

## **Abstract**

This bachelor thesis focuses in its review part on commonly exploited methods of discharge measurement (velocity–area methods, dilution method, volumetric method, formed constriction methods, slope–area method and rating curve). The principle of discharge measurement and calculation, advantages, disadvantages, and accuracies of individual methods, as well as the type of stream suitable for different method, are reviewed in theoretical part of the thesis based on available literature. In the practical part of the thesis, measurements with selected methods (current meter, FlowTracker, float method and dilution method) were made on 3 lower order streams equipped with Czech Hydrometeorological Institute gauging stations. Discharges collected with individual methods were compared with one another and with the discharges from the gauging stations. Resulted deviations of discharge values were confronted with the accuracies of individual methods presented in the review, and discussed. It was determined, based on 14 values of discharge, that on selected streams, the highest accuracies were reached with FlowTracker (relative deviation up to 12 %). Dilution method had lowest accuracies (relative deviation up to 25 %). The interpretation of the results is complicated due to low resolution of the gauging stations, which may lead to noticeable overestimating of the relative deviation. In order to reach more accurate conclusions, it would be appropriate to make more measurements with the use of higher resolution gauging stations.

Key words: discharge measurement, velocity–area method, dilution method, gauging stations