

Decentralized Wastewater Treatment in Coastal Touristic Areas Using Standardized Modular Biological Filtration (SMBF)

Authors : Andreas Rüdiger

Abstract : The selection of appropriate wastewater treatment technology for decentralized coastal tourist areas is an important engineering challenge. The local situation in coastal tourist cities and villages is characterized by important daily and seasonal fluctuations in hydraulic flow and pollution, high annual temperature variations, scarcity of building area and high housing density. At the same time, coastal zones have to meet stringent effluent limits all over the year and need simple and easy technologies to operate. This article presents the innovative technology of standardized modular aerated up-flow biofiltration SMBF as an adapted solution for decentralized wastewater treatment in sensitive touristic coastal areas. As modular technology with several biofiltration units, the system is able to treat low and high loads with low energy consumption and low demands for operators. The article focuses on the climatic and tourist situation in Croatia. Full-scale plants in Eastern Europe and Croatia have presented as well as dimensioning parameters and outlet concentrations. Energy consumption as a function of load is demonstrated.

Keywords : wastewater treatment, biofiltration, touristic areas, energy saving

Conference Title : ICW 2023 : International Conference on Wastewater

Conference Location : Dubrovnik, Croatia

Conference Dates : October 02-03, 2023