

$$AWQI = (0,229 \pm 0,554) + (0,514 \pm 0,340) \cdot SCWQI;$$

$$R = 0,73018; \quad N = 4;$$

$$AWQI = (0,225 \pm 0,154) + (1,290 \pm 0,232) \cdot EWQI;$$

$$R = 0,96899; \quad N = 4;$$

$$AWQI = (3,082 \pm 1,044) - (0,025 \pm 0,013) \cdot CWQI;$$

$$R = 0,81023; \quad N = 4.$$

Thus, for the first time using AWQI the quality of Rivers Sisian and Goris water evaluate. It was shown that from the source to the mouth of the river there is an increase in the value of the AWQI, which indicates the decline in the quality of water of the rivers from the first to the second class of pollution.

References

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WATER QUALITY ASSESSMENT “YEREVAN LAKE” ARTIFICIAL RESERVOIR

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In the last years we've suggested Entropic water quality index (EWQI) and Armenian water quality index (AWQI) for evaluation surface water quality [1].

Development of water quality assessment methods using conventional indicators comprehensively taking into account various properties of surface water is an important issue. It must be noted that most developed complex characteristics of water object in one way or another connected with the existing maximum permissible concentration (MPC). The aim of presented paper is evaluation of «Yerevan Lake» Artificial Reservoir by indexes of water quality. Five indexes of water quality (IWQ) which differ on structure, applicability and used approaches were used for this purpose. The Water Contamination Index (WCI), Canadian Water Quality Index (CWQI), Specific-combinatorial Water Quality Index (SCWQI), EWQI and AWQI.

The artificial reservoir «Yerevan Lake» is located on the south-west of Yerevan. It was built in the gorge of the river Hrazdan in 1963–1966. The lake is situated at an altitude of 908 m above sea level, has an area of 0,65 km², average depth – 8 m, and the maximum – 18 m, water volume of approxi-

mately 5 million m³ [2]. «Yerevan Lake» Artificial Reservoir has one monitoring post: number 112. It was shown that water of the reservoir is polluted by biogenic substances and heavy metals. Thus, in the Reservoir water is regularly increased MPC of copper, vanadium, aluminum, and selenium. For example, BOD₅, NH₄⁺, NO₂⁻, V, Cu, Al and Se number of MPC increasing cases is 6, 10, 12, 12, 10, 7 and 6 times respectively. The amount of excess cases of MPC –

$$N = 63; \quad \sum n \log_2 n = 203,04;$$

$$I = 203,04/63 = 3,22;$$

$$H = \log_2 63 - 3,22 = 2,75;$$

$$EWQI = H/I = 2,75/3,22 = 0,855.$$

The total amount of the multiplicity of MPC exceedances –

$$M = \sum m = 36,3; \quad \log_2 M = 5,18;$$

$$AWQI = EWQI + 0,1;$$

$$\log_2 M = 0,855 + 0,518 = 1,373.$$

Analysis of obtained data indicate that AWQI has liner dependence with WCI, SCWQI, EWQI and an inverse dependence with CWQI.

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THE STUDY OF THE DIVERSITY OF SPECIES OF TREES AND SHRUBS ON THE SCHOOL № 45 IN ARKHANGELSK

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Objective. To create an electronic mini-encyclopedia of species of trees and shrubs growing in the school № 45 city of Arkhangelsk. In our city a lot of environmental problems: dustiness, high concentration of toxic emissions, noise levels in excess of the maximum allowable health norm, and others. In addressing these issues play huge role greenery. School № 45 is situated on Sadovaya Street, in the heart of Arkhangelsk in the vicinity of roads, buildings, market. On school grounds

planted with different species of plants, which are designed to improve the quality of life and work of children and adults. About the city, its culture and the improvement of the inhabitants can be judged by the appearance of its streets, courtyards, schools territories.

The territory of the school is to become green on the pre-arranged plan.

1. I studied the main types of vegetation.
2. The range of planting material for landscaping of the city of Arkhangelsk, which can be used on school grounds.
3. Some rules of care for plants.
4. Main climatic factors affecting the growth and development of plants: light, heat and moisture.

On the territory of the school № 45 grow deciduous trees, conifers and deciduous shrubs. Deciduous trees: *Betulaceae*, *Salix L.*, *Acer platanoides*, *Sorbus aucuparia*. Conifers: *Pinus sibirica*, *Pinus sylvestris L.* Listvennye shrubs: *Arónia melanocár-*

pa, *Amelanchier ovalis*, *Viburnum opulus L.*, *Syringa vulgaris L.*, *Physocarpus opulifolius*, *Rosaceae*.

Conclusions:

1. School № 45 vegetated land as planned.
2. When planting and placing plants accounted for the basic principles of landscaping and climatic conditions.
3. All pupils and school staff want to see a beautiful school park.

Recommendation:

1. Plant near school blue spruce and larch.
2. Each class having its nominal alley and take care of it.
3. In honor of the director L.V. Elkina and teachers to plant cherry-apple orchard.

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