Dr. Rafiq Zakaria Campus
Maulana Azad College of Arts, Science and Commerce,
Aurangabad.

Report of activity for submission to IQAC

Name of the Event / Activity/ speaker: Water Audit

Date :- **Time:-** **Venue:** Offline platform : Geology Department MACA

Number of Beneficiaries: College Activity
Type of activity: *Co curricular / Departmental activity.* **Department of Geology**

Details of the Programme: Water Audit Survey

Sr. No	Name of Building Water tank placed	Capacity of Water tanks	Numbers of tanks and condition / Remark
01	Principal Office/ Administration building (Terrace)	1000 x1=1000.00	01 Sintex water storage tank
02	Principals house (Terrace)	500 x 3= 1500.00	03 Sintex water storage tanks
03(a)	Science Building (Terrace)	5000 x 1 = 5000	01 Sintex water storage tank
03(b)	Science Building (Terrace)	Approx 7500 to 10000 x 1	01 R.C.C. Water Storage tank
04 (a)	Marathwada Building (Terrace)	2000 x 2 = 4000 1000 x 1 = 1000	03 Sintex water storage tanks
04 (b)	Marathwada Building (Terrace)	Approx 7500 to 10000 x 1	01 R.C.C. Water Storage tank
05(a)	Y.B. Chavan & Kamla Nehru	1000 x 1 = 1000 2000 x 3 = 6000 5000 x 2 =10000	06 Sintex water storage tanks
05(b)	Y.B. Chavan & Kamla Nehru	Approx 7500 to 10000 x 1	01 R.C.C. Water Storage tanks
06 (a)	Junior College	1000 x 1 = 1000	01 Sintex water storage tank
06(b)	Junior College	Approx 5000 to 7500 x 1	01 R.C.C. Water Storage tanks
07	M.I.M. Building	2000 x 1 = 2000	01 Sintex water storage tank
08 (a)	Hostel	2000 x 4 = 8000	04 Sintex water storage tanks
08 (b)	Hostel	Approx 3000- 5000 x 2	02 R.C.C. Water Storage tanks
09	Canteen	1000 x 1 = 1000	01 Sintex water storage tank
10 (a)	Masjid	2000 x 2 = 4000	02 Sintex water storage tank
10 (b)	Masjid	Approx5000 to 7500 x 1	01 R.C.C. Water Storage tanks
11	Parking	Approx 3000 to 5000 x 1	01 R.C.C. Water Storage tanks
	Total	Approx 105500 liters	31 Water Tanks in good working condition.

(In Maulana Azad College, campus there are 31 tanks in working condition others (defunct) to be surveyed later).

Goals and objectives:

- To understand the availability and accountability of water
- Condition of Dug wells and bore well
- Distribution of water

Utility of water, Enhancement and maintenance of pump house

Highlights of the programme:

Dr. Rafiq Zakaria Campus, Maulana Azad College of Arts, Science & Commerce, Rauza Baugh, Aurangabad has two old dug wells and one bore well.

Water is pumped out through a dug well which is situated in the centralized parking area, which is used for the entire campus. The tank is filled up through an underground pipeline which is then routed to different overhead tanks and different outlets of colleges of the campus.

The overhead tank water is then used by the concerned departments in the buildings. The dug well has a perennial source of ground water and the dimensions are as follows: Depth 14.5 meter with 4.2 meter diameter.

The static water level is at 5 meters in summer and then in rainy season it further rises up to 3 meters as a static water level up to November.

The well is constructed of bricks in rectangular dimension from the top but it is round shaped with a diameter 4.2 in the rock formation. The rocks are vesicular basalt which has good porosity and permeability and it gives a perennial yield of groundwater.

The water is pumped out as per need by 7 H.P submersible motor having a capacity of 3 inch delivery pipe.

The pump house is built near the dug well with the security personal and its maintenance and upkeep are being taken care of by the college.

All security measures including safety boundaries, covers, locks and keys are with the college office.

The capacity of functioning of the well is approximately 1, 96, 730 liters/day (or 196.73 m^3/day), out of which we are using approximately 82,800 liters /day (or 82.80 m^3/day).

The yielding and recuperation rates (ratio 80-100) are almost the same, with only an hour gap for the retaining the groundwater level.

More or less the wells give the required demand of water and additionally also serves as a storage reservoir.

The college has a large campus with adequate sloping and this helps in the collection of rainwater .The rainwater harvesting module in operation in our college has increased the level of groundwater or recharged the groundwater and this has been a pioneering work done by the Geology department.

The step rainwater water harvesting and roof top water harvesting have been assembled together in the campus by pitting and trenching from all ground area in campus as a linear structure up to the dug well constructed with the understanding of ground slope and hydrological gradient.

The rain water harvesting structures have different types of linear trenches and collective pits. These are about 110 and additionally two filter beds have been designed in such a way that every drop of runoff water would be able to percolate in the ground below.
Relative intervals in trenching to control the runoff have also been considered. The trenching and pitting is bifurcated by the sewage line. The impact of rain water harvesting in recuperation of the well water has been found to be vigorous and it maintains the recuperation rate with pump out yield.
The availability of water is more than enough to maintain the greenery of the campus, use in labs and toilets and this has been done right from conception till date. The college has been self sufficient with respect to the demand of water. The rainwater harvesting structures is capable to recharge the area approximate about 331200 liters/day.

Relevance and outcome:

- College have perennial groundwater source which make our college self sufficient in water availability and from last ten years we need not to take water connection from AMC.
- The availability of water is more than enough to maintain the greenery of the campus

Feedback analysis (Comments/suggestions): The availability of water is plenty enough.

Programme Coordinator:

Dr. Mazahar Ahmed Farooqui (Principal)

Dr. M.A. Bari (Vice Principal)

Organizing team /committee:

M. A. Malik (Head, Department of Geology)

Dr. Aditi Bhattacharaya (IQAC Co-Ordinator)

Work Done Report by: Muneeb Ur Rahman (Assistant Professor C.H.B.)

Rain Water Harvesting for Drinking Well & Bore well,

Department of Geology,

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