

ABSTRACT

The rate of population growth impacts on both the development of region and increasing need of clean water (drinking water). The condition cannot be avoid and should be predicted. The condition also affect on the planning of city spatial pattern. To achieve the conformity between city spatial pattern, the needs and availability of water is required the efforts to analysis of water needs components, raw water source and land suitability in planning of city spatial pattern.

Based on local regulation No. 12 Tahun 2012 tentang Rencana Tata Ruang Wilayah (RTRW) Kota Balikpapan tahun 2012 – 2032 that the planning of city spatial pattern will be centerd on urban area namely sub district of Balikpapan Selatan and Balikpapan Tengah that form high density residential area. Balikpapan Selatan dan Balikpapan Tengah is at the topography with degree of slope is above 15% that basically is not suitable for city development area.

Prediction of the needs of clean water non irrigation (domestic and non domestic) Balikpapan City (2027) is 1,247 liter/sec.

The efforts to supply the raw water for Balikpapan City have been conducting around of Balikpapan area such as sungai Sepaku-Semoi (kabupaten Penajam Paser Utara) and Wonorejo reservoir (Merdeka river in Samboja, kabupaten Kutai Kartanegara). The government of Balikpapan City plan to prepare the avaibility of raw water about 2,722 liter/sec from reservoirs (Manggar, Wain, Teritip and Wonorejo) and form groundwater about 6,246 liter/sec.

The government of Balikpapan City is focusing to northern of Balikpapan Tengah sub district and Balikpapan Timur sub district for the development of ground water. Exploitations of ground water in Prapatan area and along coastal line of Balikpapan City should be reviewed strictly to avoid the environmental damage such as seawater intrusion.

Based on RTRW, the planning of spatial pattern of Balikpapan City is centered Balikpapan Selatan sub district and Balikpapan Tengah sub district for residential, office and service area. The planning should be reviewed in term of the unsuitability of area condition (high density residential area) and impact on the unfulfilled of the needs of clean water.

Key words: The needs of water, the availability of water, the pattern of spatial city.

