

WEEP – WATER END USE AND EFFICIENCY PROJECT

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In 2005 BRANZ started to look at ways in which water end uses (dishwasher, washing machine, shower and toilet) could be monitored in residential homes in order to establish where the water is actually going. After initial lab and field tests specialized equipment was developed which was attached to a high resolution water meter installed on the feed line of the home. Using specialized software it was then possible to break the collected data into its end use components.

In July 2006, twelve homes on the Kapiti Coast were fitted with the equipment and monitoring started. Monitoring finished in March 2007, to capture the seasonal variations. The reporting includes monitoring data and analysis of two separate seasons (winter and summer), as well as a summary of the methods and tests that have been conducted in order to derive an end use monitoring technique. Results include the break down of residential water uses into its end use components and average uses of the various appliances (e.g. shower duration, volumes and flow rates).

By analysing water use at an end use level, it is possible to identify the areas which would yield the greatest savings and a detailed water use model of the home can be constructed. End use modelling is also useful to model potential demand forecast, rather than a means for understanding current demand. From the case study, the largest water savings could be achieved by installing low flow shower heads and water efficient washing machines. High savings in mains water use can be accomplished by installing a grey water system or rain tank. By conducting this pilot study important issues were identified that are critical to a much larger study. These include issues such as downloading, monitoring times, equipment, and analysis.



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