

EDAMS Network Asset Management - Water Auditing (Balancing)

Automated solution for the effective Managing, Monitoring and Auditing of District Metered Areas (DMA)

Water Utilities need a consistent, continuous and reliable process to automatically monitor their district metered areas (DMAs). The adoption of the IWA best practice methodology and of *EDAMS- Network Asset Management – Water Auditing (Balancing) Module* allows a holistic approach centered on asset management, leak detection and pressure management.

A major step in implementing the IWA methodology is the creation of District Metered Areas to identify and control

water loss, both within each zone. Once established, a functional DMA can provide information required to identify unreported leaks and bursts, prioritize problems and direct crews in the most efficient way.

Having an automated solution like the *EDAMS- Water Auditing (Balancing) Module* that manages the DMAs is an important component of the strategy. Telemetry and metering become valuable sources of information from the bulk meters of the DMAs.

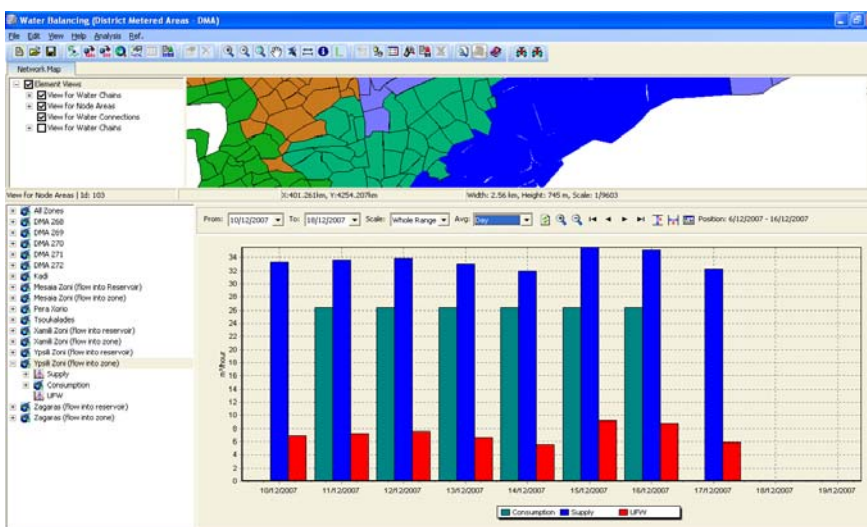
Water Auditing & EDAMS Asset Management

Water auditing/balancing is part of a comprehensive NRW strategy. Such a strategy should address issues like

1. Data Quality
2. Asset Management
3. Zoning
4. Auditing & Monitoring
5. Pressure Management
6. Active Leakage Control
7. Apparent losses

All the above issues are interlinked and should be considered in unison. Infrastructure improvement, asset management in conjunction with programmes on active leakage control and apparent losses can reduce and control NRW and leakage. At the heart of active leakage control is zonal monitoring or district metering.

The methodology recommended includes the implementation of *EDAMS- Network Asset Management* information system with integrated Water Auditing (Balancing) capabilities as a dynamic business

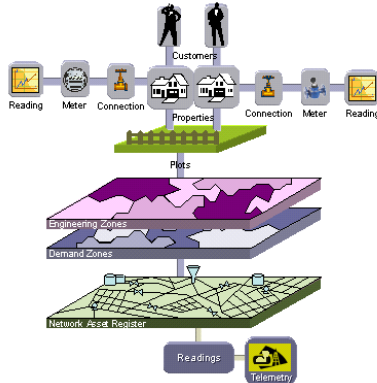


EDAMS Technology
Redefining Utility Management

solution, to empower the Utility to improve its overall operational efficiency and profitability.

System Components

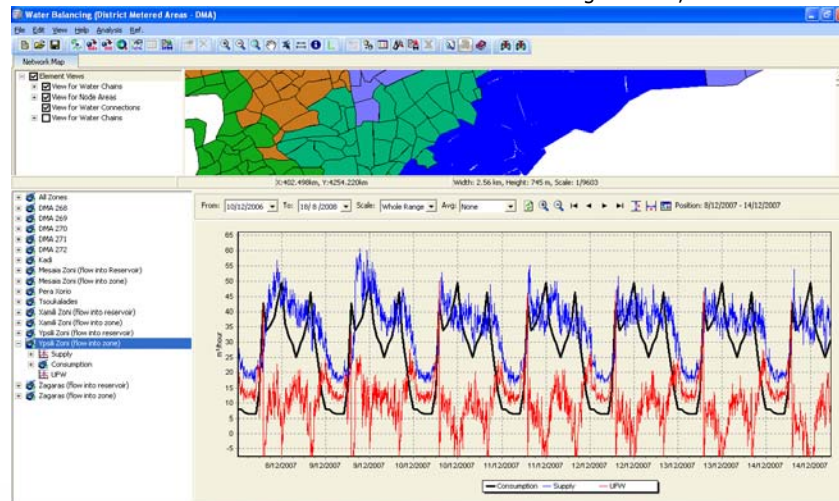
The system has three major components, metering levels, engineering zones and town planning zones. A metering level is a set of meters representing a type of flow or consumption, e.g. different levels can be consumption meters, purchase points, meters at district junctions.



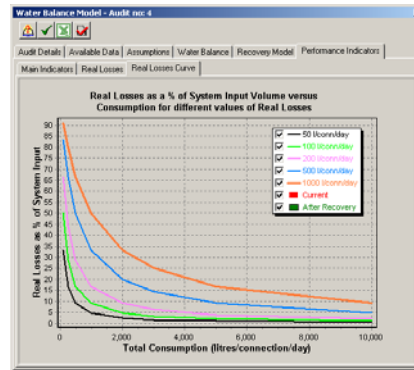
Meter data is reduced to flow rate between reading periods enabling querying for any requested time period and duration. In the case of "estimates", or missing records, consumptions are calculated from previous records and marked as estimated.

Water Balancing – Top/Down Approach

Water loss can be determined by conducting a water balance, which is



based on the measurement or estimation of water produced, imported, exported, consumed or lost.



Most water companies are able to provide figures on production, imports, exports and consumption, but less able to estimate the other components. *EDAMS Network Asset Management – Water Auditing / Balancing Module* removes the uncertainty from most of the components of the water balance equation by providing direct feedback from Metering and Commercial data. The water balance calculation can therefore provide a reliable guide to how much is lost as leakage from the network (real losses), and how much is due to apparent or non-physical losses.

Water Balancing – Bottom/Up Approach

EDAMS-Auditing (Balancing) Module based on component analysis analyses the minimum night flow and estimate the level of leakage and the relative volumes of background and burst volumes. The analysis of leakage is based on the minimum night flow, which can be

recorded and analysed continuously night after night with the use of data loggers.

As part of the leakage identification strategy, the EDAMS system determines the average flow rate for each DMA. and compares these values to established benchmarks for the corresponding DMAs.



The results form a table that include the benchmarks, the calculated average night flows for consecutive nights, and the calculated difference between the benchmark and the most recent night flow.

Consumption Analysis

Consumption analysis is made possible by comparing historical trends and marrying consumption relationships with consumer types. Consumption analysis then proceeds to examine each selected type of consumer, area of interest and historical period of interest, often using the results as input for demand standard evaluation.

System implementation

System implementation uses a structured methodology and full operator and management training. Our consulting service, based on over twenty years of industry experience, ranges from data capturing and field validation to network optimisation and the reduction and control of non-revenue water.

Contact us for more information on our products, services or Partnership Program



Tel: +357 22 478 500 Fax: +357 22 478 578
Email: sales@hydro-comp.com
Website: www.edams.com



Redefining Utility Management