This thesis deals with implementation of Water Framework Directive (2000/60/EC) in the Czech Republic. The study area was the Rolava River basin in the Ore Mountains (northwest of Bohemia). The ecological status assessment was applied to both - the main stream and relevant tributaries. Available hydrobiological and hydrochemical data enhanced with the field hydromorphological survey using the Hydroecological monitoring (HEM, Langhammer, 2007) were applied in this thesis. Results of the field survey were compared with two ecomorphological methods: LAWA-FS (LAWA, 2000) and EcoRivHab (Matoušková, 2003, 2007). As a final result, it was found out the water body on upper course of the Rolava River achieved good ecological status. Water body on lower course of the Rolava River and of the tributary the Nejdecký Brook were classified as not achieving good ecological status. The Rolava catchment has very specific conditions and huge potential to achieve the good status in the future.