

Town of Gila Bend



Gila Bend Water and Wastewater Rate Study 2009

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REVISED as of November 12, 2009

SECTION I: INTRODUCTION

Arizona Revised Statutes § 9-240(B)(5) and (6) authorizes the Town to finance, construct, operate, and maintain water and wastewater facilities.

The purpose of this report is to summarize the findings and recommendations related to the analysis for updating the Town of Gila Bend's water and wastewater rates.

SECTION II: GENERAL REQUIREMENTS

The Town needs to manage the water and wastewater utilities as enterprise funds, similar to a business, where rates and charges are assessed to users to offset operating and maintenance expenses. In addition to generating sufficient revenue to offset operating and maintenance costs, the water and wastewater enterprises must have rates and charges sufficient to offset the following current and future costs:

1. Capital Costs ~ Includes costs to upgrade, improve, or replace existing facilities in response to public health or environmental regulations and as existing facilities reach the end of their useful life.
2. Debt Service Costs ~ Includes principal and interest payments on debt issued to finance capital projects when current revenues are not sufficient to fund large, long-term capital projects with a useful life that extends several years into the future.

The standard for well managed water and wastewater enterprises throughout the United States is for water and wastewater rates to be sufficient to generate net revenues which exceed annual operating, maintenance, and capital expenditures by at least 20%. These "net revenues" are retained by the enterprise fund for:

1. Contingency, Maintenance, and Replacement Reserve ~ All or a portion of the net revenues should be deposited to a reserve for ongoing capital costs, provide contingency funding in the event of emergencies, and to stabilize rates and reduce the need for frequent rate adjustments.
2. Debt Service Reserve ~ All or a portion of the net revenues should be deposited to a separate reserve until the balance is equal to one year's worth of debt service. This reserve serves as security for debt as a standard condition required by lenders.

SECTION III: CURRENT CONDITIONS – WATER ENTERPRISE

The Town's water facilities require significant improvements to ensure safe and sustainable drinking water to users. The Town will finance these improvements with financial assistance from the United States Department of Agriculture (USDA), Rural Development (RD). As a condition for receipt of the RD assistance, the Town's water enterprise fund must generate sufficient net revenues to pay debt service and to fund reserves.

The historical and projected revenues and expenses for the water enterprise fund are shown on the following page within Table 1. Within Table 1, "base" expenses refers to the fixed costs to operate the water facilities regardless of usage including debt service and reserves. The corresponding "base" revenues refers to the revenue required to offset the "base" expenses

In contrast to base expenses and revenues, "volume" expenses refers to the variable costs to operate the water facilities based on usage – the volume of water treated and distributed to users. The

corresponding “volume” revenues refers to the variable revenue required to offset the “volume” expenses.

Table 1
Water Enterprise Fund ~ Historical and Projected Revenues and Expenses

	FY 2007 Actual	FY 2008 Actual	FY 2009 Actual	FY 2010 Budget
Revenue				
Monthly Rates	378,351	402,153	330,000	350,000
Bulk Water	201	7,682	7,000	10,000
Connection & Reconnection Fees	7,548	1,594	2,700	7,500
Late Fees	17,231	13,338	15,000	16,000
Unclassified Revenues	-	797	10,000	5,000
Total Revenues	\$ 403,331	\$ 425,564	\$ 364,700	\$ 388,500
Expenses				
Base				
Personnel Services	91,658	73,848	78,719	86,210
Professional Services	2,293	64,978	55,000	23,000
Materials & Supplies	-	-	-	8,500
Utilities	-	-	-	28,000
Maintenance	1,505	9,610	13,500	11,550
Other Operating	7,171	4,008	20,400	36,750
	\$ 102,627	\$ 152,444	\$ 167,619	\$ 194,010
Volume				
Personnel Services	-	-	-	-
Professional Services	-	-	-	-
Materials & Supplies	49,568	45,755	46,000	47,000
Utilities	19,957	15,611	20,000	112,000
Maintenance	41,499	198,357	29,500	24,450
Other Operating	594	239	500	1,500
	\$ 111,618	\$ 259,962	\$ 96,000	\$ 184,950
Debt Service	\$ -	\$ -	\$ 67,216	\$ 33,608
Reserves	\$ 10,712	\$ 20,620	\$ 26,624	\$ 25,670
Total Expenses	\$ 224,956	\$ 433,026	\$ 357,459	\$ 438,238
Revenues - Expenses	\$ 178,375	\$ (7,462)	\$ 7,241	\$ (49,738)

Currently, the Town’s water rates do not generate sufficient revenue to offset current and projected operating, maintenance, debt service, and reserve costs. In response, the Town proposes to adjust water rates, as more fully described in Section IV of this study.

SECTION IV: PROPOSED WATER RATE ADJUSTMENTS

1. Base Rates & Capital Factors

Since the meter size directly impacts the costs to operate, upgrade, and maintain the water facilities, the Town proposes to assess monthly base rates by “capital factor” or meter size. The Town’s current and proposed monthly base rates are shown in Table 2 below.

**Table 2
Water Enterprise Fund ~ Current and Proposed Monthly Base Rates**

Current			Proposed		
Meter Size	Capital Factor	Base Rate	Meter Size	Capital Factor	Base Rate
5/8	n/a	\$ 18.81	5/8	1.00	\$ 24.60
1	n/a	\$ 18.81	1	1.50	\$ 36.90
1 1/2	n/a	\$ 18.81	1 1/2	2.00	\$ 49.20
2	n/a	\$ 18.81	2	2.50	\$ 61.50
4	n/a	\$ 18.81	4	4.00	\$ 98.40
Gallons in Base Rate		3,000	Gallons in Base Rate		-

The proposed base rates will generate sufficient revenue to offset the base operating costs detailed in Table 1 including debt service and reserves.

2. Volume Rates

The Town’s costs to treat and distribute drinking water vary by usage or volume. The Town’s current and proposed monthly volume rates are shown in Table 3 below.

**Table 3
Water Enterprise Fund ~ Current and Proposed Monthly Volume Rates**

Current			Proposed		
Volume		\$ per 1,000 Gallons	Volume		\$ per 1,000 Gallons
-	to 3,000	\$ -	-	to 5,000	\$ 1.10
3,001	to 20,000	\$ 1.76	5,001	to 10,000	\$ 1.25
3,001	to 40,000	\$ 1.92	10,001	to 20,000	\$ 1.45
3,001	to 60,000	\$ 1.92	20,001	to 30,000	\$ 1.70
3,001	to 80,000	\$ 1.92	30,001	to 40,000	\$ 2.00
3,001	to 100,000	\$ 1.92	40,001	to 40,000 +	\$ 2.35
3,001	to 100,000 +	\$ 1.92			

SECTION V: CURRENT CONDITIONS – WASTEWATER ENTERPRISE

The Town's current wastewater facilities are non-mechanical wastewater lagoons whereby evaporation and sludge removal are the primary forms of treatment. The wastewater facilities require constant attention to ensure effluent quality, avoid groundwater contamination, avoid odor problems, and to ensure treatment capacity is not exceeded.

The historical and projected revenues and expenses for the wastewater enterprise fund are shown below within Table 4. The Town's wastewater enterprise has been in deficit for several years and does not generate sufficient revenue to offset current and projected operating, maintenance, and reserve costs. In response, the Town proposes to adjust wastewater rates, as more fully described in Section VI of this study.

Table 4
Wastewater Enterprise Fund ~ Historical Revenues and Expenses

	FY 2007 Actual	FY 2008 Actual	FY 2009 Actual	FY 2010 Budget
Revenue				
Monthly Rates	81,226	84,494	97,000	152,000
Connection & Reconnection Fees	5,775	2,475	1,200	1,200
Total Revenues	\$ 87,001	\$ 86,969	\$ 98,200	\$ 153,200
Expenses				
Base				
Personnel Services	90,063	72,825	77,531	84,542
Professional Services	168	4,253	2,000	4,000
Materials & Supplies	-	-	-	-
Utilities	64	56	100	6,000
Maintenance	540	4,811	2,800	2,200
Other Operating	832	8,353	3,600	8,125
	\$ 91,667	\$ 90,298	\$ 86,031	\$ 104,867
Volume				
Personnel Services	-	-	-	-
Professional Services	-	-	-	-
Materials & Supplies	8,739	13,856	16,000	23,000
Utilities	576	507	900	54,000
Maintenance	2,159	19,246	11,200	12,800
Other Operating	1,126	8,353	6,900	26,125
	\$ 12,600	\$ 41,961	\$ 35,000	\$ 115,925
Debt Service	\$ -	\$ -	\$ -	\$ -
Reserves	\$ 5,213	\$ 6,613	\$ 6,052	\$ 11,040
Total Expenses	\$ 109,480	\$ 138,872	\$ 127,083	\$ 231,832
Revenues - Expenses	\$ (22,479)	\$ (51,903)	\$ (28,883)	\$ (78,632)

SECTION VI: PROPOSED WASTEWATER RATE ADJUSTMENTS

1. Base Rates & Load Factors

Since the quality of the wastewater discharged by users directly impacts the costs to operate, upgrade, and maintain the wastewater facilities, the Town proposes to assess monthly base rates by “load factor” by user type. These load factors are based on national averages of pollutants discharged by user types. The Town’s current and proposed monthly base rates are shown in Table 5 below.

Table 5
Wastewater Enterprise Fund ~ Current and Proposed Monthly Base Rates

Current			Proposed		
User Type	Load Factor	Base Rate	User Type	Load Factor	Base Rate
Residential	n/a	\$ 10.23	Residential	1.00	\$ 16.60
Trailer Park	n/a	\$ 13.80	Trailer Park	1.00	\$ 16.60
Commercial/Retail	n/a	\$ 13.80	Commercial/Retail	0.75	\$ 12.45
Hotel/Motel	n/a	\$ 13.80	Hotel/Motel	1.00	\$ 16.60
Car Washes/Laudromats	n/a	\$ 13.80	Car Washes/Laudromats	0.75	\$ 12.45
Service Stations	n/a	\$ 13.80	Service Stations	0.75	\$ 12.45
Office/Light Industrial	n/a	\$ 13.80	Office/Light Industrial	0.75	\$ 12.45
Restaurants	n/a	\$ 13.80	Restaurants	2.00	\$ 33.20
School	n/a	\$ 10.23	School	1.00	\$ 16.60
Churches	n/a	\$ 10.23	Churches	1.00	\$ 16.60
Industrial	n/a	\$ 13.80	Industrial	4.50	\$ 74.70
Septage/Hauler	n/a	\$ 13.80	Septage/Hauler	2.00	\$ 33.20

The proposed base rates will generate sufficient revenue to offset the base operating costs detailed in Table 4 including reserves.

2. Volume Rates

The Town’s costs to collect, treat, and dispose of wastewater varies by: (1) wastewater volume as measured by water usage or as metered wastewater discharges, and (2) load factor. The Town’s current and proposed monthly volume rates are shown in Table 6 below.

Table 6
Wastewater Enterprise Fund ~ Current and Proposed Monthly Volume Rates

Current			Proposed		
User Type	Load Factor	\$ per 1,000 Gallons	User Type	Load Factor	\$ per 1,000 Gallons
Residential	n/a	\$ -	All	0.00 to 1.00	\$ 0.50
Commercial	n/a	\$ 0.36		1.01 to 2.00	\$ 0.60
				2.01 to 3.00	\$ 0.70
				3.01 to 4.00	\$ 0.80
				4.01 to 4.01 +	\$ 0.90

SECTION VII: ESTIMATED IMPACT ON USERS

Table 7 compares current and proposed total monthly rates for water users.

**Table 7
Water Enterprise Fund ~ Estimated Impact on Users**

Average User	Average Monthly Usage (1,000 Gallons)	Current			Proposed		
		Base	Volume	Total	Base	Volume	Total
Residential	10.1	\$ 18.81	\$ 12.58	\$ 31.39	\$ 24.60	\$ 11.96	\$ 36.56
Commercial	45.7	\$ 22.23	\$ 81.96	\$ 104.19	\$ 56.49	\$ 78.92	\$ 135.41
All	15.6	\$ 18.81	\$ 22.17	\$ 40.98	\$ 24.60	\$ 19.86	\$ 44.46

Table 8 compares current and proposed total monthly rates for wastewater users.

**Table 8
Wastewater Enterprise Fund ~ Estimated Impact on Users**

Average User	Average Monthly Volume (1,000 Gallons)	Current			Proposed		
		Base	Volume	Total	Base	Volume	Total
Residential	10.1	\$ 10.23	\$ -	\$ 10.23	\$ 16.60	\$ 5.07	\$ 21.67
Commercial	45.7	\$ 13.80	\$ 16.45	\$ 30.25	\$ 15.60	\$ 22.84	\$ 38.45
All	15.6	\$ 10.76	\$ 0.84	\$ 11.61	\$ 16.43	\$ 7.80	\$ 24.23

SECTION VIII: COMPARATIVE RESIDENTIAL SEWER AND WATER RATES

Table 9 below and Table 10 on the following page compare the proposed residential rates for Gila Bend to rates in other communities assuming users consume 7,500 gallons of water a month.

**Table 9 REVISED as of November 12, 2009
% of Comparative Rates (7,500 Gallons of Water Used)**

	Water	Wastewater	Combined
Gila Bend ~ Proposed	\$ 33.23	\$ 20.35	\$ 53.58
% of Arziona Average	92.9%	76.3%	85.8%
% of Muncipal Average	133.9%	88.9%	112.3%
% of County Average	108.0%	84.2%	97.6%
% of Survey Group	119.5%	68.9%	93.4%

Table 10 REVISED as of November 12, 2009
Comparative Residential Rates (7,500 Gallons of Water Used)

	Water			Wastewater			Combined
	Average	High	Low	Average	High	Low	Average
Arizona Average	35.75	201.78	4.64	26.67	80.00	2.00	62.42
Municipal Average	24.81	49.50	4.64	22.88	56.25	2.00	47.69
County Average	30.76	102.90	4.64	24.16	56.25	2.00	54.92
Gila Bend ~ Proposed	33.23			20.35			53.58
Avondale	15.98			26.86			42.84
Benson	20.50			29.68			50.18
Buckeye	31.96			23.85			55.81
Cave Creek	74.38			47.00			121.38
Eloy	23.96			24.91			48.87
Florence	37.08			36.84			73.92
Gilbert	22.73			22.53			45.26
Goodyear	22.87			37.46			60.33
Phoenix	15.88			22.82			38.70
Quartzsite	26.50			15.00			41.50
St Johns	20.25			21.21			41.46
Safford	31.58			42.25			73.83
Wickenburg	12.84			25.00			37.84
Willcox	26.09			38.35			64.44
Yuma	34.52			29.46			63.98