

6.2.1. GMRIT possesses a single overhead tank and a sole sump, each capable of storing up to 200 cubic meters of water. In order to meet the daily water needs of the campus, GMRIT boasts a combined storage capacity of 400 cubic meters. The primary water sources are derived from three open wells with a daily discharge capacity of 150 cubic meters and three tube wells with a daily discharge capacity of 360 cubic meters. Both the overhead tank and the sump are equipped with water meters to monitor the daily water consumption.

6.2.2.1. 860 m³

6.2.2.2. 4565

6.3.1. In 2002, GMRIT established an on-campus sewage treatment facility with a capacity of 150 thousand liters per day (KLD). Subsequently, to meet the growing wastewater demands on campus, the sewage treatment plant (STP) capacity was expanded to 400 KLD in 2012. The STP was constructed utilizing Fixed Bed Bioreactor (FBBR) Technology, and pressure filters employing Zeolite and Activated Carbon were implemented to enhance the quality of treated wastewater and eliminate unpleasant odors. The treated water is suitable for applications in horticulture, cleaning, and organic farming.

6.3.2. GMRIT boasts an advanced sewage treatment plant with a capacity of 400 thousand liters per day (KLD). The campus efficiently manages wastewater originating from the hostels, academic block, staff quarters, and the day canteen through a network of stone ware pipes and RCC hume pipes. These pipelines are responsible for channeling all wastewater to the central STP collection point. The STP processes and purifies this wastewater for subsequent use in horticultural applications. Distinct pipelines have been designated for wastewater, horticulture, and raw water, ensuring an organized and environmentally responsible water management system.

6.3.3. GMRIT provides complimentary drinking water to students, staff, and guests. In order to maintain water purity, GMRIT has implemented reverse osmosis and ultraviolet treatment technologies. Regular water quality assessments are conducted to ensure that the water consistently adheres to the drinking water standards established by BIS. Presently, GMRIT offers UV-treated drinking water facilities at 17 different

locations, with a total capacity of 2550 liters per hour (LPH), and RO-treated drinking water at 15 locations, providing a total capacity of 1785 LPH.

6.3.4. Numerous measures have been implemented, such as the incorporation of ball valves in all water tanks, the installation of auto cut taps and self-closing taps, the practice of rainwater harvesting from rooftops, and the placement of informative signage. GMRIT adheres to the water-efficient plumbing fixture guidelines outlined in the Uniform Plumbing Code of India. This commitment leads to a reduction in the utilization of potable water. Continuous monitoring is conducted to ensure that the overall annual water consumption remains within the limits of the base case water consumption demand.

6.3.5. Since its establishment in 1997, GMRIT has undertaken several initiatives to enhance the campus's horticulture. The GMRIT campus encompasses a vast expanse of green space, spanning 5,38,515 square meters (equivalent to 133.06 acres). Within this green space, there are 60 distinct varieties of hedges and shrubs, 53 different tree species, 8 species of creepers, and 3 types of green ground covers. GMRIT currently maintains a total of 124 different plant species across the campus, with 20 of them being drought-resistant plants.

6.4.1. GMRIT has established a well-structured system for the reuse of treated wastewater, primarily for horticultural purposes, organic farming, and the cleaning of communal areas. This policy was originally formulated in 2002 and undergoes periodic reviews every three years. In 2011, a comprehensive review led to an expansion of the STP capacity from 150 KLD to 400 KLD, allowing for the treatment of all wastewater generated within the campus. A strict requirement mandates that 100% of the treated wastewater must be allocated for horticultural use or cleaning of common areas. In instances of excess treated wastewater, it is directed to nearby ponds to replenish the water table.

Policy Created: 2013

Policy Reviewed: 2018 and 2021

6.4.2. GMRIT is equipped with a sewage treatment facility with a capacity of 400 KLD. The sprawling GMRIT green belt covers an area of approximately 5,38,515 square

meters (equivalent to 133.06 acres). The treated wastewater from this facility is employed in organic farming for agricultural purposes. The total cultivated area amounts to 7.0 acres, with 3.26 acres dedicated to vegetable cultivation. Each location is fitted with the necessary water meters and valves to manage the flow effectively. The entire campus employs sprinkler and drip irrigation techniques to minimize water wastage and enhance water efficiency.

6.5.1. GMRIT has incorporated various courses and laboratories pertaining to clean water and sanitation into its standard academic curriculum. The primary goal is to foster an understanding of water treatment, the efficient use, and the reuse of water within the broader community. GMRIT has established a student club known as the Green Eco Club, with a strong focus on water conservation. Moreover, as a part of its social commitment through the GAMYAM initiative, GMRIT actively encourages its students to engage with and contribute to the larger community.

6.5.2. Over the years, GMRIT has played a vital role in endorsing and contributing to the establishment of an organized water management system. The treated water from the STP is effectively employed for washing and gardening purposes. At GMRIT, the preference is given to drip and sprinkler irrigation methods to conserve water. Water-saving fixtures and fittings, including auto-cut taps and ball valves, have been adopted to replace conventional ones. Additionally, 'Save Water' signage has been strategically placed at all drinking water locations across the campus to educate students about the significance of water conservation.

6.5.3. To mitigate water consumption within the community, GMRIT has undertaken several initiatives aimed at benefiting society. These actions include the establishment of rainwater harvesting facilities in the RTC Complex within the Rajam and Andhra Pradesh regions. GMRIT has also implemented an educational program designed to raise awareness about water management among students in government schools and neighbouring villages. In addition, government schools have been provided with RO water facilities. Furthermore, GMRIT has constructed public restrooms in and around Rajam, serving approximately 3,000 individuals daily.

6.5.4. The GMRIT campus is powered by a 1MW solar power plant. Solar energy is harnessed to drive electric pumps that draw water from the ground, providing an

environmentally friendly and cost-effective solution to address water scarcity. These solar-powered water pumps are employed in both open wells and tube wells to extract groundwater.

6.5.5. GMRIT has implemented numerous measures to enhance water security. One key measure involves the presence of a sewage treatment plant (STP) aimed at preventing the discharge of polluted water into surface water sources, thereby reducing the risk of waterborne diseases. Additionally, GMRIT actively promotes the use of rainwater and treated sewage water within the campus to minimize the daily consumption of fresh water. This commitment ensures a sustainable and ample water supply for future generations.