

7.1.6. Rain water harvesting



Plan View of Rain water harvesting pit



Process methodology – Percolation using medium sized gravel



RO Plant of Capacity 750 LPH for Water supply in College Campus

Rainfall Runoff Estimation For the year 2018

| January | | | | | Febraury | | | | |
|---|---------------------|-------------|-------------------|---------------------------------------|---|---------------------|-------------|-------------------|---------------------------------------|
| Block Name | Area in square foot | Rainfall mm | Impervious factor | Discharge to harvesting pit in liters | Block Name | Area in square foot | Rainfall mm | Impervious factor | Discharge to harvesting pit in liters |
| ECE | 11016 | 0.1 | 1.0 | 102.34 | ECE | 11016 | 28.4 | 1.0 | 29065.12 |
| CSE | 24660 | 0.1 | 1.0 | 229.10 | CSE | 24660 | 28.4 | 1.0 | 65064.09 |
| EEE | 5184 | 0.1 | 1.0 | 48.16 | EEE | 5184 | 28.4 | 1.0 | 13677.71 |
| CIVIL | 9886 | 0.1 | 1.0 | 91.84 | CIVIL | 9886 | 28.4 | 1.0 | 26083.68 |
| MBA | 10140 | 0.1 | 1.0 | 94.20 | MBA | 10140 | 28.4 | 1.0 | 26753.85 |
| MECHANICAL | 9690 | 0.1 | 1.0 | 90.02 | MECHANICAL | 9690 | 28.4 | 1.0 | 25566.54 |
| Total Rainwater harvested in the month | | | | 655.67 | Total Rainwater harvested in the month | | | | 186210.99 |
| | | | | | | | | | |
| March | | | | | April | | | | |
| Block Name | Area in square foot | Rainfall mm | Impervious factor | Discharge to harvesting pit in liters | Block Name | Area in square foot | Rainfall mm | Impervious factor | Discharge to harvesting pit in liters |
| ECE | 11016 | 26.3 | 1.0 | 26915.94 | ECE | 11016 | 62.7 | 1.0 | 64168.43 |
| CSE | 24660 | 26.3 | 1.0 | 60253.01 | CSE | 24660 | 62.7 | 1.0 | 143645.01 |
| EEE | 5184 | 26.3 | 1.0 | 12666.33 | EEE | 5184 | 62.7 | 1.0 | 30196.91 |
| CIVIL | 9886 | 26.3 | 1.0 | 24154.96 | CIVIL | 9886 | 62.7 | 1.0 | 57586.15 |
| MBA | 10140 | 26.3 | 1.0 | 24775.57 | MBA | 10140 | 62.7 | 1.0 | 59065.71 |
| MECHANICAL | 9690 | 26.3 | 1.0 | 23676.06 | MECHANICAL | 9690 | 62.7 | 1.0 | 56444.45 |
| Total Rainwater harvested in the month | | | | 172441.87 | Total Rainwater harvested in the month | | | | 411106.65 |
| | | | | | | | | | |
| May | | | | | June | | | | |
| Block Name | Area in square foot | Rainfall mm | Impervious factor | Discharge to harvesting pit in liters | Block Name | Area in square foot | Rainfall mm | Impervious factor | Discharge to harvesting pit in liters |
| ECE | 11016 | 149 | 1.0 | 152489.56 | ECE | 11016 | 8.0 | 1.0 | 8187.36 |
| CSE | 24660 | 149 | 1.0 | 341357.36 | CSE | 24660 | 8.0 | 1.0 | 18327.91 |
| EEE | 5184 | 149 | 1.0 | 71759.79 | EEE | 5184 | 8.0 | 1.0 | 3852.87 |
| CIVIL | 9886 | 149 | 1.0 | 136847.48 | CIVIL | 9886 | 8.0 | 1.0 | 7347.52 |
| MBA | 10140 | 149 | 1.0 | 140363.49 | MBA | 10140 | 8.0 | 1.0 | 7536.29 |
| MECHANICAL | 9690 | 149 | 1.0 | 134134.34 | MECHANICAL | 9690 | 8.0 | 1.0 | 7201.84 |
| Total Rainwater harvested in the month | | | | 976952.02 | Total Rainwater harvested in the month | | | | 52453.80 |
| | | | | | | | | | |
| July | | | | | August | | | | |
| Block Name | Area in square foot | Rainfall mm | Impervious factor | Discharge to harvesting pit in liters | Block Name | Area in square foot | Rainfall mm | Impervious factor | Discharge to harvesting pit in liters |
| ECE | 11016 | 52.5 | 1.0 | 53729.54 | ECE | 11016 | 58.5 | 1.0 | 59870.06 |
| CSE | 24660 | 52.5 | 1.0 | 120276.92 | CSE | 24660 | 58.5 | 1.0 | 134022.85 |
| EEE | 5184 | 52.5 | 1.0 | 25284.49 | EEE | 5184 | 58.5 | 1.0 | 28174.15 |

| | | | | | | | | | |
|--|----------------------------|--------------------|--------------------------|--|---|----------------------------|--------------------|--------------------------|--|
| CIVIL | 9886 | 52.5 | 1.0 | 48218.07 | CIVIL | 9886 | 58.5 | 1.0 | 53728.71 |
| MBA | 10140 | 52.5 | 1.0 | 49456.93 | MBA | 10140 | 58.5 | 1.0 | 55109.15 |
| MECHANICAL | 9690 | 52.5 | 1.0 | 47262.10 | MECHANICAL | 9690 | 58.5 | 1.0 | 52663.48 |
| Total Rainwater harvested in the month | | | | 344228.06 | Total Rainwater harvested in the month | | | | 383568.41 |
| September | | | | | October | | | | |
| Block Name | Area in square foot | Rainfall mm | Impervious factor | Discharge to harvesting pit in liters | Block Name | Area in square foot | Rainfall mm | Impervious factor | Discharge to harvesting pit in liters |
| ECE | 11016 | 108.4 | 1.0 | 110938.72 | ECE | 11016 | 182.7 | 1.0 | 186978.81 |
| CSE | 24660 | 108.4 | 1.0 | 248343.20 | CSE | 24660 | 182.7 | 1.0 | 418563.68 |
| EEE | 5184 | 108.4 | 1.0 | 52206.45 | EEE | 5184 | 182.7 | 1.0 | 87990.03 |
| CIVIL | 9886 | 108.4 | 1.0 | 99558.84 | CIVIL | 9886 | 182.7 | 1.0 | 167798.89 |
| MBA | 10140 | 108.4 | 1.0 | 102116.79 | MBA | 10140 | 182.7 | 1.0 | 172110.13 |
| MECHANICAL | 9690 | 108.4 | 1.0 | 97584.98 | MECHANICAL | 9690 | 182.7 | 1.0 | 164472.10 |
| Total Rainwater harvested in the month | | | | 710748.98 | Total Rainwater harvested in the month | | | | 1197913.65 |
| November | | | | | December | | | | |
| Block Name | Area in square foot | Rainfall mm | Impervious factor | Discharge to harvesting pit in liters | Block Name | Area in square foot | Rainfall mm | Impervious factor | Discharge to harvesting pit in liters |
| ECE | 11016 | 75.2 | 1.0 | 76961.18 | ECE | 11016 | 7.5 | 1.0 | 7675.65 |
| CSE | 24660 | 75.2 | 1.0 | 172282.37 | CSE | 24660 | 7.5 | 1.0 | 17182.42 |
| EEE | 5184 | 75.2 | 1.0 | 36217.02 | EEE | 5184 | 7.5 | 1.0 | 3612.07 |
| CIVIL | 9886 | 75.2 | 1.0 | 69066.65 | CIVIL | 9886 | 7.5 | 1.0 | 6888.30 |
| MBA | 10140 | 75.2 | 1.0 | 70841.17 | MBA | 10140 | 7.5 | 1.0 | 7065.28 |
| MECHANICAL | 9690 | 75.2 | 1.0 | 67697.33 | MECHANICAL | 9690 | 7.5 | 1.0 | 6751.73 |
| Total Rainwater harvested in the month | | | | 493065.72 | Total Rainwater harvested in the month | | | | 49175.44 |
| Total Rain water harvested in the year 2018 | | | | 4978521.26 | | | | | |