WATER CONSERVATION FACILITIES IN BIT DURG

The water conservation facilities available in the Institution includes: -

1. Borewell in BIT Durg

The borewell is now perhaps the most common source of water in India in both commercial and residential buildings. These are wells which are dug deep into the ground to tap into water-bearing soil or rock layers termed aquifers. Borewells typically draw water from "confined deep aquifers", i.e., rock layers deep underground, where water is trapped under pressure between the cracks of rocks. These aquifers are formed over many years, sometimes even centuries, due to water percolating down the rock layers.

Objectives:-

- To draw underground water for different works.
- To store the water for gardening, ground maintenance & washing purpose.

Borewell of BIT Durg:-

There is total four borewells pumps which provide the required water to the college premises.

Borewell Pump No.	Capacity of the Pump	Use	Location
1	7.5 HP	For Filling Water Tank	Behind Basic Science and MBA Block
2	7.5 HP	For Filling Water Tank	Behind Basic Science and MBA Block
3	3 HP	For watering and maintaining Sports complex	Sports Complex
4	1 HP	For Filling Water Tank	Near Car Parking

2. Maintenance of Water Bodies and Distribution System in BIT Durg

A water distribution system is a part of water supply network with components that carry potable water from a centralized treatment plant or wells to consumers to satisfy residential, commercial, industrial and fire-fighting requirements. The four major water distribution system that are used for water distribution are:-

- Dead-end or Tree Distribution system.
- Gridiron Distribution System.
- Circular or ring Distribution System.
- Radial Distribution System.

Objectives:-

- To reduce the cost of supplying water.
- To maximise the reliability of water supply.

The institute has proper water distribution system where in the water starts from its source, i.e borewell and Nigam water source to travel through a well-maintained water pipeline system. The distribution system used in the college is the Dead end or Tree distribution system in which a main pipeline runs through and provides water to different sub-mains and branches. This System has less number of cut-off valves and hence the operation and maintenance cost is low.

3. Rainwater Harvesting in BIT Durg

Rainwater harvesting is an important environment friendly approach. It is a Green Practice having double benefit of keeping the groundwater level undisturbed and charging the aquifer. This green practice can be encouraged in the form of Community Development Program. The extensive and unplanned

use of groundwater has not only disturbed the natural water level but also has made the groundwater contaminated and unfit for use. Collecting and harvesting rainwater and run-off water would reserve the water for future generation. Rainwater harvesting is eco-friendly and economical.

Objectives:-

- To increase recharge of groundwater by capturing and storing rainwater, by rainwater harvesting from rooftop run-offs.
- To store the water for gardening & washing purpose.

Need:-

- Responsibilities towards protecting Nature.
- Quality of water supplies
- Increasing water demand
- Variations in water availability

Water Harvesting Capacity of BIT Durg:-

Total Area= 1500 m2

Area (m2)	Average Depth of Rainfall (m)	Volume of Runoff (Ltrs.)	Absorption in earth soil (Ltrs.)
1500	1	15,00.000 Ltrs.	9,00,000 Ltrs.

4. Waste Water Recycling in BIT Durg

Sewage is a type of wastewater that is produced by a community of people. It is typically transported through a sewer system. Sewage consists of wastewater discharged from residences and from commercial, institutional and public facilities that exist in the locality. Sub-types of sewage are greywater (from sinks, bathtubs, showers, dishwashers, and clothes washers) and blackwater (the water used to flush toilets, combined with the human waste that it flushes

away). Sewage also contains soaps and detergents. This sewage is necessary to be disposed of in such a place where it is produced in a large quantity by giving little harm to the environment.

Objectives:-

- To produce an effluent that can be discharged to the environment while causing as little water pollution as possible.
- To produce an effluent that can be reused in a useful manner.

The institute has proper closed sewage disposal system where in originated waste water travels through a well-maintained sewage pipeline over a very long distance before being disposed outside the college premises. During the flow, the sewage gets collected at various different chambers at specific distances within the pipeline channel. The collected sewage gets removed at frequent intervals by our local municipality collectors.