



City of Houston

Combined Utility System Water and Wastewater Rate Study

Executive Summary Report

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Contents

1. Executive Summary	1
1.1. Introduction	1
1.2. Definitions	1
1.3. Study Assumptions	2
1.4. Capital Improvement Program Alternatives	2
1.5. Combined Water and Wastewater Utilities	3
1.5.1. Financial Plan	3
1.5.2. Financial Plan	4
1.5.3. Rate Design	4
1.6. Water Rates	5
1.6.1. Single Family Residential	5
1.6.2. Multifamily	7
1.6.3. Commercial	8
1.6.4. Transient Meter	9
1.6.5. Lawn Meters	10
1.6.6. Industrial and Remediation	11
1.6.7. Resale	12
1.6.8. Emergency Back-Up Service	13
1.6.9. Unmetered Fire Line Service Charge	14
1.6.10. Metered Fire Line Service	15
1.6.11. Contract Treated	16
1.6.11.1. Customers With Contributed Capital	16
1.6.11.2. Customers Without Contributed Capital	16
1.6.12. Groundwater Reduction Plan (GRP)	17
1.6.12.1. Groundwater Reduction Plans No. 1 and 2	17
1.6.12.2. Groundwater Reduction Plan No. 3	17
1.6.13. Raw Water	18
1.7. Wastewater Rates	18
1.7.1. Single Family Residential	18
1.7.2. Multifamily	20
1.7.3. Light Commercial	21
1.7.4. Commercial	22
1.7.5. Industrial and Remediation	23
1.7.6. Industrial Surcharge	24
1.7.7. Contract Treated	25
1.7.7.1. Contract Treated A	25
1.7.7.2. Contract Treated B	25

List of Tables

Table 1-1. Capital Improvement Program Alternatives Fiscal Years 2011 through 2015	3
Table 1-2. Projected Combined Utilities Revenue Increases	3
Table 1-3. Comparison of Combined Water and Wastewater Class Cost of Service with Revenue under Existing Rates	4
Table 1-4. Comparison of Existing and Proposed 2011 Single Family Residential Monthly Water Rates	6
Table 1-5. Low, Median, and High User Monthly Water Bills Single Family Residential	6

Table 1-6. Comparison of Existing and Proposed 2011 Multifamily Water Rates 7

Table 1-7. Comparison of Existing and Proposed 2011 Commercial Water Rates 8

Table 1-8. Comparison of Existing and Proposed 2011 Transient Water Rates 9

Table 1-9. Comparison of Existing and Proposed 2011 Lawn Meter Water Rates..... 10

Table 1-10. Comparison of Existing and Proposed 2011 Industrial Water Rates..... 11

Table 1-11. Comparison of Existing and Proposed 2011 Resale Water Rates 12

Table 1-12. Comparison of Existing and Proposed 2011 Emergency Back-Up Service
Water Rates 13

Table 1-13. Comparison of Existing and Proposed 2011 Unmetered Fire Line Service
Charges..... 14

Table 1-14. Comparison of Existing and Proposed 2011 Metered Fire Line Service Water
Rates..... 15

Table 1-15. Comparison of Existing and Proposed 2011 Contract Treated Water Rates 16

Table 1-16. Comparison of Existing and Proposed 2011 Groundwater Reduction Plan
Water Rates 17

Table 1-17. Comparison of Existing and Proposed 2011 Raw Water Rates 18

Table 1-18. Comparison of Existing and Proposed 2011 Single Family Residential
Monthly Wastewater Rates 19

Table 1-19. Low, Median, and High User Monthly Wastewater Bills Single Family
Residential 19

Table 1-20. Comparison of Existing and Proposed 2011 Multifamily Wastewater Rates 20

Table 1-21. Comparison of Existing and Proposed 2011 Light Commercial Wastewater
Rates..... 21

Table 1-22. Comparison of Existing and Proposed 2011 Commercial Wastewater Rates..... 22

Table 1-23. Comparison of Existing and Proposed 2011 Industrial and Remediation
Wastewater Rates..... 23

Table 1-24. Comparison of Existing and Proposed 2011 Industrial Surcharges 24

Table 1-25. Comparison of Existing and Proposed 2011 Contract Treated Wastewater
Rates..... 25

1. Executive Summary

1.1. Introduction

The City of Houston, Texas (City) provides water and wastewater service to an average of 430,000 customer accounts. The City's water and wastewater utilities are funded primarily from water and wastewater rates.

The Combined Utility System (CUS) has a three-fold mission of protecting public health, protecting the environment and providing superior customer service. The CUS must continue to be financially sustainable in order to meet this mission. Financial sustainability requires having adequate revenues to fund revenue requirements, maintain appropriate cash reserves and meet bond covenants including having adequate debt service coverage.

The City authorized Red Oak Consulting to review the utilities' financial status and to recommend rate adjustments, as necessary, to ensure their continuing financial sustainability. This study includes:

- Development of water and wastewater financial plans for the five-year study period, fiscal years (FY) 2011 through 2015;
- Analysis of water and wastewater customer class cost of service for FY 2011 through FY 2015; and
- Design of water and wastewater rates for FY 2011 through FY 2015.

1.2. Definitions

The following words are used throughout the report and are defined as follows:

- *Fiscal Year (FY)* is the year July 1 through June 30.
- *Existing Rates* are water and wastewater rates in effect beginning April 1, 2010.
- *Cost of Service* is the amount of annual operating expense and capital cost to provide water and wastewater service to each customer class.

1.3. Study Assumptions

This rate study is based on numerous assumptions. Changes in these assumptions could have a material effect on study findings. Red Oak incorporated the following key assumptions into the study:

- Based on recent historical trends, the number of accounts will increase 0.0% during FY 2011 and 0.6% annually during FY 2012 through FY 2015.
- Annual water usage per account will decrease 0.50% for residential and 0.25% for nonresidential customers due to conservation and price elasticity.
- Costs will increase at the following annual inflation rates:
 - ◆ General inflation at 3.2% in FY 2010, 3.0% in FY 2011, 2.8% in FY 2012, and 3.0% in FY 2013 and subsequent years.
 - ◆ Labor Costs at 5.2%.
 - ◆ Health Benefits at 7.0%.
 - ◆ Power at 2.0% in FY 2010 and 5.4% in FY 2011 and subsequent years.
 - ◆ Chemical costs at 2.0% in 2010 and 5.0% in FY 2011 and subsequent years.
- The combined utility system must maintain minimum operating reserves of at least 60 days of operation and maintenance expenses (O&M) as working capital in the operating funds and will strive to maintain target reserves of at least 75 days of O&M.
- The combined utility system will strive to maintain minimum capital reserves of at least 2.5% of par (total outstanding principal on debt).

1.4. Capital Improvement Program Alternatives

Utility staff developed three capital improvement program (CIP) alternatives:

- Minimum Health, Safety and Regulatory (HSR) – Capital projects satisfy minimum standards.
- Minimum HSR Plus Selective Investments – Capital projects from Health, Safety and Regulatory minimum standards plus selective investments.
- Best Practices – Capital projects that include all health, safety and regulatory requirements. Also includes best practices for System’s proactive rehabilitation and replacement of treatment plants, conveyance and storage as recommended by operational staff.

Table 1-1 compares the projected 5-year CIP costs of each alternative. The City selected the Best Practices CIP alternative. The remainder of this report focuses on this alternative.

**Table 1-1.
Capital Improvement Program Alternatives
Fiscal Years 2011 through 2015
(\$1,000)**

CIP Alternative Description	Water	Wastewater	Total
Minimum HSR	\$432,846	\$552,154	\$985,000
Minimum HSR Plus Selective Investments	480,823	635,177	1,116,000
Best Practices	803,327	1,046,673	1,850,000

1.5. Combined Water and Wastewater Utilities

1.5.1. Financial Plan

Red Oak developed combined water and wastewater five-year financial plans for each capital improvement program alternative. For each alternative, revenue from existing rates is inadequate to meet projected revenue requirements, provide adequate reserves and produce required debt service coverage of 1.20 during the study period. Table 1- 2 shows the revenue adjustments projected during the study period to meet these criteria.

**Table 1-2.
Projected Combined Utilities Revenue Increases**

Fiscal Year	Best Practices Alternative
2011	25.3%
2012	3.8%
2013	6.8%
2014	3.9%
2015	3.1%

Red Oak recommends the financial plan be updated annually to reflect current estimates of revenue, operating expenses, capital improvement needs, and capital financing requirements.

1.5.2. Financial Plan

Red Oak conducted comprehensive cost of service analyses for the water and wastewater utilities in accordance with standard methods supported by the American Water Works Association and the Water Environment Federation, respectively. These determined the cost of providing water and wastewater service to each customer class. The findings of the cost of service analysis serve as a target for customer class rate design.

Table 1-3 compares the combined water and wastewater customer class cost of service with revenue under existing rates for FY 2011. An overall revenue increase of 25.3% is indicated to meet total cost of service.

Table 1-3.
Comparison of Combined Water and Wastewater
Class Cost of Service with Revenue under Existing Rates
Fiscal Year 2011
(\$1,000)

Line No.	Customer Class	Revenue under Existing Rates	Best Practices Alternative	
			Cost of Service	Indicated Revenue Adjustment
1	Single Family	\$204,535	\$291,893	42.7%
2	Multifamily	166,877	217,205	30.2%
3	Commercial	194,707	210,510	8.1%
4	Transient	641	836	30.3%
5	Lawn Meters	33,229	25,523	(23.2%)
6	Industrial	20,892	30,465	45.8%
7	Resale	29	22	(24.1%)
8	Emergency	205	293	43.1%
9	Un-metered Fire	1	2	87.9%
10	City-General Fund	3,359	3,687	9.8%
11	Contract Treated	63,215	81,509	28.9%
12	Contract Raw	<u>34,117</u>	<u>42,377</u>	24.2%
13	Total System	\$721,807	\$904,322	25.3%

1.5.3. Rate Design

Red Oak designed proposed water and wastewater rates for FY 2011 to increase combined annual water sales and wastewater service revenue by 25.3%. The proposed FY 2011 rates also begin a multi-year transition to customer class cost of service rates. The proposed FY 2011 rates are shown in subsequent sections of this report.

1.6. Water Rates

Proposed rates are comprised of base charges and volume charges. Base charges are monthly fixed charges that vary by meter size and recover customer-related costs such as meter reading, billing, meter repair and replacement, and fire protection. Volume charges are assessed to monthly usage and recover volume-related costs such as raw water supply and treated water average and peak demands.

1.6.1. Single Family Residential

Existing single family residential water rates have been in effect since April 2010 and include monthly base and volume charges.

- Existing base charges are assessed for usage in monthly increments of one thousand gallons through 6,000 gallons. These charges are the same for all meter sizes.
- Usage in excess of 6,000 gallons is assessed the base charge for 6,000 gallons plus a two-block increasing volume charge. The first block includes monthly usage between 6,000 and 12,000 gallons per month, and the second block includes usage greater than 12,000 gallons.

Proposed single family residential rates include monthly base and volume charges.

- Proposed base charges vary by meter size and are assessed for usage in monthly increments of 1,000 gallons through 6,000 gallons. Table 1-4 compares existing and proposed base charges for single family residential customers with a 5/8-inch meter.
- Existing and proposed volume charge structures are the same. Usage in excess of 6,000 gallons is assessed the base charge for 6,000 gallons plus a two-block increasing volume charge. The first block includes monthly usage between 6,000 and 12,000 gallons per month, and the second block includes usage greater than 12,000 gallons. Table 1-4 compares existing and proposed single family residential volume charges.

**Table 1-4.
Comparison of Existing and Proposed 2011
Single Family Residential Monthly Water Rates
5/8-inch Meter**

Monthly Usage (gallons)	Existing	Proposed (Best Practices)
0	\$ 3.45	\$ 3.70
1,000	3.45	3.80
2,000	8.18	8.86
3,000	8.18	8.95
4,000	16.04	16.93
5,000	19.00	20.29
6,000	21.97	23.65
7,000 - 12,000	\$21.97 + \$2.92 per 1,000 gallons for usage over 6,000 gallons	\$23.65 + \$3.65 per 1,000 gallons for usage over 6,000 gallons
Over 12,000	\$39.49 + \$5.28 per 1,000 gallons for usage over 12,000 gallons	\$45.55 + \$6.01 per 1,000 gallons for usage over 12,000 gallons

Table 1-5 compares the monthly single family residential water bills for low, median, and high usage under existing and proposed FY 2011 rates.

**Table 1-5.
Low, Median, and High User Monthly Water Bills
Single Family Residential
5/8-inch Meter**

Monthly Usage (gallons)	Range of Usage	Existing	Proposed (Best Practices)
3,000	Low	\$ 8.18	\$ 8.95
6,000	Median	21.97	23.65
10,000	High	33.65	38.25

1.6.2. Multifamily

Existing multifamily water rates have been in effect since April 2010 and include monthly base and volume charges. Base charges vary by meter size and include a minimum monthly volume allowance of 2,000 gallons. A volume charge is applied to usage in excess of 2,000 gallons.

Proposed multifamily water rates include monthly base and volume charges. Proposed base charges vary by meter size and do not include a minimum volume allowance. Proposed volume charges use a 2-block increasing rate structure in 2011. Future volume charges beyond 2011 will gradually transition to a uniform rate structure. Table 1-6 compares existing and proposed 2011 multifamily water rates.

**Table 1-6.
Comparison of Existing and Proposed 2011
Multifamily Water Rates**

Meter Size (inches)	Existing	Proposed (Best Practices)
Monthly Base Charge, per bill		
5/8	\$11.67	\$4.51
3/4	11.67	4.65
1	14.40	5.59
1 ½	18.77	8.46
2	23.27	9.96
3	43.02	26.36
4	65.26	35.93
6	121.20	61.58
8	177.01	160.79
Volume Charge, per 1,000 gallons		
Monthly Usage (gallons)	Existing	Proposed (Best Practices)
First 2,000	\$0.00	\$3.47
Over 2,000	2.57	3.47

1.6.3. Commercial

Existing commercial water rates have been in effect since April 2010 and include monthly base and a uniform volume charges. Base charges vary by meter size and include minimum monthly volume allowances that also vary by meter size. A volume charge is applied to usage in excess of the minimum volume allowance.

Proposed commercial rates include monthly base and volume charges. Proposed base charges vary by meter size and do not include a minimum volume allowance. Proposed volume charges use a 2-block increasing rate structure in FY 2011. Future volume charges will gradually transition to a uniform rate structure. Table 1-7 compares existing and proposed 2011 commercial rates.

**Table 1-7.
Comparison of Existing and Proposed 2011
Commercial Water Rates**

Meter Size (inches)	Monthly Volume Allowance (gallons)	Existing	Proposed (Best Practices)
Monthly Base Charge, per bill			
5/8	3,000	\$15.35	\$4.51
3/4	3,000	15.35	4.65
1	3,000	18.06	5.59
1 ½	10,000	43.13	8.46
2	16,000	65.38	9.96
3	35,000	141.32	26.36
4	60,000	237.47	35.93
6	125,000	485.62	61.58
8	180,000	704.09	160.79
Volume Charge, per 1,000 gallons			
Monthly Usage (gallons)		Existing	Proposed (Best Practices)
Minimum Allowance		\$0.00	\$3.56
All Usage over Minimum Allowance		2.92	3.56

1.6.4. Transient Meter

Existing transient meter water rates have been in effect since April 2010 and include a monthly rental fee and a volume charge. The monthly rental fee varies by meter size. A uniform volume charge is applied to all usage.

Proposed transient rates include monthly rental fees and a volume charge. Proposed monthly rental fees vary by meter size. The proposed volume charge is applied to all usage. Table 1-8 compares existing and proposed 2011 transient rates.

**Table 1-8.
Comparison of Existing and Proposed 2011
Transient Water Rates**

Meter Size (inches)	Existing	Proposed (Best Practices)
<i>Rental Fee, per month</i>		
1	\$15.00	\$15.00
2	20.00	20.00
3	25.00	25.00
<i>Volume Charge, per 1,000 gallons</i>		
Monthly Usage (gallons)	Existing	Proposed (Best Practices)
All Usage	\$2.92	\$3.99

1.6.5. Lawn Meters

Existing lawn meter water rates have been in effect since April 2010 and include monthly base charges and a uniform volume charge. Base charges vary by meter size and include minimum monthly volume allowances that also vary by meter size. The volume charge is applied to usage in excess of the minimum volume allowance.

Proposed lawn meter rates include monthly base and volume charges. Proposed base charges vary by meter size and do not include a minimum volume allowance. Proposed volume charges use a 2-block increasing rate structure in 2011. Future volume charges will gradually transition to a uniform rate structure. Table 1-9 compares existing and proposed 2011 lawn meter rates.

**Table 1-9.
Comparison of Existing and Proposed 2011
Lawn Meter Water Rates**

Meter Size (inches)	Monthly Volume Allowance (gallons)	Existing	Proposed (Best Practices)
Monthly Base Charge, per bill			
5/8, 3/4	3,000	\$22.44	\$22.44
1	3,000	25.16	25.16
1 ½	10,000	66.79	66.79
2	16,000	103.23	103.23
3	35,000	224.11	224.11
4	60,000	379.41	379.41
6	125,000	781.32	781.32
8	180,000	1,129.88	1,129.88
Volume Charge, per 1,000 gallons			
Monthly Usage (gallons)		Existing	Proposed (Best Practices)
Minimum Allowance		\$0.00	\$2.61
All Usage over Minimum Allowance		5.28	6.01

1.6.6. Industrial and Remediation

Existing industrial water rates have been in effect since April 2010 and include monthly base charges and a uniform volume charge. Base charges vary by meter size and include minimum monthly volume allowances that also vary by meter size. The volume charge is applied to usage in excess of the minimum volume allowance.

Proposed industrial rates include monthly base and volume charges. Proposed base charges vary by meter size and do not include a minimum volume allowance. Proposed volume charges use a 2-block increasing rate structure in 2011. Future volume charges will gradually transition to a uniform rate structure. Table 1-10 compares existing and proposed 2011 industrial rates.

**Table 1-10.
Comparison of Existing and Proposed 2011
Industrial Water Rates**

Meter Size (inches)	Monthly Volume Allowance (gallons)	Existing	Proposed (Best Practices)
Monthly Base Charge, per bill			
5/8	3,000	\$15.35	\$4.51
3/4	3,000	15.35	4.65
1	3,000	18.06	5.59
1 ½	10,000	43.13	8.46
2	16,000	65.38	9.96
3	35,000	141.32	26.36
4	60,000	237.47	35.93
6	125,000	485.62	61.58
8	180,000	704.09	160.79
Volume Charge, per 1,000 gallons			
Monthly Usage (gallons)		Existing	Proposed (Best Practices)
Minimum Allowance		\$0.00	\$3.56
All Usage over Minimum Allowance		2.92	3.56

1.6.7. Resale

Existing resale water rates have been in effect since April 2010 and include monthly base charges and a uniform volume charge. Base charges vary by meter size and include minimum monthly volume allowances that also vary by meter size. The volume charge is applied to usage in excess of the minimum volume allowance.

Proposed resale rates include monthly base and volume charges. Proposed base charges vary by meter size and do not include a minimum volume allowance. Proposed volume charges use a 2-block increasing rate structure in 2011. Future volume charges will gradually transition to a uniform rate structure. Table 1-11 compares existing and proposed 2011 resale rates.

**Table 1-11.
Comparison of Existing and Proposed 2011
Resale Water Rates**

Meter Size (inches)	Monthly Volume Allowance (gallons)	Existing	Proposed (Best Practices)
Monthly Base Charge, per bill			
5/8, 3/4	3,000	\$17.02	\$17.02
1	3,000	19.74	19.74
1 ½	10,000	48.70	48.70
2	16,000	74.27	74.27
3	35,000	160.77	160.77
4	60,000	270.83	270.83
6	125,000	555.11	555.11
8	180,000	804.14	804.14
Volume Charge, per 1,000 gallons			
Monthly Usage (gallons)		Existing	Proposed (Best Practices)
Minimum Allowance		\$0.00	\$4.27
All Usage over Minimum Allowance		3.48	4.27

1.6.8. Emergency Back-Up Service

Existing emergency back-up service water rates have been in effect since April 2010 and include monthly base charges and a uniform volume charge. Base charges vary by meter size. The volume charge is applied to all usage.

Proposed emergency back-up service rates include monthly base and volume charges. Proposed base charges vary by meter size. The proposed volume charge is applied to all usage. Table 1-12 compares existing and proposed 2011 emergency back-up service rates.

**Table 1-12.
Comparison of Existing and Proposed 2011
Emergency Back-Up Service Water Rates**

Meter Size (inches)	Existing	Proposed (Best Practices)
Rental Fee, per month		
5/8, 3/4	\$6.47	\$6.47
1	9.20	9.20
1 ½	13.57	13.57
2	18.06	18.06
3	37.83	37.83
4	60.05	60.05
6	116.00	116.00
8	171.83	171.83
10	171.83	171.83
Volume Charge, per 1,000 gallons		
Monthly Usage (gallons)	Existing	Proposed (Best Practices)
All Usage	\$4.78	\$6.60

1.6.9. Unmetered Fire Line Service Charge

Existing unmetered fire line service charges have been in effect since April 2010. The service charges vary by water tap size.

Proposed unmetered fire line service charges vary by water tap size. Table 1-13 compares existing and proposed 2011 unmetered fire line service charges.

**Table 1-13.
Comparison of Existing and Proposed 2011
Unmetered Fire Line Service Charges**

Tap Size <i>(inches)</i>	Existing	Proposed (Best Practices)
<i>Rental Fee, per month</i>		
5/8, 3/4	\$11.81	\$11.81
1	11.81	11.81
1 ½	47.02	47.02
2	69.35	69.35
3	69.35	69.35
4	69.35	69.35
6	77.25	77.25
8	85.14	131.85
10	85.14	177.87

1.6.10. Metered Fire Line Service

Existing metered fire line service water rates have been in effect since April 2010 and include monthly base charges and a uniform volume charge. Base charges vary by meter size and include minimum monthly volume allowances that also vary by meter size. The volume charge is applied to usage in excess of the minimum volume allowance.

Proposed metered fire line service rates include monthly base and volume charges. Proposed base charges vary by meter size and do not include a minimum volume allowance. The proposed volume charge is applied to all usage. Table 1-14 compares existing and proposed 2011 metered fire line service rates.

**Table 1-14.
Comparison of Existing and Proposed 2011
Metered Fire Line Service Water Rates**

Meter Size (inches)	Monthly Volume Allowance (gallons)	Existing	Proposed (Best Practices)
Monthly Base Charge, per bill			
5/8	3,000	\$15.35	\$4.51
3/4	3,000	15.35	4.65
1	3,000	18.06	5.59
1 ½	10,000	43.13	8.46
2	16,000	65.38	9.96
Volume Charge, per 1,000 gallons			
Monthly Usage (gallons)		Existing	Proposed (Best Practices)
Minimum Allowance		\$0.00	\$3.56
All Usage over Minimum Allowance		2.92	3.56

1.6.11. Contract Treated

1.6.11.1. Customers With Contributed Capital

Existing water rates for contract treated customers *with* contributed capital have been in effect since April 2010 and consist of a uniform volume charge. The rates vary by the water purification plant. Proposed water rates use the existing rate structure. Table 1-15 compares existing and proposed 2011 contract treated with contributed capital rates.

1.6.11.2. Customers Without Contributed Capital

Existing water rates for contract treated customers *without* contributed capital have been in effect since April 2010 and consists of a two-block take-or-pay volume charge structure. Each customer annually determines the monthly usage to be included in the first block and pays for all the usage included in this block regardless of actual usage. The second volume block includes all monthly usage in excess of the first block usage. The volume in this block is assessed the first block volume charge plus a surcharge of \$0.612 per thousand gallons.

Proposed rates use the existing rate structure. Additionally these customers are subdivided into two groups according to their service requirements. The Air Gap customers provide their own facilities to meet their customer peak demands. The RPZ customers rely on City facilities to meet their customer demands. Table 1-15 compares existing and proposed 2011 water rates for all contract treated water customers.

**Table 1-15.
Comparison of Existing and Proposed 2011
Contract Treated Water Rates**

Monthly Usage (gallons)	Existing	Proposed (Best Practices)
<i>Contract Treated With Contributed Capital, per 1,000 gallons</i>		
Northeast	\$1.0148	\$1.4254
East	0.6120	0.6578
Southeast	0.4884	0.6865
<i>Contract Treated Without Contributed Capital (Air Gap), per 1,000 gallons</i>		
Minimum Volume	\$2.190	\$2.467
All Usage over Minimum Volume	2.802	3.563
<i>Contract Treated Without Contributed Capital (RPZ), per 1,000 gallons</i>		
Minimum Volume	\$2.190	\$3.011
All Usage over Minimum Volume	2.802	3.625

1.6.12. Groundwater Reduction Plan (GRP)

1.6.12.1. Groundwater Reduction Plans No. 1 and 2

Existing groundwater reduction plans (GRP) Nos. 1 and 2 water rates have been in effect since April 2010 and include an increasing volume charge structure. A rate is applied for volume up to the contracted minimum allowance and a rate for usage in excess of the minimum volume allowance.

Proposed GRP Nos. 1 and 2 rates include a 2-block increasing volume structure. Proposed is a rate applied for volume up to the contracted minimum allowance and a rate for usage in excess of the minimum volume allowance. Table 1-16 compares existing and proposed 2011 GRP Nos. 1 and 2 rates.

1.6.12.2. Groundwater Reduction Plan No. 3

Existing GRP No. 3 water rates have been in effect since April 2010 and include an increasing volume charge structure. A rate is applied for volume up to the contracted minimum allowance and a rate for usage in excess of the minimum volume allowance.

Proposed GRP No. 3 rates include a 2-block increasing volume structure. Proposed is a rate applied for volume up to the contracted minimum allowance and a rate for usage in excess of the minimum volume allowance. Table 1-16 compares existing and proposed 2011 GRP No. 3 rates.

**Table 1-16.
Comparison of Existing and Proposed 2011
Groundwater Reduction Plan Water Rates**

Monthly Usage (gallons)	Existing	Proposed (Best Practices)
<i>Groundwater Reduction Plans Nos. 1 & 2, per 1,000 gallons</i>		
Minimum Volume	\$1.752	\$1.974
All Usage over Minimum Volume	2.241	2.850
<i>Groundwater Reduction Plan No. 3, per 1,000 gallons</i>		
Minimum Volume	\$0.657	\$0.740
All Usage over Minimum Volume	0.840	1.069

1.6.13. Raw Water

Existing raw water rates have been in effect since April 2010 and include a uniform volume charge structure. Proposed raw water rates retain the existing volume charge structure.

**Table 1-17.
Comparison of Existing and Proposed 2011
Raw Water Rates**

Monthly Usage (gallons)	Existing	Proposed (Best Practices)
<i>per 1,000 gallons</i>		
All Usage	\$0.4546	\$0.5647

1.7. Wastewater Rates

Proposed rates are comprised of base charges and volume charges. Base charges are monthly fixed charges that vary by meter size and recover customer-related costs such as billing and small collection mains. Volume charges are assessed to monthly usage and recover volume-related costs such as flow and strength related costs.

1.7.1. Single Family Residential

Existing single family residential wastewater rates have been in effect since April 2010 and include monthly base and volume charges and a monthly service fee. Existing base charges are assessed for usage in monthly increments of one thousand gallons through 5,000 gallons. These charges are the same for all meter sizes. Usage in excess of 5,000 gallons is assessed a service fee plus a volume charge. The volume charge is applied to all usage.

Proposed single family residential rates include monthly base and volume charges. Proposed base charges vary by meter size and are assessed for usage in monthly increments of 1,000 gallons through 5,000 gallons. Usage in excess of 5,000 gallons is assessed a volume charge. The volume charge is applied to all usage. Table 1-18 compares existing and proposed single family residential base and volume charges.

Table 1-18.
Comparison of Existing and Proposed 2011
Single Family Residential Monthly Wastewater Rates
5/8-inch Meter

Monthly Usage	Existing	Proposed (Best Practices)
<i>(gallons)</i>	<i>(\$/bill)</i>	<i>(\$/bill)</i>
0	6.52	7.86
1,000	6.52	7.99
2,000	6.52	8.25
3,000	6.52	8.46
4,000	15.81	19.39
5,000	18.77	23.34
Over 5,000	\$1.14 service fee plus \$3.96 per 1,000 gallons	\$23.34 + \$5.75 per 1,000 gallons for usage over 5,000 gallons

Table 1-19 compares monthly single family residential wastewater bills for low, median, and high usage under existing and proposed FY 2011 rates.

Table 1-19.
Low, Median, and High User Monthly Wastewater Bills
Single Family Residential
5/8-inch Meter

Monthly Usage (gallons)	Range of Usage	Existing	Proposed (Best Practices)
3,000	Low	\$6.52	\$8.46
6,000	Median	24.90	29.09
10,000	High	40.74	52.09

1.7.2. Multifamily

Existing multifamily wastewater rates have been in effect since April 2010 and include monthly service fee and a volume charge.

Proposed multifamily wastewater rates include monthly base and volume charges. Proposed base charges vary by meter size and do not include a minimum volume allowance. Proposed volume charges are applicable to all usage. Table 1-20 compares existing and proposed 2011 multifamily wastewater rates.

**Table 1-20.
Comparison of Existing and Proposed 2011
Multifamily Wastewater Rates**

Meter Size (inches)	Existing	Proposed (Best Practices)
Monthly Base Charge, per bill		
5/8, 3/4	\$1.14	\$7.93
1	1.14	8.33
1 ½	1.14	9.66
2	1.14	10.06
3	1.14	18.02
4	1.14	20.41
6	1.14	29.17
8	1.14	70.84
10	1.14	86.10
Volume Charge, per 1,000 gallons		
Monthly Usage (gallons)	Existing	Proposed (Best Practices)
All Usage	\$3.96	\$5.04

1.7.3. Light Commercial

Existing light commercial wastewater rates have been in effect since April 2010, apply to commercial accounts with 5/8-inch meters and include a monthly base charge and volume charge. The base charge includes a minimum monthly volume allowance of 2,000 gallons. A volume charge is applied to usage in excess of 2,000 gallons.

Proposed light commercial rates apply to commercial accounts with 5/8-inch meters and include monthly base and volume charges. Proposed base charges vary by meter size and do not include a minimum volume allowance. Proposed volume charges use a 2-block increasing rate structure in 2011. Future volume charges beyond 2011 will gradually transition to a uniform rate structure. Table 1-21 compares existing and proposed 2011 light commercial rates. The proposed rates are identical to the proposed commercial rates.

**Table 1-21.
Comparison of Existing and Proposed 2011
Light Commercial Wastewater Rates**

Meter Size (inches)	Existing	Proposed (Best Practices)
Monthly Base Charge, per bill		
5/8	\$11.16	\$7.93
Volume Charge, per 1,000 gallons		
Monthly Usage (gallons)	Existing	Proposed (Best Practices)
First 2,000	\$0.00	\$5.04
Over 2,000	3.97	5.04

1.7.4. Commercial

Existing commercial wastewater rates have been in effect since April 2010, apply to commercial accounts with 1-inch and larger meters and include a monthly base charge and volume charge. The base charge includes a minimum monthly volume allowance of 2,000 gallons. A volume charge is applied to usage in excess of 2,000 gallons.

Proposed commercial rates include monthly base and volume charges. Proposed base charges vary by meter size and do not include a minimum volume allowance. Proposed volume charges use a 2-block increasing rate structure in 2011. Future volume charges beyond 2011 will gradually transition to a uniform rate structure. Table 1-22 compares existing and proposed 2011 commercial rates.

**Table 1-22.
Comparison of Existing and Proposed 2011
Commercial Wastewater Rates**

Meter Size (inches)	Existing	Proposed (Best Practices)
Monthly Base Charge, per bill		
1	\$13.35	\$8.33
1 ½	13.35	9.66
2	13.35	10.06
3	13.35	18.02
4	13.35	20.41
6	13.35	29.17
8	13.35	70.84
10	13.35	86.10
Volume Charge, per 1,000 gallons		
Monthly Usage (gallons)	Existing	Proposed (Best Practices)
First 2,000	\$0.00	\$5.04
Over 2,000	5.07	5.04

1.7.5. Industrial and Remediation

Existing industrial and remediation wastewater rates have been in effect since April 2010 and include a monthly base charge and volume charge. The base charge includes a minimum monthly volume allowance of 2,000 gallons. A volume charge is applied to usage in excess of 2,000 gallons.

Proposed industrial and remediation rates include monthly base and volume charges. Proposed base charges vary by meter size and do not include a minimum volume allowance. Proposed volume charges use a 2-block increasing rate structure in 2011. Future volume charges beyond 2011 will gradually transition to a uniform rate structure. Table 1-23 compares existing and proposed 2011 industrial and remediation rates.

**Table 1-23.
Comparison of Existing and Proposed 2011
Industrial and Remediation Wastewater Rates**

Meter Size (inches)	Existing	Proposed (Best Practices)
Monthly Base Charge, per bill		
5/8, 3/4	\$13.41	\$13.41
1	13.41	13.41
1 ½	13.41	13.41
2	13.41	13.41
3	13.41	17.86
4	13.41	20.23
6	13.41	28.91
8	13.41	70.22
10	13.41	85.34
Volume Charge, per 1,000 gallons		
Monthly Usage (gallons)	Existing	Proposed (Best Practices)
First 2,000	\$0.00	\$3.10
Over 2,000	5.09	5.52

1.7.6. Industrial Surcharge

Existing industrial surcharge rates have been in effect since April 2010 and include a monthly base charge, volume charge, and surcharges for biochemical oxygen demand (BOD) and total suspended solids (TSS). The base charge is the same as industrial. The surcharges are applicable to BOD and TSS strengths whose concentrations are greater than 350 milligrams per liter (mg/l) and 375 mg/l, respectively.

Proposed industrial surcharge rates include a volume charge and surcharges for biochemical oxygen demand (BOD) and total suspended solids (TSS). The surcharges are applicable to all BOD and TSS strength quantities and do not have a minimum concentration threshold. Table 1-24 compares existing and proposed 2011 industrial surcharges.

**Table 1-24.
Comparison of Existing and Proposed 2011
Industrial Surcharges**

Description	Existing	Proposed (Best Practices)
Volume Charge, per 1,000 gallons	\$5.09	\$3.71
BOD ^(a) , per lb.	0.2290	0.6388
TSS ^(a) , per lb.	0.4893	0.2522
(a) Existing BOD and TSS strength concentration thresholds are 350 milligrams per liter (mg/l) and 375 mg/l, respectively. Proposed BOD and TSS strength concentration thresholds are 0 mg/l.		

1.7.7. Contract Treated

1.7.7.1. Contract Treated A

Existing contract treated A wastewater rates have been in effect since April 2010 and include a uniform volume charge. The volume charge is applied to all usage.

Proposed contract treated A wastewater rates include a uniform volume charge. The proposed volume charge is applied to all usage. Table 1-24 compares existing and proposed 2011 contract treated A wastewater rates.

1.7.7.2. Contract Treated B

Existing contract treated B wastewater rates have been in effect since April 2010 and include a uniform volume charge. The volume charge is applied to all usage.

Proposed contract treated B wastewater rates include a uniform volume charge. The proposed volume charge is applied to all usage. Table 1-25 compares existing and proposed 2011 contract treated B wastewater rates.

**Table 1-25.
Comparison of Existing and Proposed 2011
Contract Treated Wastewater Rates**

Monthly Usage (gallons)	Existing	Proposed (Best Practices)
<i>Contract Treated A, per 1,000 gallons</i>		
All Usage	\$1.417	\$1.240
<i>Contract Treated B, per 1,000 gallons</i>		
All Usage	\$3.357	\$4.734