

Newtown Artesian Water Company

Incorporated July 3, 1888

P.O. Box 217 • 201 N. Lincoln Ave. • Newtown, Pennsylvania 18940-0217

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APR 21 2015

April 21, 2015 PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

M-2015-2464293

*Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
400 North St.
P.O. Box 3265
Harrisburg, Pa 17105-3265*

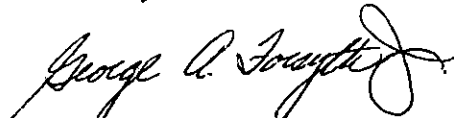
Re: Docket No. ~~M-2008-2062697~~

Dear Secretary Chiavetta:

Enclosed please find the Annual Water Audit for 2014.

If you need any additional information, please feel free to call.

Sincerely,



*George A. Forsyth, Jr.
General Manager*

Encl.

GAF/nf

**AWWA Free Water Audit Software:
Reporting Worksheet**

WAS v5.0
American Water Works Association
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Water Audit Report for: Newtown Artesian Water Company (1090043)
Reporting Year: 2014 1/2014 - 12/2014

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.

Master Meter and Supply Error Adjustments

WATER SUPPLIED

		← Enter grading in column 'E' and 'J' →				Pcnt:	Value:	
Volume from own sources:	<input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="5"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="10"/>	<input type="text" value="321.894"/>	MG/yr	<input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="5"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="10"/>	<input type="text" value="1.15%"/>	<input type="radio"/>	<input type="radio"/>	MG/yr
Water imported:	<input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="5"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="10"/>	<input type="text" value="455.831"/>	MG/yr	<input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="5"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="10"/>	<input type="text" value="1.15%"/>	<input type="radio"/>	<input type="radio"/>	MG/yr
Water exported:	<input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="5"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="10"/>	<input type="text" value="0.000"/>	MG/yr	<input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="5"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="10"/>		<input type="radio"/>	<input type="radio"/>	MG/yr

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="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="5"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="10"/>	<input type="text" value="724.880"/>	MG/yr	<input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="5"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="10"/>	<input type="text" value="1.25%"/>	<input type="radio"/>	<input type="radio"/>	MG/yr
Billed unmetered:	<input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="5"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="10"/>	<input type="text" value="0.000"/>	MG/yr	<input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="5"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="10"/>		<input type="radio"/>	<input type="radio"/>	MG/yr
Unbilled metered:	<input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="5"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="10"/>	<input type="text" value="0.000"/>	MG/yr	<input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="5"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="10"/>		<input type="radio"/>	<input type="radio"/>	MG/yr
Unbilled unmetered:	<input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="5"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="10"/>	<input type="text" value="9.611"/>	MG/yr	<input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="5"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="10"/>		<input type="radio"/>	<input type="radio"/>	MG/yr

Click here: for help using option buttons below

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

AUTHORIZED CONSUMPTION: MG/yr

Pcnt: Value:

Use buttons to select percentage of water supplied OR value

WATER LOSSES (Water Supplied - Authorized Consumption)

MG/yr

Apparent Losses

Unauthorized consumption: MG/yr

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

Customer metering inaccuracies: MG/yr
Systematic data handling errors: 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:

MG/yr
 MG/yr

Real Losses (Current Annual Real Losses or CARL)

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

WATER LOSSES: MG/yr

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NON-REVENUE WATER

NON-REVENUE WATER: MG/yr

= Water Losses + Unbilled Metered + Unbilled Unmetered

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

SYSTEM DATA

Length of mains: miles
Number of active AND inactive service connections:
Service connection density: conn /mils 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: ft

Average operating pressure: psi

COST DATA

Total annual cost of operating water system: \$/Year
Customer retail unit cost (applied to Apparent Losses): \$/1000 gallons (US)
Variable production cost (applied to Real Losses): \$/Million gallons Use Customer Retail Unit Cost to value real losses

WATER AUDIT DATA VALIDITY SCORE:

*** YOUR SCORE IS: 79 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: Billed metered
- 2: Unauthorized consumption
- 3: Systematic data handling errors



AWWA Free Water Audit Software: System Attributes and Performance Indicators

Water Audit Report for:
 Reporting Year:

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 79 out of 100 ***

System Attributes:

Apparent Losses:	3.734	MG/Yr
+	Real Losses:	30.657
=	Water Losses:	34.392
		MG/Yr

? Unavoidable Annual Real Losses (UARL):	87.76	MG/Yr
Annual cost of Apparent Losses:	\$21,025	
Annual cost of Real Losses:	\$751	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:
 Non-revenue water as percent by cost of operating system: Real Losses valued at Variable Production Cost

Operational Efficiency: { Apparent Losses per service connection per day: gallons/connection/day
 Real Losses per service connection per day: gallons/connection/day
 Real Losses per length of main per day*:
 Real Losses per service connection per day per psi pressure: gallons/connection/day/psi

From Above, Real Losses = Current Annual Real Losses (CARL): million gallons/year
 ? Infrastructure Leakage Index (ILI) [CARL/UARL]:

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

AWWA Free Water Audit Software: Water Balance

WAS v5.0

American Water Works Association

Water Audit Report for:	Newtown Artesian Water Company (1090043)	
Reporting Year:	2014	1/2014 - 12/2014
Data Validity Score:	79	

		Water Exported <i>0.000</i>	Billed Water Exported			Revenue Water <i>0.000</i>
			Authorized Consumption	Billed Authorized Consumption	Billed Metered Consumption (water exported is removed)	Revenue Water
Own Sources (Adjusted for known errors)			734.491	724.880	724.880	724.880
318.234				Unbilled Authorized Consumption	0.000	
	System Input			9.611	0.000	Non-Revenue Water (NRW)
	768.883	Water Supplied		Apparent Losses	9.611	
		768.883		3.734	1.922	44.003
			Water Losses		0.000	
			34.392	Real Losses	1.812	
Water Imported					Leakage on Transmission and/or Distribution Mains	
450.649				30.657	<i>Not broken down</i>	
					Leakage and Overflows at Utility's Storage Tanks	
					<i>Not broken down</i>	
					Leakage on Service Connections	
					<i>Not broken down</i>	



AWWA Free Water Audit Software: Dashboard

WAS v5.0

American Water Works Association.
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The graphic below is a visual representation of the Water Balance with bar heights proportional to the volume of the audit components

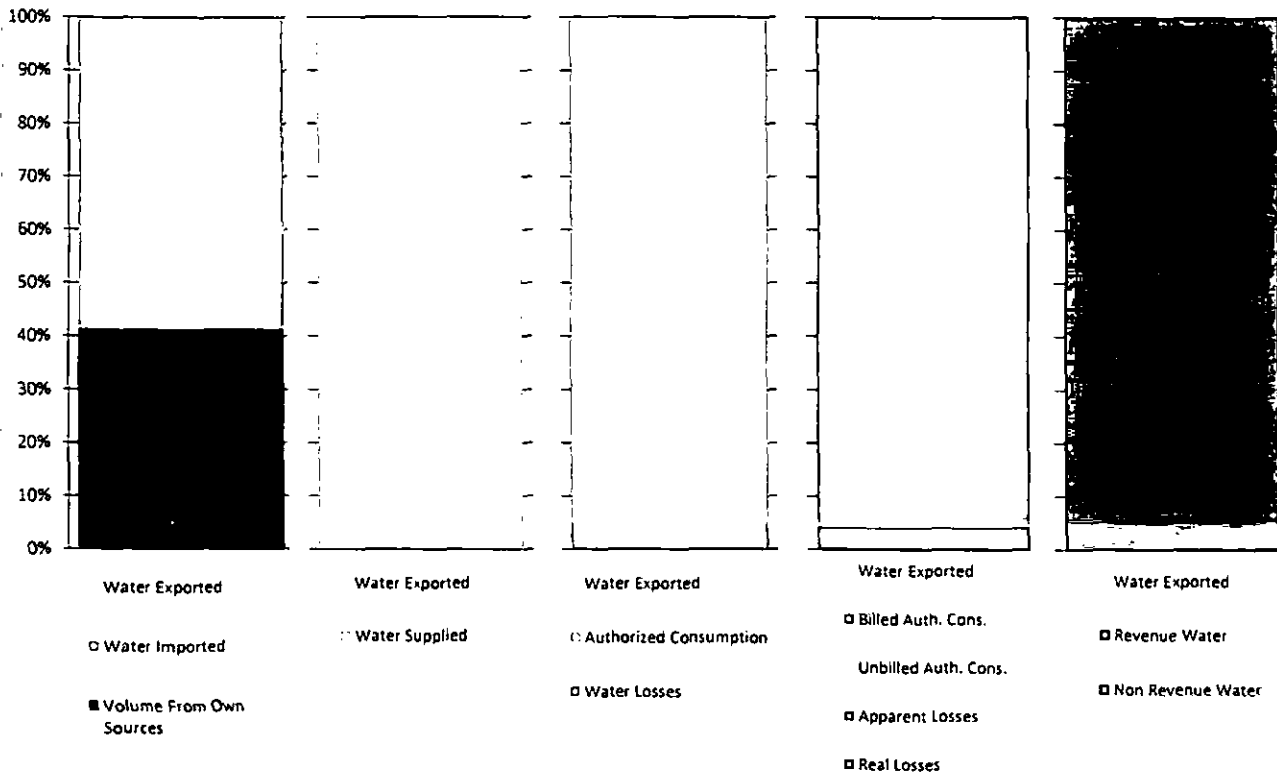
Water Audit Report for: **Newtown Artesian Water Company (1090043)**

Reporting Year: **2014** **1/2014 - 12/2014**

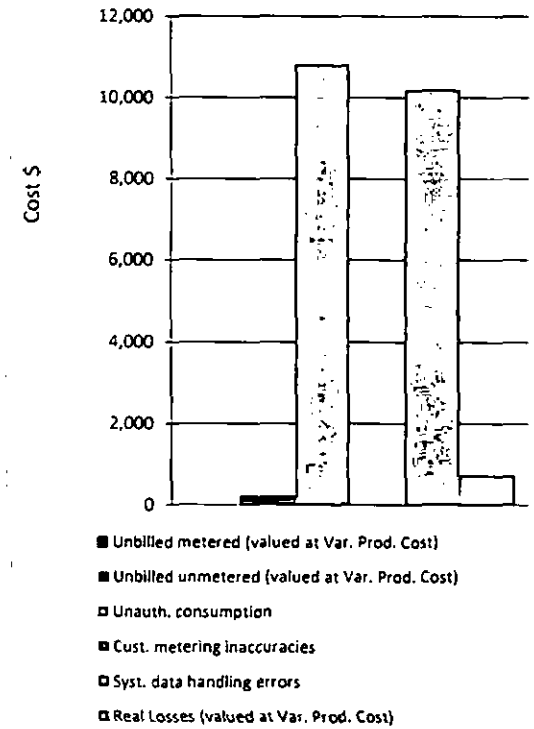
Data Validity Score: **79**

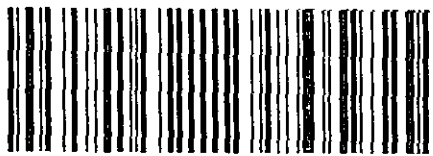
Show me the VOLUME of Non-Revenue Water

Show me the COST of Non-Revenue Water



Total Cost of NRW = \$22,011





7011 2970 0002 7509 9647



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