RAINWATER HARVESTING POTENTIAL

In our project, Phase 2 residential blocks is G+9 & G+10 storied.

Available roof area for all the building blocks is around 7960.05 sq.m

Thus, available rooftop rainwater for storage = 2388.01 kL/annum.

Considering duration of monsoon as 120 days, daily available rooftop rainwater = 2388/ 120 = 19.9 say 20 kLD.

In our project, collected rainwater will be used for car cleaning, water requirement of which is 13 kLD.

Thus, 20 - 13 kLD = 7 kLD rainwater will be stored into an underground reservoirs, which will be used during lean season.

Total volume of rainwater that may be collected = 120 X 7 kLD = 840 kL.

Thus, required capacity of the reservoir will be 840 cu.m.

Our proposal, - collection reservoir of 265 cu.m capacity (fresh water requirement) will be provided. Balance 575 cu.m of collected rainwater will be recharged into the groundwater aquifer in addition to the mandatory recharge.

Note – MLCP has not been considered for RWH.

RAINWATER RECHARGE WELL CAPACITY ASSESSMENT

Rooftop rainwater will first be collected into collection reservoir and the overflow will be directed to recharge wells within the site.

Volume of rainwater to be recharged through recharge wells is [(7,68,000 X 7960.05 /1000) X 60% + 575,000] litres= [3667.99 + 575] = 4243 kL/annum.

Considering the monsoon period as 120 days, the daily average rainfall available is 4243/120 = 35.36 kL say 36 kL which will get recharged into the ground water aquifer through recharge wells.