
Presentation of Results

Water and Sewer Rate Study

Trophy Club MUD No. 1



*A Division of
NewGen Strategies & Solutions, LLC*

February 18, 2014

Agenda

- Fundamental Assumptions
- Key Issues
- Recommendations
- Monthly Bill Comparison
- Questions



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Fundamental Assumptions

- A Water & Sewer Utility is essentially a business and therefore, should be operated accordingly
 - Considered a Business-Like Activity of Government
 - Typically accounted for in an Enterprise Fund
 - Cost to provide service should be recovered from water and sewer revenues
- Study only considered rate revenues



Key Issues

- TCMUD is in need of significant wastewater capital improvements. TCMUD plans on issuing \$6.0 Million in revenue-supported debt in FY 2014 for Treatment Plant Upgrades
- TCMUD is nearing build-out capacity, and will be losing Utility Fee Revenues from the PID
 - PID contract terminates when all utility fees are paid
 - Estimated to Occur in 2016; Contract Term is 2018



Key Issues

- Wholesale Cost Increases Continue to Impact TCMUD
 - Over \$300,000 increase in wholesale water cost from City of Ft. Worth
 - Increases must be passed through to customers to maintain financial position of the utility
- TCMUD's existing short term debt will decline through 2016



Key Issues

- Assuming “normal” precipitation conditions, TCMUD’s existing water and wastewater rates are insufficient to fully fund the cost of providing water and wastewater service
- Under Contract, PID customers must be charged the same rate as MUD Residential Customers through 2016
- Recommend Revenue Adjustment to recover Projected 2016 Cost of Service
 - Will require use of reserves to cover projected shortfalls
 - Total estimated shortfall for FY 2014 & FY 2015 of \$553,000
 - \$359,000 for Water and \$194,000 for Wastewater



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Projected Revenue Under Current Rates

Water	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>
Revenue Requirement	\$ 4,588,940	\$ 4,336,331	\$ 4,516,381	\$ 4,571,910	\$ 4,767,839
Revenue Under Current Rates	3,577,181	3,711,207	3,851,935	3,999,698	4,154,850
Over / (Under) (\$)	(\$ 1,011,759)	(\$ 625,124)	(\$ 664,447)	(\$ 572,212)	(\$ 612,988)
Over / Under (%)	-28.28%	-16.84%	-17.25%	-14.31%	-14.75%
Wastewater					
Revenue Requirement	\$ 2,157,623	\$ 2,219,073	\$ 2,229,793	\$ 2,269,112	\$ 2,323,933
Revenue Under Current Rates	1,794,717	1,867,521	1,943,966	2,024,233	2,108,513
Over / (Under) (\$)	(\$ 362,906)	(\$ 351,552)	(\$ 285,827)	(\$ 244,879)	(\$ 215,419)
Over / Under (%)	-20.22%	-18.82%	-14.70%	-12.10%	-10.22%
Totals					
Revenue Requirement	\$ 6,746,563	\$ 6,555,405	\$ 6,746,174	\$ 6,841,022	\$ 7,091,771
Revenue Under Current Rates	5,371,897	5,578,728	5,795,900	6,023,931	6,263,364
Over / (Under) (\$)	(\$ 1,374,666)	(\$ 976,676)	(\$ 950,274)	(\$ 817,091)	(\$ 828,408)
Over / Under (%)	-25.59%	-17.51%	-16.40%	-13.56%	-13.23%

Recommendations – Water Rate Options

- Scenario 1:
 - Adjust all out of District rates (Excluding PID) to 1.15x
 - Keep inclining block rate design
 - Increase upper blocks and hold percent increase between blocks constant
- Scenario 2:
 - Adjust All out of District Rates (Excluding PID) to 1.15x
 - Keep meter charge for 5/8 x 3/4 inch @ \$12.71(Lifeline Rate)
 - Any meter greater than 5/8 x 3/4 inch charge \$19.04
 - Increase upper blocks and hold percent increase between blocks constant
- Scenario 3:
 - Adjust All out of District Rates (Excluding PID) to 1.15x
 - Charge by Meter Size and Phase into AWWA Meter Equivalentents
 - Increase upper blocks and hold percent increase between blocks constant

Projected Water Rates

	<u>Current</u>	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>
Minimum Charge				
5/8 x 3/4 inch	\$ 12.71	\$ 14.90	\$ 12.71	\$ 12.71
1 inch	12.71	14.90	19.04	16.71
1 1/2 inch	12.71	14.90	19.04	26.42
2 inch	12.71	14.90	19.04	38.06
3 inch	12.71	14.90	19.04	65.23
4 inch	12.71	14.90	19.04	104.04
6 inch	12.71	14.90	19.04	201.06
Volumetric Rate (per 1,000 gallons)				
0 – 6,000	\$ 2.50	\$ 2.70	\$ 2.70	\$ 2.70
6,001 – 17,000	3.05	3.14	3.14	3.14
17,001 – 25,000	3.30	3.64	3.64	3.64
25,001 – 50,000	3.40	4.23	4.23	4.23
50,000 +	3.50	4.91	4.91	4.91

Projected Water % Increase from Current Rates

	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>
Minimum Charge			
5/8 x 3/4 inch	17.23%	0.00%	0.00%
1 inch	17.23%	49.80%	31.47%
1 1/2 inch	17.23%	49.80%	107.87%
2 inch	17.23%	49.80%	199.45%
3 inch	17.23%	49.80%	413.22%
4 inch	17.23%	49.80%	718.57%
6 inch	17.23%	49.80%	1481.90%
Volumetric Rate (per 1,000 gallons)			
0 – 6,000	8.00%	8.00%	8.00%
6,001 – 17,000	2.95%	2.95%	2.95%
17,001 – 25,000	10.30%	10.30%	10.30%
25,001 – 50,000	24.41%	24.41%	24.41%
50,000 +	40.29%	40.29%	40.29%

Projected Residential Water Rate Impact

Monthly Impact of Water Scenarios on Residential Customers

	<u>Current</u>	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>
Meter Charge (5/8 X 3/4 Inch)	\$ 12.71	\$ 14.90	\$ 12.71	\$ 12.71
Volumetric Revenue (5,000 gal)	12.50	13.50	13.50	13.50
Total Bill	\$ 25.21	\$ 28.40	\$ 26.21	\$ 26.21
Change Over / (Under) Current (\$)		3.19	1.00	1.00
Meter Charge (5/8 X 3/4 Inch)	\$ 12.71	\$ 14.90	\$ 12.71	\$ 12.71
Volumetric Revenue (10,000 gal)	27.20	28.76	28.76	28.76
Total Bill	\$ 39.91	\$ 43.66	\$ 41.47	\$ 41.47
Change Over / (Under) Current (\$)		3.75	1.56	1.56
Meter Charge (5/8 X 3/4 Inch)	\$ 12.71	\$ 14.90	\$ 12.71	\$ 12.71
Volumetric Revenue (15,000 gal)	42.45	44.46	44.46	44.46
Total Bill	\$ 55.16	\$ 59.36	\$ 57.17	\$ 57.17
Change Over / (Under) Current (\$)		4.20	2.01	2.01

Projected Residential Water Rate Impact

Monthly Impact of Water Scenarios on Residential Customers

	<u>Current</u>	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>
Meter Charge (5/8 X 3/4 Inch)	\$ 12.71	\$ 14.90	\$ 12.71	\$ 12.71
Volumetric Revenue (18,000 gal)	51.85	54.38	54.38	54.38
Total Bill	\$ 64.56	\$ 69.28	\$ 67.09	\$ 67.09
Change Over / (Under) Current (\$)		4.72	2.53	2.53
Meter Charge (5/8 X 3/4 Inch)	\$ 12.71	\$ 14.90	\$ 12.71	\$ 12.71
Volumetric Revenue (20,000 gal)	58.45	61.66	61.66	61.66
Total Bill	\$ 71.16	\$ 76.56	\$ 74.37	\$ 74.37
Change Over / (Under) Current (\$)		5.40	3.21	3.21
Meter Charge (5/8 X 3/4 Inch)	\$ 12.71	\$ 14.90	\$ 12.71	\$ 12.71
Volumetric Revenue (25,000 gal)	74.95	79.86	79.86	79.86
Total Bill	\$ 87.66	\$ 94.76	\$ 92.57	\$ 92.57
Change Over / (Under) Current (\$)		7.10	4.91	4.91

Projected Residential Water Rate Impact

Monthly Impact of Water Scenarios on Residential Customers

	<u>Current</u>	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>
Meter Charge (1 Inch)	\$ 12.71	\$ 14.90	\$ 19.04	\$ 16.71
Volumetric Revenue (5,000 gal)	12.50	13.50	13.50	13.50
Total Bill	\$ 25.21	\$ 28.40	\$ 32.54	\$ 30.21
Change Over / (Under) Current (\$)		3.19	7.33	5.00
Meter Charge (1 Inch)	\$ 12.71	\$ 14.90	\$ 19.04	\$ 16.71
Volumetric Revenue (10,000 gal)	27.20	28.76	28.76	28.76
Total Bill	\$ 39.91	\$ 43.66	\$ 47.80	\$ 45.47
Change Over / (Under) Current (\$)		3.75	7.89	5.56
Meter Charge (1 Inch)	\$ 12.71	\$ 14.90	\$ 19.04	\$ 16.71
Volumetric Revenue (15,000 gal)	42.45	44.46	44.46	44.46
Total Bill	\$ 55.16	\$ 59.36	\$ 63.50	\$ 61.17
Change Over / (Under) Current (\$)		4.20	8.34	6.01

Projected Residential Water Rate Impact

Monthly Impact of Water Scenarios on Residential Customers

	<u>Current</u>	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>
Meter Charge (1 Inch)	\$ 12.71	\$ 14.90	\$ 19.04	\$ 16.71
Volumetric Revenue (18,000 gal)	51.85	54.38	54.38	54.38
Total Bill	\$ 64.56	\$ 69.28	\$ 73.42	\$ 71.09
Change Over / (Under) Current (\$)		4.72	8.86	6.53
Meter Charge (1 Inch)	\$ 12.71	\$ 14.90	\$ 19.04	\$ 16.71
Volumetric Revenue (20,000 gal)	58.45	61.66	61.66	61.66
Total Bill	\$ 71.16	\$ 76.56	\$ 80.70	\$ 78.37
Change Over / (Under) Current (\$)		5.40	9.54	7.21
Meter Charge (1 Inch)	\$ 12.71	\$ 14.90	\$ 19.04	\$ 16.71
Volumetric Revenue (25,000 gal)	74.95	79.86	79.86	79.86
Total Bill	\$ 87.66	\$ 94.76	\$ 98.90	\$ 96.57
Change Over / (Under) Current (\$)		7.10	11.24	8.91

Projected Commercial Water Rate Impact

Monthly Impact of Water Scenarios on Commercial Customers

	<u>Current</u>	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>
Meter Charge (2 Inch)	\$ 12.71	\$ 14.90	\$ 19.04	\$ 38.06
Volumetric Revenue (25,000 gal)	74.95	79.86	79.86	79.86
Total Bill	\$ 87.66	\$ 94.76	\$ 98.90	\$ 117.92
Change Over / (Under) Current (\$)		7.10	11.24	30.26
Meter Charge (2 Inch)	\$ 12.71	\$ 14.90	\$ 19.04	\$ 38.06
Volumetric Revenue (50,000 gal)	159.95	185.61	185.61	185.61
Total Bill	\$ 172.66	\$ 200.51	\$ 204.65	\$ 223.67
Change Over / (Under) Current (\$)		27.85	31.99	51.01

Projected Commercial Water Rate Impact

Monthly Impact of Water Scenarios on Commercial Customers

	<u>Current</u>	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>
Meter Charge (2 Inch)	\$ 12.71	\$ 14.90	\$ 19.04	\$ 38.06
Volumetric Revenue (75,000 gal)	247.45	308.36	308.36	308.36
Total Bill	\$ 260.16	\$ 323.26	\$ 327.40	\$ 346.42
Change Over / (Under) Current (\$)		63.10	67.24	86.26
Meter Charge (2 Inch)	\$ 12.71	\$ 14.90	\$ 19.04	\$ 38.06
Volumetric Revenue (100,000 gal)	334.95	431.11	431.11	431.11
Total Bill	\$ 347.66	\$ 446.01	\$ 450.15	\$ 469.17
Change Over / (Under) Current (\$)		98.35	102.49	121.51

Number of Customers By Meter Size (May 2013 Active Meter Count)

5/8 x 3/4 inch	2,491
1 inch	1,403
1 1/2 inch	18
2 inch	77
3 inch	13
4 inch	12
6 inch	2
8 inch	1

Note: All active meters including Effluent meters in May 2013 Billing Data. Apartments Units are charged at 5/8 x 3/4 inch meter size per Apartment Unit and NOT by Meter Size. Only Meter Sizes indicated above.

Recommendations – Sewer Rate Options

- **Scenario 1:**
 - Keep current rate structure to recover cost of service
 - Adjust All out of District Rates (Excluding PID) to 1.15x
- **Scenario 2:**
 - Adjust all out of District rates (excluding PID) to 1.15x
 - Raise Residential Cap to 18K
 - Keep inclining block rate design for commercial
- **Scenario 3:**
 - Adjust all out of District rates (excluding PID) to 1.15x
 - All Volumes Charged the same rate, No Blocks
 - Keep Residential Cap at 12K gallons
- **Scenario 4:**
 - Adjust all out of District rates (excluding PID) to 1.15x
 - All Volumes Charged the same rate, No Blocks
 - Raise Residential Cap at 18K gallons

Projected Residential Sewer Rates

	Current	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Minimum Charge	\$ 12.71	\$ 14.58	\$ 13.00	\$ 14.58	\$ 14.58
Volumetric Rate (000, gallons)					
0 – 6,000	\$ 2.50	\$ 2.88	\$ 2.50	\$ 3.05	\$ 2.50
6,001 - 12,000	2.50	2.88		3.05	
6,0001 – 18,000			2.50		2.50

Projected % Increase from Current Residential Sewer Rates

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Minimum Charge	14.68%	2.28%	14.68%	14.68%
Volumetric Rate (000, gallons)				
0 – 6,000	15.20%	0.00%	22.00%	0.00%
6,001 - 12,000	15.20%		22.00%	
6,0001 – 18,000		*0.00%		*0.00%

* No change in volumetric charge because of adjustment to rate design.

Projected Commercial Sewer Rates

	Current	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Minimum Charge	\$ 12.71	\$ 14.58	\$ 13.00	\$ 14.58	\$ 14.58
Volumetric Rate (000, gallons)					
0 – 6,000	\$ 2.50	\$ 2.88	\$ 2.50	\$ 3.05	\$ 2.50
6,001 – 17,000	3.05	3.52	3.05	3.05	2.50
17,001 – 25,000	3.30	3.81	3.30	3.05	2.50
25,001 – 50,000	3.40	3.92	3.40	3.05	2.50
50,000+	3.50	4.04	3.50	3.05	2.50

Projected % Increase/Decrease from Current Commercial Sewer Rates

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Minimum Charge	14.68%	2.28%	14.68%	14.68%
Volumetric Rate (000, gallons)				
0 – 6,000	15.50%	0.00%	22.00%	0.00%
6,001 – 17,000	15.41%	0.00%	0.00%	-18.03%
17,001 – 25,000	15.45%	0.00%	-7.58%	-24.24%
25,001 – 50,000	15.29%	0.00%	-10.29%	-26.47%
50,000+	15.43%	0.00%	-12.86%	-28.57%

Residential Sewer Rate Impact

Monthly Impact of Sewer Scenarios on Residential Customers

	<u>Current</u>	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>	<u>Scenario 4</u>
Minimum Charge	\$ 12.71	\$ 14.58	\$ 13.00	\$ 14.58	\$ 14.58
Flow Revenue (5,000 gal)	12.50	14.40	12.50	15.25	12.50
Total Bill	\$ 25.21	\$ 28.98	\$ 25.50	\$ 29.83	\$ 27.08
Change Over / (Under) Current (\$)		3.77	0.29	4.62	1.87
Minimum Charge	\$ 12.71	\$ 14.58	\$ 13.00	\$ 14.58	\$ 14.58
Flow Revenue (10,000 gal)	25.00	28.80	25.00	30.50	25.00
Total Bill	\$ 37.71	\$ 43.38	\$ 38.00	\$ 45.08	\$ 39.58
Change Over / (Under) Current (\$)		5.67	0.29	7.37	1.87
Minimum Charge	\$ 12.71	\$ 14.58	\$ 13.00	\$ 14.58	\$ 14.58
Flow Revenue (15,000 gal)	30.00	34.56	37.50	36.60	37.50
Total Bill	\$ 42.71	\$ 49.14	\$ 50.50	\$ 51.18	\$ 52.08
Change Over / (Under) Current (\$)		6.43	7.79	8.47	9.37

Residential Sewer Rate Impact

Monthly Impact of Sewer Scenarios on Residential Customers

	<u>Current</u>	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>	<u>Scenario 4</u>
Minimum Charge	\$ 12.71	\$ 14.58	\$ 13.00	\$ 14.58	\$ 14.58
Flow Revenue (18,000 gal)	30.00	34.56	45.00	36.60	45.00
Total Bill	\$ 42.71	\$ 49.14	\$ 58.00	\$ 51.18	\$ 59.58
Change Over / (Under) Current (\$)		6.43	15.29	8.47	16.87
Minimum Charge	\$ 12.71	\$ 14.58	\$ 13.00	\$ 14.58	\$ 14.58
Flow Revenue (20,000 gal)	30.00	34.56	45.00	36.60	45.00
Total Bill	\$ 42.71	\$ 49.14	\$ 58.00	\$ 51.18	\$ 59.58
Change Over / (Under) Current (\$)		6.43	15.29	8.47	16.87
Minimum Charge	\$ 12.71	\$ 14.58	\$ 13.00	\$ 14.58	\$ 14.58
Flow Revenue (25,000 gal)	30.00	34.56	45.00	36.60	45.00
Total Bill	\$ 42.71	\$ 49.14	\$ 58.00	\$ 51.18	\$ 59.58
Change Over / (Under) Current (\$)		6.43	15.29	8.47	16.87

Commercial Sewer Rate Impact

Monthly Impact of Sewer Scenarios on Commercial Customers

	<u>Current</u>	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>	<u>Scenario 4</u>
Minimum Charge	\$ 12.71	\$ 14.58	\$ 13.00	\$ 14.58	\$ 14.58
Flow Revenue (25,000 gal)	74.95	86.48	74.95	76.25	62.50
Total Bill	\$ 87.66	\$ 101.06	\$ 87.95	\$ 90.83	\$ 77.08
Change Over / (Under) Current (\$)		13.40	0.29	3.17	(10.58)
Minimum Charge	\$ 12.71	\$ 14.58	\$ 13.00	\$ 14.58	\$ 14.58
Flow Revenue (50,000 gal)	159.95	184.48	159.95	152.50	125.00
Total Bill	\$ 172.66	\$ 199.06	\$ 172.95	\$ 167.08	\$ 139.58
Change Over / (Under) Current (\$)		26.40	0.29	(5.58)	(33.08)

Commercial Sewer Rate Impact

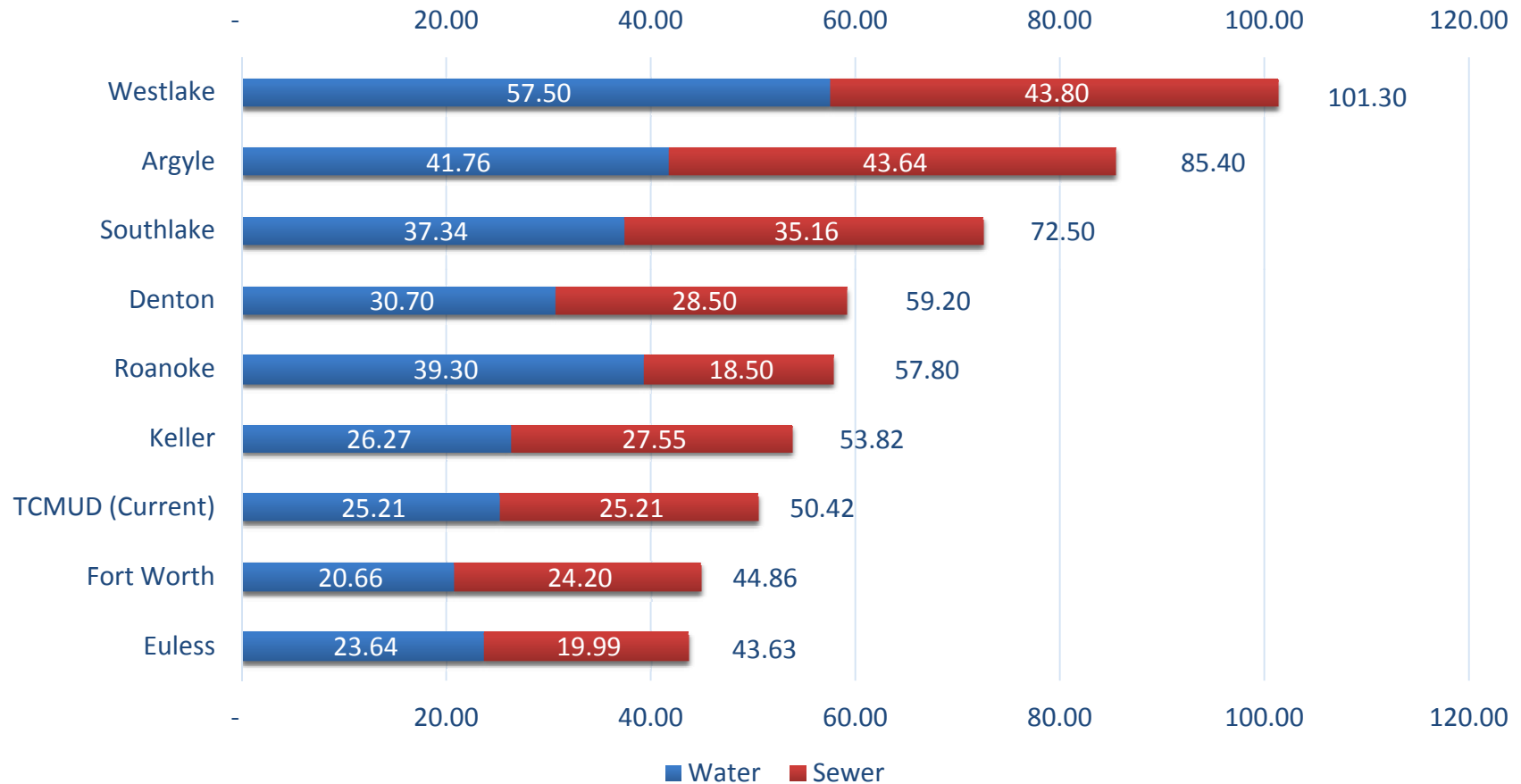
Monthly Impact of Sewer Scenarios on Commercial Customers

	<u>Current</u>	<u>Scenario 1</u>	<u>Scenario 2</u>	<u>Scenario 3</u>	<u>Scenario 4</u>
Minimum Charge	\$ 12.71	\$ 14.58	\$ 13.00	\$ 14.58	\$ 14.58
Flow Revenue (75,000 gal)	247.45	285.48	247.45	228.45	187.50
Total Bill	\$ 260.16	\$ 300.06	\$ 260.45	\$ 243.33	\$ 202.08
Change Over / (Under) Current (\$)		39.90	0.29	(16.83)	(58.08)
Minimum Charge	\$ 12.71	\$ 14.58	\$ 13.00	\$ 14.58	\$ 14.58
Flow Revenue (100,000 gal)	334.95	386.48	334.95	305.00	250.00
Total Bill	\$ 347.66	\$ 401.06	\$ 347.95	\$ 319.58	\$ 264.58
Change Over / (Under) Current (\$)		53.40	0.29	(28.08)	(83.08)

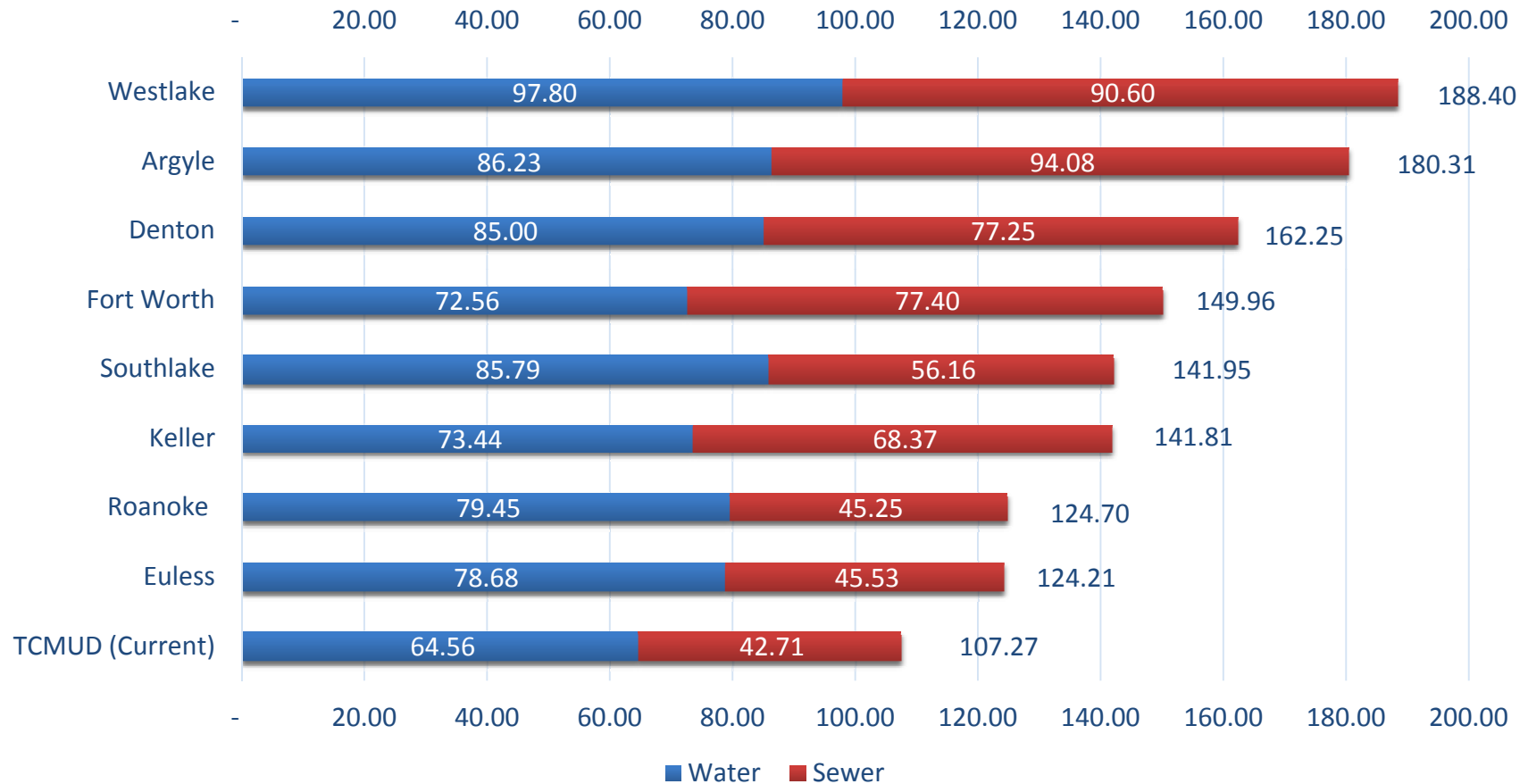
Overall Recommendations

- Recover water & sewer expenses through rates
- Charge by meter size and phase in AWWA Meter Equivalents
- Pass Through TCEQ Regulatory Assessment Fee & include as Line-Item on Bill
- Lower Out of District Charges from 2x to 1.15x In-district rates
- Increase rates to recover projected 2016 Cost of Service; fund projected short-falls with reserves
- Continue to evaluate rate performance and adjust as necessary, to protect the financial integrity of the utility system

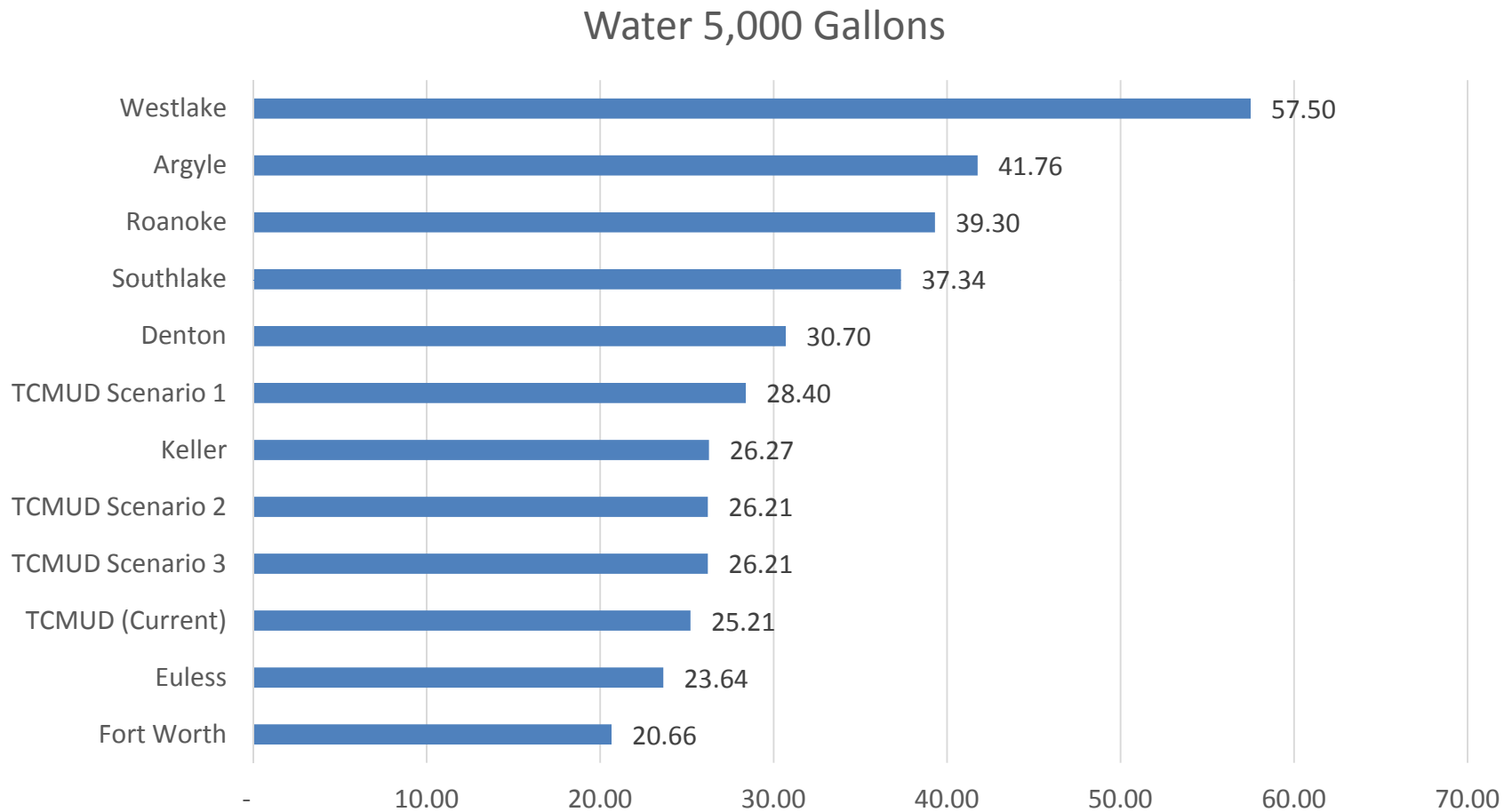
Comparison of Monthly Water and Sewer Bill Residential - 5,000 Gallon



Comparison of Monthly Water and Sewer Bill Residential - 18,000 Gallon

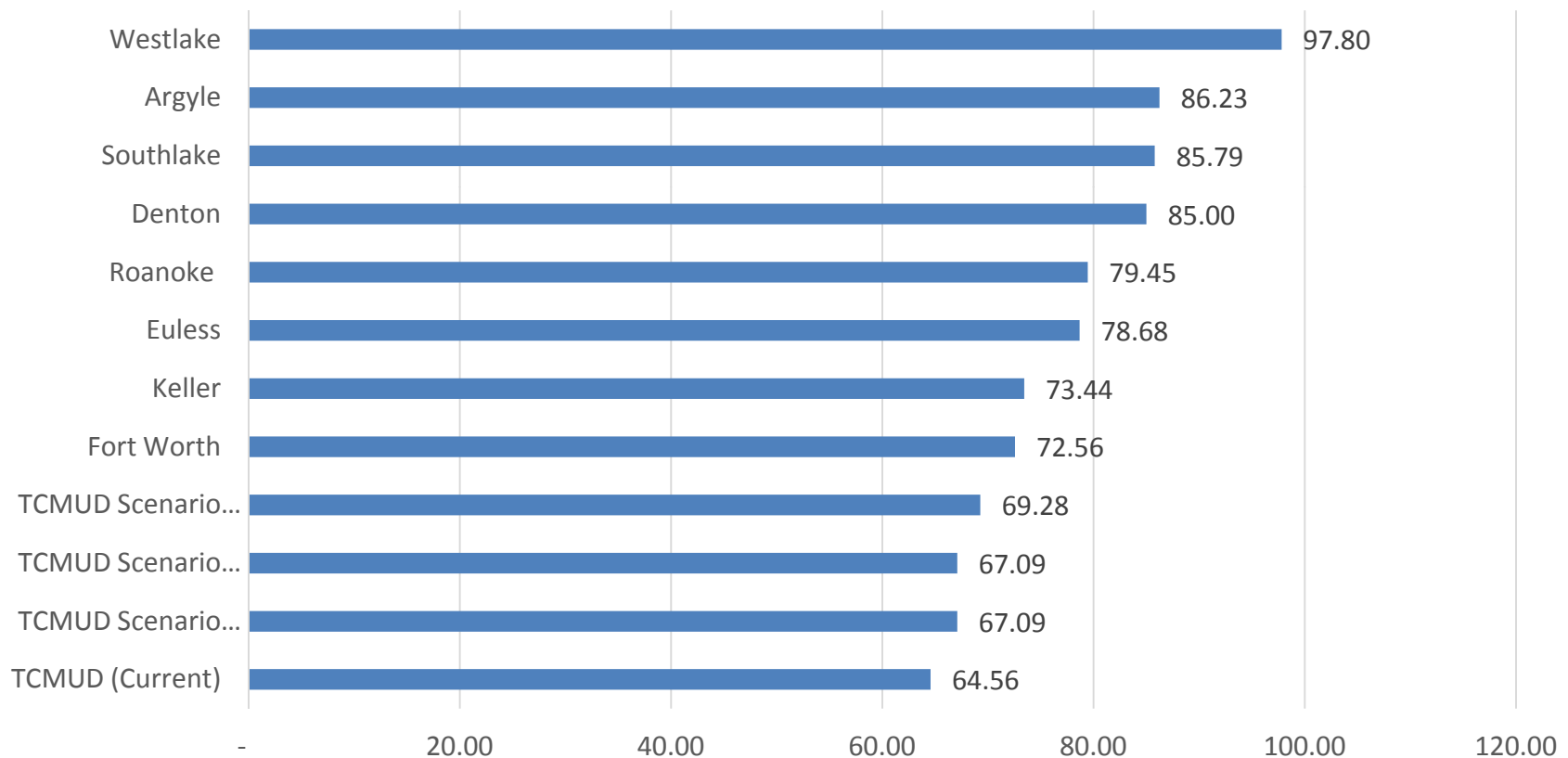


Residential Water 5/8 x 3/4 inch 5,000 Gallon Comparison



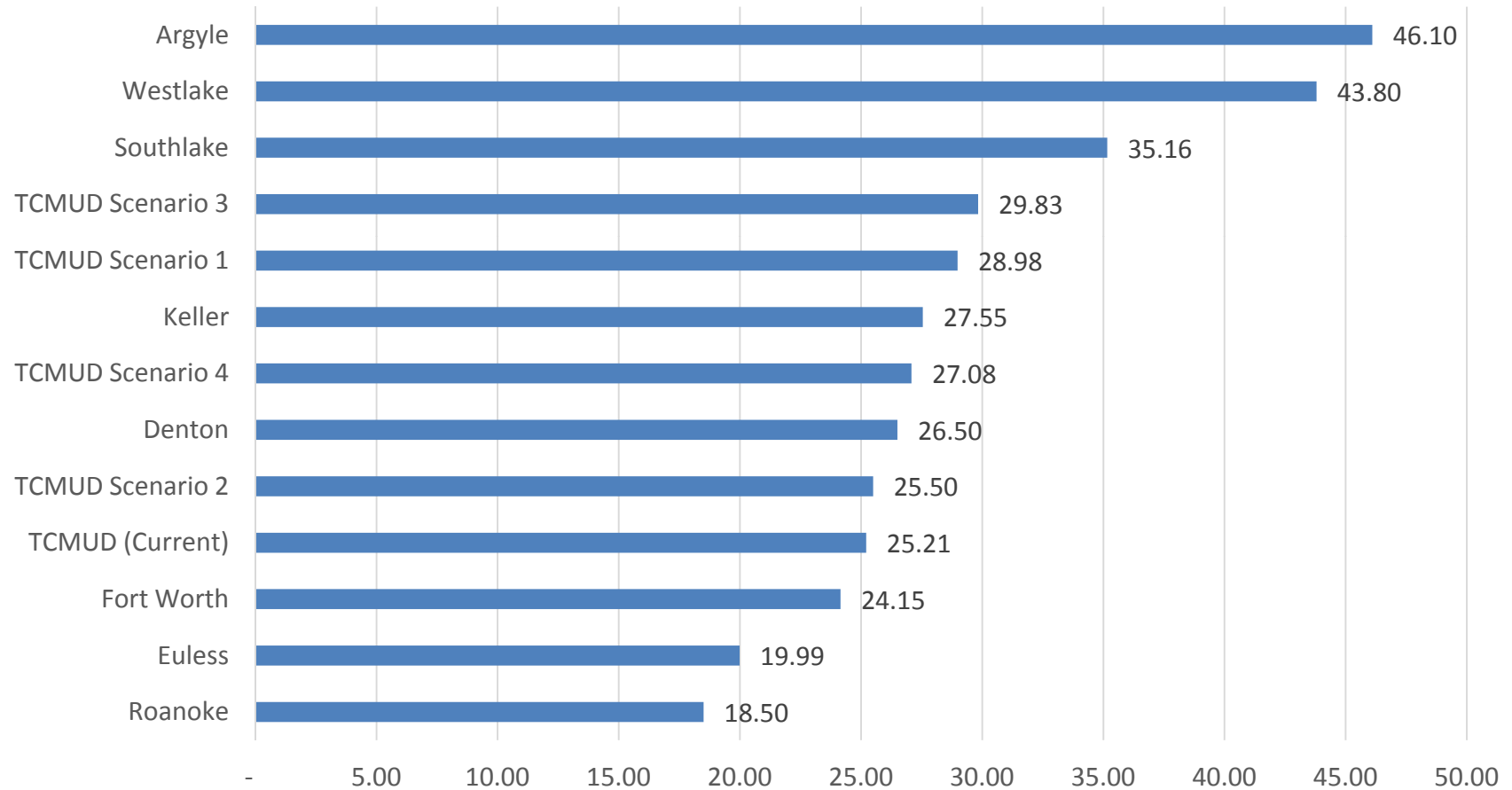
Residential Water 5/8 x 3/4 inch 18,000 Gallon Comparison

Water 18,000 Gallons



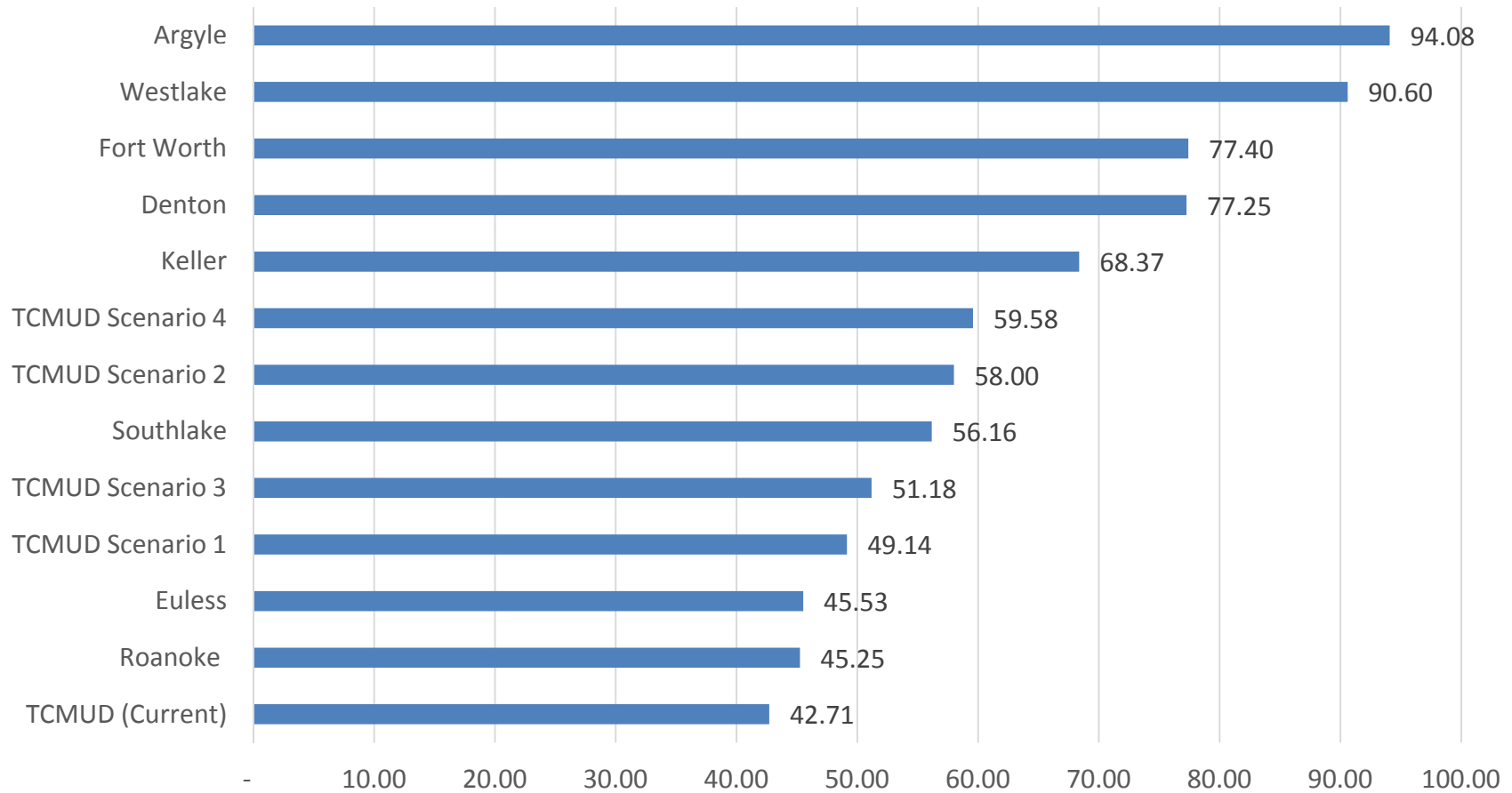
Residential Sewer 5,000 Gallon Comparison

Sewer 5,000 Gallons

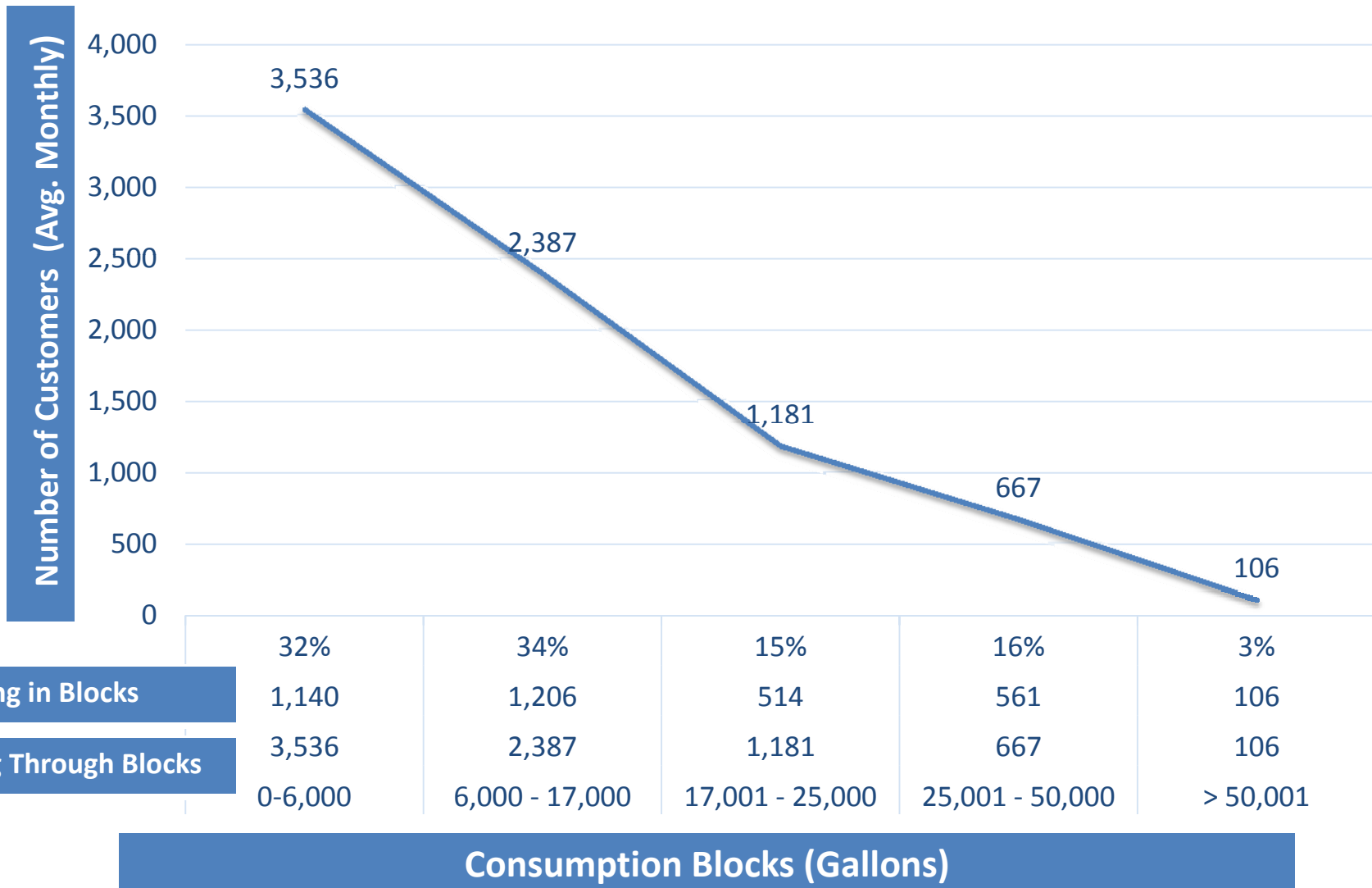


Residential Sewer 18,000 Gallon Comparison

Sewer 18,000 Gallons



Annual Consumption Distribution Residential (FY 2012)



Questions

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