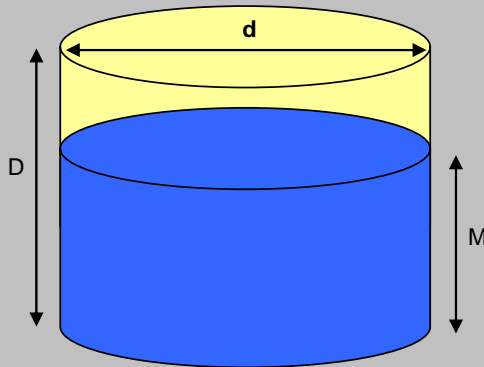


B11.1 VOLUMES and FLOW RATES of CIRCULAR TANKS

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B11.11 Circular Tank 1

Tank Name: **Spring Hill Reservoir**



Tank is EMPTYING

Diameter of Tank (d): **80.00** feet
 ** Depth of Tank (D): **20.00** feet
 Depth of Material (M): **18.00** feet

Weight of Material: **8.34** lbs./gal.

Average Flow into Tank: **120** gpm

Average Flow out of Tank: **200** gpm

NET Average Emptying Tank Flow: **80** gpm

Calculate Tank Volumes in: gallons cubic ft

feet inches

lbs/gal lbs/cubic ft

gpm gph cu ft / sec cu ft / hour

Note: Pure water with a Specific Gravity (SG) of 1.0, weighs 8.34 lbs/gal or 62.38 lbs/cu-ft. Adjust the Weight for solutions with different SG.

** Depth of Tank means usable tank volume, i.e. outlet to overflow pipe.

VOLUME		MASS	
Total (full) Tank Material Volume:	751,972 gallons	Total (full) Tank Material Weight:	6,271,443 lbs.
Current Material Volume In Tank:	676,774 gallons	Current Material Weight In Tank:	5,644,299 lbs.
Volume Needed to Fill Tank:	75,197 gallons	Weight Needed to Fill Tank:	627,144 lbs.
Material Volume per Foot of Tank:	37,599 gallons	Material Weight per Foot of Tank:	313,572 lbs.

Time to Empty Tank (from present net average tank flow):		
6 days	21 hours	60 minutes
Current Date and Time:		3/11/05 6:36 PM
Date and Time to Empty Tank:		3/17/05 3:35 PM
Full tank detention time @ Inlet flow: 104.44 hours		

Mass Dosage and Discharge Rate Table @ 8.34 lbs./gallon	
10.00% % by weight of active chemical in solution	
1.112 lbs./sec.	96,076.80 lbs./day
66.72 lbs./min.	2,922,336 lbs./month
4003.2 lbs./hr.	35,068,032 lbs./year

NOTE: Disinfection Dosage does NOT account for Specific Gravity.

Disinfection of Current Tank Water Volume at Desired Dosage	3.00 ppm	10.00% % Cl2 by weight	169.33 lbs. (or)	20.30 gallons
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B11.12 Circular Tank 2

Tank Name: