

Quantitative and Qualitative Characteristics of Dissolved Organic Matter in Urban Small Water Reservoirs – Julita Dunalska, Jolanta Grochowska, Maciej Czasnowski

Summary

Dissolved organic matter in twenty-one small water reservoirs located in three south-eastern districts (Jaroty, Skanda and Wschód) of the Olsztyn city was characterized. The study revealed the quantitative (measured as DOC) and qualitative (measured as $SUVA_{260}$) diversity of the dissolved organic matter in seasonal and spatial distribution, but also with regard to the watershed's utilization intensity. Due to their small volume, the reservoirs collect considerably much organic matter, which was confirmed by the high or very high values of DOC (over $40.0 \text{ mg C}\cdot\text{dm}^{-3}$) determined in two of the examined reservoirs. The organic matter was mainly of allochthonous origin. As shown by the Skanda district example, meadows – if dominant in the watershed – increase the aromatic properties of organic matter. The significant contribution of the organic matter of anthropogenic origin was well illustrated by the example of the most developed Wschód district.