

# WQ Calibrator - Overview

WQ Calibrator provides sophisticated micro-level pipe network calibration capabilities. It casts the micro-calibration problem as an implicit nonlinear optimization problem subject to explicit inequality and equality constraints.

The optimization problem consists of determining the pipe wall coefficient values that produce the minimum overall difference between the observed concentration measurements and model predicted results.


The resulting value for the pipe wall coefficient for each group is determined from a user-specified range of minimum and maximum values associated with their respective group (e.g., PVC, CI, DIP, AC, etc.). It is assumed that all pipes within a group will have an identical pipe wall coefficient.

## Features of Water Quality Calibrator

- Up to 50 distinct pipe groups can be defined with this version of WQ Calibrator.
- The number of field concentration measurements must be greater than or equal to the number of decision variables, the more measurements the better the accuracy of the calibration.

WQ Calibrator provides you with an efficient, flexible and easy-to-use vehicle for accurate and reliable model calibration and validation. It is assumed that the data collected and used for calibration is accurate.

## Running Water Quality Calibrator

The WQ Calibrator is initialized from inside H2ONET/InfoWater by selecting the **Apps**  **Apps** command from the InfoWater Pro ribbon. With the **Apps** dialog box open, select **WQ Calibrator** from the list of applications, and click on the **Run** button.