

Regional Groundwater Potential Study of Semarang area

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Abstract

Water is one of limited natural resources depend on time and place, its need to be wise to control and use this resources. Groundwater become so important because of this material daily use for many people. Generally Semarang's people and citizen use groundwater for his daily activity like drinking, for industri and others activity. So, it is need to identify of the groundwater potency.

The aim of this recent study was to get the date of groundwater potency and the spread of aquifer part. The methods of this recent study was survey, geological and hydrogeology. Geological survey including morfological overview, litology and geological structure. Hydrogeological survey include climate date and groundwater surface count.

An area with 127 km² of large is used for this recent study. Aquifer part include sands, tuff sands and breccia. Morfological movement model of groundwater in Semarang flow from high land to the lower land. Groundwater flows model from south – north. Interrelationship of groundwater and surface water on this study was gaining stream where groundwater supplies to the surface water and loosing stream where surface water supplies groundwater. Groundwater storage include static storage which is 1,276,504,521.18m³ and groundwater flow which is 3,066,160.60 m³/years of total discharge, respectively. Shallow groundwater used of Semarang people was 3,684,857.5 m³/years. It means there were shallow groundwater over exploitation.

Keywords: groundwater, hydrogeology, groundwater potential