

Case Study – Bioremediation of Lake Peca, Biatorbágy with Bioclean™ Lake/Pond Clarifier and Bioclean™ Aqua Fish

Area: 3 hectares

Lake Peca is a popular fishing lake in city Biatorbágy, not far from Budapest. For ensuring the fish number that satisfies the anglers visiting the lake, high number of fish is stocked into the lake every year. This, and the algae growth enhanced by fish metabolites increase the organic matter, thus sludge production of the lake.

The bioremediation treatment of the lake began in May, 2008. The main goals of the treatment were sludge thickness reduction and algae control. When the treatment begun, the algae number was 67 782 ind./ml, which led to very low water transparency level (23 cm Secchi-depth). The algae species composition was unfavorable, with several blue-green algae species in dominance. The sludge thickness was about 37-38 cm, and the sediment had a high organic content, endangering the oxygen balance and aquatic life.

The biorehabilitation of the lake took 4 years, between 2008 and 2011. Each year, 4 treatments were carried out. The final ecological status establishment was done in March 2012. The results showed the great success of the treatment, and led us to the conclusion that the bioremediation treatment of the lake can be finished. The average sludge thickness was only about 20 cm, which means as much as 15-18 cm reduction. The dominance of blue-green algae ceased. The algae number in March 2012 was only 2 005 ind./ml, which resulted in a transparent, and all in all, better looking lake.

Our results are summarized in the table below.



Lake Peca

	2008	2012
Ammonium (mg/l)	< 0,04	0,07
Nitrate (mg/l)	< 0,25	0,2
Ortophosphate (mg/l)	0,05	< 0,05
Total Algae Count / ml	67 782	2 005
Secchi-transparency (cm)	23	40
Sludge Thickness (average in cms)	38	20

I confirm the authenticity of the data introduced above:


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Pál Hegyi

President of Peca-tó Anglers' Association

