



RainWater Harvesting for College Building

Niranjan Pawar¹, SachinYedge², More Akshay³, Valvi Lullya⁴, Nikhil Ghadge⁵, Gauri .S.Desai⁶BE Student^{1,2,3,4,5}, Professor⁶

Department of Civil Engineering

Jayawantrao Sawant Polytechnic, Hadapsar, Pune, India

Abstract:

Water scarcity is serious problem throughout the world for both urban and rural community. Urbanisation, industrial development & increase in agricultural field & production have resulted in overexploitation of ground water & surface water resources and resultant deterioration in water quality. The conventional water source namely well, river and reservoirs, etc. are inadequate to fulfill water demand due to unbalanced rainfall. While the rainwater harvesting system investigate a new water source. The aim of the present study is to use rainwater and thus taking close to the concept of nature conservation. In this study, RWH system is analysed as alternative source of water at a campus of JSPM College of engineering, hadapsar in state of Maharashtra India. The expected outcome of study is the development of RWH system for catchment area of polytechnic building A & B.

I. INTRODUCTION

AIM:

- Rainwater harvesting for college campus for polytechnic building A & B.

OBJECTIVE:

- To increase height of ground water table.
- To reduce flood on road
- To reduce soil erosion
- To store water and use for domestic purpose
- To meet water demand.

METHODOLOGY

Data collection:

We have to collect data about college buildings area, height of building, location of boar wells, dug wells with their location and capacities. We have also finds necessity of rain water harvesting system of college and all data of polytechnic buildings. We are going at Bhujalbhavan in pune. Collection the data about present ground water table in hadapsar area and also collect data about rainfall intensity.

II. LITERATURE SURVEY:

Collecting information regarding rain water harvesting system from related websites. We are studying the literature survey and find out the abstract from the survey.

Design

Depending upon collection of rainfall on roof then designing the pipe diameter and tank capacity. also find out the cost of rain water harvesting system of college.



Estimation and Costing

Preparation of measurement sheet and abstract sheets for estimation of rain water harvesting system. We are going to the hardware shop and collect information regarding material with their rates and final estimation and costing work was done.

Proposal

We are made the proposal of rain water harvesting system and gave the proposal to the campus director Mr. Bugade sir.

Tank Design We have to design tank

L=7.5 m

B=3.62m

H=1.5m

Of tank capacity =7198000 lit

Actual cost of tank Rs = **1090289.2/-**

III. CONCLUSION

Water is essential element of life. Everyone knows that, if we do not harness available sources of water and use them judiciously with proper care the problem of water scarcity is going to be serious. Irrespective of fast development in all fields of science there can be no substitute to water. Hence, it is necessary to opt for various water harvesting measures. It is the responsibility of government organization as well as individual to harvest each drop of water falling on earth surface. For this, it is necessary that each person collect the raindrops falling on his roof, plot, and farm and recharges it under ground. Two cases of roof top water harvesting for urban and rural area have been considered in the present

study. Similarly, for other building roof top rain water harvesting can be implemented. In fact, there is no village and habitation in India that cannot meet its basic drinking and cooking needs through rainwater harvesting techniques

IV. REFERENCES

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