

The main objective of the thesis is to study artificial wastewater recharge in the area of Řevničov and reassessment of related problems such as groundwater chemical changes, colmatage, and unfavorable legislation in the Czech Republic. Individual chapters describe the experience with the above mentioned topic in the Czech Republic, but classifies it into the global context.

The major part of the thesis focuses on the assessment of the qualitative and quantitative impacts of wastewater artificial recharge in the geological environment. These conclusions are drawn from monitoring changes of groundwater quality, which are controlled on the network of monitoring boreholes in the Řevničov experimental catchment. The natural attenuation of geological environment has considerable impact to final composition of contaminated water, which is compared to legal limits of underground and potable water in Czech Republic. In the research area several tracing tests were also applied, with the aim of proving the expected flow of wastewater into monitoring borehole.

The obtained data specify the situation in the area of interest, or may serve as a source of information for future studies dealing with similar topics.