A neural network model for forecasting daily water demand in the Auckland region

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This study is concerned with daily water demand forecasting in the Auckland region in New Zealand. The region contains the city of Auckland- the largest city in New Zealand. Daily water demand forecasting is essential for managing the operation of water supply networks. In this study, a neural network model based on the structure of the multi-layer feed forward neural network is developed for forecasting daily water demand in the Auckland region. The previous and most recent water consumption data as well as temperature data are used as inputs to the model. The results of the neural network model are compared to those of traditional linear time series daily water demand forecasting models. The results show that the neural network model has considerable potential and promise in daily water demand forecasting in the Auckland region.