

Dairy Effluent Storage Calculator

Summary Report

Regional authority: Environment Southland Regional Council
Authorised agent: Landpro Limited
Client: Woldwide Five Ltd
Program version: 1.50
Report date: Monday, 21 January 2019

General description:

DESC prepared by Tanya Copeland and reviewed by Zen Gerente
1000 cows
Mix of low and high risk soils
Wash down water at 3 L/sec based on scraped yard
Discharge via low rate pods at 1mm/hr restriction and via slurry tanker during summer months
Solid effluent stored and dealt with in a separate system
343 m2 of additional catchment includes underpass effluent
Current storage is 180m3 in above ground tanks

Climate

Rainfall site: Drummond Marson Rd
Mean annual rainfall: 1061 mm/year

Effluent Block

Area of low risk soil: 59.2 hectares
Minimum area of high risk soil: 70.9 hectares
Surplus area of high risk soil: 0.0 hectares

Wash Water

Yard wash:

- Milking season starts: 01 August
- Milking season ends: 15 June

Month	Number of Cows	Hours in Yard	Wash Volume (cubic metres)
January	1000	4.0	3.0
February	1000	4.0	3.0
March	1000	4.0	3.0
April	1000	4.0	3.0
May	1000	4.0	3.0
June	1000	4.0	3.0
July	0	0.0	0.0
August	500	4.0	3.0
September	750	4.0	3.0
October	1000	4.0	3.0
November	1000	4.0	3.0
December	1000	4.0	3.0

Irrigation

Winter-spring depth: 1 mm

Spring-autumn depth:	2 mm
Winter-spring volume:	40 cubic metres
Spring-autumn volume:	240 cubic metres
Irrigate all year?	Yes

Catchments

Yard Area:	1200 square metres
Diverted?	Yes
- diversion start:	16 June
- diversion end:	31 July
Shed Roof Area:	440 square metres
Diverted?	Yes
Feedpad Area:	0 square metres
Covered?	No
Diverted?	No
Animal Shelter Area:	0 square metres
Covered?	Yes
Diverted?	No
Other Areas:	343 square metres

Storage

Pond/s present?	No
Tank/s present?	No
Emergency storage period:	0 days

Solids Separation

Solids separator/s present?	No
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Outputs

Maximum required storage pond volume:	614 cubic metres
90 % probability storage pond volume:	335 cubic metres
During the period from:	01 July 1980
To:	30 June 2013

Required Annual Storage Volumes

