

Evaluation of the hydrological role of wetlands in the Włodawka River catchment (Polesie Lubelskie)

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Abstract: The Włodawka River catchment of an area of 725 km² covers the central and eastern part of the Łęczna-Włodawa Lake District. Evaluation of the role of hydrogenic areas in runoff creation was based on materials of the Department of Hydrography and the Institute of Meteorology and Water Management data. The analysis was conducted for selected catchments in which additional hydrometric measurements and water quality tests were done. Such parameters as: the share of hydro-genic surfaces in total catchment area, types of wetlands, their hypsometric location and position with reference to drainage streams were taken into consideration for evaluation. The degree of anthropogenic transformation of the marshland was expressed in terms of density and depth of the drainage ditches that dissect it. It was found that the drained gyttja of Krowie Bagno plays a considerable role in increasing the minimum discharge. Wetlands in the Włodawka River catchment influence the conditions of the runoff and water quality, which is noticeable, primarily, in the concentration of organic carbon, and of nitrogen and phosphorus compounds.

Key words: hydrology, physico-chemical properties, Polesie Lubelskie, wetlands