

Guide to agrichemical use in Resource Management Plans – Waikato Region As at October 2011

Waikato Regional Plan – Chapter 6.2

Note: This guide is intended to assist users and applicators understanding 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 the councils are met is with the applicator and user of agrichemicals.

Contents of this Guide:

1. Structure of plan requirements
2. Specific notes for users
3. Rule 6.2.4.8 Spot spraying using hand held spray equipment
4. Rule 6.2.4.9 Widespread application of agrichemicals
5. Performance requirements for qualifications for agrichemicals from 6.2.10.
6. Spray Plan requirements
7. Potential Spray drift hazard from 6.2.9
8. Guidelines for assessment and enforcement for off target spray drift
9. Definitions

1. Structure of plan requirements

The Waikato Regional Plan has 2 permitted activity rules for agrichemical applications – depending on the method of application:

- Rule 6.2.4.8 Spot spraying using hand held spray equipment
- Rule 6.2.4.9 Widespread application of agrichemicals

Rule 6.2.4.8 provides only for discharge of agrichemicals from the ground into air.

Rule 6.2.4.9 provides for the discharge of agrichemicals into air, or onto or into land or water.

A user will need to meet the requirements of the relevant rule depending on the method of application to be used. If a number of application methods are used then the requirements of both rules will need to be met.

The Plan also includes a number of additional requirements and information:

- 6.2.7 Spray plan checklist
- 6.2.8. Guidelines for assessment and enforcement for off target spray drift
- 6.2.9 Potential drift hazard chart
- 6.2.10 Performance requirements for qualifications to apply agrichemicals - which set out training requirements for users.

Details of each of these are included below the rule tables.

If the conditions of the permitted activity rule cannot be met then a controlled or discretionary activity resource consent under Rules 6.2.4.10 or 6.2.4.11 will be required from the Council.

There is a Prohibited Activity Rule - 6.2.4.12– which prohibits the use and discharge of 2,4-D Butyl Ester to air. This means that no resource consent can be granted for using 2,4-D Butyl Ester.

This RMA Guide has been prepared by Lynette Wharfe of The AgriBusiness Group for the New Zealand Agrichemical Education Trust (NZAET).

There are definitions in the Plan that are very important in determining which rule may apply and how it is implemented. Relevant definitions are identified in the guide by *italics* and the definitions are listed at the end of the rule tables. The definition of *hand held spray equipment* is particularly important as it determines which rule will apply.

Relevant definitions include:

- Agrichemical
- Community based spray programmes
- Contractor
- Contact re-entry time
- Hand held spray equipment
- Off target
- Place of public assembly
- Private
- Public amenity area
- Sensitive areas
- Significant Adverse Effect of Off-Target Drift
- Spot spraying
- Spray
- Spray drift
- Subject Property
- Water
- Water body – and related definitions of river, lake and wetland

Status of Plan - Status of Plan – The Waikato Regional Plan is Operative meaning that the current version cannot be changed except through a publicly notified Plan Change.

The link to the Waikato Regional Council website and the rules in the plan is:

<http://www.waikatoregion.govt.nz/Council/Policy-and-plans/Rules-and-regulation/Regional-Plan/Waikato-Regional-Plan/>

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 most useful. It should be noted that some of the requirements in the Waikato Regional Plan put the responsibility on the 'owner, occupier, manager or applicator'. In these situations there needs to be agreement between the parties as to who will undertake the responsibility.

Rule 6.2.4.9 requires that the application is undertaken in accordance with NZS8409:2004 Management of Agrichemicals. The rule does not specify particular sections – rather the whole Standard. Users should be aware of the mandatory requirements in Sections 2, 5 and 6 which are identified in NZS8409 as **shall** statements. Users will need to reference NZS8409:2004 and meet these requirements to be compliant with the rules for agrichemical use in the Waikato Regional Plan.

Using this Rule Guide:

Table 1.2 in the RMA section in the GROWSAFE® Introductory Training Manual sets out possible conditions that a Council may require in a permitted activity rule for agrichemical use. The summary tables below for each rule follow the Training Manual format which provides further information on the nature of conditions that may be required. If a line is blank then it means that the Plan does not require anything on that matter, although requirements in NZS8409:2004 may apply.

3. Rule 6.2.4.8 – *Spot spraying using hand held spray equipment*

Permitted activity conditions	What the rule requires
Type of use	Spot spraying with hand held spray equipment (Refer to the definitions below as to the limitations of use under this rule.)
Area of use 6.2.4.8 a)	Discharge is not to occur in a public amenity area .
Nature of applicator	
Certain agrichemicals	
Comply with manufacturer's instructions 6.2.4.8 b)	The discharge shall be undertaken in a manner that does not contravene any other requirement specified in the agrichemical manufacturer's instructions.
Drift beyond the boundary 6.2.4.8 c)	The discharge shall be undertaken in such a way that no significant adverse effects of off-target drift shall occur beyond the boundary of the subject property (i.e. property being sprayed.)
Status of NZS8409	
Qualifications or training	
Notification 6.2.4.8 d)	<p>1. Owner or occupier of property on which spraying is to occur is to notify anyone who has requested prior notification:</p> <ul style="list-style-type: none"> • Either verbally or in writing • Between 12 hours and 3 weeks prior to discharge <p>Notification must include:</p> <ul style="list-style-type: none"> • Date of discharge • Type of agrichemicals to be used • Location of discharge • Duration of discharge • Method of discharge <p>2. Where agrichemical may enter water the owner or occupier of property on which spraying is to occur must notify:</p> <ul style="list-style-type: none"> • Any downstream water user within 1 km of point of discharge • Between 12 hours and 3 weeks prior to discharge.
Spray Plan	
Signage	
Records	
Public places or amenity areas or sensitive areas	
Storage	
Mixing sites	
Applications to or near water	See notification above
Disposal	

4. Rule 6.2.4.9 Widespread application of agrichemicals

Permitted activity conditions	What the rule requires
Type of use	Wide spread application – anything not provided for in Rule 6.2.4.8 - Spot spraying with hand-held spray equipment
Area of use	Into air, water and into or onto land
Nature of applicator	
Certain agrichemicals	2,4-D butyl ester prohibited from use
Comply with manufacturer's instructions 6.2.4.9 a)	The discharge shall be undertaken in a manner that does not contravene any other requirement specified in the agrichemical manufacturer's instructions.
Drift beyond the boundary 6.2.4.9 b)	The discharge shall be undertaken in such a way that no significant adverse effects of off-target drift shall occur beyond the boundary of the subject property (i.e. property being sprayed.)
Status of NZS8409 6.2.4.9 e)	The application of agrichemicals is undertaken in accordance with NZS8409:2004 Management of Agrichemicals. (See note above in 2).
Qualifications or training 6.2.4.9 d) and 6.2.10	<ol style="list-style-type: none"> Every person applying agrichemicals shall have a qualification that meets requirements in 6.2.10 (see below) or under direct supervision of person who holds those requirements. (A GROWSAFE® Introductory Certificate would meet the requirements). Every contractor or contractor employee undertaking land based applications shall hold: EITHER: Current National Certificate in Agrichemical application OR GROWSAFE® Registered Chemical Applicators Certificate OR: Qualification that meets requirements in 6.2.10 OR Be under on-site supervision of a person who meets those requirements. Aerial application –Pilots Agrichemical Rating issued by CAA
Notification 6.2.4.9 h) and Table 6-4	<ol style="list-style-type: none"> <u>Ground based application on private property, more than 50 m from the property boundary.</u> Notification is only required where a person has requested notification. The owner, occupier or manager of property to be sprayed to provide in form agreed between the 2 parties. <u>Ground based application on private property, less than 50m from the property boundary.</u> Owner, occupier or

	<p>manager of property to be sprayed shall provide:</p> <p>EITHER</p> <p>Verbal or written notification to owners or occupiers of adjoining properties OR person requesting notification</p> <ul style="list-style-type: none"> • between 12 hours and 3 weeks prior <p>OR</p> <p>Written advice (at least once a year) to any person who is likely to be directly affected by spray applications that a spray plan has been prepared as set out in f) (see below) and that the spray plan is available on request.</p> <p>EXCEPT</p> <p>Notification of adjoining private property owners or occupiers will not be required if written permission has been obtained from them stating that notification can be in some mutually agreed form or that it will not be required.</p> <p>3. <u>Aerial spraying using aircraft</u></p> <p>The owner, occupier or manager of property to be sprayed shall provide:</p> <p>EITHER</p> <p>Verbal or written notification to owners or occupiers of adjoining properties OR person requesting notification between 12 hours and 3 weeks prior</p> <p>EXCEPT</p> <p>Notification of adjoining private property owners or occupiers will not be required if written permission has been obtained from them stating that notification can be in some mutually agreed form or that it will not be required.</p> <p>OR</p> <p>Give prior notification of discharge between 12 hours and 3 weeks prior:</p> <ul style="list-style-type: none"> - in local newspapers; or - verbal or written notice to people who may be affected in the adjoining area. <p>Notice shall include:</p> <ul style="list-style-type: none"> - that a spray plan has been prepared as set out in f) (see below) and is available for viewing - likely date, time and duration of discharge - location of area where discharge is to occur - trade name and classification of agrichemicals to be discharged - name and phone number of person who will carry out the operation. <p>4. <u>Public amenity areas, places of public assembly or community based spray programmes</u></p> <p>EITHER</p> <p>1. Prior notification of discharge between 12 hours and 3 weeks prior:</p> <ul style="list-style-type: none"> - in local newspapers; or
--	---

	<ul style="list-style-type: none"> - verbal or written notice to people who may be affected in the adjoining area. <p>OR</p> <p>2. Prior notification of the discharge in local newspapers or written notice to people who may be affected in the adjoining area on an annual or seasonal basis.</p> <p>Notice shall include:</p> <ul style="list-style-type: none"> - that a spray plan has been prepared as set out in f) (see below) and is available for viewing - likely date, time and duration or season of discharge - location of area where discharge is to occur - trade name and classification of agrichemicals to be discharged - name and phone number of person who will carry out the operation. <p>For Option 2 the notice shall also include instructions on who to contact if people wish to be notified closer to the date and the process to be followed for individual notification to give sufficient time to take precautions.</p> <p>AND</p> <p>3. Any person that identifies that they require notification shall be given notification in a form agreed between the 2 parties.</p>
<p>Spray Plan 6.2.4.9 f) iii) and 6.2.7</p>	<p>The owner, occupier, or manager of the property to be sprayed shall prepare a spray plan, or shall arrange for a spray plan to be prepared, at the beginning of each year or spray season and:</p> <ul style="list-style-type: none"> • be given within 7 days to any person requesting the spray plan • provided to the contractor /applicator prior to spraying commences • set out any notification procedures that have been agreed by parties. <p>Requirements for the spray plan are in 6.2.7 based on Appendix M4 of NZS8409:2004 – refer below for details.</p>
<p>Signage 6.2.4.9 h) and Table 6-4</p>	<p>1. Ground based application on private property, less than 50m from the property boundary, where boundary is a public amenity area or place of public assembly. The discharger shall:</p> <ul style="list-style-type: none"> • place signs that are clearly visible to the public at all points where the public commonly have entry to indicate that agrichemicals are being sprayed • leave signs in place until after contact re-entry time for the agrichemicals. <p>2. Public amenity areas, places of public assembly or community based spray programmes</p> <ul style="list-style-type: none"> • The applicator shall place signs so that they are clearly visible to the public on all normal lines where the public commonly have entry to indicate that agrichemicals are being sprayed. The signs shall be left in place until after

	<p>contact re-entry time for the agrichemicals.</p> <ul style="list-style-type: none"> • If spraying a road or railway verge from a vehicle the discharger must place signs at the front and back of any vehicle advising 'agrchemical application in progress'.
Records 6.2.4.9 g)	<p>The owner, occupier, or manager of the property to be sprayed shall keep and maintain records of agrchemical use, or shall arrange for records to be kept. These records shall, as a minimum, include the information in Appendix C of NZS8409:2004, Management of Agrichemicals.</p> <p>Appendix C sets out a Agrichemical Use Record Sheet that requires:</p> <ul style="list-style-type: none"> • Name, Date, Time, Location • Agrichemical used • Target of use • Application rate/dosage, total volume (kg or litre per ha) • Application methods • Additives used • Weather conditions (windspeed, direction, humidity) • Sensitive areas (location map, neighbours notified) • Other comments • Results achieved.
Public places or amenity areas or sensitive areas 6.2.4.9 f) iii)	The spray plan must identify sensitive areas and strategies to be employed to avoid adverse effects on those areas.
Storage	As required in NZ8409:2004 in Section 4 and Appendix L.
Mixing sites	As required in NZ8409:2004 5.3.2 and in Appendix R.
Applications to or near water 6.2.4.9 c)	<p>Where application is to vegetation on banks and beds of water bodies:</p> <ul style="list-style-type: none"> • Application and consequent breakdown of vegetation shall not result in the contamination of domestic or commercial water supplies, or the death of fauna (and/or residues being detected in fish). • When applied directly to water must notify: <ul style="list-style-type: none"> - Any downstream water user within 1 km of point of discharge - Between 12 hours and 3 weeks prior to discharge.
Disposal	As required in NZ8409:2004 in Section 6 and Appendix S

5. Performance Requirements for qualifications to apply agrichemicals - 6.2.10

Rule 6.2.4.9 d) requires training requirements for every person undertaking application of agrichemicals and refers to the performance requirements in 6.2.10. A user will need to determine which are the appropriate requirements given the nature of the work being undertaken.

Commercial user (this term is not defined in the Plan but is taken to mean any person, group or organisation using agrichemicals in the course of their business activities, other than a **contractor** or contractor employee.)

The minimum training programme for commercial users shall include:

Knowing and being able to describe:

- (a) The hazard classifications of agrichemicals to be used.
- (b) The adverse effects that could be caused by the agrichemicals to be used.
- (c) His or her obligations and liabilities under Acts of Parliament relative to the agrichemicals to be used and their use.
- (d) Which regulations apply in respect of those agrichemicals, and where those regulations can be obtained (including the relevant chapters of the Waikato Regional Plan).
- (e) The content of NZS 8409: 2004 Management of Agrichemicals.
- (f) The precautions required to prevent injury to a person or damage to the environment (including property).
- (g) The procedures to adopt in an emergency involving the agrichemicals to be used.

Knowing and being able to demonstrate:

- (h) A working knowledge of the operating equipment (including protective equipment and clothing) necessary to manage the agrichemicals being used.

An example of a qualification that meets these requirements is the GROWSAFE® Introductory Certificate.

Contractors and contractor employees

The minimum programme for contract use of agrichemicals (animal and plant health products) where agrichemicals are applied for hire or reward (both ground and aerial application) shall include those matters listed for commercial users and these additional matters:

- First aid, health and safety, and emergency response.
- Environmental effects, including spray drift minimization.
- Notification requirements, including signage.
- Product label interpretation.
- Protective equipment selection and use.
- Transport, storage and disposal of agrichemicals.
- Selection, calibration and operation of application equipment for specific operations.

An example of a qualification that meets these requirements is the GROWSAFE® Applied Certificate.

6. Spray Plan requirements

Rule 6.2.4.9 f) requires that a spray plan in accordance with Appendix M4 of NZS8409:2004 Management of Agrichemicals be completed and sets out the minimum requirements in 6.2.7 of the Plan.

A template for a Property Spray Plan based on Appendix M4 can be found on the GROWSAFE® website: www.growsafe.co.nz.

The Spray Plan should be prepared by the owner, occupier or manager of the property or the applicator and include the following:

1. Address and phone of property owners / occupiers, property manager and registered chemical applicators.
2. Address and phone number of neighbours and status (owner/ occupier)
3. Roads adjacent to the property boundary and roads used for school bus routes
4. Identification of area to be sprayed, size of area and target (e.g. crops) to be sprayed
5. Types of agrichemicals that are likely to be used during the year, classifications, potential hazard and times of year that spraying is likely to occur
6. Description and location of any *sensitive areas* (see definition below)
7. Strategies to be used to avoid *spraydrift* on sensitive areas
8. Factors to be considered before spraying (e.g. weather conditions)
9. Factors that may increase spray hazard potential (refer to Potential Spray Drift Hazard Chart from NZS8409:2004 Appendix G and 6.2.9 of the Plan).

7. Potential Spray Drift Hazard Chart – 6.2.9

The Waikato Regional Plan in 6.2.9 includes Table G1 from NZS8409:2004 which details the factors that contribute to spray drift, the potential drift hazard scale and comments as to how to address the factors. The chart is provided to assist users when completing a spray plan to identify factors that could increase risk of off target spray drift and users should take the chart into account when completing a spray plan.

Factor	Potential Drift Hazard Scale		Comment
	High	Low	
Wind speed.	Zero/very low (<1 m/s) or greater than 6 m/s	Steady (1-3 m/s)	Measurement or estimate using smoke.
Wind direction.	Unpredictable.	Predictable, and away from sensitive areas.	Use smoke to indicate.
Humidity.	Low (delta T>8C)	High (delta T<4C).	Measure using whirling psychrometer.
Atmospheric stability.	Inversion layer present.	Inversion layer not present.	Use cold smoke to indicate.
Maximum height of release.	>1.5m above the target.	<0.5m above the target.	Application technique (see Appendix Z of Agrichemical Users' Code of Practice).
Particle droplet size	<50 microns diameter.	>250 microns diameter.	See Appendix Z of Agrichemical Users' Code of Practice.
Volatility.	High (vapour pressure >10 mPa).	Low (vapour pressure <0.1 mPa).	Check label.
Sensitive area.	Close (<100 m away).	More than 1 km distant.	Identify on property spray checklist.
Buffer zone.	None.	Yes (>100 m).	

Shelter belts.	No shelter.	Live shelter, >3m high and 1m thick.	Not for herbicides.
Toxicity.	Scheduled agrichemicals.	Unscheduled agrichemicals	Check label.

8. Guidelines for assessment and enforcement of complaints regarding off target spray drift.

The Waikato Regional Plan in 6.2.8 includes information about the approach that Waikato Regional Council will take if complaints are received regarding off target spray drift. They include:

- Course of action to assess complaints regarding off target spray drift
- Course of action of considering enforcement.

Users are directed to the 6.2.8 of the Plan if further information is required on these matters.

9. Definitions

- Agrichemical
- Community based spray programmes
- Contact re-entry time
- Contractor
- Hand held spray equipment
- Off target
- Place of public assembly
- Private
- Property
- Public amenity area
- Sensitive areas
- Significant Adverse Effect of Off-Target Drift
- Spot spraying
- Spray
- Spray drift
- Water
- Water body and related definitions of river, lake and wetland

Agrichemical: Any substance, whether inorganic or organic, human-made or naturally occurring, modified or in its original state, that is used in agriculture, horticulture or related activity to eradicate, modify or control flora and fauna. For the purpose of this Plan, agrichemicals do not include fertilisers, fumigants, vertebrate pest control products and oral nutrition.

Community based spray programmes are programmes which the community has funded rather than a single landowner. These programmes would include spraying of drains as part of the maintenance programme for drainage areas, spraying of road verges or programmes where a number of landowners engage a single spray contractor.

Contact re-entry time is the minimum time required to elapse after application of agrichemicals before unprotected re-entry can take place into a treated area where skin contact with a treated surface is likely to take place. This includes operations of land thinning, hand pruning, hand weeding and walking on any spray surfaces, for whatever reason, without adequate foot protection.

Contractor: In relation to Chapter 6.2 of this Plan ‘contractor’ means any person or organisation who, by agreement with the owner, occupier, or manager of any land, discharges any agrichemical to that land for hire or reward, and is not otherwise an employee of that owner, occupier or manager.

Hand held spray equipment means a hand held sprayer with a single nozzle, used for spot spraying and operated at a pressure no greater than 200kpa (30psi) and excludes high pressure handguns.

Off target in relation to Chapter 6.2 means any area (properties or residences) or species (humans, flora or fauna) for which the discharge was not intended.

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

Private means an area which is not a *place of public assembly* or *public amenity area*.

Public amenity area: Those areas to which the public have right of access under any statute, regulation, law or by-law, which may include:

- Crown or council properties, reserves, gardens, parks and airfields;
- Grasslands, sports grounds and recreational turf;
- Forest and bush areas;
- Road and rail verges and embankments, pedestrian walkways, malls and precincts;
- Beaches and beach reserves and adjacent foreshore areas.

Sensitive areas include, but not limited to:

- Dwelling houses
- Places of public assembly and public amenity areas
- Domestic and community water supplies
- Water bodies and banks of a water body
- Habitats of significant indigenous flora and fauna (as defined in district plans and DCO Management Strategies)
- Plans and/or crops which are sensitive to agrichemicals being discharges
- Certified organically farmed properties.

(Definition from Chapter 6.2.3 Policy 2.)

Significant Adverse Effect of Off-Target Drift: For the purposes of this Plan, an adverse effect of off-target exposure from the application of agrichemicals is defined as significant if the application:

a) has caused or is likely to have caused adverse effect(s) on human health resulting from one or more of the following pathological processes:

- allergies
- irritants
- toxicity
- carcinogenesis*
- teratogenesis*
- mental distress or disorder, or

b) has caused or is likely to have caused one or more of the following adverse effects on amenity values and cultural well-being:

- reduced access to property or adjoining areas because of contamination (i.e. on grass or foliage) from spraying activity
- reduced or impaired use of areas of cultural or social significance including places of public assembly, or

c) has caused or is likely to have caused one or more of the following adverse effects on natural and physical resources and ecosystems (including flora and fauna):

- contamination of domestic or commercial water supplies
- contamination of waterways (i.e. resulting in residues being detected in fish or death of flora or fauna)
- damage to crops and other plants to the point where the agrichemical has affected the growth and quality of the crop, or contaminates the crops to a level where residues exceed limits for safe human consumption
- damage to or destruction of significant indigenous vegetation identified pursuant to the criteria in the Waikato RPS
- death or illness of fauna, or

d) exceeds a threshold specified for any substance in the agrichemical pursuant to the Hazardous Substances and New Organisms Regulations

e) The likelihood of these effects occurring can be measured through comparison between residue levels in vegetation, water or animal tissues and threshold values set under hazardous substances or food protection laws. In determining whether an incident is likely to have caused these effects, Council will rely upon numerical thresholds such as these.

Spot spraying: spot spraying means the application of agrichemicals targeted at a discrete individual plants each not exceeding two square metres for example for forestry tree release and individual plant pest control.

Spray: The discharge of agrichemicals (as defined) whether in liquid, emulsified, mist, granular, powdered, pelletised or any other physical form or forms, and 'spraying' has a corresponding meaning.

Spray drift: The airborne movement of any sprayed agrichemical (including carrier, solvent, active ingredient).

Subject property is the property on which the activity is carried out. The boundaries of the subject property extend vertically into the air. It excludes that are of land rented by a third party unless a rental agreement specifies otherwise.

Water means:

- a) water in all its physical forms whether flowing or not and whether over or under the ground
 - b) Includes fresh water, coastal water and geothermal water
- c) does not include water in any form while in any pipe, tank or cistern.

Water body - Means 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.

Note: The definition of water body is further defined in the definitions of river, lake and wetland:

River means 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 means 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.