

Estimation of Spring Runoff Characteristics of Lowland Rivers in Kazakhstan

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Abstract

This paper considers the methods and results of determining statistical parameters for spring flood runoff by the main lowland river basins of Kazakhstan for the long-term period. It presents a series of observations made for the long-term period, determines statistical parameters for the depth of spring flood runoff as well as constructs the probability curves of the depth of spring flood runoff by study areas. The paper also gives an estimation of the



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probability values of the depth of spring flood runoff for the calculation period and for the last period of runoff formation in the context of ongoing climate change. These characteristics are determined by four river basins belonging to the lowland territory of Kazakhstan.

References

- [1] Baidal, M.Kh. 1964. Long-term weather forecasts and climate fluctuations. Part I-II. in Kazakhstan, Leningrad Gidrometeoizdat, 446.
- [2] Galperin, R.I., Davletgaliyev, S.K., Chigrinets, A.G., Moldakhmetov, M.M., Makhmudova, L.K., Avezova, A. (2011). Renewable surface water resources of Western, Northern, Central and Eastern Kazakhstan. Almaty, "National Scientific and Technological Holding "Parasat" JSC, Institute of Geography of CNZMO JSC of the Republic of Kazakhstan.
- [3] Rozhdestvensky, A.V., Ezhov, A.V., Sakharuk, A.V. 1990. Estimation of accuracy of hydrological calculations. Leningrad: Gidrometeoizdat.
- [4] Kritsky, S.N., Menkel, M.F. 1981. Hydrological foundations of river runoff control. Moscow: Nauka.
- [5] Shvets, G.I. 1972. Outstanding hydrological phenomena in the south-west of the USSR. Leningrad: Gidrometeoizdat.
- [6] Sokolovsky, D.L. 1968. River runoff. Leningrad: Gidrometeoizdat.
- [7] Semenov, V.A. 1986. Surface water resources of the arid inland areas and information support for their assessment. Abstract of Doctoral dissertation. Irkutsk.
- *** Guide to hydrological forecasts. 1989. Issue 1. Long-term forecasts of elements of the water regime of rivers and reservoirs. Leningrad: Gidrometeoizdat.
- *** Manual on the definition of calculated hydrological characteristics. 1984. Leningrad: Gidrometeoizdat.
- *** Research applied handbook on the climate of the USSR. 1989. Series 3 – the long-term data. Vol. 18. Kazakh SSR. Book 1 and 2. Leningrad: Gidrometeoizdat.
- *** Rulebook SP 33-101-2003. 2004. Definition of basic calculated hydrological characteristics. Moscow: Russian State Committee for Construction.
- *** SNIP 2.01.14-83. 1983. Determination of calculated hydrological characteristics. Moscow: Stroizdat.

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