One of the fundamental branches of landscape ecology is the assessment of changes in a landscape through comparisons of its state (usage) at different points in time. This typically employs maps, photographs, and aerial and satellite photography. However, important groundwork for the interpretation of landscape ecology may also be supplied by paintings and drawings of a landscape, provided they are sufficiently realistic. The construction of water reservoirs is among the human interventions that change the face of a landscape most profoundly. Before being dammed and flooded, valley and floodplain landscapes usually featured a varied and picturesque mosaic, attracting artists to favour it over other areas in their work. Typical examples are the valleys of the Dyje and Želetavka River in south-western Moravia, which were partially flooded during the construction of the Vranov Dam in the 1930’s. From the early 19th century, this romantic landscape had been portrayed by a large number of Austrian and Czech painters who captured its distinct features, often to the smallest detail. To assess the landscape changes, there thus exists a large series of landscape paintings and prints, especially lithographs, held by the Museum of South Moravia in Znojmo. Apart from the Vranov Dam, the article discusses the artistic documentation of landscape and the construction of the Vír Dam on the Svratka, the Vltava reservoir cascade and system of water reservoirs of Nové Mlýny in South Moravia. The artistic decoration of reservoir structures is briefly mentioned as well.