

**STUDY OF FORMED FOR THE SPRING AND CONSERVATION ON
MOORLAND IN THE VILLAGE OF HARGO ROJO AND THE VILLAGE OF
SAMOREJO, DISTRICT BAGELEN, PURWOREJO, CENTRAL JAVA**

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ABSTRACT

Water demand is increasing in line with the increasing needs of human life, both in urban and rural areas. On the other hand, the amount of water is relatively unchanged over time. The total availability of water sources in a region can be seen from the environmental conditions of the area. Somorejo Village and Hargo Rojo Village are villages that often experience water drought during dry season. The majority of the population of the two villages use water as the source for springs daily activities. Two villages are located at the eastern end of Purworejo bordering Kulon Progo. The purpose of this research is to know the methods for springs; springs characteristics; and techniques/conservation springs recharge zone on the Moorland.

The methods used in this study of which the method of surveying and mapping, interviews, laboratories, as well as mathematical. For determining the location of sampling techniques and using purposive sampling based on difference in the slope of the land use, soil texture, as well as rainfall. Springs formed which include type; quantity: the distribution and quality. The quantity is calculated based on discharge springs. Quality testing conducted at the test laboratories with Physical parameters (color, odor, taste, turbidity, and TDS); Chemistry (Fe, BOD, Nitrates, and Nitrites); and biology (E. Coli) soil testing to know permeability and porosity. Interview to find out the need of water.

The location of the Research there were 9 springs residing in the backwoods of Mejing, Sejagir, and Tepus. The springs in the Mejing and Sejagir influenced by soil type of latosol and open fractures, it make the stream Springs perennial .While in springs at Tepus influenced by soil type of latosol and fractured rock resulting the intermittent stream of springs. Water demand in 2018 at the backwoods Mejing of 18,160.13 L/day (adequate) with the availability of water in the dry season 77,905.3 L/day, Sejagir backwoods of 17,671.21 L/day (adequate) with the availability of water in the dry season of 35,565.79 L/day, and the backwoods of Tepus 14,458.26 L/day (not enough) and the availability of water in the dry season of 46.74,31 L/day. All the parameters of water quality on a standard under bakumutu mataair, except that the parameters of E. Coli of 4×10 MPN/100 mL. The increased the parameter of E.Coli caused by using the organic fertilizer. Conservation of springs with application of organic minerals in a trash can on the Moor and settlements; and change the function of Moor with flat slope to the orchards. This conversation goals to reduced the rate of run-off and increase the rate of infiltration. It is expected to maintain / increase the stream of the springs.

Keywords: water availability, springs formed, recharge zone, springs conservation.