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**RECOMMENDATIONS FOR IMPROVING THE CONDITIONS  
OF USING THE WATER DISTRIBUTION FACILITY "TOSHRABOT".**

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**Abstract.** This article provides information on the conditions of the water distribution facility "Toshrabot" built in 1967 on the Zarafshan river in order to provide water to Gijduvon and Shofirkon of Bukhara region, Kyziltepa district of Navoi region, and recommendations for improving the conditions of use of the hydro node are given.

Key words: Water distribution facility, network, canal, picket, lifting devices.

**“TOSHRABOT” SUV TAQSIMLASH INSHOOTIDAN FOYDALANISH  
SHAROITINI YAXSHILASH BO’YICHA TAVSIYALAR.**

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**Annotatsiya.** Ushbu maqolada Buxoro viloyatini G‘ijduvon va Shofirkon, Navoiy viloyatini Qiziltepa tumanini suv bilan ta’minlash maqsadida 1967 yilda Zarafshon daryosida qurib ishga tushirilgan “Toshrabot” suv taqsimlash inshootidan sharoitlari bo‘yicha ma’lumotlar berilgan va Gidrouzeldan foydalanish sharoitini yaxshilash bo‘yicha tavsiyalar keltirilgan.

**Kalit so'zlar:** Suv taqsimlash inshooti, tarmoq, kanal, piket, yuk ko'tarish qurilmalari.

"Toshrobot" water distribution facility consists of 6 networks, the water capacity is adjusted to 530 m<sup>3</sup>/s.

1. Toshrobot Zarafshan.
2. "Bosh Shafirkon".
3. Gijduvan canal.
4. Mayta canal.
5. Okrabot canal.
6. Ogitma.

In 1968, for the purpose of transferring flood waters, the Ogitma spillway was built on the right side of the river above the water structure, and then this spillway was put into operation by digging a canal to dump water into the Sho'rkol reservoir on PK-20.

### ***1. Toshrobot Zarafshan river.***

The length of concrete embankment on the left side of the Zarafshon river dam is 100 m,  $m=1.5$ , the bottom of the embankment is 52 m, the water carrying capacity is 402 m<sup>3</sup>/s, and the maximum flow of water is 322 m<sup>3</sup>/s due to the fact that the river bed is buried.

### ***2. Main Shafirkon canal.***

The flow capacity of the main Shofirkon network is 128 m<sup>3</sup>/s, the water flow capacity of the canal is 70 m<sup>3</sup>/s, the length of the canal is 5.4 km.

On the right side of the structure there are Gijduvon, Mayta and Oqrabot networks.

The Rostgoy water distribution facility is located at PK-34+00 of the main Shofirkon canal. The facility was built and commissioned in 1960 and distributes water to 4 networks.

1. Abomuslim canal.
2. Rostgoy canal.

3. Kalkanrot canal.

4. Shafirkon.

3. Gijduvan canal

The Gijduvan canal consists of 2 spans, each of which is 3.10 m high and 3.35 m wide, and has a capacity of 6 m<sup>3</sup>/s.

#### ***4. Mayta canal***

Mayta canal consists of 2 points, 1.10 m wide, 1.60 m high flat sheet is installed, water capacity is 1.50 m<sup>3</sup>/s.

#### ***5. Oqrabot canall***

A flat sheet is installed in Oqrabot canal, wide 1.60 m, height 1.60 m, water flow capacity 0.50 m<sup>3</sup>/s.

#### ***6. Ogitma.***

In order to prevent the beginning of the channel from being washed away by water, a threshold was built at PK-2+60 of the Ogitma spillway (the second name is the water inlet to Shu'rkol), water is pumped into the spillway during floods and to fill the Shurkol reservoir, the water flow capacity of the spillway is 80 m<sup>3</sup>/s, the water inlet channel to Sho'rkol is water capacity 30 m<sup>3</sup>/s, both accept 110 m<sup>3</sup>/s water.

After analyzing the results of the observation and inspection conducted at the facility, we recommend the following recommendations for improving the conditions of use of the Toshrobot hydroelectric plant:

In 2023, in order to easily open and close the sluices in the Jilvon water distribution facility, the unworkable lifting mechanisms in the "Batrak" channel should be replaced with new ones, that is, two EVD 5 L-4 m lifting mechanisms should be installed.

Toshrobot, Rostgoy and Jilvan water distribution facilities to improve night lighting and electrical cabinets, frames, lifting mechanisms and other metal parts to be cleaned from rust and dirt and painted twice to prevent corrosion, the goal is to prevent all kinds of accidents by using them for many years without damage.

It is necessary to reconstruct 4 segment sluices in Toshrobot water distribution facility and remove segmental sluices No. 6 and No. 8 in Zarafshan Toshrobot network and install 2 new segment sluices instead. The goal is to improve the technical condition of the structure and to open and close it at the right time without wasting water.

All the metal parts in the building should be cleaned and repainted to protect against corrosion and extend the service life of transformers, emergency transformers, reducers, taps, electrical cabinets and hoppers, concrete barriers should be whitewashed, oil should be poured to improve the performance of reducers, cables and screws should be lubricated. 1 EVD-5 L-4 m lifting mechanisms and 1 EVD-5 L-4 m due to wear and tear of screws and reducers in the Oqrabot canal at the Toshrobot water distribution facility and 1 EVD-5 L-4 m due to wear and tear of the screws and reducers at 1 point of the Mayta canal Lifting mechanisms should be replaced with new ones. The goal is to open and close at the right time without wasting water. 80,000 kw. electricity was allocated, of which 43,040 kw. electricity is consumed. Installation of solar panels is required in order to save electricity used for the operation of the facility.

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