TYPES AND CLASSIFICATION OF RESERVOIRS

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Abstract: *Currently, great attention is paid to reservoirs in our country. Reservoirs will be built in mountainous regions and lowlands. Most of the reservoirs in the territory of Uzbekistan belong to lowland regions. It should be said that reservoirs in low plains have a higher amount of sediments in water than in mountainous regions. In the article, we will think about the same issues, that is, about the location area and the state of blurry pressure.*

Key words*: reservoir, spillway, bed, normally damped level, hydroelectric power station, turbidity, sediments.*

Until now, many classifications of reservoirs have been proposed according to different characteristics. There are more than 60 reservoirs in the Aral Sea basin, their useful volume is more than 10 million m3. The total volume of all reservoirs is 64.5 km3, of which 46.5 km3 is the useful volume. The reservoir is a hydrotechnical facility designed to fill its volume at the expense of the water of streams and rivers in the winter season and to ensure the delivery of water to the consumer in the field of public economy and power plant sectors.

Reservoirs are mainly of two types:

1. **Injected reservoirs** – deliver water to the reservoir through special channels. In these reservoirs, water is pumped. But if these reservoirs are covered with mud, it will be completely impossible to clean them, and in order to prevent this, great importance is attached to the clarity of the water.

2. ***Crested reservoirs*** – is to block the flow in the reservoir and retain water. In these reservoirs, all the turbidity in the flow comes and remains in the reservoir. As a result, turbidity is faster than that of impoured reservoirs.

Filled reservoirs in Uzbekistan are located in Andijan, Bukhara, Jizzakh, Namangan, Samarkand, Syrdarya, Surkhandarya, Fergana and Kashkadarya regions. They are listed below (Table 1):

Filled reservoirs in Uzbekistan

№	Name of reservoirs	Total water volume	Useful water volume	Dead water volume	Reservoir area	Dam height
		million.m3			km2	m
1	Asaka-Adir	3,5	3,5	0,5	0,29	24
2	Quyumozor	320	270	50	18	28,1
3	To‘dako‘l	1150	1010	140	215	11
4	Sho‘rko‘l	170	170	17	42,3	14,5
5	Jizzax	100	87,3	13	12,4	25
6	Qovultepa	53	50	3	3	40
7	Talimarjon	1525	1400	125	77,3	35
8	Qamashi	25	23,8	1,2	3,82	14,9
9	Toshloqsoy	2	1,65	0,35	0,24	32
10	Kosonsoy	165	160	5	8	64
11	Eskiyer	18,5	16	2,5	1,72	23

12	Ko‘kshereksoy	6,2	5,63	0,565	0,64	12,5
13	Kattaqo‘rg‘on	900	840	60	79,5	31,25
14	Uchqizil	160	80	80	10,5	11,5
15	Degresss	12,75	12,20	0,55	2,25	12,8
16	Oqtepa	120	100	20	11,5	14
17	Karkidon	218,4	211,4	7	9,533	70
18	Qo‘rg‘ontepa	28,6	28,3	0,3	2,81	45
19	Sho‘rsuy	6,2	5,9	0,3	0,62	30
Total		**4984,15**	**4475,7**	**526,27**	**499,423**	

Currently, great attention is paid to reservoirs in our country. Reservoirs will be built in mountainous regions and lowlands. Most of the reservoirs in the territory of Uzbekistan belong to lowland regions. It should be said that reservoirs in low plains have a higher amount of sediments in water than in mountainous regions.

As a result, half the volume of the reservoir 25 – becomes muddy after 50 years, and 50 – completely fails in 100 years. For example, the Qairaqum reservoir is 4.16 billion. 0.413 billion from m3. m3 volume covered with mud (0.8%), 5.7 billion in Chordarya reservoir in 3 years. 0.10 billion from m3. m3 covered with mud (0.6%) and so on.

It is used for irrigation of reservoirs and for hydroelectric power station purposes. The following events occur in this case:

- when used for irrigation, the useful volume of sediments is pushed towards the dead volume;

- it becomes difficult to grow water-loving plants from the reservoir;

When used in a hydroelectric plant, it is strictly necessary to maintain the water level at the NSS for the normal operation of the hydroelectric power plant, and as a result, there is a possibility of an increase in water-loving plants in these

areas. When considering the issues of reservoir water resources and water balance and their impact on river flow, classification of the reservoir according to their origin is used. According to this sign, the 3 most characteristic types of reservoirs are distinguished:

➢ river reservoirs created in river valleys;

➢ ash reservoirs created by lake water rise;

➢ river reservoirs are the most common reservoirs that occur in connection with the filling of adapted reservoirs that are specially transported by river water. A.B.Avakyan, except for those mentioned in his work:

➢ underground; marine reservoirs;

➢ discharge water reservoir can be divided into collectors.

Reservoirs are often classified according to configuration, morphometric indicators, water exchange characteristics and flow regulation characteristics. Classification by these symbols is now considered. It is more difficult to classify a reservoir according to the configuration, because they have very variable shapes and symbols. In addition, the configuration of the reservoir changes as the water level in them changes. Depending on the next situation, many proposed classifications have considered reservoir configuration at Normal Dim level. Currently, the most detailed is M.A.Fortukatov's classification. In doing so, he suggests distinguishing between four types of reservoirs:

➢ in the valley; lake-like; reservoir with complex configuration.

Separate types of reservoirs, in turn, are divided into several small groups according to their shape. V.S.Vuglinsky, in his work, it was proposed to distinguish three types of reservoirs by configuration:

➢ The elongated reservoir is characterized by an elongated shape and corresponds to the condition L> 5B, where; L– reservoir length, V - its average width;

➢ Round reservoir has a round or elliptical shape under the condition L < 5B;

➢ Complex reservoirs, unlike the previous two types, often have a variable sign in the plan with separate narrowing and expansion alternating.

Classification of the reservoir according to morphometric characteristics is presented in the works. The most successful classification of reservoirs by the size and area of the water surface A.V.Avakyan and Invited by V.A.Sharopov at work. This classification is based on the analysis of the size of large quantities of earth's reservoirs and is considered sufficiently detailed (Table 2):

Classification of reservoirs by size

Category of reservoirs	**Full size, km3**	**Water surface area, km2**
The largest	>50	>5000
Very large	50-10	5000-500
Big ones	10-1	500-100
Average	1-0,1	100-20
Not big	0,1-0,01	20-2
Small	<0,01	<2

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