

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEAR ENDED SEPTEMBER 30, 2014

NOTE 9. RISK MANAGEMENT

The District is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; business interruption; errors and omissions; injuries to employees; employee health benefits; and other claims of various nature. Commercial insurance is purchased for the risks of loss to which the District is exposed. Any losses reported but unsettled or incurred and not reported, are believed to be insignificant to the District's basic financial statements.

Additionally, the District must operate in compliance with rules and regulations mandated for public water supply systems by federal and state governments. The District is subject to compliance oversight by the Texas Commission on Environmental Quality (TCEQ).

NOTE 10. DUE TO AND FROM OTHER FUNDS

During the course of operations, the District has activity between funds for various purposes. Any residual balances outstanding at year end are reported as due from/to other funds. While these balances are reported in fund financial statements, balances between the funds included in governmental activities (i.e., the governmental funds) are eliminated for the Statement of Net Position presentation.

At September 30, 2014, the General Fund was due \$86,259 from the Capital Projects Fund for capital project expenditures paid for by the General Fund.

NOTE 11. RETIREMENT PLAN

Plan Description

The District participates in a cost-sharing multiple-employer defined-benefit group-term life insurance plan operated by the Texas County & District Retirement System (TCDRS). This plan is referred to as the Group Term Life Fund (GTLF). This optional plan provides group term life insurance coverage to current eligible employees and, if elected by employers, to retired employees. The coverage provided to retired employees is a postemployment benefit other than pension benefits (OPEB). Retired employees are insured for \$5,000. The GTLF is a separate trust administered by the TCDRS Board of Trustees. TCDRS issues a publicly available comprehensive annual financial report (CAFR) that includes financial statements and required supplementary information for the GTLF. This report is available at www.tcdrs.org. TCDRS' CAFR may also be obtained by writing to the Texas County & District Retirement System, P.O. Box 2034, Austin, TX 78768-2034, or by calling 800-823-7782.

Benefits

Members can retire at ages 60 and above with five or more years of service, with 20 years of service regardless of age, or when the sum of their age and years of service equals 75 or more. Members are vested after five years of service, but must leave their accumulated contributions in the plan to receive any employer-financed benefit. Members who withdraw their personal contributions in a lump sum are entitled to any amounts contributed by the District.

**TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEAR ENDED SEPTEMBER 30, 2014**

NOTE 11. RETIREMENT PLAN - CONTINUED

Benefit amounts are determined by the sum of the employee's contributions to the plan, with interest and employer-financed monetary credits. The level of these monetary credits is adopted by Board of Directors, within the actuarial constraints imposed by the TCDRS Act so that the resulting benefits can be expected to be adequately financed by the employer's commitment to contribute. At retirement, death, or disability, the benefit is calculated by converting the sum of the employee's accumulated contributions and the employer-financed monetary credits to a monthly annuity using annuity purchase rates prescribed by the TCDRS Act.

Funding Policy

Each participating employer contributes to the GTLF at a contractually required rate. An annual actuarial valuation is performed and the contractual rate is determined using the unit credit method for providing one-year term life insurance. The District contributions to the GTLF for the year ended September 30, 2014 were \$99,082, which equaled the contractually required contribution.

Annual Pension Cost

The required contribution was determined as part of the Dec. 31, 2013 actuarial valuation using the entry age actuarial cost method. The actuarial assumptions at Dec. 31, 2013 included (a) 8.0 percent investment rate of return (net of administrative expenses), and (b) projected salary increases of 4.9 percent. Both (a) and (b) included an inflation component of 3.0 percent. The actuarial value of assets was determined using techniques that spread the effects of short-term volatility in the market value of investments over a thirty-year period. The unfunded actuarial accrued liability is being amortized as a level percentage of payroll on an open basis. The remaining amortization period at Dec. 31, 2013 was twenty-nine years.

Funding Progress

The schedule of funding progress, presented as Required Supplementary Information (RSI) following the notes to the financial statements, presents multi-year trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

NOTE 12. PRIOR PERIOD RESTATEMENTS

The following schedule itemizes the effects of prior period restatements on the government-wide financial statements:

<u>Government-wide effects</u>	<u>Governmental Activities</u>
Net Position - beginning	\$ 15,127,431
Prior period adjustment - remove bond issuance costs per GASB 65	(169,567)
Prior period adjustment - unrecorded construction in progress	192,286
Net Position - beginning as adjusted	<u>\$ 15,150,150</u>

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1
NOTES TO BASIC FINANCIAL STATEMENTS
FOR THE YEAR ENDED SEPTEMBER 30, 2014

NOTE 13. SUBSEQUENT EVENTS

The District has evaluated all events and transactions that occurred after September 30, 2014 up through audit report date, which is the date the financial statements were issued. The District has the following subsequent event:

On December 23, 2014, the District issued Series 2014 Unlimited Tax Bonds of \$5,765,000 to finance wastewater plant expansion. The following schedule shows how this issuance will increase future minimum debt service:

<u>Fiscal Year</u>	<u>Principal</u>	<u>Interest</u>	<u>Total</u>
2015	\$ -	\$ 105,476	\$ 105,476
2016	235,000	148,325	383,325
2017	240,000	144,800	384,800
2018	245,000	141,200	386,200
2019	250,000	137,525	387,525
2020-2024	1,360,000	618,024	1,978,024
2025-2029	1,575,000	446,675	2,021,675
2030-2034	1,860,000	194,588	2,054,588
	<u>\$ 5,765,000</u>	<u>\$ 1,936,613</u>	<u>\$ 7,701,613</u>

REQUIRED SUPPLEMENTARY INFORMATION

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1
GENERAL FUND
BUDGETARY COMPARISON SCHEDULE (BUDGETARY BASIS)
YEAR ENDED SEPTEMBER 30, 2014

	<u>Budgeted amounts</u>		<u>Actual</u>	<u>Variance with Final Budget</u>
	<u>Original</u>	<u>Final</u>		
Revenues				
Water and wastewater charges	\$ 5,610,814	\$ 5,610,814	\$ 5,730,872	\$ 120,058
Taxes	1,338,400	1,338,400	1,340,502	2,102
Utility fees	582,109	582,109	331,200	(250,909)
Intergovernmental revenues	10,000	10,000	10,000	-
Miscellaneous	42,463	46,550	115,102	68,552
Oversize meter reimbursements	84,000	84,000	77,380	(6,620)
Inspection and tap fees	5,600	7,700	10,725	3,025
Investment income	4,800	4,800	6,071	1,271
Total revenues	<u>7,678,186</u>	<u>7,684,373</u>	<u>7,621,852</u>	<u>(62,521)</u>
Expenditures:				
Water operations	3,356,708	3,354,211	3,031,672	322,539
Fire	906,173	906,173	879,830	26,343
Wastewater operations	715,569	663,044	621,108	41,936
Wastewater collection system	333,333	224,694	185,561	39,133
Non-Departmental	166,940	382,766	776,992	(394,226)
Administration	1,055,198	1,056,619	990,577	66,042
Directors	22,661	22,881	11,901	10,980
Capital Outlay	161,000	1,029,681	990,311	39,370
Debt Service	642,558	642,558	642,647	(89)
Total expenditures	<u>7,360,140</u>	<u>8,282,627</u>	<u>8,130,599</u>	<u>152,028</u>
Excess of revenues over expenditures	<u>318,046</u>	<u>(598,254)</u>	<u>(508,747)</u>	<u>89,507</u>
Other financing sources (uses):				
Transfers out	(214,279)	(214,279)	(350,804)	(136,525)
Total other financing sources (uses)	<u>(214,279)</u>	<u>(214,279)</u>	<u>(350,804)</u>	<u>(136,525)</u>
Net change in fund balance	<u>103,767</u>	<u>(812,533)</u>	<u>(859,551)</u>	<u>(47,018)</u>
Fund Balances - beginning of year	<u>3,797,213</u>	<u>3,797,213</u>	<u>3,797,213</u>	<u>-</u>
Fund Balances - end of year	<u>\$ 3,900,980</u>	<u>\$ 2,984,680</u>	<u>\$ 2,937,662</u>	<u>\$ (47,018)</u>

Notes to Required Supplementary Information:

The District annual budgets are approved on the budgetary basis. The Board also approves all revisions and appropriations which lapse at each fiscal year-end.

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1
DEBT SERVICE FUND
BUDGETARY COMPARISON SCHEDULE
YEAR ENDED SEPTEMBER 30, 2014

	<u>Budgeted Amounts</u>		<u>Variance with</u>
	<u>Original & Final</u>	<u>Actual</u>	<u>Final Budget</u>
Revenues			
Taxes	\$ 393,316	\$ 389,668	\$ (3,648)
Investment income	375	97	(278)
Total revenues	393,691	389,765	(3,926)
Expenditures:			
Debt service			
Principal	425,000	425,000	-
Interest	197,195	197,195	-
Fees	2,300	1,500	800
Total expenditures	624,495	623,695	800
Deficiency of revenues under expenditures	(230,804)	(233,930)	(3,126)
Other financing sources (uses)			
Transfers in	230,804	230,804	-
Total other financing sources	230,804	230,804	-
Net change in fund balance	-	(3,126)	(3,126)
Fund Balances - beginning of year	17,879	17,879	
Fund Balances - end of year	\$ 17,879	\$ 14,753	\$ (3,126)

Notes to Required Supplementary Information:

The District annual budgets are approved on the budgetary basis. The Board also approves all revisions and appropriations which lapse at each fiscal year-end.

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1
SCHEDULE OF FUNDING PROGRESS - TEXAS COUNTY AND DISTRICT RETIREMENT SYSTEM
FOR THE YEAR ENDED SEPTEMBER 30, 2014

Actuarial							Ratio of
Valuation Date	Value of Assets	Accrued	(Overfunded)	Percentage	Annual		Unfunded
		Liability	or Unfunded	Funded	Covered Payroll		(Funded) to
							Annual
							Covered
							Payroll
12/31/2013	\$ 265,646	\$ 252,715	\$ (12,931)	105.12%	\$ 963,243		-1.34%
1/1/2013	\$ 113,743	\$ 208,703	\$ 94,960	54.50%	\$ 838,740		11.32%

**INDIVIDUAL SCHEDULES AND OTHER
SUPPLEMENTARY INFORMATION REQUIRED
BY TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY (TCEQ)**

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1
TSI-1 SERVICES AND RATES
SEPTEMBER 30, 2014

1. Services provided by the District:

- a) Retail Water
- b) Retail Wastewater
- c) Wholesale Water
- d) Wholesale Wastewater Treatment
- e) Fire Protection
- f) Irrigation
- g) Participates in regional system and/or wastewater service (other than emergency interconnect)

2. Retail service providers:

Current Rates

<u>Water Base Rates</u>		<u>Water Volumetric Rates</u>	
Meter Size	Base Rate	Rates per 1,000 Gallons Over Base	Gallons
5/8"	\$12.71		
1"	16.71	\$2.70	0 to 6,000
1.5"	26.42	3.14	6,001 to 17,000
2"	38.06	3.64	17,001 to 25,000
3"	65.23	4.23	25,001 to 50,000
<u>Base Fee</u>			
WASTEWATER	\$ 14.58	0	No \$ 2.50 0 to 18,000 No - Caps at 18,000

GOLF COURSE Subject to peak draw rates from Ft Worth water department.

NOTE: all rates noted above were amended effective July 1, 2014.

District employs winter averaging for wastewater usage? No

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1
TSI-1 SERVICES AND RATES
SEPTEMBER 30, 2014

Total water and wastewater charges per 10,000 gallons usage (including surcharges)
effective July 1, 2014 (based on 5/8" & 3/4")

First 10,000 gallons used	\$ 41.47
Next 10,000 gallons used	32.90
Next 10,000 gallons used	39.35
Next 10,000 gallons used	42.30
Next 10,000 gallons used	42.30
Next 10,000 gallons used and subsequent	49.10

Maximum residential wastewater charge is for 18,000 gallons or \$59.58

- b) Retail service providers: number of retail water and/or wastewater* connections within the District as of the fiscal year end. Provide actual numbers and single family equivalents (ESFC).

Meter Size	Connections		ESFC Factor	Active ESFC's
	Total	Active		
Unmetered	-	-	1.0	-
Less than 3/4"	2,494.0	2,494.0	1.0	2,494.0
1"	496.0	496.0	2.5	1,240.0
1 1/2"	18.0	18.0	5.0	90.0
2"	88.0	88.0	8.0	704.0
3"	21.0	21.0	15.0	315.0
4"	13.0	13.0	25.0	325.0
6"	3.0	3.0	50.0	150.0
8"	-	-	80.0	-
10"	-	-	115.0	-
Total Water	<u>3,133.0</u>	<u>3,133.0</u>		<u>5,318.0</u>
Total Wastewater	<u>3,140.0</u>	<u>3,140.0</u>	<u>1.0</u>	<u>3,140.0</u>

- * Number of connections relates to water service if provided. Otherwise, the number of wastewater connections should be provided.

Note: "inactive" means that water and wastewater connections were made, but service is not being provided.

Note: District provides wholesale services to the Town of Trophy Club through 1,259 connections

3. Total water consumption (in thousands) during the fiscal year:

Gallons pumped into the system	937,819
Gallons billed to customers	888,962
Water accountability ratio	94.8%

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1
TSI-1 SERVICES AND RATES
SEPTEMBER 30, 2014

4. Standby Fees:

Does the District assess standby fees? No

For the most recent fiscal year, FY2014:

	Total Levy	Total Collected	Percentage Collected
Debt Service	\$ 389,651	\$ 198,179	50.9%
Operations and Maintenance	\$ 1,028,121	\$ 1,157,470	112.6%

Have standby fees been levied in accordance with Water Code Section 49.231, thereby constituting a lien on property? No**

5. Location of District:

Counties in which District is located: a) Denton
b) Tarrant

Is the District located entirely in one county? No

Is the District located within a city? Partially

Cities in which District is located: Town of Trophy Club
Town of Westlake

Is District located within a city's extra territorial jurisdiction (ETJ)? Unknown

ETJ's in which District is located: Unknown

Is the general membership of the Board appointed by an office outside the District? No

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1
TSI - 2
General Fund Expenditures and Other Financing Uses
Year Ended September 30, 2014

	<u>Current Year</u> 2014	<u>Prior Year</u> 2013
Administrative	\$ 1,779,470	\$ 1,476,468
Water Operations	3,031,672	2,623,822
Wastewater Operations	621,108	896,538
Wastewater Collection Systems	185,561	322,017
Contribution to Trophy Club Fire Dept	879,830	790,779
Capital Outlay	990,311	462,876
Transfers Out and Debt Service	<u>993,451</u>	<u>1,115,390</u>
Total Expenditures	<u>\$ 8,481,403</u>	<u>\$ 7,687,890</u>

Number of employees employed by the District:

Full time Equivalents (FTEs)	18 *	32.5
Part time	0	1

- * The Fire Department personnel is paid by the Town and receive Town benefits.
The MUD reimburses the Town 50/50% of Payroll and related expenses. Fire
Department personnel have been excluded from FTE's.

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1 CONSOLIDATED
TSI-3 TEMPORARY INVESTMENTS
September 30, 2014

<u>Funds</u>	<u>Identification Number</u>	<u>Interest Rate</u>	<u>Maturity Date</u>	<u>Balance End of Year</u>	<u>Accrued Interest End of Year</u>
General Fund TexPool	613300002	0.0333%	Demand	\$ 1,171,507	Paid daily
General Fund Bank of the West	4526372	0.3200%	Demand (money market)	1,504,702	Paid monthly
Debt Service Fund TexPool	613300003	0.0333%	Demand	10,406	Paid daily
Capital Projects Texpool	613300010	0.0333%	Demand	152,090	Paid daily
Total - All Funds				<u>\$ 2,838,705</u>	

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1
TSI-4 TAXES LEVIED AND RECEIVABLE
SEPTEMBER 30, 2014

	General Fund			Debt Service	Total
	Operations	Fire	Total		
Taxes receivable beginning of year	\$ 1,890	\$ 14,384	\$ 16,274	\$ 11,863	\$ 28,137
2013 tax levy	97,920	1,219,041	1,316,961	383,932	1,700,893
Total to be accounted for	99,811	1,233,425	1,333,236	395,795	1,729,031
Less collections and adjustments:					
Current year	(97,242)	(1,212,546)	(1,309,788)	(381,273)	(1,691,061)
Prior years	(378)	4,981	4,603	(4,527)	76
Total to be accounted for	(97,620)	(1,207,565)	(1,305,185)	(385,800)	(1,690,984)
Taxes receivable, end of year	\$ 2,191	\$ 25,860	\$ 28,051	\$ 9,995	\$ 38,046
Taxes receivable by year					
1996 and prior	\$ 19	\$ 108	\$ 127	\$ 454	\$ 581
1997	7	41	48	150	198
1998	7	44	51	140	191
1999	7	48	55	108	163
2000	7	34	41	122	163
2001	7	36	43	120	163
2002	7	61	68	136	204
2003	70	126	196	132	328
2004	17	145	162	210	372
2005	59	199	258	283	541
2006	88	409	497	632	1,129
2007	52	508	560	621	1,181
2008	96	2,461	2,557	612	3,169
2009	266	2,238	2,504	674	3,178
2010	189	4,224	4,413	1,652	6,065
2011	213	4,229	4,442	1,201	5,643
2012	247	4,210	4,457	488	4,945
2013	833	6,739	7,572	2,259	9,831
	<u>\$ 2,191</u>	<u>\$ 25,860</u>	<u>\$ 28,051</u>	<u>\$ 9,995</u>	<u>\$ 38,046</u>
Property valuations (in 000's)					
	F/Y 13/14	F/Y 12/13	F/Y 11/12	F/Y 10/11	F/Y 09/10
Land	\$ 439,499	\$ 431,312	\$ 432,801	\$ 442,492	\$ 209,177
Improvements	573,454	551,135	516,182	518,390	786,539
Personal property	95,598	84,548	92,311	74,566	80,332
Exemptions	(45,150)	(46,788)	(43,476)	(42,737)	(40,057)
	<u>\$ 1,063,401</u>	<u>\$ 1,020,207</u>	<u>\$ 997,818</u>	<u>\$ 992,711</u>	<u>\$ 1,035,991</u>
Tax rate per \$100 valuation					
Operations	0.009350	0.009890	0.009890	0.008790	0.027140
Fire department	0.087380	0.104000	0.109250	0.109250	0.109140
Debt service	0.036660	0.019500	0.055860	0.076960	0.068720
Tax rate per \$100 valuation	<u>0.133390</u>	<u>0.133390</u>	<u>0.175000</u>	<u>0.195000</u>	<u>0.205000</u>
Tax levy:	\$ 1,726,648	\$ 1,581,619	\$ 1,714,788	\$ 1,934,045	\$ 2,091,414
Percent of taxes collected to taxes levied	99.42%	99.72%	99.44%	99.59%	99.69%

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO.1
TSI-5 LONG-TERM DEBT SERVICE REQUIREMENTS - BY YEARS
SEPTEMBER 30, 2014

Due During Fiscal Years Ending	All Bonded Debt Series		Total
	Principal Due 1-Sep	Interest Due Mar 1/ Sep 1	
2015	\$ 440,000	\$ 178,508	\$ 618,508
2016	450,000	168,658	618,658
2017	470,000	155,783	625,783
2018	480,000	142,309	622,309
2019	505,000	128,534	633,534
2020	510,000	114,083	624,083
2021	530,000	98,333	628,333
2022	550,000	81,958	631,958
2023	570,000	63,458	633,458
2024	110,000	43,183	153,183
2025	115,000	37,683	152,683
2026	115,000	33,083	148,083
2027	125,000	28,368	153,368
2028	130,000	23,243	153,243
2029	135,000	17,783	152,783
2030	140,000	12,113	152,113
2031	145,000	6,163	151,163
	<u>\$ 5,520,000</u>	<u>\$ 1,333,243</u>	<u>\$ 6,853,243</u>

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO.1
TSI-5 LONG-TERM DEBT SERVICE REQUIREMENTS - BY YEARS
SEPTEMBER 30, 2014

General Obligation Bonds - Series 2010
(\$2,000,000)

Due During Fiscal Years Ending	Principal Due 1-Sep	Interest Due Mar 1/ Sep 1	Total
2015	70,000	73,733	143,733
2016	75,000	71,283	146,283
2017	80,000	68,658	148,658
2018	85,000	65,858	150,858
2019	85,000	62,883	147,883
2020	90,000	59,908	149,908
2021	95,000	56,758	151,758
2022	100,000	53,433	153,433
2023	105,000	48,433	153,433
2024	110,000	43,183	153,183
2025	115,000	37,683	152,683
2026	115,000	33,083	148,083
2027	125,000	28,368	153,368
2028	130,000	23,243	153,243
2029	135,000	17,783	152,783
2030	140,000	12,113	152,113
2031	145,000	6,163	151,163
	<u>\$ 1,800,000</u>	<u>\$ 762,566</u>	<u>\$ 2,562,566</u>

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO.1
TSI-5 LONG-TERM DEBT SERVICE REQUIREMENTS - BY YEARS
SEPTEMBER 30, 2014

General Obligation Bonds - Series 2012
(2,355,000)

Due During Fiscal Years Ending	Principal Due 1-Sep	Interest Due Mar 1/ Sep 1	Total
2015	195,000	53,250	248,250
2016	200,000	49,350	249,350
2017	205,000	44,350	249,350
2018	210,000	39,226	249,226
2019	225,000	33,976	258,976
2020	225,000	28,350	253,350
2021	230,000	21,600	251,600
2022	240,000	14,700	254,700
2023	250,000	7,500	257,500
	<u>\$ 1,980,000</u>	<u>\$ 292,302</u>	<u>\$ 2,272,302</u>

General Obligation Bonds - Series 2013
(1,905,000)

Due During Fiscal Years Ending	Principal Due 1-Sep	Interest Due Mar 1/ Sep 1	Total
2015	175,000	51,525	226,525
2016	175,000	48,025	223,025
2017	185,000	42,775	227,775
2018	185,000	37,225	222,225
2019	195,000	31,675	226,675
2020	195,000	25,825	220,825
2021	205,000	19,975	224,975
2022	210,000	13,825	223,825
2023	215,000	7,525	222,525
	<u>\$ 1,740,000</u>	<u>\$ 278,375</u>	<u>\$ 2,018,375</u>

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1
TSI-6 CHANGES IN LONG-TERM BONDED DEBT
SEPTEMBER 30, 2014

	Series 2010 GO Bonds	Series 2012 GO Bonds	Series 2013 GO Bonds	Total
Interest rate	3.50-5.00%	2.00-3.00%	2.00-3.50%	
Date interest payable	3/1 & 9/1	3/1 & 9/1	3/1 & 9/1	
Maturity date	9/1/2031	9/1/2023	9/1/2023	
Bonds outstanding at beginning of year	\$ 1,870,000	\$ 2,170,000	\$ 1,905,000	\$ 5,945,000
Retirements of principal	\$ 70,000	\$ 190,000	\$ 165,000	\$ 425,000
Bonds outstanding at end of fiscal year	<u>\$ 1,800,000</u>	<u>\$ 1,980,000</u>	<u>\$ 1,740,000</u>	<u>\$ 5,520,000</u>
Retirements of interest	<u>\$ 76,183</u>	<u>\$ 57,050</u>	<u>\$ 63,963</u>	<u>\$ 197,196</u>

Paying agent's name & city: The Bank of New York Mellon, Newark, NJ

All Series

<u>Bond Authority</u>	<u>General Obligation Bonds</u>
Amount authorized by voters	\$ 29,094,217
Amount issued	<u>(23,325,000)</u>
Remaining to be issued	<u>\$ 5,769,217</u>

The general obligation bonds were authorized on October 7, 1975

Debt Service Fund cash and cash equivalents balance as of September 30, 2014:	<u>\$ 10,264</u>
Average annual debt service payment (principal & interest) for remaining term of debt:	<u>\$ 403,132</u>

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1
TS1-7 COMPARATIVE SCHEDULES OF REVENUES AND EXPENDITURES-FIVE YEARS
GENERAL FUND
SEPTEMBER 30, 2014

	Amounts					Percent of total revenue				
	2014	2013	2012	2011	2010	2013	2012	2011	2010	
REVENUE										
Ad valorem property taxes	\$ 1,340,502	\$ 1,426,185	\$ 1,374,808	\$ 1,313,027	\$ 1,491,584	16.1%	16.1%	18.8%	26.2%	
Water and wastewater charges	5,730,872	5,467,371	5,210,788	5,323,244	3,919,084	60.9%	60.9%	76.3%	68.8%	
Utility Fees	331,200	508,300	647,080	165,600	80,500	7.6%	7.6%	2.4%	1.4%	
Inspection and tap fees	10,725	9,600	10,250	7,800	5,775	0.1%	0.1%	0.1%	0.1%	
Interest earned	6,071	4,841	5,706	5,534	6,171	0.1%	0.1%	0.1%	0.1%	
Debt proceeds	-	-	1,100,000	-	-	12.8%	12.8%	0.0%	0.0%	
Miscellaneous and other	202,481	214,294	213,277	159,221	191,498	2.5%	2.5%	2.3%	3.4%	
Total revenue	\$ 7,621,851	\$ 7,630,391	\$ 8,561,909	\$ 6,974,426	\$ 5,694,592	100.0%	100.0%	100.0%	100.0%	
EXPENDITURES										
Administrative	\$ 1,779,470	\$ 1,476,468	\$ 1,097,547	\$ 1,042,073	\$ 993,986	12.8%	12.8%	14.9%	17.5%	
Water operations	3,031,672	2,623,822	2,503,331	2,737,946	1,912,511	29.2%	29.2%	39.3%	33.6%	
Wastewater operations	621,108	896,538	614,102	727,272	961,382	7.2%	7.2%	10.4%	16.9%	
Wastewater collection system	185,561	322,017	260,895	300,215	308,798	3.0%	3.0%	4.3%	5.4%	
Information systems	-	-	173,386	150,516	209,569	2.0%	2.0%	2.2%	3.7%	
Contribution to Trophy Club Fire Dept	879,830	790,779	822,307	1,429,159	876,521	9.6%	9.6%	20.5%	15.4%	
Capital outlay	990,311	462,876	1,562,809	-	-	18.3%	18.3%	0.0%	0.0%	
Transfers Out and Debt Service	993,450	1,115,390	1,011,260	308,000	558,000	11.8%	11.8%	4.4%	9.8%	
Total expenditures	\$ 8,481,402	\$ 7,687,890	\$ 8,045,637	\$ 6,695,181	\$ 5,820,767	94.0%	94.0%	96.0%	102.2%	
Excess (deficiency) of revenues over (under) expenditures	\$ (859,551)	\$ (57,499)	\$ 516,272	\$ 279,245	\$ (126,175)	-11.3%	6.0%	4.0%	-2.2%	
Total active retail water and/or wastewater connections	3,140	3,096	3,887	3,554	3,361					

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1
TSI-7 COMPARATIVE SCHEDULES OF REVENUES AND EXPENDITURES-FIVE YEARS (Continued)
DEBT SERVICE FUND
SEPTEMBER 30, 2014

REVENUE	Amounts					Percentage				
	2014	2013	2012	2011	2010	2014	2013	2012	2011	2010
Ad valorem property taxes	\$ 386,992	\$ 201,207	\$ 547,587	\$ 771,631	\$ 740,420	62.4%	28.0%	62.9%	57.9%	52.9%
Penalties and interest	2,676	1,688	3,226	6,018	-	0.4%	0.2%	0.4%	0.5%	0.0%
Intergovernmental	230,804	503,000	308,000	554,100	653,000	37.2%	70.1%	35.4%	41.6%	46.7%
Interest earned	97	11,900	5,956	985	4,848	0.0%	1.7%	0.7%	0.1%	0.3%
Miscellaneous and other	-	-	6,120	-	1,000	0.0%	0.0%	0.7%	0.0%	0.1%
Total revenue	620,569	717,795	870,889	1,332,734	1,399,268	100.0%	100.0%	100.0%	100.0%	100.0%
EXPENDITURES										
Principal retirement	425,000	605,000	565,000	1,115,000	1,055,000	68.5%	84.3%	64.9%	83.7%	75.4%
Interest and fiscal charges	198,695	231,333	277,319	382,019	311,570	32.0%	32.2%	31.8%	28.7%	22.3%
Total expenditures	623,695	836,333	842,319	1,497,019	1,366,570	100.5%	116.5%	63.2%	112.3%	97.7%
Excess (deficiency) of revenues over (under) expenditures	\$ (3,126)	\$ (118,538)	\$ 28,570	\$ (164,285)	\$ 32,698	-0.5%	-16.5%	36.8%	-12.3%	2.3%

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1 CONSOLIDATED
TSI-8 BOARD MEMBERS, KEY PERSONNEL AND CONSULTANTS
September 30, 2014

Complete District Mailing Address: 100 Municipal Drive, Trophy Club, Texas 76262

District Business Telephone Number: Metro (682) 831-4600

Limit of Fees of Office that a Director may receive during a fiscal year: \$6,000
(Set by Board Resolution - TWC Section 49.060)

<u>Name and Address</u>	<u>Term of Office Elected/Expires or Date Hired</u>	<u>Fees of Office Paid FY14</u>	<u>Expense Reimbursements FY14</u>	<u>Title at Year End</u>
Board Members:				
James Moss 979 Trophy Club Drive Trophy Club, TX 76262	05/10-05/16	\$ 1,900	\$ -	President
Jim Hase 315 Lakewood Drive Trophy Club, TX 76262	05/14-05/18	\$ 700	\$ -	Vice-President
Kevin Carr 15 Edgemere Drive Trophy Club, TX 76262	05/04-05/18	\$ 2,000	\$ 42	Secretary/Treasurer
Neil Twomey 203 Oakmont Drive Trophy Club, TX 76262	06/14-05/16	\$ 600	\$ -	Director
James C. Thomas 7 Meadowbrook Lane Trophy Club, TX 76262	05/04-05/18	\$ 1,700	\$ -	Director
William Armstrong 18 Avenue Twenty Trophy Club, TX 76262	05/10-05/14	\$ 1,300	\$ -	Director
C. Nick Sanders 7 Hayes Court Trophy Club, TX 76262	05/10-05/16	\$ 1,200	\$ -	Resigned 5/10/14

TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1
TSI-8 BOARD MEMBERS, KEY PERSONNEL AND CONSULTANTS (Continued)
SEPTEMBER 30, 2014

Name and Address	Term of Office Elected/Expires or Date Hired	Fees of Office Paid FY14	Title at Year End
Key Personnel:			
Jennifer McKnight 122 Reatta Drive Justin, Texas 76247	3/19/2012	\$ -	General Manager
Consultants:			
Denton Central Appraisal District P.O. Box 2816 Denton, TX 76202	4/1/1981	\$ 7,657	Appraiser
Tarrant Appraisal District 2500 Handley-Ederville Rd. Fort Worth, TX 76262	10/1/2007	\$ 2,416	Appraiser
LaFollett & Abbott PLLC P.O. Box 717 Tom Bean, TX 75489	10/1/2010	\$ 26,200	Auditors
The Wallace Group P.O. Box 22007 Waco, TX 76702	5/1/2012	\$ 886,331	Engineers
Whitaker, Chalk, Swindle & Sawyer, L.L.P. 3500 City Center, Tower II Fort Worth, TX 76102	10/1/1999	\$ 87,671	Legal Counsel
Liston Law Firm 2801 Weems Way, Suite B Rowlett, TX 75088	7/1/2002	\$ 46,749	Legal Counsel
Freeman & Corbett 8500 Bluffstone Cove Suite B-104 Austin, TX 78759	12/17/2012	\$ 80,743	Legal Counsel
Booth, Ahrens & Werkenthin P. C. 515 Congress Ave., Suite 1515 Austin, Texas 78701	10/1/2012	\$ 19,330	Legal Counsel
J Stowe & Company 1300 E. Lookout Dr., Suite 100 Richardson, TX 75082	7/1/2013	\$ 6,798	Consultant
Fulbright & Jaworski LLP P. O. Box 844284 Dallas, Texas 75284-4284	4/1/2014	\$ 509,874	Legal Counsel

**REPORTS REQUIRED BY
GOVERNMENTAL AUDITING STANDARDS**



Susan LaFollett, CPA – Partner
Rod Abbott, CPA – Partner

**INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED
ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE
WITH *GOVERNMENT AUDITING STANDARDS***

To the Board of Directors
Trophy Club Municipal Utility District No. 1
Trophy Club, Texas

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standard* issued by the Comptroller General of the United States, the financial statements of the governmental activities, each major fund, and the aggregate remaining fund information of Trophy Club Municipal Utility District No. 1 (the District), as of and for the year ended September 30, 2014, and the related notes to the financial statements, which collectively comprise the District's basic financial statements, and have issued our report thereon dated January 20, 2015.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the District's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, we do not express an opinion on the effectiveness of the District's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or, significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the District's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

We noted certain matters that we reported to management of the District in a separate letter dated January 20, 2015.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

In Follett and Abbott PLLC

Tom Bean, Texas
January 20, 2015

CONFIDENTIAL

DOCKET NO. PUC 45231/SOAH 473-16-1836.WS

STYLE: Ratepayers' Appeal of the Decision by Trophy Club Municipal Utility District No. 1 to Change Rates

SUBMITTING PARTY: Trophy Club Municipal Utility District No. 1

BRIEF DESCRIPTION OF CONTENTS: Response to Commission Staff's Second Request for Information, RFI No. 2-2 – customer winter average information

BATE STAMP OR SEQUENTIAL PAGE NUMBER RANGE: TCMUD000783 TO TCMUD000868

ENVELOPE # 1 OF 1

DATE SUBMITTED TO COMMISSION: April 25, 2016



TROPHY CLUB MUD NO. 1

Water and Sewer Rate Study *FINAL REPORT*

December 4, 2013

Prepared by:



1300 E. Lookout Dr., Ste.100

Richardson, Texas 75082

P 972.680.2000

F 972.680.2007

E-mail: cekrut@jstoweco.com



A Division of
NewGen Strategies & Solutions, LLC

1300 E Lookout Drive, Ste 100
Richardson, TX 75082
t 972 680 2000
f 972 680 2007

515 Congress Avenue, Ste 1515
Austin, TX 78701
t 512 479 7900
f 512 479 7905

December 4, 2013

Jennifer McKnight
District Manager
Trophy Club MUD No. 1
100 Municipal Drive
Trophy Club, Texas 76262

RE: WATER AND SEWER RATE STUDY – FINAL REPORT

Dear Ms. McKnight:

In June 2013, J. Stowe & Co., an operating division of NewGen Strategies & Solutions, LLC., ("J. Stowe & Co.") was engaged by Trophy Club Municipality Utility District No. 1 ("TCMUD") to conduct a Water and Sewer Rate Study ("Study"). The attached *final* report presents our findings and recommendations based on our analysis.

We appreciate the opportunity to provide our professional services to TCMUD and would like to express our sincere appreciation to you and your staff for supplying the needed information and data, and for assisting us in completing the Study.

Should you or your Board members require additional information or clarification regarding the enclosed report, please do not hesitate to contact Mr. Chris Ekrut at 972.680.2000 or via e-mail at cekrut@jstoweco.com.

Very truly yours,

A handwritten signature in cursive script that reads "Chris D. Ekrut". The signature is written in dark ink and is positioned below the typed name.

Chris D. Ekrut
Director
J. Stowe & Co.

Environmental Economists

www.jstoweco.com

TCMUD000870

726

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TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1 WATER AND SEWER RATE STUDY

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III.	PROJECTED RATES	13
IV.	RECOMMENDATIONS	23

ATTACHMENTS

Attachment A	Test Year and Projected Revenue Requirement
Attachment B	Budget Functionalization
Attachment C	Development of Water Revenue Requirement Allocation
Attachment D	Projected Water Revenue – Current Rates
Attachment E	Projected Sewer Revenue – Current Rates
Attachment F	FY 2016 Projected Revenue – Water Rate Scenarios
Attachment G	FY 2016 Projected Revenue – Sewer Rate Scenarios
Attachment H	Comparison of Residential Monthly Water and Sewer Charges

TCMUD000871

EXECUTIVE SUMMARY

In June 2013, J. Stowe & Co. was retained by TCMUD to perform a Water and Sewer Rate Study. As part of this Study, J. Stowe & Co.'s Project Team ("Project Team") was requested to forecast revenue requirements and rates from Fiscal Year ("FY") 2014 through FY 2018.

As a water and sewer provider, TCMUD currently faces several key issues.

- TCMUD is in need of major upgrades to its wastewater treatment plant to meet both growth and permit issues to comply with new regulatory requirements set by the Texas Commission on Environmental Quality ("TCEQ"). TCMUD is currently planning to issue \$6.0 million in revenue-supported debt to cover the capital improvements needed.
- TCMUD is nearing its ultimate build-out capacity in the Public Improvement District ("PID"), and revenues from Utility Fees associated with new connections in the PID can no longer be relied upon. TCMUD's contract with the PID will terminate when all utility fees are paid or at the end of contract term in 2018. Currently, it is estimated that all utility fees will be paid by 2016. Revenues from the PID are currently being utilized to fund a portion of the current debt service payments. TCMUD will need to transition away from using Utility Fees to pay debt service and recover this cost through rates.
- TCMUD's existing short term debt will decline through 2016.
- Wholesale cost increases continue to impact TCMUD, which must be passed through to customers to maintain financial position of the utility.
- Based on the analysis conducted, and assuming normal precipitation conditions, the Project Team estimates that on a combined basis, TCMUD's current rate revenues are insufficient to fund the cost of providing service.

The Project Team has calculated three (3) rate options for the water utility and four (4) rate options for the sewer utility for consideration to assist each utility in ensuring sufficient revenue is available to meet TCMUD's fiscal needs. The Project Team has recommended revenue adjustments to recover the projected FY 2016 cost of service. By recommending current rate adjustments to fully recover costs in 2016, TCMUD will require use of reserves to cover projected shortfalls in FY 2014 and FY 2015.

The Project Team has relied upon the following key factors to enable TCMUD to consider amending rates based on the projected 2016 cost of service. These factors include: expected growth in connections of 5.00%, short-term debt falling off after FY 2014, and cash reserves available to cover revenue shortfalls until 2016. These factors will be discussed in more detail throughout the report. Table ES-1 below shows the projected revenue requirement and projected revenue for water and sewer under current rates.

TABLE ES-1
Projected Revenue under Current Rates

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Water 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%
Sewer 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%
Total 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%

As Table ES-1 above indicates, TCMUD will under-recover a total of approximately (\$1,374,666) in FY 2014 and (\$976,676) in FY 2015. As an alternative to adjusting the utility rates to meet the current FY 2014 revenue requirement, the Project Team has recommended rate scenario options to recover the projected cost of service in FY 2016 in order to minimize the overall impact on customers, and prevent a potential over-recovery of revenue in FY 2015. The recommended rates scenarios considered by the Project Team are below.

The rate options for water are as follows:

- **Scenario 1:**
 - Adjust all out of District rates (Excluding PID) to 1.15x Inside-District rates;
 - Keep current inclining block rate design;
 - Increase upper block rates and hold percent increase in rates between blocks constant.
- **Scenario 2:**
 - Adjust all out of District rates (Excluding PID) to 1.15x Inside-District rates;
 - 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 block rates and hold percent increase in rates between blocks constant.
- **Scenario 3:**
 - Adjust all out of District rates (Excluding PID) to 1.15x Inside-District rates;
 - Charge by meter size and phase into AWWA Meter Equivalents;
 - Increase upper block rates and hold percent increase between blocks constant.

Tables ES-2 below presents the recommended water rate scenarios side by side for comparison and Table ES-3 shows the impact on a Residential customer with a 5/8 x 3/4" meter assuming 5,000 and 10,000 gallons consumption.

TABLE ES - 2
Projected Water Rates under Rate Scenario Options

	Current	Scenario 1	Scenario 2	Scenario 3
Minimum Charge				
5/8 x 3/4 Inch	\$ 12.71	\$ 14.90	\$ 12.71	\$ 12.71
1 Inch	12.71	14.90	19.04	16.78
1 - 1/2 Inch	12.71	14.90	19.04	26.60
2 Inch	12.71	14.90	19.04	38.39
3 Inch	12.71	14.90	19.04	65.90
4 Inch	12.71	14.90	19.04	105.19
6 Inch	12.71	14.90	19.04	203.42
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

TABLE ES - 3
Projected Scenario Water Rates Impact on Customers

	Current	Scenario 1	Scenario 2	Scenario 3
5,000 Gallons				
Water (5/8 x 3/4 Inch Meter)	\$ 25.21	\$ 28.40	\$ 26.21	\$ 26.21
Increase (\$)		3.19	1.00	1.00
10,000 Gallons				
Water (5/8 x 3/4 Inch Meter)	\$ 39.91	\$ 43.66	\$ 32.54	\$ 41.47
Increase (\$)		3.75	1.56	1.56

The project team has developed four (4) wastewater rate scenarios based on conversations with TCMUD's staff regarding how TCMUD customers use the sewer system. TCMUD determines a customer's billed sewer flow based on actual water use. Currently, TCMUD has a 12,000 gallon cap on billed sewer flow for residential customers, meaning that water usage above 12,000 gallons is not charged as billed sewer flow. Due to the high volume of water use by average customers, TCMUD staff requested the Project Team examine options for raising the cap on billed sewer flow to capture additional revenue under the current policy and minimize overall increases to lower volume customers.

The rate options for Sewer are as follows:

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

Table ES-4 below presents the sewer rate scenarios as recommended. Table E-5 shows the impact on Residential customers assuming 5,000 and 10,000 gallons of billed flow.

TABLE ES – 4
Projected Residential Sewer Rates under Rate Scenario Options

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

TABLE ES – 5
Projected Scenario Sewer Rates Impact on Customers

	Current	Scenario 1	Scenario 2	Scenario 3	Scenario 4
5,000 Gallons					
Sewer	\$ 25.21	\$ 28.98	\$ 25.50	\$ 29.83	\$ 27.03
Increase (\$)		3.77	0.29	4.62	1.87
10,000 Gallons					
Sewer	\$ 37.71	\$ 43.38	\$ 38.00	\$ 45.08	\$ 39.58
Increase (\$)		5.67	0.29	7.37	1.87

Listed in this report are rate design details and additional customer impact examples for residential and commercial customers. In implementing any alternative rate design, it is important that TCMUD define its pricing goals and objectives and balance these as part of any rate design change.

I. INTRODUCTION AND BACKGROUND

A. Introduction

In June 2013, J. Stowe & Co. was retained by TCMUD to perform a Water and Sewer Rate Study. As part of this Study, J. Stowe & Co.'s Project Team ("Project Team") was requested to forecast revenue requirements and rates from Fiscal Year ("FY") 2014 through FY 2018. This report describes the analysis performed for TCMUD and makes recommendations with respect to rates to be charged to TCMUD's water and sewer customers. This report consists of an Executive Summary and four sections. Also attached are eight (8) attachments which supplement the findings of this report.

Following the Executive Summary, Section I provides the introduction and background for the Study. Section II discusses the development of the revenue requirement(s) through FY 2018. Section III discusses the projected rates needed to recover the estimated revenue requirement(s) and rate design options. Finally, Section IV offers recommendations based on the Study's findings.

Regular reviews of a utility's water and sewer rates are an integral part of the management of any water and sewer utility, and failure to monitor TCMUD's rates can result in the need for significant rate actions in the future. Our Project Team recommends that TCMUD continue to regularly monitor and review the performance of its adopted rates and perform rate adjustments so as to preserve the financial integrity of the water and sewer utility.

The analysis performed by J. Stowe & Co. is designed to take into account the foreseeable changes from the current fiscal year (FY 2014) through FY 2018. The goal is to construct a planning tool with which TCMUD can gain an understanding of the issues that need to be addressed during the Study's planning horizon. A critical benefit is the quantification of the long-range impact of decisions being made today. As with any forecast, assumptions must be made and TCMUD should be aware that the actual rates required may be different from the projected rates outlined in this report due to unforeseen changes such as system growth, inflation, etc. In addition, it should be noted that this analysis is based on data provided by TCMUD. While this data has been reviewed and tested for accuracy to the extent possible, if the data relied on by the Project Team to produce this analysis is inaccurate and not reflective of the actual operation and/or financial condition of TCMUD's water and sewer system, then the results of this analysis may merit revision.

B. Background

A water and sewer utility is essentially a business and therefore, should operate in a fiscally sound and prudent manner. The Project Team has identified several issues that could impact the future financial integrity and stability of TCMUD's water and sewer utility.

First, a water and sewer utility is considered a Business-Like Activity of Government and is typically accounted for in an Enterprise Fund. Similar to a business, a utility must ensure that its revenues meet

and/or exceed expenditures and that rates be set sufficient to recover the cost of providing service. TCMUD is nearing its ultimate build-out capacity in the PID, revenues from Utility Fees associated with new connections in the PID can no longer be relied upon. TCMUD's contract with the PID expires in 2018 or until all Utility Fees are paid. Currently, it is estimated all utility fees will be paid by 2016. The Project Team has provided rate scenarios herein that exclude PID Utility Fees from current revenues in order to fully recover the cost of service. Based on the recommendations given, TCMUD should consider negotiating a new contract with the PID based current recommended rates.

Second, 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. The planned debt issuance in FY 2014 is projected to add an additional \$461,257 in annual debt service payments to the cost of service. While this is a significant increase in debt service, TCMUD is in a unique situation, because current short-term water utility debt of \$377,533 will be paid off in FY 2014, therefore the full weight of the new debt will not be felt as the other short term debt will be paid off.

Third, given an unrestricted cash balance of \$2.8 Million, the Project Team recommends revenue adjustment to recover projected FY 2016 cost of service. Under this approach, TCMUD can expect projected shortfalls around \$533,000 for FY 2014 and FY 2015. This recommendation requires the use of reserves to cover two years of planned under-recovery, but helps to stabilize the rate over the planning period.

Finally, TCMUD must continue to pass along cost increases from wholesale suppliers and adjust rates as necessary. TCMUD must maintain sufficient financial resources to cover the cost of providing service and fund needed capital improvements. Based on the analysis conducted, the Project Team estimates that TCMUD's current rates and revenues are insufficient to fund the cost of service. At this time, the Project Team recommends that TCMUD implement rate increases necessary to produce rate revenues to cover FY 2016 projected cost of service.

II. Revenue Requirement

There are two primary ratemaking methodologies employed in the utility industry, the cash basis and the utility basis. The primary difference between the cash basis and the utility basis involves the treatment of depreciation, return on invested capital, and debt service. The cash basis, which is the most common method used by municipalities, includes debt service but excludes depreciation and return on invested capital in the revenue requirement determination. The cash basis focuses on meeting the cash demands of the utility. The utility basis, most commonly used by private utilities, includes depreciation and return on invested capital, but excludes debt service from the revenue requirement determination. The cash basis is usually more easily understood by municipalities since it follows the traditional cash-oriented budgeting practices used by governmental entities. In addition, the cash basis is generally easier to explain to customers since the cash basis attempts to match revenue to expenditures. In performing this analysis, the Project Team has utilized the cash basis to develop TCMUD's water and sewer revenue requirements.

A. Rate Year Revenue Requirement

To develop the Rate Year Revenue Requirement (i.e., the first year for which rates are developed), J. Stowe & Co. utilized the proposed FY 2014 budget for TCMUD. To ensure TCMUD's budget accurately reflects the cost of providing water and wastewater service, several adjustments were made to the budgeted numbers. These are discussed in detail below:

TCEQ Regulation Fee

TCMUD has historically budgeted for the Texas Commission on Environmental Quality ("TCEQ") regulatory assessment fee and recovered this amount through rates. Investor-owned utilities, water districts, water supply corporations, and certain counties are required to collect the assessment from retail customers based on a percentage of total revenues and send the amount collected to the TCEQ. Typically these charges are applied to the customer for water and sewer service and appear on the customer bills. After conversations with TCMUD staff, the Project Team has taken assessment fees out of the budget and recommends including them as a separate line item within the customer's bill based on a percentage of total charges. This resulted in an \$18,000 reduction in the water expense line item and an \$8,550 wastewater expense line item deduction in the TCMUD service accounts labeled TCEQ Fees and Permits.

PID Utility Fees

TCMUD currently includes the collection of utility fees from the PID of \$2,300 per new connection. These fees have historically been used to pay down TCMUD's debt and included as a revenue line item. The PID utility fees are not a sustainable source of income for TCMUD since these revenues will end after the PID reaches build-out or the end of TCMUD's contract term in 2018, whichever comes first. The Project Team removed utility fees to accurately reflect the cost of providing service, which resulted in a \$582,109 reduction in revenues.

Property Taxes / Property Tax P&I

Similar to PID utility fees, property taxes were removed from revenues. To accurately reflect the cost of providing service and recover this amount through rate revenues, the Project Team removed these revenue line items resulting in a total reduction of \$100,900.

B. Forecasted Revenue Requirement

In determining the forecasted revenue requirements of the utility, the Project Team utilized TCMUD's proposed FY 2014 budget, adjusted as discussed above, as the basis for the revenue requirement projections through FY 2018. Discussions were held with TCMUD's staff to determine the known and measureable adjustments that should be made to the budgeted data. In addition, inflation factors were also estimated and applied to the FY 2014 baseline data. The adjustments made are discussed in more detail below.

Budgeted Line Items

To project future costs, the Project Team applied an inflation factor of 2.8% to all expense line items. This rate represents the average annual increase in the Municipal Cost Index ("MCI") over the last thirty (30) years.¹

Electricity Expense

Future electricity purchases were based on FY 2012 water consumption and wastewater flow. The unit rate for electricity applied to these volumes was then escalated at 10.0% reflecting TCMUD's methodology for the FY budget estimates as to future electricity cost.

Purchased Wholesale Water from Fort Worth

The City of Fort Worth currently provides wholesale water service to TCMUD. When projecting future wholesale water expenses the Project Team used assumptions for projecting water consumption and projected wholesale cost paid to Fort Worth. In determining the projected water consumption the Project Team used normalized data to project average consumption per connection. The connections for Residential MUD and PID were then increased at a 5% rate annually, which was the same methodology utilized by TCMUD staff and Board of Directors for projecting future growth of TCMUD in the FY 2014 budget. Clear estimates of the future cost of Fort Worth's wholesale rate were not able to be determined. The City of Fort Worth has been increasing its wholesale rates significantly given their cost to purchase water from Tarrant Regional Water District ("TRWD") and increases associated with TRWD's cost to construct the Integrated Pipeline are expected to continue. Given this, the Project Team utilized the 2.80% increase in cost for volumetric charges to keep pace with inflation costs to project future

¹ The Municipal Cost Index ("MCI"), published by American City and County Magazine, is similar to the Consumer Price Index ("CPI") in that it tracks the increased cost of a "market basket" of goods. The CPI tracks consumer goods, such as the cost of a haircut, milk, and eggs. On the other hand, the MCI tracks goods applicable to a City, such as cement, construction machinery, office supplies, etc.

wholesale water service charged by City of Fort Worth. TCMUD must pass all wholesale cost on to its rate payers to ensure the financial stability of the utility.

Existing Debt Service

Debt Service for the utility was projected based on the debt service schedules for utility-related debt issuance.

Future Debt Service

Based on a preliminary Engineering Report conducted by TCMUD's Engineer and information received from TCMUD's staff, approximately \$6.0 million of new debt will need to be issued in FY 2014 for wastewater treatment plant improvements to meet growth demand and comply with permit parameters required by TCEQ. The Project Team has assumed a debt issuance of \$6.0 million at 4.50% for a 20 year term. This debt issuance results in a \$461,257 increase in wastewater debt service that will need to be recovered in wastewater rates.

Revenue Offsets

In order to isolate the revenues that are required from rates to cover expenses associated with providing retail service, it is necessary to subtract other utility-related revenues. The revenue offsets identified in this Study correlate with the budgeted values in the FY 2014 budget.

Attachment A to this report illustrates the rate revenue requirement of the utility projected over the study timeframe.

C. Allocation of Revenue Requirement

Once the revenue requirement is developed, it is necessary to allocate the revenue requirements to the individual water and sewer functions so that the appropriate level of revenue is recovered from the respective customer groups. This is particularly important so that the proper price signals are sent to customers and to minimize subsidization of a service by customers who do not receive the benefit of that service.

The first step in this process is to directly assign expenses to each service function where applicable. Specifically, all expenses of the water department are classified as water expenses and all expenses of the sewer department are classified as sewer expenses.

Second, for those expenses which cannot be directly assigned, allocation factors must be developed which allocate these costs between water and sewer service. The following discusses the allocation factors utilized by the Project Team for areas where expenses could not be directly assigned.

- Administrative Expense

Allocated based on a composite of the total budgeted personnel costs of the administration and utility billing department.

- Board of Directors / Non Departmental / General Fund Revenue Offsets
Allocated based on a composite of the total cost of providing water and sewer service.
- Customer Expenses
Allocated based on the number of customers to which TCMUD is currently providing service.
- Existing Debt Service
According to TCMUD staff, previous records of debt proceeds were not available to that extent if the debt could not be identified the Project Team split water and sewer 50/50.

Attachment B illustrates the rate revenue requirement of the utility, allocated to the water and sewer functions.

D. Cost Functionalization, Allocation, and Distribution

The base-extra capacity method recognizes the differences in the cost of providing service due to variations in average rate of use and peak rate of use by a customer class. The method also recognizes the effects of system diversity on costs. Costs are generally divided into three components: (a) base costs, (b) extra capacity costs, and (c) customer costs. Base costs are those costs that tend to vary with the total quantity of water used plus capital costs and operation and maintenance costs needed to provide service to customers under average load conditions. Extra capacity costs are those costs incurred above the average operating conditions, and are necessary to support peaking conditions. Customer costs are those costs associated with serving customers regardless of the amount of water used, i.e., meter reading, accounting, billing, etc.

The appropriate allocation factors between base and extra capacities usually vary from system to system. Therefore, they should be determined from actual operating history or the design criteria of the system. The following discusses the allocation factors utilized by the Project Team for areas where expenses could not be directly assigned.

- Administration Expenses
The Project Team developed composites for each section of the Administration budget which includes, Personnel, Professional Services, Operating Expenditures, and Consumable supplies. These sections in the administration portion of the budget are composites developed after taking the total group cost of each section mentioned throughout the entire budget and allocating appropriately to base and extra capacities.
- Board of Directors / Non Departmental
Allocated based on the overall cost of service for the utility.

- General Fund Revenue Offsets
Allocated based on a composite of all expenses and revenue offsets.

Attachment C illustrates the water rate revenue requirement of the utility, allocated further to the Base, Extra and Customer functions of the water utility.

III. Projected Rates

In evaluating the performance of existing water and sewer rates and to project future water and sewer rates, some estimation of billed water consumption and billed sewer flow is required. In making this estimation, it is necessary to consider a period of normal precipitation. If data involving abnormal weather patterns is utilized (i.e., unusually low or excessive precipitation), then the resulting revenue estimates could be too high or too low. For purposes of this Study, the Project Team reviewed consumption data from June 2010 through May 2013. A projected period, known as the "Test Year" was used to reflect normal system operation.

Attachments D and E, respectively, present the projected water and sewer revenues of the utility under TCMUD's existing rates, as compared to the projected revenue requirement.

A. Water Rates

TCMUD's water rate structure currently consists of a two-part rate design including a minimum monthly charge, which is the same rate for every customer regardless of meter size, and a five-tiered volumetric rate structure wherein a customer pays more, per unit of consumption, as more water is utilized. The percent increase charged between blocks is not consistent and the higher the rate block consumption the less percent increase between those blocks.

Table 1 below illustrates the expected revenue to be earned under the current water rate structure as compared to the projected revenue requirement. It should be noted that for purposes of this analysis, the Project Team has assumed an annual growth rate for Residential MUD and PID customers of 5% annually per connection as is the adopted rate used by TCMUD and approved by the Board of Directors.

TABLE 1
Projected Water Revenue Under Current Rates

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Water 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%

Based on the calculated water revenue requirement, Table 2 below illustrates the corresponding water rates under the three rate scenarios for the planning period.

The rate options for water are as follows:

- **Scenario 1:**
 - Adjust all out of District rates (Excluding PID) to 1.15x Inside-District rates;
 - Keep Inclining block rate design;
 - Increase upper block rates and hold percent increase between blocks constant.

- **Scenario 2:**
 - Adjust all out of District Rates (Excluding PID) to 1.15x Inside-District rates;
 - 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 block rates and hold percent increase between blocks constant.
- **Scenario 3:**
 - Adjust all out of District rates (Excluding PID) to 1.15x Inside-District rates;
 - Charge by meter size and phase into AWWA Meter Equivalents;
 - Increase upper block rates and hold percent increase between blocks constant.

Historically, TCMUD has charged Out of District customers the same minimum charge as In-District customers, but charged them 2 times the effective volumetric rate. While the Texas Commission on Environmental Quality ("TCEQ") requires utilities to justify a multiplier charged to customers outside of jurisdictional boundaries, current regulatory precedent has been set such that 1.15 times the in-District rate is a reasonable charge for Out of District Customers and therefore the Project Team has recommended in all scenarios an adjustment to the Out of District customer's rate to 1.15 times the in-District rate.

TCMUD staff has indicated a desire to implement changes to the existing water rate structure, but would like to take incremental steps to implement those changes over time, minimizing impact on rate payers. It is the Project Team's opinion that several changes should be considered in the long-term.

- **Increase price differential between rate blocks.** The Texas Water Conservation Implementation Task Force's Best Management Practices Guide for Water Conservation ("TWCIF BMP") recommends rate blocks should be no less than 50% of the previous rate block. This structure sends customers a price signal which encourages water conservation. Currently the percentage differential between TCMUD's rate blocks is inconsistent and below the recommended 50% in every block. However, while this change might further promote conservation, it will also subject more of TCMUD's revenue stream to variability based on precipitation. To balance these competing objectives, the Project Team has currently placed a consistent 16% increase between blocks for each recommended scenario.
- **Charge customers based on meter size.** The American Water Works Association ("AWWA") M1: Principals of Water Rates, Fees, and Charges guide recommends that meter equivalents be established on the system and allow for users who place greater demand on the system to pay more, based on demand. This prevents subsidizing high demand users with rates paid by lower system demand users. This recommendation is represented in Scenario 3. Please note that to minimize the overall impact on customers, the Project Team's recommendations phases in these charges over time, instituting a path for TCMUD to charge their customers based on meter size equivalents.

Please note that Table 2 below assumes that the rate for PID Customers recognizing the current contract is increased as the same percentage rate as Residential MUD customers. Revenues estimated to be produced by the rate scenarios in Table 2 are presented in Attachment F for FY 2016.

TABLE 2
Projected Water Rates under Rate Scenario Options

	Current	Scenario 1	Scenario 2	Scenario 3
Minimum Charge				
5/8 x 3/4 Inch	\$ 12.71	\$ 14.90	\$ 12.71	\$ 12.71
1 Inch	12.71	14.90	19.04	16.78
1 - 1/2 Inch	12.71	14.90	19.04	26.60
2 Inch	12.71	14.90	19.04	38.39
3 Inch	12.71	14.90	19.04	65.90
4 Inch	12.71	14.90	19.04	105.19
6 Inch	12.71	14.90	19.04	203.42
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

Again, while the above changes are recommended from an equitable and conservation standpoint, implementation of these changes must be balanced with other competing goals and objectives such as revenue stability and customer affordability. Table 3 below shows the projected water percentage increases from current rates.

TABLE 3
Projected Water Percent Increase from Current Rates

	Scenario 1	Scenario 2	Scenario 3
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%

Using the rate scenarios mentioned above, the resulting revenues will fall short of the actual revenue required by TCMUD in FY 2014 and FY 2015. To minimize the impact to TCMUD customers, The Project Team recommends recovering the projected shortfalls for the water utility through unrestricted cash reserves. Table 4 and 5 below present the projected monthly impact for a residential customer with either a 5/8 x 3/4 inch or 1 inch meter assuming billable consumption of 5,000, 10,000, and 15,000 gallons.

TABLE 4
Monthly Impact of Water Scenarios on Residential Customers
5/8 X 3/4 Inch Meter

	<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

TABLE 5
Monthly Impact of Water Scenarios on Residential Customers
1 Inch Meter

	<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

A. Sewer Rates

TCMUD's current sewer rate structure differs between residential and commercial customers. Each customer pays a minimum service charge. Commercial customers have a five- tiered volumetric sewer rates structure in which they pay more per unit of flow contributed to the system, while residential customers are billed sewer flow at a flat volumetric rate which is capped at 12,000 gallons. As with water, the Project Team assumed an annual growth for Residential MUD and PID customers of 5% annually per connection and projected sewer revenue under existing rates. Table 6 below illustrates the expected revenue to be earned under the current sewer rate structure as compared to the projected revenue requirement.

TABLE 6
Projected Sewer Revenue Under Current Rates

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Sewer 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%

Based on the sewer revenue requirement, Table 7 below illustrates Residential sewer rates and Table 8 illustrates commercial sewer rates projected to be required under four rate scenarios for the planning period. The Project Team raised the residential cap from 12,000 gallons to 18,000 gallons in Scenarios 2 and 4 based on conversations with TCMUD representatives and usage data. The average TCMUD customer uses approximately 18,000 gallons, therefore raising the cap allows TCMUD to capture otherwise missed revenue. Similar to the water utility, changes to the Out of District rate were lowered to 1.15 times the district rate on all developed scenarios.

The rate options for sewer are as follows:

- **Scenario 1:**
 - Keep current rate structure to recover cost of service;
 - Adjust All out of District Rates (Excluding PID) to 1.15x In-District.
- **Scenario 2:**
 - Adjust all out of District rates (excluding PID) to 1.15x In-District;
 - 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 In-District;
 - 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 In-District;
- All Volumes Charged the same rate, No Blocks;
- Raise Residential Cap at 18K gallons.

TABLE 7
Projected Residential Sewer Rates under Rate Scenario Options

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

TABLE 8
Projected Commercial Sewer Rates under Rate Scenario Options

	Current	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Minimum Charge	\$ 12.71	\$ 14.58	\$ 13.00	\$ 14.58	\$ 14.58
Volumetric Rate (per 1,000 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

The project team would like to note that, except for the contribution of some industrial customers, the strength or quality of flows from most wastewater customers is virtually the same. Industrial customers contribute strength of flow that can significantly increase costs for a wastewater treatment plant. Though TCMUD does not currently have industrial customers, a future decision by the utility to charge industrial customers a higher rate, or to surcharge these customers based on the quality of their wastewater stream, to offset increased costs is consistent with cost-causative rate setting. It is the Project Team's opinion that TCMUD should consider Scenarios 3 and 4, equitably charging residential and commercial customers the same volumetric rate reflective of the domestic strength sewage that each contributes to the wastewater system.

Please note that Table 8 above assumes the same rate for PID Customers, which are essentially Out of District, recognizing the current contract rate is increased by the same percentage as Residential MUD customers. Revenues estimated to be produced by the rates in Table 8 are presented in Attachment G for FY 2016. Table 3 below shows the projected water percentage increase from current rates.

TABLE 9
Projected Residential Sewer Percent Increase from Current Rates

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Minimum Charge	14.68%	2.28%	14.68%	14.68%
Volumetric Rate (per 1,000 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. The change in design moves the residential capped sewer rate from 12,000 gallons to 18,000 gallons per month and recovers cost from TCMUD's average customers who use approximately 18,000 gallons of water per month.

TABLE 10
Projected Commercial Sewer Percent Increase from Current Rates

	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Minimum Charge	14.68%	2.28%	14.68%	14.68%
Volumetric Rate (per 1,000 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%

Using the scenarios mentioned above, the revenues produced from these rates will fall short of the actual revenue required by TCMUD in FY 2014 and 2015. To minimize the impact to TCMUD customers, the Project Team recommends recovering the projected shortfalls for the sewer utility through unrestricted cash reserves. Table 11 below presents the projected monthly impact for 5,000, 10,000, and 15,000 gallon residential customers. Table 12 presents the projected monthly impact for 25,000, 50,000, 75,000, and 100,000 gallon commercial customers.

TABLE 11
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

TABLE 12
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)
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)