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Engr -115

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Input Parameters	
Surface Area of Lake (m ²)	8000
Evaporation (in/mo)	0.72
cm to m	0.01
sec to hr	0.000277778
avg radius of bucket (cm)	13.52
cm ³ to m ³	0.000001

STREAM 1

Inflow Method 1 : Ping Pong Ball	Width (cm)	Depth (cm)	
	1	100	1
	2	100	1
	3	100	1

STREAM 2

Inflow Method 1: Velocity Meter	Width (cm)	Depth (cm)	
	1	70	6.5
	2	80	8.5
	3	60	5

Inflow Method 2: Ping Pong Ball	Width (cm)	Depth (cm)	
	1	64	2.65
	2	64	2.65
	3	64	2.65

Outflow Method: Bucket	Height of Water (cm)	Avg SA of Bucket (cm ²)	
	1	32.8	574.2529778
	2	32.50	574.2529778
	3	32	574.2529778

Accumulation (m ³ /hr)	Change in depth (cm/hr)
32.19	0.40

Results

Through analysis of the data collected, I have come to the conclusion that Fern Lake is not
subtracting from that number the outflow I get an accumulation of 32.19 cubic meters
negligible, amounting to just over 146 cubic meters per month. There was zero precipita
getting deeper at a rate of .4 centime



Length (cm)	Volume (m ³)	Time (s)	
	30	0.003	4.55
	30	0.003	4.13
	30	0.003	3.88
Mean Flow (m³/hr)			

Channel Area (m ²)	Meter Value (m/s)	Flow Rate (m ³ /hr)	
0.0455		0.1	16.38
0.068		0.1	24.48
0.03		0.1	10.8
Mean Flow (m³/hr)			17.22

Length (cm)	Volume (m ³)	Time (s)	
	70	0.011872	3.31
	70	0.011872	3.31
	70	0.011872	3.78
Mean Flow (m³/hr)			

Volume of water (cm ³)	Time to fill up bucket (s)	Flow Rate (m ³ /hr)	
18835.49767	15	7.84812E-05	
18663.22178	14.8	7.67266E-05	
18376.09529	13	6.63581E-05	
Mean Flow (m³/hr)			7.38553E-05

t at steady state. Totalling the inputs from both streams and then
; per hour. Historically, the evaporation for this time of year is
ation during the time the measurements were taken. The lake is
ters per hour.

Flow Rate (m ³ /hr)	
	2.37
	2.62
	2.78
	2.59

Flow Rate (m ³ /hr)	
	12.91
	12.91
	11.31
	12.38