

# The Pressure Effect to Water Flow within Water Distribution System

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## **Abstract:**

The article describes pressure conditions, methods of pressure management and impacts of pressure changes in water supply distribution systems of Slovakia. Furthermore, it describes the use of separately measurable districts in active detection of water leaks as well as research activities of the Department of Sanitary and Environmental Engineering dealing with the changes in pressure of distribution system and their impact on water discharge and water consumption. These changes have an impact on effectiveness and reliability of water supply systems operation. There is a relationship among pressure, rate of changes in pressure, water leaks and water consumption that can be described using mathematical terms. This relationship is currently reevaluated in operating conditions of the distribution systems of Slovakia. The results of the research on relationship among pressure, water leaks and water consumption obtained during pressure regulation in the separately measurable districts zone of water distribution system Lučenec are presented in the article.

**Keywords:** pressure management, impact of pressure changes, water flow, water leakage, separately water meters district zones

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