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THE ROLE OF LOCAL WATER SOURCES IN THE CENTRALIZED SUPPLY OF DRINKING WATER TO THE POPULATION

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Abstract: water is an essential factor that constitutes an integral part of a person's life when he experiences all the jewels. Therefore, the problem of stagnant water supply to akholin is considered one of the most urgent tasks in the national security of each state. Drinking water quality is the most important component of the ecological content in human health. For 150 years, the provision of drinking water quality has been the basis of primary prevention in the fight against diseases that spread through water. It is for this reason that the availability of quality drinking water is considered one of the main criteria in assessing the level of well-being of the population. And the provision of centralized quality drinking water of small akholi points along the lines of large cities is one of the main elements of the improvement of rural population settlements of the present day.

Keywords: water, drilled wells, water supply, disinfection, epidemiological indicators

Introduction. The problem of supplying drinking water to the population of rural regions of the Republic of Uzbekistan is not only growing, but also becoming a factor of depopulation in some regions. It should be noted that in relation to cities, there are specific features of the supply of drinking water to rural areas, along with centralized systems operating in large settlements here, there are local water sources that use groundwater sources, and in a number of cases, special vehicles are used in the supply of drinking water, while this water does not correspond to sanitary and epidemiological.

In connection with this, it is necessary to increase the efficiency of the use of fresh water, including the rational organization of water consumption, which subsequently requires a comparative approach to water consumption and purification, modernization of existing ones and the development of new water preparation technologies. The use of modern water treatment technologies in order to provide drinking water for rural areas should be an effective and economically feasible tool with the ability to improve the socio-environmental situation in villages where two-thirds of the population of the Republic of Uzbekistan lives, stop the socio-economic degradation of places where people live, have a positive effect on solving the

When developing and recommending one or another technology for cleaning drinking water, it is necessary, first of all, to study the chemical composition of water. The only source of drinking water supply in most rural population settlements would be underground water sources, since the degree of pollution of open water

bodies and their hydrogeological description would signal them that they had arrived in an unsuitable state.

Materials and methods. When conducting scientific research, theoretical and practical experiments were used. In this, the study of chemical, biological indicators in the composition of wastewater was based on laboratory data. In the statistical processing of the results obtained, methods of evidence-based medicine were used.

Results. Particular attention is paid to the economical use of water in our country. The decree of the president "on the establishment of the state inspectorate for control over the use of drinking water under the Cabinet of Ministers of the Republic of Uzbekistan"dated April 18, serves as an important guideline in this regard.

According to this document, in order to improve the drinking water supply of the population, the work of water and sewage networks, the rational use of drinking water resources and the creation of a unified control system, "Davsuvinspekt" and its territorial inspections were established. The application of this event shows its positive results for regions densely populated by aholi, such as Fergana region.

As a result of the research carried out in this regard, all data on the "hygienic assessment of drinking water supply of Fergana region and the study of factors affecting the health of the population" were revealed by hydrogeological studies carried out initially in the territory of Fergana Region, 5 underground water deposits were identified, the estimated water reserves of which are a total Of this, the mineralization of 2,706 thousand cubic meters/day (33 percent) is considered to be up to 1.0 g/l.

According to the state monitoring of groundwater carried out by the Fergana hydrogeology station of" uzbekgidrogeology", 9,290 (of which 6,823 are in working condition) use wells are registered in the region, with the help of which the amount of groundwater taken is a total of 5,087.8 thousand meters of cubic/day.

From this:

- for a drink – 1236.45 thousand m^3 /day;
- for maintenance and production - 629.64 thousand m^3 /day;
- for irrigation of land-1539.87 thousand m^3 /day;
- for land reclamation-1669.32 thousand m^3 /day;
- and for others-0.36 thousand m^3 /day.

At the same time, in recent years, there have been negative changes in the quality of groundwater in some regions due to the development of agricultural and other objects of the economy and the fact that measures aimed at Nature Protection have not been established at the required level.

The predicted reserves of the Sukh underground water field are 3126 thousand meters of cubic/day. Of this, 1207 thousant cubic meters/day (38.6 percent) of mineralization is considered to be up to 1.0 g/l. This mine is located in the south-western part of Fergana region and is mainly used to supply water to the cities of Kokand, Yaypan, Rishton and the population of Uzbekistan, Furkat, Dangara, Uchkuprik, Buwayda, Bagdad and Rishton districts and economy facilities. As of January 1, 2022, a total of 359.16 thousand cubic meters/milk underground water reserves for mining have been approved for use for various purposes, with the result of hydrogeological studies carried out initially in accordance with the assignments, respectively.

As a result of the development of agricultural sectors in recent years, groundwater pollution has been observed in the upper parts of the Suh-Isfara adir Aldi part of the Suh underground water field, the western and eastern sectors. In particular, groundwater pollution has also been observed in wells at the Central Water Intake Facility of the city of Yaypan, which is located in the south-west of the mine (Table 1). Due to the fact that in recent years the total water hardness obtained from the water intake plant has not corresponded to the requirements of UzDst 950:2011 "drinking water", in 2021, underground drinking water reserves in the amount of 3.57 thousand meters of cubic/milk were assessed and put into operation on the new site.

Table1

Well №№	Years (mineralization, mg / l / total hardness, mg-eklnt/l)					
	1980	1990	2000	2010	2018	2022
Skv.1 (49)	676/7,7	712/8,8	724/9,3	736/9,8	750/10,8	790/11,2
Skv.2 (50)	682/8,1	684/8,9	692/9,1	702/9,4	718/9,9	755/11,0

The predicted reserve of the isfara underground water field is 719.7 thousand cubic meters/day, of which 443.2 thousand cubic meters/day (62 percent) of mineralization is up to 1.0 g/l. As of January 1, 2022, with the result of hydrogeological studies carried out initially in accordance with the relevant tasks, a total of 42.29 thousand cubic meters/milk underground water reserves for mining have been approved for use for various purposes.

This mine is located in the western, southwestern part of Fergana region and provides water mainly to the population of the city of Besharik and Besharik district, as well as the objects of the economy. In 1988, underground drinking water reserves in the amount of 25.1 thousand meters of cubic/milk were approved on the Almazar plot to provide economic and drinking water to the population of the city of besharik. The source of saturation of the isfara mine is mainly the water of the isfara River. Since the 1990s, the quality of this river water has begun to deteriorate (mainly during the low season of the year). So far, due to the development of adirlik areas in the southern part for agricultural purposes and irrigation of arable land from the polluted water of the Isfara River, the groundwater in the saturation part of the mine has become unsuitable for consumption.

In accordance with the result of monitoring work carried out by the Fergana hydrogeology station, in recent years, the total hardness of the water of the observation Well No. 457, located in the saturation part of the isfara underground water field, has exceeded the norm by more than two times (Figure 1).

Currently, Almazar, which supplies drinking water to the city of Besharik, is about to be taken out of use due to the fact that the total hardness of the water being taken at the central water intake facility exceeds the established norm (10mg-ekv/l) (Figure 2).

Taking into account the above circumstances, the issue of applying measures aimed at protecting groundwater in the relevant part of this mine is currently in a nationwide discussion (ID 65078, 01.08.2022.), Provided for by the draft resolution of the president of the Republic of Uzbekistan "on additional measures to protect and regulate the rational use of underground fresh water resources."

At the same time, in order to stop the pollution process observed in the isfara underground water field and restore the water quality, hydrogeological studies have begun to substantiate the artificial saturation of the mine at the expense of the fresh water of the Norin River, which flows inefficiently in the period outside the irrigation season.

The Oltiarik-Besolish underground water deposit is located in the central part of Fergana region, mainly the Oltiarik, Kuva, Yazyovon, Tashlak, Koshtepa districts are used for economic and drinking water supply and other purposes. The reserves predicted by the mine are 2492.6 thousand cubic meters/day, of which 285.1 thousand cubic meters/day (11 percent) of mineralization is up to 1.0 g/l. As of January 1, 2022, a total of 209.49 thousand cubic meters/milk underground water reserves were approved for use for various purposes by the mine, with the result of hydrogeological studies carried out initially in accordance with the assignments, respectively.

The source of saturation of this deposit is mainly Shakhimardonsoy and Isfayramsoy. The quality of water of these streams is satisfactory, that is, its mineralization is 1 g/l. But, under the influence of man-made factors (the development of Southern Fergana steppes, the activities of the rhinoceros reservoir), the quality of some existing reserves in the southern parts of the mine has changed, making it unsuitable for drinking. In particular, the quality of drinking water reserves in the amount of 55.0 and 12.8 thousand cubic meters/day, approved initially in accordance with the six-and rocky underground water intake facilities, exceeded the norm by 1.5 times (Figure 4, 5).

Taking into account the above situation, in 2021, underground drinking water reserves in the amount of 2.41 and 6.0 thousand meters of cubic/day were approved and put into operation in New Plots for drinking water supply in the Sixtiariq and Tashlak district centers.

Chimyon-formerly an underground water deposit located in the eastern part of the province, is mainly used for farm farming as well as other purposes of the city of Kuvasoy and Fergana district. Chimyon formerly the main source of saturation of the underground water deposit is the Rivers Shakhimardonsoy and Isfayramsoy.

The reserves predicted by the mine amounted to 1226 thousand cubic meters/day, of which 518.4 thousand cubic meters/day (42 percent) of mineralization was up to 1.0 g/l. Respectively, as of January 1, 2022, with the result of hydrogeological studies carried out initially in accordance with the assignments, a total of 34.67 thousand cubic meters/milk underground water reserves for the mine were approved for use for various purposes.

The Yormazar underground water field is located in the Regional Center, in the intermediate sedimentation of adirlik, and is not considered promising for use for drinking purposes due to the scattered quality water resources in it.

The projected reserves of the mine are 604.8 thousand cubic meters/day, of which 252.3 thousand cubic meters/day (42 percent) of mineralization is calculated to be up to 1.0 g/l. As of January 1, 2022, a total of 3.0 thousand cubic meters/milk underground water reserves for mining have been approved for use for various purposes.

Today, within the framework of the state monitoring of groundwater in the Fergana region, there are 331 observations available in the region, 150 exploitation wells and 7 Springs, constantly changing the quality and quantity of existing water resources, the state of which is assessed. Information on the work and results carried out in this direction is included in the state committee for Ecology and Environmental Protection of the Republic of Uzbekistan with the completion of each quarter in the prescribed manner.

Conclusion.

Despite the fact that the Fergana Valley is a region rich in underground fresh water deposits, the main part of the water supply of the cities of Namangan, Andijan, Chortoq and Asaka falls at the expense of the Andijan reservoir and water from Chortoksoy. In addition, the main part of the water supply of the cities of Fergana and Margilan is also carried out at the expense of underground water intake facilities located 10-15 kilometers south of Fergana. This is because the bulk of the underground freshwater deposits in the regions where these cities are located have become unsuitable for consumption. There are 18 underground water deposits in the Fergana Valley, of which 6 are located on the territory of the Fergana region. The regional reserves of groundwater assessed on them are 9447 thousand m^3 in one night. Another of the positive characteristics of groundwater deposits is the specific pressure of the groundwater layers in the densely populated areas of the region. Today, more than 2 thousand wells operate on the basis of a natural fountain, from which groundwater is extracted. Unfortunately, 40-50 percent of steep Wells recorded as a result of the negligence of water user officials operated without any control taps, leaving a certain amount of underground fresh water flowing inefficiently.

The decision of the head of state "on measures to regulate the control and accounting of the rational use of groundwater reserves in 2017-2021”occupies an important” place in the rational use of water. This document is aimed at improving the efficiency of measures to ensure the rational use of groundwater reserves and, on this basis, improving the quality of water supply to the population of our country, as well as preventing the rise of groundwater levels in the center of certain cities and districts.

Particular attention is paid to the state of drinking water supply of the population in Fergana region and the rational and efficient use of water supply sources, especially underground freshwater sources. The work was initiated on the basis of the resolution of the Cabinet of Ministers of the Republic of Uzbekistan of September 30, 2017 "on additional measures to improve the system of providing clean drinking water to the population of the Fergana Valley due to the expansion of the use of groundwater in 2017-2022". Within the framework of the implementation of this decision, the increase and commissioning of underground fresh water reserves in the Fergana region in the amount of 147.3 thousand m^3 per night will be achieved, the re-

evaluation and extension of the period of use of underground fresh water reserves in the amount of 950 thousand m^3 per night, the development of

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