



PLANNING, MAPPING OF RAINWATER HARVESTING AT GNANAMANI INSTITUTIONS

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Abstract

Rainwater harvesting is the collection of water volume from raindrops. It's the system is being frequently used these days and it's not a new system for India. In this project, the planning and mapping of rainwater harvesting system is proceed at Gnanamani educational Institutions. Rainwater harvesting has been the main source of water supply for potable and non-potable uses in the old days because the water conveyance systems were not used for water distribution during days and the method used for rainwater harvesting was simple and primary. Presently, the water supply system haves improved but the demand is increasing due to the population growth and development. The potable uses includes drinking, bathing, cooking and washing. Non potable uses includes flushing toilets, watering garden and washing floor and treatment of rainwater is not required for these purposes. Finally the rainwater harvesting system is planned and mapped for an 80 acre's by using AutoCAD, ArcGIS.

Keywords: Total Station

1. INTRODUCTION

Rainwater harvesting is an important environment friendly approach – dubbed as a Green Practice which has double benefit in both keeping the groundwater table undisturbed and charging the aquifer. Such a green practice encouraged in form of Community Development Program can find its popularity when it shows the manifold benefits of, in one hand, bringing people together to collective thinking on 'green' approaches, innovating approaches to save earth by harping on their creative notes, achieving nobler feelings saving water for future; on the other hand, rainwater as well as runoff storm water stored in a planned way save the earth from soil erosion, flood;

recharge the aquifers to give a shot in the arm to the decreasing ground water table.

Rain water stored on everywhere rainy house and factory is stored in various ways we save rain water. we have to drink water in some of yours colors the rain water house is taken from the fault of the pipe and stored in the pot .drinking water and rain water most industrial and colleges spend recycling and use water again.

Water is required at the required times and places ,most people use of very much.the rainwater harvesting and sewage water recycling should be used without use of the garden and some other places and use, earth's water level should be warmed to the earth and the water should by sprayed without environmental damages. Rain water should be properly recycled and used needles to remove

The best part of the practice of rainwater harvesting, however, is that in one hand it is checking one from leaning towards using groundwater as rainwater is obtained in abundance in many countries; on the other hand, if remains unused or extra, these rainwater, collected in say natural ponds or even in artificial tanks can pour back to the ground thus charging the natural aquifer to boost the groundwater level.

1.1 OBJECTIVE

- To meet the increasing demand of water and reduce the flooding of erosionground water table contamination.
- To reduce the run-off which chokes the drains?

- To avoid the flooding of roads increases of water demand.
- To raise the underground water table and supplement domestic water needs.
- To reduce groundwater pollution and reduces of loss of restriction.

1.2 ADVANTAGES OF RAIN WATER HARVESTING SYSTEM

Rain water harvesting system utilize the energy of resources.

Rain water harvesting system water collected to use of several non-drinking function as well.

Water surfaces on pesticides and fertilizers from rain water run off and clean lakes and ponds.

1.3 DISADVANTAGES OF RAIN WATER HARVESTING SYSTEM

Water needs in areas limitations rain fall is not advisable to depend on rain fall.

Rain water harvesting system cost is high and regular maintenance.

The collection of water storage on facilities on impose some kind of restriction.

1.4 METHODOLOGY

- Objectives
- Analysis in India
- Field Data Collection
- Sketch Plan
- Presenting Maps
- Suitability of RWH
- Conclusion
- References

2. LITERATURE REVIEW

2.1 INDIA'S HISTORY

Tami Nadu was the first state to make rainwater harvesting compulsory for every building to avoid groundwater depletion. The scheme was launched in 2001 and has been implemented in all rural areas of Tamil Nadu. Posters all over Tamil Nadu including rural areas create awareness about harvesting

rainwater TN Govt site. It gave excellent results within five years, and slowly every state took it is a role model. Since its implementation, Chennai had a 50% rise in water level in five years and the water quality significantly improved.

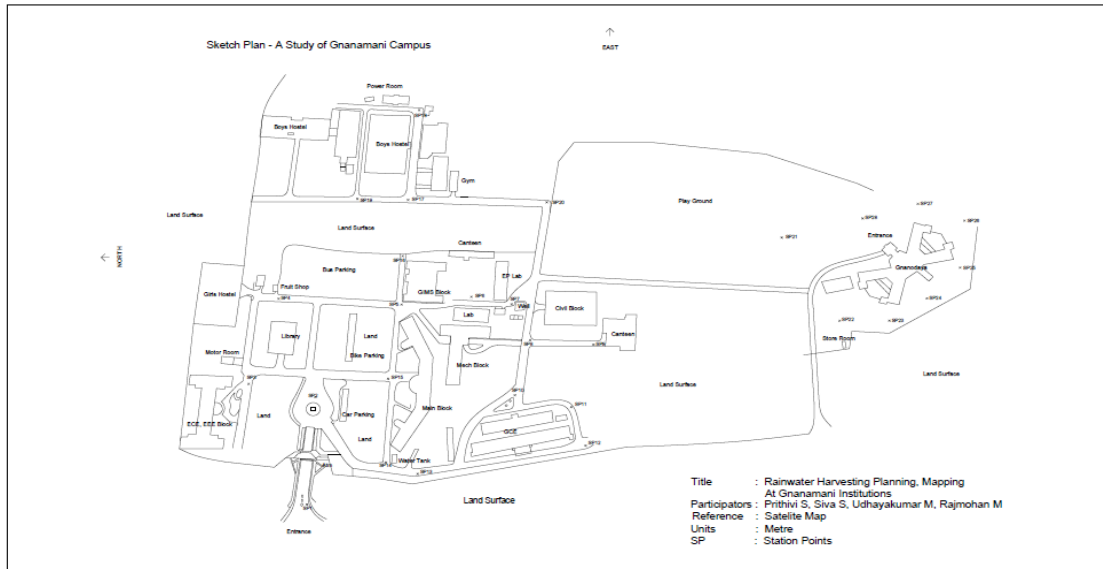
Karnataka: In Bangalore, adaptation of rainwater harvesting is mandatory for every owner or the occupier of a building having the site area measuring 60ft (18.3m) x 40ft (12.2m) and above and for newly constructed building measuring 30ft (9.1m) x 40ft (12.2m) and above dimensions. In this regard, Bangalore water Supply and Sewerage Board has initiated and constructed "Rainwater Harvesting Theme Park" in the name of Sir M. Visvesvaraya in 1.2 acres (4,900m²) of land situated at Jayanagar, Bangalore. In this park, 26 different type of rainwater harvesting models are demonstrated along with the water conservation tips. The auditorium on the first floor is set up with a "green" air conditioning system and will be used to arrange the meeting and showing of a video clip about the rainwater harvesting to students and general public. An attempt has been made at the Department of Chemical Engineering, IISc, and Bangalore to harvest rainwater using upper surface of a solar still which has used for water distillation.

In Rajasthan, rainwater harvesting has traditionally been practiced by the people of the Thar Desert. Many ancient water harvesting systems in Rajasthan have now been revived. Water harvesting systems are widely used in other areas of Rajasthan, as well, for example the charka system from the Jaipur district.

Maharashtra: At present, in Pune, rainwater harvesting is compulsory for any new housing society to be registered.

In Mumbai, Maharashtra, rainwater harvesting is being considered as a good solution to solve the water crisis. The Mumbai City council is planning to make rainwater harvesting mandatory for large societies.

3. SKETCH PLAN

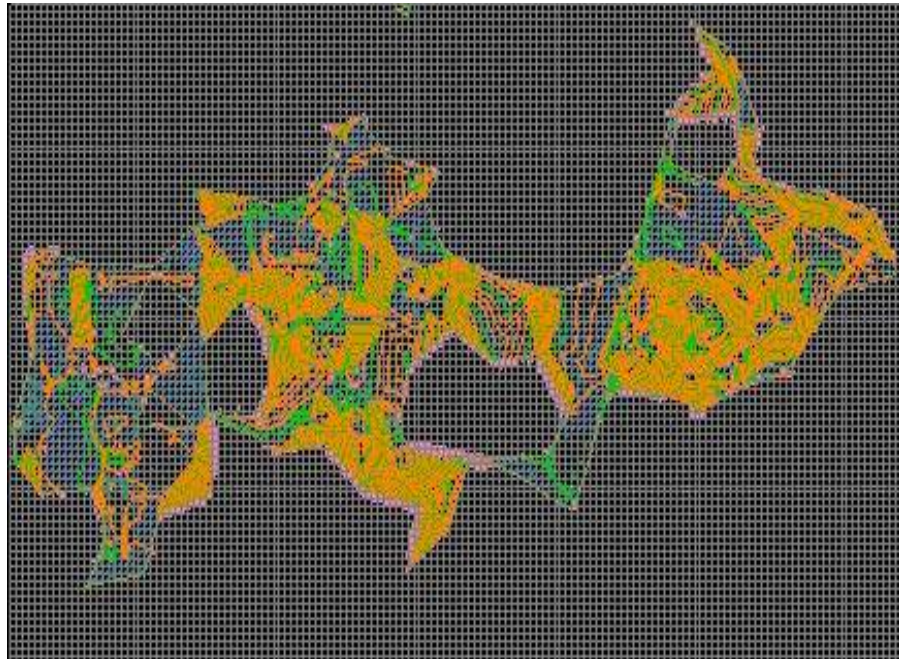


4. DETAILS OF CONTOURING MAPPING

Statistics	
1. Maximum Elevation	122.713
2. Minimum Elevation	87.11278
3. No. of Contours	56
4. No. of Major Contours	14
5. No. of Minor Contours	42
6. No. of Elevations	3815
7. Area	189895

Sl No	Description	Layer Name	Colour	Text Height	Text Angle
1	Original Elevations	ESOriginal	114	0.50	45
2	Anchor Line	ESAnchor	20		
3	Major Line	ESMajor	12		
4	Graded Contours	ESGraded	144		
5	Contour Annotation	ESContour	231	3.00	
6	Boundary	ESBoundary	55		
7	Grid Elevation	ESGridElevation	150	0.50	45
8	Grid Line	ESGridLine	8		
9	Grid Annotation	ESGridAnnotation	181	0.50	0
20	Break Lines	ESBreakLines	3	0.50	0

5. RESULTS



REFERENCES

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[2]. Refer simply to the reference number, as in [3]—do not use —Ref. [3] or —reference [3] except at the beginning of a sentence: —Reference [3] was the first ...

Number footnotes separately in superscripts. Place the actual footnote at the bottom of the column in which it was cited. Do not put footnotes in the abstract or reference list. Use letters for table footnotes.

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