

Greenviroment helps RMZ Millenia drought proof its Chennai facilities, saves thousands of litres of water and lakhs in operating costs

With climate change making extreme weather events frequent and disrupting weather patterns, Chennai faced a rainfall deficit that led to drought and widespread water rationing across the city in 2019. The water crisis created awareness among the IT Corridor of Chennai, RMZ Millenia Business Park with 26 companies and over 20,000 employees implemented IOT Based Real Time Monitoring of Total Water Management with the help of Greenviroment India.

Large offices like the ones built and operated by RMZ Millenia generate huge amounts of waste water that when treated and reused leads to lesser freshwater usage. This saves on costs and lessens the water stress on the surrounding community.

RMZ Millenia approached Greenviroment for one of a kind evidence based real time continuous water monitoring solution to drought proof its facilities and optimize its freshwater usage.

Challenge:

The site was in full use and the solution needed to be implemented with minimal operational disruptions while also meeting all reporting and operational standards. In addition the Greenviroment team also faced an integration challenge as the clients existing infrastructure had to be utilized to its fullest within the Greenviroment solution to save on costs and resources.

Solution:

Greenviroment's approach is purpose built for each site it handles and therefore started with a X week period of site observation to establish the baseline. Here's what we found,

- a. Establish the water consumption patterns for the site
- b. Improving the operation of already available treatment plants at the site

Greenviroment proposed a comprehensive Real Time Monitoring (RTM) System implementation based on the observations and baseline.

Greenviroment's purpose built Real Time Monitoring (RTM) system for RMZ Millenia Business Park includes a full array of smart sensors on the water lines that transmit water & wastewater quality and quantity indicator data to the central monitoring software via a secure network.

The sensor array for RMZ includes a pH sensor, a total dissolved solids (TDS) sensor, a turbidity sensor and an oxidation reduction potential (ORP) sensor. Other key parameters monitored to meet regulatory standards for wastewater management are Total Suspended Solids (TSS), Biological Oxygen Demand (BOD), and Chemical Oxygen Demand (COD).

Once implemented the RTM system led to the following data based interventions to optimize water use at the facility,

- Tanker Monitoring using TDS sensors helped in ensuring the inlet water quality and flow sensor helped in monitoring the amount of water is unloaded from the tanker
- Sewage Treatment Plant (STP) went through basic operation improvements
- The health of the filter media has been improved due to usage of treated water at the site.
- ORP based automation was added to the dosing system, in both Water Treatment Plant (WTP) & STP the disinfection of the treated water has been maintained for further usage of Landscaping & Toilet Flushing

Outcome:

- In 24 weeks, the facility successfully started using the better quality STP treated water for toilet flushing, floor cleaning and landscaping
- Freshwater use dropped by 22%
- 40% of per day water requirements is fulfilled by recycled water
- The building has been able to save upto Rs. 28.35 lakhs per annum (300 days operation) on Water spends

Testimonial:

"This pilot project has been hugely successful and has helped us save water by 40%, thereby enabling us to maintain and double the stocks," says Jiji Thomas, Associate Director, RMZ Corp.