

3.9.4.7 Livestock Access

If the current extent of adverse effects attributed to livestock having access to water bodies is not reduced significantly at the time of plan review or by 2005, whichever is the sooner, then rules to exclude livestock from water bodies identified in Method 3.9.4.6 as being particularly sensitive to land use effects, will be implemented as part of the plan review or by way of a plan change.

3.9.4.8 Nutrient Research

Waikato Regional Council will undertake and where appropriate encourage investigation into:

1. the adverse effects of fertiliser use and nutrients on water bodies
2. farm management techniques that make the most efficient use of nutrients inputs while minimising leaching
3. methods to prevent nutrient contamination of water bodies.

3.9.4.9 Fertiliser Use

If the current extent of adverse effects attributable to fertiliser reaching ground and surface water is not reduced significantly at the time of plan review by 2005, whichever is the sooner, then rules to control fertiliser use, or nitrogen leaching, on land adjacent to water bodies identified in Method 3.9.4.6 as being particularly sensitive to land use effects, will be implemented as part of the plan review or by way of a plan change.

3.9.4.10 Part XII RMA Enforcement

Waikato Regional Council will apply for enforcement orders, issue abatement notices and use other enforcement mechanisms in Part XII of the RMA where any of the following adverse effects on water bodies occur as a result of inappropriate land use practices:

1. Severe bed or bank erosion, and/or;
2. Significant discharge of sediment or nutrients or other contaminants to water bodies leading to:
 - a) significant adverse effects on aquatic life, or
 - b) significant adverse effects on the uses and values of water bodies, or
 - c) significant adverse effects on other users of water, or
 - d) significant adverse effects on water quality, or
 - e) Water Management Classes being compromised.
3. The direct discharge of fertiliser into water resulting in significant adverse effects on water quality.

3.9.4.11 Permitted Activity Rule – Fertiliser Application

The discharge of fertiliser* into air and onto or into land outside the Lake Taupo Catchment is a **permitted activity** subject to the following conditions:

- a) The discharge shall not result in any objectionable odour or particulate matter beyond the subject property boundary.
- b) The discharge does not result in any avoidable direct application of fertiliser to any water body.
- c) Where the fertiliser is being used in other than domestic gardening situations the fertiliser must be applied in accordance with the NZ Fertiliser Manufacturers Research Association, 1998 (updated 2002): Code of Practice for Fertiliser Use.
- d) A nutrient management plan of the type specified in Table 3-10 must be used to plan fertiliser application where nitrogen fertiliser is being applied at rates greater than 60 kg/N/ha/year.

- e) The contents of the nutrient management plan required by condition d) must be made available to the Waikato Regional Council upon request.
- f) A nutrient management plan shall be provided to Waikato Regional Council on request in accordance with condition d) where fertiliser is to be applied to an area of land that has also had farm animal effluent applied to it within the preceding 12 months.

Table 3-10 Nutrient Management Requirements by Land Use Type

Land Use Type	Nutrient Management Plan Requirements
All Land Uses applying more than 60Kg N/ha/yr	<p>A nutrient management plan must be prepared that, as a minimum records the following information for at least nitrogen (N) and phosphate (P) (in units of kg of N and P per hectare per year) :</p> <ul style="list-style-type: none"> • Inputs from fertiliser. • Inputs from other sources such as manures, green crops and soil mineralization. • Outputs in product. • Results of soil testing for levels of available N and P. • Documentation of consideration given to climatic and soil conditions for the life of the crop to account for the effects of rainfall and irrigation on the potential for N and P leaching through the soil in to ground and surface water. • Practices that will be implemented to reduce nutrient and sediment losses from the property and to avoid, remedy or mitigate adverse effects on the environment.
Pastoral	The nutrient management plan specified above must be developed based on the outputs of either Overseer (Agresearch) or any other nutrient management planning tool that meets the criteria set out in the fifth advisory note below.
Commercial Vegetable and Fruit Production, Arable/Mixed Cropping and Livestock or any other land use not otherwise captured in this table	From 1 January 2011, the nutrient management plan specified above must be developed based on the outputs of any nutrient management planning tool that meets the criteria set out in the fifth advisory note below.

Advisory Notes:

- The discharge of fertiliser into air and onto or into land that does not comply with Rule 3.9.4.11 is a discretionary activity in accordance with Rule 3.5.4.5.
- Application of fertiliser should follow the good practice guide on fertiliser use in Section 3.9.7 and any other relevant industry nutrient management tools, including "Doing it Right" (the Franklin Sustainability Project, 2002).
- The processes for determining the objectionable effects of odour or particulate matter beyond the property boundary are set out in Chapter 6.4 of this Plan.
- This rule does not specify a nutrient leaching rate for the model. It is Waikato Regional Council's intention to survey modelled leaching rates and if necessary develop rules that specify nutrient leaching rates for sensitive locations in accordance with Method 3.9.4.8.
- In order to comply with the requirements of this Rule Nutrient Management Planning tools other than Overseer and SPASMO must:
 - a) Be a Crown Research Institute, University or Industry developed model that has successfully completed commercial trials commensurate with climatic, terrain and soil conditions expected to be encountered in the Waikato Region.
 - b) Be able to predict annual, seasonal or crop nutrient losses at either a paddock or total crop area scale with a margin of error no more than 30%.
 - c) Have been calibrated against current versions of either Overseer or SPASMO, or versions that are no more than 3 years old, and any departures from those models when using identical data sets documented and explained.
 - d) Have product maintenance and support currently available as of the date of use or guaranteed for a period of one year.

- A register of nutrient management planning tools that meet the criteria set out in the above advisory note is maintained by Waikato Regional Council. If by 2011 models that meet these criteria have not been developed for the subject crop or land use, a model based on the crop or land use with the most similar nutrient leaching behaviour will be acceptable.

Explanation and Principal Reasons for Adopting Methods 3.9.4.1 to 3.9.4.11

The above methods provide a range of non-regulatory methods as provided for in the policies in Section 3.9.3. There is also one permitted activity rule for the discharge of fertiliser into air and onto or into land outside the Lake Taupo catchment.

Method 3.9.4.1 encourages Waikato Regional Council to work with organisations, industry groups and individuals in the development and use of good practices that are designed to avoid, remedy or mitigate the adverse effects of non-point source discharges as a result of land use activities. This approach encourages good practice and practical measures which ensure adverse effects, are avoided or are minor. The good practices can be captured and promoted in guideline documents. Appropriate existing guidelines are:

- a) Dairying and the Environment: Farm management issues³⁷.
- b) Code of Practice for Fertiliser Use³⁸.
- c) NZ Forest Code of Practice³⁹.
- d) Design guidelines for earthworks, tracking and crossings⁴⁰.
- e) Riparian Management Guidelines⁴¹.
- f) Section 3.9.7 (Use of Fertilisers) of this Plan.
- g) The Fonterra Accord.
- h) Doing it Right: Franklin Sustainability Project Guide to Sustainable Land Management.
- i) New Zealand Deer Farmers Landcare Manual.

Method 3.9.4.2 provides that Waikato Regional Council will use environmental education programmes to raise the community's awareness regarding non-point source discharges and land use effects on water bodies.

Working with local communities and care groups is also encouraged as an important mechanism for increasing community awareness and ensuring that streamside areas are managed in an appropriate manner. Support could include facilitation and information to existing care groups and encouragement, planning information and advice to assist new care groups or community initiatives. These types of groups have a major input into enhancing and establishing streamside areas that are important in terms of managing non-point source discharges.

Method 3.9.4.3 promotes integrated management between Waikato Regional Council and territorial authorities. This is important because, although Waikato Regional Council has a direct role in managing water quality, territorial authorities control the effects of land use under s31 of the RMA, and to this extent, Waikato Regional Council and territorial authorities need to work together to jointly manage this issue.

Economic incentives in **Method 3.9.4.4** are also promoted as a way of managing land use effects. Through such incentives, Waikato Regional Council can support projects that assist with minimising the impacts of land use activities on water bodies. This includes the provision made under Section 3.4.9 of the Waikato RPS allowing territorial

³⁷ Heatley, P.R. 1998: *Dairying and the Environment: Farm management issues*. Dairying and the Environment Committee, Palmerston North.

³⁸ NZ Fertiliser Manufacturers Research Association. 1998: *Code of Practice for Fertiliser Use*. NZ Fertiliser Manufacturers Research Association, Newmarket, Auckland.

³⁹ Visser, R. and Smith, M 1993: *New Zealand Forest Code of Practice* (2nd Ed.) Logging Industry Research Organisation. LIRO, Rotorua.

⁴⁰ Waikato Regional Council. 1995: Design guidelines for earthworks, tracking and crossings: A practitioner's technical guide to minor effects based activities. *Waikato Regional Council Technical Publication no. 1995/8*. Waikato Regional Council, Hamilton.

⁴¹ Collier, K., Cooper, A.B., Davies-Colley, R.J., Rutherford, J.C., Smith, C.M., and Williamson, R.B. 1995: *Managing riparian zones: a contribution to protecting New Zealand rivers and streams*. Department of Conservation, Wellington.