

Memorandum

City of Tempe



Date: May 19, 2009

To: Mayor and City Council

From: Don Hawkes, Water Utilities Manager (ext. 2660)
Jerry L. Hart, Financial Services Manager (ext. 8505)

Through: Charles W. Meyer, City Manager (ext. 8884)
Jeff Kulaga, Assistant City Manager (ext. 8844)

Subject: Water and Wastewater Rate Study Review

The Water Utilities Department (WUD), with assistance from the Financial Services Department, has completed the water and wastewater rate study led by Red Oak Consulting. Last year the City Council was presented with a three-year phased approach to the cost of service rate structure, and this rate adjustment would be the second of the three year program. This approach smoothes the impact of significant rate fluctuations across the different customer classifications (residential customers, commercial customers, industrial customers, etc).

Consistent with the prior year's rate analysis, the attached Executive Summary indicates both water and wastewater rate adjustments are necessary to ensure full recovery of operating costs, financing of capital projects and maintenance of the unreserved fund balance. The analysis indicates that over the next six years the fund balance will be reduced to approximately 37% of revenue, well below the policy level of 100% of total annual fund revenue.

Highlights of the rate analysis are as follows:

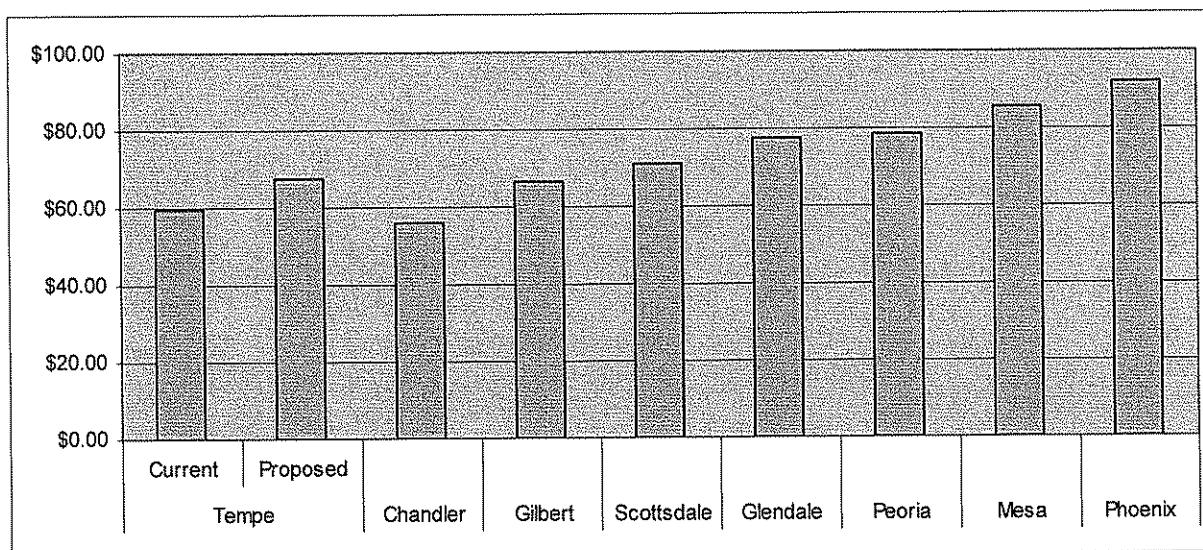
- Each class of customer would pay its fair share of costs by the end of the 3-year period.
- Tempe's combined water and wastewater rates would remain among the lowest within the comparison cities.
- Due to adequate fund balances that have accumulated in the fund, the fund balance can be utilized to mitigate significant rate increases.
- The cost of funding Other Post Employment Benefits (OPEB) is estimated at \$1.1 million per year beginning in FY 2009-10.
- Expenses associated with certain non-utility services and irrigation services are estimated at \$1.33 million and \$352,000, respectively.
- The City is currently seeking a portion of its capital financing through the Water Infrastructure Finance Authority (WIFA) by utilizing funds available from the American Reinvestment and Recovery Act (ARRA) of 2009. This financing offsets borrowing costs in the utility.
- The study anticipates similar rate adjustments would be required for FY 2010-11 with smaller rate increases in subsequent fiscal years.

City staff and Red Oak Consulting will be available at the May 28, 2009 Issue Review Session for questions.

The total recommended rate adjustments, including solid waste will increase a median single family residential utility bill by \$7.68 a month, or 12.9%. The following table and graph illustrate the rate increases and compare them to other valley cities.

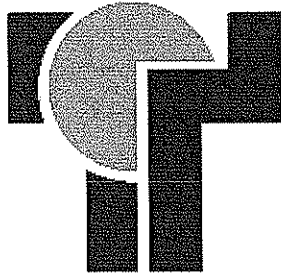
Monthly Water / Wastewater / Solid Waste Cost Comparison

	Tempe			Chandler	Gilbert	Scottsdale	Glendale	Peoria	Mesa	Phoenix
	Current	Proposed	Difference							
Water	\$21.45	\$24.23	\$2.78	\$23.22	\$26.16	\$35.64	\$28.23	\$36.81	\$37.25	\$40.59
Wastewater	\$19.10	\$23.05	\$3.95	\$17.67	\$23.12	\$19.44	\$32.84	\$26.61	\$24.90	\$24.41
Sanitation	\$19.02	\$19.97	\$0.95	\$15.07	\$17.30	\$15.69	\$16.30	\$15.06	\$23.34	\$26.80
Total	\$59.57	\$67.25	\$7.68	\$55.96	\$66.58	\$70.77	\$77.37	\$78.48	\$85.49	\$91.79



Tentative Schedule for Water/Wastewater Rate Adjustments

- | | |
|--------------------|---|
| May 28, 2009 | Council Issue Review Session -- Review of proposed water/wastewater rates with City Council. |
| July 2, 2009 | Supply written report of data supporting rate increase to the City Clerk (at least 30 days prior to the July 22, 2008 Public Hearing). |
| July 2, 2009 | Adopt Notice of Intention to set time and date of the Public Hearing (at least 30 days prior to the July 22, 2008 Public Hearing). |
| August 17, 2009 | Publish Notice of Intention in newspaper (not less than 20 days prior to the Public Hearing). |
| September 10, 2009 | Hold Public Hearing and Adopt Rate Adjustments. |
| November 1, 2009 | Effective date of rate adjustments (at least 30 days after the rate resolution is adopted). |



City of Tempe

Water and Wastewater Rates

Executive Summary

May 2009

Report Prepared By:



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1. Executive Summary

1.1. Introduction

The City of Tempe, Arizona (City) provides water and wastewater service to approximately 43,400 customer accounts. The City's water and wastewater utilities are funded primarily from water and wastewater rate revenue.

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

- Development of water and wastewater financial plans for the 10-year study period, 2008-09 through 2017-18;
- Analysis of customer class cost of service for 2009-10; and
- Design of water and wastewater rates for 2009-10.

1.2. Definitions

References made to a year or fiscal year mean the year ending June 30. Water and wastewater rates in effect November 2008 are designated as existing rates.

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:

- The number of accounts will increase 0.25% in both 2009-10 and 2010-11 and 0.50% per year thereafter.
- Costs will increase at the following annual inflation rates:
 - ◆ Capital improvements at 3% and
 - ◆ Operation and maintenance expense (O&M) at rates used in the long range forecast, except for salaries and wages which are at 0% through 2011-12 and 3.3% thereafter.
- Utilities will maintain minimum reserve levels equal to:
 - ◆ 90 days O&M plus
 - ◆ 2% of fixed asset value.

- Utilities will strive to achieve target levels equal to twelve months of revenue to be consistent with City policy although this level is not achieved during the study period.
- Costs associated with Other Post Employment Benefits (OPEB) are fully included in utility revenue requirements.
- Costs associated with supporting certain non-utility services are included in utility revenue requirements. Non-utility services represent \$1.33 million or 2.4% of the water revenue requirement.
- Costs associated with irrigation services total \$679,000 in 2009-10 and are included in water utility revenue requirements. These costs will be met from \$327,000 of irrigation rate revenue and \$352,000 of water rate revenue, which represents 1.2% of the water revenue requirement.

1.4. Water Rates

Principal findings of the water rate study are:

- Utility staff has developed a \$197 million water capital improvement program for the study period.
- Water sales revenue under existing rates is inadequate to meet projected O&M and debt service and maintain minimum reserve levels. Rate adjustments are needed in 2009-10 to increase annual water revenue by 11.5%. Similar rate adjustments are indicated to increase revenues in each of the subsequent three fiscal years. More moderate rate adjustments are projected thereafter.
- Red Oak recommends the water utility's long term financial plan be updated annually to reflect current estimates of revenue, operating expenses, capital improvement needs, and capital financing requirements.
- Red Oak conducted a comprehensive water utility cost of service analysis in accordance with standard methods supported by the American Water Works Association. We performed our analysis for the 2009-10 test year and determined the cost of providing water service to customer classes. Table 1-1 summarizes the findings of the cost of service analysis.

Table 1-1.
Comparison of Water Cost of Service
With Revenue From Existing Rates
Test Year 2009-10

Line No.	Customer Class	Cost of Service	Revenue From Existing Rates	Indicated Revenue Adjustment
	Inside City			
1	Single Family Residential	\$ 13,352,543	\$ 11,494,726	16.2%
2	Multifamily Residential	5,333,339	5,140,061	3.8%
3	Commercial	6,626,248	6,152,568	7.7%
4	Construction	308,012	265,574	16.0%
5	Government	1,664,790	1,361,790	22.3%
6	Industrial	1,880,076	1,878,059	0.1%
7	Landscaping	5,176,775	4,497,178	15.1%
8	Private Fire Protection	88,988	102,468	(13.2)%
9	Total Inside City	\$ 34,430,771	\$ 30,892,424	11.5%
10	Total Outside City	\$ 37,612	\$ 20,924	79.8%
11	Total	\$ 34,468,383	\$ 30,913,348	11.5%

- Existing water rates have been in effect since November 2008 and have the following structure:
 - ◆ Monthly base charges that vary by meter size.
 - ◆ Volume charges for single family residential customers that use a 4-block increasing rate structure.
 - ◆ Volume charges for all other customer classes that use a uniform rate structure.
- Red Oak developed 2009-10 rates using the existing structure. These rates represent the second year of a three-year transition to cost of service rates and will increase annual water sales revenue by 11.5%. Red Oak proposes that these transitional rates be adopted.

- Table 1-2 compares existing and proposed monthly water base charges.

Table 1-2.
Comparison of Existing and Proposed 2009-10
Monthly Water Base Charges⁽¹⁾

Meter Size	Existing	Proposed 2009-10 Rates
<i>(inches)</i>	<i>(per month)</i>	<i>(per month)</i>
5/8	\$ 9.92	\$ 10.24
3/4	14.63	14.63
1	22.01	22.01
1 1/2	32.72	35.90
2	61.98	62.50
3	116.84	131.00
4	209.03	245.00
6	362.22	458.00
8	635.00	955.00
10	809.78	1,410.00
(1) Rates shown are for inside City customers. Outside City rates are 30% greater than inside City rates, in accordance with City policy.		

- Table 1-3 compares existing and proposed single family residential water volume charges.

Table 1-3.
Comparison of Existing and Proposed 2009-10
Single Family Residential Water Volume Charges⁽¹⁾

Monthly Rate Block	Existing	Proposed 2009-10 Rates
<i>(Kgal)</i>	<i>(per Kgal)</i>	<i>(per Kgal)</i>
First 8	\$ 0.98	\$ 1.19
Next 7	1.23	1.49
Next 10	1.54	1.86
Over 25	1.93	2.33
(1) Rates shown are for inside City customers. Outside City rates are 30% greater than inside City rates, in accordance with City policy.		

- Table 1-4 compares existing and proposed non-single family residential water volume charges.

Table 1-4.
Comparison of Existing and Proposed 2009-10
Non-Single Family Residential Water Volume Charges⁽¹⁾

Customer Class	Existing	Proposed 2009-10 Rates
	<i>(per Kgal)</i>	<i>(per Kgal)</i>
Multifamily	\$ 1.38	\$ 1.50
Commercial	1.41	1.58
Construction	1.45	1.80
Government	1.57	1.85
Industrial	1.42	1.49
Landscaping	1.53	1.80
(1) Rates shown are for inside City customers. Outside City rates are 30% greater than inside City rates, in accordance with City policy.		

- Table 1-5 compares monthly single family water bills under existing and proposed 2009-10 rates. The 2009-10 monthly bill for the median single family customer (11,000 gallons) increases \$2.78 from \$21.45 under existing rates to \$24.23 under proposed 2009-10 rates.

Table 1-5.
Monthly Single Family Water Bills
5/8" Meter⁽¹⁾

Monthly Usage (gallons)	Cumulative Percent of Bills	Existing Rates	Proposed 2009-10 Rates	
			Amount	Change
0	1.6%	\$ 9.92	\$ 10.24	\$ 0.32
1,000	3.4%	10.90	11.43	0.53
2,000	6.6%	11.88	12.62	0.74
3,000	11.1%	12.86	13.81	0.95
4,000	16.7%	13.84	15.00	1.16
5,000	22.6%	14.82	16.19	1.37
6,000	28.5%	15.80	17.38	1.58
7,000	34.1%	16.78	18.57	1.79
8,000	39.4%	17.76	19.76	2.00
9,000	44.2%	18.99	21.25	2.26
10,000	48.8%	20.22	22.74	2.52
11,000	53.0%	21.45	24.23	2.78
12,000	56.8%	22.68	25.72	3.04
13,000	60.3%	23.91	27.21	3.30
14,000	63.5%	25.14	28.70	3.56
15,000	66.4%	26.37	30.19	3.82
16,000	69.1%	27.91	32.05	4.14
17,000	71.6%	29.45	33.91	4.46
18,000	73.8%	30.99	35.77	4.78
19,000	75.8%	32.53	37.63	5.10
20,000	77.8%	34.07	39.49	5.42
25,000	85.1%	41.77	48.79	7.02
50,000	97.1%	90.02	107.04	17.02
(1) Based on inside City rates.				

1.5. Wastewater Rates

Principal findings of the wastewater rate study are as follows:

- Utility staff has developed a \$184 million wastewater capital improvement program for the study period.
- Wastewater service charge revenue under existing rates is inadequate to meet projected O&M and debt service and maintain minimum reserve levels during the study period. Rate adjustments are needed in 2009-10 to increase annual wastewater service revenue by 16%. A similar rate adjustment is indicated in 2010-11. More moderate rate adjustments are projected thereafter.
- Red Oak recommends the wastewater utility's ten-year financial plan be updated annually to reflect current estimates of revenue, operating expenses, capital improvement needs, and capital financing requirements.
- Red Oak conducted a comprehensive wastewater utility cost of service analysis in accordance with standard methods supported by the Water Environment Federation. We performed our analysis for the 2009-10 test year and determined the cost of providing wastewater service to customer classes. Table 1-6 summarizes the findings of the cost of service analysis.

Table 1-6.
Comparison of Wastewater Cost of Service
With Revenue From Existing Rates
Test Year 2009-10

Line No.	Customer Class	Cost of Service	Revenue under Existing Rates	Indicated Revenue Adjustment
1	Residential	12,613,691	\$ 10,214,632	23.5%
2	Residential with separate sprinkler meters	987,866	694,549	42.2%
3	Commercial – Low Strength	7,170,434	6,433,082	11.5%
4	Commercial – Medium Strength	625,219	529,120	18.2%
5	Commercial – High Strength	1,697,675	1,324,083	28.2%
6	Government	1,728,824	1,428,316	21.0%
7	Industrial	4,543,694	4,692,942	(3.2%)
8	Total	\$ 29,367,403	\$ 25,316,724	16.0%

- Existing wastewater rates have been in effect since November 2008 and have the following structure:
 - ◆ Monthly base charge that varies by meter size.
 - ◆ Volume charge that varies by customer class and is based on billable water usage.
- Red Oak developed 2009-10 rates using the existing structure. These rates represent the second year of a three-year transition to cost of service rates and will increase annual wastewater service revenue by 16%. Red Oak proposes that these transitional rates be adopted.
- Table 1-7 compares existing and proposed monthly wastewater base charges.

Table 1-7.
Comparison of Existing and Proposed 2009-10
Monthly Wastewater Base Charges⁽¹⁾

Meter Size	Existing	Proposed 2009-10 Rates
<i>(inches)</i>	<i>(per month)</i>	<i>(per month)</i>
5/8	\$ 3.26	\$ 7.21
3/4	4.40	9.90
1	6.69	15.20
1 1/2	12.42	28.70
2	33.03	51.60
3	58.22	115.00
4	115.48	228.00
6	161.29	419.00
8	287.25	944.00
10	459.02	1,490.00
(1) Rates shown are for inside City customers. Outside City rates are 30% greater than inside City rates, in accordance with City policy.		

- Table 1-8 compares existing and proposed wastewater volume charges.

**Table 1-8.
Comparison of Existing and Proposed
Wastewater Volume Charges**

Line No.	Customer Class	Existing	Proposed 2009-10 Rates
		<i>(per Kgal)</i>	<i>(per Kgal)</i>
1	Residential	\$ 1.76	\$ 1.76
2	Residential with separate sprinkler meters	1.76	2.32
3	Commercial – Low Strength	2.47	2.65
4	Commercial – Medium Strength	3.35	3.85
5	Commercial – High Strength	5.25	6.45
6	Government	2.30	2.61
7	Industrial	varies	varies

- Table 1-9 compares monthly single family wastewater bills under existing and proposed 2009-10 rates. The monthly bill for the median single family customer (9,000 gallons) would increase \$3.95 from \$19.10 under existing rates to \$23.05 under proposed 2009-10 rates.

Table 1-9.
Monthly Single Family Wastewater Bills
5/8" Meter

Billable Monthly Usage (gallons)	Existing Rates	Proposed 2009-10 Rates	
		Amount	Change
0	\$ 3.26	\$ 7.21	\$ 3.95
1,000	5.02	8.97	3.95
2,000	6.78	10.73	3.95
3,000	8.54	12.49	3.95
4,000	10.30	14.25	3.95
5,000	12.06	16.01	3.95
6,000	13.82	17.77	3.95
7,000	15.58	19.53	3.95
8,000	17.34	21.29	3.95
9,000	19.10	23.05	3.95
10,000	20.86	24.81	3.95
11,000	22.62	26.57	3.95
12,000	24.38	28.33	3.95
13,000	26.14	30.09	3.95
14,000	27.90	31.85	3.95
15,000	29.66	33.61	3.95