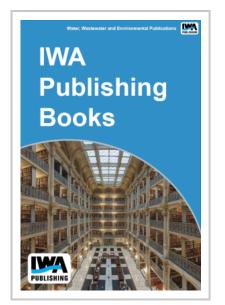


Feasibility, Design Criteria, and O&M Requirements for Small Scale Constructed Wetland Wastewater Treatment Systems

The expanding use of decentralized wastewater management has resulted in an increased interest in smallscale wetland treatment systems. However, there is limited information available on the use, distribution of and performance of these small-scale systems. The purpose of this study was to address this knowledge gap by developing criteria for the feasibility, design, operation, and maintenance of small-scale wetland treatment systems.

Monitoring data from the assembled small-scale wetland database was used to develop sizing criteria for FWS and VSB wetlands. Loading rates and corresponding effluent quality were developed for BOD, TSS, TKN, phosphorus, and fecal coliform bacteria.



Where there was adequate data, the variation in monthly vs. annual average effluent concentration was assessed to provide a factor-of-safety approach to wetland sizing.

Information on internal processes, hydraulic design, operation, maintenance, cost, and industrial applications of constructed wetlands is also presented in this report.

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