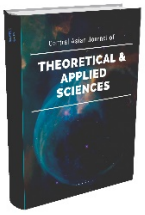

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Effective Solutions of Water Resources (On the Example of Fergana Region)

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Abstract: *The article examines the problems and solutions to the use of water resources in the region. The features and principles of water resources management have been studied, the factors for their improvement have been identified, problems in this area have been identified and ways to solve them have been proposed. The efficiency of the use of water resources has been improved, and systems for the use of drinking water have been developed.*

KeyWords: *water resources, management principles, efficient use of water resources, water supply.*

Introduction

Ensuring reliable guarantees and implementation of measures for social protection and environmental protection in the Republic of Uzbekistan is one of the main priorities of state policy at all stages of economic reforms. The country's leadership, which is not deviating from the chosen path, is committed to further deepening economic reforms by liberalizing the economy. implementation of institutional changes, development of Water Users Associations (WUAs), expansion of legal and economic independence of agricultural producers. Society is aware of the need to take decisive action to address water problems and reduce water shortages. In the management of water resources, the principles of water use are being revised to eliminate existing systems, and convenient and acceptable measures are being sought.

The Decree of the President of the Republic of Uzbekistan dated June 17, 2019 "On measures for the efficient use of land and water resources in agriculture" is significant in that it marks the beginning of a new phase of work in this area. This document sets out a number of tasks related to the gradual re-use of lands in the country, which over the years have deteriorated due to the deterioration of the reclamation situation, the widespread introduction of resource-saving technologies, ensuring the participation of potential investors.

Method

In many mountainous and mountainous areas of the region, due to the uneven terrain, there are some problems and technical inconveniences in the supply of drinking water. Such problems are mainly:

1. It is difficult to distribute drinking water from the main water networks to other outlets at the consumption level;

2. Relief inconvenience - uneven distribution of water pressure as a result of altitude;

3. Monitoring of water supply to some network outlets;

4. Short-term interruptions in water supply and uneven water supply in another network when water consumption increases in one network;

5. Application of multiple pumping stations to ensure that the water supply is at the required level;

6. A lot of earthworks are required to lay the main and water distribution networks on the required slope.

Similar problems in water supply can be common due to the highs and lows of the terrain. However, it is possible to create the necessary pressure in the water supply by making wise use of the highs and lows of the terrain. Before developing a system diagram of water supply networks using terrain, the area supplied with drinking water is studied on the basis of topographic analysis.

The results of topographic surveys will serve as a basis for project work. After analyzing the relief markings, convenient schemes are developed for the most rational water supply of all structures in the system.

Result and solution

In solving this problem, it is necessary to rationally select water networks, place drinking water storage reservoirs at the highest points of the relief and use water lifting towers. It can also be used to provide water pressure. As a result, the water distributed in the water lift tower is evenly distributed to consumers.

The proposed solution could theoretically provide an optimal water supply using land relief.

In addition, in areas where the relief is very uneven, the supply of drinking water through the water towers is carried out using a regional branching scheme.

According to the proposed scheme, water from the open water basin (Sorikurgan canal) through the dam is first poured into the 1st settler and purified of suspended solids, the water in the 2nd settler is cleaned of fine particles by adding special coagulants, the clarified water is filtered and purified It is stored in 2 fresh water reservoirs with a capacity of 4000 m3, which, depending on the needs of the population, are delivered to the settlements through the basins at sufficient pressure (Figure 1).

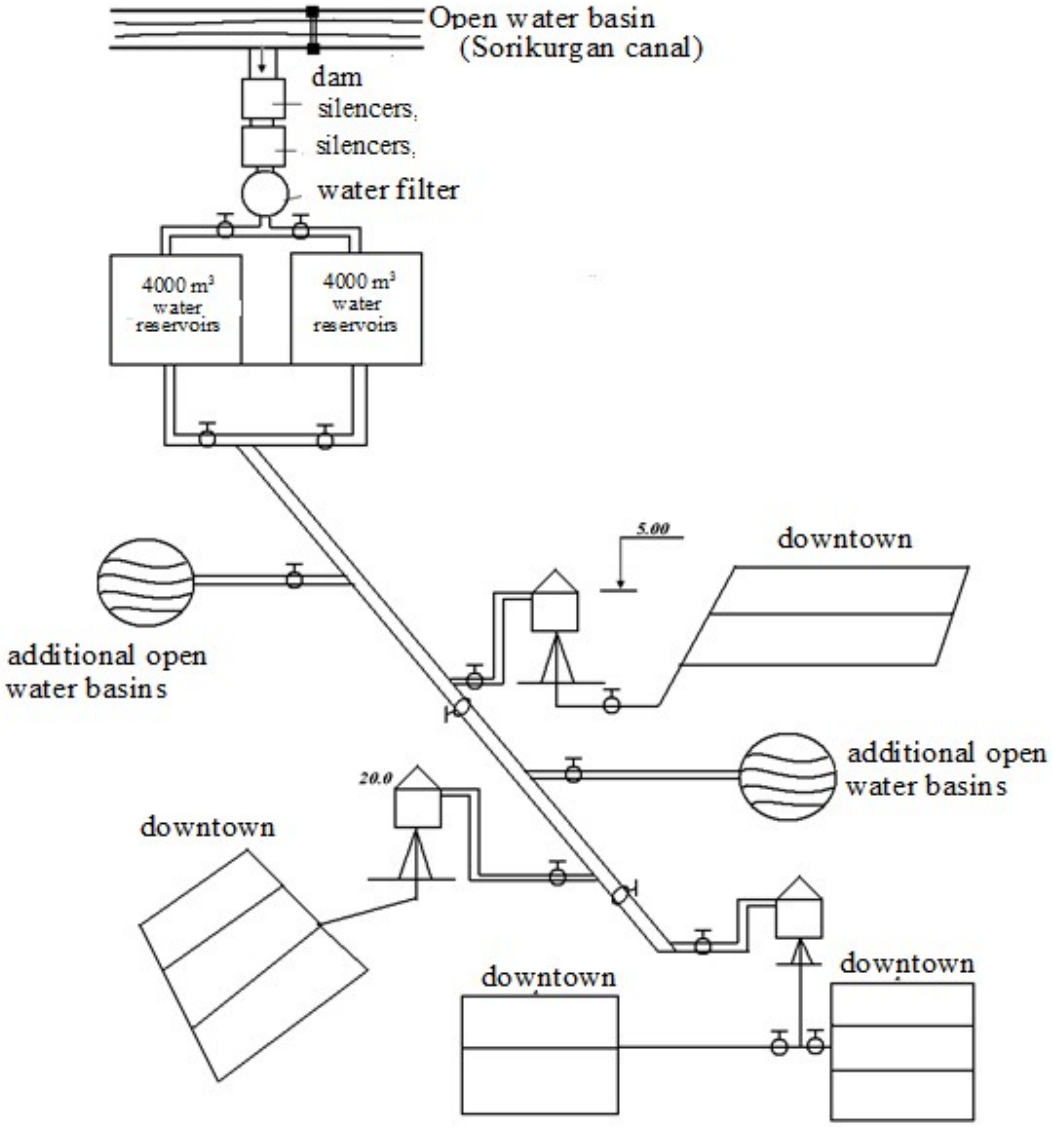

Figure 1. Recommended water supply scheme.

Proper use of the above scheme and design work and landforms will ensure efficient and reliable operation of water supply systems.

The issue under consideration is perfectly developed taking into account the unevenness of the terrain. The proposed project will provide great economic benefits if used in the water supply system.

Conclusion

Theoretically, optimal water supply will be provided using land relief.

Drinking water is carried out through water lifting towers using a regional branching scheme.

The proposed scheme will ensure efficient and reliable operation of water supply networks.

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