



## HISTORY OF CONSTRUCTION OF THE CHIMKURGON RESERVOIR

**Urakova Dilnoza**

*Karshi State University 3rd year student of the Faculty of History*

*dilnozaoroqova722@gmail.com*

*phone: +998949920615*

**Abstract:** In this article, we tried to think about the history of the Chimkurgan Reservoir, located in the Kashkadarya region, and its economic opportunities. After reading the article, you will learn about the history of this reservoir, its historical significance, role in the economy of Uzbekistan, role in the life of the population, significance in the irrigation of cotton and grain fields of the region. And of course, we tried to write the article based on the rules of scientific objectivity and comprehensive analysis.

**Keywords:** Chimkurgan Reservoir, Kashkadarya River, Sughd Region, Hisar, Tovtash Pass, Hazratbashir Village.

There are many rivers and tributaries in the Kakhkadarya region. The largest of them is the Kashkadarya River, which is the basis for the name of the region. This river, if not the largest, occupies an important place in the economy of Uzbekistan. There are many villages and settlements in this river basin, and the river plays an important role in their lives. The total area of the river basin is 12 thousand km<sup>2</sup>. The river begins at an altitude of 2960 m, 1.5 km northeast of the Tovtash Pass, on the northern slope of the Obihunda Mountains, the western branch of the Hissar Range in the Sughd Region of Tajikistan. The right tributary of the river before flowing into the Ortabulok is called Shinchasoy.<sup>1</sup>

It flows in a deep valley along a high plateau in its upper reaches. The upper part of the river valley is narrow in many places. The slopes of the valley are often steep, at least 50-120 meters high. After flowing into the Yargak tributary, the valley widens slightly (100-200 meters). From here, a gorge appears in the river (100 meters wide, near the village of Dugoba). Starting from the village of Khazratbashir below the city of Chirakchi, the river water is diverted into ditches and canals.

Many reservoirs have been built in the basin of this river. We will talk about the history of the Chimkurgan reservoir, which plays an important role in the economic life of the region, and its role in the life of the region.<sup>2</sup>

The Chimkurgan reservoir is a hydraulic engineering facility built in the middle reaches of the Kashkadarya River. On the territory of the Kashkadarya region, 60 km east of the city of Karshi. The construction of the Chimkurgan reservoir began in 1958. It has been put into permanent use since 1960. The full capacity is 500 million cubic meters, the useful capacity is 450 million cubic meters. The surface water level is 49.2 km<sup>2</sup>, the reservoir is the river basin. The length is 17.5 km, the maximum depth is 30 meters, the average depth is 17.2 meters. It is intended for seasonal regulation of the Kashkadarya flow.<sup>3</sup> Its maximum area is 49.2 km<sup>2</sup>, the volume is 0.5 km<sup>3</sup>, the depth is 28 m]. At minimum filling, the area is 11 km<sup>2</sup>, the volume is 10 million m<sup>3</sup>, the depth does not exceed 12 m. The reservoir is hot. The maximum water temperature is 29.5 °C,

1. 1 Muhammadiev M.M., Uryshev B.Yu. Hydropower devices. Textbook. – T.: “Science and Technology”, 2013, 280 p.

2 Information from the Amu-Kashkadarya Basin Department of Irrigation Systems. Data for 2002-2012

3 “Chimkurgan Reservoir” OZME. Letter Ch. First volume. Tashkent, 2000

recorded in June. It irrigates 188 thousand hectares (ha) of land in the Kamashinsky, Karshi, Guzorsky and Kosonsky districts of the Kashkadarya region. The Chimkurgon Reservoir includes an earthen dam, a tower spillway, left-bank (27 m<sup>3</sup>/s) and right-bank (22 m<sup>3</sup>/s) main distributors located in the lower bay. The dam is 33 meters high<sup>4</sup>. The tower water distributor is designed to supply water for irrigation and simultaneously remove excess water (water transfer capacity is 350 m<sup>3</sup>/s). The reservoir is hot. The maximum water temperature of 29.5 °C was recorded in June. The maximum area is 49.2 km<sup>2</sup>, the volume is 0.5 km<sup>3</sup>, the depth is 28 m]. At minimum filling, the area is 11 km<sup>2</sup>, the volume is 10 million m<sup>3</sup>, the depth does not exceed 12 m.

The reservoir is located between several villages, and as we have already said above, it is of great importance in the life of these villages. People use it for irrigation, fishing and other purposes. Below we present the boundaries of the reservoir with the villages.

These are:

Northern border - Karatepa and Durmon villages.

Western border - Birdoli, Tukboy, Gishti villages.

Eastern border - Chimkurgan and Pakhtaabad villages.

Southern border - Balandchayla and Kulemgir villages.<sup>5</sup>

These villages surround the reservoir from different sides and have the opportunity to use the reservoir directly. Thus, if we take into account the planned construction of a hydroelectric power station on the Chimkurgan reservoir and the existing and operated Berdoli pumping station, the water will be returned to the reservoir. These facilities operate according to the operating procedure of the PSPP. The use of electricity in this way plays an important role in supplying the energy system of our republic during periods of energy shortage. The Chimkurgan Reservoir was commissioned in 1963, the total irrigated area is 77,000 hectares, the design volume is 500 million m<sup>3</sup>, the useful volume is 352,011 million m<sup>3</sup>, the turbidity volume is 166 million m<sup>3</sup>, the evaporating surface is 11 km<sup>2</sup> high. The dam length is 30 m, the standard capacity is 330 m<sup>3</sup> / s, the spillway length is 128 m, the lower level is 458 m, the maximum volume level is 488.2 m. To calculate the hydropower potential of the Chimkurgan Reservoir, we studied the volume of water withdrawn and the volume of water released from it for irrigation in 2012-2021. According to its data, the reservoir contains an average of 386.7 million cubic meters of water, and its - 352.011 million cubic meters. m<sup>3</sup> of water is released for irrigation. Considering the complexity of the calculation with a useful reservoir volume of 17.2 m, the average annual hydropower potential can be calculated using the following formula.

## USED LITERATURE!

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4. “Kashkadarya (river)” OZME. Q-letter, volume one. Tashkent, 2000

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<sup>4</sup> Muhammadiev M.M., Uryshev B.Yu. Hydropower devices. Textbook. – T.: “Science and Technology”, 2013, 280 p.

<sup>5</sup> Muhammadiev M.M., Uryshev B.Yu. Hydropower devices. Textbook. – T.: “Science and Technology”, 2013, 280 p.