

**NMED – Water Loss Control Training Program  
Small Systems Workshop #2 – Data Inputs Exercise**

**Supply**

The Town Water Utility (TWU) is a small-sized water utility located in the Southwestern United States. The TWU services both urban and rural areas within its county service area. Water is produced from 3 wells at separate locations around the system, and delivered through 3 separate finished water meters (turbine style). TWU buys no bulk water supply from any neighboring water authorities. TWU sells water in bulk to a neighboring utility (Walterville).

*↓ doesn't include well #3 meter flows*

Production Report for 2014	Well #1 Meter (MG)	Well #2 Meter (MG)	Well #3 Meter (MG)	Total
January	12.34	10.20	5.61	22.54
February	10.16	8.40	4.62	18.56
March	13.79	11.40	6.27	25.19
April	15.97	13.20	7.26	29.17
May	21.05	17.40	9.57	38.45
June	21.78	18.00	9.90	39.78
July	24.68	20.40	11.22	45.08
August	26.14	21.60	11.88	47.74
September	21.78	18.00	9.90	39.78
October	17.42	14.40	7.92	31.82
November	14.52	12.00	6.60	26.52
December	13.07	10.80	5.94	23.87
<b>Total (MG)</b>	<b>212.72</b> →	<b>175.80</b> →	<b>96.69 = 485.21</b>	<b>388.52</b>

*28.15  
23.18  
31.46  
36.43  
48.02  
49.68  
56.30  
59.62  
49.68  
39.74  
33.12  
29.81  
**485.19***

FWM Accuracy Test Report	Well #1	Well #2	Well #3
Date	2/3/2014	2/4/2014	2/5/2014
Duration	6 hr	6 hr	6 hr
Method	Clamp-on (ultrasonic)	Comparitive meter (test port)	Clamp-on (ultrasonic)
Accuracy Result	6.30%	1.10%	2.80%
Over/Under	Over	Under	Under

*ok not on same date*

**Master Meter Error Calculation: 6.3% - 1.3% - 2.8% = 2.2%.**

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*unbilled*

Unmetered Usage Report	Estimated Volume for 2014
WQ flushing	2.350 MG
Complaint flushing	0.059 MG
Repair flushing	0.850 MG
Fire Dept	1.758 MG
Leaks found	8.575 MG
New construction flushing	2.220 MG
Street cleaning	0.980 MG
Sewer jetting	4.150 MG

*exclude leaks = real loss  
12.367*

**Billing System Report: Water Sold 2014**

Month	Residential Billed	Non-Residential Billed	Wholesale (Exported)	Total
January	7,116,213	6,523,196	5,930,178	19,569,587
February	5,860,411	5,372,043	4,883,676	16,116,130
March	7,953,415	7,290,630	6,627,846	21,871,891
April	9,209,217	8,441,783	7,674,348	25,325,348
May	12,139,423	11,127,804	10,116,186	33,383,413
June	12,558,024	11,511,522	10,465,020	34,534,565
July	14,232,427	13,046,391	11,860,356	39,139,174
August	15,069,628	13,813,826	12,558,024	41,441,478
September	12,558,024	11,511,522	10,465,020	34,534,565
October	12,880,024	11,806,689	10,733,354	35,420,067
November	8,372,016	7,674,348	6,976,680	23,023,043
December	7,534,814	6,906,913	6,279,012	20,720,739
<b>Total (gal)</b>	<b>125,483,636</b>	<b>115,026,667</b>	<b>104,569,697</b>	<b>345,080,000</b>

*-104569697 exported  
240510303 Billed (metered)*

Class	Rate Code	Rate (\$/kgal)
Residential Water	WRES	\$4.65
Non-Residential Water	WNR	\$5.65
00Residential Sewer	SRES	\$5.81
Non-Residential Sewer	SNR	\$7.06

Ratio of sewer volume to water volume sold = 67%