Liquid Waste Storage Volume Calculation Worksheet

Ridge Breeze Dairy **:Permittee Name** **# of A.U.'s:** 2431 **Dsn by:** MJB **Date:** 6/6/2023

Total Annual Liqud Waste Volume (NRCS Table Values)	
Liquids Collected/Stored	Annual Gallons
Manure and Bedding	12,531,618
Parlor Wastewater	4,343,500
Feed Storage Leachate	117,810
Feed Storage Area 1 Runoff Collected *	735,717
Stacking Pad Runoff Collected*	476,838
Net Precipitation on Storage Surface(s) **	2,857,370
Other	
Other	
Other	
Other	
Other	
Other	
Other	
TOTAL:	**21,062,853**

Total Annual Liquid Waste from Hauling Logs	**N/A**

Total Liquid Waste Storage Capacity (gallons)						
Waste Storage	Total Vol. from Settled Top to Bottom	-Solids Storage	-25-yr, 24-hr Precip. on Storage	25-yr, 24-hr Collected Runoff ***	-Freeboard Vol.	Max. Operating Level (MOL) Vol.
#1	2,419,676	122,552	132,895	0	283,727	1,880,503
#2	6,261,404	388,840	295,317	79,737	644,917	4,852,593
#3	0	0	0	0	0	0
#4	11,087,214	347,222	320,549	0	694,511	9,724,933
#5	0	0	0	0	0	0
#6	0	0	0		0	0
					Total MOL Vol:	**16,458,029**
					Days of Storage:	**285**
					Meets Days of Storage Criteria:	**YES**

1 Total Annual Volume Source (1=NRCS Table Values; 2=Hauling Log Values)

Jan. 2018

NOTE 1: The volumes above can be calculated in the NRCS "Waste Storage Design" spreadsheet downloaded from the Wisconsin NRCS Engineering Resources website

NOTE 2: The NRCS "Waste Storage Design" spreadsheet can be used to calculate the days of storage as well, however it is designed to be used with only one waste storage

NOTE 3: Formula for days of storage: (Total Storage Capacity/Annual Liquid Waste Generation)*365 = Days of storage

* Collected Runoff Volumes can be calculated in the NRCS "Waste Storage Design" spreadsheet Monthly Runoff Section. Set the Days of Storage to 365.

** Net Precipitation on Storage Surface depth can be calculated in the NRCS "Waste Storage Design" spreadsheet and then multiplied by the storage top area to get the net

*** 25-yr Collected Runoff Volumes can be calculated in the NRCS "Waste Storage Design" spreadsheet 25-yr Runoff section.

http://www.nrcs.usda.gov/wps/portal/nrcs/detail/wi/technical/engineering/?cid=nrcs142p2_025422