On-site Small Scale Wastewater Treatment Plants

On-site small scale wastewater treatment plants, which often serve a single house or building, are the most feasible solution for solving the water scarcity and wastewater management issues especially in rural and vulnerable localities where the dispersed pattern of houses makes building a collection network unfeasible.

The Treatment Plant can solve the wastewater collection and disposal problems in those communities and contribute in improving the management of the limited water resources, by economizing in a big portion of the domestic drinking water used for irrigation. Along with the benefit of protecting the water resources from pollution due to the disposal of untreated wastewater as well as reducing environmental and health problems and risks.

Treatment process

In the Treatment Plant which is based on the activated sludge technology, the treatment process starts with a primary treatment stage that includes screening; this stage is followed by secondary and advanced treatment stages, where the oxidation and disintegration of the incoming biodegradable material take place as well other biological processes as the case of nitrification and denitrification processes. Later on, the biologically treated effluent is enhanced even more by a filtration process that follows the biological treatment and that will help in protecting the irrigation network during the reuse of the treated effluent.