



AMALA COLLEGE OF NURSING

(An undertaking of Amala Cancer Hospital Society)

Amala Nagar P.O., Thrissur-680 555, Kerala, India.

Website: www.amalanursingcollege.org

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CRITERION 7

INSTITUTION VALUES AND BEST PRACTICES

7.1 Institutional Values and Social Responsibility

7.1.5 – Description of water conservation facilities available in the institution

Submitted to



THE NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL



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WATER CONSERVATION FACILITIES AVAILABLE IN THE INSTITUTION

Rain water harvesting

The landscape of the campus is such that the rain water on the roof top can be collected and recharged in a natural way. Rain water harvesting is done at various levels in the campus. Primarily we have a **151364 litre capacity tank** to which the rain water on the roof top is collected and used for all purposes in the campus. This source is of great help in addressing the problem of water shortage on the campus. During the monsoon season **70-80% of the water requirement** is met through rain water harvesting.

We also have **water recharging units**. The water collected from the roof tops of the three buildings (Chavara block, St Mary's block and Sacred Heart Block) are routed to a natural pond where the water is stored. The water will trickle down through the earth to the nearby open well. This will raise the water table in the surrounding areas as well. The efforts to harvest rain water on the campus have helped solving the water shortage in the campus. Further these efforts have spread a strong message among students and general public on the need to preserve our natural resources.

Bore well/Open well

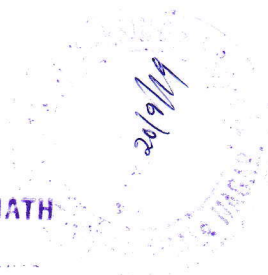
Bore well has been installed near four areas of the Amala campus. That include :-

1. Ayurveda Hospital
2. Amala Medical College
3. Santhvanam building
4. Doctor's quarters

Waste water recycling

The average waste water generated in Amala College of Nursing is **50, 000 litres/day**. The total capacity of water that can be recycled in the waste water treatment plant is 10 lakh/day and on an average of 8 lakh litres of water is recycled per day.

Prof. Dr. RAJEE REGHUNATH
PRINCIPAL





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Maintenance of water bodies and distribution system in the campus

- The ground water is pumped into storage tanks located at different places in the campus.
- The water collected from the Puzhakkal irrigation canal is treated in water treatment plant and is supplied through a separate set of distribution pipes.
- Waste water generated is treated and utilized for agriculture and gardening.
- Rain water harvesting is done at various levels in the campus. The water collected from the roof tops are routed into a natural pond within the campus.

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Water treatment plant (general use)

ACON utilizes the treated water from the water treatment plant for general use. The water treatment plant has the capacity of **10 Lakh liters /day**. The treatment process consist of 6 steps. These include:

1. Collection
2. Chemical Addition
3. Sedimentation and Clarification
4. Filtration
5. Disinfection
6. Storage and distribution

Step 1-Collection

Water is collected from the **Puzhakkal irrigation canal** and stored for the treatment process.

Step 2-Chemical addition

Caustic soda (sodium hydroxide, or NaOH) is used in the water treatment. This chemical stabilizes the pH of water by absorbing water and carbon dioxide.

A chemical called poly aluminium chloride is used to remove the anionic colloidal impurities and settling of suspended materials during clarification of the raw water.

A dosing pump is used to transport very precise flow rates of a chemical into the water stream. After chemical dosing the water is released into the settling tank

Step 3-Sedimentation and clarification

The water then passes into the clarifier-1. The clarifier is a conical shaped tank which helps in removing the sludge by means of gravity. The collected sludge is periodically removed.

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The same process is repeated once the water reaches the clarifier -2. During this water is chlorinated by adding sodium hypochlorite.

Step 4-Filtration

In this stage the water undergoes filtration .The water passes into the filter feed tank (sand filter and activated carbon filter) and iron removal filter.

Step 5-Disinfection

The filtered water is disinfected with sodium hypochlorite

Step 6-Storage and distribution

The treated water is finally stored in the final storage tank and distributed

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