

18 September 2018

Mr Graham Carter

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By email: fyi-request-8548-de55b6d1@requests.fyi.org.nz

Dear Graham

**Local Government Official Information and Meetings Act 1987 (“LGOIMA”):
Request for Information**

I refer to your email dated 22/08/18 requesting information on spraying around waterways. Your request has been referred to me to reply.

Please find below the answers to your questions in relation to spraying on and around the Rakaia River. Our River Engineering team maintain only a small portion of the Styx River, downstream of the floodgates (where it enters the Waimakariri River under the stopbank), and there is no routine spraying here. For information regarding spraying on and around the Styx River I suggest you contact the Christchurch City Council (CCC).

1. You ask for the exact names of the chemicals used to spray on the foliage around waterways and the application rate of each.

Environment Canterbury holds resource consent CRC981580 which authorises the application of triclopyr, glyphosate and surfactants to river beds in Canterbury.

While all products used are either triclopyr or glyphosate based, the exact product name may vary from year to year depending on which suppliers have been selected during chemical procurement. Surfactants used are either Organosilicone or canola oil-based products like Kwicken.

During 2017-2018 the following chemicals were used to spray in the Rakaia River:

- Nufarm Lion 490 DST - Glyphosate
- MAX-Spred - Organosilicone surfactant
- Kenso 600 - Triclopyr

The fairway (active part of the bed between the berms) is sprayed with glyphosate and the surfactant, and tracks within the berm are sprayed with glyphosate and triclopyr (triclopyr is not used in the fairway). The application rate can vary depending on the weed infestation to be treated, however the typical application rate is 12L/Ha (min rate 6.4L/Ha, max rate 17L/Ha) for Glyphosate and 1.5L/Ha for Organosilicone.

2. You ask what signage is put up when the areas are being sprayed.

Signs are put up on the access points to tracks when spraying tracks, and these are kept in place until vegetation is starting to show signs that it has been sprayed. We also communicate this to North Canterbury Fish and Game.

Below is an image of the sign that is used, with site specific information added at the time of spraying:

CAUTION

Vegetation has been sprayed in this area.
The following area is being sprayed

**Avoid contact with surface water
and the collection of shellfish
or plants/mahinga kai**

Active herbicide chemical used: _____

Proposed spraying dates: ___/___/___ to ___/___/___

Proposed duration of spraying: _____

Aerial or ground based spraying: _____

For further information contact:
_____ on _____
or Environment Canterbury on 0800 324 636

Environment Canterbury Regional Council
Facilitating sustainable development in the Canterbury region
www.ecan.govt.nz

3. You ask what water testing is carried out after an application of spraying has been undertaken and whether or not the surfactants are tested.

The sampling as specified on our resource consent is:

In areas where triclopyr has been discharged –

(a) Samples of water shall be taken from channels containing flowing water within 25 metres downstream and immediately upstream of the spray area. Samples shall be taken as follows:

- (i) One upstream sample shall be taken immediately prior to spraying;*
- (ii) One downstream sample shall be taken upon the conclusion of spraying; and*
- (iii) One downstream sample shall be taken within 40 days of the conclusion of spraying and following sufficient rainfall on river flow to result in surface water movement over the sprayed area.*

(b) The samples taken in accordance with (a)(ii) and (iii) shall be analysed for triclopyr.

(c) The sample taken in accordance with Condition (a)(i) shall be analysed for triclopyr only if the samples taken in accordance with either (a)(ii) or (iii) show a result that is greater than or equal to the maximum concentration specified in Condition 7(ii). (that being 0.01g/m³)

(d) If the analysis of the samples taken in accordance with Condition(a)(ii) or (iii) shows that the concentration of triclopyr does not exceed the concentration specified in Condition (7)(ii), the results shall be provided to the Canterbury Regional Council within 10 working days of receipt of the results by the consent holder.

(e) If the analysis of the sample taken in accordance with (20)(a)(i) or (20)(a)(ii) shows that the concentration of triclopyr determined exceeds the concentration specified in Condition (7)(ii), the consent holder shall:

(i) Notify the Compliance Monitoring Section of the Canterbury Regional Council within two working days of receipt of the results by the consent holder; and

(ii) Implement all practicable measures to reduce the concentration of the contaminant in the receiving environment. Without limitation such measures may include cessation of activities that may have caused the exceeding concentration, or removal of contaminant source(s), or review of discharge procedures. The measures to be implemented shall be reported to the Compliance Monitoring Section of Canterbury Regional Council along with the notice of the results under (e)(i).

In areas where glyphosate has been discharged –

(a) Samples of water shall be taken from channels containing flowing water within 25 metres downstream and immediately upstream of the spray area. Samples shall be taken as follows:

(i) One upstream sample shall be taken immediately prior to spraying,

(ii) One downstream sample shall be taken upon the conclusion of spraying.

(b) The samples taken in accordance with (a)(ii) shall be analysed for glyphosate.

(c) The sample taken in accordance with Condition (a)(i) shall only be analysed for glyphosate if the sample taken in accordance with Condition(a)(ii) shows a result that is greater than or equal to the maximum concentration specified in Condition (7)(i). (that being 0.1g/m³)

(d) If the analysis of the samples taken in accordance with Condition(a)(ii) shows that the concentration of glyphosate does not exceed the concentration specified in Condition (7)(i), the results shall be provided to the Canterbury Regional Council within 10 working days of receipt of the results by the consent holder.

(e) If the analysis of the sample taken in accordance with (a)(i) or (ii) shows that the concentration of glyphosate determined exceeds the concentration specified in Condition (7)(i), the consent holder shall:

(i) Notify the Compliance Monitoring Section of Canterbury Regional Council within two working days of receipt of the results by the consent holder; and

(ii) Implement all practicable measures to reduce the concentration of the contaminant in the receiving environment. Such measures may include cessation of activities that may have caused the exceeding concentration, or removal of contaminant source(s), or review of discharge procedures. The measures to be implemented shall be reported to the Compliance Monitoring Section of Canterbury Regional Council along with the notice of the results under (e)(i).

The sampling is required for 5 sites across the region in any given year, so it is not guaranteed that there will be sampling done after each spraying event in the Rakaia River. Triclopyr is not sampled for, as there are typically no flow channels around the tracks to collect samples from.

Samples are analysed for glyphosate, surfactants specifically are not tested for as the resource consent has not required this.

4. You ask what form of triclopyr is used.

Triclopyr butoxyethyl ester is the form that is used.

5. You ask if polyethoxylated tallowamine, or POEA, an ingredient in chemicals present in any of the chemicals.

No, according to the safety data sheets, POEA is not present in any of the chemicals.

6. You ask for the exact timings of the spraying.

Below are the spraying dates for the last five years:

Upper Rakaia – upstream from SH1 Bridge to Rakaia Barrhill Methven Rd	Lower Rakaia – downstream SH1 bridge to mouth
4/12/2013	4/12/2013
5/12/2013	5/12/2013
11/02/2015	12/01/2015
12/02/2015	13/01/2015
18/02/2015	30/01/2015
11/02/2016	10/02/2015
12/02/2016	11/02/2015
13/11/2017	21/01/2016
15/11/2017	22/01/2016
	2/02/2016
	9/02/2016
	25/10/2017
	1/11/2017
	2/11/2017
	6/11/2017
	13/11/2017

7. You ask for access to the results of the water quality testing, and ask what happens if the weeds don't get sprayed, and if there is an alternative method to kill the weeds.

The results for water quality testing of the Rakaia River are shown below:

Sample date	Sample location/name	Substance tested	Result
22/02/2007	Before	Glyphosate	No residues detected
22/02/2007	after	Glyphosate	0.011mg/kg
9/12/2009	D/S	Glyphosate	0.0090mg/L
9/12/2009	U/S	Glyphosate	No residues detected
9/12/2009	24 hr after	Glyphosate	No residues detected

19/01/2015	25m Downstream before spray	Glyphosate	<0.0010mg/kg
19/01/2015	25m Downstream after spray	Glyphosate	0.0085mg/kg
20/01/2015	25m Downstream after spray	Glyphosate	<0.0010mg/kg
22/01/2016	Upstream	Glyphosate	<0.0010mg/kg
22/01/2016	Downstream	Glyphosate	<0.0010mg/kg
25/01/2016	Downstream within 72hrs	Glyphosate	<0.0010mg/kg
11/02/2017	Downstream true right	Glyphosate	<0.0066mg/kg
11/02/2017	Downstream true left	Glyphosate	0.043mg/kg

Consent limit - 0.1g/m³

Laboratory Limit of Detection = 0.0010mg/kg

If areas are not sprayed, they will either continue to grow and form dense vegetated islands, or floods will clear weedy growth (if frequent, sufficiently sized floods happen). Once vegetated islands have established, the natural braiding pattern of rivers can be lost as the flow gets entrenched into a set pattern, and therefore associated aquatic habitats are lost. Areas of bare gravel are also lost, which impacts on the nesting success of our native birds which rely on clear gravels for nesting and raising their chicks. Heavily vegetated river beds also reduce flood carrying capacity and increase erosion to the river banks if flows are being deflected by islands. If this happens, typically the only resolution is mechanical intervention – which can be both very expensive to the local rate payers and more intrusive to the river environment. Routine spraying can help avoid these effects.

Due to the scale of the Rakaia River, there is no practicable alternative to spraying to manage weed growth over this significant area of river bed.

8. Finally, you ask what method of delivering the chemicals is used.

The Rakaia River fairway is aerially sprayed by helicopter. Vehicle access tracks within the berm areas are sprayed via a truck mounted spray unit, with a handheld spray gun.

You will be aware that if you are not satisfied with this response you are able to refer this matter to the Office of the Ombudsman under s27 (3) of the Local Government Official Information and Meetings Act 1987.

Please be advised that we now put LGOIMA responses that are in the public interest onto our website. No personal details of the requester are given, but we do summarise the essence of the request alongside the response.

Should you require any further information or clarification, please do not hesitate to contact Anna Paris in the first instance anna.paris@ecan.govt.nz or 033653828.

Yours sincerely

A handwritten signature in blue ink that reads "N. Dommissé." The signature is written in a cursive style with a period at the end.

Nadeine Dommissé
Director