

WATER SUPPLY TREATMENT SUSTAINABILITY OF PANCHING WATER  
SUPPLY TREATMENT PROCESS – A WATER FOOTPRINT APPROACH

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## **ABSTRAK**

Di banyak tempat di dunia, air tawar adalah terhad dan pengekstrakan berlebihan. Tujuan kajian ini adalah untuk menentukan jejak air Proses Rawatan Bekalan Air (WSTP) di Loji Rawatan Panching Air (LRA) dan juga untuk mengenalpasti kemampuan Sg. Kuantan sebagai sumber pengambilan utama air mentah berikutan peningkatan pembangunan guna tanah. Jumlah jejak air (WF) akan dikira dengan menggunakan WF perakaunan manual. Hasil dapatan yang diperolehi menunjukkan bahawa sumber pengambilan air masih mencukupi tetapi adalah dipercayai bahawa ia tidak akan dapat menampung peningkatan jumlah jejak air (WF). Permintaan air adalah sebanyak 1.8% pada tahun 2015-2016 dan telah meningkat sebanyak 11 kali ganda lebih tinggi daripada peratusan jejak air (WF) sebanyak 19.9%. Keputusan ini menunjukkan bahawa penggunaan air semasa proses rawatan bekalan air adalah dua kali lebih tinggi daripada permintaan oleh itu ia menunjukkan ketidakcekapan dalam pengurusan air.

## **ABSTRACT**

In many parts of the world, freshwater is scarce and overexploited. The purpose of this study is to determine the water footprint of Water Supply Treatment Process (WSTP) at Panching Water Treatment Plant (WTP) as well as to identify the sustainability of the Sg. Kuantan as an intake resource due to the effect of land use development. The total water footprint (WF) was calculated by using WF accounting manual. The results obtained show that the availability of water in Sg Kuantan as a water intake resource is still adequate but it is believed that it will not be able to cope with the increasing WF. The increment of water demand percentage by 1.8% from 2015 to 2016 has increased 11 times higher of the water footprint percentage onto 19.9%. The result obtained also shows that the water consumption during the water supply treatment process is two times higher than the demand thus it depicted the inefficient of the water management.