# SMART WATER MANAGEMENT SYSTEM IN URBAN AREA USING LORA TECHNOLOGY

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**Abstract**

Due to excess wastage of water globally, it has become imperative to make effective use of it. Hence, smart systems are one of the solutions that need to be implemented to prevent wastage of water. This paper aims to monitor and control the flow of water using electronic sensors and transmit the sensor data via LoRa technology. The data traversed will be monitored by the central authorities continuously and the user will be updated on a real-time basis. The update will include the amount of water usage, the cost related to it and also alerts based on any excess usages. These updates will be provided directly to the user through the application layer of the LoRa network. The basic blocks used in the process are sensors (water flow/amount detecting sensor, solenoid valve), LoRa module and a control unit. It transmits the data collected to a LoRa cloud database and according to the database results, the water supply for a user will be monitored and controlled using the user's permission.

**Keywords---Lora, Smart Water Meter, Wireless, Internet of Things, Cloud-Based Server, The Things Network.**

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