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Long-range forecasting of the ice break-up dates for the Yukon River by the synoptic statistical method / Pavroz Yu.A. // Hydrometeorological studies and forecasts. 2023. No. 3 (389). pp. 112-124.

A scheme for obtaining a long-range forecast of the dates of ice break-up is proposed for the Yukon River (North America). The scheme is based on a well-proven national practice of ice forecasting, namely, on the meteorological statistical method. The method utilizes a linear dependence of the predicted value on the characteristics of temperature and pressure fields in the North Atlantic and the North Pacific. The most informative predictors are selected. Statistical stability of the forecast formula parameters is verified. The average forecast lead time is 40 days. The verification of the proposed methodology performed for three stretches of the Yukon River on the basis of independent data for the period from 2009 to 2015 showed that it allows obtaining quite satisfactory results with a fairly low root-mean-square error and a fairly high accuracy of forecasts.

Keywords: river ice break-up, long-range forecast, synoptic statistical method, temperature and pressure fields, predictors, stability, method verification

Tab. 2. Fig. 3. Ref. 8.