

STUDI KETERSEDIAAN AIRTANAH BEBAS UNTUK PROYEKSI KEBUTUHAN AIR DOMESTIK DI KECAMATAN NGENEMPLAK KABUPATEN SLEMAN

oleh

Ramadhan Ristiawan

11/313071/GE/06993

INTISARI

Pertumbuhan penduduk di Kecamatan Ngemplak cukup besar. Kondisi ini disebabkan oleh pengaruh pertumbuhan kota. Pengaruh pertumbuhan kota memberikan dampak pada sumberdaya airtanah. Penelitian ketersediaan dan kebutuhan airtanah bebas di Kecamatan Ngemplak mempunyai tiga tujuan. Tujuan penelitian untuk mengetahui ketersediaan dan kebutuhan air domestik, melakukan perbandingan ketersediaan dan kebutuhan, serta melakukan proyeksi kebutuhan dibandingkan dengan ketersediaan. Metode penelitian yang digunakan yaitu metode kuantitatif. Proses sampel menggunakan teknik quota (quota sampling) melalui wawancara dan pengukuran. Hasil yang diperoleh yaitu kebutuhan air domestik dan fluktuasi airtanah. Teknik analisis data dilakukan secara deskriptif dengan memperhatikan aspek keruangan.

Tahapan penelitian yang dilakukan dengan menghitung ketersediaan airtanah bebas, kebutuhan air domestik, imbuan airtanah dan hasil aman. Hasil penelitian menunjukkan ketersediaan airtanah tahun 2014 sebesar 534.965.265,38 m³/tahun, sedangkan kebutuhan air domestik sebesar 164,46 liter/kapita/hari. Kebutuhan air domestik penduduk tahun 2014 sebesar 3.947.674,29 m³/tahun, untuk industri 630.227 m³/tahun, untuk peternakan 256.199 m³/tahun, imbuan airtanah 23.778.490 m³/tahun, hasil aman 14.488.073,10 m³/tahun. Prediksi kebutuhan dan ketersediaan airtanah berdasarkan proyeksi penduduk diperoleh tahun kritis setelah tahun 2129. Berdasarkan hasil penelitian yang dicapai menunjukkan kebutuhan air masih belum melewati hasil aman.

Kata Kunci: ketersediaan, kebutuhan, airtanah bebas, hasil aman, proyeksi

**THE STUDY OF GROUNDWATER AVAILABILITY FOR PROJECTED IN
DOMESTIC WATER NEED AT NGEMLAK DISTRICT SLEMAN
REGENCY**

by

Ramadhan Ristiawan

11/313071/GE/06993

ABSTRACT

The population growth in the Ngemplak district is quite large. This condition is caused by the influence of the city growth. The influence of the city growth has an impact on groundwater resources. The research the availability and free groundwater needs in Sub Ngemplak has three objectives. The aim of research to determine the availability and domestic water needs, perform comparisons availability and needs, as well as projecting the availability compared to the needs. The method used is quantitative method. The samples processed using techniques quota (quota sampling) through interviews and measurements. The obtained results are domestic water demand and fluctuations in groundwater. The technique data analysis was done descriptively by taking into account the spatial aspect.

The stages of research done by calculating the availability of free ground water, the actual domestic water needs, the groundwater recharge and safe yield. The results showed that the availability of groundwater in 2014 up to 534.965.265,38 m³ / year, while the domestic water requirement was 164.46 liters / capita / day. . The needs of population's domestic water in 2014 up to 3.947.674,29 m³ / year, 630.227m³ / year for industrial, 256.199 m³ / year for livestock, the groundwater recharge was 23.778.490 m³ / year, safe yield was 14.488.073,10 m³ / year. The prediction of needs and availability of groundwater based on population projections obtained critical year after the year 2129. Based on the result the water needs is still not passed the safe outcome.

Keywords: *availability, needs, free groundwater, safe yield, projections*