



# AWWA Free Water Audit Software: Reporting Worksheet

WAS v5.0

American Water Works Association  
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**Water Audit Report for:** Lake Arrowhead Community Services District (Rimforest) (CA3610045)  
**Reporting Year:** 2020 7/2019 - 6/2020

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.

**WATER SUPPLIED**

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

Volume from own sources:	<input type="button" value="+"/> <input type="button" value="?"/> n/a	<input type="text" value="0.000"/>	acre-ft/yr
Water imported:	<input type="button" value="+"/> <input type="button" value="?"/> 7	<input type="text" value="48.350"/>	acre-ft/yr
Water exported:	<input type="button" value="+"/> <input type="button" value="?"/> n/a	<input type="text" value="0.000"/>	acre-ft/yr

**Master Meter and Supply Error Adjustments**

Pcnt:	<input type="text" value="3"/>	Value:	<input type="text" value=""/>	acre-ft/yr
	<input type="button" value="+"/> <input type="button" value="?"/>		<input type="button" value="0"/>	acre-ft/yr
	<input type="button" value="+"/> <input type="button" value="?"/>		<input type="button" value="100"/>	acre-ft/yr

**WATER SUPPLIED:** 48.350 acre-ft/yr

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

**AUTHORIZED CONSUMPTION**

Billed metered:	<input type="button" value="+"/> <input type="button" value="?"/> 7	<input type="text" value="37.170"/>	acre-ft/yr
Billed unmetered:	<input type="button" value="+"/> <input type="button" value="?"/> n/a	<input type="text" value="0.000"/>	acre-ft/yr
Unbilled metered:	<input type="button" value="+"/> <input type="button" value="?"/> 10	<input type="text" value="0.009"/>	acre-ft/yr
Unbilled unmetered:	<input type="button" value="+"/> <input type="button" value="?"/> 5	<input type="text" value="0.121"/>	acre-ft/yr

**AUTHORIZED CONSUMPTION:** 37.300 acre-ft/yr

Click here: [?](#)  
for help using option buttons below

Pcnt:  Value: 

acre-ft/yr

Use buttons to select percentage of water supplied  
**OR**  
value

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

11.050 acre-ft/yr

**Apparent Losses**

Unauthorized consumption:   0.121 acre-ft/yr  
**Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed**

Customer metering inaccuracies:	<input type="button" value="+"/> <input type="button" value="?"/> 5	<input type="text" value="0.187"/>	acre-ft/yr
Systematic data handling errors:	<input type="button" value="+"/> <input type="button" value="?"/> 5	<input type="text" value="0.093"/>	acre-ft/yr

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

**Apparent Losses:** 0.401 acre-ft/yr

Pcnt:  Value: 

acre-ft/yr

acre-ft/yr

acre-ft/yr

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

Real Losses = Water Losses - Apparent Losses:  10.649 acre-ft/yr

**WATER LOSSES:** 11.050 acre-ft/yr

**NON-REVENUE WATER**

**NON-REVENUE WATER:**  11.180 acre-ft/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

**SYSTEM DATA**

Length of mains:	<input type="button" value="+"/> <input type="button" value="?"/> 9	<input type="text" value="0.7"/>	miles
Number of <u>active AND inactive</u> service connections:	<input type="button" value="+"/> <input type="button" value="?"/> 8	<input type="text" value="300"/>	
Service connection density:	<input type="button" value="+"/> <input type="button" value="?"/>	<input type="text" value="405"/>	conn./mile main

Are customer meters typically located at the curbside or property line?

(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:   5  psi

**COST DATA**

Total annual cost of operating water system:	<input type="button" value="+"/> <input type="button" value="?"/> 10	<input type="text" value="\$267,466"/>	\$/Year
Customer retail unit cost (applied to Apparent Losses):	<input type="button" value="+"/> <input type="button" value="?"/> 9	<input type="text" value="\$5.10"/>	\$/100 cubic feet (ccf)
Variable production cost (applied to Real Losses):	<input type="button" value="+"/> <input type="button" value="?"/> 5	<input type="text" value="\$443.49"/>	\$/acre-ft <input type="checkbox"/> Use Customer Retail Unit Cost to value real losses

**WATER AUDIT DATA VALIDITY SCORE:**

**\*\*\* YOUR SCORE IS: 71 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: Water imported**
- 2: Customer metering inaccuracies**
- 3: Variable production cost (applied to Real Losses)**