# ANALYSIS OF DRINKING WATER CONSUMPTION IN THE TOWN OF SALCEDO, PUNO

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## ABSTRACT

The increase in population density and the dynamics of urban expansion make these areas vulnerable to the supply of drinking water due to the growing demand and the complex treatment and supply systems. The study analyzes water consumption influenced by economic income and number of inhabitants per household in order to compare them with the values recommended by WHO; In addition, the daily and hourly variation of water consumption in the urban area of Salcedo-Puno is determined. The sample for the analysis of water consumption was 1246 homes and for the daily and hourly variations 39 homes, whose consumption and variation data were collected from the Service Provider Company and from on-site observations respectively. It was determined that the average water consumption was 67 l/inhab/d influenced by factors such as economic income, number of inhabitants per household and months of the year. The coefficients of daily and hourly variation that affect the design of the catchment, conduction and reservoir as well as for the abduction and distribution network were $K_1$ = 1,33 and $K_2$ = 3,80 respectively, the latter being higher than those recommended by the regulations due to the non-continuity of the service in the place. In conclusion, the values of drinking water consumption are below the levels established by the WHO of 100 l/inhab/d, in the incidence among other factors the economic income and the number of inhabitants per dwelling, being the maximum consumption of 73,83 l/inhab/d for housing with 5 inhabitants and minimum of 50,55 l/inhab/d for housing with 12 inhabitants.

**Keywords:** Drinking Water, Analysis, Endowment, Daily Variation, Hourly Variation.

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