From: Lauren McDonald

To:

**Subject:** Response to Official Information request - herbicides

Date: Monday, 10 February 2020 08:55:00 a.m.

Attachments: DCC Monitoring data of herbicides in water.pdf

Dear	

In response to your official information request of 20 December 2019 on behalf of the

. Your questions have

been restated below, together with our response for clarity.

1. What guidelines does the Council use for the application of glyphosate-based herbicide (eg Roundup products) on Council owned land, by both council staff and contractors?

Any use of agri-chemicals on DCC Parks land is in accordance with NZ legislation and industry best-practice guidelines, including the Otago Regional Council's Regional Plans where they pertain to the discharge of agri-chemicals to air or water, or to land in circumstances where they may enter water. All agri-chemical use is to the manufacturer's specifications.

- 2. Does the Council limit the use of glyphosate in areas that children play?

  DCC Parks does not use Glyphosate immediately under or near children's play equipment.
- 3. Has Council formally considered a spray-free streets and parks policy in the last 5 years? If so, what was considered and what decision was made? Council has not formally considered a spray-free streets and parks policy in the last 5 years.
- 4. Does the Council use steam weeding, hot water/foam, 'natural' spray products, and/or mechanical alternatives to glyphosate-based herbicides, and if so what percentage of weed control by each of the alternatives is used? No.
- 5. Does the Council or its contractors have the equipment to carry out steam, hot water/foam weeding? What is owned by Council and what by its contractors?

DCC Parks does not use steam weeding, hot water/foam. Where deemed the most effective and efficient means of weed control, organic products and/or mechanical weeding is used.

- 6. Does Council keep records of pesticides including herbicide volumes used annually, if so could these be supplied. If more comprehensive records are not maintained, what quantity of glyphosate-based herbicides does the Council and its contractors use each year on Council owned land? DCC Parks contractors use approximately 964 litres of Glyphosate per annum.
- 7. Does Council differentiate vegetation control methods between areas open to the public and other Council owned land?

DCC Parks contractors use vegetation control methods appropriate for each situation and type of vegetation being controlled. Any exclusion or "no-entry" safety withholding periods specified by the manufacturers are adhered to.

8. Does Council use glyphosate-based herbicides for aquatic and surrounds vegetation control? What other herbicides are used in aquatic and surrounds vegetation control? DCC Parks does not directly control aquatic weeds. If any spraying takes place adjacent to any drain or waterway, Parks contractors only use

agri-chemicals approved by the NZ Environmental Protection Agency for use over or near waterways.

9. What monitoring of herbicides residues is undertaken by Council or other agencies in public residential areas, aquifers, drinking-water source points and water supplies controlled by Council? Please supply results of all such monitoring.

Please find attached a sample of the monitoring undertaken (and the results), for your information.

I trust that this answers your request.

Yours sincerely

## Lauren McDonald

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## DCC monitoring data of herbicides use in water

Sample Point	Description	Sample Date	Result	Units
Deep Creek	2,4-D in water	10/05/2019	< 0.0005	mg/L
Deep Stream	2,4-D in water	10/05/2019	< 0.0005	mg/L
<b>Lower Morrisons</b>	2,4-D in water	10/05/2019	< 0.0005	mg/L
MacKenzies	2,4-D in water	10/05/2019	< 0.0005	mg/L
McQuilkans	2,4-D in water	10/05/2019	< 0.0005	mg/L
Nichols	2,4-D in water	10/05/2019	< 0.0005	mg/L
Powder Creek	2,4-D in water	10/05/2019	< 0.0005	mg/L
Port Chalmers	2,4-D in water	13/05/2019	< 0.0005	mg/L
Lower Reservoir				
Port Chalmers	2,4-D in water	13/05/2019	< 0.0005	mg/L
Upper Reservoir				
Ross Creek	2,4-D in water	10/05/2019	< 0.0005	mg/L
Sligo's	2,4-D in water	10/05/2019	< 0.0005	mg/L
Upper Morrison	2,4-D in water	13/05/2019	< 0.0005	mg/L
Waikouaiti	2,4-D in water	13/05/2019	< 0.0005	mg/L
Pumping Main				
West Taieri	2,4-D in water	10/05/2019	< 0.0005	mg/L
Deep Creek	2,4-DB in water	10/05/2019	Not	Recovered
Deep Stream	2,4-DB in water	10/05/2019	Not	Recovered
<b>Lower Morrisons</b>	2,4-DB in water	10/05/2019	Not	Recovered
MacKenzies	2,4-DB in water	10/05/2019	Not	Recovered
McQuilkans	2,4-DB in water	10/05/2019	Not	Recovered
Nichols	2,4-DB in water	10/05/2019	Not	Recovered
Powder Creek	2,4-DB in water	10/05/2019	Not	Recovered
Port Chalmers	2,4-DB in water	13/05/2019	Not	Recovered
Lower Reservoir				
Port Chalmers	2,4-DB in water	13/05/2019	Not	Recovered
Upper Reservoir				
Ross Creek	2,4-DB in water	10/05/2019	Not	Recovered
Sligo's	2,4-DB in water	10/05/2019	Not	Recovered
Upper Morrison	2,4-DB in water	13/05/2019	Not	Recovered
Waikouaiti	2,4-DB in water	13/05/2019	Not	Recovered
Pumping Main				
West Taieri	2,4-DB in water	10/05/2019	Not	Recovered
Deep Creek	2, 4, 5-T in water	10/05/2019	< 0.0005	mg/L
Deep Stream	2, 4, 5-T in water	10/05/2019	< 0.0005	mg/L
<b>Lower Morrisons</b>	2, 4, 5-T in water	10/05/2019	< 0.0005	mg/L
MacKenzies	2, 4, 5-T in water	10/05/2019	< 0.0005	mg/L
McQuilkans	2, 4, 5-T in water	10/05/2019	< 0.0005	mg/L
Nichols	2, 4, 5-T in water	10/05/2019	< 0.0005	mg/L
Powder Creek	2, 4, 5-T in water	10/05/2019	< 0.0005	mg/L

Port Chalmers	2, 4, 5-T in water	13/05/2019	< 0.0005	mg/L
Lower Reservoir				
Port Chalmers	2, 4, 5-T in water	13/05/2019	< 0.0005	mg/L
Upper Reservoir				
Ross Creek	2, 4, 5-T in water	10/05/2019	< 0.0005	mg/L
Sligo's	2, 4, 5-T in water	10/05/2019	< 0.0005	mg/L
Upper Morrison	2, 4, 5-T in water	13/05/2019	< 0.0005	mg/L
Waikouaiti	2, 4, 5-T in water	13/05/2019	< 0.0005	mg/L
Pumping Main				
West Taieri	2, 4, 5-T in water	10/05/2019	< 0.0005	mg/L
Deep Creek	Acifluorfen in water	10/05/2019	< 0.0005	mg/L
Deep Stream	Acifluorfen in water	10/05/2019	< 0.0005	mg/L
Lower Morrisons	Acifluorfen in water	10/05/2019	< 0.0005	mg/L
MacKenzies	Acifluorfen in water	10/05/2019	< 0.0005	mg/L
McQuilkans	Acifluorfen in water	10/05/2019	< 0.0005	mg/L
Nichols	Acifluorfen in water	10/05/2019	< 0.0005	mg/L
Powder Creek	Acifluorfen in water	10/05/2019	< 0.0005	mg/L
Port Chalmers	Acifluorfen in water	13/05/2019	< 0.0005	mg/L
Lower Reservoir				
Port Chalmers	Acifluorfen in water	13/05/2019	< 0.0005	mg/L
Upper Reservoir				
Ross Creek	Acifluorfen in water	10/05/2019	< 0.0005	mg/L
Sligo's	Acifluorfen in water	10/05/2019	< 0.0005	mg/L
Upper Morrison	Acifluorfen in water	13/05/2019	< 0.0005	mg/L
Waikouaiti	Acifluorfen in water	13/05/2019	< 0.0005	mg/L
Pumping Main				
West Taieri	Acifluorfen in water	10/05/2019	< 0.0005	mg/L
Deep Creek	Bentazone in water	10/05/2019	< 0.0005	mg/L
Deep Stream	Bentazone in water	10/05/2019	< 0.0005	mg/L
Lower Morrisons	Bentazone in water	10/05/2019	< 0.0005	mg/L
MacKenzies	Bentazone in water	10/05/2019	< 0.0005	mg/L
McQuilkans	Bentazone in water	10/05/2019	< 0.0005	mg/L
Nichols	Bentazone in water	10/05/2019	< 0.0005	mg/L
Powder Creek	Bentazone in water	10/05/2019	< 0.0005	mg/L
Port Chalmers	Bentazone in water	13/05/2019	< 0.0005	mg/L
Lower Reservoir				
Port Chalmers	Bentazone in water	13/05/2019	< 0.0005	mg/L
Upper Reservoir				
Ross Creek	Bentazone in water	10/05/2019	< 0.0005	mg/L
Sligo's	Bentazone in water	10/05/2019	< 0.0005	mg/L
Upper Morrison	Bentazone in water	13/05/2019	< 0.0005	mg/L
Waikouaiti	Bentazone in water	13/05/2019	< 0.0005	mg/L
Pumping Main				
West Taieri	Bentazone in water	10/05/2019	< 0.0005	mg/L
Deep Creek	Bromoxynil in water	10/05/2019	< 0.0005	mg/L
Deep Stream	Bromoxynil in water	10/05/2019	< 0.0005	mg/L

Lower Morrisons	Bromoxynil in water	10/05/2019	< 0.0005	mg/L
MacKenzies	Bromoxynil in water	10/05/2019	< 0.0005	mg/L
McQuilkans	Bromoxynil in water	10/05/2019	< 0.0005	mg/L
Nichols	Bromoxynil in water	10/05/2019	< 0.0005	mg/L
Powder Creek	Bromoxynil in water	10/05/2019	< 0.0005	mg/L
Port Chalmers	Bromoxynil in water	13/05/2019	< 0.0005	mg/L
Lower Reservoir	·			Ü
Port Chalmers	Bromoxynil in water	13/05/2019	< 0.0005	mg/L
Upper Reservoir	·			C
Ross Creek	Bromoxynil in water	10/05/2019	< 0.0005	mg/L
Sligo's	Bromoxynil in water	10/05/2019	< 0.0005	mg/L
Upper Morrison	Bromoxynil in water	13/05/2019	< 0.0005	mg/L
Waikouaiti	Bromoxynil in water	13/05/2019	< 0.0005	mg/L
Pumping Main	·			C
West Taieri	Bromoxynil in water	10/05/2019	< 0.0005	mg/L
Deep Creek	Dicamba in water	10/05/2019	< 0.005	_
Deep Stream	Dicamba in water	10/05/2019	< 0.005	
Lower Morrisons	Dicamba in water	10/05/2019	< 0.005	
MacKenzies	Dicamba in water	10/05/2019	< 0.005	
McQuilkans	Dicamba in water	10/05/2019	< 0.005	
Nichols	Dicamba in water	10/05/2019	< 0.005	
Powder Creek	Dicamba in water	10/05/2019	< 0.005	
Port Chalmers	Dicamba in water	13/05/2019	< 0.005	
Lower Reservoir				
Port Chalmers	Dicamba in water	13/05/2019	< 0.005	
Upper Reservoir				
Ross Creek	Dicamba in water	10/05/2019	< 0.005	
Sligo's	Dicamba in water	10/05/2019	< 0.005	
Upper Morrison	Dicamba in water	13/05/2019	< 0.005	
Waikouaiti	Dicamba in water	13/05/2019	< 0.005	
<b>Pumping Main</b>				
West Taieri	Dicamba in water	10/05/2019	< 0.005	
Deep Creek	Dichlorprop in water	10/05/2019	< 0.0005	mg/L
Deep Stream	Dichlorprop in water	10/05/2019	< 0.0005	mg/L
<b>Lower Morrisons</b>	Dichlorprop in water	10/05/2019	< 0.0005	mg/L
MacKenzies	Dichlorprop in water	10/05/2019	< 0.0005	mg/L
McQuilkans	Dichlorprop in water	10/05/2019	< 0.0005	mg/L
Nichols	Dichlorprop in water	10/05/2019	< 0.0005	mg/L
Powder Creek	Dichlorprop in water	10/05/2019	< 0.0005	mg/L
Port Chalmers	Dichlorprop in water	13/05/2019	< 0.0005	mg/L
Lower Reservoir				
Port Chalmers	Dichlorprop in water	13/05/2019	< 0.0005	mg/L
Upper Reservoir				
Ross Creek	Dichlorprop in water	10/05/2019	< 0.0005	mg/L
Sligo's	Dichlorprop in water	10/05/2019	< 0.0005	mg/L
Upper Morrison	Dichlorprop in water	13/05/2019	< 0.0005	mg/L

Waikouaiti	Dichlorprop in water	13/05/2019	< 0.0005	mg/L
Pumping Main	51.11	10/07/2010	0.0007	
West Taieri	Dichlorprop in water	10/05/2019	< 0.0005	mg/L
Deep Creek	Dinoseb in water	10/05/2019	< 0.0005	mg/L
Deep Stream	Dinoseb in water	10/05/2019	< 0.0005	mg/L
Lower Morrisons	Dinoseb in water	10/05/2019	< 0.0005	mg/L
MacKenzies	Dinoseb in water	10/05/2019	< 0.0005	mg/L
McQuilkans	Dinoseb in water	10/05/2019	< 0.0005	mg/L
Nichols	Dinoseb in water	10/05/2019	< 0.0005	mg/L
Powder Creek	Dinoseb in water	10/05/2019	< 0.0005	mg/L
Port Chalmers	Dinoseb in water	13/05/2019	< 0.0005	mg/L
Lower Reservoir				_
Port Chalmers	Dinoseb in water	13/05/2019	< 0.0005	mg/L
Upper Reservoir				
Ross Creek	Dinoseb in water	10/05/2019	< 0.0005	mg/L
Sligo's	Dinoseb in water	10/05/2019	< 0.0005	mg/L
Upper Morrison	Dinoseb in water	13/05/2019	< 0.0005	mg/L
Waikouaiti	Dinoseb in water	13/05/2019	< 0.0005	mg/L
Pumping Main				
West Taieri	Dinoseb in water	10/05/2019	< 0.0005	mg/L
Deep Creek	Fenoprop in water	10/05/2019	< 0.0005	mg/L
Deep Stream	Fenoprop in water	10/05/2019	< 0.0005	mg/L
Lower Morrisons	Fenoprop in water	10/05/2019	< 0.0005	mg/L
MacKenzies	Fenoprop in water	10/05/2019	< 0.0005	mg/L
McQuilkans	Fenoprop in water	10/05/2019	< 0.0005	mg/L
Nichols	Fenoprop in water	10/05/2019	< 0.0005	mg/L
Powder Creek	Fenoprop in water	10/05/2019	< 0.0005	mg/L
Port Chalmers	Fenoprop in water	13/05/2019	< 0.0005	mg/L
Lower Reservoir				
Port Chalmers	Fenoprop in water	13/05/2019	< 0.0005	mg/L
Upper Reservoir				
Ross Creek	Fenoprop in water	10/05/2019	< 0.0005	mg/L
Sligo's	Fenoprop in water	10/05/2019	< 0.0005	mg/L
Upper Morrison	Fenoprop in water	13/05/2019	< 0.0005	mg/L
Waikouaiti	Fenoprop in water	13/05/2019	< 0.0005	mg/L
Pumping Main				
West Taieri	Fenoprop in water	10/05/2019	< 0.0005	mg/L
Deep Creek	MCPA in water	10/05/2019	< 0.0005	mg/L
Deep Stream	MCPA in water	10/05/2019	< 0.0005	mg/L
Lower Morrisons	MCPA in water	10/05/2019	< 0.0005	mg/L
MacKenzies	MCPA in water	10/05/2019	< 0.0005	mg/L
McQuilkans	MCPA in water	10/05/2019	< 0.0005	mg/L
Nichols	MCPA in water	10/05/2019	< 0.0005	mg/L
Powder Creek	MCPA in water	10/05/2019	< 0.0005	mg/L
Port Chalmers	MCPA in water	13/05/2019	< 0.0005	mg/L
Lower Reservoir				

Port Chalmers	MCPA in water	13/05/2019	< 0.0005	mg/L
Upper Reservoir	MCDA:	10/05/2010	-0.0007	/т
Ross Creek	MCPA in water	10/05/2019	< 0.0005	mg/L
Sligo's	MCPA in water	10/05/2019	< 0.0005	mg/L
Upper Morrison	MCPA in water	13/05/2019	< 0.0005	mg/L
Waikouaiti	MCPA in water	13/05/2019	< 0.0005	mg/L
Pumping Main	MCDA :	10/05/2010	-0.0005	/ <b>T</b>
West Taieri	MCPA in water	10/05/2019	< 0.0005	mg/L
Deep Creek	MCPB in water	10/05/2019	< 0.0100	mg/L
Deep Stream	MCPB in water	10/05/2019	< 0.0100	mg/L
Lower Morrisons	MCPB in water	10/05/2019	< 0.0100	mg/L
MacKenzies	MCPB in water	10/05/2019	< 0.0100	mg/L
McQuilkans	MCPB in water	10/05/2019	< 0.0100	mg/L
Nichols	MCPB in water	10/05/2019	< 0.1000	mg/L
Powder Creek	MCPB in water	10/05/2019	< 0.0100	mg/L
Port Chalmers	MCPB in water	13/05/2019	< 0.0100	mg/L
Lower Reservoir				
Port Chalmers	MCPB in water	13/05/2019	< 0.0100	mg/L
Upper Reservoir				
Ross Creek	MCPB in water	10/05/2019	< 0.0100	mg/L
Sligo's	MCPB in water	10/05/2019	< 0.0100	mg/L
Upper Morrison	MCPB in water	13/05/2019	< 0.0100	mg/L
Waikouaiti	MCPB in water	13/05/2019	< 0.0100	mg/L
Pumping Main				
West Taieri	MCPB in water	10/05/2019	< 0.0100	mg/L
Deep Creek	Mecoprop in water	10/05/2019	< 0.0005	mg/L
Deep Stream	Mecoprop in water	10/05/2019	< 0.0005	mg/L
<b>Lower Morrisons</b>	Mecoprop in water	10/05/2019	< 0.0005	mg/L
MacKenzies	Mecoprop in water	10/05/2019	< 0.0005	mg/L
McQuilkans	Mecoprop in water	10/05/2019	< 0.0005	mg/L
Nichols	Mecoprop in water	10/05/2019	< 0.0005	mg/L
Powder Creek	Mecoprop in water	10/05/2019	< 0.0005	mg/L
Port Chalmers	Mecoprop in water	13/05/2019	< 0.0005	mg/L
Lower Reservoir				
Port Chalmers	Mecoprop in water	13/05/2019	< 0.0005	mg/L
Upper Reservoir	1 1			Ü
Ross Creek	Mecoprop in water	10/05/2019	< 0.0005	mg/L
Sligo's	Mecoprop in water	10/05/2019	< 0.0005	mg/L
Upper Morrison	Mecoprop in water	13/05/2019	< 0.0005	mg/L
Waikouaiti	Mecoprop in water	13/05/2019	< 0.0005	mg/L
Pumping Main	1 1			C
West Taieri	Mecoprop in water	10/05/2019	< 0.0005	mg/L
Deep Creek	Pentachlorophenol in	10/05/2019	< 0.0005	mg/L
- T	water			0'
Deep Stream	Pentachlorophenol in	10/05/2019	< 0.0005	mg/L
1	water	- · · - <del>- ·</del>		<i>3</i> –

Lower Morrisons	Pentachlorophenol in water	10/05/2019	< 0.0005	mg/L
MacKenzies	Pentachlorophenol in water	10/05/2019	< 0.0005	mg/L
McQuilkans	Pentachlorophenol in water	10/05/2019	< 0.0005	mg/L
Nichols	Pentachlorophenol in water	10/05/2019	< 0.0005	mg/L
Powder Creek	Pentachlorophenol in water	10/05/2019	< 0.0005	mg/L
Port Chalmers Lower Reservoir	Pentachlorophenol in water	13/05/2019	< 0.0005	mg/L
Port Chalmers Upper Reservoir	Pentachlorophenol in water	13/05/2019	< 0.0005	mg/L
Ross Creek	Pentachlorophenol in water	10/05/2019	< 0.0005	mg/L
Sligo's	Pentachlorophenol in water	10/05/2019	< 0.0005	mg/L
Upper Morrison	Pentachlorophenol in water	13/05/2019	< 0.0005	mg/L
Waikouaiti Pumping Main	Pentachlorophenol in water	13/05/2019	< 0.0005	mg/L
West Taieri	Pentachlorophenol in water	10/05/2019	< 0.0005	mg/L
Deep Creek	Picloram in water	10/05/2019	< 0.005	mg/L
Deep Stream	Picloram in water	10/05/2019	< 0.005	mg/L
Lower Morrisons	Picloram in water	10/05/2019	< 0.005	mg/L
MacKenzies	Picloram in water	10/05/2019	< 0.005	mg/L
McQuilkans	Picloram in water	10/05/2019	< 0.005	mg/L
Nichols	Picloram in water	10/05/2019	< 0.005	mg/L
Powder Creek	Picloram in water	10/05/2019	< 0.005	mg/L
Port Chalmers	Picloram in water	13/05/2019	< 0.005	mg/L
Lower Reservoir				C
Port Chalmers	Picloram in water	13/05/2019	< 0.005	mg/L
Upper Reservoir				C
Ross Creek	Picloram in water	10/05/2019	< 0.005	mg/L
Sligo's	Picloram in water	10/05/2019	< 0.005	mg/L
Upper Morrison	Picloram in water	13/05/2019	< 0.005	mg/L
Waikouaiti	Picloram in water	13/05/2019	< 0.005	mg/L
Pumping Main				C
West Taieri	Picloram in water	10/05/2019	< 0.005	mg/L
Deep Creek	Triclopyr in water	10/05/2019	< 0.0005	mg/L
Deep Stream	Triclopyr in water	10/05/2019	< 0.0005	mg/L
Lower Morrisons	Triclopyr in water	10/05/2019	< 0.0005	mg/L
MacKenzies	Triclopyr in water	10/05/2019	< 0.0005	mg/L
McQuilkans	Triclopyr in water	10/05/2019	< 0.0005	mg/L
				-

Triclopyr in water	10/05/2019	< 0.0005	mg/L
Triclopyr in water	10/05/2019	< 0.0005	mg/L
Triclopyr in water	13/05/2019	< 0.0005	mg/L
Triclopyr in water	13/05/2019	< 0.0005	mg/L
Triclopyr in water	10/05/2019	< 0.0005	mg/L
Triclopyr in water	10/05/2019	< 0.0005	mg/L
Triclopyr in water	13/05/2019	< 0.0005	mg/L
Triclopyr in water	13/05/2019	< 0.0005	mg/L
Triclopyr in water	10/05/2019	< 0.0005	mg/L
	Triclopyr in water	Triclopyr in water       10/05/2019         Triclopyr in water       13/05/2019         Triclopyr in water       13/05/2019         Triclopyr in water       10/05/2019         Triclopyr in water       10/05/2019         Triclopyr in water       13/05/2019         Triclopyr in water       13/05/2019         Triclopyr in water       13/05/2019	Triclopyr in water 10/05/2019 <0.0005 Triclopyr in water 13/05/2019 <0.0005  Triclopyr in water 13/05/2019 <0.0005  Triclopyr in water 10/05/2019 <0.0005  Triclopyr in water 10/05/2019 <0.0005  Triclopyr in water 13/05/2019 <0.0005  Triclopyr in water 13/05/2019 <0.0005  Triclopyr in water 13/05/2019 <0.0005