



CITY OF NOGALES, ARIZONA

WATER/WASTEWATER/SANITATION RATE STUDY and NON-RATE FEES AND SERVICES ANALYSIS

EXECUTIVE SUMMARY

FINAL – March 2016

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Acknowledgements

During the course of this study, several City employees expended considerable time and effort in assisting the project team. These employees included the Mayor and Council, John Kissinger, Sherry Schurhammer, Michael Masee, Alejandro Barcenas, Elizardo Jacobs and Angel Suarez. The project team owes a debt of gratitude to the hard work, dedication and professionalism of these employees, without whom this project would not have been successfully completed.

The project team has relied upon the extensive data supplied by the City. Thus, the integrity of the study is largely dependent upon the accuracy of this financial and volumetric data. Every effort has been made by the project team to validate and confirm the information contained herein prior to the preparation of the final study documents. This report presents no assurance or guarantee that the forecast contained herein will be consistent with actual results or performances. These represent forecasts based on a series of assumptions about future behavior, and are not guarantees. Any changes in assumptions or actual events may result in significant revisions to the forecast and its conclusions. The cash flow projections and debt service coverage calculations are not intended to present overall financial positions, results of operations, and/or cash flows for the periods indicated, in conformity with guidelines for presentation of a forecast established by the American Institute of Certified Public Accountants.

Executive Summary

Background



In May 2015, the City of Nogales, Arizona (the "City") engaged **Willdan/Economists.com** to prepare a water, wastewater and sanitation rate study and long-term financial plan. In August 2015 the City engaged the Firm to prepare a Utility Non-Rate Revenue and Fee Study.

The City identified the following objectives for these studies:

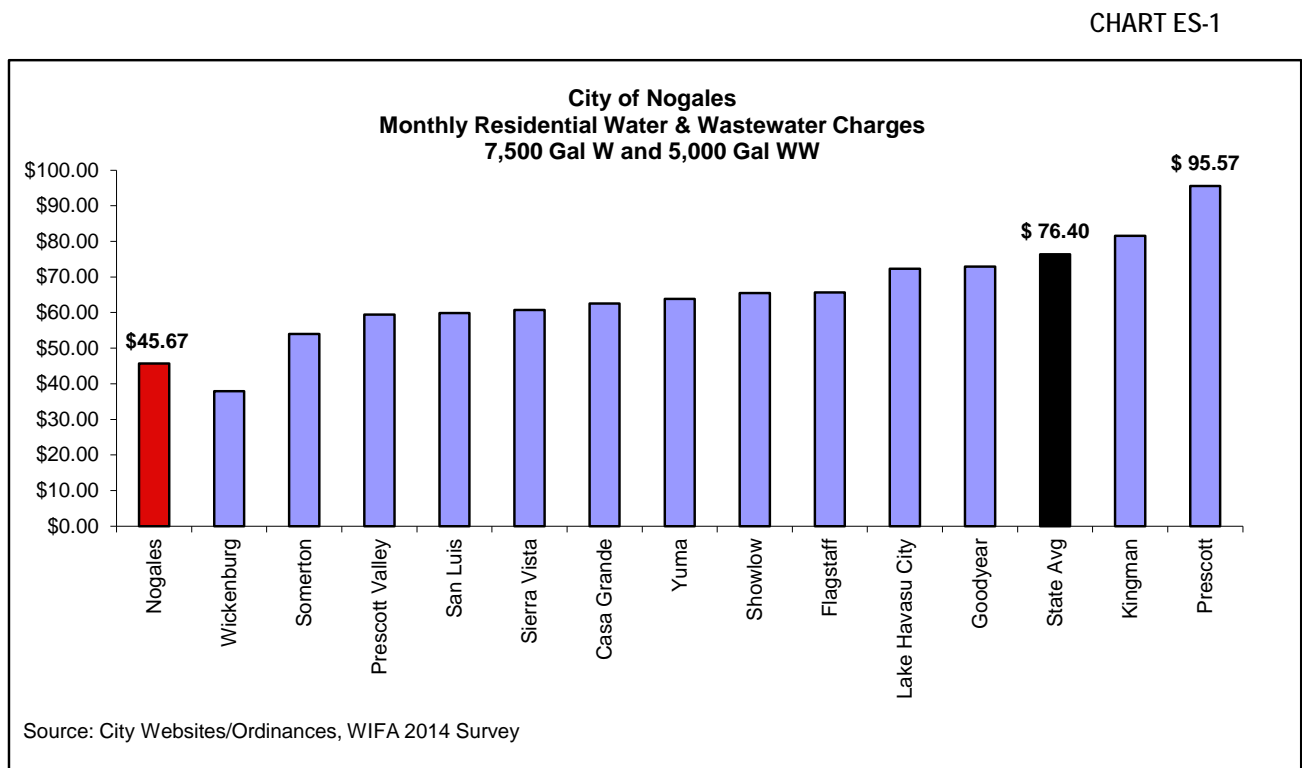
- A comprehensive review and evaluation of present water, wastewater and sanitation rates and their ability to fund City operations and capital requirements.
- A detailed analysis and comparison of the City's current and proposed rates to other surrounding communities.
- An estimate of current and forecast accounts, water consumption and wastewater billing units for the forecast period.
- A forecast of water, wastewater and sanitation revenue requirements, including operating expenses, capital outlays and debt service for a period ten years into the future.
- An evaluation of the impact of the City's capital improvement plan and revised growth estimates on current and forecast rates.
- Development of proposed alternative rate structures that would recover the City's cost of service, ensure equitable, just and reasonable treatment of identified customer classes and maintain critical financial ratios.
- The Non-Rate Fee Study will assess the cost of each utility fee currently charged by the City.
- Additional Utility Non-Rate Fees will be evaluated for the City's consideration

In conjunction with City staff, the project team evaluated several alternative rate structures that would enable the City to achieve these objectives while continuing to provide ratepayers with a superior quality of municipal water, wastewater and sanitation service. After a series of meetings with City officials during which these objectives and rate scenarios were thoroughly analyzed, the project team narrowed its recommendations to the water, wastewater and sanitation alternatives contained in this study. The analysis and recommendations presented in this study achieve all of the objectives outlined.

Water and Wastewater Rate Comparison

Chart ES-1 compares the City of Nogales’ monthly water and wastewater charges to those of a group of selected cities in Arizona. The rate data is based a telephone survey conducted to collect information on current water and wastewater rates. These rates do not include sales tax, activation or other charges beyond the basic minimum and volume charges. Additionally, where appropriate, certain cities that charge for service based on cubic feet of water have had their rates converted to an equivalent charge per 1,000 gallons.

The table reveals that while the City’s rates are lower than certain larger neighboring cities, the City’s rates are significantly below those of several other similarly-sized cities and the sample average.



Water and Wastewater Test Year and Forecast Accounts

The first step in developing cost of service rates is to analyze patterns of usage, both for the system as a whole, and for specified customer classes. According to standard utility ratemaking methodology, in order to allocate revenue requirements equitably among system users, customers must be classified into relatively homogeneous groups with similar usage characteristics or service demands. Costs are then allocated to the customer classes in proportion to the usage characteristics of each class.

Table ES-2 and Table ES-3 present the average historical, test year and forecast water and wastewater accounts for each of the City’s defined customer classes. The most significant account growth is 60 new accounts in FY 2017 for a newly opening multi family building downtown. The tables reveal that the customer base is forecast to remain predominantly residential. In total, water accounts are forecast to remain flat in the

ten-year period with an average annual increase of 0.2%. Wastewater accounts are expected to remain flat with an average annual increase of 0.2%.

Table ES-2

CITY OF NOGALES													
TOTAL WATER ACCOUNTS													
WATER Customer Classes													
	W01	W02	W03	W04	W05	W06	W07	W08	W09	W10	W11	W12	
	Resid-Single	Resid-Multi	Comm-Single/Multi	Trailer Park	Bldg/School	Sr. Low Incom	Resid-Single	Resid-Multi	Comm-Sing/Multi	Trailer Park	Irrigation	Other	Other
	Inside	Inside	Inside	Inside	Inside	In/Out	Outside	Outside	Outside	Outside	In/Out		
	Total												
WATER Total Accounts													
Dec-11	3,634	232	510	6	61	594	106	4	13	12	227	19	5,418
Dec-12	3,561	225	566	5	109	657	129	4	4	1	107	21	5,389
Dec-13	3,529	226	566	5	111	707	128	3	4	1	111	21	5,412
Dec-14	3,512	229	566	5	112	715	128	3	4	1	111	16	5,402
TY 2016	3,517	230	530	5	112	743	132	3	4	1	115	17	5,408
2017	3,519	290	530	5	112	743	132	3	4	1	115	17	5,470
2018	3,521	290	530	5	112	743	132	3	4	1	115	17	5,472
2019	3,523	290	530	5	112	743	132	3	4	1	115	17	5,474
2020	3,526	290	530	5	112	743	132	3	4	1	115	17	5,477
2021	3,529	290	530	5	112	743	132	3	4	1	115	17	5,480
2022	3,532	290	530	5	112	743	132	3	4	1	115	17	5,483
2023	3,535	290	530	5	112	743	132	3	4	1	115	17	5,486
2024	3,538	290	530	5	112	743	132	3	4	1	115	17	5,489
2025	3,541	290	530	5	112	743	132	3	4	1	115	17	5,492

Table ES-3

CITY OF NOGALES									
TOTAL WASTEWATER ACCOUNTS									
WASTEWATER Customer Classes									
	Res Inside	School/Pub Bldg	Clinic/Hospital	Commercial	Food Service	Sr/Low Income	Trailer Park	Rio Rico	Total
WASTEWATER Total Accounts									
Dec-11	3,997	95	14	481	35	590	370	1	5,583
Dec-12	3,949	95	14	487	34	601	370	1	5,551
Dec-13	3,906	99	13	515	35	669	175	1	5,413
Dec-14	3,849	101	13	513	35	728	175	1	5,415
TY 2016	3,819	102	13	521	37	754	175	1	5,422
2017	3,881	102	13	521	37	754	175	1	5,484
2018	3,883	102	13	521	37	754	175	1	5,486
2019	3,885	102	13	521	37	754	175	1	5,488
2020	3,888	102	13	521	37	754	175	1	5,491
2021	3,891	102	13	521	37	754	175	1	5,494
2022	3,894	102	13	521	37	754	175	1	5,497
2023	3,897	102	13	521	37	754	175	1	5,500
2024	3,900	102	13	521	37	754	175	1	5,503
2025	3,903	102	13	521	37	754	175	1	5,506

Water and Wastewater Test Year and Forecast Revenue Requirements

As is typical for publically owned utilities, Nogales's system revenue requirements were developed using the cash basis of ratemaking. Under the cash basis, as defined by the AWWA Manual M-1, system revenue requirements consist of cash expenditures and other financial commitments (such as debt service coverage or reserves) that must be met through system operating revenues and other revenue sources.

The revenue requirement components of this approach include:

O&M expense

Capital Outlays Funded from Rates

Debt Service - Current

Debt Service – Forecast

The Project Team has prepared and presented four Scenarios to City Staff. For the purposes of this rate study, the scenario alternatives are as follows:

- Scenario 1 Alternative – Operating Costs and No CIP Funding
- Scenario 2 Alternative – Operating Costs and \$10 Million CIP Funding
- Scenario 2 Alternative – Operating Costs and \$15 Million CIP Funding
- Scenario 4 Alternative – Operating Costs and \$21 Million CIP Funding - RECOMMENDED

It is important to note that while the four long-term rate plan alternatives presented share the same account and consumption growth assumptions, each has unique test year and forecast revenue requirement. The Project Team and City Staff are recommending the **Scenario 4 – Alternative – Operating Costs and \$21 Million CIP Funding** for Council approval.

Table ES-4 presents the City of Nogales' net revenue requirement for its water and wastewater divisions for the Recommended Scenario 4 – Alternative – Operating Costs and \$21 Million CIP Funding. These net revenue requirements must be raised from the City's water and wastewater rates in the test year FY 2016 and the forecast period. This means that non-rate revenue (such as tap fees and interest) must be subtracted from expenses to determine the net revenue requirement.

As the table reveals, debt service becomes an increasing portion of the total revenue requirement for both the water and wastewater system in future years. Detailed calculations are presented in the rate model contained in Appendix A of this report.

TABLE ES-4

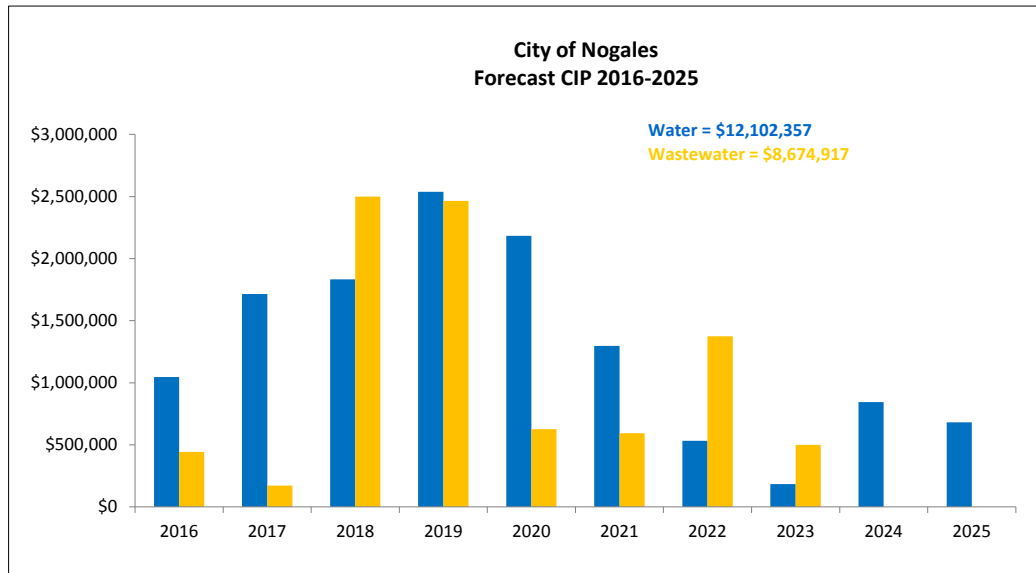
CITY OF NOGALES										
FORECAST NET REVENUE REQUIREMENT										
Scenario:	2016 02 10 -- \$21M CIP Funding									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
WATER										
Operating/Cap Outlays	\$ 2,338,852	\$ 2,425,818	\$ 2,510,297	\$ 2,598,830	\$ 2,602,329	\$ 2,624,210	\$ 2,725,633	\$ 2,831,980	\$ 2,943,530	\$ 3,060,581
Debt Service -- Current	520,524	834,920	835,922	1,041,055	964,350	963,847	963,699	963,105	967,165	913,355
Debt Service -- Future	-	215,706	215,706	552,993	552,993	866,747	866,747	866,747	1,004,015	1,004,015
Sub-Total	\$ 2,859,376	\$ 3,476,444	\$ 3,561,925	\$ 4,192,877	\$ 4,119,672	\$ 4,454,804	\$ 4,556,080	\$ 4,661,833	\$ 4,914,710	\$ 4,977,951
Non-Rate Revs	(275,897)	(284,174)	(292,699)	(301,480)	(310,525)	(319,840)	(329,435)	(339,319)	(349,498)	(359,983)
Total	\$ 2,583,479	\$ 3,192,271	\$ 3,269,226	\$ 3,891,397	\$ 3,809,147	\$ 4,134,964	\$ 4,226,645	\$ 4,322,515	\$ 4,565,212	\$ 4,617,968
WASTEWATER										
Operating/Cap Outlays	\$ 2,449,223	\$ 2,525,997	\$ 2,610,738	\$ 2,697,550	\$ 2,803,196	\$ 2,871,701	\$ 2,971,256	\$ 3,072,668	\$ 3,179,735	\$ 3,299,863
Debt Service -- Current	686,838	699,987	700,145	370,236	484,867	483,304	484,877	486,165	483,878	451,067
Debt Service -- Future	-	239,238	239,238	239,238	525,539	525,539	525,539	682,417	682,417	682,417
Sub-Total	3,136,061	3,465,223	3,550,121	3,307,024	3,813,602	3,880,544	3,981,672	4,241,250	4,346,030	4,433,346
Non-Rate Revs	(358,133)	(368,877)	(379,943)	(391,342)	(403,082)	(415,174)	(427,630)	(440,458)	(453,672)	(467,282)
Total	\$ 2,777,928	\$ 3,096,346	\$ 3,170,178	\$ 2,915,682	\$ 3,410,520	\$ 3,465,370	\$ 3,554,042	\$ 3,800,791	\$ 3,892,358	\$ 3,966,064
Total	\$ 5,361,407	\$ 6,288,616	\$ 6,439,403	\$ 6,807,080	\$ 7,219,667	\$ 7,600,334	\$ 7,780,687	\$ 8,123,306	\$ 8,457,570	\$ 8,584,032

Water and Wastewater Capital Improvement Plan

The City of Nogales is in the process of implementing a comprehensive and extensive water and wastewater capital improvement plan. Important replacement-related water and wastewater capital improvement projects are planned for the forecast period. The CIP is separated into water and wastewater and functionalized into treatment, distribution/collection and customer-related categories.

City staff and the project team developed a preliminary estimate of the City's capital improvement costs over the next decade. The project team held several work sessions with Council to discuss the City's CIP and alternative for funding and rate impacts. While this preliminary CIP has not been formally adopted by staff or Council, it represents a reasonable estimate of the City's capital requirements for the purposes of this study. The Tables presented below are based on the **Scenario 4 – Alternative – Operating Costs and \$21 Million CIP Funding**. **Chart ES-5** summarizes the expected timeline of the capital improvement expenditures under the Scenario 4 – Alternative – Operating Costs and \$21M CIP Funding.

CHART ES-5



As shown in Table ES-6, in order to fully fund the CIP the City must issue approximately \$21,500,000 in long-term debt over the next decade. For this analysis, the project team is assuming that the debt has a term of 20 years at 5.5% interest rate. The remainder of the CIP is assumed to be funded after an updated evaluation of funding needs in the out years.

TABLE ES-6

CITY OF NOGALES			
FORECAST DEBT ISSUES			
Scenario:	2016 02 10 -- \$21M CIP Funding		
	Water	Wastewater	Total
2016	\$ 2,750,000	\$ 3,050,000	\$ 5,800,000
2017	-	-	-
2018	4,300,000	-	4,300,000
2019	-	3,650,000	3,650,000
2020	4,000,000	-	4,000,000
2021	-	-	-
2022	-	2,000,000	2,000,000
2023	1,750,000	-	1,750,000
2024	-	-	-
2025	-	-	-
TOTAL	\$ 12,800,000	\$ 8,700,000	\$ 21,500,000

Water and Wastewater Rate Design Recommendation

Rate design involves determining charges for each customer class that will generate a desired level of revenue. The water and wastewater rates developed in this section are designed to recover the test year and forecast revenue requirement while continuing to fund capital improvements.

Table ES-7 and Table ES-8 present the project team's recommended residential rate design under the **Scenario 4 – Alternative – Operating Costs and \$21 Million CIP Funding proposal**. This scenario is presented because it represents the project team's recommended rate plan for the City. A detailed listing of rates for all customer classes is presented in Section II, Table II-42.

The following is notable about this rate design:

- The rate structure is based on the City's current rate design.
- Initial rate adjustments are scheduled to be implemented in September 2016, 2017, 2018 and 2019.
- This alternative assumes that the City issues \$21,500,000 to fund capital projects over the next decade. Note that this is less than half of what staff has evaluated to need to maintain and improve the Water and Wastewater systems over the next 10 years.
 - Water Debt issuances are recommended as follows:
 - \$2,750,000 in 2016,
 - \$4,300,000 in 2018
 - \$4,000,000 in 2020 and
 - \$1,750,000 in 2023
 - Wastewater Debt issuances are recommended as follows:
 - \$3,050,000 in 2016,
 - \$3,650,000 in 2019
 - \$2,000,000 in 2022
- This rate design is intended to ensure that the City collects sufficient revenues to fund operating, capital outlay expenditures and \$21,500,000 in Capital Improvement Projects over the next decade.

TABLE ES-7

CITY OF NOGALES		ALTERNATIVE OPERATING COSTS AND \$21 MILLION CIP RESIDENTIAL WATER RATES					
Scenario: 2016 02 10 -- \$21M CIP Funding							
		Current	Effective Feb-16	Effective Sep-16	Effective Sep-17	Effective Sep-18	Effective Sep-19
% Increase			2.00%	16.00%	6.00%	15.00%	3.00%
RESIDENTIAL INSIDE							
Water Monthly Charge							
Base Charge		\$7.11	\$7.25	\$8.41	\$8.92	\$10.25	\$10.56
Water Volume Charge							
-	3,000	1.78	1.82	2.11	2.23	2.57	2.64
3,001	8,000	2.09	2.13	2.47	2.62	3.01	3.10
8,001	13,000	2.25	2.30	2.66	2.82	3.25	3.34
13,001	20,000	2.49	2.54	2.95	3.12	3.59	3.70
20,001	35,000	3.26	3.33	3.86	4.09	4.70	4.84
35,001	Above	4.04	4.12	4.78	5.07	5.83	6.00
RESIDENTIAL OUTSIDE							
Water Monthly Charge							
Base Charge		\$21.33	\$21.76	\$25.24	\$26.75	\$30.76	\$31.69
Water Volume Charge							
-	3,000	2.67	2.72	3.16	3.35	3.85	3.97
3,001	8,000	2.84	2.90	3.36	3.56	4.10	4.22
8,001	13,000	3.14	3.20	3.72	3.94	4.53	4.66
13,001	20,000	3.56	3.63	4.21	4.46	5.13	5.29
20,001	35,000	4.44	4.53	5.25	5.57	6.40	6.60
35,001	Above	5.51	5.62	6.52	6.91	7.95	8.19

TABLE ES-8

CITY OF NOGALES		ALTERNATIVE - OPERATING COSTS AND \$21 MILLION CIP FUNDING RESIDENTIAL WASTEWATER RATES					
Scenario: 2016 02 10 -- \$21M CIP Funding							
		Current	Effective Feb-16	Effective Sep-16	Effective Sep-17	Effective Sep-18	Effective Sep-19
% Increase			2.00%	24.00%	3.00%	3.00%	6.00%
RESIDENTIAL INSIDE and OUTSIDE							
WW Monthly Charge							
Base Charge -- 1st 1,000 Gal		\$12.81	\$13.07	\$16.20	\$16.69	\$17.19	\$18.22
Volume Charge -- Per 1,000 Gal		2.20	2.24	2.78	2.87	2.95	3.13

Table ES-9 presents the impact of the proposed rate plan on monthly residential, commercial and multi-family ratepayers.

TABLE ES-9

CITY OF NOGALES		PROPOSED RATE PLAN ALTERNATIVE - OPERATING COSTS AND \$21 MILLION CIP FUNDING RATE PLAN IMPACT ONMONTHLY WATER_WW CHARGES					
Scenario: 2016 02 10 -- \$21M CIP Funding		Current	Effective Feb-16	Effective Sep-16	Effective Sep-17	Effective Sep-18	Effective Sep-19
Residential							
7,500 Gal W, 5,000 Gal WW							
\$	45.67	\$ 46.58	\$ 55.97	\$ 58.43	\$ 63.47	\$ 66.33	
		0.91	9.40	2.45	5.04	2.86	
Commercial							
20,000 Gallons Water & WW							
	190.22	194.02	233.78	243.76	263.63	275.84	
		3.80	39.75	9.98	19.88	12.21	
Multi-Family							
30,000 Gallons Water & WW							
	241.06	245.88	295.96	308.73	334.46	349.79	
		4.82	50.08	12.76	25.73	15.33	

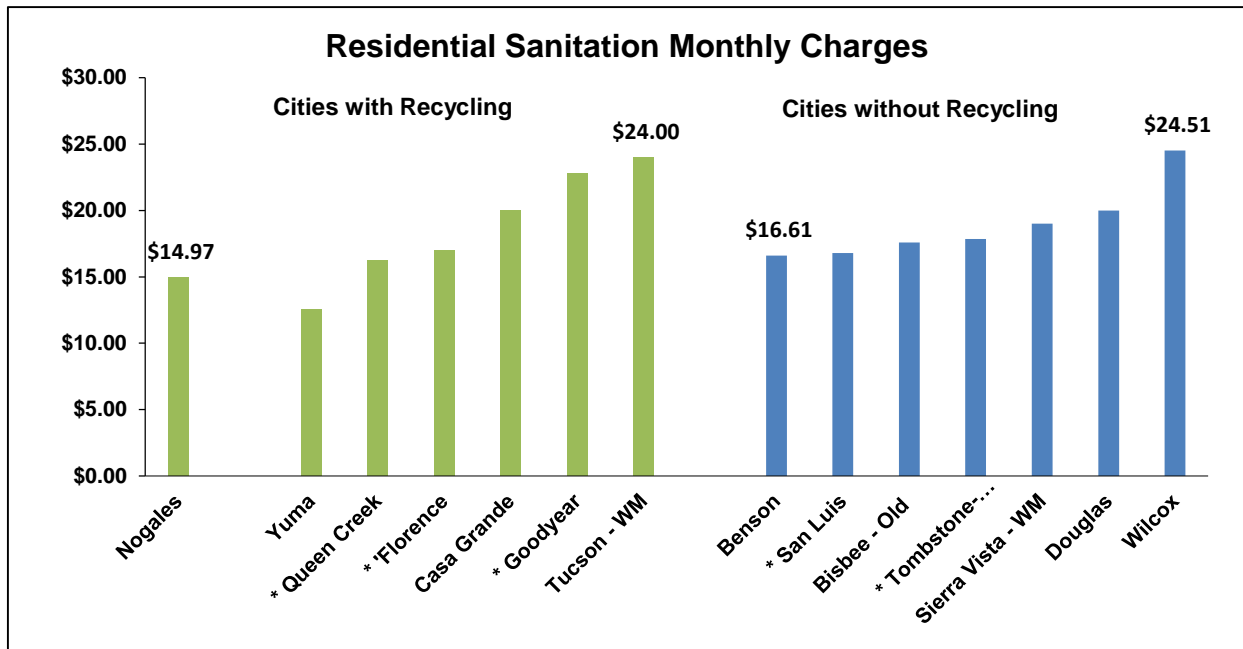
Sanitation Rate Study

Section III of the consolidated rate study and long term financial plan focuses on the revenue and cost of service forecast for the City's sanitation utility. This includes a detailed analysis of the City's cost of service for the collection of refuse from residential and commercial customer classes. Using the utility's cost of service and current accounts as base, revenues by customer class are forecast for the ten-year period. Total revenues include non-rate revenues from sources other than monthly sanitation rates. The rate recommendation is designed to recover the full cost of service, including operating and capital expenses. The rate recommendations are based on national ratemaking standard generally accepted sanitation rate making methodology.

Sanitation - Rate Comparison

Table ES-10 compares the City's residential rate to monthly collection rates for several locations in the state of Arizona. Rates compared are for cities with and without recycling. Cities with * are those with only 1 garbage pick-up per week.

Table ES-10



The chart reveals that Nogales' Residential Solid Waste rates are significantly lower than all comparisons. Current residential rates in Nogales are 25% less than the sampling average. It is also important to note that all other cities provided residential customers with the choice of a 65 or 95-gallon container for the same price.

Sanitation – Billing Units

Table ES-11 breaks out billing units by customer class to illustrate the percentage of pick-ups attributed to monthly collections. The Project Team would expect that residential customer collections would be 75-80% of the City's total monthly billing units.

Table ES-11

CITY OF NOGALES		
FY 2015 SANITATION Billing Units		
Container Size	Billing Units	Percent
Residential	5,085	78.2%
Commercial - Min Charge	137	2.1%
Commercial Refuse Coll	505	7.8%
3 Cubic Yard	226	3.5%
4 Cubic Yard	270	4.2%
6 Cubic Yard	205	3.2%
8 Cubic Yard	71	1.1%
Grand Total	6,499	100.0%

As with water and wastewater account, sanitation accounts are forecast to grow by 60 residential account in FY 2017. There is no other growth forecast for residential or commercial accounts over the next 10-year period. As a result, landfill costs are not expected to increase more than reflected with the 60 residential account increase.

Sanitation – Test Year and Forecast Revenue Requirements

As with the other utilities, the City's solid waste revenue requirement is calculated on the cash basis of ratemaking. System revenue requirements include operating and maintenance expenditures, capital outlays and debt service, and are funded by a combination of rate and non-rate revenues. In the case of the sanitation utility, this is primarily a function of revenues generated through fees for collection and disposal.

Table ES-12 presents the solid waste forecast net revenue requirement for the forecast period. This table reveals that the total cost of service is expected to increase by an average of 3.5% annually over the next ten years.

Table ES-12

CITY OF NOGALES							
CURRENT AND FORECAST SANITATION NET REVENUE REQUIREMENT							
SCENARIO:							
2016 02 13 -- Scenario 1 -- Status Quo							
	Operating Expenses	Fund Transfers	Capital Outlays	Debt Service	Total Cost of Service	Less Non-Rate Revenues	Net Revenue Requirement
SANITATION Revenue Requirement							
2016	\$ 2,336,736	\$ 206,781	\$ 300,583	\$ 4,414	\$ 2,848,514	\$ (193,203)	\$ 2,655,311
2017	2,410,987	212,984	280,583	283,454	3,188,008	(193,203)	2,994,805
2018	2,487,673	219,374	260,583	283,464	3,251,094	(193,203)	3,057,891
2019	2,566,877	225,955	257,083	284,031	3,333,946	(193,203)	3,140,743
2020	2,648,686	232,734	135,000	283,615	3,300,035	(193,203)	3,106,832
2021	2,733,190	239,716	110,000	627,287	3,710,192	(193,203)	3,516,989
2022	2,820,480	246,907	115,000	352,352	3,534,740	(193,203)	3,341,537
2023	2,910,655	254,315	90,000	352,356	3,607,325	(193,203)	3,414,122
2024	3,003,812	261,944	135,000	352,333	3,753,089	(193,203)	3,559,886
2025	3,100,056	269,802	110,000	352,352	3,832,210	(193,203)	3,639,007

Sanitation – Capital Improvement Plan and Future Debt Service

The City has several solid waste capital improvements currently planned to be funded in FY 2016. These include the following:

- Replacement of Commercial Dumpsters
- Replacement of a Commercial Sanitation Truck
- Replacement of a Residential Sanitation Truck

Additional projects forecast as capital improvements by the sanitation utility over the next 10 years include a new transfer station. A complete schedule of the forecast capital improvements is summarized in Table ES-13.

Table ES-13

CITY OF NOGALES						
SANITATION CAPITAL EXPENDITURES AND IMPROVEMENTS						
FY 2016 Through FY 2020						
SCENARIO:						
SCENARIO 1 - STATUS QUO						
	2016	2017	2018	2019	2020	5 Year Total
Transfer Station -	\$ -	\$ -	\$ -	\$ -	\$ 500,000	\$ 500,000
Future Replacement of Dumpsters Commercial	75,000	75,000	-	-	-	150,000
Replacement of Sanitation Trucks Commercial	250,000	250,000	-	-	-	500,000
Replacement of Sanitation Trucks Residential	250,000	250,000	-	-	-	500,000
	-	-	-	-	-	-
	-	-	-	-	-	-
Total	\$ 575,000	\$ 575,000	\$ -	\$ -	\$ 500,000	\$ 1,650,000

Sanitation – Rate Design Recommendation

Rate design involves determining charges for each class of customers that will generate a desired level of revenue. The solid waste rates developed in this section are designed to cover the revenue requirements presented for the test year and the forecast period, and generate revenues by class that approximately equal the allocated cost responsibility of each class.

The next several pages present solid waste rate implementation of a Base – Status Quo Scenario. This scenario contains the following assumptions:

- The recommended rate alternative is designed to recover sufficient revenues to fund current and future operating expenses incurred by the City's solid waste utility.
- Each rate design is based upon the City's existing rate structure.
- The City issues the following debt to fund the CIP:
 - \$1,200,000 in FY 2016 to fund Commercial dumpsters and 2 sanitation trucks
 - \$1,500,000 in FY 2020 to fund updates to the current Transfer Station
- Annual rate adjustments for all customer classes are recommended to be implemented each Fiscal Year beginning in February 2016. The 2016 rate increase is significant due to no rate changes since 2002 with subsequent increases being nominal.

The **Status Quo Scenario 1** reflects the revenue requirement and cost of service as outlined in the previous section of this study. **Table ES-14** summarizes the project team's recommendations and rate impacts for the Base Scenario monthly sanitation rates. The recommended rate adjustments that will be required by the City to recover its operating and capital expenses over the next decade.

Table ES-14

CITY OF NOGALES									
BASE SCENARIO RECOMMENDED SOLID WASTE RATES									
Scenario:									
2016 02 13 – Scenario 1 – Status Quo									
	# Cont	P/U Per Week	CUY	Current	Effective Feb-16	Effective Sep-16	Effective Sep-17	Effective Sep-18	Effective Sep-19
Residential									
Residential-65 Gal	2	2		\$ 14.97	\$ 17.96	\$ 18.68	\$ 19.24	\$ 19.82	\$ 20.22
Commercial - Min Charge									
	1	1		55.25	66.30	68.95	71.02	73.15	74.61
Commercial Refuse Collection									
		1	1	23.08	27.70	28.80	29.67	30.56	31.17

March 2016 Rate Study Update

After many meetings between the project team, City Staff and the City Council, in late February 2016 the Finance Director and City Attorney filed a Notice of Intent (NOI) to change water, wastewater and sanitation utility rates. The NOI rate schedules were submitted for the City Council Agenda to be approved at the March 2, 2016 meeting. On Monday, February 29th city staff was notified that the matter would not be considered until after the November 2016 election.

The project team was requested by staff to revisit water, wastewater rate scenarios that were initially presented for review on December 2, 2015. The water and wastewater scenario was named the “Status Quo” as it assumed the City would continue implementation of the deferred rate adjustments in accordance with City’s Order No. 2014-06-047. In June 2014 the Council voted to adjust the 2012 recommended water and wastewater rate plans as follows:

- February 2015 adjustment was deferred until February 2016
- February 2016 adjustment was reduced by ½
- September 2016 adjustment was reduced by ½

The assumptions used in the Status Quo Scenario was residential account growth of 2-3 per year, 60 unit multi family complex opening in FY 2017, most operating expenses increasing 2-5% and the CIP being fully funded. The CIP did not include the IOI Rehabilitation project due to unknown costs and timeline of the project.

Table ES-15 is a summary of the revenue analysis for FY16 and FY17 for the 2015 12 02 – Status Quo scenario. The table illustrates that with the deferred rate implementations passed by the 2014 Council, the City would have a water and wastewater revenue shortfall of \$150,848 in FY16 and \$540,388 and FY2017.

Table ES-15

CITY OF NOGALES		WATER AND WASTEWATER REVENUE ANALYSIS	
Scenario: 2015 12 02 - "Status Quo"		2016	2017
Revenues			
Water/WW Rates	\$	5,210,559	\$ 5,462,486
Non-Rate Revenue		634,030	653,051
Other		-	-
Total		<u>5,844,589</u>	<u>6,115,537</u>
Cost of Service			
Operating		2,752,235	2,863,828
NiWWTP		950,000	986,882
Chemicals/Electricity/Materials		665,943	706,206
Capital Outlays		419,897	407,724
Debt Service		<u>1,207,362</u>	<u>1,691,785</u>
Total		<u>5,995,437</u>	<u>6,656,426</u>
Net Revenues for Contingency		(150,848)	(540,888)

The project team was asked by staff to revisit the Sanitation – Status Quo rate scenario that was initially presented for review on December 2, 2015. The scenario was named the “Status Quo” as it assumed the City would continue the same number garbage, recycling and green waste pickups and that collections would continue to be provided by the City.

The assumptions used in the Status Quo Scenario was residential account growth of 2-3 per year, 60 unit multi family complex opening in FY 2017, most operating expenses increasing 2-5% and the CIP being fully funded.

Table ES-16 is a summary of the revenue analysis for FY16 and FY17 for the 2016 03 08 – Status Quo scenario. The table illustrates that with the deferred rate implementation for the sanitation utility will have a revenue shortfall of \$128,656 in FY16 and \$46,607 and FY2017. This assumes that the Council approves a 22% rate increase in March 2017. Absent the 22% increase being implemented in March 2017 the FY17 revenue deficit would be \$181,677.

Table ES-16

CITY OF NOGALES		SANITATION REVENUE ANALYSIS	
Scenario: 2016 03 08 - "Status Quo"			
	FY2016		FY2017
Revenues			
Sanitation Rates	\$ 2,444,295	\$	2,590,895
Non-Rate Revenue	275,563		275,563
Total	2,719,858		2,866,458
Cost of Service			
Operating	1,467,107		1,515,269
Transfer and Tipping	869,629		895,718
Allocation and Transfers	206,781		212,984
Capital Outlays	300,583		280,583
Debt Service	4,414		8,510
Total	2,848,514		2,913,065
Net Revenues for Contingency	(128,656)		(46,607)

It is important to note that, at the time of finalization of this report, additional analysis was being completed with estimates of rate adjustments that will be needed to bring the City's water, wastewater and sanitation funds back to viable financial standing and begin to have the ability to meet debt coverage ratios in order issue debt to finance much needed capital improvement projects.

Non-Rate Fees and Services

As is common for all utilities, The City maintains a schedule of fees and charges for services that are offered in addition to basic monthly water, wastewater and sanitation service. Unlike utility rates, which are charged to all active ratepayers, these fees are only charged to those who specifically request the associated service or who are violating the utility's codes. These fees are generally known as Non-Rate Fees and Services.

The City's Non-Rate Fees have not been reviewed or adjusted, some since the early 1990s. The City seeks to analyze the cost it incurs in providing each of these services to the associated ratepayer as well as an analysis of what other cities charge for similar fees and services. This will form the basis of the fee recommended to be charged for each service.

In order to be properly calculated and implemented, each category of Non-Rate Fees and Services must have its costs calculated according to a basic, generally-accepted methodology. This methodology has been closely followed during the course of this study. The non-rate revenue calculation model is presented in Appendix C of this report presents the cost calculation methodology in detail.

Based on the analysis completed for this Non-Rate Fees and Services Analysis it is recommended that the City implement a number of additional non-rate fees and update existing fees. Some of these implementations will be administrative in nature and require forms to be developed and staff trained to administer the fees. Other fees, like the Fats, Oils and Grease (FOG) fees will need to have a program developed in order to administer and follow thru on implementing the fees.

Tables ES-17 through ES-19 illustrates the details of revenue forecast for each of the non-rate and service fees in the Administrative, Water, Wastewater and Sanitation areas.

TABLE ES-17

CITY OF NOGALES, ARIZONA NON-RATE FEES AND SERVICES CALCULATION MODEL						
	FY 2015 Revenue	Current Fee	Proposed Fee	Est Annual No of Fees Charged	Forecast Revenue Proposed Fees	Annual Revenue Increase
Administrative Fees						
Late Charge - W_WW and Sanitation	\$ 8,242	1.5% of Past Due	As Current	-	\$ 8,242	-
* Delinquency Notice - W_WW and Sanitation	-	-	6.00	1,727	10,362	10,362
Non-Sufficient Funds Charge	825	25.00	25.00	-	825	-
Security Deposit - Water - Residential	67,463	Per Ordinance	As Current	-	67,463	-
Security Deposit - Water - Non-Resid	47,170	Per Ordinance	As Current	-	47,170	-
Security Deposit - WW - Residential	-	-	60.00	-	-	-
Security Deposit - WW - Non-Resid	-	-	175.00	-	-	-
Labor Fees - Regular Business Hours						
Clerical/Specialist	-	-	23.00	-	-	-
Technical/Field	-	-	23.00	-	-	-
Professional	-	-	44.00	-	-	-
Labor Fees - After Hours						
Clerical/Specialist	-	-	34.00	-	-	-
Technical/Field	-	-	34.00	-	-	-
Professional	-	-	67.00	-	-	-
After Hours Call Out - Non-Emergency	-	-	125.00	-	-	-
Materials	-	-	Plus 15%	-	-	-
TOTAL ADMINISTRATIVE	\$ 123,700				\$ 134,062	\$ 10,362

* Customer does not pay for the Past Due Notice, only the Delinquency Notice

TABLE ES-18

CITY OF NOGALES, ARIZONA NON-RATE FEES AND SERVICES CALCULATION MODEL							
	FY 2015 Revenue	Current Fee	Proposed Fee	Est Annual No of Fees Charged	Forecast Revenue Proposed Fees	Annual Revenue Increase	
Water Fees							
New Tap - W							
5/8"	\$ -	\$ 370.00	\$300 + Material	-	\$ -	\$ -	
3/4"	5,229	370.00	\$300 + Material	-	5,229	-	
1"	-	TMO	\$300 + Material	-	-	-	
1 1/2"	-	TMO	\$300 + Material	-	-	-	
2"	715	TMO	TMO	-	715	-	
New Service Establishment - Regular Business Hours	17,023	15.00	60.00	-	68,092	51,069	
** Customer Requested Meter Re-Read	-	25.00	45.00	96	4,320	4,320	
Customer Requested Meter Test Fee	40	40.00	160.00	50	8,000	7,960	
Investigation Fee - W	-	-	120.00	-	-	-	
Meter Tag Fee	-	25.00	40.00	1,727	69,080	69,080	
Meter Tampering	350	\$25-\$250	100.00 + TMO	-	-	-	
Unauthorized Connction/Water Theft							
1st Offense	-	\$25-\$250	\$25-250	-	-	-	
2nd Offense	-	\$500.00	500.00	-	-	-	
3rd Offense	-	\$1,000-\$2,500	\$1,000 - \$2,500	-	-	-	
Reconnect - Residential	25,910	15.00	50.00	-	86,367	60,457	
Reconnect - Non-Residential	-	-	55.00	-	-	-	
Hydrant and Backflow Meter Deposit	15,000	750.00	2,200.00	-	44,000	29,000	
Hydrant and Backflow Meter Set Up and Take Down	-	-	175.00	20	3,500	3,500	
Hydrant - Unauthorized Usage	-	-	500.00	-	-	-	
Lab Service Fees	-	-	TMO	-	-	-	
*** Private Property Leak Detection	-	-	80.00	12	960	960	
Fire Protection	-	-	7.11	-	-	-	
TOTAL WATER	\$ 64,267				\$ 290,263	\$ 226,346	
** City provides one Meter Re-read to each water customer per calendar year.							
*** City provides one Private Property Leak Detection to each water customer per calendar year.							
Wastewater Fees							
New Tap - WW	\$ -		\$255 + TMO	30	\$ 8,250	\$ 8,250	
**** Customer Requested Sewer Line Check	-	\$ -	\$ 340.00	60	20,400	20,400	
Plan Review Developer Lines-WW	-	150.00	525.00	20	10,500	10,500	
Inspection Fee Developer Lines-WW	-	0.02	0.05	-	-	-	
Backflow Device Inspection Fee	-	-	\$6 Monthly	1,070	77,040	77,040	
FOG Installation Inspection Fee	-	-	110.00	12	864	864	
FOG Annual Inspection Fee	-	-	\$9 Monthly	82	5,904	5,904	
FOG Re-Inspection Fee	-	-	75.00	5	360.00	360.00	
TOTAL WASTEWATER	\$ -				\$ 123,318	\$ 123,318	
**** City provides one Customer requested Sewer Line Check per calendar year.							

TABLE ES-19

CITY OF NOGALES, ARIZONA NON-RATE FEES AND SERVICES CALCULATION MODEL							
	FY 2015 Revenue	Current Fee	Proposed Fee	Est Annual No of Fees Charged	Forecast Revenue Proposed Fees	Revenue Increase	
Sanitation Fees							
Commercial - Set-Up Fee	\$ -	\$ -	\$ 60.00	84	5,040	5,040	
***** Resid - Container Replacement	-	-	80.00	50	4,000	4,000	
Resid - Bulk Pick-Up	-	-	105.00	37	3,885	3,885	
Comm - Special Pick-Up							
3 and 4 Cu Yd Container	-	-	90.00	84	7,560	7,560	
6 Cu Yd Container	-	-	100.00	84	8,400	8,400	
8 Cu Yd Container	-	-	115.00	84	9,660	9,660	
TOTAL SANITATION	\$ -				\$ 38,545	\$ 38,545	
***** Each Residential Customer is allowed 1 container replacement without charge during a calendar year.							

Tables ES-20 presents a summary of the Project Team's recommended Non-Rate Fees and Service and revenue projections by Administrative, Water, Wastewater and Sanitation. It is important to note that in order for the City to realize the estimated revenue close attention must be paid to developing and implementing processes for these fees to be assessed. No revenue has been forecast for fees or charges based on Time and Materials.

TABLE ES-20

CITY OF NOGALES, ARIZONA NON-RATE FEES AND SERVICES CALCULATION MODEL				
	FY 2015 Revenue	Forecast Revenue Proposed Fees	Annual Revenue Increase	
ADMINISTRATIVE	\$ 123,700	\$ 134,062	\$ 10,362	
WATER	64,267	290,263	226,346	
WASTEWATER	-	123,318	123,318	
SANITATION	-	38,545	38,545	
TOTAL	\$ 187,967	\$ 586,188	\$ 398,571	