

SUMMARY

Transport costs have resulted in soft drink manufacturing plants being situated in the majority of large towns in South Africa. Thus, there are numerous carbonated soft drink bottling/canning plants, dairies and several fruit juice packaging plants which collectively produce approximately 1,5 million m³ of soft drink a year (85% from carbonated soft drink bottling/canning plants, 10% from dairies, 5% from fruit juice packaging plants). This requires approximately 4,0 million m³ water of which between 50% and 80% is discharged as effluent.

The average Specific Water Intake (SWI) was found to be 2,7 m³ water per m³ of soft drink. Improvements in SWI can be achieved through implementation of water saving/reclamation techniques and improved water management. The target SWI should be set at 2,3 volume/volume.

The average Specific Pollution Load (SPL) was found to be 4,0 kg COD/m³ of soft drink. A reduction in SPL can be achieved by improved management and by effluent treatment processes. The target SPL for untreated effluent should be set at 3,5 kg COD/m³ soft drink.

The target for TDS should be set at 5 kg TDS/m³ soft drink for plants with bottle-washers and 1,5 kg TDS/m³ soft drink for plants without bottle-washers.