Criterion VII Institutional Values and Best Practices

7.1.4 Q_n M	Water conservation facilities available in the institution

Any Other Relevant Information

Criterion VII: - Institutional Values and Best Practices

7.1.4 QnM	Water conservation facilities available in the institution

7.1.4 Water conservation facilities available in the Institution:

1. Rain water harvesting

2. Bore well /Open well recharge

3. Construction of tanks and bunds

4. Waste water recycling

5. Maintenance of water bodies and distribution system in the campus

Water Conservation in the College:

The college has very effective water conservation and distribution system in the campus. The water bodies in the campus are well maintained and utilized with proper cultivation practice. We have the following water conservation facilities in the campus.

1. Rain Water Harvesting:

Our college is having rain water harvesting system to conserve the rain water. The earth water level is increased with Rain water harvesting which helped to have water to our college bore well. It increases natural storage of water, and helps the college in getting water for various purposes.

- **There are total eight rainwater harvesting systems in our institute.**
  1) **Prerana Building** – Two Rainwater harvesting and Tank having 1, 00,000 Lt. storage capacity.
  2) **Near Microbiology Department**-One Rainwater harvesting and Tank having 3, 00,000 Lt. storage capacity.
  3) **New Building**-Two Rainwater harvesting and Tank having 1, 00,000 Lt. storage capacity.
  4) **Junior College Building**-One Rainwater harvesting and Tank having 60,000 Lt. storage capacity.
  5) **Ladies Hostel**- One Rainwater harvesting and Tank having 60,000 Lt. storage capacity.
  6) **College Premises** -One Rainwater harvesting and Tank having 60,000 Lt. storage capacities.

2. Bore well /Open well Recharge in the College

Tuljaram Chaturchand College has a long-term commitment for conservation of water. The college is spread over Thirty-eight acres of beautiful lush-green area encompassing institutions catering to the academic needs of over twelve thousand students aspiring for Higher Education. To meet the need of water on the campus which includes boys and girl's hostels, canteens, mess, and common rooms for boys and girls students various departments etc. the college has the provisions of bore well at various places in the campus. There are eight bores well to cater the need of water for different purposes. These bore wells are well connected to the storage tanks.

- **Total Supply and Consumption of Water by Campus:**

Source	Quantity Supplied (Liters)/Year	% of Supply/Year
Well	90,75,000	**22.5%**
Bore well	2,25,70,000	**55%**
BMC	90,05,000	**22.5%**

Water Consumption Chart in a year

Purpose of Consumption – Drinking water, Toilets, Laboratories, Bathing and Toilet water for Hostels, Irrigation for college garden etc.

Water Purifiers in the College Campus:

In our college, the drinking water has been purified by modern treatment technology using Filtration, Ion exchange, Ultra Violet and Reverse Osmosis. The RO treated drinking water is dispensed through **21 Water Coolers** in the college provided at various locations that include Class Room Blocks, Laboratory Blocks, Administrative Block and other Centers.

Sr. No.	Place	RO/UV	Number	Capacity
1	Administrative Building	RO	2	50 X 2 = 100 lit.
2	Junior College	RO	4	50 X 4 = 200 lit.
3	B.Voc. Building	RO	2	50 X 2 = 100 lit.
4	Ladies Room	RO	1	50 lit.
4	Jeevraj Auditorium	RO	1	50 lit.
5	Gymkhana	RO	1	50 lit.
6	Chemistry Dept	UV	1	-
7	Library	UV	1	-
8	MBA Hostel	RO	1	50 lit.
9	Hostels	UV	7	-

3. Constructions of Tanks and Bunds:

In the college campus tanks are constructed in all areas. The storage tanks situated at various locations of the college are pumped with ground water. There are various number of overhead storage tanks having the capacity of 50,000 to 60,000 litres.

We have a separate tank system for drinking as well as bore water for the convenient usage. Water from the bore well, open well and other water bodies are collected through the pipes and stored in the tank (at every block). Maintenance department of the college taking responsible for cleaning the tanks regularly as per the Government norms.

4. Waste Water Recycling:

- The college has set up an effluent treatment plant (ETP) for the management of waste water. Effluent from Chemistry, Botany, Zoology, Microbiology, Environmental Science department is collected for processing in the Effluent collecting tank. The collected effluent is stirred with overhead electric motor and mixing with a solution of potash alum for coagulation. Then a solution of calcium hydroxide is added to adjust the pH in the range of 6-7. After adjusting the pH, effluent is lifted in an overhead tank for coagulation and sedimentation for 4 - 5 hours.
- After 5 hours settlement, the sludge settled down at the bottom is taken in a separating tank and supernatant liquid is collected in another tank and mixed with the solution of sodium-oxy-chloride as germicide. This liquid is allowed to pass through two filters having activated charcoal as molecular sieves. Resultant clean water is collected in another tank and used for gardening.

5. Maintenance of water bodies and distribution system in the campus:

The water bodies are maintained regularly to provide safe and adequate water in the campus. The main objective of the maintenance is to provide diseases free environment. The distribution of water is done through well-equipped system of pipes. The college provides clean drinking water by installing RO machines in adequate numbers.

Scheduled Inspection of water distribution systems is done in monthly and annual basis in the campus. In order to avoid leakages and to prevent wastage of water, overall distribution system in the campus is well maintained and supervised by Store and Maintenance department of the college.