

Water Losses and the Potential of Reducing System Pressure: A Case Study in Trinidad

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Abstract: *Non-revenue water (NRW) is a concern for the Water and Sewerage Authority of Trinidad and Tobago (WASA), as it is estimated at about 45%. Although WASA has introduced District Metered Areas (DMAs), a low priority has been given to pressure management, which may be resulting in significant water losses, poor service and increased operational costs. This paper analyses the minimum night flow measurements to estimate NRW. The results show that at Maloney and Maraval, NRW is estimated at 37% to 57 %, respectively. By simulating pressure reductions in the DMAs such that at least 20m of pressure is achieved at the highest elevations in the DMAs, it is considered possible to reduce NRW by over 70% and at the same time reduce the frequency of burst pipes by over 40%. The water saved in both districts would provide water to more than 1,000 additional customers. Greater emphasis on pressure management through the implementation of DMA would mean that more water would be available to the Water and Sewerage Authority, and this water would be able to generate revenue.*

Keywords: *Non revenue water, district metered areas, pressure management*