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Short- and medium-term forecasting of water levels of the Tobol basin rivers /
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In order to provide the necessary hydrological information for operational decisions on the use of water resources and protecting the population from dangerous floods for the rivers of the Tobol river basin, a methodology for daily forecasting of average daily water levels with a lead time of 1 to 10 days has been developed. The hydrograph extrapolation method was used, which takes into account water levels for the date of the forecast and for the 5 previous days. The methodology was developed for 64 sections located on the Tobol River and its tributaries of various orders. To estimate the parameters of the scheme for obtaining forecasts and their verification, hydrological observation data for the period from 1985 to 2022 were used. For most rivers in the basin, the methodology provides satisfactory results. In general, the accuracy of forecasts and their lead time increase with increasing catchment area. The methodology can be used within an automated system for preparing and issuing forecasts.

Keywords: hydrograph extrapolation, water levels, forecast, lead time; verification, error and accuracy of forecasts

Tab. 5. Fig. 3. Ref. 13.