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RATEPAYERS' APPEAL OF THE
DECISION BY TROPHY CLUB
MUNICIPAL UTILITY DISTRICT
NO. 1 TO CHANGE RATES

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PUBLIC UTILITY COMMISSION
COMMISSION
FILING CLERK
OF TEXAS

DIRECT TESTIMONY & EXHIBITS
OF
WILLIAM ROSE

ON BEHALF OF
TROPHY CLUB MUNICIPAL UTILITY DISTRICT NO. 1 RATEPAYERS

AUGUST 5, 2016

63

DIRECT TESTIMONY & EXHIBITS

OF WILLIAM ROSE

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
I. Introduction.....	3
II. Summary, Purpose and Scope.....	4
III. Wastewater Cost Allocation Between Customer Classes.....	7
IV. Sewer Rate Structure.....	13
V. Conservation Pricing.....	17
VI. Wastewater Cost Allocation Within Residential Customer Class.....	21
VII. Revenue Requirement.....	22
VIII. Rate Case Expenses.....	22
IX. Conclusion.....	23

ATTACHMENT

Wastewater Cost Of Service Calculation.....	Attachment-1
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LIST OF EXHIBITS

Trophy Club MUD 1 Monthly Log Sheets.....	Exhibit RP-1
Total Commercial Water Quantities Sold.....	Exhibit RP-2
Commercial Water Quantities Sold Without A Sewer Fee.....	Exhibit RP-3
Transcript August 19, 2015 Budget Workshop.....	Exhibit RP-4

1 **DIRECT TESTIMONY**
2 **OF WILLIAM ROSE**

3 **I. INTRODUCTION**

4 **Q. PLEASE STATE YOUR NAME AND ADDRESS FOR THE RECORD.**

5 A. My name is William C. Rose. I live at 219 Inverness Drive, Trophy Club, Texas 7626

6 **Q. ARE YOU EFFECTED AS A CUSTOMER OF TROPHY CLUB MUNICIPAL UTILITY**
7 **DISTRICT NO. 1?**

8 A. Yes. I currently own and have owned property located in Trophy Club Municipal
9 Utility District ("TCMUD") since 1993. My water and wastewater services are
10 provided by TCMUD.

11 **Q. WHAT IS YOUR RELATIONSHIP TO THIS CASE?**

12 A. I am the designated representative of the Trophy Club Municipal Utility District No.
13 1 Ratepayers by the MUD Petition to Appeal Rates Established by the Board of
14 Directors filed with the Texas Public Utilities Commission on October 9, 2015.

15 **Q. ON WHOSE BEHALF ARE YOU PRESENTING TESTIMONY IN THIS PROCEEDING?**

16 A. I am presenting testimony on the behalf of the ratepayers of Trophy Club Municipal
17 Utility District No. 1.

18 **Q. WHAT IS YOUR PROFESSIONAL AND EDUCATIONAL BACKGROUND?**

19 A. I am a retired United States Air Force Lieutenant Colonel with service in Vietnam,
20 Desert Storm and Desert Shield. I am a retired American Airlines pilot. I hold a
21 Bachelor of Arts degree from Colorado State College and a Master of Aeronautical

1 Science degree from Embry-Riddle Aeronautical University. I served as a Trophy
2 Club Town Council Member for five years (2009-2014) and in that capacity was
3 directly involved with developing and adopting the Town's annual budget. In May
4 2016, I was elected to the TCMUD Board of Directors.

5 **Q. ARE YOU AN ATTORNEY?**

6 **A. No.**

7 **Q. ARE THE RATEPAYERS REPRESENTED BY LEGAL COUNSEL?**

8 **A. No.**

9 **II. SUMMARY, PURPOSE AND SCOPE**

10 **Q. PLEASE SUMMARIZE THE RATE ACTION TAKEN BY TCMUD THAT WAS THE**
11 **CATALYST FOR THIS RATE APPEAL.**

12 **A. On July 21, 2015, TCMUD adopted a water and sewer rate increase for all customers.**
13 **Tables 1 and 2 below show the previous rates that were in effect and the new rates**
14 **that were adopted.**

1

Table 1 Dollar Summary of TCMUD Water Rate Change (Residential & Commercial)				2
				3
	Rates Effective January 1, 2015	Rates Effective September 1, 2015	Amount Changed	4
Monthly Meter Charge				5
3/4 inch or less	12.71	12.99	0.28	
1 inch	16.71	20.39	3.68	6
1 1/2 inch	26.42	32.23	5.81	
2 inch	28.06	46.43	8.37	7
3 inch	65.23	79.58	14.35	
4 inch	104.04	126.93	22.89	8
6 inch	201.06	245.29	44.23	
				9
Volumetric Charge (per 1,000 gallons)				
0 – 6,000 gal	2.70	3.03	0.33	10
6,001 – 17,000 gal	3.14	3.53	0.39	
17,001 – 25,000 gal	3.64	4.09	0.45	11
25,001 – 50,000 gal	4.23	4.75	0.52	
50,001 + gal	4.91	5.52	0.61	
Source: Prefiled Direct Testimony & Exhibits of Chris Ekrut, pg. 9, line 1.				
Table 2 Dollar Summary of TCMUD Wastewater Rate Change (Residential & Commercial)				
	Rates Effective January 1, 2015	Rates Effective September 1, 2015	Amount Changed	
Monthly Base Charge				
All Connections	14.58	15.35	0.77	
Volumetric Charge (per 1,000 gallons based on actual water use)				
Residential & Commercial				
0 – 18,000 gal	2.50	2.63	0.13	
Commercial only 18,000 gal +	2.50	2.63	0.13	
Source: Prefiled Direct Testimony & Exhibits of Chris Ekrut, pg. 9, line 3.				

12

13 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

14 A. The purpose of my testimony is to show that the wastewater rate structure adopted
 15 by the board is discriminatory and does not meet the legal standard for just and
 16 reasonable rates. I will show that the adopted rate structure does not meet water

1 conservation standards. I will show that the allocation of wastewater costs within
2 the residential customer class is neither just nor reasonable. Finally, I will show that
3 expenses for this rate appeal were included in the rate structure under appeal.

4 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE PUBLIC UTILITY**
5 **COMMISSION?**

6 A. No.

7 **Q. WHAT STANDARDS GOVERN THIS CASE?**

8 A. The Texas Water Code provides that "In an appeal under this section, the utility
9 commission shall ensure that every rate made, demanded, or received by any retail
10 public utility or by any two or more retail public utilities jointly shall be just and
11 reasonable. Rates shall not be unreasonably preferential, prejudicial, or
12 discriminatory but shall be sufficient, equitable, and consistent in application to
13 each class of customers." TWC § 13.043 (j). This language is also reflected in the
14 Commission's rules. 16 TAC § 24.41(i).

15 **Q. HAS THE TCMUD MET THIS STANDARD?**

16 A. No. The burden of proof is on the district to show that the rates are just and
17 reasonable. 16 TAC § 24.21. Any testimony correlating revenue generated from
18 each customer class to wastewater volumes processed for each customer class is
19 conspicuously absent from all TCMUD testimony.

20 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

21 A. My testimony shows:

- 1 • The sewer cost allocation between customer classes is unjust and
2 unreasonable. Residential customers are paying \$786,834.59 of the
3 commercial customers sewage cost of service.
- 4 • The 18,000-gallon cap on residential sewer charges is unreasonable. The
5 cap is too high and is based on average water usage, and not on average sewer
6 usage.
- 7 • The combined water and wastewater rate structure is a declining block
8 structure, which is contrary to best management practices and encourages
9 water consumption.
- 10 • The anticipated rate appeal costs were included in the adopted rate
11 structure.

12 **Q. WHAT DO YOU PROPOSE AS A SOLUTION?**

13 A. Commercial and residential customers pay their respective sewer cost of service
14 based on volumes treated by class. Institute winter averaging for residential
15 customers. Refund the excess sewer charges that residential customers have paid to
16 TCMUD.

18 **III. WASTEWATER COST ALLOCATION BETWEEN CUSTOMER CLASSES**

19 **Q. PLEASE DESCRIBE TCMUD'S COST ALLOCATION?**

20 A. TCMUD uses a water-billed method of determining allocation of costs between
21 customer classes. Under the water-billed method TCMUD residential customers are

1 billed wastewater costs on all water usage up to 18,000 gallons and commercial
2 customers are billed sewer charges on all water usage. TCMUD then uses the ratio
3 between commercial water use and residential water use to allocate costs.

4 **Q. DID TCMUD CHANGE THEIR METHOD OF COST ALLOCATION FROM THE**
5 **PREVIOUS RATES?**

6 A. No.

7 **Q. WHAT IS THE PROBLEM WITH THE WATER-BILLED METHOD FOR**
8 **DETERMINING COST ALLOCATION?**

9 A. Water used for irrigation by residential customers is not returned to the wastewater
10 system. The inclusion of irrigation water in the computation significantly distorts
11 the cost allocation computation. Commercial sources provide 42 percent of the
12 wastewater volume and only pay 9.7 percent of the cost. (See attachment 1).

13 **Q. IS THE COST ALLOCATION FOR WASTEWATER SERVICES BETWEEN THE**
14 **RESIDENTIAL AND CUSTOMER CLASS JUST AND REASONABLE?**

15 A. No. Residential customers should not be paying the bill for processing commercial
16 sewer. The adopted rate structure is preferential toward commercial customers,
17 prejudicial toward residential customers and fails to equitably distribute cost of
18 services. It fails to meet the rule set forth in TWC § 13.043 (j).

19 **Q. THE TCMUD'S EXPERT WITNESS STATES THAT TCMUD ONLY USES TWO**
20 **CUSTOMER CLASSES, IN-DISTRICT AND OUT OF DISTRICT. DO YOU AGREE?**

21 A. No. On page 10 of his testimony, C. Ekrut states "....rates are developed for the
22 District's customer classes (i.e., In-District Customers and Out-of-District

1 Customers)...". However, under commission rules, a customer class is determined
2 by its rate treatment. 16 TAC § 24.3 states, "Customer class—A description of utility
3 service provided to a customer that denotes such characteristics as nature of use or
4 type of rate. For rate-setting purposes, a group of customers with similar cost of
5 service characteristics that take utility service under a single set of rates." Under
6 this definition, any group of customers taking utility service under a single set of
7 rates, with similar cost of service characteristics, is a customer class.

8 **Q. HOW MANY CUSTOMER CLASSES ARE IN TCMUD 1?**

9 A. TCMUD has two customer classes: Commercial and Residential. They are
10 differentiated by type of rate.

11 **Q. PLEASE DESCRIBE HOW THEIR RATES DIFFER?**

12 A. The rates differ in how they are applied. Under the district's rate structure, the
13 commercial wastewater is billed equal to commercial water -- a cap does not limit
14 the volumetric charges. For example, a commercial customer who uses 30,000
15 gallons of water would be charged for processing 30,000 gallons of wastewater. The
16 application of the residential sewer rate is different --a volumetric cap limits
17 residential wastewater charges. For example, a residential customer who uses
18 30,000 gallons of water would be charged for processing 18,000 gallons of
19 wastewater. On its face, these appears advantageous to the customers, because
20 there is no cap on how much sewerage is charged to commercial; however, the cap
21 is set so high that in fact it has the opposite effect.

1 **Q. DOES TCMUD CONSIDER COMMERCIAL WASTEWATER TREATED TO BE EQUAL**
2 **TO COMMERCIAL WATER CONSUMPTION?**

3 A. Yes. TCMUD charges a sewer-processing fee to commercial water that is not
4 excluded, such as irrigation, evaporative coolers, etc. The amount of commercial
5 freshwater consumption very closely matches its discharge, as acknowledged by
6 TCMUD 1 Director Jim Hase "I think you have agreed with what I have said, that
7 commercial input to the wastewater plant is probably very close to the purchase of
8 fresh water."¹

9 **Q. WHY IS IT IMPORTANT TO USE KNOWN COMMERCIAL AND WASTEWATER**
10 **TREATMENT PLANT VOLUMES IN ALLOCATION OF COST OF SERVICES?**

11 A. The comparison of known commercial and wastewater treatment plant volumes
12 gives an accurate percentage of commercial wastewater plant volume to total plant
13 volume. Dividing commercial volume by the amount of wastewater entering the
14 treatment plant provides the percentage of commercial use. That percentage
15 establishes the correct cost of service allocation between customer classes.
16 Commercial in TCMUD provides 42.09 percent of total volume at the treatment
17 plant as shown in Attachment 1, Table 1.

18 **Q. DOES THIS RATE DESIGN ACCURATELY REFLECT THE COST OF SERVICE TO**
19 **EACH CUSTOMER CLASS?**

20 A. No.

¹ TCMUD Regular Meeting, February 17, 2015, video at 44 minutes 40 seconds

1 **Q. WHY DO TCMUD 1'S SEWER RATES FAIL TO ACCURATELY REFLECT THE COST**
2 **OF SERVICE TO EACH CUSTOMER CLASS?**

3 A. The current design is based on the volume of billed water. Thus, for every 1,000
4 gallons of water billed, a customer is billed for 1,000 gallons of sewer up to 18,000
5 gallons. That method of cost allocation overstates the residential contribution to the
6 wastewater stream. It fails to incorporate the two known factors: (1) the
7 volumetric flows at the wastewater treatment plant; and (2) the quantity of
8 commercial water sold that is subsequently processed by the treatment plant.

9 **Q. WHAT IS THE VOLUMETRIC FLOW AT THE WASTEWATER TREATMENT**
10 **PLANT?**

11 A. The flow at the plant is from two sources, residential and commercial.

12 **Q. WHAT IS THE QUANTITY OF COMMERCIAL WATER THAT IS SUBSEQUENTLY**
13 **PROCESSED BY THE PLANT?**

14 A. Chris Ekrut states on page 35 of his testimony that "...all sewage is of domestic
15 strength." I agree.

16 **Q. DID YOU ANALYZE THE DISTRICT'S SEWER RATES TAKING THESE FACTORS**
17 **INTO CONSIDERATION?**

18 A. Yes. Director Jim Hase's comment (noted above) gave me the incentive to run an
19 analysis.

20 **Q. WHEN YOU ANALYZE TCMUD 1'S VOLUMETRIC SEWER RATES WHAT DO YOU**
21 **FIND?**

1 A. For the analysis, I determined the percentage of commercial volume in the
2 wastewater stream, and then multiplied the revenue required by that percentage to
3 determine the commercial revenue required. The details of the analysis are
4 contained in Attachment 1. I find that commercial customers provide 42.09 percent
5 of the volumetric sewage flow, and under the adopted rate order, they pay 9.72
6 percent of wastewater costs. Residential customers pay the rest. Based on the
7 \$2,430,991 total sewer revenue requirement, commercial fails to pay \$786,835 of
8 their cost of sewer service.

9 **Q. DO YOU AGREE WITH MR. EKRUT'S ASSERTION THAT "THERE IS NO BASIS FOR**
10 **A DIFFERENCE IN THE CHARGE PER UNIT, WITH THE EXCEPTION THAT THE**
11 **CHARGE SHOULD BE BASED ON FLOW AND THOSE PRODUCING HIGHER LEVEL**
12 **OF FLOWS SHOULD BE CHARGED MORE"?²**

13 A. No. Charge per unit can only be held equal between customer classes if all
14 residential water is levied a sewer charge (like commercial) or a cap is placed on the
15 customer class rates that ensures the customer class only pays for their percentage
16 of costs of service. The revenue gained from each respective customer class must
17 match its respective percentage of service volume.

18 **Q. CAN COMMERCIAL CUSTOMERS BE CHARGED RATES THAT ARE DIFFERENT**
19 **FROM RESIDENTIAL RATES, IF THE EFFLUENT FLOW IS OF THE SAME**
20 **QUALITY?**

² Prefiled Direct Testimony & Exhibits of Chris Ekrut, pg. 35, line 20.

1 A. Yes, to align revenue with cost of service by customer class may require different
2 rates depending on method chosen to allocate sewer costs within the residential
3 class.

4 **Q. HOW WOULD THE RATEPAYERS REQUEST THEIR OVERPAYMENT BE**
5 **RESOLVED?**

6 A. The ratepayers request a refund of their overpayments based on their individual
7 contribution to the overpayment amount.

8 **Q. WITH RESPECT TO COMMERCIAL RATES, DO THE RATEPAYERS HAVE ANY**
9 **OTHER REQUESTS?**

10 A. Yes, the ratepayers request that the PUC establish commercial rates for TCMUD that
11 fully cover commercial's cost of service.

12

13 **IV. SEWER RATE STRUCTURE**

14 **Q. PLEASE DESCRIBE THE DISTRICT'S SEWER RATE STRUCTURE.**

15 A. The District charges sewer rates based on customers monthly water usage. A
16 volumetric cap does not limit the commercial rate charges. The residential rates are
17 capped at 18,000 gallons per month based on water usage.³

18 **Q. WHAT IS THE BASIS GIVEN FOR THE SELECTION OF THE 18,000-GALLON CAP?**

19 A. Per TCMUD's General Manager: "In 2013, when the first rate study was conducted
20 with the outside consultant, the average customer usage was approximately 18,000

³ TCMUD Response to Staff RFI 2-25, Rate Order 2015-0721A, pg. 9.

1 gallons per month. Therefore, raising the cap allowed the District to capture
2 otherwise missed sewer revenue. The Board has maintained the 18,000 gallon cap
3 since the original report as average customer usage has stayed basically the same.”⁴

4 **Q. DOES THE AVERAGE CUSTOMER USE 18,000 GALLONS OF SEWAGE**
5 **PROCESSING PER MONTH?**

6 A. No. The district services approximately 4105 residential customers. The total
7 monthly winter average consumption is 29,659,848 gallons. Therefore, the average
8 residential customer sewer use is approximately 7,225 gallons.⁵

9 **Q. WHAT IS YOUR OPINION CONCERNING THE USE OF 18,000 GALLONS AS AN**
10 **AVERAGE?**

11 A. 18,000 gallons is a number more closely matched with residents average annual
12 water consumption as opposed to average residential average sewer use. It ignores
13 the fact that not all of the water consumed goes down the drain. It therefore
14 includes volumes used for outdoor purposes and the waste treatment plant does not
15 process those volumes.

16 **Q. GENERALLY SPEAKING, HOW IS THE 10,775-GALLON DIFFERENCE BETWEEN**
17 **THE CAP AND THE AVERAGE RESIDENTIAL CUSTOMER SEWER USED BY**
18 **RESIDENTS?**

19 A. Based on the increased volumetric flows charged sewer charges in the summertime,
20 in my opinion, it is primarily used for outdoor irrigation.

⁴ TCMUD Response to Ratepayer RFI 2-3, pg. 4.

⁵ TCMUD Response to Staff RFI 2-2, Winter Average Data, pg. 9.

1 **Q. CAN THE TCMUD WASTEWATER TREATMENT PLANT PROCESS 18,000**
2 **GALLONS PER MONTH PER CONNECTION?**

3 A. No. The plant is permitted to process 1.75 MGD.⁶ However, a subsequent
4 engineering report limits the plant to .875 MGD to remain within permitted
5 standards.⁷ 18,000 gallons per month is 600 gallons per day. As of June 2015 the
6 TCMUD had 4,478 total active connections.⁸ Total active connections (4,478) times
7 600 gallons per day equals 2.686 MGD. TCMUD's sewer rate cap allows billing for
8 qualities vastly larger than the treatment plants processing capacity.

9 **Q. DO YOU AGREE WITH CHRIS EKRUT THAT THE FLOW PRODUCED BY**
10 **COMMERCIAL CUSTOMERS IS OF THE SAME STRENGTH QUALITY AS**
11 **RESIDENTIAL CUSTOMERS?⁹**

12 A. Yes.

13 **Q. DO YOU AGREE WITH CHRIS EKRUT THAT APPLYING THE SAME RATES TO**
14 **RESIDENTIAL AND COMMERCIAL CUSTOMERS IS REFLECTIVE OF THE LEVEL**
15 **OF SERVICE PROVIDED?¹⁰**

16 A. No. The adopted wastewater rate structure charges commercial customers for
17 wastewater treatment that is acknowledged to be equivalent to water usage. The
18 residential customers are charged wastewater costs on interior water that is

⁶ TPDES Permit No. WQ0011593001

⁷ Preliminary Engineering Report Wastewater Treatment Facility, The Wallace Group, Inc., April 2013, pg. 14 & Appendix C

⁸ TCMUD July 21, 2015 Public Hearing Regular Meeting Agenda Packet, pg. 236

⁹ Prefiled Direct Testimony & Exhibits of Chris Ekrut, pg. 36, line 7.

¹⁰ Ibid, line 9.

1 accepted as equal to wastewater, and then they have the additional cost of
2 wastewater charges on water applied to lawns. Table 3 clearly shows residential
3 customers' cost is not reflective of the level of service provided.
4
5

Table 3 Cost Per 1,000 Gallons Wastewater All Customers Charged \$47.34 for Volumetric Sewer				
	Sewer Volume in gallons	Irrigation Volume	Total Volume	Cost Per 1,000 gallons
Customer A	1,000	17,000	18,000	\$47.34
Customer B	4,000	14,000	18,000	\$11.84
Customer C	18,000	0	18,000	\$2.63 published rate
Customer D	30,000	0	30,000	\$1.97

6
7 **Q. IN YOUR OPINION, HOW SHOULD THE TCMUD SEWER RATE STRUCTURE CAPS**
8 **BE ADJUSTED?**

9 A. Either the cap should be lowered to a position more consistent with the known
10 average residential use of 7,225 gallons, or a more equitable system like winter
11 averaging should be adopted without caps. It is my opinion that the use of caps
12 results in a customer with usage below the cap paying for another customer's
13 service that is above the cap and therefore not charged.
14
15
16

1 **V. CONSERVATION PRICING**

2 **Q. IN YOUR OPINION DOES THE TCMUD RATE DESIGN MEET CONSERVATION**
3 **GUIDELINES TO PROMOTE WATER CONSERVATION?**

4 **A.** No.

5 **Q. WHY NOT?**

6 **A.** The TCMUD residential rate structure fails to consider the combined effect of sewer
7 rates on water consumption decisions and creates a declining block structure.

8 **Q. WHY SHOULD THE COMBINED EFFECT BE CONSIDERED?**

9 **A.** Water and Wastewater Finance and Pricing: A Comprehensive Guide states,
10 "Though a conservation rate structure is only applied to water rates, it is necessary
11 to consider the relationship with the wastewater rate structure. The relationship
12 between the water and wastewater rate structures is critical for utilities that
13 provide both water and wastewater service." The guide continues on to state, "Since
14 water and wastewater charges are often combined in a single bill...utilities should
15 compare the total water and wastewater bills to determine if the rate structures are
16 going to provide the necessary conservation incentive."¹¹

17 Water Price Elasticities for Single-Family Homes in Texas states in the
18 Executive Summary, "Customers concerned about their water bill focus on the total
19 dollar amount. They are much less knowledgeable of the details of the water rate

¹¹ Water and Wastewater Finance and Pricing: A Comprehensive Guide, Third Edition, George A. Raftelis, pg. 253

1 structure and its price." It also states in 2.8.6 of the Data Collection section, "Hence,
2 the sewer charge can play a role in the economic price signal sent to customers to
3 use water prudently."¹²

4 **Q. WHAT DOES THE TEXAS WATER DEVELOPMENT BOARD STATE IN THEIR**
5 **WATER CONSERVATION BEST MANAGEMENT PRACTICES GUIDE?**

6 A. Section 2.2, paragraph 1 states, ""Water Conservation Pricing is the use of rate
7 structures that discourage the inefficient use or waste of water. Conservation
8 pricing structures include increasing unit prices with increased consumption such
9 as inverted block rates, base rates and excess use rates such as water budget rates,
10 and seasonal rates."¹³ It is important to note that "structures" in the preceding quote
11 is plural indicating application to both water and wastewater.

12 Section 2.2, paragraph 2 states, "For utilities supplying both water and sewer
13 service, this BMP applies to pricing of both water and sewer service. Utilities that
14 supply water but not sewer service should make good faith efforts to work with
15 sewer agencies so that those sewer agencies do not provide sewer services for a
16 declining block rate."¹⁴

17 Section 2.2, paragraph 3 states, "When customers read their bill, they most
18 often just look at the total amount billed."¹⁵

¹² Water Price Elasticities for Single-Family Homes in Texas, prepared for Texas Water Development Board, Stratus Consulting Inc., John Whitcomb, Aug 1, 1999, pg. 2-18

¹³ TWBD Report 362, Water Conservation Best Management Practices Guide, Water Conservation Implementation Task Force, November 2004, pg. 19

¹⁴ Ibid

¹⁵ Ibid

1 **Q. HOW WOULD YOU DESCRIBE TCMUD'S COMBINED VOLUMETRIC**
2 **WATER/SEWER RATE DESIGN?**

3 A. TCMUD's rate structure creates a net declining block structure that encourages
4 customers to use more than 18,000 gallons of water. This is contrary to the policy
5 that "In order to encourage the prudent use of water or promote conservation,
6 water and sewer utilities shall not apply rate structures which offer discounts or
7 encourage increased usage within any customer class." 16 TAC 24.32(b)(1).
8 Although that provision applies specifically to water and sewer utilities, from a
9 customer and conservation perspective, the principle applies equally to a district.
10 Customers who use more than 18,000 gallons have a net decrease in cost per
11 thousand gallons. A customer's combined cost for the first thousand-gallon
12 increment (\$5.66) is more than the cost for the fiftieth thousand-gallon increment
13 (\$4.75). The most expensive combined cost is the seventeenth thousand gallons at
14 \$6.72. The eighteenth thousand gallon cost drops to \$4.09.¹⁶

15 **Q. HOW WOULD YOU CHANGE THE SEWER RATE DESIGN TO MEET WATER**
16 **CONSERVATION GUIDELINES?**

17 A. The optimum solution would be to implement winter averaging with an increasing
18 block structure and no caps. Under winter averaging "...saving a unit of water in the
19 winter will reduce the sewer bill not only during the winter months but also for the

¹⁶ TCMUD Response to Staff RFI 2-25, Rate Order 2015-0721A

1 other nine months of the year."¹⁷ A winter average cost fixed at one value does not
2 impact an established water rate structure. A winter average design with an
3 increasing block structure encourages additional conservation during the time that
4 winter average volumes are determined.

5 **Q. ARE YOU AWARE OF OTHER UTILITIES THAT UTILIZE WINTER AVERAGING AS**
6 **OPPOSED TO BILLED WATER CONSUMPTION FOR DETERMINING BILLED**
7 **WASTEWATER FLOW?**

8 A. Yes. In the metroplex; Dallas, Ft. Worth, Denton, Arlington, Grapevine, Flower
9 Mound, Colleyville, Keller, Watauga, Richland Hills, North Richland Hills, Plano,
10 Garland, Irving, and Lake Worth all use winter average rates. Those utilities would
11 certainly serve the majority of the metroplex population and therefore make winter
12 averaging the industry standard in the metroplex.

13 **Q. ARE YOU AWARE OF ANOTHER MUNICIPAL UTILITY DISTRICT THAT USES**
14 **WINTER AVERAGING WITH IN INCREASING BLOCK STRUCTURE?**

15 A. Yes. Sonterra MUD adjacent to the city of Jarrell, Texas. Their volumetric sewer
16 charge structure per 1,000 gallons used: 0 to 2,000 gallons -- \$3.25; 2,001 to 6,000
17 gallons -- \$3.50; and over 6,000 gallons -- \$7.62.¹⁸

18 **Q. WHAT ACTION DO YOU REQUEST THAT THE PUC TAKE WITH RESPECT TO**
19 **TCMUD'S SEWER RATE STRUCTURE TO MEET CONSERVATION GUIDELINES?**

¹⁷ Water Price Elasticities for Single-Family Homes in Texas, prepared for Texas Water Development Board, Stratus Consulting Inc., John Whitcomb, Aug 1, 1999, pg. 2-18

¹⁸ Sonterra Municipal Utility District Fourteenth Amended Rate Order, May 16, 2013, pg. 2

1 A. Implement winter averaging with an inclining block structure for residential
2 customers.

3

4 **VI. WASTEWATER COST ALLOCATION WITHIN RESIDENTIAL CUSTOMER CLASS**

5 **Q. HOW ARE TCMUD SEWER COSTS LEVIED?**

6 A. For residential, TCMUD charges \$2.63 per 1,000 gallons of water used up to 18,000
7 gallons each month. For commercial, TCMUD charges \$2.63 per 1,000 gallons of
8 water used without a cap.¹⁹

9 **Q. IN YOUR OPINION, DOES THE CURRENT CAP JUSTLY ALLOCATE COSTS WITHIN**
10 **THE RESIDENTIAL CLASS?**

11 A. No.

12 **Q. WHY NOT?**

13 A. Due to the impact of outdoor water consumption, residential customers have
14 different sewer costs for the same level of service.

15 **Q. CAN YOU PROVIDE SOME EXAMPLES OF DIFFERENT COSTS PER 1,000**
16 **GALLONS OF SEWER SERVICE?**

17 A. Yes, as Table 3 above shows, customer cost per 1,000 gallons of sewage processed
18 may vary from \$47.34 for one thousand gallons to less than the published rate of
19 \$2.63 when processing more than 18,000 gallons.

¹⁹ TCMUD Response to Staff 2-25, Rate Order 2015-0721A

1 Q. HOW SHOULD THE INEQUITY OF COSTS WITHIN THE RESIDENTIAL CLASS BE
2 RESOLVED?

3 A. When establishing a just and reasonable rate structure for TCMUD, the Ratepayers
4 request that the PUC include winter averaging for residential sewer customers.
5

6 VII. REVENUE REQUIREMENT

7 Q. DO YOU HAVE ANY COMMENTS ON THE REVENUE REQUIREMENTS AS
8 PRESENTED?

9 A. Yes. TCMUD's ten percent electric rate of inflation factor seems excessive and their
10 Budget Input & Revenue Requirement Development lacks actual cost information to
11 serve as a basis.²⁰ I request that I be able to address this subject after receipt of
12 pending discovery responses.
13

14 VIII. RATE CASE EXPENSES

15 Q. WAS THE TCMUD AWARE THAT THERE WAS A DISTINCT PROBABILITY OF A
16 RATE APPEAL AS A RESULT OF SETTING THE RATES FOR FY 2016?

17 A. Yes. I personally advised the Board of that probability during the Citizen's
18 Presentation agenda item at their June 16, 2015 regular meeting.

19 Q. DID THE TCMUD INCLUDE FUNDING FOR RATE CASE EXPENSES IN THE RATES
20 APPROVED JULY 21, 2105?

²⁰ Prefiled Direct Testimony & Exhibits of Chris Ekrut, Exhibit TC-5B, pg. 2 and 6 - 14.

1 A. Yes.

2 Q. WHAT WAS THE BUDGET INPUT & REVENUE DEVELOPMENT AMOUNT FOR FY
3 2016 LEGAL?

4 A. \$480,490.00²¹

5 Q. DO YOU HAVE ANY TESTIMONY OR DOCUMENTATION SHOWING THAT RATE
6 APPEAL FUNDING WAS INCLUDED IN THE RATE STRUCTURE?

7 A. Yes, a statement made during an open meeting and captured on video. Director Neil
8 Twomey stated in the August 19, 2015 Budget Workshop that the amount was
9 \$239,914.00. See Exhibit RP-4 for transcript.

10 Q. HOW SHOULD TCMUD'S REQUEST FOR RECOVERY OF RATE CASE EXPENSES BE
11 HANDLED AS A PART OF THIS PROCEEDING?

12 A. TCMUD should not be allowed to recover rate appeal costs that were previously
13 funded within the rates under appeal. Any funds remaining within the amount
14 allocated to this proceeding after payment of the rate case expenses should be
15 returned to the ratepayers at the conclusion of the proceeding.

16

17 IX. CONCLUSION

18 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

19 A Yes. However, with the Administrative Law Judge's permission, I request the right
20 to amend, delete and add to my testimony, as additional facts become known.

²¹ TCMUD Amended and Supplemental Response to Staff 2-1, pg. 12

ATTACHMENT

Wastewater Cost Of Service Calculation.....Bates RP000001

LIST OF EXHIBITS

Trophy Club MUD 1 Monthly Log Sheets.....Bates RP000005

Total Commercial Water Quantities Sold.....Bates RP000017

Commercial Water Quantities Sold Without A Sewer Fee.....Bates RP000018

Transcript August 19, 2015 Budget Workshop.....Bates RP000019

Wastewater Cost of Service Calculation

The accurate determination of cost of service allocation requires the knowledge of three variables. First, it is necessary to know the volume of wastewater being treated at a plant. Second, in the case of two customer classes, one of the customer class's volumetric contributions to the total wastewater stream must be determined. Finally, the sewer revenue requirement must be known.

To determine the volumetric flows at the wastewater treatment plant, I examined the Trophy Club MUD 1 Monthly Log Sheets for the 2014 calendar year. The log sheets are found in Exhibit RP-1 and the monthly totals are shown and summarized in Table 1. To determine the quantity of commercial water sold that was charged a sewer fee; it was necessary to subtract the quantity of commercial water that was not charged a sewer fee from the total commercial water quantity. The total commercial water quantities sold are shown in Exhibit RP-2 and found in column 3 of Table 1. Commercial water quantities sold without a sewer fee are found in Exhibit RP-3 and summarized in column 4. Table 1, column 5 summarizes total commercial water volume, commercial volume that is not charged a sewer charge and shows the resulting commercial volume that is charged a sewer charge.

Table 1 shows the commercial percentage of wastewater treatment plant volume is 42.09231 percent. Table 2 shows a total revenue requirement of \$2,430,991. Commercial's revenue requirement, based on known volumetric percentages is \$1,023,260.27. With commercial only paying \$236,425, they are \$786,835 short of covering their cost of service.

RP000001

ATTACHMENT 1

Table 1 Summary of CY 2014 Wastewater Treatment Plant and Commercial Volumes (Shown in Millions of Gallons)					
Month	WWTP Volumes	Total Commercial Volume	Commercial Volume No Sewer Charge	Commercial Volume With Sewer Charge	Commercial percentage of WWTP Volume
JAN	26.0440	12.152	2.517	9.635	36.9950852
FEB	23.4072	11.881	2.519	9.362	39.9962405
MAR	25.5094	15.598	6.021	9.577	37.5430234
APR	26.6056	18.018	7.115	10.903	40.9800944
MAY	28.0401	19.879	7.805	12.074	43.0597608
JUN	29.4058	23.171	10.722	12.449	42.3351856
JUL	28.5604	23.953	10.066	13.887	48.6232686
AUG	27.2092	27.249	13.054	14.195	52.1698543
SEP	26.1434	27.675	14.090	13.585	51.9634019
OCT	26.9710	23.802	12.047	11.755	43.5838493
NOV	26.4819	15.750	6.413	9.337	35.2580442
DEC	27.1676	14.545	5.958	8.587	31.6075031
TOTAL	321.5456	233.673	98.327	135.346	42.0923191
WWTP volumes summarized from Exhibit RP-1 Total commercial volumes summarized from RP-2 Commercial water quantities without sewer fees summarized from Exhibit RP-3					

RP000002

ATTACHMENT 1

Table 2 Summary of Sewer Revenue Under Current Rates FY 2016			
	Meter Charge Revenue	Volumetric Revenue	Total Revenue
MUD 1 Residential	536,880	1,085,617	1,622,498
PID Residential	230,199	341,869	572,068
Total Residential	767,079	1,427,486	2,194,566
Percentage of Total			90.2745
Commercial	11,238	75,663	86,901
Commercial (Solana)	3,869	111,338	115,207
Apartments	2,211	32,106	34,317
Total Commercial	17,318	219,107	236,425
Percentage of Total			9.7254
Total Residential and Commercial	784,397	1,646,593	2,430,991
Source: TCMUD 1's Response to Staff RFI 2-1, pg. 121.			

Table 3 Commercial Revenue Shortage At 42.09231 Percent				
	Total Revenue Required	Commercial Revenue Required at Percentage	Commercial Revenue at Current Rates	Commercial Revenue Shortage
Total Revenue Required	2,430,991	1,023,260	236,425	786,835
Meter Charge Revenue	784,397	330,171	17,318	312,853
Volumetric Revenue	1,646,593	693,089	219,107	473,982

RP000003

ATTACHMENT 1

Table 2 Summary of Sewer Revenue Under Current Rates FY 2016			
	Meter Charge Revenue	Volumetric Revenue	Total Revenue
MUD 1 Residential	536,880	1,085,617	1,622,498
PID Residential	230,199	341,869	572,068
Total Residential	767,079	1,427,486	2,194,566
Percentage of Total			90.2745
Commercial	11,238	75,663	86,901
Commercial (Solana)	3,869	111,338	115,207
Apartments	2,211	32,106	34,317
Total Commercial	17,318	219,107	236,425
Percentage of Total			9.7254
Total Residential and Commercial	784,397	1,646,593	2,430,991
Source: TCMUD 1's Response to Staff RFI 2-1, pg. 121.			

Table 3 Commercial Revenue Shortage At 42.09231 Percent				
	Total Revenue Required	Commercial Revenue Required at Percentage	Commercial Revenue at Current Rates	Commercial Revenue Shortage
Total Revenue Required	2,430,991	1,023,260	236,425	786,835
Meter Charge Revenue	784,397	330,171	17,318	312,853
Volumetric Revenue	1,646,593	693,089	219,107	473,982

RP000004

EXHIBIT RP-1

Trophy Club MUD 1 Monthly Log Sheet

Month: January Year: 2014

Date	Raw (mgd)	Lake A (mgd)	Lake B (mgd)	Creek (mgd)	Eff. Total (mgd)	pH	DO (mg/L)	TSS (mg/L)	TSS Lbs	CBOD (mg/L)	CBOD Lbs	NH3-N (mg/L)	NH3-N Lbs	Nitrate-N (mg/L)	Nitrate-N Lbs	E. coli (CFU/MPN)	Copper (mg/L)	Copper Lbs
1/1/2014	0.858	0.0000	0.0000	0.6510	0.6510	7.20	8.6	1.4	7.601	2.2	11.945	0.27	1.468	14.2	77.097	<1	0.0146	0.0793
1/2/2014	0.814	0.0000	0.0102	0.5770	0.5872											<1		
1/3/2014	0.888	0.0041	0.0008	0.6070	0.6119											<1		
1/4/2014	0.850	0.0000	0.0000	0.6180	0.6180											<1		
1/5/2014	0.853	0.0000	0.0000	0.5970	0.5970											<1		
1/6/2014	0.893	0.0000	0.0097	0.6460	0.6557	7.30	8.6	1.6	8.749	5.2	28.436	1.10	6.015	12.2	66.714	<1	0.0118	0.0645
1/7/2014	0.921	0.0000	0.0000	0.6610	0.6610		8.6	1.8	9.923	3.6	19.846	0.38	1.985			<1		
1/8/2014	0.873	0.0000	0.0000	0.5600	0.5600											<1		
1/9/2014	0.853	0.0000	0.0000	0.6550	0.6550											<1		
1/10/2014	0.864	0.0000	0.0000	0.5830	0.5830											<1		
1/11/2014	0.803	0.0000	0.0000	0.5750	0.5750											1.0		
1/12/2014	0.855	0.0000	0.0000	0.6130	0.6130											<1		
1/13/2014	0.917	0.0000	0.0000	0.6470	0.6470			1.8	9.713	3.7	19.965	3.38	18.238	9.25	49.913	<1	0.0101	0.0545
1/14/2014	0.854	0.0000	0.0000	0.5420	0.5420	7.30	8.1									<1		
1/15/2014	0.882	0.0000	0.0000	0.6190	0.6190		8.0	1.4	7.227	4.0	20.650	1.94	10.015			<1		
1/16/2014	0.767	0.0000	0.0000	0.4560	0.4560											<1		
1/17/2014	0.836	0.0000	0.0000	0.5310	0.5310											1.0		
1/18/2014	0.742	0.0000	0.0000	0.4220	0.4220											<1		
1/19/2014	0.786	0.0000	0.0000	0.5500	0.5500											1.0		
1/20/2014	0.808	0.0218	0.1517	0.5020	0.6756											<1		
1/21/2014	0.938	0.0000	0.0257	0.5370	0.5627											<1		
1/22/2014	0.789	0.0000	0.0000	0.5600	0.5600	7.30	8.3	12.0	58.045	2.3	10.742	1.64	7.659	12.6	58.847	15.8	0.0322	0.1504
1/23/2014	0.803	0.0000	0.0231	0.5800	0.6031		8.2	3.2	16.095	2.6	12.674	1.52	7.645			<1		
1/24/2014	0.819	0.0000	0.0000	0.5910	0.5910											<1		
1/25/2014	0.774	0.0000	0.0000	0.5320	0.5320											3.1		
1/26/2014	0.806	0.0000	0.0000	0.5550	0.5550											1.0		
1/27/2014	0.893	0.0000	0.0000	0.4680	0.4680											10.7		
1/28/2014	0.838	0.0033	0.0462	0.5510	0.6005											5.2		
1/29/2014	0.814	0.0000	0.0000	0.5650	0.5650	7.30	9.0	1.0	4.712	8.4	39.582	2.95	13.901	14.9	70.210	<1	0.0183	0.0862
1/30/2014	0.847	0.0581	0.0052	0.5840	0.6373	7.20	8.0	2.0	10.630	2.0	10.630	2.80	14.882			<1		
1/31/2014	0.806	0.0000	0.0003	0.6130	0.6133											1.0		
Total	26.0440	0.0973	0.2728	17.7260	18.0961	43.6000	82.8000	27.4000	136.8193	35.9000	184.5750	16.7400	85.7868	63.1500	322.7811	61.8000	1.0887	0.434913
Avg	0.8401	0.0031	0.0088	0.5718	0.5837	7.2667	8.2800	2.7400	13.6819	3.5900	18.4575	1.674	8.5787	12.6300	64.5562	1.2906	0.0174	0.0870
Max	0.9377	0.0681	0.1517	0.6610	0.6756	7.3000	9.0000	12.0000	58.0448	8.4000	39.5816	3.3800	18.2384	14.9000	77.0966	15.8000	0.0322	0.1504
Min	0.7422	0.0000	0.0000	0.4220	0.4220	7.2000	7.4000	1.0000	4.7121	2.0000	10.2063	0.1000	1.4559	9.2500	49.9128	1.0000	0.0101	0.0545

Annual Average Flow	0.685
2 Hour Peak Flow	764

Report on DMR	Ph	DO	TSS	CBOD	NH3	Nitrate-N	Copper	E. coli
Minimum	7.2	7.4	N/A	N/A	N/A	N/A	N/A	N/A
1" Daily Average	N/A	N/A	2.7	<3.60	<1.67	12.6	0.017	<1.291
10" Daily Max	7.3	N/A	12.0	8.4	3.38	14.9	0.032	16.8
1" Lbs/Day Average	N/A	N/A	13.7	<18.457	<8.58	64.6	0.09	N/A
7 Day Average	N/A	N/A	7.6	4.4	2.7	N/A	N/A	N/A

PERMIT LIMITS	Ph	DO	TSS	CBOD	NH3	Nitrate-N	Copper	E. coli
Minimum	6.00	6.00	N/A	N/A	N/A	N/A	N/A	N/A
1" Daily Average	N/A	N/A	12	3	24	REPORT	126	
10" Daily Max	9.00	N/A	40	20	10	REPORT	394	
1" Lbs/Day Average	N/A	N/A	176	73	15	350	N/A	N/A
7 Day Average	N/A	N/A	20.00	10.00	5.00	N/A	N/A	N/A

RAW
(MGD)
26.0440

RP000005

EXHIBIT RP-1

Trophy Club MUD 1 Monthly Log Sheet

Trophy Club MUD 1 Monthly Log Sheet										Month: February		Year: 2014						
Date	Raw (mgd)	Lake A (mgd)	Lake B (mgd)	Creek (mgd)	Eff. Total (mgd)	pH	DO (mg/L)	TSS (mg/L)	TSS Lbs	CBOD (mg/L)	CBOD Lbs	NH3-N (mg/L)	NH3-N Lbs	Nitrate-N (mg/L)	Nitrate-N Lbs	E. coli (CFU/100ml)	Copper (mg/L)	Copper Lbs
2/1/2014	0.746	0.0000	0.0000	0.5130	0.5130											<1		
2/2/2014	0.811	0.0000	0.0000	0.5610	0.5610											<1		
2/3/2014	0.911	0.0000	0.0174	0.6610	0.6784	7.30	9.5	3.2	16.104	2.0	11.315	1.14	6.450	17.3	87.877	<1	0.0212	0.1199
2/4/2014	0.850	0.0000	0.0000	0.6130	0.6130		8.2	2.4	12.270	4.2	21.472	1.20	6.135			<1		
2/5/2014	0.825	0.0000	0.0000	0.6050	0.6050											<1		
2/6/2014	0.841	0.0000	0.0000	0.6640	0.6640		8.6									<1		
2/7/2014	0.957	0.0000	0.0000	0.6920	0.6920											<1		
2/8/2014	0.687	0.0000	0.0000	0.5030	0.5030											<1		
2/9/2014	0.809	0.0000	0.0005	0.5820	0.5825											<1		
2/10/2014	0.906	0.0000	0.0001	0.6370	0.6371			2.2	11.689	2.0	10.627	0.88	4.678	15.5	82.356	<1	0.0181	0.0962
2/11/2014	0.832	0.0000	0.0004	0.5990	0.5994			2.4	11.988	2.0	9.998	1.24	6.199		0.000	<1		
2/12/2014	0.855	0.0000	0.0000	0.5890	0.5890	7.20	7.5									<1		
2/13/2014	0.807	0.0116	0.0054	0.5510	0.5680		8.1									<1		
2/14/2014	0.896	0.0000	0.0199	0.6470	0.6669											<1		
2/15/2014	0.739	0.0000	0.0739	0.5540	0.5779											<1		
2/16/2014	0.848	0.0000	0.0193	0.6140	0.6333											<1		
2/17/2014	0.897	0.0000	0.0072	0.6520	0.6592	7.30	8.0	1.0	5.498	6.8	37.385	3.20	17.593	13.1	72.021	<1	0.0242	0.1330
2/18/2014	0.873	0.0000	0.0301	0.6570	0.6871		8.2	4.4	25.213	2.0	11.460	1.18	6.782			<1		
2/19/2014	0.856	0.0000	0.0405	0.6800	0.7205											<1		
2/20/2014	0.838	0.0000	0.0040	0.6550	0.6590											<1		
2/21/2014	0.839	0.0000	0.0297	0.6490	0.6787											<1		
2/22/2014	0.796	0.0000	0.0265	0.5960	0.6225											<1		
2/23/2014	0.823	0.0000	0.0371	0.5960	0.6331											<1		
2/24/2014	0.913	0.0000	0.0329	0.6490	0.6819	7.20	7.4	2.8	15.924	2.5	14.218	3.95	22.464	10.2	58.008	1.0	0.0183	0.1041
2/25/2014	0.905	0.0000	0.0000	0.5760	0.5760		7.4	1.8	8.647	5.1	24.500	1.41	6.773			<1		
2/26/2014	0.780	0.0000	0.0417	0.5050	0.5467											<1		
2/27/2014	0.806	0.0000	0.0091	0.6260	0.6351											<1		
2/28/2014	0.760	0.0000	0.0188	0.5080	0.5268											<1		

EXHIBIT RP-1

Trophy Club MUD 1 Monthly Log Sheet

Trophy Club MUD 1 Monthly Log Sheet														Month.	March	Year	2014	
Date	Raw (mgd)	Lake A (mgd)	Lake B (mgd)	Creek (mgd)	Eff. Total (mgd)	pH	DO (mg/L)	TSS (mg/L)	TSS Lbs	CBOD (mg/L)	CBOD Lbs	Nh3-N (mg/L)	Nh3-N Lbs	Nitrate-N (mg/L)	Nitrate-N Lbs	E. coli (CFU/MPN)	Copper (mg/L)	Copper Lbs
3/1/2014	0.680	0.0000	0.0367	0.9610	0.9977											<1		
3/2/2014	0.715	0.0000	0.0000	0.9900	0.9900											<1		
3/3/2014	0.781	0.0000	0.0417	0.9630	1.0047	7.40	8.3	1.0	8.379	2.0	16.758	2.20	18.434	24.3	203.610	<1	0.017	0.1420
3/4/2014	0.813	0.0000	0.0157	0.8790	0.8947											<1		
3/5/2014	0.752	0.0000	0.0032	0.9560	0.9592			1.0	7.999	2.0	15.999	0.84	6.719			<1		
3/6/2014	0.829	0.0000	0.0023	0.8880	0.8903											<1		
3/7/2014	0.820	0.0000	0.0101	0.9700	0.9801		7.7									<1		
3/8/2014	0.782	0.0000	0.0221	0.5740	0.5961											<1		
3/9/2014	0.791	0.0000	0.0092	0.5580	0.5672											<1		
3/10/2014	0.804	0.0000	0.0175	0.5550	0.5725		6.9	3.2	15.278	2.0	9.549	0.68	3.246	19.7	94.060	<1	0.0209	0.0997
3/11/2014	0.791	0.0000	0.1261	0.4960	0.6221	7.10	6.7									<1		
3/12/2014	0.795	0.0000	0.0443	0.4880	0.5323			1.4	6.215	2.0	8.678	0.30	1.330			<1		
3/13/2014	0.781	0.0000	0.0000	0.5490	0.5490											<1		
3/14/2014	0.773	0.5072	0.0638	0.2460	0.8170											<1		
3/15/2014	0.717	0.6342	0.0440	0.0920	0.7702											<1		
3/16/2014	0.957	0.0142	0.0231	0.6980	0.7353											<1		
3/17/2014	0.920	0.0000	0.0810	0.6580	0.7390	7.60	8.7	3.4	20.955	2.0	12.326	1.50	9.244	17.7	109.090	<1	0.0153	0.0942
3/18/2014	0.880	0.0000	0.1272	0.6470	0.7742		7.4	1.0	8.458	7.6	49.071	1.56	10.072			<1		
3/19/2014	0.846	0.0000	0.0399	0.6600	0.6999											<1		
3/20/2014	0.853	0.0000	0.0265	0.6070	0.6335											<1		
3/21/2014	0.892	0.0000	0.1732	0.5630	0.7362											<1		
3/22/2014	0.795	0.6292	0.0549	0.1600	0.8441											<1		
3/23/2014	0.819	0.0163	0.0157	0.5430	0.5750											<1		
3/24/2014	1.049	0.0001	0.0246	0.7750	0.7987	7.10	7.5	2.4	16.006	2.0	13.338	1.60	10.671	15	100.040	<1	0.0153	0.1020
3/25/2014	0.754	0.0000	0.0438	0.4570	0.5008		8.0	8.0	33.413	2.2	9.188	1.88	7.852			<1		
3/26/2014	0.819	0.0000	0.1586	0.5080	0.6666											<1		
3/27/2014	0.894	0.0000	0.0071	0.5440	0.6511											<1		
3/28/2014	0.802	0.0000	0.0360	0.5420	0.5780											<1		
3/29/2014	0.803	0.0000	0.0000	0.6250	0.6250											<1		
3/30/2014	0.862	0.0000	0.0000	0.6020	0.6020											<1		
3/31/2014	0.940	0.0000	0.0879	0.6800	0.7679											1.0		
Total	25.5094	1.8012	1.3361	19.5340	22.6713	29.2000	61.2000	21.4000	114.7011	21.8000	135.1070	10.5600	67.5680	76.7000	506.8000	38.3000	0.0685	0.4379
Avg	0.8229	0.0581	0.0431	0.6301	0.7313	7.3000	7.6500	2.6750	14.3376	2.7250	16.8884	1.320	8.4460	19.1750	126.7000	1.0710	0.0171	0.1095
Max	1.0487	0.6342	0.1732	0.9900	1.0047	7.6000	8.7000	8.0000	33.4130	7.6000	49.0710	2.2000	18.4340	24.3000	203.6100	1.0000	0.0209	0.1420
Min	0.6804	0.0000	0.0000	0.0920	0.5008	7.1000	6.7000	1.0000	6.2151	2.0000	8.6780	0.1000	1.3300	15.0000	94.0600	1.0000	0.0153	0.0942
Annual Average Flow						Report on DMR												
2 Hour Peak Flow						Minimum												
						Daily Average												
						Daily Max												
						Lbs/Day Average												
						7 Day Average												

PERMIT LIMITS	Ph	DO	TSS	CBOD	NH3	Nitrate-N	Copper	E. coli
Minimum	6.00	6.00	N/A	N/A	N/A	N/A	N/A	N/A
Daily Average	N/A	N/A	12	6.0	3	24	REPORT	126
Daily Max	N/A	N/A	40	20	10	61	REPORT	394
Lbs/Day Average	N/A	N/A	175	73	15	350	N/A	N/A
7 Day Average	N/A	N/A	20.00	10.00	5.00	N/A	N/A	N/A

RAW
(MGD)
25.5094

RP000007

EXHIBIT RP-1

Trophy Club MUD 1 Monthly Log Sheet

Month: April Year: 2014

Monthly Log Sheet																		Month:	April		Year:	2014	
Date	Raw (mgd)	Lake A (mgd)	Lake B (mgd)	Creek (mgd)	Eff. Total (mgd)	pH SU	DO (mg/L)	TSS (mg/L)	TSS lbs	CBOD (mg/L)	CBOD lbs	NH3-N (mg/L)	NH3-N lbs	Nitrate-N (mg/L)	Nitrate-N lbs	E. coli (CFU/MPN)	Copper (mg/L)	Copper lbs					
4/1/2014	0.900	0.6319	0.0498	0.2380	0.9177	7.20	7.1	2.4	18.369	2.0	15.308	4.65	35.591	13.9	106.389	<1	0.0139	0.1064					
4/2/2014	0.858	0.9206	0.1578	0.0780	1.1564		7.0	1.6	15.431	2.0	19.288	0.24	2.315			<1							
4/3/2014	0.880	0.5206	0.1823	0.1830	0.8860											<1							
4/4/2014	0.909	0.6881	0.1074	0.1620	0.9555											<1							
4/5/2014	0.841	0.0867	0.0401	0.5610	0.6878											<1							
4/6/2014	0.859	0.0000	0.0184	0.6100	0.6284											<1							
4/7/2014	1.073	0.0000	0.0125	0.7840	0.7965	7.30										6.2							
4/8/2014	0.926	0.0024	0.0284	0.5940	0.6249		7.6	2.6	13.550	2.4	12.508	0.43	2.241	16.1	83.905	<1	0.0231	0.1204					
4/9/2014	0.879	0.0469	0.0391	0.6040	0.6900		7.9	1.0	5.754	2.0	11.508	0.33	1.899			<1							
4/10/2014	0.908	0.7182	0.0712	0.1820	0.9713											<1							
4/11/2014	0.914	0.6038	0.2589	0.0800	0.9427											<1							
4/12/2014	0.715	0.5023	0.1788	0.0680	0.7491											<1							
4/13/2014	0.846	0.0183	0.0635	0.5880	0.6698											<1							
4/14/2014	1.000	0.0000	0.0437	0.7230	0.7667		7.6	2.0	12.788	2.0	12.788	0.21	1.343	19.4	124.047	4.1	0.0174	0.1113					
4/15/2014	0.950	0.0000	0.0281	0.7100	0.7381	7.40	8.0	1.7	10.465	2.0	12.311	0.18	1.108			6.3							
4/16/2014	0.850	0.0000	0.0363	0.5950	0.6313											45.9							
4/17/2014	0.846	0.3345	0.2036	0.2540	0.7921											<1							
4/18/2014	0.790	0.5066	0.2894	0.0780	0.8740											<1							
4/19/2014	0.834	0.7873	0.0578	0.0560	0.9011											<1							
4/20/2014	0.833	0.6263	0.1679	0.0750	0.8692											83.3							
4/21/2014	1.025	0.7540	0.2076	0.1000	1.0616	7.40	7.5	3.3	29.217	2.0	17.707	0.37	3.276	19.1	169.102	<1	0.019	0.1682					
4/22/2014	0.932	0.0000	0.0000	0.6790	0.6790		7.3	6.6	37.375	2.0	11.326	0.67	3.794			24.1							
4/23/2014	0.932	0.0000	0.1023	0.6900	0.7823											<1							
4/24/2014	0.949	0.4865	0.1393	0.3180	0.9438											<1							
4/25/2014	0.821	0.1657	0.0562	0.4270	0.6489											<1							
4/26/2014	0.777	0.4163	0.1171	0.3020	0.8354											<1							
4/27/2014	0.883	0.4431	0.2645	0.0690	0.7766											<1							
4/28/2014	0.957	0.0163	0.0680	0.6700	0.7543	7.20	7.0	2.7	16.985	2.0	12.582	0.52	3.271	16.5	103.803	<1	0.0198	0.1246					
4/29/2014	0.875	0.5955	0.1949	0.0670	0.8574		7.5	1.4	10.011	2.0	14.301	0.30	2.145			<1							
4/30/2014	0.865	0.6388	0.1777	0.0460	0.8625											1.0							
Total	26.6056	10.5088	3.3624	10.5790	24.4502		36.5000	74.5000	25.3000	169.9457	20.4000	139.6284	7.9000	56.9824	85.0000	587.2467	194.9000	0.0932	0.6308142				
Avg	0.8869	0.3503	0.1121	0.3526	0.8150		7.3000	7.4500	2.5300	16.9946	2.0400	13.9628	0.7900	5.6982	17.0000	117.4493	1.7032	0.0186	0.1262				
Max	1.0728	0.9206	0.2894	0.7840	1.1564		7.4000	8.0000	6.6000	37.3749	2.4000	19.2885	4.6500	35.5906	19.4000	169.1022	83.3000	0.0231	0.1682				
Min	0.7154	0.0000	0.0000	0.0460	0.6249		7.2000	7.0000	1.0000	5.7542	2.0000	11.3257	0.1000	1.1080	13.9000	83.9054	1.0000	0.0139	0.1064				
Annual Average Flow					0.713	Report on DMR																	
2 Hour Peak Flow					868	Minimum					7.2	DO	TSS	CBOD	NH3	Nitrate-N	Copper	E. coli					
												N/A	N/A	N/A	N/A	N/A	N/A	N/A					

Report on DMR									
Minimum	Ph	DO	TSS	CBOD	NH3	Nitrate-N	Copper	E. coli	
	7.2	7.0	N/A	N/A	N/A	N/A	N/A	N/A	
Daily Average	N/A	N/A	2.5	1.0	0.79	17.0	0.019	1.7032	
7 Day Average	N/A	N/A	6.6	2.4	4.65	19.4	0.0231	83.3	
Lbs/Day Average	N/A	N/A	17.0	13.963	5.70	117.4	0.13	N/A	
7 Day Average	N/A	N/A	5.0	2.2	2.4	N/A	N/A	N/A	

PERMIT LIMITS									
Minimum	Ph	DO	TSS	CBOD	NH3	Nitrate-N	Copper	E. coli	
	6.00	6.00	N/A	N/A	N/A	N/A	N/A	N/A	
Daily Average	N/A	N/A	12	5.0	3	24	REPORT	126	
7 Day Average	N/A	N/A	40	20.0	10	81	REPORT	384	
Lbs/Day Average	N/A	N/A	175	73	15	360	N/A	N/A	
7 Day Average	N/A	N/A	20.00	10.00	5.00	N/A	N/A	N/A	

RAW
(MGD)
26.6056

RP000008

EXHIBIT RP-1

Trophy Club MUD 1 Monthly Log Sheet

Trophy Club MUD 1 Monthly Flow Sheet										Month: May				Year: 2014				
Date	Raw (mgd)	Lake A (mgd)	Lake B (mgd)	Creek (mgd)	Eff Total (mgd)	pH	DO (mg/L)	TSS (mg/L)	TSS lbs	CBOD (mg/L)	CBOD lbs	NH3-N (mg/L)	NH3-N lbs	Nitrate-N (mg/L)	Nitrate-N lbs	E. coli (CFU/MPN)	Copper (mg/L)	Copper lbs
5/1/2014	0.814	0.6047	0.1966	0.0330	0.8344											2.0		
5/2/2014	0.875	0.6578	0.2001	0.0420	0.8999											1.0		
5/3/2014	0.822	0.5649	0.2228	0.0290	0.8167											<1		
5/4/2014	1.044	0.5827	0.2095	0.0600	0.8522											<1		
5/5/2014	0.752	0.6527	0.2098	0.0530	0.9154	7.30	7.3	3.0	22.904	2.1	16.033	1.06	8.093	16.1	122.917	1.0	0.0211	0.1611
5/6/2014	0.952	0.6272	0.1824	0.0600	0.8696			2.2	15.956	2.8	20.306	0.56	4.062			1.0		
5/7/2014	0.952	0.0586	0.3423	0.2500	0.6509											<1		
5/8/2014	0.887	0.0000	0.0000	0.6510	0.6510											<1		
5/9/2014	0.959	0.0057	0.0932	0.7280	0.8269											<1		
5/10/2014	0.826	0.0034	0.0342	0.8190	0.6566											<1		
5/11/2014	0.918	0.0103	0.3231	0.2510	0.5844											<1		
5/12/2014	1.000	0.0002	0.0000	0.6760	0.6762											<1		
5/13/2014	1.029	0.0019	0.1011	0.7730	0.8760	7.30	6.3									<1		
5/14/2014	1.006	0.0025	0.0313	0.8870	0.9208		7.4	6.0	46.076	2.4	18.430	5.88	45.155	16.7	128.245	<1	0.0228	0.1751
5/15/2014	0.933	0.0057	0.0391	0.8040	0.8488			3.2	22.652	2.3	18.281	4.92	34.827			1.0		
5/16/2014	0.896	0.0029	0.0411	0.7210	0.7651											1.0		
5/17/2014	0.858	0.0014	0.0554	0.7240	0.7808											<1		
5/18/2014	0.837	0.5347	0.2253	0.0890	0.8490											<1		
5/19/2014	0.910	0.5200	0.2200	0.0000	0.7400		7.1	1.9	11.726	<2.0	12.343	0.54	3.333	17.4	107.386	31.5	0.016	0.0987
5/20/2014	0.948	0.7672	0.2734	0.1740	1.2146	7.30	7.4	1.8	18.233	<2.0	20.259	0.58	5.875			<1		
5/21/2014	0.900	0.6329	0.2300	0.0790	0.9419											<1		
5/22/2014	0.906	0.8213	0.1112	0.0620	1.0145											1.0		
5/23/2014	0.907	0.5272	0.2147	0.0800	0.8218											<1		
5/24/2014	0.812	0.7946	0.1048	0.0850	0.9844											<1		
5/25/2014	0.812	0.7946	0.2010	0.1810	1.1766											<1		
5/26/2014	0.913	0.6612	0.0420	0.0000	0.7031											<1		
5/27/2014	1.030	0.9487	0.0814	0.1150	1.1451	7.20	7.0	1.6	15.280	<2.0	19.100	0.39	3.725	15.2	145.163	<1	0.0181	0.1729
5/28/2014	0.879	0.7929	0.0830	0.1110	0.9868		7.0									<1		
5/29/2014	0.907	0.7971	0.0846	0.1050	0.9867			1.6	13.168	<2.0	16.458	0.30	2.489			<1		
5/30/2014	0.904	0.8138	0.0909	0.0850	0.9897											1.0		
5/31/2014	0.850	0.0772	0.0460	0.6390	0.7622											<1		
Total	28.0401	13.2660	4.2901	9.1860	26.7421	29.1000	56.9000	21.3000	165.9937	17.6000	139.2120	14.2300	107.5369	65.4000	503.7104	62.5000	0.078	0.6077826
Avg	0.9045	0.4279	0.1384	0.2963	0.8626	7.2750	7.1125	2.6625	20.7492	2.2000	17.4015	1.779	13.4421	16.3500	125.9276	1.1430	0.0195	0.1519
Max	1.0436	0.9487	0.3423	0.8870	1.2146	7.3000	7.4000	6.0000	46.0760	2.8000	20.3080	5.8800	45.1545	17.4000	145.1628	31.5000	0.0228	0.1751
Min	0.7521	0.0000	0.0000	0.0000	0.5844	7.2000	6.3000	1.0000	11.7260	2.1000	12.3430	0.1000	2.4687	15.2000	107.3858	1.0000	0.0160	0.0987
Annual Average Flow						Report on DMR												
2 Hour Peak Flow						Ph DO TSS CBOD NH3 Nitrate-N Copper E. coli												
						Minimum 7.2 6.3 N/A N/A N/A N/A N/A												

Annual Average Flow 0.725
2 Hour Peak Flow 851

Report on DMR										Ph	DO	TSS	CBOD	NH3	Nitrate-N	Copper	E. coli
Minimum										7.2	6.3	N/A	N/A	N/A	N/A	N/A	N/A
Daily Average										N/A	N/A	2.7	<2.2	1.78	16.4	0.020	<1.143
Daily Max										7.3	N/A	5.0	2.8	5.88	17.4	0.023	31.5
Lbs/Day Average										N/A	N/A	20.7	<17.402	13.44	125.9	0.15	N/A
7 Day Average										N/A	N/A	4.6	2.5	5.4	N/A	N/A	N/A

PERMIT LIMITS										Ph	DO	TSS	CBOD	NH3	Nitrate-N	Copper	E. coli
Minimum										6.00	6.00	N/A	N/A	N/A	N/A	N/A	N/A
Daily Average										N/A	N/A	12	5.0	2.0	24	REPORT	128
Daily Max										9.00	N/A	40	20	10	10	REPORT	394
Lbs/Day Average										N/A	N/A	175	73	15	350	N/A	N/A
7 Day Average										N/A	N/A	20.00	10.00	5.00	N/A	N/A	N/A

RAW
(MGD)
28.0401

RP000009

EXHIBIT RP-1

Trophy Club MUD 1 Monthly Log Sheet

Month: June Year: 2014

Date	Raw (mgd)	Lake A (mgd)	Lake B (mgd)	Creek (mgd)	Eff. Total (mgd)	pH	DO SU	TSS (mg/L)	TSS Lbs	CBOD (mg/L)	CBOD Lbs	NH3-N (mg/L)	NH3-N Lbs	Nitrate-N (mg/L)	Nitrate-N Lbs	E. coli (CFU/MPN)	Copper (mg/L)	Copper Lbs
6/1/2014	0.889	0.8025	0.0784	0.0810	0.9620											<1		
6/2/2014	0.991	0.7491	0.2113	0.0730	1.0334	7.30	6.9	1.4	12.066	15.4	132.727	0.28	2.413	15.4	132.727	<1	0.0228	0.1965
6/3/2014	0.968	0.2486	0.3107	0.2380	0.7973		7.0	1.8	11.969	2.0	13.299	0.22	1.463			<1		
6/4/2014	0.948	0.0023	0.0449	0.8290	0.8762											2.0		
6/5/2014	0.961	0.0038	0.1411	0.6220	0.7683											19.9		
6/6/2014	0.964	0.0009	0.1441	0.7190	0.8640											11.0		
6/7/2014	0.886	0.0011	0.1967	0.5610	0.7589											3.1		
6/8/2014	0.886	0.7818	0.0872	0.0000	0.8691											<1		
6/9/2014	0.966	0.0109	0.0460	0.8710	0.9279	7.20	7.0	2.6	20.121	2.0	15.478	0.25	1.935	17.7	136.980	<1	0.0321	0.2484
6/10/2014	0.943	0.0007	0.0356	0.6560	0.6923		7.1	2.8	16.165	2.0	11.547	0.28	1.617			<1		
6/11/2014	0.883	0.0003	0.0384	0.7030	0.7417											3.1		
6/12/2014	0.908	0.0000	0.0000	0.7960	0.7960											<1		
6/13/2014	0.918	0.0027	0.0867	0.7820	0.8714											<1		
6/14/2014	0.875	0.0074	0.1044	0.5740	0.6858											<1		
6/15/2014	0.883	0.7852	0.1122	0.0600	0.9574											<1		
6/16/2014	0.936	0.5374	0.2634	0.0590	0.8599	7.30										<1		
6/17/2014	0.962	0.5321	0.2479	0.0640	0.8640		7.1	2.6	16.735	2.3	16.573	0.34	2.450	15.9	114.570	<1	0.0211	0.1520
6/18/2014	0.921	0.7089	0.1382	0.0610	0.9032		7.0	2.0	15.065	2.0	15.065	0.46	3.465			<1		
6/19/2014	0.903	0.2844	0.3160	0.1330	0.7334											1.0		
6/20/2014	0.855	0.8304	0.0544	0.0630	0.9777											<1		
6/21/2014	0.810	0.5283	0.0936	0.0810	0.7028											<1		
6/22/2014	1.962	0.4654	0.2915	0.0820	0.8389											<1		
6/23/2014	0.962	0.8510	0.0642	0.1210	1.0768	7.20	7.2									2.0		
6/24/2014	1.007	0.8921	0.0475	0.0930	1.1326		7.3	2.4	22.670	2.0	16.892	0.16	1.511	19.1	180.416	<1	0.0193	0.1823
6/25/2014	0.962	0.9742	0.0405	0.0990	1.0637			2.0	17.742	2.0	17.742	0.18	1.597			2.0		
6/26/2014	1.399	0.2607	0.0755	0.8220	1.1582											1.0		
6/27/2014	0.987	0.0040	0.0898	0.8580	0.9518											3.1		
6/28/2014	0.939	0.0039	0.0810	0.8260	0.9109											<1		
6/29/2014	0.961	0.0047	0.0854	0.7290	0.8190											1.0		
6/30/2014	0.969	0.0027	0.0804	0.9280	1.0121											<1		
Total	29.4058	10.3621	3.6073	12.6350	26.6049	29.0000	56.6000	17.6000	134.5340	17.6000	241.3227	2.1700	16.4504	68.1000	564.6938	68.2000	0.0953	0.779272
Avg	0.9802	0.3454	0.1202	0.4212	0.8868	7.2500	7.0750	2.2000	16.8168	2.2000	30.1653	0.271	2.0563	17.0250	141.1734	1.4363	0.0238	0.1948
Max	1.9619	0.9921	0.3160	0.9290	1.1582	7.3000	7.3000	2.8000	22.6701	15.4000	132.7270	0.4600	3.4649	19.1000	180.4164	19.9000	0.0321	0.2484
Min	0.8101	0.0000	0.0000	0.0000	0.6858	7.2000	6.9000	1.0000	11.9690	2.0000	11.5468	0.1000	1.4629	15.4000	114.5700	1.0000	0.0193	0.1520

Annual Average Flow 0.733
2 Hour Peak Flow 903

Report on DMR							
Minimum	pH	DO	TSS	CBOD	NH3	Nitrate-N	E. coli
Daily Average	7.2	6.9	N/A	N/A	N/A	N/A	N/A
Daily Max	N/A	N/A	2.2	<3.7	0.27	17.0	0.024
Lbs/Day Average	N/A	N/A	16.8	<30.165	141.2	19.1	<1.436
7 Day Average	N/A	N/A	2.7	8.7	0.4	N/A	N/A

PERMIT LIMITS							
Minimum	pH	DO	TSS	CBOD	NH3	Nitrate-N	E. coli
Daily Average	7.0	6.0	N/A	N/A	N/A	N/A	N/A
Daily Max	9.0	N/A	12	5.0	1.0	24	REPORT
Lbs/Day Average	N/A	N/A	175	73	15	350	N/A
7 Day Average	N/A	N/A	20.00	10.00	5.00	N/A	N/A

RAW
(MGD)
29.4058

RP000010

EXHIBIT RP-1

Trophy Club MUD 1 Monthly Log Sheet

Date	Raw (mgd)	Lake A (mgd)	Lake B (mgd)	Creek (mgd)	Eff Total (mgd)	pH	DO (mg/L)	TSS (mg/L)	TSS Lbs	CBOD (mg/L)	CBOD Lbs	NH3-N (mg/L)	NH3-N Lbs	Nitrate-N (mg/L)	Nitrate-N Lbs	E. coli (CFU/MPN)	Copper (mg/L)	Copper Lbs	
7/1/2014	0.966	0.0008	0.0841	0.8560	0.9510		7.1	1.8	14.276	2.0	15.852	0.17	1.348	16	128.895	<1	0.0213	0.1689	
7/2/2014	0.931	0.0004	0.1058	0.7470	0.8532		7.4	1.4	9.962	2.0	14.231	0.18	1.281			<1			
7/3/2014	0.894	0.0009	0.5541	0.4910	1.0459	7.30										<1			
7/4/2014	0.846	0.0008	0.3667	0.4880	0.8555											<1			
7/5/2014	0.907	0.0018	0.2720	0.4970	0.7709											<1			
7/6/2014	0.886	0.0023	0.3154	0.4640	0.8017											<1			
7/7/2014	0.934	0.0079	0.3394	0.5100	0.8573											<1			
7/8/2014	0.898	0.6048	0.2609	0.0820	0.9277	7.30	6.5	1.6	12.380	2.0	15.475	0.20	1.547	16	123.797	<1	0.0233	0.1803	
7/9/2014	0.975	0.6394	0.4195	0.0670	1.1260		6.8	2.0	16.782	2.0	16.782	0.20	1.876			<1			
7/10/2014	0.980	0.6000	0.3515	0.0560	1.0075											<1			
7/11/2014	0.850	0.6161	0.3060	0.0580	0.9801											<1			
7/12/2014	0.962	0.6512	0.3742	0.0720	1.0974											<1			
7/13/2014	0.709	0.4818	0.2388	0.0510	0.7715											<1			
7/14/2014	0.940	0.6011	0.3296	0.0570	0.9877	7.30	7.1	1.6	13.180	2.0	16.475	0.25	2.059	21.7	178.753	<1	0.0323	0.2661	
7/15/2014	0.922	0.6088	0.2783	0.0960	0.9831		7.2	1.2	9.839	2.0	16.398	0.23	1.886			<1			
7/16/2014	0.877	0.6456	0.1500	0.0930	0.8886											<1			
7/17/2014	0.932	0.5761	0.2490	0.0750	0.9001											<1			
7/18/2014	1.120	0.7669	0.2059	0.1660	1.1388											<1			
7/19/2014	0.876	0.1805	0.0734	0.1060	0.3598											<1			
7/20/2014	0.895	0.0000	0.0697	0.1070	0.1767											<1			
7/21/2014	1.026	0.0000	0.0470	0.8390	0.8860	7.30	7.3	1.4	10.344	2.0	14.776	0.17	1.256	18	132.999	<1	0.022	0.1626	
7/22/2014	0.968	0.0000	0.2143	0.6610	0.8753		7.1	1.0	7.300	2.0	14.599	0.17	1.241		0.000	<1			
7/23/2014	0.963	0.0000	0.3510	0.5480	0.8990											<1			
7/24/2014	0.997	0.0000	0.4740	0.5830	1.0570											<1			
7/25/2014	0.961	0.0000	0.1226	0.7330	0.8556											<1			
7/26/2014	0.856	0.0000	0.2781	0.3650	0.6431											<1			
7/27/2014	0.899	0.0000	0.3522	0.2690	0.6112											<1			
7/28/2014	0.905	0.0000	0.0422	0.7870	0.8292											1.0			
7/29/2014	0.919	0.0000	0.3746	0.4470	0.8216			2.6	17.817	2.0	13.705	0.22	1.506	19.2	131.568	<1	0.0407	0.2789	
7/30/2014	0.863	0.4805	0.2375	0.1000	0.8180	7.20	7.0	2.4	16.372	2.0	13.644	0.33	2.251			<1			
7/31/2014	0.903	0.7637	0.0565	0.0930	0.9132		7.5									<1			
Total	28.5604	8.2313	7.8943	10.5640	26.6897	36.4000	71.0000	17.0000	130.2507	20.0000	153.9481	2.1200	16.2556	90.9000	694.0127	30.0000	0.1396	1.0567306	
Avg	0.9213	0.2655	0.2547	0.3408	0.8610	7.2800	7.1000	1.7000	13.0251	2.0000	15.3948	0.212	1.6256	18.1800	115.6688	1.0000	0.0279	0.2113	
Max	1.1203	0.7669	0.5541	0.8660	1.1388	7.3000	7.5000	2.6000	18.7819	2.0000	16.7619	0.3300	2.2512	21.7000	178.7527	1.0000	0.0407	0.2789	
Min	0.7085	0.0000	0.0412	0.0510	0.1767	7.2000	6.5000	1.0000	7.2996	2.0000	13.6436	0.1000	1.2409	16.0000	0.0000	1.0000	0.0213	0.1626	
Annual Average Flow							0.737	Report on DMR											
2 Hour Peak Flow							833	Ph 2											
								Minimum											
								7.2											
								6.5											
								N/A											
								N/A											
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Annual Average Flow	0.737
2 Hour Peak Flow	833

Report on DMR									
Minimum	Ph	DO	TSS	CBOD	NH3	Nitrate-N	Copper	E. coli	
7.2	7.2	6.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Daily Average	N/A	N/A	1.7	<2.0	0.21	18.2	0.028	<1.00	
Daily Maximum	7.3	N/A	2.6	2.0	0.33	21.7	0.041	1.00	
Lbs/Day Average	N/A	N/A	13.0	<15.395	1.63	115.7	0.21	N/A	
7 Day Average	N/A	N/A	2.5	2.0	0.2	N/A	N/A	N/A	

PERMIT LIMITS									
Minimum	Ph	DO	TSS	CBOD	NH3	Nitrate-N	Copper	E. coli	
6.00	6.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Daily Average	N/A	N/A	12	5.0	0.1	24	REPORT	126	
Daily Maximum	9.00	N/A	40	20	0.16	51.2	REPORT	394	
Lbs/Day Average	N/A	N/A	175	73	15	350	N/A	N/A	
7 Day Average	N/A	N/A	20.00	10.00	5.00	N/A	N/A	N/A	

RAW
(MGD)
28.5604

RP000011

EXHIBIT RP-1

Trophy Club MUD 1 Monthly Log Sheet

Month: August Year: 2014

Date	Raw (mgd)	Lake A (mgd)	Lake B (mgd)	Creek (mgd)	Eff Total (mgd)	pH	DO (mg/L)	TSS (mg/L)	TSS Lbs	CBOD (mg/L)	CBOD Lbs	NH3-N (mg/L)	NH3-N Lbs	Nitrate-N (mg/L)	Nitrate-N Lbs	E. coli (CFU/MPN)	Copper (mg/L)	Copper Lbs
8/1/2014	0.859	0.8694	0.0665	0.1140	1.0500											2.0		
8/2/2014	0.804	0.8447	0.0657	0.1000	1.0104											<1		
8/3/2014	0.846	0.8052	0.0749	0.0880	0.9721											<1		
8/4/2014	0.880	0.8272	0.0856	0.0790	0.9918	7.30	7.2									2.0		
8/5/2014	0.886	0.2945	0.3249	0.1190	0.7385		7.4	16	9.654	2.0	12.318	0.60	3.695	17	104.703	1.0	0.0225	0.1386
8/6/2014	0.936	0.5778	0.2745	0.0710	0.9232			5.0	36.499	2.0	15.400	0.25	1.925			1.0		
8/7/2014	0.879	0.5294	0.2489	0.0610	0.8393											<1		
8/8/2014	0.885	0.4535	0.2150	0.1710	0.8395											23.1		
8/9/2014	0.864	0.5236	0.2591	0.1460	0.9287											<1		
8/10/2014	0.864	0.4786	0.2639	0.1120	0.8545											<1		
8/11/2014	0.886	0.3748	0.1748	0.2520	0.8016	7.30	7.0									<1		
8/12/2014	0.920	0.5437	0.5038	0.0960	1.1435		7.1	18	17.167	2.0	19.074	0.22	2.098	16	152.595	1.0	0.0193	0.1841
8/13/2014	0.805	0.4905	0.5058	0.0820	1.0783			4.6	41.368	2.0	17.986	0.23	2.068			<1		
8/14/2014	0.853	0.4113	0.2582	0.1620	0.8314											<1		
8/15/2014	0.844	0.4900	0.2770	0.0830	0.8499											<1		
8/16/2014	0.801	0.4308	0.1964	0.1100	0.7373											<1		
8/17/2014	0.924	0.4550	0.1364	0.2500	0.8414											<1		
8/18/2014	0.885	0.5745	0.0421	0.2560	0.8727	7.30	7.1	18	13.101	2.0	14.556	0.66	4.804	13.4	97.527	<1	0.0193	0.1405
8/19/2014	0.883	0.7952	0.0537	0.1490	0.9979		7.2	1.2	9.987	2.0	16.644	0.20	1.664			<1		
8/20/2014	0.961	0.7019	0.0276	0.1490	0.8785											<1		
8/21/2014	0.974	0.6499	0.0586	0.1750	0.8835											<1		
8/22/2014	0.875	0.5876	0.0832	0.1540	0.8247											<1		
8/23/2014	0.843	0.6478	0.0943	0.1190	0.8611											<1		
8/24/2014	0.833	0.3197	0.1972	0.1210	0.6379											1.0		
8/25/2014	0.954	0.8740	0.0352	0.0740	0.9831											<1		
8/26/2014	0.895	0.5117	0.1815	0.0700	0.7632	7.20	6.8	2.0	12.731	2.0	12.731	0.19	1.209	18	114.576	1.0	0.0277	0.1763
8/27/2014	0.967	0.8141	0.0680	0.0880	0.9701		7.0	2.8	22.654	2.0	16.182	0.22	1.780			<1		
8/28/2014	0.879	0.5949	0.1522	0.0960	0.8430											1.0		
8/29/2014	0.859	0.5728	0.1604	0.0770	0.8102											<1		
8/30/2014	0.813	0.3527	0.0228	0.4510	0.8264											<1		
8/31/2014	0.852	0.0141	0.0201	0.7200	0.9132											1.0		
Total	27.2092	17.4148	5.1283	4.7950	27.4972	29.1000	56.8000	20.8000	165.3607	16.0000	124.8909	2.5700	19.2443	64.4000	469.4010	54.1000	0.0888	0.6394331
Avg	0.8777	0.5618	0.1654	0.1547	0.8870	7.2750	7.1000	2.6000	20.6701	2.0000	15.6114	0.321	2.4055	16.1000	117.3503	1.1628	0.0222	0.1599
Max	0.9737	0.8740	0.5058	0.7200	1.1459	7.3000	7.4000	5.0000	41.3681	2.0000	19.0744	0.6600	4.8036	18.0000	152.5950	23.1000	0.0277	0.1841
Min	0.8013	0.0141	0.0201	0.0610	0.6379	7.2000	6.8000	1.0000	9.8544	2.0000	12.3180	0.1000	1.2094	13.4000	97.5268	1.0000	0.0193	0.1386

Annual Average Flow

0.745

2 Hour Peak Flow

938

Report on DMR	pH	DO	TSS	CBOD	NH3	Nitrate-N	Copper	E. coli
Minimum	7.2	6.8	N/A	N/A	N/A	N/A	N/A	N/A
Daily Average	N/A	N/A	2.6	<2.0	0.32	16.1	0.022	<1.163
Daily Maximum	7.3	6.8	5.0	2.0	0.66	18.0	0.028	23.1
Lbs/Day Average	N/A	N/A	20.7	15.611	2.41	117.4	0.16	N/A
7 Day Average	N/A	N/A	3.3	2.0	0.4	N/A	N/A	N/A

PERMIT LIMITS	pH	DO	TSS	CBOD	NH3	Nitrate-N	Copper	E. coli
Minimum	6.00	6.00	N/A	N/A	N/A	N/A	N/A	N/A
Daily Average	N/A	N/A	12	5.0	1	24	REPORT	126
Daily Maximum	9.00	N/A	40	20	5.0	51	REPORT	384
Lbs/Day Average	N/A	N/A	175	73	157	360	N/A	N/A
7 Day Average	N/A	N/A	20.00	10.00	5.00	N/A	N/A	N/A

RAW
(MGD)
27.2092

RP000012

EXHIBIT RP-1

Trophy Club MUD 1 Monthly Log Sheet

Month: Sept Year: 2014

Date	Raw (mgd)	Lake A (mgd)	Lake B (mgd)	Creek (mgd)	Eff Total (mgd)	pH	DO (mg/L)	TSS (mg/L)	TSS Lbs	CBOD (mg/L)	CBOD Lbs	NH3-N (mg/L)	NH3-N Lbs	Nitrate-N (mg/L)	Nitrate-N Lbs	E. coli (CFU/MPN)	Copper (mg/L)	Copper Lbs
9/1/2014	0.846	0.0122	0.0182	0.8040	0.8344													
9/2/2014	1.062	0.6644	0.2305	0.0000	0.8948	7.20	7.2	5.0	37.315	2.0	14.925	0.61	4.552	20.8	155.222	<1	0.0276	0.2060
9/3/2014	0.890	0.5376	0.1810	0.0770	0.7956		7.2	2.0	13.270	2.0	13.270	0.28				<1		
9/4/2014	0.892	0.5498	0.2273	0.0860	0.8631											<1		
9/5/2014	0.858	0.5804	0.2836	0.0790	0.9430											<1		
9/6/2014	0.833	0.5627	0.2588	0.0690	0.8905											<1		
9/7/2014	0.845	0.5674	0.3046	0.1030	0.9750											<1		
9/8/2014	0.957	0.5935	0.3048	0.1000	0.9984											2.0		
9/9/2014	0.900	0.7094	0.2166	0.1180	1.0440	7.40	7.0									<1		
9/10/2014	0.912	0.5432	0.2111	0.0940	0.8483		6.9	2.2	15.564	2.0	14.149	0.20	1.415	22.5	159.160	<1	0.0226	0.1599
9/11/2014	0.918	0.5547	0.2143	0.0940	0.8630											<1		
9/12/2014	0.853	0.5265	0.2381	0.1090	0.8736			4.0	29.149	2.0	14.574	0.22	1.603			<1		
9/13/2014	0.747	0.6756	0.0341	0.1140	0.8237											<1		
9/14/2014	0.792	0.7649	0.0195	0.1150	0.8995											<1		
9/15/2014	0.913	0.5664	0.2505	0.1180	0.9349	7.10	6.7									<1		
9/16/2014	0.894	0.5707	0.0478	0.1040	1.0089		7.1									<1		
9/17/2014	0.894	0.7677	0.0769	0.0980	0.9426											10.9		
9/18/2014	0.832	0.5578	0.2281	0.0920	0.8779			3.0	21.965	2.0	14.643	3.52	25.766	15.3	111.996	7.5	0.0178	0.1302
9/19/2014	0.868	0.7216	0.1301	0.1010	0.9527			2.2	17.480	2.0	16.685	2.90	23.055			<1		
9/20/2014	0.786	0.7064	0.0709	0.1060	0.8833											1.0		
9/21/2014	0.810	0.7638	0.0725	0.0980	0.9343											<1		
9/22/2014	0.938	0.6471	0.1695	0.0950	0.9116	7.70	7.2									6.3		
9/23/2014	0.878	0.7723	0.1258	0.0540	0.9520		7.3	2.4	19.055	2.0	15.880	0.18	1.431	19.2	152.448	<1	0.0211	0.1675
9/24/2014	0.834	0.7127	0.0969	0.0660	0.8756			1.5	10.953	2.0	14.600	0.56	4.088			<1		
9/25/2014	0.881	0.4892	0.2419	0.0540	0.7851											<1		
9/26/2014	0.856	0.4443	0.3006	0.1620	0.9069											<1		
9/27/2014	0.743	0.3563	0.2837	0.0500	0.6900							0.14	0.806			1.0		
9/28/2014	0.866	0.4038	0.2885	0.0670	0.7593							0.37	2.343			1.0		
9/29/2014	0.953	0.4452	0.2932	0.0570	0.7954	7.70	7.1					0.18	1.194			<1		
9/30/2014	0.893	0.1330	0.1141	0.5450	0.7922		7.1									<1		
Total	26.1434	17.1869	5.5335	3.8290	26.5495	37.1000	70.8000	22.3000	164.7512	16.1000	118.7260	9.1600	66.2524	77.8000	578.8260	52.7000	0.0891	0.66357
Avg	0.8714	0.5729	0.1845	0.1276	0.8850	7.4200	7.0800	2.7875	20.5944	2.0000	14.8444	0.8333	6.6333	19.4500	144.7111	1.2602	0.0223	0.1711
Max	1.0616	0.8570	0.3048	0.8040	1.0440	7.7000	7.3000	5.0000	37.3152	2.1000	16.6850	3.5200	25.7660	22.5000	159.1600	10.9000	0.0900	0.2060
Min	0.7431	0.0122	0.0182	0.0000	0.6900	7.1000	6.7000	1.0000	10.9530	2.0000	13.2700	0.1000	0.8056	15.3000	111.9960	1.0000	0.0178	0.1302

Annual Average Flow 0.752
2 Hour Peak Flow 903

Report on DMR

	Ph	DO	TSS	CBOD	NH3	Nitrate-N	E. coli	Copper
Minimum	7.1	6.7	N/A	N/A	N/A	N/A	N/A	N/A
Daily Average	N/A	N/A	2.8	<2.0	0.83	19.5	<1.260	0.0223
Daily Max	7.7	N/A	5.0	2.1	3.52	22.5	10.9	0.028
Lbs/Day Average	N/A	N/A	20.6	<14.840	6.63	144.7	N/A	0.17
7 Day Average	N/A	N/A	3.5	2.1	3.2	N/A	N/A	N/A
PERMIT LIMITS								
Minimum	6.00	6.00	N/A	N/A	N/A	N/A	N/A	N/A
Daily Average	N/A	N/A	12.5	5.0	1.0	24	1261	REPORT
Daily Max	9.00	N/A	40	20	10	51	394	REPORT
Lbs/Day Average	N/A	N/A	20.00	10.00	5.00	N/A	N/A	N/A
7 Day Average	N/A	N/A	20.00	10.00	5.00	N/A	N/A	N/A

RAW
(MGD)
26.1434

RP000013

EXHIBIT RP-1

Trophy Club MUD 1 Monthly Log Sheet

Month: OCT Year: 2014

Date	Raw (mgd)	Lake A (mgd)	Lake B (mgd)	Creek (mgd)	Eff. Total (mgd)	pH	DO (mg/L)	TSS (mg/L)	TSS (Lbs)	CBOD (mg/L)	CBOD (Lbs)	NH3-N (mg/L)	NH3-N (Lbs)	Nitrate-N (mg/L)	Nitrate-N (Lbs)	E. coli (CFU/MPN)	Copper (mg/L)	Copper (Lbs)
10/1/2014	0.846	0.2707	0.1876	0.3440	0.8022			1.5	10.036	2.0	13.381	0.19	1.271	27.5	183.986	2.0	0.0227	0.1519
10/2/2014	1.062	0.0679	0.0724	0.6190	0.7593	7.30	6.7	1.0	6.332	2.0	12.665	0.16	1.013			<1		
10/3/2014	0.890	0.0025	0.0272	0.8060	0.8357			7.2								<1		
10/4/2014	0.892	0.0027	0.0378	0.6250	0.6655											<1		
10/5/2014	0.858	0.0047	0.0367	0.6700	0.7114											<1		
10/6/2014	0.833	0.4201	0.3396	0.0400	0.7997	7.40	6.9									<1		
10/7/2014	0.845	0.0325	0.0635	0.6410	0.7370		6.9	12.0	73.759	2.0	12.293	0.19	1.168	21	129.078	<1	0.0228	0.1401
10/8/2014	0.957	0.2373	0.2092	0.3490	0.7955			1.9	12.606	2.0	13.270	0.21	1.393			<1		
10/9/2014	0.900	0.0253	0.0565	0.7310	0.8129											1.0		
10/10/2014	0.912	0.6538	0.1702	0.1240	0.9480											1.0		
10/11/2014	0.918	0.1879	0.0824	0.4760	0.7464											1.0		
10/12/2014	0.853	0.0006	0.0118	0.6380	0.6485											<1		
10/13/2014	0.747	0.0033	0.0385	0.8260	0.8678	7.70	7.3	1.5	10.856	2.0	14.474	0.23	1.665	21	151.979	<1	0.0227	0.1643
10/14/2014	0.792	0.0022	0.0067	0.7990	0.8079		7.4	1.0	6.738	2.0	13.476	0.18	1.213			1.0		
10/15/2014	0.913	0.0060	0.0368	0.6960	0.7388											<1		
10/16/2014	0.894	0.0016	0.0427	0.7110	0.7552											<1		
10/17/2014	0.894	0.0045	0.3449	0.4450	0.7943											<1		
10/18/2014	0.832	0.0028	0.1152	0.6530	0.7710											<1		
10/19/2014	0.868	0.0095	0.0392	0.7050	0.7537											<1		
10/20/2014	0.786	0.5470	0.2584	0.0980	0.9034	7.40	7.3									1.0		
10/21/2014	0.810	0.0966	0.0955	0.6910	0.8832		7.3									9.5		
10/22/2014	0.938	0.0013	0.0332	0.8210	0.8555			1.8	12.843	2.0	14.270	0.91	6.493	24	171.237	<1	0.018	0.1284
10/23/2014	0.878	0.3695	0.1920	0.2310	0.7925			2.0	13.220	2.0	13.220	0.20	1.322			1.0		
10/24/2014	0.834	0.5259	0.2628	0.0860	0.8747											<1		
10/25/2014	0.881	0.0759	0.0792	0.6000	0.7550											<1		
10/26/2014	0.856	0.0030	0.0370	0.7180	0.7580											<1		
10/27/2014	0.743	0.0372	0.0495	0.7770	0.8637	7.80	6.9									<1		
10/28/2014	0.866	0.5135	0.2420	0.0860	0.8415		6.7	4.2	29.475	2.0	14.036	0.20	1.404	18.3	128.428	<1	0.0224	0.1572
10/29/2014	0.953	0.5436	0.2562	0.0740	0.8738			2.4	17.490	2.0	14.675	0.20	1.457			<1		
10/30/2014	0.893	0.5799	0.2893	0.0720	0.9412											<1		
10/31/2014	0.828	0.4921	0.2398	0.0660	0.7979											<1		
Total	26.9710	5.7214	3.9537	15.2160	24.8911	37.6000	70.6000	29.3000	193.3537	20.0000	135.6581	2.6700	18.3986	111.8000	764.7077	39.5000	0.1086	0.7419247
Avg	0.8700	0.1846	0.1275	0.4908	0.8028	7.5200	7.0600	2.9300	19.34	2.0000	13.57	0.267	1.84	22.3600	152.94	1.1031	0.0217	0.1519
Max	1.0616	0.6538	0.3449	0.8260	0.9480	7.80	7.4000	12.00	73.7589	2.00	14.5748	0.91	6.4927	27.50	183.9864	9.50	0.02	0.1643
Min	0.7431	0.0006	0.0067	0.0400	0.6485	7.30	6.70	1.0000	6.3324	2.0000	12.2931	0.1000	1.0132	18.3000	128.4278	1.0000	0.0180	0.1284

Annual Average Flow 0.762
2 Hour Peak Flow 764

Report on DMR

	Ph	DO	TSS	CBOD	NH3	Nitrate-N	E. coli	Copper
Minimum	7.3	6.7	N/A	N/A	N/A	N/A	N/A	N/A
Daily Average	N/A	N/A	5.29	<2.0	0.27	22.4	<1.103	0.022
Daily Max	7.8	N/A	12.0	2.0	0.91	27.5	9.5	0.023
Lbs/Day Average	N/A	N/A	19.3	13.57	1.84	152.9	N/A	0.15
7 Day Average	N/A	N/A	7.0	2.0	0.6	N/A	N/A	N/A
PERMIT LIMITS								
Minimum	6.00	6.00	N/A	N/A	N/A	N/A	N/A	N/A
Daily Average	N/A	N/A	12	5.0	1	24	126	REPORT
Daily Max	9.00	N/A	40	20	10	51	394	REPORT
Lbs/Day Average	N/A	N/A	175	73	16	350	N/A	N/A
7 Day Average	N/A	N/A	20.00	10.00	5.00	N/A	N/A	N/A

RAW
(MGD)
26.9710

RP000014

RP000015

Month: **November** Year: **2014**

RAW
(MGD)
26.4819

EXHIBIT RP-1

Trophy Club MUD 1 Monthly Log Sheet

Month: December Year: 2014

Date	Raw (mgd)	Lake A (mgd)	Lake B (mgd)	Creek (mgd)	Eff. Total (mgd)	pH	DO (mg/L)	TSS (mg/L)	TSS Lbs	CBOD (mg/L)	CBOD Lbs	NH3-N (mg/L)	NH3-N Lbs	Nitrate-N (mg/L)	Nitrate-N Lbs	E. coli (CFU/MPN)	Copper (mg/L)	Copper Lbs
12/1/2015	0.971	0.0061	0.0502	0.7810	0.8373	7.20	6.8											
12/2/2015	0.858	0.0118	0.0052	0.7440	0.7610		7.9											
12/3/2015	0.884	0.0108	0.0003	0.7130	0.7241			2.8	16.908	2.0	12.077	0.20	1.208	19.8	119.566	1.0	0.0178	0.1075
12/4/2015	0.870	0.0027	0.0293	0.7600	0.7920			3.6	23.779	2.0	13.211	0.32	2.114					
12/5/2015	0.875	0.0039	0.0312	0.7040	0.7390													
12/6/2015	0.806	0.0354	0.0427	0.6080	0.6841													
12/7/2015	0.852	0.0034	0.0367	0.6970	0.7370													
12/8/2015	0.927	0.0013	0.0130	0.7490	0.7633	7.20	7.0	3.4	21.643	2.0	12.731	0.48	3.055	13.8	87.845	<1	0.0148	0.0942
12/9/2015	0.911	0.0038	0.0344	0.7860	0.8242		7.5	1.8	12.372	2.0	13.747	0.65	4.468					
12/10/2015	0.904	0.0005	0.0364	0.7200	0.7569													
12/11/2015	0.885	0.0006	0.0486	0.7120	0.7612													
12/12/2015	0.896	0.0010	0.0325	0.7150	0.7485													
12/13/2015	0.767	0.0027	0.0313	0.6830	0.7170													
12/14/2015	0.881	0.0040	0.0410	0.7360	0.7810													
12/15/2015	1.003	0.0026	0.0262	0.8430	0.8718	6.80	7.2	4.4	31.992	2.0	14.542	0.92	6.689	16.8	122.152	<1	0.0142	0.1032
12/16/2015	0.915	0.0049	0.0397	0.7940	0.8386		7.4	1.8	12.589	2.0	13.888	0.42	2.938					
12/17/2015	0.874	0.0070	0.0185	0.7530	0.7785													
12/18/2015	0.876	0.0000	0.0005	0.7440	0.7446													
12/19/2015	0.888	0.0004	0.0006	0.7010	0.7019													
12/20/2015	0.784	0.0000	0.0002	0.6590	0.6592													
12/21/2015	0.839	0.0000	0.0007	0.6750	0.6757													
12/22/2015	0.879	0.0000	0.0043	0.7120	0.7164	6.70	7.0	4.6	27.482	2.0	11.949	0.49	2.927	17.6	105.150	2.0	0.0194	0.1159
12/23/2015	0.889	0.0050	0.0189	0.7750	0.7989		7.3	4.4	29.317	2.0	13.326	0.49	3.265					
12/24/2015	0.883	0.0012	0.0009	0.7080	0.7081													
12/25/2015	0.942	0.0250	0.0191	0.7680	0.8121													
12/26/2015	0.844	0.0037	0.0162	0.6910	0.7109													
12/27/2015	0.839	0.0034	0.0096	0.7040	0.7170													
12/28/2015	0.834	0.0090	0.0026	0.6420	0.6536													
12/29/2015	0.860	0.0070	0.0121	0.5980	0.6151	6.70	7.7	14.4	73.874	2.7	13.851	0.20	1.026	13.5	69.257	3.0	0.0199	0.1021
12/30/2015	0.857	0.0000	0.0127	0.6540	0.6667		8.2											
12/31/2015	0.871	0.0000	0.0007	0.7250	0.7257			2.0	12.105	2.0	12.105	0.20	1.210					
Annual Average Flow	27.1676	0.1572	0.6162	22.2480	23.0214	34.6000	74.0000	43.2000	262.0632	20.7000	131.5274	4.3700	28.9003	81.5000	503.9701	73.2000	0.0861	0.5229409
Avg	0.8764	0.0051	0.0199	0.7177	0.7426	6.9200	7.4000	4.3200	26.2114	2.0000	13.15	0.437	2.89	16.3000	100.79	1.5378	0.0172	0.10
Max	1.0035	0.0354	0.0502	0.8430	0.8718	7.20	8.2000	14.40	73.8744	2.70	14.5419	0.92	6.6893	19.80	122.1519	14.60	0.02	0.1159
Min	0.7671	0.0000	0.0002	0.5960	0.6151	6.70	6.80	1.0000	12.1047	2.0000	11.9489	0.1000	1.0260	13.5000	69.2573	1.0000	0.0142	0.0942

Annual Average Flow 0.787

2 Hour Peak Flow 625

Report on DMR

Minimum	Ph	DO	TSS	CBOD	NH3	Nitrate-N	E. coli	Copper
Minimum	6.7	6.8	N/A	N/A	N/A	N/A	N/A	N/A
Daily Average	N/A	N/A	4.3	<2.0	0.44	16.3	<1,537	0.017
7 Day Average	N/A	N/A	14.4	2.7	0.92	19.8	114.6	0.020
7 Day Average	N/A	N/A	8.2	2.0	0.7	N/A	N/A	N/A
PERMIT LIMITS	Ph	DO	TSS	CBOD	NH3	Nitrate-N	E. coli	Copper
Minimum	6.00	6.00	N/A	N/A	N/A	N/A	N/A	N/A
Daily Average	N/A	N/A	12	5.0	2.1	24	126	REPORT
7 Day Average	N/A	N/A	40	20	10.4	51	394	REPORT
7 Day Average	N/A	N/A	20.00	10.00	5.00	N/A	N/A	N/A

RAW
(MGD)
27.1676

RP000016

EXHIBIT RP-2

Commercial Water 2014.txt Edited

ubcna2s
02/11/15
ndandria
16:39

TROPHY CLUB H.U.D.

Consumption Avg/Tot Summary by Billing Period

Page: 1

Service Code	Billing Period	Resident Count	Address Count	Number Of Units	Average Consumption	Total Consumption	Total Demand Consumption
WT	01/2014	177	177	368	65,333	12,152,000	0
	02/2014	178	178	369	63,876	11,881,000	0
	03/2014	178	178	369	83,860	15,596,000	0
	04/2014	178	178	369	96,871	18,018,000	0
	05/2014	179	178	369	106,305	19,879,000	0
	06/2014	181	179	370	121,953	23,171,000	0
	07/2014	179	179	370	127,410	23,953,000	0
	08/2014	178	177	368	144,941	27,249,000	0
	09/2014	177	177	368	149,595	27,675,000	0
	10/2014	179	179	370	125,937	23,882,000	0
	11/2014	181	180	371	82,831	15,758,000	0
	12/2014	180	180	371	76,553	14,545,000	0
Service WT Totals:		2,145	2,140	4,432	103,716	233,673,000	0
Grand Totals:		2,145	2,140	4,432	103,716	233,673,000	0

RP000017

EXHIBIT RP-3

Commercial water-no sewer 2014.txt Locked

ubchoa2s
02/11/15
ndandria
16:48

TROPHY CLUB M.U.D.

Consumption Avg/Tot Summary by Billing Period

Page: 1

Service Code	Billing Period	Resident Count	Address Count	Number Of Units	Average Consumption	Total Consumption	Total Demand Consumption
WT	01/2014	75	75	75	33,560	2,517,000	0
	02/2014	75	75	75	33,587	2,519,000	0
	03/2014	75	75	75	80,280	6,021,000	0
	04/2014	75	75	75	94,067	7,115,000	0
	05/2014	75	75	75	104,067	7,805,000	0
	06/2014	76	75	75	141,079	10,722,000	0
	07/2014	75	75	75	134,213	10,066,000	0
	08/2014	75	75	75	174,053	13,054,000	0
	09/2014	75	75	75	187,067	14,090,000	0
	10/2014	76	76	76	158,513	12,047,000	0
	11/2014	77	77	77	83,286	6,413,000	0
	12/2014	77	77	77	77,377	5,958,000	0
Service WT Totals:		906	905	905	100,529	98,327,000	0
Grand Totals:		906	905	905	100,529	98,327,000	0

*** End of Report ***

RP000018

**Transcript of Rate Appeal Budgeted Legal Costs August 19, 2015 Budget Workshop
Meeting.**

Transcript starting at 02:40:10.

Director Neil Twomey: "Before we do that. Before we do, that staying on page 6 for a second let's, just on legal. Ah, of the \$389,914.00 ; I mean if, if there wasn't a possibility of the that rate challenge, what would legal be? Or, would you kind of ballpark it at?"

General Manager Jennifer McKnight: "I would try to go back to where we were a couple of years ago, which was about 150. Just for normal every year. We, we budgeted more because of the developer issue last year. We've budgeted more this year because it continued in there. Um, and, but, really we could hopefully to go back to just routine legal, and a few other things.

Director Kevin Carr: "Well that legal last year, it was the developer and then it also included the town with the agreement didn't it?"

General Manager Jennifer McKnight: "Yes."

Director Neil Twomey: "So what ya, we are basically saying is about \$240,000 is just because of uh a possibility of this uh uh rate uh challenge. OK, I just wanted to get a break out number, get a ballpark number for that. OK, thank you."

Director Kevin Carr: "So the rate challenge is going to cost 240?"

Director Neil Twomey: "About that."

Director Kevin Carr: "Approximately."

Director Neil Twomey: "240,914. 239,914."

Director Kevin Carr: "Conservative is 240. 250, somewhere."

Director Neil Twomey: "Yah."

Director Kevin Carr: "OK."

Transcript ending at 02:41:40