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Use of Alternative Water Sources Based on a Rainwater in the Multi-Dwelling Urban Building 2030

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Abstract : Drinking water is water with a very high quality, and as such represents only 2.5% of the total quantity of all water in the world. For many years we have observed continuous increase in its consumption as a result of many factors such as: Growing world population (7 billion in 2011r.), increase of human lives comfort and – above all – the economic growth. Due to the rocketing consumption and growing costs of production of water with such high-quality parameters, we experience accelerating interest in alternative sources of obtaining potable water. One of the ways of saving this valuable material is using rainwater in the Urban Building. With an exponentially growing demand, the acquisition of additional sources of water is necessary to maintain the proper balance of all ecosystems. The first part of the paper describes what rainwater is and what are its potential sources and means of use, while the main part of the article focuses on the description of the methods of obtaining water from rain on the example of new urban building in Poland. It describes the method and installations of rainwater in the new urban building ("MBJ2030"). The paper addresses also the issue of monitoring of the whole recycling systems as well as the particular quality indicators important because of identification of the potential risks to human health. The third part describes the legal arrangements concerning the recycling of rainwater existing in different European Union countries with particular reference to Poland on example the new urban building in Warsaw.

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