## **Basic Elements**

Written by ?evad Kold�o Tuesday, 04 September 2012 23:00

The elements of the water balance are defined as:

**System input volume** is the measured system input to a defined part of the water supply system. In water systems with large exports of water it is also very important to determine the volume of water supplied (system input volume minus billed water exported).

**Authorised consumption** is the volume of metered and (or) un-metered water taken by registered customers, the water works and other authorised parties. It includes billed authorised consumption (such as billed metered consumption, billed unmetered consumption and water exported and unbilled authorised consumption.

This part of the water balance also includes leaks and overflows after costumer's watermeter as well as the own requirements of the water utility, (for flushing pipes or filter back-wash).

**Revenue water** is the volume of water successfully delivered and billed to the customer and which thus generates revenue for the water utility.

Non-revenue water (NRW) is the volume which remains unbilled and therefore does not generate any revenue for the water utility. It can be expressed as the difference between the system input volume and billed authorised consumption or as the total sum of unbilled authorised consumption and water losses. During defined terminology IWA Task Force recommends discontinuing the use of the term unaccounted-for water (UFW) because of widely varying interpretations of the term worldwide.

**Water losses** is the volume of water lost between the point of water supply and the customer water meter due to various reasons. It can be expressed as the difference between system input volume and authorised consumption, and consists of apparent and real losses.

Apparent losses can be subdivided into unauthorised consumption, meter inaccuracies and data handling errors.

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Real losses are consist of leakage from transmission and distribution pipes, leakage from service connections and losses from storage tanks and reservoirs.