



RAINWATER HARVESTING STORAGE WORKSHEET

Optimize your storage volume



WEATHER STATION:

PROJECT NAME: Example

DATE: March 21, 2019



MONTH	INPUTS												TOTAL
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	
Environment Canada Precipitation (mm)	188.0	126.0	113.0	67.0	54.0	43.0	25.0	28.0	36.0	102.0	197.0	184.0	1,163.0
Household Usage (imp gals)	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	30,000
Irrigation/Outside Usage (imp gals) (make-up)						0	0	0	0				0
Total Usage (imp gals)	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	30,000

MONTH	OUTPUTS												TOTAL
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	
Precipitation Received from Roof (imp gals)	4,157	2,786	2,498	1,481	1,194	951	553	619	796	2,255	4,356	4,068	25,714
Start of Month in Storage (imp gals) (Last Dec.)	3,424	5,000	5,000	4,998	3,980	2,674	1,125	0	0	0	0	1,856	
Overflow Volume - wastage (imp gals)	81	286	0	0	0	0	0	0	0	0	0	0	367
End of Month in Storage (imp gals) (make-up)	5,000	5,000	4,998	3,980	2,674	1,125	(823)	(1,881)	(1,704)	(245)	1,856	3,424	

SELECTED TANK CAPACITY (IMP GALS)	5,000
ROOF AREA (SQFT)	1,200
ROOF EFFICIENCY	0.9

ANNUAL OVERFLOW VOLUME (WASTAGE)	1%
ANNUAL MAKE-UP WATER (SHORTFALL)	-16%

Notes:

- Performance based on monthly averages.
- Bracketed numbers indicate rainwater shortfall
- Precipitation includes snowfall
- Useful links:

This worksheet enables you to evaluate how your rainwater system will perform on a month to month basis. Click 'Enable Content', clear the box and type in your nearest weather station (Try nearest town). Estimate your household and/or irrigation needs for each month of the year. Before using this worksheet you must know the roof sections you have available, and for sloped roofs, the area projected on a horizontal plane. The collection efficiency (evaporation, absorption) depends on the type of roof surface. For example, a Metal roof may have a collecting efficiency of 0.9, Plastic, 0.95, Asphalt 0.75-0.85 Wood (not recommended) 0.6. The roof type will also influence water quality.

Now we come to the most important and major part of your rainwater system - the STORAGE TANK. The RAIN-TANK program allows you to enter different tank capacities and instantly review the monthly and yearly effect on the system.

Try several tank capacities, and for each capacity entered, the table will show you which months you are overflowing (full tank-usually winter) and which months you need to make up water (usually summer). Increase capacity until no change in annual make-up water is noted.

The **Optimal Tank Capacity** will be where you have minimum annual wastage and minimum or zero make-up needed.

This worksheet provides an estimate based on average data. We recommend increasing the storage tank capacity 25% - 50% to accommodate higher than average rainfall. The tank height should include a 6" residual depth in the bottom.

We hope you find this worksheet helpful in determining your storage tank capacity, however we carry no responsibility for the system design or the worksheet input and output data.

MAKE A SELECTION FROM OUR COMPREHENSIVE RANGE OF CSA/NSF CERTIFIED RAIN WATER STORAGE TANKS.

www.premierplastics.com 1-800-661-4473