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A set of methods for short- and medium-range forecasting of water levels on Russian rivers is proposed. The methods utilize observation data from stream gages. The forecast is expressed as a linear function of observed water levels and is adjusted by replacing its extreme values with an acceptable minimum or maximum.

The first method of hydrograph extrapolation takes into account only water levels observed at the forecast gage. The second, more general method additionally takes into account water levels observed at an upstream gage. The third, even more general method additionally takes into account water levels observed at a tributary gauge. Validation of these methods using independent data showed that each can produce satisfactory forecasts for a great number of river gages. Recommendations for implementing the presented methods in Roshydromet's operational hydrological forecasting practices are provided.

Keywords: stream gage, water level, short- and medium-range forecast, forecast quality, choice of method

Tab. 5. Fig. 1. Ref. 20.