

**ASSESSMENT OF THE WATER SUPPLY SYSTEM OF  
DAINE, INDANG, CAVITE**

Undergraduate Thesis  
Submitted to the Faculty of the  
College of Engineering and Information Technology  
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Bachelor of Science in Agricultural Engineering

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## ABSTRACT

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The study was conducted from November 2015 to February 2016. Specifically, it aimed to: assess the functional elements of the water supply system; assess the present water demand of the service area; project the water demand in the next ten years; and determine the physical, chemical and microbial properties of the water supplied by the system in the service area.

Two water supply systems exist in Barangay Daine, Indang, Cavite: the Daine 1 Waterworks System and the Daine 2 Waterworks. The water supply system of Daine 1 Waterworks System has three functional elements: source, storage and distribution. Daine 2 Waterworks, on the other hand, has two functional elements which include the source and distribution elements. Both water supply systems utilize the groundwater from Macabag spring as the main source with a measured discharge of 3.66 L/s (316, 224 L/day).

Water flows directly to distribution pipes and relies on gravitational force. The entire service area of Daine has a total water demand 287,730.90 L/day with over 592 connections. Although the present water supply is still sufficient for the Year 2015, it will not meet the projected demand this year onwards assuming that the water supply remains at the same discharge. Water samples collected passed the physical and chemical analysis requirements of the Philippine National Standards for Drinking Water (PNSDW). However, the latest result of the microbiological analysis dated October 2015 of the water supply system failed the limits of PNSDW.