

[Study of the efficiency of hypolimnetic aeration process on the preservation of the thermal stratification](#)

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Description

Lake eutrophication has proven to be a stubborn environmental problem. Depletion of dissolved oxygen (O<sub>2</sub>) in the deep layer (hypolimnion) of lakes during stratification and its deleterious effect on fish stocks have been observed and analyzed for more than 100 years. Although it has taken only 60 years for humans to turn many freshwater lakes eutrophic, studies estimate that their recovery may take 1,000 years under the best circumstances. In deeper (thermally stratified) lakes, the stabilization can involve several factors, including biogeochemistry of the deep layer of water (hypolimnion), temperature of the hypolimnion, shape of the lake basin, abundance of rooted plants, and food web structure. The main purpose of this study was to show the efficiency of hypolimnetic aeration process on the preservation of the thermal stratification, the increasing the amount of oxygen dissolved, and the reduction in phosphorus ...