

ECOLOGICAL POTENTIAL OF SURFACE WATERS IN NATURAL SCIENTIFIC RESERVE “LOWER PRUT”

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Abstract. According to the Regulation on monitoring and systematic evidence of the surface and groundwater status, the Belevu Lake is included in the network of surface waters state monitoring in the Republic of Moldova. The research results have marked a low value of the self-purification capacity for Belevu Lake water, between 0.12 and 0.19, which is of 1.2-2 times lower than those from Prut River (0.25), correlating positively with the values of BOD₅, COD-Cr and the time of biochemical oxidation of ammonium ions. The oxidation of ammonium into nitrite (NH₄⁺(NH₃) → NO₂⁻) in the nitrification process in lake water (collected in November 2014) takes place about 25 days and the process NO₂⁻ → NO₃⁻ being more than 35 days. The period of nitrification is about 2 times higher than in lake water collected in 2015 and 2.8-3.0 times higher than those of the model with water from Prut River.

Keywords: Lake Belevu, self-purification capacity, nitrification process, BOD₅, COD-Cr.

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