Water Is Right for Everyone

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Having tested a prototype of the Water is a Right for Everyone project, it is confirmed we can control the process of water distribution to assure fairness based on population density and average per capita needs. In addition, this project reduces water loss and leakage at homes and within the main pipelines by detecting it early and determining its site, so the mater can be fixed on a timely fashion with minimum costs. All of this is done electronically through the LabVIEW software, which is connected to a mobile phone, and used by the competent officer to facilitate and control water loss or leakage, saving time and energy. A Water Flowrate valve was used to measure the flow rates of water leaving the main source and entering the household or water consuming entity, refereed to here as the participant. This probe continuously supplied Arduino with a reading of the amount of water flowing to the participant in the form of pulses. Using a specific equation, Arduino transfers these pulses into milliliters. Once the pre-calculated amount of water per a specific participant is consumed, Arduino will send an order to close the valve by the Relay. In the event of water loss or leakage, Arduino will send an order to close the valve and alert the competent officer of the accurate site of loss or leakage. This project is scalable and if adopted for execution and implementation, WaterCAD software will be used to accurately measure and determine water distribution to residents of a given geography. In addition a plan to generate electric power through the water flow dynamics will be explored and implemented.

Awards Won: