



# Vegetable Washwater Discharge Code of Practice

Version 1.2a

## Permitted Activity Rules and Storage

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# Vegetable Washwater Discharge Code of Practice



## Permitted Activity Rules and Storage

Sufficient storage is essential for successfully managing your washwater discharges.

Calculating the required storage needs to take into account the period when the soil cannot be irrigated, the discharge rates over this time, the soil type, and for uncovered storage ponds rainfall (rain falling directly on the pond increases the storage requirements).

DairyNZ has guidance on storage requirements, soil risk, and application systems. The storage calculations below were determined using their [Storage Calculator](#).

The tables below give the storage requirements for an operation processing 2,500 tonnes of root vegetables discharging an average of 20 m<sup>3</sup>/day (5,000 m<sup>3</sup>/year) into uncovered storage, and where the operation is irrigating onto high or low risk soils. These soil risk categories are described in the [DairyNZ booklet Pocket guide to determine soil risk](#). Most soils are classified as high risk (FDE category A, B, C), generally having one or more of the following characteristics: > 7 degrees, impeded drainage, low infiltration rate (<10mm/hr), mole or pipe drains, or coarse topsoil structure (> 80% of soil aggregates captured on a 10mm sieve). The soil risk category can be found for many soils on Landcare Research’s [S mapOnline](#).

High risk soil (FDE category A, B, C) – average discharge of 20m <sup>3</sup> /day when the soil is saturated (cannot irrigate)					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Dargaville	1,280	54	12	4	1 : 1
Whangarei	1,090	46	12	4	1 : 1

Low risk soil (FDE category D and E) – average discharge of 20 m <sup>3</sup> /day					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Dargaville	160	17	8	3	1 : 1
Whangarei	120	16	7	3	1 : 1

1. Meets the storage requirements for 9 years out of 10.

Council	Permitted <sup>1</sup>		Conditions
	Discharge to water	Discharge to land	
Northland Regional Council	-	-	Doesn't specifically mention vegetable washwater. Refers to Best Management Practices and the need for a backup system.

1. Permitted subject to conditions.

**Contact:**

Horticulture New Zealand  
04 472 3795

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High risk soil (FDE category A, B, C) – average discharge of 20m <sup>3</sup> /day when the soil is saturated (cannot irrigate)					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Warkworth	1,054	36	14	4	1 : 1
Pukekohe	2,002	50	17	4	1 : 1

Low risk soil (FDE category D and E) – average discharge of 20 m <sup>3</sup> /day					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Warkworth	157	17	8	3	1 : 1
Pukekohe	198	20	8	3	1 : 1

1. Meets the storage requirements for 9 years out of 10.

Council	Permitted <sup>1</sup>		Conditions
	Discharge to water	Discharge to land	
Auckland Council	✘	✔	No runoff into surface water. The discharge must not contain contaminants other than sediment, and/or those contaminants generally found in agricultural soils and water.

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High risk soil (FDE category A, B, C) – average discharge of 20m <sup>3</sup> /day when the soil is saturated (cannot irrigate)					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Te Puke	870	37	12	4	1 : 1
Whakatane	790	39	11	4	1 : 1

Low risk soil (FDE category D and E) – average discharge of 20 m <sup>3</sup> /day					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Te Puke	130	14	8	3	1 : 1
Whakatane	110	16	7	3	1 : 1

1. Meets the storage requirements for 9 years out of 10.

Council	Permitted <sup>1</sup>		Conditions
	Discharge to water	Discharge to land	
Bay of Plenty Regional Council	✘	-	No rules about discharge to land.

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High risk soil (FDE category A, B, C) – average discharge of 20m <sup>3</sup> /day when the soil is saturated (cannot irrigate)					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
<b>Gisborne Airport</b>	770	43	10	4	1 : 1
<b>Tiniroto</b>	1,030	44	12	4	1 : 1

Low risk soil (FDE category D and E) – average discharge of 20 m <sup>3</sup> /day					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
<b>Gisborne Airport</b>	140	15	8	3	1 : 1
<b>Tiniroto</b>	180	19	8	3	1 : 1

1. Meets the storage requirements for 9 years out of 10.

Council	Permitted <sup>1</sup>		Conditions
	Discharge to water	Discharge to land	
Gisborne Regional Council	✗	✓	No land discharge rules, but policy 5.1.4 says uncontaminated discharge water with minor or no adverse effects is permitted.

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High risk soil (FDE category A, B, C) – average discharge of 20m <sup>3</sup> /day when the soil is saturated (cannot irrigate)					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Stratford	2,010	55	16	4	1 : 1
New Plymouth	1,830	55	15	4	1 : 1

Low risk soil (FDE category D and E) – average discharge of 20 m <sup>3</sup> /day					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Stratford	180	19	8	3	1 : 1
New Plymouth	190	20	8	3	1 : 1

1. Meets the storage requirements for 9 years out of 10.

Council	Permitted <sup>1</sup>		Conditions
	Discharge to water	Discharge to land	
Taranaki Regional Council	-	✓	Application to land of farm waste is permitted, 50m from bores and 25m from surface water.

1. Permitted subject to conditions.

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High risk soil (FDE category A, B, C) – average discharge of 20m <sup>3</sup> /day when the soil is saturated (cannot irrigate)					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
<b>Levin</b>	1,810	53	15	4	1 : 1
<b>Palmerston North</b>	1,690	55	14	4	1 : 1
<b>Ohakune</b>	1,790	58	14	4	1 : 1

Low risk soil (FDE category D and E) – average discharge of 20 m <sup>3</sup> /day					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
<b>Levin</b>	140	16	8	3	1 : 1
<b>Palmerston North</b>	140	16	8	3	1 : 1
<b>Ohakune</b>	180	19	8	3	1 : 1

1. Meets the storage requirements for 9 years out of 10.

Council	Permitted <sup>1</sup>		Conditions
	Discharge to water	Discharge to land	
Horizons Regional Council	 < 50m <sup>3</sup> /day	 < 100m <sup>3</sup> /day	No discharge to a lake. Must not cause a conspicuous colour/clarity change.

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High risk soil (FDE category A, B, C) – average discharge of 20m <sup>3</sup> /day when the soil is saturated (cannot irrigate)					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
<b>Blenheim</b>	729	42	10	4	1 : 1
<b>Nelson</b>	1,332	55	12	4	1 : 1

Low risk soil (FDE category D and E) – average discharge of 20 m <sup>3</sup> /day					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
<b>Blenheim</b>					1 : 1
<b>Nelson</b>	112	16	7	3	1 : 1

1. Meets the storage requirements for 9 years out of 10.

Council	Permitted <sup>1</sup>		Conditions
	Discharge to water	Discharge to land	
Marlborough Regional Council / Tasman District Council	-	-	No washwater specific rules.

1. Permitted subject to conditions.

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High risk soil (FDE category A, B, C) – average discharge of 20m <sup>3</sup> /day when the soil is saturated (cannot irrigate)					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Lincoln	1,000	42	12	4	1 : 1
Ashburton	900	39	12	4	1 : 1

Low risk soil (FDE category D and E) – average discharge of 20 m <sup>3</sup> /day					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Lincoln	110	16	7	3	1 : 1
Ashburton	110	16	7	3	1 : 1

1. Meets the storage requirements for 9 years out of 10.

Council	Permitted <sup>1</sup>		Conditions
	Discharge to water	Discharge to land	
Environment Canterbury	 Does not change stream flow by > 20%	 < 10 m <sup>3</sup> /day	Discharge to water is permitted if it meets water quality standards after reasonable mixing and suspended solids is < 50g/m <sup>3</sup> or 100g/m <sup>3</sup> , depending on the area. Land application

1. Permitted subject to conditions.

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High risk soil (FDE category A, B, C) – average discharge of 20m <sup>3</sup> /day when the soil is saturated (cannot irrigate)					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Morrinsville	1,440	43	15	4	1 : 1
Cambridge	1,850	50	16	4	1 : 1

Low risk soil (FDE category D and E) – average discharge of 20 m <sup>3</sup> /day					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Morrinsville	140	15	8	3	1 : 1
Cambridge	250	20	10	3	1 : 1

1. Meets the storage requirements for 9 years out of 10.

Council	Permitted <sup>1</sup>		Conditions
	Discharge to water	Discharge to land	
Waikato Regional Council	✗	✓	Rules only cover discharge to water. Land-based treatment systems are promoted.

1. Permitted subject to conditions.

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High risk soil (FDE category A, B, C) – average discharge of 20m <sup>3</sup> /day when the soil is saturated (cannot irrigate)					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Wairoa	850	37	12	4	1 : 1
Whakatu	600	35	10	4	1 : 1

Low risk soil (FDE category D and E) – average discharge of 20 m <sup>3</sup> /day					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Wairoa	150	16	8	3	1 : 1
Whakatu	100	14	7	3	1 : 1

1. Meets the storage requirements for 9 years out of 10.

Council	Permitted <sup>1</sup>		Conditions
	Discharge to water	Discharge to land	
Hawke's Bay Regional Council	 < 50m <sup>3</sup> /day	-	No rules about discharge to land that do not enter water. Shall not breach, after reasonable mixing, the "Drinking Water Quality Standards for New Zealand" (1995).

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High risk soil (FDE category A, B, C) – average discharge of 20m <sup>3</sup> /day when the soil is saturated (cannot irrigate)					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Te Horo	2,030	60	15	4	1 : 1
Masterton	1,590	48	15	4	1 : 1

Low risk soil (FDE category D and E) – average discharge of 20 m <sup>3</sup> /day					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
Te Horo	140	16	8	3	1 : 1
Masterton	160	17	8	3	1 : 1

1. Meets the storage requirements for 9 years out of 10.

Council	Permitted <sup>1</sup>		Conditions
	Discharge to water	Discharge to land	
Greater Wellington Regional Council	✓	✓	Discharge to water is permitted if suspended solids is < 50g/m <sup>3</sup> or 100g/m <sup>3</sup> , depending on the area.

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	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
<b>Gore</b>	1,980	50	17	4	1 : 1
<b>Woodlands</b>	1,930	56	15	4	1 : 1

Low risk soil (FDE category D and E) – average discharge of 20 m <sup>3</sup> /day					
	Uncovered storage (includes direct rainfall)				
	Volume <sup>1</sup> (m <sup>3</sup> )	Length (m)	Width (m)	Depth (m)	Batter (slope)
<b>Gore</b>	190	15	10	3	1 : 1
<b>Woodlands</b>	220	17	10	3	1 : 1

1. Meets the storage requirements for 9 years out of 10.

Council	Permitted <sup>1</sup>		Conditions
	Discharge to water	Discharge to land	
Southland Regional Council	✗	 < 20 m <sup>3</sup> /day OR Following Section 2 of HortNZ Good Practice Guidelines 2017	Complies with Section 2 of HortNZ Washwater Discharge Code of Practice 2017 OR, No overland flow or ponding for more than 24hrs. Discharge contains only water, soil and HSNO approved sanitisers, and is not within 20m of waterways or landholding boundary, or 100m of residential dwellings (Rule 36 in Water and Land Plan 2018).

1. Permitted subject to conditions.

**Contact:**

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