



# AWWA Free Water Audit Software: Reporting Worksheet

WAS v6.0

American Water Works Association  
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**Water Audit Report for:** Lake Arrowhead Community Services District (CA3610005)  
**Reporting Year:** 2019 7/2018 - 6/2019

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: ACRE-FEET 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.

Master Meter and Supply Error Adjustments

**WATER SUPPLIED**

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

Volume from own sources:	+ ? 5	1,124.300	acre-ft/yr
Water imported:	+ ? 7	171.910	acre-ft/yr
Water exported:	+ ? n/a		acre-ft/yr

Pcnt:	Value:	
+ ? 3	0.00%	
+ ? 1		

**WATER SUPPLIED:** 1,296.210 acre-ft/yr

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

**AUTHORIZED CONSUMPTION**

Billed metered:	+ ? 7	1,137.807	acre-ft/yr
Billed unmetered:	+ ? n/a	0.000	acre-ft/yr
Unbilled metered:	+ ? 10	8.992	acre-ft/yr
Unbilled unmetered:	+ ? 5	16.203	acre-ft/yr

Click here:  for help using option buttons below

Pcnt:	Value:	
+ ? 1	0.00%	

Enter a positive value, otherwise a default percentage of 1.25% (of billed metered) is applied and a grading of 5 is applied but not displayed

**AUTHORIZED CONSUMPTION:** 1,161.002 acre-ft/yr

Use buttons to select percentage of water supplied OR value

**WATER LOSSES (Water Supplied - Authorized Consumption)**

135.208 acre-ft/yr

**Apparent Losses**

Unauthorized consumption: 3.241 acre-ft/yr

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

Customer metering inaccuracies: 2.869 acre-ft/yr

Systematic data handling errors: 2.845 acre-ft/yr

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

**Apparent Losses:** 8.954 acre-ft/yr

Pcnt:	Value:	
+ ? 1	0.25%	

Pcnt:	Value:	
+ ? 1	0.25%	

**Real Losses (Current Annual Real Losses or CARL)**

Real Losses = Water Losses - Apparent Losses: 126.254 acre-ft/yr

**WATER LOSSES:** 135.208 acre-ft/yr

**NON-REVENUE WATER**

**NON-REVENUE WATER:** 158.403 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

**SYSTEM DATA**

Length of mains:	+ ? 9	129.0	miles
Number of <u>active AND inactive</u> service connections:	+ ? 8	8,381	
Service connection density:	+ ?	65	conn / mile main

Are customer meters typically located at the curbstoep or property line? Yes

(length of service line, beyond the property boundary, that is the responsibility of the utility)

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

Average operating pressure: 85.0 psi

**COST DATA**

Total annual cost of operating water system:	+ ? 10	\$6,852,461	\$/Year
Customer retail unit cost (applied to Apparent Losses):	+ ? 9	\$3.83	\$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	+ ? 5	\$382.52	\$/acre-ft

Use Customer Retail Unit Cost to value real losses

**WATER AUDIT DATA VALIDITY SCORE:**

**\*\*\* YOUR SCORE IS: 65 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: Volume from own sources
- 2: Customer metering inaccuracies
- 3: Variable production cost (applied to Real Losses)