

Guide to agrichemical use in Resource Management Plans

Otago Region

As at June 2017

Disclaimer: This Guide is intended to assist users and applicators to understand the requirements relating to agrichemical use in the relevant regional plans in your Region. Every effort has been made to ensure the accuracy of this information but the responsibility for ensuring that the requirements of councils are met is with the applicator and user of agrichemicals.

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10. Definitions

1. Structure of plan requirements

Under the Regional Plan: Air for Otago, the following three types of agrichemical application are permitted activities, ie you do not need a resource consent if you follow the rules:

- 16.3.9.1 – Discharges from agrichemical application on residential properties
- 16.3.9.2 – Discharges from agrichemical applications on production land
- 16.3.9.3 – Discharges from agrichemical application in public amenity areas and places of public assembly

The rules provide for the discharge of agrichemicals into air. If the rules cannot be met then a resource consent under Rules 16.3.9.4 will be required from the Council.

The Air Plan also includes Schedule 1.4 Good Management Practices for Agrichemical Application which sets out best practice for users.

Discharges of pesticides to water and discharges to land are addressed in the Regional Plan: Water for Otago in Rules 12.7. Four types of discharge are permitted subject to following the rules:

- Rule 12.B.1.1 Discharge of any herbicide to water for the control of aquatic plants
- Rule 12.B.1.2 Land based discharge of any pesticides to land
- Rule 12.B.1.3 Discharge of herbicide to air or land in circumstances where it will enter water
- Rule 12.B.1.4 Aerial discharge of any pesticide onto land in circumstances where it may enter water (not included in this document).

If relevant rules cannot be met, then a resource consent under Rules 12.B.2.1 will be required from the Council.

Definitions

Key words are identified in this Guide by *italics* and their formal definitions from the Plan are listed in section 10 of this Guide. The definitions of *residential property* and *hand held appliance* are particularly important as it determines which rule will apply.

Status of plans

Both the Regional Plan: Water for Otago (September 2015) and the Regional Plan: Air for Otago (January 2009) are Operative meaning that the current versions cannot be changed except through a publicly notified Plan Change.

The link to the Otago Regional Council website and the rules in the plan are:

<http://www.orc.govt.nz/Publications-and-Reports/Regional-Policies-and-Plans/Regional-Plan--Air/>

<http://www.orc.govt.nz/Publications-and-Reports/Regional-Policies-and-Plans/Regional-Plan-Water/>

2. Specific notes for users

Onus of responsibility

An important issue in terms of compliance with a Regional Plan is to be clear as to 'who' is responsible for 'what'. Some plans have conditions (e.g. notification) which are the responsibility of the 'landowner or occupier'. Other conditions (e.g. records) may be the responsibility of the 'discharger' or 'applicator'. Sometimes it may be either 'landowner' or 'applicator'. Usually such terms are defined in the Plan so it is clear who should be undertaking particular activities. However, there are times where it is not clear who should be carrying out a task. If the landowner or manager is the person undertaking the spraying then all the responsibility is with that person. However, it is recommended that where a landowner or manager engages or employs someone else to undertake the spraying that it is clearly set out who will undertake particular responsibilities required by the Plan. In the event of a spray drift incident the Council will be seeking to confirm who undertook such matters as notification or keeping of records. A paper trail in this respect will be useful.

NZS8409:2004

Rule 16.3.9.3 has a requirement that the application is undertaken in accordance with Section 5 of NZS8409:1999 Code of Practice for Management of Agrichemicals. Users should be aware of the mandatory requirements in Sections 5 which are identified in NZS8409 as shall statements. Users under Rule 16.3.9.3 will need to reference NZS8409:1999 and meet these requirements to be compliant with the rules for agrichemical use in the Regional Plan: Air for Otago.

Rules 16.3.9.1 and 16.3.9.2 do not have a mandatory requirement but have a note that refers to NZS 8409:1999 Code of Practice for the Management of Agrichemicals and, in particular, that Section 5 Use of Agrichemicals should be used. Schedule 1.4 of the Plan - Good Management practices for Agrichemical Application is based on the Code. While this is not a mandatory requirement users are directed to NZS8409 as being best practice for agrichemical management.

Using this Guide

The summary tables below for each rule set out possible conditions that a Council may require in a permitted activity rule for agrichemical use. If a line is blank then it means that the Plan does not require anything on that issue.

3. Rule 16.3.9.1: Discharges from agrichemical application on residential properties

Permitted activity conditions	What the rule requires
Type of use	Hand held applications on residential properties ; for domestic purposes within a residential property; on the residential portion of any other property; on road frontages of residential properties where the spray is applied by the residents of the adjoining residential property.
Area of use	
Nature of applicator 16.3.9.1 c)	The discharge does not exceed the quantity, concentration or rate required for the intended purpose.
Certain agrichemicals 16.3.9.1 a)	The agrichemical and any associated additive must be authorised for use in NZ and used in accordance with that authorisation.
Comply with manufacturer's instructions 16.3.9.1 b)	The application must be carried out in accordance with the manufacturer's directions.
Drift beyond the boundary 16.3.9.1 d)	The application does not result in any ambient concentration of contaminants at or beyond the boundary of property that have noxious or dangerous effects. See Schedule 1.4 (section 9 of this Guide) for advice on drift hazard.
Status of NZS8409	Includes a note that Schedule 1.4 is based on NZS8409:1999 and Section 5 should be used when carrying out agrichemical applications.
Qualifications or training	
Notification	
Spray Plan	
Signage	
Records	See Schedule 1.4 (in section 9 of this Guide)
Public places or amenity areas or sensitive areas	
Storage	
Mixing sites	
Applications to or near water	Refer to rules 12.7.1.2 and 12.7.1.3 of the Regional Plan: Water for Otago (see below).
Disposal	See Schedule 1.4 (in section 9 of this Guide)

4. Rule 16.3.9.2: Discharges from agrichemical applications on production land and industrial and trade premises

Permitted activity conditions	What the rule requires
Type of use	The discharge of any agrchemical into air using aerial or ground based application methods: <ul style="list-style-type: none"> • On production land; or • On roadsides adjoining production land when applied by the adjacent landowner or his/her employee; or • On industrial or trade premises.
Area of use	
Nature of applicator 16.3.9.2 c)	The discharge does not exceed the quantity, concentration or rate required for the intended purpose.
Certain agrichemicals 16.3.9.2 a)	The agrichemical and any associated additive must be authorised for use in NZ and used in accordance with that authorisation.
Comply with manufacturer's instructions 16.3.9.2 b)	The application must be carried out in accordance with the manufacturer's directions.
Drift beyond the boundary 16.3.9.2 d)	The application does not result in any ambient concentration of contaminants at or beyond the boundary of property that have noxious or dangerous effects. See Schedule 1.4 for advice on drift hazard.
Status of NZS8409	A note states that Schedule 1.4 is based on NZS8409:1999 and Section 5 should be used when carrying out agrichemical applications.
Qualifications or training	
Notification	
Spray Plan	
Signage	
Records	See Schedule 1.4 (in section 9 of this Guide)
Public places or amenity areas or sensitive areas	
Storage	
Mixing sites	
Applications to or near water	Refer to rules 12.7.1.2 and 12.7.1.3 of the Regional Plan: Water for Otago (see below).
Disposal	See Schedule 1.4 (in section 9 of this Guide)

5. Rule 16.3.9.3: Discharges from agrichemical application in public amenity areas and places of public assembly

Permitted activity conditions	What the rule requires
Type of use	The discharge of any agrichemical into air using aerial or ground based application methods in public amenity areas and places of public assembly .
Area of use	
Nature of applicator 16.3.9.3 c)	The discharge does not exceed the quantity, concentration or rate required for the intended purpose.
Certain agrichemicals 16.3.9.3 c)	The agrichemical and any associated additive must be authorised for use in NZ and used in accordance with that authorisation.
Comply with manufacturer's instructions 16.3.9.3 c)	The application must be carried out in accordance with the manufacturer's directions.
Drift beyond the boundary 16.3.9.3 c)	The application does not result in any ambient concentration of contaminants at or beyond the boundary of property that have noxious or dangerous effects. See Schedule 1.4 below for advice on drift hazard.
Status of NZS8409 16.3.9.3 f)	The application is undertaken in accordance with Section 5 of the Code of Practice for the Management of Agrichemicals (NZS8409:1999).
Qualifications or training 16.3.9.3 e)	Every user must have the following qualifications: <ul style="list-style-type: none"> • Hand-held appliances with a maximum capacity of up to 15 litres shall hold a current Standard GROWSAFE® Certificate (now the Introductory) • Ground-based application methods including hand-held appliances with a maximum capacity in excess of 15 litres shall hold a current GROWSAFE® Registered Chemical Applicators Certificate; For aerial applications the Plan recognises that a pilot requires a Pilots Agrichemical Rating from CAA so has not included a duplicate requirement in the Plan.
Notification	
Spray Plan	
Signage 16.3.9.3 g) h) and i)	Signs advising that spraying is in progress must be placed at all points where the public commonly have entry when application occurs in parks, reserves, gardens and sports grounds, but not alongside public roads or railways. Signage is to be maintained in place to ensure the public do not enter the affected land until the re-entry period for that particular chemical has expired.

	Where application occurs alongside public roads and railways, vehicles associated with the spraying shall display prominent signs advising that spraying is in progress.
Records	See Schedule 1.4 (in section 9 of this Guide)
Public places or amenity areas or sensitive areas	
Storage	
Mixing sites	
Applications to or near water	Refer to rules 12.7.1.2 and 12.7.1.3 of the Regional Plan: Water for Otago (see below).
Disposal	See Schedule 1.4 (in section 9 of this Guide)

6. Rule 12.B.1.1: Discharge of any herbicide to water to the control of aquatic plants

Permitted activity conditions	What the rule requires
Type of use 12.B.1.1 d)	Purpose is for controlling aquatic plants and does not exceed the quantity, concentration or rate required for that purpose.
Area of use	
Nature of applicator	
Certain agrichemicals 12.B.1.1 a) and c)	The herbicide and any associated additive must be authorised for aquatic use in NZ and used in accordance with that authorisation. The herbicide is applied in the form of a gel.
Comply with manufacturer's instructions 12.B.1.1 b)	The application must be carried out in accordance with the manufacturer's directions.
Drift beyond the boundary	
Status of NZS8409	
Qualifications or training 12.B.1.1 b)	Carried out by a person holding a current GROWSAFE® Registered Chemical Applicators Certificate.
Notification 12.B.1.1 f)	<p>The discharger must notify at least one week before commencing the discharge:</p> <ul style="list-style-type: none"> every person taking water for domestic supply, and every holder of a resource consent or deemed permit for the taking of water within one km downstream of the proposed discharge in any river or water race, or within 1 km of the proposed discharge in a lake. <p>Where the discharge will occur directly into a lake or river the community will be notified through Public Notice at least one week prior to commencing the discharge.</p>
Spray Plan	
Signage	
Records	
Public places or amenity areas or sensitive areas	
Storage	
Mixing sites	
Applications to or near water 12.B.1.1 e)	No lawful take of water is adversely affected as a result of the discharge.
Disposal	

7. Rule 12.B.1.2: Land-based discharge of any pesticide onto land

Permitted activity conditions	What the rule requires
Type of use 12.B.1.2 c)	Purpose is for controlling animals, plants or other organisms and does not exceed the quantity, concentration or rate required for that purpose.
Area of use	
Nature of applicator	
Certain agrichemicals 12.B.1.2 a)	The pesticide must be authorised for use in NZ and used in accordance with that authorisation.
Comply with manufacturer's instructions 12.B.1.2 b)	The application must be carried out in accordance with the manufacturer's directions.
Drift beyond the boundary	
Status of NZS8409	
Qualifications or training	
Notification	
Spray Plan	
Signage	
Records	
Public places or amenity areas or sensitive areas	
Storage	
Mixing sites	
Applications to or near water 12.B.1.2 d)	There is no direct discharge of the pesticide to water in any water body , drain, water race or coastal marine area.
Disposal	

8. Rule 12.B.1.3: Discharge of herbicide to air or land in circumstances where it will enter water

Permitted activity conditions	What the rule requires
Type of use 12.B.1.3 c)	Purpose is for controlling plants and does not exceed the quantity, concentration or rate required for that purpose.
Area of use	
Nature of applicator	
Certain agrichemicals 12.B.1.3 a)	The herbicide and any associated additive must be authorised for use in or over water in NZ and used in accordance with that authorisation.
Comply with manufacturer's instructions 12.B.1.3 b)	The application must be carried out in accordance with the manufacturer's directions.
Drift beyond the boundary	
Status of NZS8409	
Qualifications or training	
Notification 12.B.1.3 f)	<p>The discharger notifies at least one week before commencing the discharge:</p> <ul style="list-style-type: none"> every person taking water for domestic supply, and every holder of a resource consent or deemed permit for the taking of water within one km downstream of the proposed discharge in any river or water race, or within 1 km of the proposed discharge in a lake. <p>Where the discharge will occur directly into a lake or river the community will be notified through Public Notice at least one week prior to commencing the discharge.</p>
Spray Plan	
Signage	
Records	
Public places or amenity areas or sensitive areas	
Storage	
Mixing sites	
Applications to or near water 12.B.1.3 d) and e)	<p>All reasonable measures are taken to minimise any direct discharge of the herbicide to water in any water body, drain, water race or coastal marine area.</p> <p>No lawful take of water is adversely affected as a result of the discharge.</p>
Disposal	

9. Schedule 1.4: Good Management Practices for Agrichemical Application

This schedule is based on the information contained in the New Zealand Standard 8409:1999: Code of Practice for the Management of Agrichemicals, August 1999, developed by the New Zealand Agrichemical Education Trust. It has been included in the Plan in a simple and convenient form for general public information and education purposes. The information contained in this Schedule also provides general guidance on the best practice for avoiding or minimising adverse effects on the environment from agrichemical application. This information may be useful for those carrying out discharges of agrichemicals into air under rules in 16.3.9, but it does not negate the conditions in any such rule.

This information caters for a wide range of purposes for spraying. Some, not all, will be applicable depending on the purpose and scale of spraying.

For further, more detailed information reference should be made to the Code of Practice itself. This document can be obtained from Standards New Zealand (Private Bag 2439, Wellington, Ph (04) 498 5990 or Fax (04) 498 5990), e-mail: snz@standards.co.nz, website: www.standards.co.nz, or can be viewed at the Otago Regional Council's Dunedin Office.

To achieve the Plan's objectives, any person discharging agrichemical sprays is requested to observe the following, in conjunction with the accompanying chart. All such persons should:

- (a) Not spray upwind of the sensitive areas (listed in the explanation to Policy 12.1.1), unless adequate buffer distances are observed, or additional techniques for avoiding spray drift are used.
- (b) Not spray when wind direction is unpredictable or when there are high winds, or very low or no wind conditions. Some wind may assist in correct targeting of spray.
- (c) Not spray during inversion conditions.
- (d) Make use of appropriate and effective buffer zones and/or shelter belts to minimise the risk of spray drifting to non-target areas.
- (e) Have particular regard to the selection of nozzle size and pressure from the spray unit, in order to minimise the risk of spray drift. (Use equipment generating a droplet size of at least 50 microns in diameter and preferably greater than 250 microns.)
- (f) In the case of ground application methods, apply spray at a height preferably less than 0.5 metres above, but no greater than 1.5 metres above the target.
- (g) In the case of aerial application methods, be a person who holds a Growsafe Pilots' Agrichemical Rating Certificate of Qualification.
- (h) Comply with the manufacturer's instructions, as stated on the container label or in information sheets.
- (i) Preferably use spray formulations of low volatility and toxicity.
- (j) Dispose of surplus spray solution and spray containers according to the Code of Practice for the Management of Agrichemicals, 1999 and the recommendations of the manufacturer or supplier, as stated in the directions on the product container label.
- (k) Keep specific records of the type of each spray and any additive applied, the pest species targeted, the volume of spray, the volume of product, concentrations used, the time, date and locality, identification of any sensitive area (see (a) above), the meeting of any notification requirements, and equipment calibration details, as well as a specific inventory of the types and volumes of any chemicals in storage.
- (l) Use only those agrichemicals currently authorised for use in New Zealand.
- (m) Also take into account the information provided on the following chart to minimise the risk of drift hazard.

	Factor	Conditions that cause potential hazards from spray drift to be:	
		High	Low
Site factors	Sensitive area	Close (<100 m away)	More than 1 km distant
	Buffer zone	None.	Yes (>100 m)
	Shelter belts	No shelter	Live shelter, >3m high and 1m thick
	Wind direction	Unpredictable	Predictable, and away from sensitive areas
	Wind speed	Zero/very low (<1 m/s) or greater than 6 m/s	Steady (1-3 m/s)
	Humidity	Low (delta T>8C)	High (delta T<4C)
	Atmospheric stability	Inversion layer present	Inversion layer not present
Techniques factors	Particle droplet size	Less than 50 microns diameter	Greater than 250 microns diameter
	Maximum height of release	Greater than 1.5m above the target	Less than 0.5m above the target
Material factors	Volatility	High (vapour pressure >10 mPa)	Low (vapour pressure <0.1 mPa)
	Toxicity	Substance used is classed as a 'Poison' in terms of Section 2 of the Toxic Substances Act 1979	No substance used is classed as a 'Poison' in terms of Section 2 of the Toxic Substances Act 1979

10. Definitions

Agrichemical spray drift - the airborne movement of aerosol or droplets containing agrichemicals onto non target areas.

Agrichemical -any substance that is used to eradicate, modify or control flora or fauna, including animal remedies, but excluding fertilisers.

Aquatic plant - any plant species that grows in water and is either totally or predominantly submerged in water

Boundary of the property - the legal perimeter of the property

Buffer zone in relation to the use of agrichemicals and potentially odorous discharges - the distance between the downwind edge of an area where the activity is undertaken, and sensitive land uses.

Ground based application methods - any method of application where that part of the equipment from where the agrichemical is emitted is either on the ground or attached to equipment that is on the ground.

Hand held application methods - any method of application where the applicator holds that part of the equipment from which the agrichemical is emitted.

Herbicide - substance toxic to plants and used to kill or control plants.

Land based discharge: The discharge of any agrichemical from anything other than any aircraft.

Pest plant - any plant specified as a pest in a pest management strategy written under the Biosecurity Act 1993.

Pesticide- a substance or mixture of substances used to kill or control unwanted species of plants, animals or other organisms.

Place of public assembly –l and or buildings which are used in whole or in part for the assembly or gathering of people for such purposes as meetings, conferences, worship, entertainment, recreation, celebration, education or similar purposes and includes such buildings associated with public or private hotels, travellers' accommodation and marae.

Production land:

- any land and auxiliary buildings used for the production (but not processing) of primary products (including agricultural, pastoral, horticultural, and forestry products):
- does not include land or auxiliary buildings used or associated with prospecting, exploration, or mining for minerals; and "production" has a corresponding meaning.

Public amenity area - any area to which the public has right of access under any statute, regulation, law or by-law, including:

- Crown and council properties, reserves, gardens, parks and airfields;
- grasslands, sports grounds and recreational turf;
- forest and bush areas;
- roads railways and their verges and embankments, pedestrian walkways, malls and precincts;
- beaches, beach reserves and adjacent foreshore areas.

Residential property - a property that contains at least one permanent residential dwelling and is used primarily for domestic purposes; but does not include a hostel or boarding house of other specialized accommodation.

Water body - fresh water or geothermal water in a **river, lake**, stream, pond, **wetland**, or aquifer, or any part thereof, that is not located within the coastal marine area.

- **River** - a continually or intermittently flowing body of fresh water; and includes a stream and modified watercourse; but does not include any artificial watercourse (including an irrigation canal, water supply race, canal for the supply of water for electricity power generation, and farm drainage canal)
- **Lake** - a body of fresh water which is entirely or nearly surrounded by land
- **Wetland** includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.