



PROJECT PART-FUNDED BY THE SUSTAINABLE FARMING FUND

The first project, 2002–2005, showed there were linkages between nitrogen (N) applied on the farms around Lake Rerewhakaaitu and the amount of N that leached into the lake water.

FARMING WITHIN NUTRIENT LIMITS

THE ISSUE OR OPPORTUNITY

Land managers are under increasing pressure to farm or grow within nutrient limits, so they minimise their impact on the natural environment.

In the Rotorua Lakes area, the community has expressed a desire to improve quality of water in many of its lakes.

Lake Rerewhakaaitu is surrounded by 27 dairy farms. The farmers decided to be proactive and find out what impact their activities were having on the lake and what they could do to minimise this.

RESULTS

The first project, 2002–2005, showed there were linkages between nitrogen (N) applied on the farms around Lake Rerewhakaaitu and the amount of N that leached into the lake water.

The nutrient budgeting tool OVERSEER® was tested and accepted as a useful tool that farmers can use to manage nutrients.

Farmers made the following changes to their N management practices:

- » Reduced or eliminated nitrogen fertiliser applied to effluent blocks
- » Reduced or eliminated nitrogen fertiliser applications during autumn and winter
- » Reduced total nitrogen fertiliser applications.

The second project, 2006–2009, focused on phosphorus (P), as monitoring showed this could cause decline in water quality.

The work showed that sediment runoff from farms is a major source of P loss. Major losses occur off raceways.

Mitigation methods are: grass filter strips, sediment traps, and P-socks filled with melter slag. The slag is a P-absorbing, non-toxic by-product of the steel industry that is encased in porous mesh socks and placed in water.

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Recommended practices to manage P include:

- » humping and hollowing of farm tracks on steeper land to reduce runoff velocity
- » diverting track runoff to pasture, rather than waterways
- » manage winter grazing to reduce pugging
- » aim to reduce soil Olsen P to target levels of 35–40
- » time fertiliser application to better match plant nutrient requirements, i.e. less in autumn and winter
- » soil test effluent blocks separately and reduce phosphate fertiliser applied.

The follow-on from the SFF projects was an offer from the Bay of Plenty Regional Council for the farmer group to write the catchment plan, which was accepted. This is expected to be finalised in 2013.

AT A GLANCE

	10/011 – Development of Lake Rerewhakaaitu Catchment Plan
	Total SFF investment: \$407 485
SFF projects	02/032 & 06/032 Farmers in the Catchment of Lake Rerewhakaaitu
	Total SFF investment: \$288 862
	Project 1, FertResearch \$45 000, Dairy Insight \$45 000, BOPRC \$15 000 +in-kind from technical staff
Other cash contributors	Project 2, as above
	Project 3, DairyNZ \$15 000, BOPRC \$140 000
	Farmer in-kind contributions total – 2700 hours
Total project value (excluding in-kind contributions): \$1 061 547	