

## **ABSTRACT**

Water is considered as one of the most abundant substances necessary for human existence. In the Philippines, having proper water supply system has been a long problem in rural communities. For this reason, the researchers conducted a study at Barangay Tua, Magallanes, Cavite with the primary purpose of providing a design of a sustainable water supply system for Tua Elementary School which is acceptable in the community and environment, safe in quality and sufficient in quantity. Data gathered from the school and the community were used to project the population and water demand of the school for the next 10 years. This computation was then used as the basis for the design of the whole distribution system including tank capacity, pipe network layout and hydraulic analysis. Water samples from the source and an identified alternative source of water were also examined for its physical, chemical and microbiological parameters. Collected water samples passed both physical and chemical analysis but failed the microbiological test based on the 2007 Philippine National Standards for Drinking Water (PNSDW). Chlorination was introduced in the system to provide safe and potable water. Using local data and responses from justifiable key informants, an initial environmental impact assessment report was also provided.

**Keywords:** Water Supply, Sustainable, Barangay Tua, PNSDW, EIA