Silver Lake Biofilter

The Silver Lake Conservation Association represents many of the residents of Silver Lake, Indiana in their efforts to protect and enhance water quality in one of the state's 500+ glacial lakes. The lake has experienced a period of rapid cultural eutrophication in the past 100 years, caused by excessive runoff of sediment and nutrients from nearby homes and farm fields.

The association chose a vulnerable site on the lake's southern age to install a "biofilter" to trap nutrients and sediments before they entered the lake. The biofilter consists of a gravel and sand filter on which facultative wetland plants grow. As water runs off nearby fields, it is trapped in the biofilter, where sediments are filtered out and nutrients are incorporated into a beautiful community of plants.

Commonwealth Biomonitoring designed and built the Silver Lake biofilter in the summer of 2005. The biofilter is expected to reduce loading of sediment to the lake by 500 kg per year. There will also be a reduction of 8 kg of nitrogen and 1 kg of phosphorus each year (about 5% of the total annual input to the lake). These reductions in loading are expected to help return Silver Lake to a more natural rate of eutrophication.