The Toolbox (Basic) 	Helps to Address	Level of Cost
1 - Validation of supply & consumption volumes	Low Data Validity Score, Gremlins	Low-Mid
2 - Estimating and tracking unmetered use	Validity, Unmetered Use	None-Low
3 - Installing meters on unmetered connections	Unmetered Use	Mid
4 - Billing system audit	Systematic Data Handling Errors	Low-Mid
5 - Meter testing & replacement	Customer metering inaccuracy	Mid-High
6 - Unidirectional flushing program	Unbilled unmetered	Low
7 - Acoustic leak survey	Unreported leakage	Mid
8 - Improve speed/quality of repairs	Unreported, Reported leakage	Low
9 - Locate & eliminate pressure transients (surges, hammers)	All 3 types of leakage	Low-Mid
10 - Reduce peak and overall pressure	All 3 types of leakage	Mid-High

Water Audit Report for: #1 - CITY OF ADEL (GA0750000)
Reporting Year: 2014 | 1/2014 - 12/2014

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 60 out of 100 ***

○ Show me the VOLUME of Non-Revenue Water
● Show me the COST of Non-Revenue Water

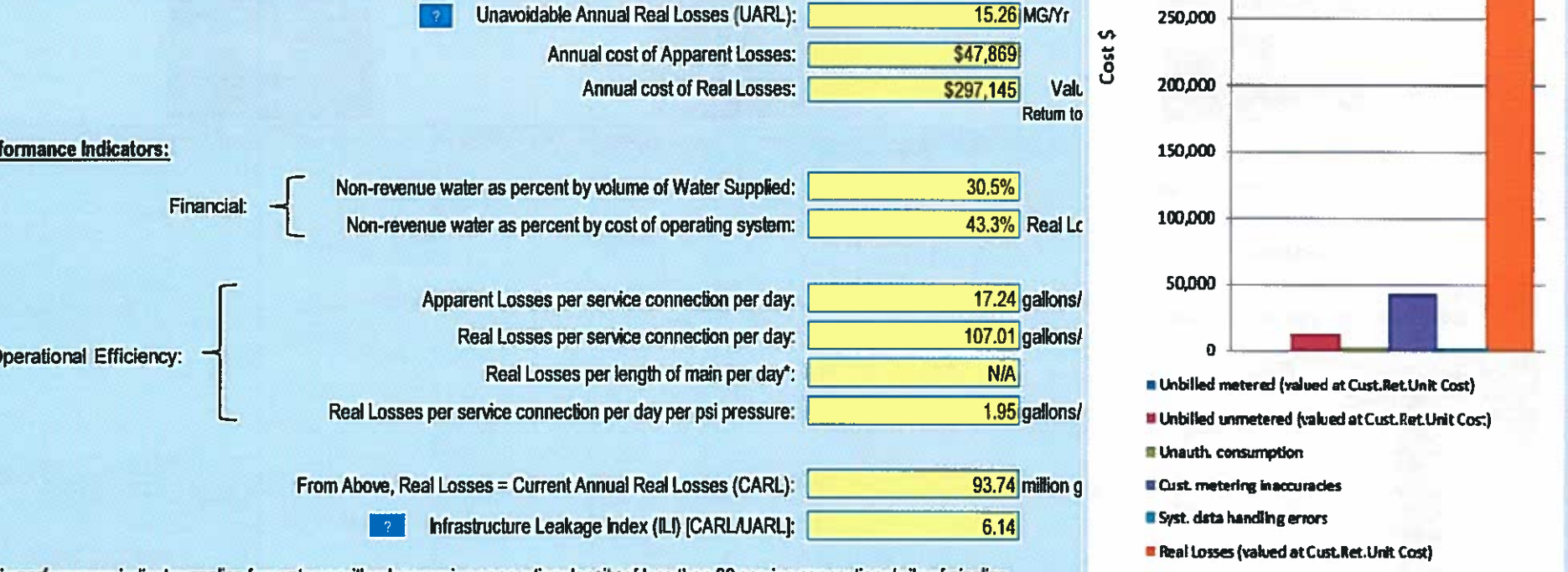
System Attributes:

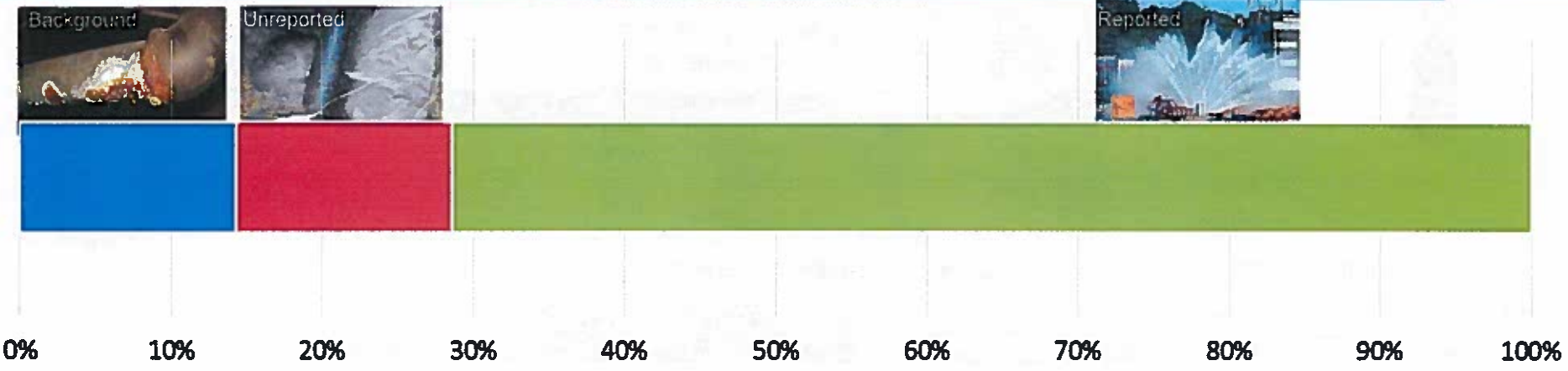
Apparent Losses:	15.100	MG/Yr
+ Real Losses:	93.737	MG/Yr
= **Water Losses:**	108.837	MG/Yr
? Unavoidable Annual Real Losses (UARL):	15.26	MG/Yr
Annual cost of Apparent Losses:	$47,869	
Annual cost of Real Losses:	$297,145	Valu
		Return to

Performance Indicators:

Financial: Non-revenue water as percent by volume of Water Supplied:	30.5%	
Financial: Non-revenue water as percent by cost of operating system:	43.3%	Real Lc
Operational Efficiency: Apparent Losses per service connection per day:	17.24	gallons/
Operational Efficiency: Real Losses per service connection per day:	107.01	gallons/
Operational Efficiency: Real Losses per length of main per day*:	N/A	
Operational Efficiency: Real Losses per service connection per day per psi pressure:	1.95	gallons/
From Above, Real Losses = Current Annual Real Losses (CARL):	93.74	million g
? Infrastructure Leakage Index (ILI) [CARL/UARL]:	6.14	

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





Water Audit Report for: #2 - City of Cave Spring (GA 150000)
Reporting Year: 2014 | 1/2014 - 12/2014

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 52 out of 100 ***

○ Show me the VOLUME of Non-Revenue Water
◉ Show me the COST of Non-Revenue Water

System Attributes:

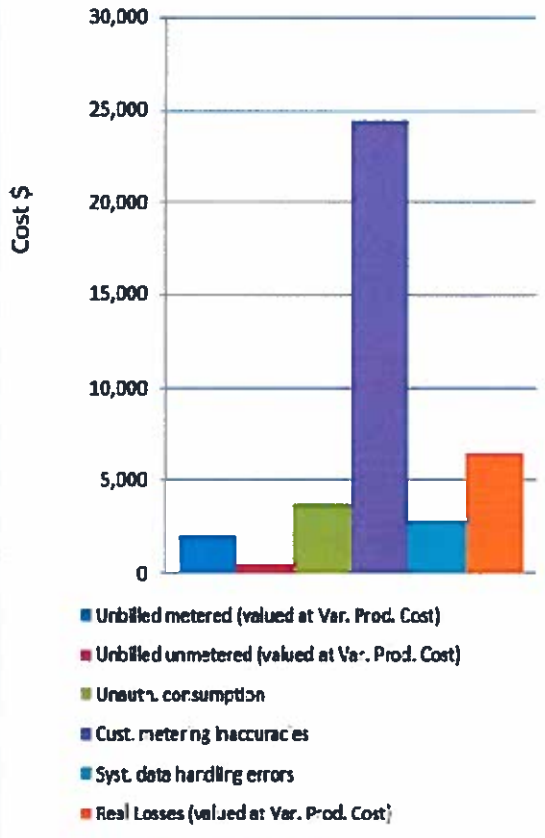
	Apparent Losses:	4.041	MG/Yr
+	Real Losses:	29.998	MG/Yr
=	**Water Losses:**	34.039	MG/Yr
?	Unavoidable Annual Real Losses (UARL):	28.55	MG/Yr
	Annual cost of Apparent Losses:	$30,992	
	Annual cost of Real Losses:	$6,476	Val

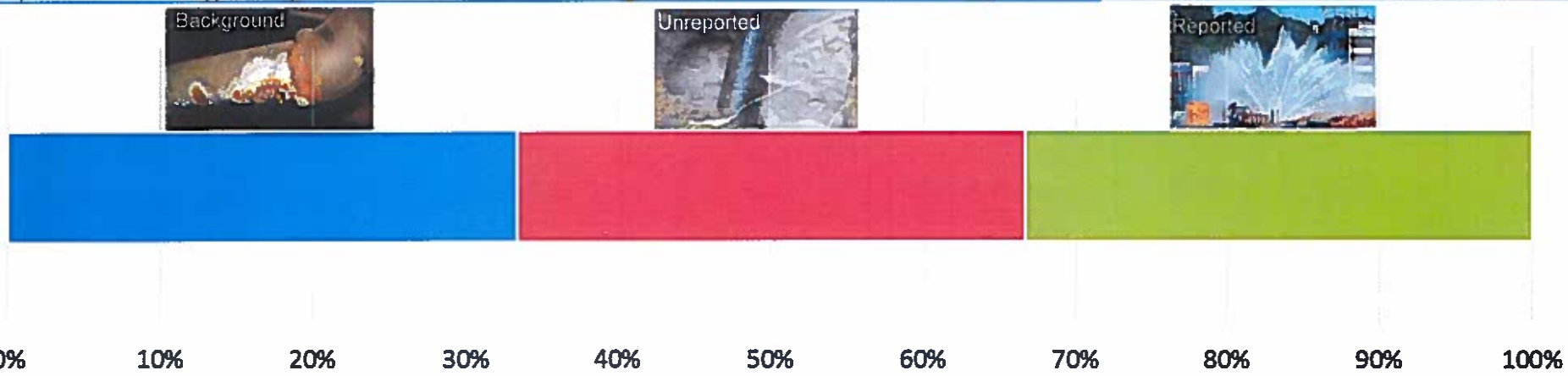
Return t

Performance Indicators:

Financial:	Non-revenue water as percent by volume of Water Supplied:	23.8%	
	Non-revenue water as percent by cost of operating system:	4.8%	Real L
Operational Efficiency:	Apparent Losses per service connection per day:	6.91	gallons
	Real Losses per service connection per day:	N/A	gallons
	Real Losses per length of main per day*:	944.67	gallons
	Real Losses per service connection per day per psi pressure:	N/A	gallons
	From Above, Real Losses = Current Annual Real Losses (CARL):	30.00	million
?	Infrastructure Leakage Index (ILI) [CARL/UARL]:	1.05	

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





Water Audit Report for: #3 - City of Dallas
Reporting Year: 2014 | 1/2014 - 12/2014

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 64 out of 100 ***

System Attributes:

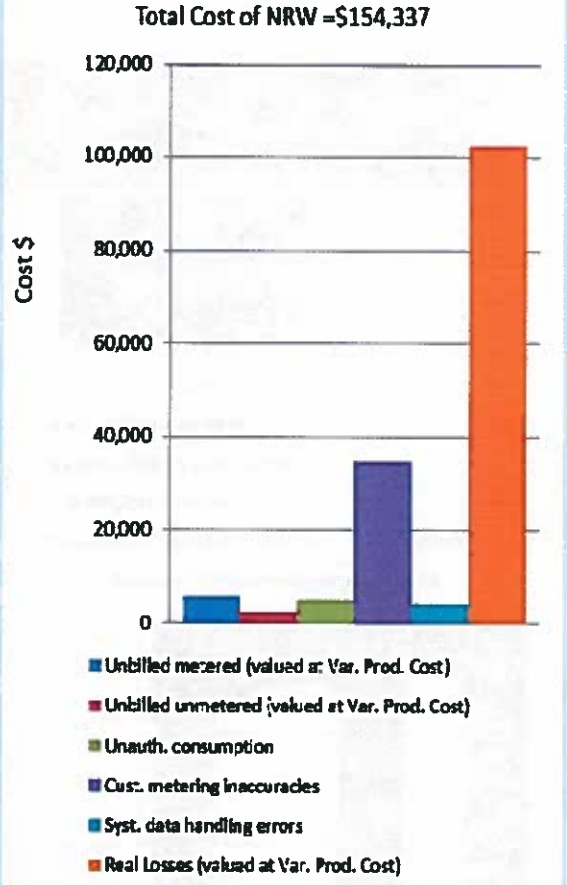
	Apparent Losses:	3.857	MG/Yr
+	Real Losses:	27.485	MG/Yr
=	**Water Losses:**	31.341	MG/Yr
?	Unavoidable Annual Real Losses (UARL):	22.64	MG/Yr
	Annual cost of Apparent Losses:	$44,043	
	Annual cost of Real Losses:	$102,317	Val
			Return t

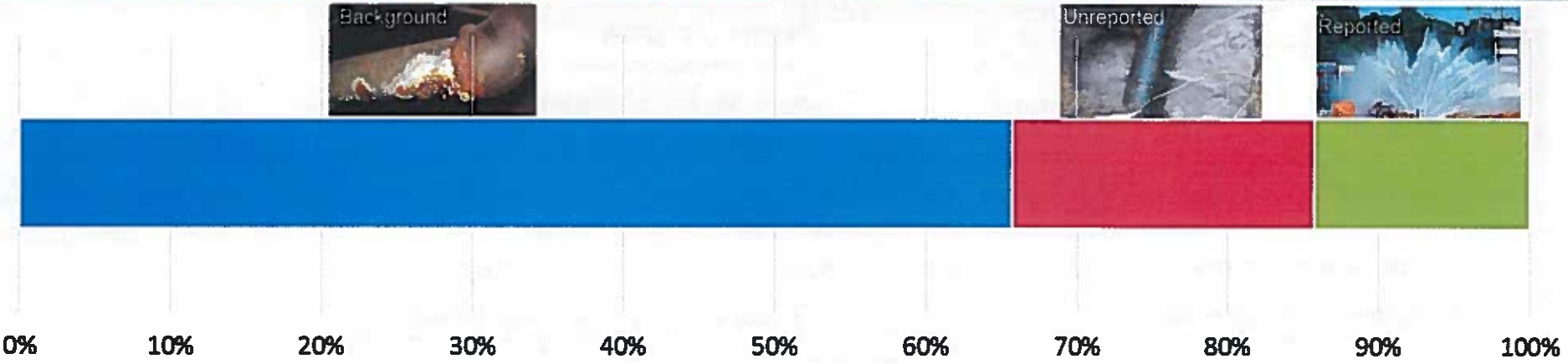
Performance Indicators:

Financial:	Non-revenue water as percent by volume of Water Supplied:	18.5%	
	Non-revenue water as percent by cost of operating system:	8.8%	Real L
Operational Efficiency:	Apparent Losses per service connection per day:	3.23	gallons
	Real Losses per service connection per day:	22.99	gallons
	Real Losses per length of main per day*:	N/A	
	Real Losses per service connection per day per psi pressure:	0.26	gallons
	From Above, Real Losses = Current Annual Real Losses (CARL):	27.48	million
?	Infrastructure Leakage Index (ILI) [CARL/UARL]:	1.21	

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

○ Show me the VOLUME of Non-Revenue Water
● Show me the COST of Non-Revenue Water





Water Audit Report for: #4 - Harlem
Reporting Year: 2014 | 1/2014 - 12/2014

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 55 out of 100 ***

System Attributes:

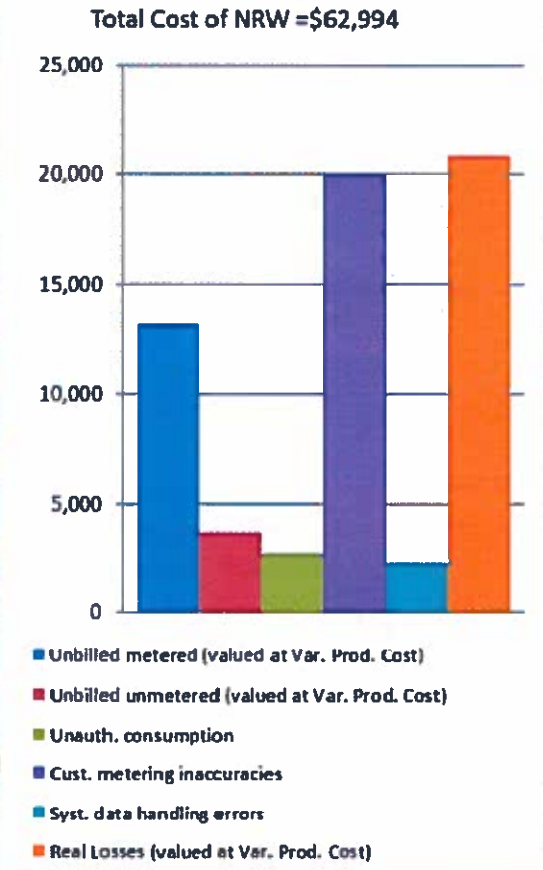
	Apparent Losses:	3.704	MG/Yr
+	Real Losses:	11.315	MG/Yr
=	**Water Losses:**	15.019	MG/Yr
?	Unavoidable Annual Real Losses (UARL):	16.52	MG/Yr
	Annual cost of Apparent Losses:	$25,187	
	Annual cost of Real Losses:	$20,890	Value
			Return to R

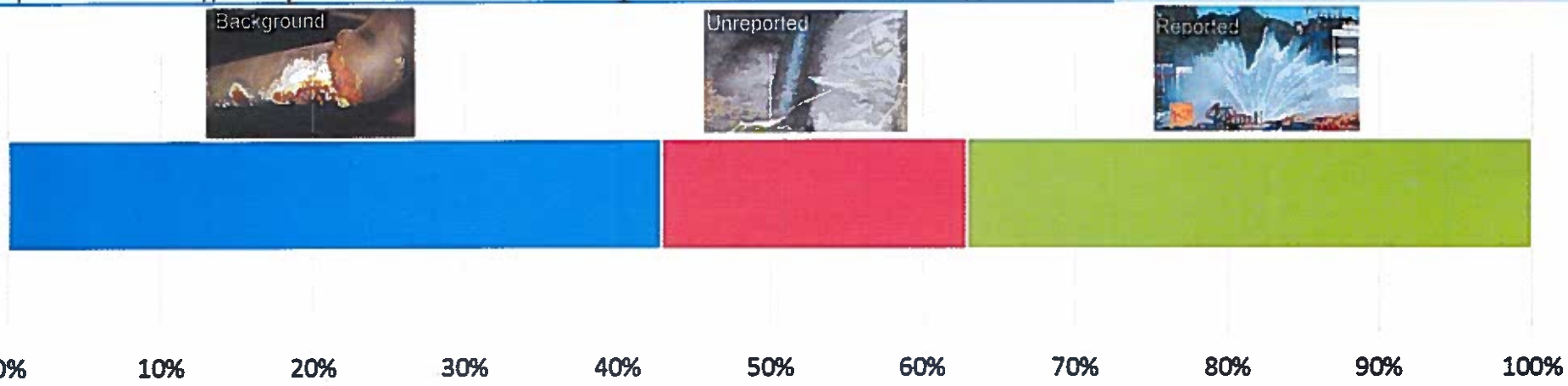
Performance Indicators:

Financial:	Non-revenue water as percent by volume of Water Supplied:	14.9%	
	Non-revenue water as percent by cost of operating system:	7.9%	Real Los
Operational Efficiency:	Apparent Losses per service connection per day:	4.43	gallons/cc
	Real Losses per service connection per day:	13.53	gallons/cc
	Real Losses per length of main per day*:	N/A	
	Real Losses per service connection per day per psi pressure:	0.19	gallons/cc
	From Above, Real Losses = Current Annual Real Losses (CARL):	11.31	million gal
?	Infrastructure Leakage Index (ILI) [CARL/UARL]:	0.68	

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

○ Show me the VOLUME of Non-Revenue Water
◉ Show me the COST of Non-Revenue Water





#3 – Dallas

Annual cost of Non-Revenue Water: $ 154,337

Data Validity Score: 64

typ = 2-10
ILI = 1.2 10

Your observations – are the metrics high, low, or in the middle? What else stands out?

Data Validity Score (scale of 100)	64 mid
Apparent Losses per service connection per day (typical 4-40)	3 oops!
Real Losses per service connection per day (typical 20-200)	23 low
Real Losses per mile of main per day (typical 400-4000)	N/A

The top 1 to 3 focus areas should be:	The best tools to address those focus areas:
1. validity, ILI	1. 1, 2?
2. background loss	2. 9, 10
3. cust meter inaccs	3. 5

#4 - Harlem

Annual cost of Non-Revenue Water: $ 63,000

Data Validity Score: 55

typ = 2-10 ?

Your observations – are the metrics high, low, or in the middle? What else stands out? ILI = 0.62

Data Validity Score (scale of 100)	55 lo
Apparent Losses per service connection per day (typical 4-40)	4 lo
Real Losses per service connection per day (typical 20-200)	14 lo
Real Losses per mile of main per day (typical 400-4000)	N/A

The top 1 to 3 focus areas should be:	The best tools to address those focus areas:
1. validity, ILI	1. 1
2. real loss reported background	2. 8, 9, 10
3. cust meter inaccs unbilled metered	3. 5 3, 4 policies

#1 – Adel

Annual cost of Non-Revenue Water: $ 357 313

Data Validity Score: 60/100

Your observations – are the metrics high, low, or in the middle? What else stands out?

Data Validity Score (scale of 100)	60 mid
Apparent Losses per service connection per day (typical 4-40)	17 mid
Real Losses per service connection per day (typical 20-200)	107 mid
Real Losses per mile of main per day (typical 400-4000)	N/A

The top 1 to 3 focus areas should be:	The best tools to address those focus areas:
1. real loss - reported	1. 8, 9, 10
2. cust meter inacc (real)	2. 5
3. serv conn loss	3.

#2 – Cave Spring

Annual cost of Non-Revenue Water: $ 40,018

Data Validity Score: 52

typ: 2-10

Your observations – are the metrics high, low, or in the middle? What else stands out? ILI = 1.05 ?

Data Validity Score (scale of 100)	52 low
Apparent Losses per service connection per day (typical 4-40)	7 lo
Real Losses per service connection per day (typical 20-200)	N/A
Real Losses per mile of main per day (typical 400-4000)	945 lo/mid

The top 1 to 3 focus areas should be:	The best tools to address those focus areas:
1. validity	1. 1, 2?
2. cust meter inaccs	2. 5
3.	3.

Water Audit Report for: #5 - Jesup (GA3050000)
Reporting Year: 2014 | 1/2014 - 12/2014

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 54 out of 100 ***

System Attributes:

Apparent Losses:	40.186	MG/Yr
+ Real Losses:	139.535	MG/Yr
= **Water Losses:**	179.721	MG/Yr
? Unavoidable Annual Real Losses (UARL):	32.73	MG/Yr
Annual cost of Apparent Losses:	$127,391	
Annual cost of Real Losses:	$33,837	Valu

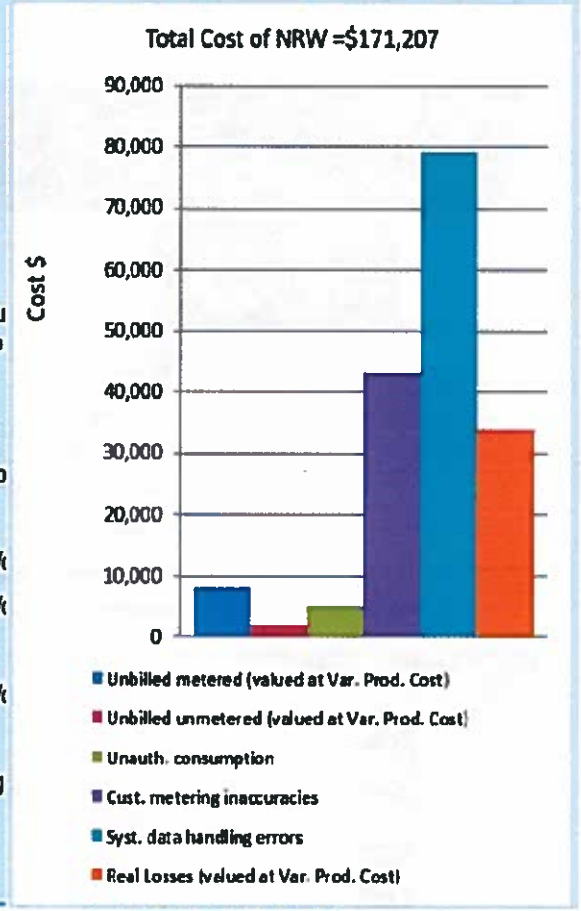
Return to

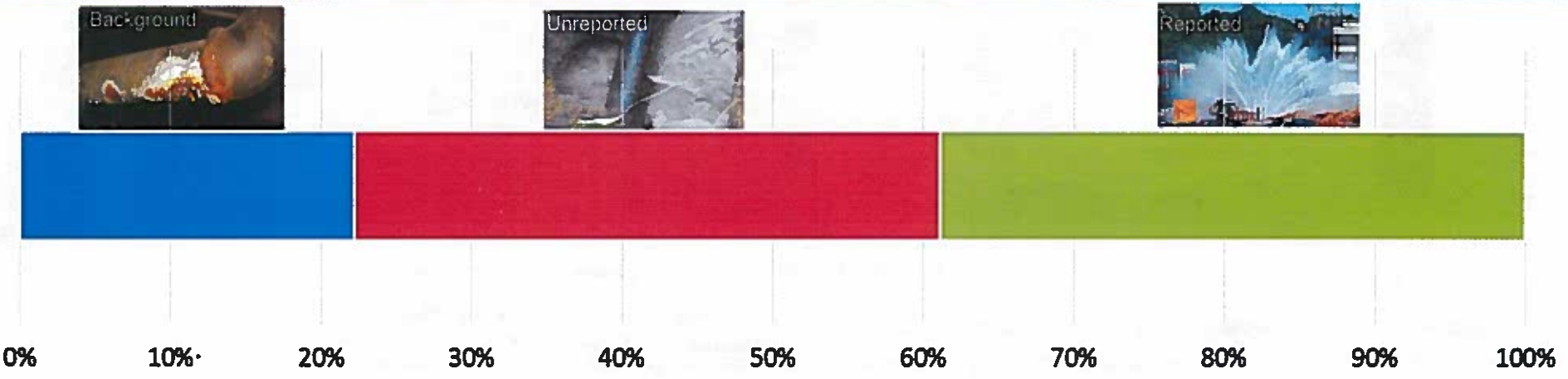
Performance Indicators:

Financial: Non-revenue water as percent by volume of Water Supplied:	35.2%	
Financial: Non-revenue water as percent by cost of operating system:	18.4%	Real Lo
Operational Efficiency: Apparent Losses per service connection per day:	20.08	gallons/c
Operational Efficiency: Real Losses per service connection per day:	69.73	gallons/c
Operational Efficiency: Real Losses per length of main per day*:	N/A	
Operational Efficiency: Real Losses per service connection per day per psi pressure:	1.20	gallons/c
From Above, Real Losses = Current Annual Real Losses (CARL):	139.53	million g
? Infrastructure Leakage Index (ILI) [CARL/UARL]:	4.26	

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

○ Show me the VOLUME of Non-Revenue Water
⊕ Show me the COST of Non-Revenue Water





Water Audit Report for: #6 - McRae/Water (2710003)
Reporting Year: 2014 1/2014 - 12/2014

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 52 out of 100 ***

System Attributes:

Apparent Losses:	17.758	MG/Yr
+ Real Losses:	23.799	MG/Yr
= Water Losses:	41.557	MG/Yr
? Unavoidable Annual Real Losses (UARL):	9.37	MG/Yr
Annual cost of Apparent Losses:	$47,769	
Annual cost of Real Losses:	$4,831	Value

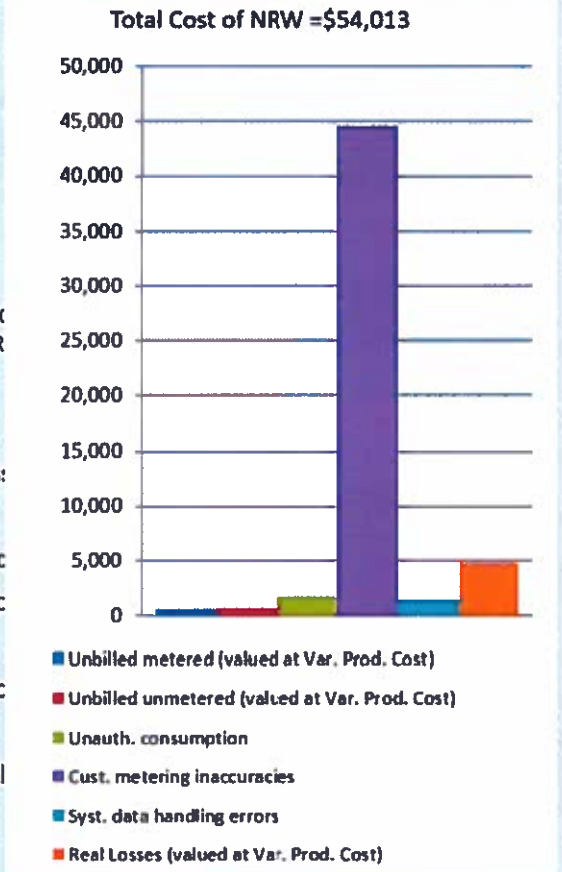
Return to R

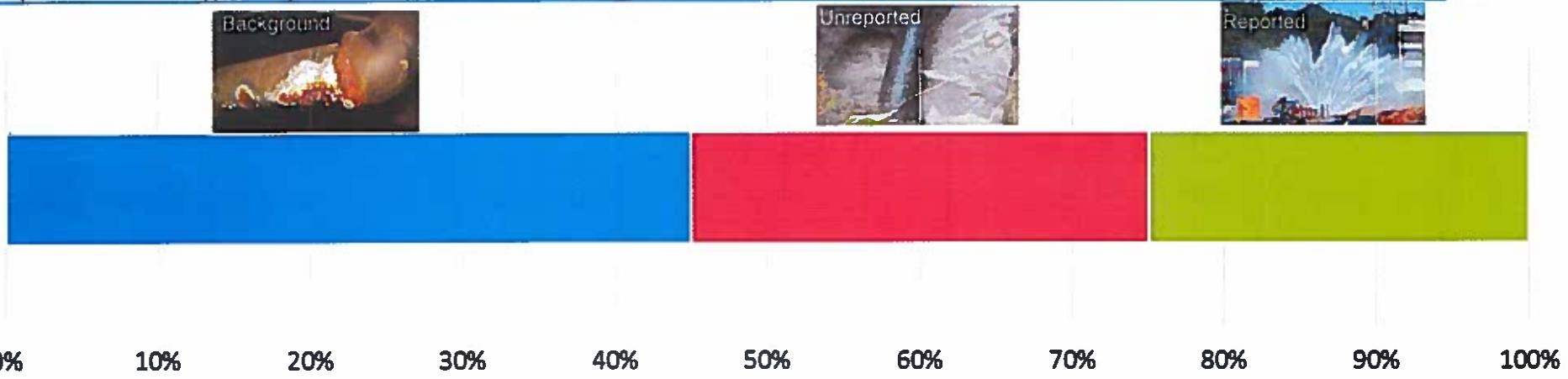
Performance Indicators:

Financial: Non-revenue water as percent by volume of Water Supplied:	18.8%	
Non-revenue water as percent by cost of operating system:	9.6%	Real Los
Operational Efficiency: Apparent Losses per service connection per day:	27.03	gallons/cc
Real Losses per service connection per day:	36.22	gallons/cc
Real Losses per length of main per day*:	N/A	
Real Losses per service connection per day per psi pressure:	0.72	gallons/cc
From Above, Real Losses = Current Annual Real Losses (CARL):	23.80	million gal
? Infrastructure Leakage Index (ILI) [CARL/UARL]:	2.54	

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

○ Show me the VOLUME of Non-Revenue Water
◉ Show me the COST of Non-Revenue Water





Water Audit Report for: #7 - City of Quitman (0270002)
Reporting Year: 2014 1/2014 - 12/2014

○ Show me the VOLUME of Non-Revenue Water
◉ Show me the COST of Non-Revenue Water

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 47 out of 100 ***

System Attributes:

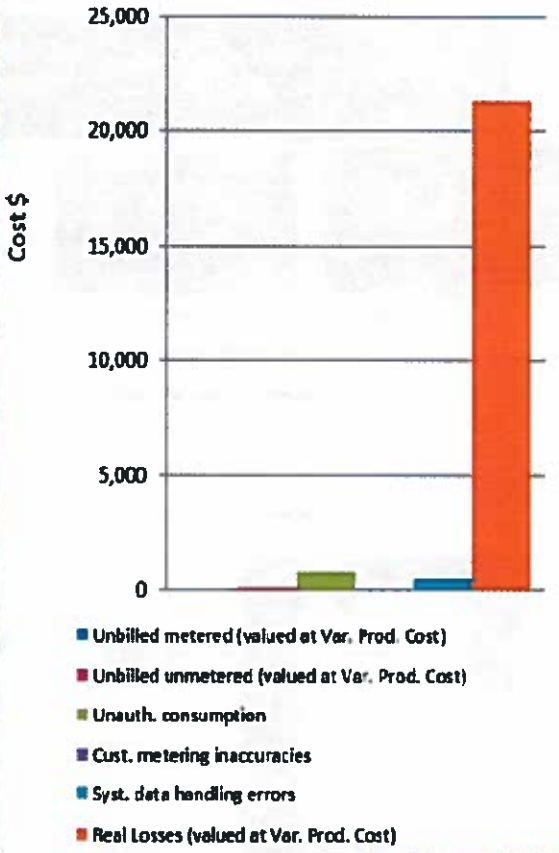
	Apparent Losses:	1.045	MG/Y
+	Real Losses:	89.385	MG/Y
=	**Water Losses:**	90.430	MG/Y
?	Unavoidable Annual Real Losses (UARL):	16.17	MG/Y
	Annual cost of Apparent Losses:	$1,285	
	Annual cost of Real Losses:	$21,334	V
			Return

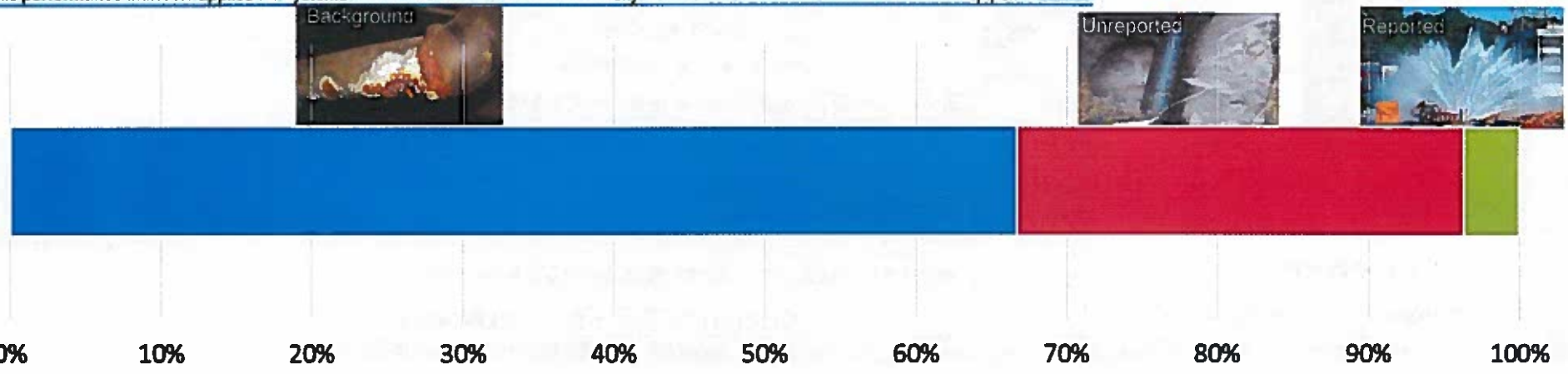
Performance Indicators:

Financial:	Non-revenue water as percent by volume of Water Supplied:	35.7%	
	Non-revenue water as percent by cost of operating system:	3.5%	Real
Operational Efficiency:	Apparent Losses per service connection per day:	1.04	gallor
	Real Losses per service connection per day:	89.34	gallor
	Real Losses per length of main per day*:	N/A	
	Real Losses per service connection per day per psi pressure:	1.37	gallor
	From Above, Real Losses = Current Annual Real Losses (CARL):	89.39	millior
?	Infrastructure Leakage Index (ILI) [CARL/UARL]:	5.53	

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

Total Cost of NRW =$22,741





Water Audit Report for: #8 - SENOIA (0770003)
Reporting Year: 2014 | 1/2014 - 12/2014

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 38 out of 100 ***

○ Show me the VOLUME of Non-Revenue Water
◉ Show me the COST of Non-Revenue Water

System Attributes:

	Apparent Losses:	0.954	MG/Yr
+	Real Losses:	11.018	MG/Yr
=	**Water Losses:**	11.972	MG/Yr
?	Unavoidable Annual Real Losses (UARL):	See limits in definition	MG/Yr
	Annual cost of Apparent Losses:	$6,594	
	Annual cost of Real Losses:	$7,530	Valu

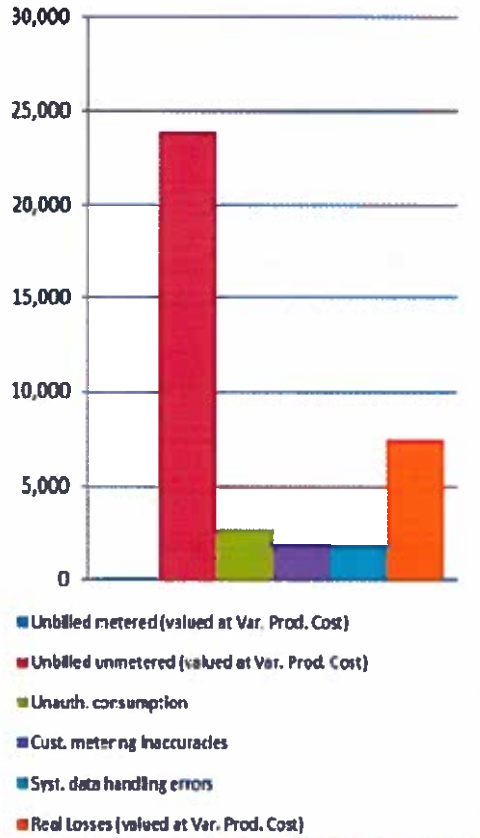
Return to

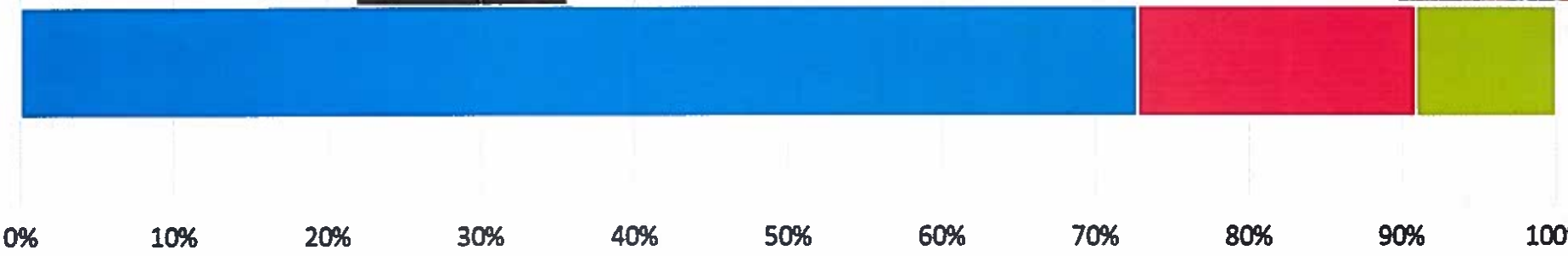
Performance Indicators:

Financial:	Non-revenue water as percent by volume of Water Supplied:	29.7%	
	Non-revenue water as percent by cost of operating system:	0.0%	Real Lo
Operational Efficiency:	Apparent Losses per service connection per day:	1.54	gallons/c
	Real Losses per service connection per day:	17.76	gallons/c
	Real Losses per length of main per day*:	N/A	
	Real Losses per service connection per day per psi pressure:	0.25	gallons/c
	From Above, Real Losses = Current Annual Real Losses (CARL):	11.02	million ga
?	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

Total Cost of NRW =$38,122





#5 - Jesup

Annual cost of Non-Revenue Water: $ 171,207

Data Validity Score: 54 typ 2-10

Your observations – are the metrics high, low, or in the middle? What else stands out? ILI = 4.3

Data Validity Score (scale of 100)	54 lo
Apparent Losses per service connection per day (typical 4-40)	20 mid
Real Losses per service connection per day (typical 20-200)	70 lo mid
Real Losses per mile of main per day (typical 400-4000)	N/A

The top 1 to 3 focus areas should be:	The best tools to address those focus areas:
1. data handling errors	1. 4
2. cust meter inaccs (Real losses)	2. 5 (7 8 9 10)
3. validity - don't want to work on real losses before having better validity	3. 1

#6 - McRae

Annual cost of Non-Revenue Water: $ 54,000

Data Validity Score: 52

Your observations – are the metrics high, low, or in the middle? What else stands out?

Data Validity Score (scale of 100)	52 lo ; ILI = 3 typ 2-10
Apparent Losses per service connection per day (typical 4-40)	27 mid/hi
Real Losses per service connection per day (typical 20-200)	36 lo
Real Losses per mile of main per day (typical 400-4000)	N/A

The top 1 to 3 focus areas should be:	The best tools to address those focus areas:
1. cust meter inaccs	1. 5
2. validity	2. 1
3.	3.

#7 - Quitman

Annual cost of Non-Revenue Water: $ 22,741

Data Validity Score: 47

Your observations – are the metrics high, low, or in the middle? What else stands out?

Data Validity Score (scale of 100)	47 lo ; ILI = 6 typ 2-10 mid
Apparent Losses per service connection per day (typical 4-40)	1 lo (validity issue)
Real Losses per service connection per day (typical 20-200)	89
Real Losses per mile of main per day (typical 400-4000)	N/A

The top 1 to 3 focus areas should be:	The best tools to address those focus areas:
1. validity	1. 1
2. real loss - background	2. 9, 10
3.	3.

#8 - Senoia

Annual cost of Non-Revenue Water: $ 38,122

Data Validity Score: 38

Your observations – are the metrics high, low, or in the middle? What else stands out?

Data Validity Score (scale of 100)	38 lo ; ILI N/A
Apparent Losses per service connection per day (typical 4-40)	2 lo
Real Losses per service connection per day (typical 20-200)	18 below
Real Losses per mile of main per day (typical 400-4000)	

The top 1 to 3 focus areas should be:	The best tools to address those focus areas:
1. validity	1. 1
2. unbilled unmetered	2. 1, 2, 6
3. real loss background	3. 9, 10