Abstract

Historically, many South Australian regional towns have been serviced by septic tanks with either drainage trenches or an effluent drainage scheme (STEDS). Ageing septic tank infrastructure has shown signs of failure which is of particular concern in coastal holiday towns where wastewater from failing systems may enter the marine environment. Recent drought conditions highlighted the need to utilise all water resources, therefore collecting and treating wastewater to a suitable standard for recycling was a viable option and provided many regional towns with an alternative source of water.

Community wastewater management systems (CWMS) are designed to collect, treat and re-use or dispose of wastewater from town properties. Collection of either full sewage or septic tank effluent may utilise gravity pipes, vacuum technology, small allotment-based pressure pumps or a hybrid of more than one collection method. Treatment options are commonly facultative lagoons or a mechanical plant.

CWMS design must consider population curves (including holiday populations), the impacts of varied flows on infrastructure, the most applicable hydraulic loading and achieving treatment to provide ‘fit-for-purpose’ recycled water. Management of these projects involves substantial liaison and necessitates a consultative approach as influences from statutory authorities, funding bodies (often state/federal governments) and the community are considered.

Key Words: Community wastewater, effluent, wastewater design, recycled water, collection system design, irrigation