

Meter-Master

Application: **METER SIZING**

Losing Money on Oversized Meters? Concerned About Inaccurate Consumption Data or Inequitable Billing?

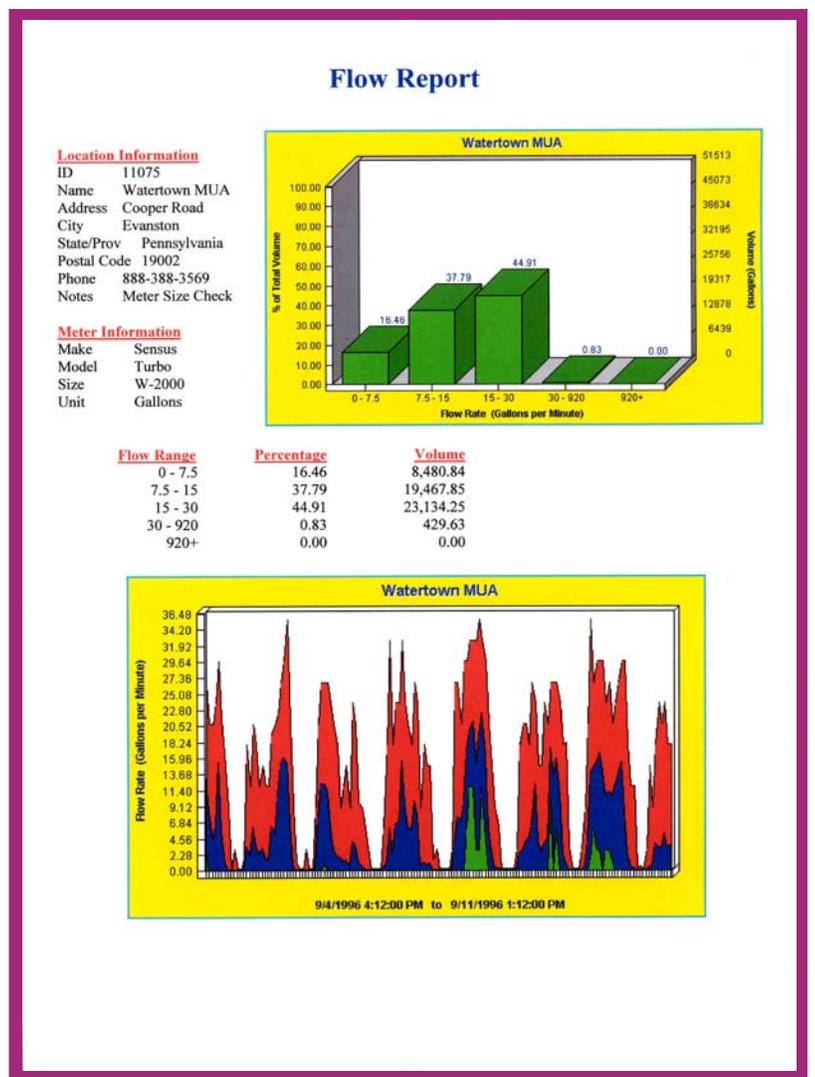
The submersible, portable Meter-Master Model 100EL Flow Recorder is the ideal solution for meter sizing. Data logged from water meters is ideal because a water meter is the most precise means to measure water use. Most utilities have many oversized meters because the historic tendency has been to size meters based on the same conservative techniques used to size service lines. Today, meter connections should be designed to accommodate meter type/size changes as user characteristics change.

The Model 100EL provides peak flow data and calculates the percentage of water used in each flow range of significance to the installed meter. The objective is to properly size the meter for maximum accountability and revenue recovery without adversely affecting pressure and applicable fire flow requirements. Maintenance costs are also a consideration. For example, if a meter is sized based only on peak flow, accelerated wear will occur if substantial flow is occurring in the upper half of a meter's flow range.

Properly sized meters enhance the accuracy of demand profiles which, in turn, help to identify new service size requirements, define water use characteristics for conservation programs, enhance customer satisfaction and awareness, improve hydraulic models, and establish equitable and justifiable rate structures.

In the example on the right, data from a 6" turbine meter serving a residential community has been analyzed to determine the percentage of flow in the applicable flow ranges for a 6" meter. The lower graph shows the maximum, average, and minimum flow rates. In this case, almost all of the flow is occurring below a 6" meter's accuracy range (30 gpm to 1400 gpm according to AWWA) which results in lost revenue and poor accountability.

For more detailed analyses, the MeterSizer® software accessory automatically calculates the accounted-for water percentage, percentage of flow in a meter's "normal range", headloss at the maximum recorded flow rate, annual revenue gain/loss, and payback period for each alternative meter type and size option as compared to the existing meter.



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