

IMPACT OF THE SMALL WATER RESERVOIR PSURÓW ON THE QUALITY AND
FLOWS OF THE PROSNA RIVER
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Abstract: The paper presents a small water reservoir Psurów located on the Prosna River (right tributary of the Warta River) in the Opolskie Voivodeship (southern Poland). Results of water quality analyses of the Prosna River flowing into the reservoir and the outflowing water, as well as water stored in the reservoir have been discussed. Water flows of the Prosna River above and below the Psurów reservoir were analyzed. The analyses were carried out from November 2006 to October 2008. The following water quality indicators were measured: PO_4^{3-} , NO_3^- , NO_2^- , NH_4^+ , BOD_5 , DO, water temperature, pH, electrolytic conductivity, TSS and chlorophyll a, for which basic descriptive statistics was calculated. The research showed that the small water reservoir Psurów contributed to the reduction of the following loads: phosphates (by about 21%), nitrates (by 26%), nitrites (by 9%), ammonia (by 5%) and total suspended solids (by 17%). It was found out that there was a statistically significant relationship ($p < 0.05$) between the volume of water flowing out of the reservoir and the inflowing water (Pearson's correlation coefficient: $r = 0.93$). Based on the Vollenweider's criterion the Psurów reservoir was classified to polytrophic reservoirs.