The focus of this thesis is on the application of ecohydromorphological survey of a small watercourses flowing through the Landscape Protected Area Křivoklátsko (LPA Křivoklátsko). A brief characterization of the study are, the catchment area of the Klíčava River, was written based on the study of literature as well as on the digital and analogue bases. The specificity of this region lies in the presence of the valley reservoir Klíčava, Lánská deer-park and the LPA Křivoklátsko. Two different methods of a stream habitat survey were applied, the Czech field survey method the EcoRivHab (Matoušková, 2003, 2007) and the River Habitat Survey - RHS (Environmental Agency, 1997, 2003) from the United Kingdom used in the UK and some other European states. This thesis examines the possibility of the application of these methods on a small watercourse running through a hilly country with a significant proportion of natural reaches, which are situated mainly in the Lánská deer-park. These regions were used as models for definitions of reference localities. The most anthropogenically impacted reaches were localized in the upper part of the Klíčava catchment area, which has been in the recent past intensively used for agricultural purposes, nowadays it is only used extensively. This part of the watercourse has been severalfold divided by dams and straightened. The lower part of the Klíčava River has also been affected. The outflow is here completely regulated and an artificial river bed has been built there. The ecohydromorphological state is also significantly affected by the traffic communication in the flood plain as well as flood protection measures taken by the municipality Zbečno. The thesis suggests concrete modifications of the watercourse parts that can still be altered and rehabilitated. The results of these survey were given to the management of the LPA Křivoklátsko. They play an important role in protection of important localities and in the search for habitation of protected species based on the ecohydromorphological characteristics.