FACT SHEET

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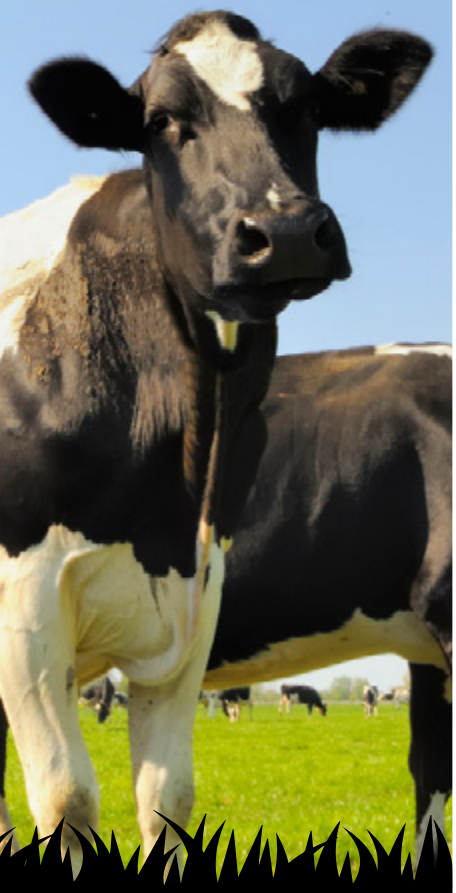
Nitrogen Discharge Allowances

Allocating nitrogen matters. It sets out how much nitrogen each landowner can legally discharge from their property.



Why are we allocating nitrogen in the Rotorua catchment?

The Proposed Regional Policy Statement sets a sustainable nitrogen limit for Lake Rotorua of 435 tonnes per year, to be met by 2032. This nitrogen limit is much smaller than the current load to the lake, mainly due to the levels of nitrogen loss from pastoral farming. We need to decide how to distribute the 435 tonnes among land use activities in the Rotorua catchment.

Current nitrogen sources to Lake Rotorua

	Nitrogen Load to Lake Rotorua (tN/yr)		
Source of nitrogen (based on the ROTAN catchment model)	Current input	Reduction required by 2032	Distribution of the nitrogen limit
Pastoral land use i.e. dairy, drystock and lifestyle	526	270	256
Forest and native bush	75	0	75
Urban, sewage, geothermal and rain	154	50	104
TOTAL	755	320	435

A catchment wide approach to managing nitrogen

An integrated framework for achieving the nitrogen limit was proposed by the Lake Rotorua Stakeholder Advisory Group which includes farmer representatives. In September 2013 this framework was approved by the partners of the Rotorua Te Arawa Lakes Programme – the Bay of Plenty Regional Council, Rotorua District Council and Te Arawa Lakes Trust.

The integrated framework achieves the nitrogen reductions from pastoral land use in three ways:

- 140 tonnes through new rules that will allocate Nitrogen Discharge Allowances (NDA)
- 100 tonnes through a $40 million incentives scheme
- 30 tonnes through a $2.5 million gorse conversion scheme.

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What are we proposing?

Individual properties over 2 hectares with nitrogen losses of more than 10kgN/ha/yr will be allocated Nitrogen Discharge Allowances (NDAs). To do this we need to have a reasonable way of distributing the nitrogen allowance to each property.

At this stage, the suggested allocation approach is based on applying a range of NDA values to the dairy and drystock sectors plus a single NDA value to forestry land.

Sector and definition	N loss range kgN/ha/yr	Average reduction from current N losses
Dairy: includes the effective pasture area in the milking platform, fodder and effluent but excludes run-off (e.g. dairy support) and forest.	30-40	30%
Drystock: includes the effective pasture area in sheep, beef, deer, alpacas, horticulture, cropping and dairy support but excludes forest.	10-20	20%
Forest: includes native bush as well as forestry.	3	Nil

All nitrogen discharge numbers referred to in this document are based on estimates using versions of Overseer® 5. The Regional Council is in the process of updating all data in the latest Overseer version 6.1.2. It is expected discharge estimates will change accordingly, and the proposed numbers will need to be revised with best available information. We expect the overall nitrogen loss reduction effort and cost will remain the same, despite the version change.

NDA ranges allow for a combination of factors to be taken into account when setting NDA levels for individual properties. This recognises that each property is unique.

Under this NDA range approach, the actual NDA allocated to an individual property will depend on the farm type (dairy or drystock) and the property's Rule 11 benchmark or current nitrogen loss. The tables below provide an indication of what the proposed NDAs might look like:

Potential NDAs for the dairy sector

Rule 11 Benchmark (kgN/ha/yr)	Potential NDA (kgN/ha/yr)
less than 40	30
42	31.5
44	33
46	34.5
48	36
50	37.5
52	39
More than 54	40

Potential NDAs for the drystock sector

Rule 11 Benchmark (kgN/ha/yr)	Potential NDA (kgN/ha/yr)
Under 14	10
16	12.0
18	13.5
20	15.0
22	16.5
24	18.0
26	19.5
Over 27	20.0

We recognise that some existing land uses do not fit into the above sectors. The NDA allocations these land uses receive need to be worked through on a case by case basis and the landowner will still be expected to reduce nitrogen loss.

What are the allocation options?

There are a variety of different ways that NDAs could be allocated among landowners. All approaches will have implications for land values, profitability of farms and how the land can be used in the future.

It is important that our nitrogen allocation approach considers the characteristics of the Lake Rotorua catchment and its community. The table below summarises the main nitrogen allocation approaches:

Allocation Approach	Explanation
Grandparenting with clawback	Allocation is based on existing discharges benchmarked under Rule 11 To achieve the 140 tonne nitrogen reduction target all properties would need to reduce current nitrogen losses by 27%.
Pastoral averaging	This is where the pastoral nitrogen limit is divided equally throughout the catchment. All pastoral landowners would receive a Nitrogen Discharge Allowance of 18kg/ha.
Sector averaging	This method allocates an averaged level of nitrogen discharge for specific types of land use or "sectors". For this catchment, three sectors have been identified – dairy, drystock and forestry. The allocation of the nitrogen limit would mean sector nitrogen allowances of: Dairy 35 kgN/ha/yr Drystock 13 kgN/ha/yr Forest 3 kgN/ha/yr
Land use capability	This approach assesses the physical quality of the land, soil and environment. Higher nitrogen limits would be allocated to more versatile classes of land, thus improving overall efficiency of land use in the long run.
Input based limits	Focuses on controlling inputs to land use operations by directly managing the amount of nutrients being applied on land. For example, controlling stock numbers, fertiliser and feed application rates.
Output based limits	Based on the greatest units of output leaving a property (e.g. milk solids, timber, kg of meat). An example would be allocating to a landowner based on how many kg of milk solids or revenue produced per 1 kg of nitrogen leached.

For further information on allocation approaches and how they were assessed go to www.rotorualakes.co.nz/vdb/document/672

The preferred allocation approach

The different NDA allocation approaches above were analysed by the Regional Council and the Stakeholder Advisory Group.

A combination of sector averaging and grandparenting (with clawback) has been identified as the most appropriate approach to allocate NDA in the Lake Rotorua catchment.

The approach preferred at this stage by the Stakeholder Advisory Group and Bay of Plenty Regional Council are ranges based on Rule 11 benchmarks but within the following lower and upper limits: 30-40 kgN/ha/yr for the dairy sector and 10-20 kgN/ha/yr for the drystock sector.

Ko te wai te ora o ngā mea katoa

Water is the life giver of all things

Fact sheets in this series:

1 Draft rules - how they could affect landowners
2 Nitrogen Discharge Allowances
3 Draft rules - Q&A
4 Support and incentives
5 Gorse Conversion
6 Resource Consents

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The key reasons for using this approach are:

- Recognises existing land use and landowner investment
- Takes into account the current rates of nitrogen discharges
- Supports good land use practice
- Shares the burden of reduction across nearly all pastoral landowners.

Fixed sector limits of 35 kgN/ha/yr for dairy and 13 kgN/ha/yr for drystock were originally proposed as part of the integrated framework. Work with the Stakeholder Advisory Group identified that NDA ranges were preferred.

Two different ways to determine NDA ranges were analysed based on the 140 tonne nitrogen reduction needed from landowners meeting NDAs by 2032.

(i) Linking NDAs to rainfall and soil types in the Rotorua catchment

(ii) Basing NDA ranges on Rule 11 benchmarks, noting that differences in benchmarked nitrogen losses are largely driven by farm system and management, not soil and rainfall.

What are other regions doing around nitrogen allocation?

A land use capability approach (sometimes called “natural capital”) is being used in some regions such as Manawatu-Wanganui and Hawkes Bay. This approach was not considered appropriate for the Lake Rotorua catchment because of the way land is currently used in the catchment and that it would require a substantial shift in current land use.

Other regions are using grandparenting and single value nitrogen limits. These allocation approaches were rejected because they did not provide enough reduction or did not account for farm variability across the catchment.

Allocation is important – your input is needed

We want to make sure that the approach used to allocate NDAs is the most appropriate for the Lake Rotorua catchment.

We want your views on the suggested approach as well as potential alternatives. For example:

- A fixed sector average of 13 kgN/ha/yr for drystock, and 35 kgN/ha/yr for dairy OR
- A single fixed average for all land uses of 18 kgN/ha/yr
- If a landowner voluntarily undertook nutrient mitigations before 2001 (e.g. retired land) when Rule 11 benchmarks were set, should this be recognised when their NDA is set?

Public consultation on draft rules

We are seeking input from farmers, landowners, iwi and the wider community to develop the draft rules to make sure they are practical and reasonable so we can achieve a future that has both a clean lake and farming in the catchment.

You can have input into the draft consenting process and nitrogen allocation approach by:

- Completing the feedback form on the Have Your Say brochure
- Going to www.rotorualakes.co.nz and completing the online feedback form
- Attending any of the open day or information sessions being held as part of consultation on the rules. For details go to www.rotorualakes.co.nz
- Calling 0800 884 880 and talking to Regional Council staff.

Feedback received through consultation may require a reconsideration of the draft allocation approach.

Want to know more?

For more information on the draft rules see the Have Your Say brochure or supporting information on www.rotorualakes.co.nz

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