



AWWA Free Water Audit Software: Reporting Worksheet

WAS v5.0
American Water Works Association

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Water Audit Report for:
Reporting Year:

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: MILLION GALLONS (US) PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

WATER SUPPLIED

----- Enter grading in column 'E' and 'J' ----->

Volume from own sources:	<input type="button" value="+"/> <input type="button" value="?"/> 9	1,450.577	MG/Yr	<input type="button" value="+"/>
Water imported:	<input type="button" value="+"/> <input type="button" value="?"/> n/a	0.000	MG/Yr	<input type="button" value="+"/>
Water exported:	<input type="button" value="+"/> <input type="button" value="?"/> n/a	0.000	MG/Yr	<input type="button" value="+"/>

Master Meter and Supply Error Adjustments

Pcnt:	Value:
9	-9.438

Enter negative % or value for under-registration
Enter positive % or value for over-registration

WATER SUPPLIED: MG/Yr

AUTHORIZED CONSUMPTION

Billed metered:	<input type="button" value="+"/> <input type="button" value="?"/> 5	1,281.131	MG/Yr
Billed unmetered:	<input type="button" value="+"/> <input type="button" value="?"/> n/a	0.000	MG/Yr
Unbilled metered:	<input type="button" value="+"/> <input type="button" value="?"/> n/a	0.000	MG/Yr
Unbilled unmetered:	<input type="button" value="+"/> <input type="button" value="?"/> 5	18.250	MG/Yr

Default option selected for Unbilled unmetered - a grading of 5 is applied but not displayed

AUTHORIZED CONSUMPTION: MG/Yr

Click here: for help using option

Pcnt: Value:

Use buttons to select percentage of water supplied OR value

WATER LOSSES (Water Supplied - Authorized Consumption)

MG/Yr

Apparent Losses

Unauthorized consumption: 5 MG/Yr

Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies: 3 MG/Yr

Systematic data handling errors: 5 MG/Yr

Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed

Apparent Losses: MG/Yr

Pcnt: Value:

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: MG/Yr

WATER LOSSES: MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains: 5 miles

Number of active AND inactive service connections: 9

Service connection density: conn./mile main

Are customer meters typically located at the curbstop or property line? (length of service line, beyond the property boundary, that is the responsibility of the utility)

Average length of customer service line: 10 (Average length of customer service line has been set to zero and a data grading score of 10 has been applied)

Average operating pressure: 5 psi

COST DATA

Total annual cost of operating water system: 10 \$/Year

Customer retail unit cost (applied to Apparent Losses): 10 \$/1000 gallons (US)

Variable production cost (applied to Real Losses): 5 \$/Million gallons Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 72 out of 100 ***

A weighted scale for the components of consumption and water loss is included in the calculation of the Water Audit Data Validity Score

PRIORITY AREAS FOR ATTENTION:

Based on the information provided, audit accuracy can be improved by addressing the following components:

1: Customer metering inaccuracies

2: Billed metered

3: Variable production cost (applied to Real Losses)



AWWA Free Water Audit Software: System Attributes and Performance Indicators

WAS v5.0

American Water Works Association.

Water Audit Report for: City of Riverbank (CA5010018)
 Reporting Year: 2020 | 1/2020 - 12/2020

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 72 out of 100 ***

System Attributes:

Apparent Losses:	19.794	MG/Yr
+	Real Losses:	140.840 MG/Yr
=	Water Losses:	160.634 MG/Yr

Unavoidable Annual Real Losses (UARL): 30.57 MG/Yr

Annual cost of Apparent Losses: \$47,505

Annual cost of Real Losses: \$41,624 Valued at **Variable Production Cost**
 Return to Reporting Worksheet to change this assumption

Performance Indicators:

Financial: { Non-revenue water as percent by volume of Water Supplied: 12.3%
 Non-revenue water as percent by cost of operating system: 4.3% Real Losses valued at Variable Production Cost

Operational Efficiency: { Apparent Losses per service connection per day: 7.91 gallons/connection/day
 Real Losses per service connection per day: 56.31 gallons/connection/day
 Real Losses per length of main per day*: N/A
 Real Losses per service connection per day per psi pressure: 0.94 gallons/connection/day/psi

From Above, Real Losses = Current Annual Real Losses (CARL): 140.84 million gallons/year

? Infrastructure Leakage Index (ILI) [CARL/UARL]: 4.61

* This performance indicator applies for systems with a low service connection density of less than 32 service connections/mile of pipeline