



Seremban

Malaysia

Initial phases in the holistic Non-Revenue Water (NRW) concept, including creation of a leakage monitoring system (based on District Metering Zones (DMZ)) and subsequent reduction in NRW from 38% to 20% using GIS and hydraulic modelling

Strategic modeling on the trunk main system connecting the main balancing reservoir and the reservoirs in the area has been carried out. Pump characteristics have been applied for pump houses and/or booster stations and the model was subsequently calibrated. AQUIS Models for 40 DMZ's were created and calibrated using pressure logger data.

Regarding Pressure Management AQUIS models were built to establish the behavior inside the pressure management area and to find the optimal setting for the pressure reduction valve.

In addition, several AQUIS models were built for planning purposes. For example when merging neighboring areas, finding new tapping points, deciding the optimal pipe size, redesigning supply areas etc. In general, AQUIS models provided essential information regarding the behavior of pressure and head before any action was taken.



Seremban is the capital of the Malaysian state of Negeri Sembilan, located within the district of Seremban, one of the seven districts of Negeri Sembilan. The town's administration is run by the Seremban Municipal Council or Majlis Perbandaran Seremban.

CUSTOMER CASE

AQUIS has been used in the following activities:

- Optimizing existing Network and modeling future scenarios
 - New tapping points. The modeling can show the optimal solution.
 - Extending existing DMZ. The modeling can show if the zone extension will cause any supply problems.
 - Redesigning larger areas. Modeling can help find the right solution regarding new inlets, valves to be closed, reservoir supply areas etc.
- Pipe Replacement
 - Optimization of pipe size. The modeling can show how small a pipe can be laid, without creating any supply problems.
- Pressure Management
 - Modeling of Pressure Reducing Valve (PRV) location and PRV setting can show any possible supply problems before the PRV is installed.
- Calibrated models for established DMZ's
 - Calibrated models were to verify the present pipe registration.

System integrator

Danwater Malaysia is system integrator.