

**Design of a Water Supply System
at Brgy. Harasan Indang, Cavite**

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ABSTRACT

The study was conducted to design a Water Supply System in Barangay Harasan Indang Cavite to improve the water supply at the barangay. Specifically; it aimed to determine the sustainability and yield of spring as primary source of the water supply in the barangay; to determine the volume of the storage to supply the water demand of the barangay; and to layout of a pipe distribution system to supply the water demand of the whole barangay.

Based on the yield of the spring determined by the researchers at the summer time of 2013, the spring exceeded the average water demand of barangay Harasan which means the water source is stable. The tank sized was adjusted so that it could sustain its supply for almost a day and minimize the operation of the pump. The researchers conclude that using a larger diameter of pipe minimize the head loss in pipe and pressure head at nodes. The researchers used 200mm diameter of pipe from the source of water to tank and used pump to distribute it to higher elevation. PRV (Pressure Reducing Valve) was inserted in the junctions to minimize the pressure head in remotest end of the network. Pipe sizes were decreased at distribution system at the barangay, 75mm, 100mm and 150mm diameter were used. The researchers observed that the greater the demand in every junction, the larger the pipe must be used.

Since the research was well accomplished and already has the solutions to the main problem of the said area, the proposed paper answered the main objective.

The study was conducted from June 2013 to February 2014.