

Model estimate of roof top rain water harvesting scheme for 10000 litre capacity reservoir (Plastic, Sintex) under NREGA

Calculation of Quantities of different Items.

Sl. No.	Description of Item	No.	Length	Breadth	Height	Quantity	Total Quantity
1	Earthwork in excavation (ordinary mixed soil) in foundation as required complete @ 2.49 m ³ / male USK & 2.12 m ³ / female USK		PI x 2.050 x 0.600 x 0.450 =			1.739 m ³	1.739 m³
2	Cement Concrete (1:4:8) to foundation and below reservoir bed. @ 2 skilled & 3 unskilled / 2 m ³ (i)		PI x 2.050 x 0.600 x 0.150 =			0.580 m ³	0.852 m³
	(ii)		PI x (2.150) ² x 0.075/4 =			0.272 m ³	
3	Brickwork with Cement Mortar(1:4) in foundation and plinth @ 1 skilled & 2 unskilled / 1.1 m ³ (i)		PI x 2.275 x 0.375 x 0.750 =			2.010 m ³	3.848 m³
	(ii)		PI x 2.400 x 0.250 x 0.975 =			1.838 m ³	
4	Earth filling above G.L. (i)		PI x (1.900) ² x 0.450 /4=			1.276 m ³	3.817 m³
	(ii)		PI x (2.150/4) ² x 0.70 =			2.541 m ³	
5	Silversand filling below P.C.C		PI x (2.150) ² x 0.20 / 4			0.726 m ³	0.726 m³
6	12 mm thick plastering (1:4)	1	PI x 2.650 x 1.50 =			12.49 m ²	12.49 m²

Total Labours Required

Sl. No.	Items	Quant ity of work	Unit	Skilled (Nos)	Semi Skilled (Nos)	Unskilled (Nos)
1	Earthwork in excavation (ordinary mixed soil) in foundation as required complete	1.739	m ³	0	0	1
2	Cement Concrete (1:4:8) to foundation and below reservoir bed. @ 2 skilled & 3 unskilled / 2 m ³	0.852	m ³	1	0	1.5
3	Brickwork with Cement Mortar(1:4) in foundation and plinth @ 1 skilled & 2 unskilled / 1.1 m ³	3.848	m ³	3.5	0	7
4	Earth filling above G.L.(compacting every 150 mm height)	3.817	m ³	0	0	2
5	Silversand filling below P.C.C	0.726	m ³	0	0	0.3
6	12 mm thick plastering (1:4), (2 skilled & 3 unskilled per 18 m ²)	12.49	m ²	1.3	0	2
Total =				5.8	0	13.8
				(Say 6 Nos.)		(Say 14 Nos.)

A. Wage Components

6 Nos. of Unskilled labour @ Rs. 100/- = **Rs. 600.00**

Calculation of required materials.

Sl. No	Description	Quantity	Rate	Amount (Rs.)
1	Plastic cylindrical vertical water tank (capacity 10000 litres)	1 No.	4.60/- per litre	46000.00
2	Cement	14 Bags	275/- per bag	3850.00
3	Sand (medium)	1.87 m3	610/- per m3	1141.00
4	Brick	1500 Nos	4.40/- per no.	6600.00
5	Fine Sand	0.726 m3	200/- per m3	145.00
6	5/8" Stone Chips	0.85 m3	1216/- per m3	1034.00
7	Bib Cock	1 pc	45/- per pc.	45.00
8	3" dia pipe	140 rft	30/- per rft	4200.00
9	Valve	1 pc	900/- per pc.	900.00
10	M - Seal			50.00
11	Cico			300.00
12	Filter Bucket	1 No.	150 per No.	150.00
13	T- Pipe, Bend	2 pcs	100/- per pc	200.00
14	Iron Clamp for fitting gully & outlet pipe			500.00

Total Material Cost =

65115.00


B. Non Wage Component

(i) Wage of Supervisor 1 no. (Semi Skilled labour)	150.00
(ii) Wage of Skilled labour (22 Nos @ Rs. 200/- per Skilled labour)	4400.00
(ii) Material Cost	65115.00
(iii) Work site facilities (a) Shed	200.00
(b) First Aid Box	100.00
© Water pot & Jug	250.00
(d) Display board	500.00

Total Non Wage Cost = 70715.00

Total Project Cost = (A +B) = (Rs.600 + Rs.70715.00) = Rs.71315.00

(Rupees Seventy One Thousand Three Hundred and Fifteen only)


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