EVALUATION OF CENTRALIZED WASTEWATER MANAGEMENT IN MANADO CITY

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ABSTRACT

The construction of Centralized Wastewater Treatment Plant (WWTP) in Manado City was started in 2010 and serves the villages of Wenang Utara (North Wenang), Wenang Selatan (South Wenang), Titiwungen Utara (North Titiwungen) and Titiwungen Selatan (South Titiwungen). Construction of house connection (HC) was started in 2013 as many as 200 units and the community have responsibility to the management. It is a challenge for Manado City Government to improve the community willingness and how to integrate the existing wastewater treatment with the centralized system. The purpose of this research therefore to evaluate HC design of centralized wastewater system in the service area and improvement efforts.

The research was conducted through questionnaires, interviews and direct observation and also supporting data from relevant government agencies. Sampling method used simple random sampling, with amounted samples were 90 of 3,044 households. Technical evaluation was done by comparing the HC design based on the planning documents with the existing wastewater treatment. Evaluation of community participation based on the willingness and ability to take advantage of the HC from WWTP. Meanwhile, the economic aspect conducted by feasibility analysis of benefit cost ratio.

Result of this research showed that the HC design of Boulevard Area WWTP can be made by two types of connection. Through the septic tank that serve 19% of the community and the direct connection of toilets, bathrooms, and kitchens. More than 90% of the people willing and able to take advantage of the HC of WWTP, but only 2.2% of people who are willing to pay the HC construction cost. The Government should make efforts to increase the HC management by continuous socialization of the benefits from wastewater treatment and still provide subsidies which 43% of the total cost of centralized wastewater management system.

Keywords: boulevard area of manado city, centralized system, house connection