**IOT BASED WATER MANAGEMENT SYSTEM USING RASPBERRY PI**

**ABSTRACT**

This Project Proposes a system, that system performs water quality monitoring and Regulated water supply operation. We have some more sensor like pH, conductivity sensor, Flow sensor, Temperature Sensor and LDR module. By using this sensor value, we calculate the continually and taking the data, analyze after any problem in the sensor value we will calculate to the water purity and sent the alert message to the authorized person by using the IOT Technologies. We have the purity sensor and pH sensor by using this we got the sensor values, at last, we get the alert message.

Clean drinking water is the most valuable resource for humans. Any imbalance in the water quality would seriously affect the health condition of the humans. Now a day’s drinking water utilities are facing various challenges in real time due to limited water resources, global warming, growing population, and pollution. Hence there is a need for better methodologies for real-time water quality monitoring.

In the existing System, we are monitoring the water quality by connecting the PH sensor, conductivity sensor and turbidity sensor which is collected in raspberry pi and uploaded over the Cloud for analysis.In the proposed system we have to add Flow sensor and Solenoid valve to the Existing system. Purpose of using the flow sensor is to find out how much water is consumed by each house and solenoid valve is to Automatically Close the pipe. This whole system will act as water quality and Water regulated supply system.

The whole system is based on Sensors connected to Raspberry Pi to monitor the water quality and to Regulate the water flow. Raspberry – Single board Computer acts as a heart of the system and performs the desired operation. All the sensor values are uploaded to cloud.Thingspeak – open source cloud provides the values in the form of Graphical representation by using this we can do the analysis.

The proposed system consists of sensors for water quality monitoring and solenoid valve for controlling the water flow in the pipeline. These devices are low in cost, highly efficient and flexible.These are connected to Raspberry Pi core controller and IoT module. Finally, sensed values viewed and controlling is performed by the internet and also through Wi-Fi to mobile devices.