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ANALYSIS OF WATER CONSUMPTION AND STORAGE VOLUMES FOR RESIDENTIAL AREAS SITUATED IN BIG CITIES OF ROMANIA

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Abstract

Population migration in big cities led to an increase in the complexity of the water supply and distribution systems, as well as of water storage volumes. Dimensioning data of the water storage tank must be periodically analyzed and brought up to date based on *in situ* measurements. This report analyzes the hourly, daily and monthly water consumption in some Romanian residential areas belonging to the big cities, for the year 2017. Further, the percentage parameters n were calculated and then used to compensate the hourly water demand of the consumers (**WVHDC**). The obtained values of the percentage parameters for 2017 were compared to values corresponding to the years: 1966, 1977, 1995, and 2006. For 2017, the minimum percentage parameter increased to 2.41 while the maximum decreased to 5.44 compared to the other years. A smoother variation in 2017 hourly water consumption was registered compared to 2006. Also, the **WVHDC** decreased in 2017 by 50 % compared to 1966 and by 4 % from 2006. The results confirmed the need of a periodical update of the percentage parameters and of the water storage volume.

Key words: average daily flow, daily water consumption, drinking water, monthly water consumption, storage volume, water volume

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