Penelitian resapan buatan melalui sumur dalam terhadap air tanah terkekang secara gravitasi

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Abstrak

The change of natural land-use has altered water sources at cultivated land where water conservation principles are not implemented into a source of disaster because of the change of soil surface into an impermeable layer. City development is not only causing impermeability of soil layer and decrease of ground water recharge, but also increase of ground water exploitation. Ground water exploitation exceeding the limitation of aquifer recharge forms a ground water depression cone. One of the efforts to increase ground water is by direct storage of rain water in an artificial recharge at pumping area. The artificial recharge in an unused deep well in the city of Semarang-Central Java, after well washing, has shown a recharge of 5 L/sec. Investigation on artificial recharge is done regularly, yet estimation of recharge is to be done by analytic computation. In facilitating the estimation of recharge, a nomograph was made for wells in confined aquifer. Required data for the nomograph shall comprise data on ground water level, aquifer permeability, aquifer thickness, well diameter, and flow concentration time of rain catchment. The reading results of the nomograph are nearly equal to computation results or field experiment.