

INTERACTION OF WELLS AND GUARANTEES OF THEIR SUSTAINABLE OPERATION

ABROR GADAEV¹, DILNORA GANIEVA² & GULMIRA BOBOYEVA³

^{1,2,3}Samarkand state architectural and construction university, Construction of engineering communications Faculty, Water supply, sewerage and water resources protection Department, Samarkand, Uzbekistan.

ABSTRACT

Today, due to several positive indicators of underground waters, they are being used in the water supply system more. Groundwater wells and their efficient operation ensure the reliability and stability of the entire water supply system. When using wells, their operation individually or in groups causes different calculations, and the justification of this order is a very important factor. The following article is devoted to the calculation of a group of wells and their interaction indicators. The analysis of the problem and the research on its solution shows that the situation is different in wells working individually and in groups. During a designing of the well fields and water wells inter influencing factors not always meet the official indicators because of the local or global water table decreasing and other aquifers characteristics' changes. If the decrease in flow rate of individual wells depends only on its own indicators, this situation becomes more complicated in a group of wells, that is, they interact depending on their capacity, distance between them and location. When calculating of the productivity of the water intake structures, they consist of a large number of wells, group of wells interacting with each other are often used by the method called generalized systems. First, let's talk about the impact of the influencing radius of the well and the factors it depends on. As it is mentioned above water table decreasing in each water well it causes to the total decreasing of the well field capacity and water supply system efficiency. Researches on the predicting water wells inter influencing and capacity decreasing are provided at the UZWATER national research center of Samarkand state architectural and construction university.

Key words: water well, interacting, well influencing radius, well field capacity

Received: Jun 24, 2023; **Accepted:** Jly 19, 2023; **Published:** Jly 24, 2023; **Paper Id:** JCSEWIERJUN20233