

CITY OF LAFOLLETTE - BOARD OF PUBLIC UTILITIES WATER DEPARTMENT

AWWA Free Water Audit Software:
Reporting Worksheet

WAS v5.0
 American Water Works Association.
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Water Audit Report for: **LaFollette Utilities Board (0000374)**
 Reporting Year: **2018** / 7/2017 - 6/2018

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.

← Enter grading in column 'E' and 'J' →

WATER SUPPLIED

Volume from own sources:	+	?	9	683.283	MG/Yr
Water imported:	+	?	9	0.000	MG/Yr
Water exported:	+	?	10	0.000	MG/Yr

WATER SUPPLIED: 676.518 MG/Yr

AUTHORIZED CONSUMPTION

Billed metered:	+	?	10	413.389	MG/Yr
Billed unmetered:	+	?	10	0.130	MG/Yr
Unbilled metered:	+	?	9	98.330	MG/Yr
Unbilled unmetered:	+	?	?	8.456	MG/Yr

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

AUTHORIZED CONSUMPTION: 520.305 MG/Yr

WATER LOSSES (Water Supplied - Authorized Consumption) **156.213** MG/Yr

Apparent Losses

Unauthorized consumption:	+	?	?	1.691	MG/Yr
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Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed

Customer metering inaccuracies:	+	?	9	0.000	MG/Yr
Systematic data handling errors:	+	?	?	1.033	MG/Yr

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

Apparent Losses: 2.725 MG/Yr

Real Losses (Current Annual Real Losses or CARL)

Real Losses = Water Losses - Apparent Losses: 153.488 MG/Yr

WATER LOSSES: 156.213 MG/Yr

NON-REVENUE WATER

NON-REVENUE WATER: 262.999 MG/Yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

SYSTEM DATA

Length of mains:	+	?	9	700.0	miles
Number of active AND inactive service connections:	+	?	9	10,063	conn./mile main
Service connection density:	?	?	?	14	conn./mile main

Are customer meters typically located at the curbside 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:	+	?	9	125.0	psi
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COST DATA

Total annual cost of operating water system:	+	?	10	\$4,373,630	\$/Year
Customer retail unit cost (applied to Apparent Losses):	+	?	10	\$13.04	\$/1000 gallons (US)
Variable production cost (applied to Real Losses):	+	?	10	\$566.04	\$/Million gallons <input type="checkbox"/> Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 90 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: Unauthorized consumption

3: Systematic data handling errors

See Independent Auditor's Report.

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WATER DEPARTMENT**

AWWA Free Water Audit Software:
System Attributes and Performance Indicators

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Reporting Year: **2018** **7/2017 - 6/2018**

***** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 90 out of 100 *****

System Attributes:

	Apparent Losses:	2.725	MG/Yr
	+ Real Losses:	153.488	MG/Yr
	= Water Losses:	156.213	MG/Yr
?	Unavoidable Annual Real Losses (UARL):	241.65	MG/Yr
	Annual cost of Apparent Losses:	\$35,531	
	Annual cost of Real Losses:	\$86,880	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:	38.9%	
		Non-revenue water as percent by cost of operating system:	4.2%	Real Losses valued at Variable Production Cost
Operational Efficiency:	{	Apparent Losses per service connection per day:	0.74	gallons/connection/day
		Real Losses per service connection per day:	N/A	gallons/connection/day
		Real Losses per length of main per day*:	600.74	gallons/mile/day
		Real Losses per service connection per day per psi pressure:	N/A	gallons/connection/day/psi
		From Above, Real Losses = Current Annual Real Losses (CARL):	153.49	million gallons/year
?		Infrastructure Leakage Index (ILI) [CARL/UARL]:	0.64	

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