogen~~ nutrients within the Lake Rotorua groundwater catchment by ~~using:~~ developing integrated catchment models which account for all contributing sources of both nitrogen and phosphorous including internal lake loads; and by improving the use of sub-catchment data to inform effective and efficient nutrient reduction strategies.

~~(a) the 435 tonne sustainable annual nitrogen load for Lake Rotorua from the operative Regional Policy Statement Policy WL 3B(c);~~

~~(b) the 755 tonne load to Lake Rotorua estimated by the ROTAN model in 2011 as the position from which nitrogen loss reductions will be determined;~~

~~(c) OVERSEER® 6.2.0 for nitrogen discharge allowance allocation purposes; and~~

~~(d) the pastoral sector reductions within the Integrated Framework approach.~~

LR P4 To implement adaptive management in the management of ~~nitrogen~~ nutrients within the Lake Rotorua groundwater catchment through:

(i) science reviews set out in Method LR M2 and subsequent consideration by Council of recommendations;

(ii) regular reviews of the Regional Policy Statement and Regional Water and Land Plan objectives, policies, rules and methods under the Resource Management Act 1991;

~~(iii) five-year individual on-farm Nitrogen Management Plan review timeframes; and~~

~~(iv) the use of OVERSEER® reference files and proportional requirements to reduce the variability for individual property nitrogen targets.~~

(v) Implementing the Rotorua Lakes WMA to give effect to the NPS-FW 2014

~~Nitrogen allocation~~ Managed Reduction Targets

LR P5 To ~~achieve the~~ support the achievement of ~~Policy LR P1~~ the RWLP TLI objective ~~sustainable load to Lake Rotorua by allocating nitrogen discharge allowances~~ managed reduction targets may be allocated ~~to dairy and drystock activities within the Lake Rotorua groundwater catchment (Table LR 4) subject to further work on dairy support; and to recognise standard OVERSEER® 5.4 loss rates for plantation forestry, bush/scrub and house blocks.~~

~~**Table LR 4: Allocated nitrogen loss rates to sectors.**~~

~~***Overseer 5.4 values to be inserted***~~

~~Sector~~	~~Average nitrogen loss by sector (kgN/ha/yr) (OVERSEER® 6.2.0 5.4)~~	~~Nitrogen loss range within each sector (kgN/ha/yr) (OVERSEER® 6.2.0 5.4)~~
~~**Dairy**~~	~~64.5~~	~~54.6 – 72.8~~
~~**Drystock**~~	~~25.6~~	~~18 – 54.6~~

~~No property/farming enterprise will be required to reduce its nitrogen loss below the bottom of the relevant sector nitrogen loss range.~~

LR P6 ~~To determine individual Nutrient Discharge Allowances that must be achieved by 2032 in accordance with Schedule LR One for all properties/farming enterprises that are not provided for as permitted activities by Rules LR R1 to LR R7~~

LR P7 To enable the authorised transfer of nitrogen loss ~~entitlements~~ increases between properties/farming enterprises ~~from 1 July 2022~~ through flexibility, transfer and trading mechanisms to encourage efficient outcomes, eg, transferable development rights, offset mechanisms, baseline-and-credit trading schemes; mechanisms for recognising management practices and innovations which are not in Overseer; and making provision for collective consents for multi-property nutrient reduction proposals

LR P8 To ~~require~~ support achievement of the RWLP TLI objective and encourage whole-of-community engagement by enabling sub-catchment ~~property/farming enterprise specific Nitrogen~~ Nutrient Action ~~Management~~ Plans which may include sub-catchment managed reduction targets will be prepared in conjunction with the sub-catchment community ~~and require the implementation of mitigation actions to achieve and maintain Managed Reduction Targets (five-yearly nitrogen loss reduction targets) and Nitrogen Discharge Allowances~~

LR P9 To allow as a permitted activity:

(a) All land uses until 30 June 2017 provided that the land uses do not increase their nitrogen loss.

(b) The use of land for plantation forestry and bush/scrub and constructed wetlands and sediment detainment bunds

(c) The use of land for farming activities on properties/farming enterprises 5 hectares or less in area from 1 July 2017 provided there is no intensive land use.

(d) The use of land for farming activities on properties/farming enterprises greater than 5 hectares in area or between 5 hectares and 10 hectares or less in ~~effective~~ area from 1 July 2017 provided there is no intensive land use.

~~(e) The use of land for farming activities on properties/farming enterprises between 10 and 40 hectares in effective area from 1 July 2017 to 31 June 2022 provided there is no increase in nitrogen loss and the information keeping and reporting conditions are met.~~

~~(f) The use of land for farming activities on properties/farming enterprises in the Lake Rotorua groundwater catchment not previously managed by Rules 11 to 11F from 1 July 2017 to 31 June 2022 provided there is no increase in nitrogen loss and information keeping and reporting conditions are met.~~

~~(g) The use of land for farming activities on properties/farming enterprises that can demonstrate low nitrogen loss.~~

(h) The discharge of nutrients onto or into land provided the land use associated with the discharge is authorised under Rule 1 to 5 ~~LR R1 to LR R11~~.

LR P10 ~~To require resource consents for:~~ To allow as a permitted activity:

(a) The use of land for farming activities on properties/farming enterprises over 40 hectares in ~~effective~~ area from 1 July 2017 provided there is no increase in nitrogen loss and the information keeping and reporting conditions are met.
(b) The use of land for farming activities on properties/farming enterprises between 10 and 40 hectares in ~~effective~~ area from 1 July 2017 ~~2022~~ provided there is no increase in nitrogen loss and the information keeping and reporting conditions are met.
(c) The use of land for farming activities on properties/farming enterprises less than 5 hectares in area or that are between 5 hectares and less than 10 hectares in ~~effective~~ area that are not low intensity land use from 1 July 2017 ~~2022~~ provided there is no increase in nitrogen loss and the information keeping and reporting conditions are met.
(d) The use of land for farming activities on properties/farming enterprises in the Lake Rotorua groundwater catchment not previously managed by Rules 11 to 11F that are not low intensity land use from 1 July 2017 ~~2022~~provided there is no increase in nitrogen loss and the information keeping and reporting conditions are met.
(e) The discharge of nutrients onto or into land provided the land use associated with the discharge is authorised under FF Rules 1 to 5~~Rule LR xx to LR Rxy~~.

LR P11 ~~To classify land use consent applications for farming activities that submit a Nitrogen Management Plan demonstrating the achievement of Managed Reduction Targets and Nitrogen Discharge Allowances by 2032 as controlled activities.~~

LR P12 ~~To classify as non-complying activities, farming activities that require a land use consent application to be made and that do not submit a Nitrogen Management Plan demonstrating managed reduction.~~

LR P13 To use OVERSEER® version ~~6.2.0~~ 5.4 ~~and subsequent versions~~ consistent with the catchment load estimates to determine the nitrogen loss from land. Any future version changes will need to retain consistency between catchment and farm estimates; and may necessitate a variation to the RPS

LR P14 To consider nitrogen budgets and alternative models for determining nitrogen loss if OVERSEER® cannot be readily used for a specific land use. Consideration of whether alternate nitrogen budgets may be used will take into account:

(a) The ability to reliably estimate a property/farming enterprise's long-term nitrogen loss;

~~(b) The acceptability of information inputs, for example, verifiable leaching rates; and~~

(c) The potential availability of suitably qualified and experienced persons to develop the nitrogen budgets.

Any alternative to OVERSEER® for nitrogen budgeting purposes must be authorised by the Regional Council

LR P15 To require information to be supplied for:

(a) All farming activities on properties/farming enterprises between 5 hectares and 10 hectares in ~~effective~~ area that are not low intensity land use,

(b) All permitted farming activities on properties/farming enterprises between 10 and 40 hectares; and

(c) All permitted farming activities on properties/farming enterprises in the Lake Rotorua groundwater catchment not previously managed by Rules 11 to 11F that are not low intensity land use.

(d) All permitted farming activities on properties/farming enterprises over 40 hectares in area

This information will be used to monitor compliance with permitted activity conditions.

LR P16 To grant controlled activity consents for a duration of twenty years ~~and non-complying activity consents, where granted, for durations less than 20 years.~~ The duration of consents will reflect the nature, scale and robustness of any ~~on-farm~~ mitigation options proposed to ~~achieve~~ offset any proposed increase in nutrient losses from the property/farming enterprise's benchmark ~~2032 Nitrogen Discharge Allowance~~

LR P17 ~~To decline the re-consenting of activities that have failed to achieve the required reductions in nitrogen loss.~~

METHODS

~~**LR M1**~~ ~~Regional Council will supply information to Rotorua District Council for inclusion on Land Information Memorandum that:~~

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

(b) ~~advises landowners of rural properties/farming enterprises identified in Method LR M1(a) to contact the Bay of Plenty Regional Council for further information~~.

LR M2 Regional Council will review and publish the science that determined the objectives and limits set in the RPS and the Regional Water and Land Plan for Lake Rotorua on a five yearly basis from 2017. These reviews ~~may~~ will include:

(a) Review of trends in Lake water quality attributes including nitrogen, phosphorus, Chlorophyll a, algal blooms, clarity, trophic level index[2] for in-lake, inflows, and outflow where relevant; review of the health of indigenous fauna and flora and review of interactions and impacts of introduced fauna and flora

(b) Review of progress towards achieving the RWLP TLI objective ~~RPS Policy WL 6B(c) 2022 catchment nitrogen load target~~

(c) Review of the RPS Policy WL 3B(c) catchment nitrogen load, and a nominal phosphorus (external and internal) catchment load of 37 tP/yr[3], and any other nitrogen and phosphorus load combinations that catchment modelling shows would meet the Lake Rotorua Trophic Level Index of 4.2. This may necessitate:

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

(ii) a review and rerun of ROTAN (or any successor model), including nitrogen and phosphorous loss rates, groundwater trends and attenuation rates by sub-catchment, including OVERSEER® or similar estimates;

(iii) an assessment of the efficacy and risks of alum dosing and an assessment of land-based or catchment-based phosphorus loss mitigation.

(d) Review of relevant New Zealand and international lake water quality remediation science.

(e) Recommendations to Council including for any necessary amendments to the RPS and the RWLP if the science supporting the targets or loads materially alters

LR M3 Regional Council will respond to the recommendations that result from Method LR M2 science reviews through a formal and public decision making process. This may include initiation of a plan change and review of resource consent conditions.

LR M4 Regional Council will monitor permitted activities and any developing technologies to ensure that any related risks of ~~nitrogen~~ nutrient loss to the catchment are understood and acted on if necessary.

LR M5 Regional Council will:

(a) ~~develop and maintain a Rule Implementation Plan;~~ support the establishment and resourcing of sub-catchment committees to develop sub-catchment Action Plans for the reduction of nutrient loads to the lake

[2] Trophic Level Index is defined in the Operative Regional Water and Land Plan.
[3] This nominal phosphorus load was first determined by Rutherford et al (1989) and confirmed in subsequent advice from the Water Quality Technical Advisory Group.

(b) report on the achievement of the ~~Rule Implementation Plan~~ sub-catchment Action Plans on a five-yearly basis through plan effectiveness reporting;

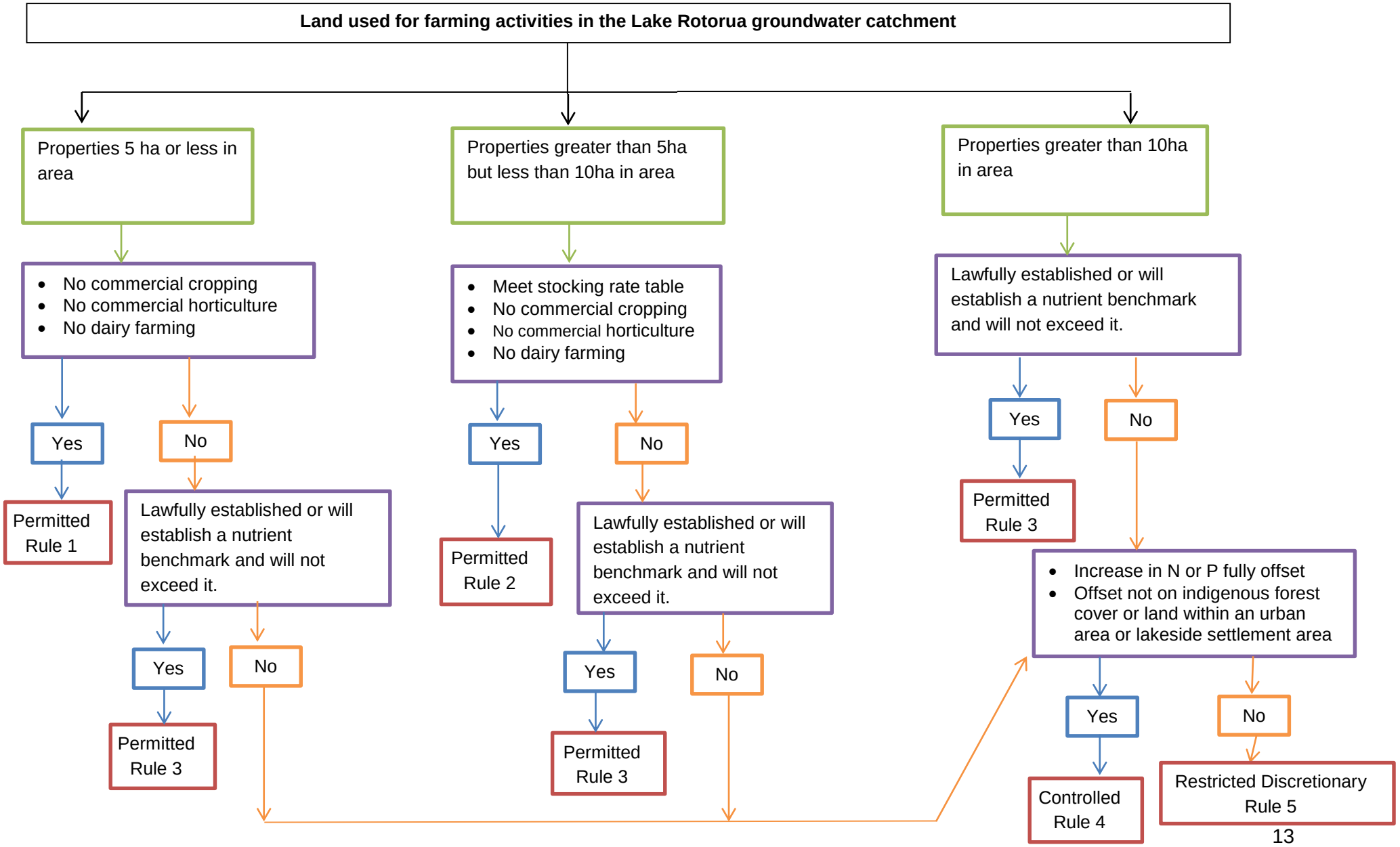
(c) ~~develop and maintain a Nitrogen Discharge Allowance Register, that will~~ monitor catchment-wide progress towards meeting the ~~RPS Policy WL 3B(c)~~ ~~catchment nitrogen load~~ RWLP TLI objective

(d) provide land advisory services and incentives to support preparation of Nutrient Management Plans in accordance with Schedule 6, land use management change and land use change that reduces nitrogen and phosphorus loss in the catchment; and

(e) encourage industry good practices to be implemented on rural properties/farming enterprises to reduce nitrogen and phosphorus loss in the catchment.

LR M6 Regional Council will develop a process to recognise management practices and innovations which are not currently in Overseer.

RULE SUMMARY FLOW CHART



RULES

Rule 1 - Permitted Activity

The use of land for farming activities/farming enterprises on properties which are less than 5 hectares in area are permitted provided the following condition is met:

a) The farming activities/farming enterprises do not comprise of any of the following land use activities:
   - Commercial cropping; or
   - Commercial horticulture; or
   - Dairy farming.

Rule 2 - Permitted Activity

The use of land for farming activities/farming enterprises on properties which are greater than 5 ha in area but less than 10 hectares in area are permitted provided the following conditions are met:

a) The stocking rate on the property does not exceed the stocking rates specified in Schedule ~~XX~~LR Two at any point in time; and
b) The farming activities/farming enterprises do not comprise of any of the following land use activities:
   - Commercial cropping; or
   - Commercial horticulture; or
   - Dairy farming

Rule 3 – Permitted Activity

The use of land for farming activities/farming enterprises on properties which are greater than 10 hectares in area, or do not meet the conditions of Rules 1 and 2, are permitted provided the following conditions are met:

a) The use of land for farming activities/farming enterprises on properties which are less than 40 hectares in area:
   - The farming activities/farming enterprises will establish a nutrient benchmark in accordance with Schedule AA and provide that information to Council by 2017, and will not exceed it
b) The use of land for farming activities/farming enterprises on properties which are greater than 40 hectares in area:
   - The farming activities/farming enterprises have a lawfully established nutrient benchmark for the property and will not exceed it; or will establish a nutrient benchmark in accordance with Schedule AA and provide that information to Council by 2017, and will not exceed it

❖ For the purpose of Rule 3 nutrient benchmark means: ~~Council was provided with a register of the annual average export of nitrogen and phosphorus from the property for the agreed benchmarking period.~~

   a) Where the farming activity/farming enterprise has a lawfully established nutrient benchmark, Council was supplied with a register of the annual average export of nitrogen and phosphorous for the property for the period 1 July 2001 to 30 June 2004.

b) Where a farming activity/farming enterprise does not have a lawfully established nutrient benchmark:

i. Council is supplied with a register of the annual average export of nitrogen and phosphorous for the property for the period 1 July 2001 to 30 June 2004; or

ii. Where the farming activity/farming enterprise does not have sufficient records from 1 July 2001 to 30 June 2004, Council is supplied with a register of the annual average export of nitrogen and phosphorous for the period from 1 March 2013 to 29 February 2016.

Rule 4 – Controlled Activity

The use of land for farming activities/farming enterprises on properties which do not meet Rule 3 is a controlled activity the following conditions are met:

a) The increase in the export of nitrogen or phosphorous from the proposed farming activity/farming enterprise will be fully offset by the use of nutrient management measures on land within the same lake catchment; and
b) The nutrient management measures used to fully offset the effects of the proposed land use do not occur on land which is covered by indigenous forest cover or is on land located within an urban area or lakeside settlement area

Matters of control

a) Measures to offset adverse effects on water quality, including surface water and groundwater.
b) Measures to avoid, remedy or mitigate adverse effects on aquatic ecosystems in streams and rivers.
c) Aspects of the land use activity that cause an increase in the export of nitrogen or phosphorus from the activity.
d) Measures to fully offset the increase in the export of nitrogen or phosphorus from the activity within the same lake catchment.
e) Contractual arrangements with third parties where the offset measures are not applied on the property.
f) Where the offset is not applied on the property, the change to the nutrient benchmark for both properties. The nutrient benchmark for the property where the land use activity will take place will increase, and the property where offset measures will take place will decrease accordingly.
g) Preparation of a Nutrient Management Plan in accordance with Schedule LR Six.
h) Information and monitoring requirements.

Rule 5 – Restricted Discretionary Activity

The use of land for farming activities/farming enterprises on properties which do not meet Rule 4 is a Restricted Discretionary Activity:

Matters of Discretion

a) Measures to offset adverse effects on water quality, including surface water and groundwater, including consideration of measures which may not be recognised in Overseer.
b) Measures to avoid, remedy or mitigate adverse effects on aquatic ecosystems in streams and rivers.
c) Aspects of the land use activity that cause an increase in the export of nitrogen or phosphorus from the activity.

d) Measures to fully offset the increase in the export of nitrogen or phosphorus from the activity within the same lake catchment.
e) Contractual arrangements with third parties where the offset measures are not applied on the property.
f) Where the offset is not applied on the property, the change to the nutrient benchmark limit for both properties. The nutrient benchmark for the property where the land use activity will take place will increase, and the property where offset measures will take place will decrease accordingly.
g) Preparation of a Nutrient Management Plan in accordance with Schedule LR Six.
h) Information and monitoring requirements.

LR R13 Permitted – Incidental nutrient discharges

The discharge of nutrients onto or into land in circumstances that may result in a contaminant entering water that would otherwise contravene section 15(1)(b) of the Resource Management Act is a permitted activity, provided the land use associated with the discharge is authorised under Rules ~~LR R1 to LR R11~~ 1 to 5.

DEFINITIONS

Area: the property on which the farming activity/farming enterprise occurs and includes but is not limited to any land used for grazing, cultivation, cropping, horticulture, effluent disposal, plantation forestry or bush/scrub

Block: ~~An area of land within a property/farming enterprise that has common physical and management attributes. OVERSEER® categorises blocks into types e.g. pastoral, fodder crop, trees and scrub, house. There may be multiple blocks of the same type within a property/farming enterprise reflecting the different physical or management characteristics of each of the blocks.~~ The sum of areas of the property/farming enterprise that are managed the same (e.g., irrigated, cropped, effluent applied) and have the same bio-physical attributes (e.g. soil type, topography).

Bush/Scrub: Areas of native forest, bush, scrub, wetlands and exotic non-productive woody species (including gorse) ~~which are not grazed by stock.~~

Cropping block: Includes a property/farming enterprise's effective area used for forage crops, fodder crops, maize and cultivation but does not include alternative pasture species.

Dairy: The ~~effective~~ area on which milking cows are grazed during the milking season and includes the animal effluent disposal area and fodder crop areas but excludes land used as dairy support, ~~plantation forestry and bush/scrub.~~

Dairy support: land used for heifer grazing or the wintering off of cows. *Note: dairy support's ~~nitrogen loss allowance is included within the drystock allocation range.~~ managed reduction target range requires further work*

Drystock: The ~~effective~~ area used for non-dairy activity, including grazing of sheep, beef cattle, goats, horses, deer, cropping and dairy support ~~but excluding plantation forestry and bush/scrub.~~

~~**Effective area:** The part of the property/farming enterprise that is used for grazing, cultivation, cropping, horticulture and effluent disposal.~~

Farming Activity: dairy, dairy support and drystock activities, cropping and horticulture, ~~but not~~ including plantation forestry or bush/scrub within the farm area.

Horticulture: Includes a property/farming enterprise's ~~effective~~ area used for nurseries, orchards, vineyards or growing vegetables for human consumption.

Lake Rotorua groundwater catchment: All land within the groundwater catchment boundary identified in Map 1.

Managed Reduction: The planned progressive reduction of ~~nitrogen~~ nutrient losses ~~from a property/farming enterprise over time~~ to reach a ~~Nutrient Discharge Allowance.~~ Managed Reduction Target.

~~**Managed Reduction Target:** The maximum amount of nitrogen loss that is allowed to occur from a property/farming enterprise at a target date (1 July 2022 and 1 July 2027).~~

Managed Reduction Offset: Nitrogen loss capacity that is transferred from a source property/farming enterprise for addition to the managed reduction pathway of a destination property/farming enterprise to enable landuse change and meet a Managed Reduction Target.

Nitrogen: refers to elemental nitrogen ~~as measured as Nitrogen Discharge Allowances (kgN/ha/yr) or as annual lake loads (tonnes N/yr). It is noted that the predominant form of leached nitrogen is the nitrate ion (NO_3^-).~~ In dissolved, particulate or organic forms

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~~**Nitrogen Discharge Allowance:** The maximum annual amount of nitrogen loss that is allowed to occur from a property/farming enterprise post 1 July 2032. Nitrogen Discharge Allowances are allocated on a block basis and these are summed to provide a property/farming enterprise total.~~

Nitrogen loss entitlement: A ~~Nitrogen Discharge Allowance~~ consent allowing for ~~or~~ Managed Reduction Offset.

~~**Nitrogen**~~ **Nutrient Management Plan:** A plan prepared for a property or farming enterprise that identifies sources of nutrients associated with the farming activity and that records mitigation actions to reduce ~~nitrogen~~ nutrient losses ~~to meet Managed Reduction Targets and the Nitrogen Discharge Allowance, and to manage phosphorus loss.~~ The requirements of a ~~Nitrogen~~ Nutrient Management Plan are specified in Schedule LR Six.

OVERSEER®: OVERSEER® Nutrient Budgets model (commonly referred to as OVERSEER®) is a software application that generates information about the flow of nutrients on and off a farm. ~~OVERSEER® calculations are based on a 01 July to 30 June period.~~

OVERSEER® File: An estimate of the total ~~nitrogen~~ nutrient balance for a particular property/farming enterprise using OVERSEER®, taking into account ~~nitrogen~~ inputs and outputs.

Plantation forestry: Areas of planting, maintenance and/or harvesting of tree species for commercial purposes ~~which are not grazed by stock.~~

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

Phosphorous: refers to elemental phosphorus in dissolved, particulate and organic forms.

~~**Property/farming enterprise:** A single operating unit regardless of its ownership structure, size, arrangement and number of parcels and legal tenure~~. means an aggregation of parcels of land held in single or multiple ownership (whether or not held in common ownership) that constitutes a single operating unit for the purpose of farm management

For the purposes of these provisions, property/farming enterprise only relates to rural land within the Lake Rotorua groundwater catchment.

~~**Reference files:** OVERSEER® files that provide a point of reference for the Lake Rotorua groundwater catchment and that represent the biophysical factors and farming systems found within the catchment.~~

Rural: In relation to land and properties/farming enterprises within the Lake Rotorua groundwater catchment means land identified on Map LR 1 excluding land outside BoPRC boundaries

Suitably qualified and experienced person: A person who:

- Implements OVERSEER® input best practice ~~and uses standard protocols recognised and approved by the Bay of Plenty Regional Council including those specific to the Lake Rotorua groundwater catchment; and~~
- 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 five years’ work experience in a land use/farm advisory role; or
- ~~is approved in writing by the Chief Executive (or delegate thereof) of the Bay of Plenty Regional Council.~~

SCHEDULES

Schedule AA - Nutrient Benchmark

Information required for Nutrient benchmark

1) Land area;
2) Soils drainage class and soil characteristics;
3) Rainfall;
4) Slope/Topography;
5) Land cover and land uses on the property (including percentage of land area in different land uses);
6) Percentage of riparian area of rivers streams and lakeshore on the property that have been fenced, or in retirement plantings
7) Area of wetlands on the property.
8) Number of houses on the property.
9) Type of sewage treatment for the houses on the property.
10) Fertiliser application – type and amount of fertiliser, and percentage of amount applied in May, June and July.
11) Type of livestock on the property.
12) Peak number of livestock by stock type.
13) For beef properties, the percentage of female livestock.
14) Number of livestock taken off the property, or put onto a wintering pad/loafing pad/feedpad during winter.
15) Where a wintering pad/loafing pad/feedpad is used, the waste treatment and disposal system for the wintering pad/loafing pad/feedpad.
16) Crop type(s), and area in each crop. This includes forestry.
17) Volume of irrigation.
18) Supplementary stock feed purchased or sold off-farm.
19) Description of other land management practices relevant to nutrient management.
20) Annual exports from the property (e.g. crops, livestock, milk solids etc).

Delete Schedule LR One (methodology to determine start points, managed reduction targets and nitrogen discharge allowances)

Schedule LR Two – stocking rates (Federated Farmers is neutral on this schedule)

Schedule LR Three – Information requirements for Permitted Rules ~~LR R5 and LR R6~~

(a) Contact details of landowner (and any leaseholder).

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

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

And where applicable:

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

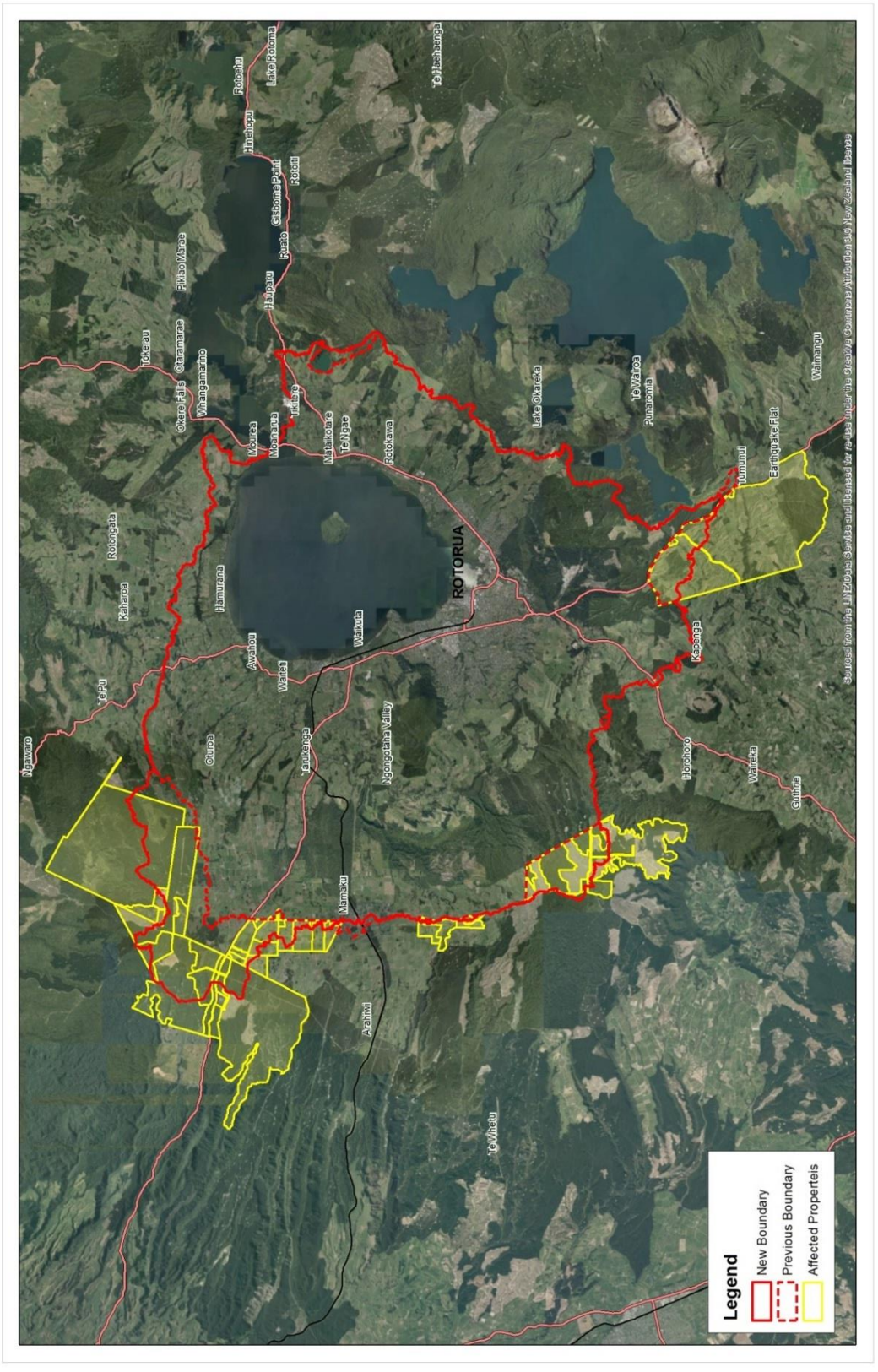
(e) Type, quantity and timing of effluent and fertiliser applications.

(f) Type area and planting dates for crops.

(g) 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, or at greater intervals as demanded by the Regional Council, no later than 31 October each year. The Regional Council reserves the right to seek clarification from information provided.

Schedule LR Four – Properties in the Lake Rotorua Groundwater catchment not previously managed by Rule 11 – 11F



Delete Schedule LR Five (use of Overseer and reference files)

Schedule LR Six – ~~Nitrogen~~ Nutrient Management Plan requirements

~~*The aim of the Nitrogen Management Plan is to manage nutrient reduction so the property/farming enterprise meets the Nitrogen Discharge Allowance by 2032.*~~

A ~~Nitrogen~~ Nutrient Management Plan shall be prepared in accordance with A or B below by a suitably qualified and experienced person.

The ~~Nitrogen~~ Nutrient Management Plan shall take into account sources of nitrogen associated with the farming activity and identify all ~~relevant reasonable, practicable and affordable~~ reasonably practicable ~~nitrogen~~ nutrient management practices and mitigation measures.

The plan requirements will apply to:

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

~~Nitrogen~~ Nutrient 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/farming enterprise if different from above.

2 A map(s) or aerial photograph at a scale that clearly shows:

(a) The boundaries of the property.

(b) A block map for the property/farming enterprise.

~~3~~ The start point on which nitrogen loss allocation is based, relevant Managed Reduction Targets ~~and the Nitrogen Discharge Allowance allocated to the property/farming enterprise that must be achieved by 2032.~~

4 Any ~~nitrogen~~ nutrient 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/farming enterprise by 2032~~. The ~~Nitrogen~~ Nutrient Management Plan must include:

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

(ii) A pathway, including a schedule of mitigation actions, that demonstrates managed reduction to achieve the Managed Reduction Targets ~~and the 2032 Nitrogen Discharge Allowance in accordance with LR P8.~~

(iii) The specific data and records that will be kept to measure compliance with specific targets and mitigation actions defined in 5(a)ii.

(iv) A description of any specific risks related to nitrogen leaching and runoff risks and how these will be addressed.

(b) *Phosphorus management:* To identify the environmental risks associated with phosphorus and sediment loss from the subject property, the significance of those risks and implementation of industry best practice management 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 with consent conditions (including permitted activity standards) every day of the year.~~

(d) *Gorse management:* To manage gorse to minimise nitrogen losses.

(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 2013 or as updated; and either

(i) the Spreadmark Code of Practice 2015 or as updated; or

(ii) 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 authorised by the Regional Council) in accordance with Policy LR P13 and LR P14.

7 ~~Nitrogen~~ Nutrient Management Plans shall be updated:

(i) at no more than five yearly intervals from 1 June 2017; and

(ii) in response to a significant farm system change; or

(iii) in response to the addition or removal of leased land or land with contractual arrangements in support of a property/farming enterprise; or

(iv) on the transfer of Nitrogen Discharge Allowances; or

(v) on the transfer of Managed Reduction Offsets to meet a Managed Reduction Target; or

(vi) by agreement with the Chief Executive of the Regional Council.

All updated ~~Nitrogen~~ Nutrient Management Plans must meet the intent of the original ~~Nitrogen~~ Nutrient Management Plan and include an updated nitrogen budget.

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, and Nitrogen Overview.

Schedule LR Seven – Transfer of Nitrogen Discharge Allowance or Managed Reduction Offset

~~Transfer of Nitrogen Discharge Allowance~~

~~The transfer of Nitrogen Discharge Allowance between properties/farming enterprises can enable a destination property/farming enterprise to permanently increase its Nitrogen Discharge Allowance.~~

- ~~Any proposed increase in nitrogen loss (consequently triggering the need for a new Nitrogen Discharge Allowance) associated with land must be offset by a corresponding and equivalent permanent decrease in nitrogen loss (also triggering the need for a new Nitrogen Discharge Allowance) on one or more other properties/farming enterprises in the Lake Rotorua groundwater catchment.~~
- ~~Any Nitrogen Discharge Allowance that is transferred between properties/farming enterprises must be authorised by the Regional Council to confirm the new source (transferor) Nitrogen Discharge Allowance and new destination (transferee) Nitrogen Discharge Allowance.~~
- ~~Evidence will be required of the legal basis for how the Nitrogen Discharge Allowance transfer is secured.~~
- ~~New Nitrogen Management Plans will be required to recognise the new Nitrogen Discharge Allowances and any new Managed Reduction Targets for the source and destination land.~~
- ~~Transfer does not include the contractual permanent removal of Nitrogen Discharge Allowances from the system by the Lake Rotorua Incentives Board or other organisation, including where required as a condition of consent under the District Plan.~~

Transfer of Managed Reduction Offset

The transfer of Managed Reduction Offset between properties/farming enterprises can enable a destination property/farming enterprise to meet a Managed Reduction Target.

- Any increase in Managed Reduction Offsets associated with a property/farming enterprise must be offset by a corresponding and equivalent decrease in one or more other properties/farming enterprises in the Lake Rotorua groundwater catchment.
- Managed Reduction Offsets must be measureable and able to be delivered through mitigation actions within ~~Nitrogen~~ Nutrient Management Plans.
- Evidence will be required of the legal basis for how the Managed Reduction Offsets are secured for the relevant timeframe.
- New ~~Nitrogen~~ Nutrient Management Plans will be required to recognise any Managed Reduction Offsets as part of the managed reduction for the source and destination land.
- ~~Managed Reduction Offsets cannot be used to meet a Nitrogen Discharge Allowance target.~~
- The use of Managed Reduction Offsets by the destination property/farming enterprise is limited by the Managed Reduction Target timeframes for the source property/farming enterprise. ~~Managed Reduction Offsets only last for a maximum of 5 years.~~