

# Dairy Effluent Storage Calculator

## Summary Report

**Regional authority:** Environment Southland Regional Council  
**Authorised agent:** Landpro Limited  
**Client:** Woldwide Four Ltd  
**Program version:** 1.50  
**Report date:** Friday, 18 January 2019

### General description:

DESC prepared by Tanya Copeland and reviewed by Zen Gerente  
 1000 cows  
 78ha effluent area, high risk soils  
 Wash down water at 3L/cow/day based on a scraped yard.  
 Discharge via low rate pods, travelling irrigator and slurry tanker  
 480m<sup>2</sup> of additional catchment areas includes underpass effluent.  
 Current pond dimensions included

### Climate

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

### Effluent Block

**Area of low risk soil:** 0.0 hectares  
**Minimum area of high risk soil:** 78.0 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	25.0
February	1000	4.0	25.0
March	1000	4.0	25.0
April	1000	4.0	25.0
May	1000	4.0	25.0
June	0	0.0	25.0
July	0	0.0	0.0
August	500	4.0	25.0
September	750	4.0	25.0
October	1000	4.0	25.0
November	1000	4.0	25.0
December	1000	4.0	25.0

### Irrigation

**Winter-spring depth:** 4 mm  
**Spring-autumn depth:** 5 mm

Winter-spring volume:	240 cubic metres
Spring-autumn volume:	240 cubic metres
Irrigate all year?	Yes

### Catchments

Yard Area:	1100 square metres
Diverted?	Yes
- diversion start:	15 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:	480 square metres

### Storage

Pond/s present?	Yes
No. of ponds:	1 pond/s
Includes irregular ponds?	No
Pond 1	
- total volume:	4824 cubic metres
- pumpable volume:	3801 cubic metres
- surface area:	2142 square metres
- width:	34.0 metres
- length:	63.0 metres
- batter:	2.0:1
- total height:	3.0 metres
- pumped?	Yes
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:	4481 cubic metres
90 % probability storage pond volume:	3660 cubic metres
During the period from:	01 July 1980

To:

30 June 2013

