

# AWWA Water Audit Software v5.0

## Tips & Guidance

All water system identifying and contact information must be entered on the “Instructions” page. If you attempt to enter this information at the top of the “Reporting Worksheet” page, you will find the cell is locked.

If you are unsure what data is to be entered, click on the “?” to the left of the entry. This will take you to a definition for the entry. Once you understand the definition, click on “Find” to go back to the “Reporting Worksheet” entry.

All water volumes must be entered in **Million Gallons (MG)**. If you enter data in gallons or thousand gallons, all performance indicators will be incorrect including “Non-revenue water as percent by cost of operating system”.

Each data entry has a square box to the left of it. If you place your cursor on this box, you will see ten conditions pertaining to the data. Carefully read each condition, select the one that closest matches the conditions at your system and enter the number of that condition in the box. If you click on the box, you will not see the conditions. You must click elsewhere and place your cursor on the box to view the conditions.

The validity score is calculated using the numbers entered in the boxes. The validity score is heavily weighted on the conditions in the “Water Supplied” section. For example, if you are not testing the master meter for accuracy and/or calibrating at least annually, you cannot enter a condition above five since condition six indicates that accuracy and/or calibration is checked annually. If you change conditions at your system so that you can change from a condition five to condition nine, your validity score may increase as much as 8 – 14 points. **IT IS EXTREMELY IMPORTANT TO TEST THE MASTER METER FOR ACCURACY AND CALIBRATE ANNUALLY.**

When entering the error adjustments for your master or supply meter, enter a “-“ in front of the percentage for meters that under register. If your meter registered 98% of the flow, you should enter -2.00%.

Data for “Master Meter and Supply Error Adjustments” and “Customer metering inaccuracies” can be entered as either a percentage or value in MG/Yr. A default percentage or a value in MG/Yr can be used for “Unbilled unmetered” water, “Unauthorized consumption” and “Systematic data handling errors”. To enter a value you must click in the circle next to the cell where the value is entered.

Do not leave any cell blank. For example, if you do not export water to another utility, enter 0 for the MG value and n/a in the condition box. A form with blank cells is incomplete.

The AWWA uses different terms than the previous “Unaccounted for Water” when referring to various water uses. Since some continue to use the previous method to

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calculate water loss on a monthly basis, the following table lists how the terms normally interchange:

<u>Unaccounted for Water</u>	<u>AWWA</u>
Water Pumped	- Volume from own sources
Water Purchased	- Water imported
Water Sold	- Billed metered + Water exported
Bulk Sales	Billed unmetered
Metered for Consumption (in house usage)	- Unbilled metered
Fire Dept. usage + Flushing + Tank Cleaning/Filling + Street Cleaning	- Unbilled unmetered

If you use the previous method, version 6.1 which includes an AWWA report, is available for download at [www.taud.org](http://www.taud.org). This report converts the volumes to MG and changes to terms used in the AWWA software. This version also allows you to keep track of monthly revenues, electrical costs and chemical costs.

“Customer metering inaccuracies” is often difficult to determine. Testing the accuracy of a representative sample of your meters is recommended. Small meters can be tested without removing by connecting a new calibrated meter to the customer’s outside faucet and conducting a comparative flow test.

The “Total annual cost of operating water system” entry should include **all** expenses related to the water system. This entry should not include any expenses for wastewater, gas or other departments. If some expenses are combined with wastewater, you may need to determine the percentage spent for water only.

The “Customer retail unit cost” entry should be the average cost your customers pay per 1000 gallons of water. If you have varying rates, you may need to calculate a weighted average. If your system also provides sewer service and sewer charges are based on water usage (this is typical), you should also include the cost customers pay per 1000 gallons of sewer.

The “Variable production cost” entry should be the cost to treat and deliver the next MG to your customers. This will include electrical costs for the raw water pumps or wells, the treatment plant and booster stations. It should also include treatment chemical costs and other costs required for treatment. If you purchase water from another utility, this cost as well as electrical cost to pump the purchased water should be included.

Under normal circumstances in Tennessee the small box labeled “Use customer retail unit cost to value real losses” should never be checked.