HANSFORD
ECONOMIC CONSULTING

DRAFT

Wastewater Rate Study

September 29, 2017

HEC Project #150165

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Section 1: INTRODUCTION

1.1 PURPOSE OF THE STUDY

The City of Newman (City or Newman) contracted with Hansford Economic Consulting (HEC) to perform a Wastewater Rate Study (Study). The purpose of this Study is to determine the level of funding required to adequately operate the wastewater system in a safe manner and provide the residents and businesses of the City wastewater service that meets State and Federal regulatory requirements.

This Study provides an explanation of, and justification for, calculated wastewater rates by customer type through June 30, 2022 (a five-year period), and documents adherence to the law regarding the setting of rates by a municipality. Specifically, the rates were designed in compliance with California Constitution Article 13D (commonly referred to as Proposition 218), which requires that the rates for wastewater service fees and charges shall not be extended, imposed, or increased by any agency unless they meet all of the following requirements:

(1) Revenues derived from the fee or charge shall not exceed the funds required to provide the property related service.

(2) Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.

(3) The amount of a fee or charge imposed upon any parcel or person as an incident of property ownership shall not exceed the proportional cost of the service attributable to the parcel.

(4) No fee or charge may be imposed for a service unless that service is actually used by, or immediately available to, the owner of the property in question. Fees or charges based on potential or future use of a service are not permitted.

(5) No fee or charge may be imposed for general governmental services including, but not limited to, police, fire, ambulance or library services, where the service is available to the public at large in substantially the same manner as it is to property owners.

The wastewater financial model projects revenues and expenses, and calculates rates for the next ten years; however, the City is only proposing to adopt rates for the next five years with the Proposition 218 notification and hearing.

1.2 BACKGROUND

The City provides wastewater service to residents and businesses of the City.

The wastewater system is accounted for in the wastewater fund which includes funds 60 (sewer operations), 61 (sewer capital), and 62 (sewer lift station operations). In addition, the City collects impact fees and funds projects specifically benefitting new development in fund 41. The wastewater fund is an enterprise fund. An enterprise fund is a fund that is intended to recover its costs through user fees and charges. Enterprise funds also provide the repayment capacity for, and make debt service payments on, any debt incurred for capital projects; therefore, any enterprise fund bond-funded projects do not diminish the City's general fund debt capacity.

The City last increased rates July 1, 2011. Since 2011, the annual costs of operating the wastewater system (excluding debt service) have increased from approximately $1.4 million to $2.7 million. Revenues are approximately $2.6 million each year. There are substantial capital outlays required for necessary capital improvement projects in the City's 10-year capital improvement project (CIP) schedule. Without a rate increase, within the next two fiscal years, the wastewater fund would sustain annual losses that would worsen each year.

In determining an appropriate rate structure for wastewater customers that would meet the requirements of Article 13D the rate study considered the following key objectives:

- Rates must be capable of generating sufficient revenues to meet all annual financial obligations of the wastewater enterprise fund;
- Changes to the rate structure must be administratively feasible (compatible with the existing billing system and straightforward to explain to customers);
- The rate structure should be as reflective of customer demands and burdens on the wastewater system as possible; and
- Revised rates must be supportive of City goals, including meeting target reserve levels and keeping within affordability guidelines.

This Study presents the result of the analysis and recommendations for the rate structure that best meets these objectives under current and projected conditions.

1.3 METHODOLOGY

This report was prepared using the principles established by the Water Environment Federation Manual of Practice No. 27 and guidelines prepared by the California State Water Resources Control Board for State Revolving Fund financing. This Study uses the functional cost allocation methodology to determine rates[1].

[1] Chapter 6, pages 110-120, Financing and Charges for Wastewater Systems, Manual of Practice No. 27.

The following four steps outline how wastewater rates are calculated such that the monthly wastewater rates meet California's legal requirements.

1. **Establish the Wastewater Customer Base and User Characteristics** – Wastewater flow and strength data for each customer type is based on City flow measurements and industry standards.

2. **Project the Revenue Requirement and Allocate to Collection and Treatment** – The revenue requirement analysis compares the revenues of the utility to its operating and capital costs to determine the adequacy of existing rates to recover the utility's costs. Components of revenue requirement include capital improvement costs, system rehabilitation costs, operations and maintenance costs, debt service costs, and operating reserve costs. Non-rate revenue credited against the projected costs include interest income, sale of property, and savings from the Solar City project at the wastewater treatment plant.

3. **Allocate Revenue Requirement Based on Flow and Strength and Determine Unit Costs** – The revenue requirement is allocated based on flow and strength depending on the percentage distribution of operations and maintenance operations attributed to flow, biological oxygen demand (BOD),[2] and total suspended solids (SS).[3] Per unit revenue requirement for each projected year is determined by dividing the allocated revenue requirement by the demand for each customer type.

4. **Determine Revenue Requirement by Customer Type** – Per unit costs from step 3 are multiplied by the flow and strength characteristics of each customer category to determine the annual cost by customer type.

1.4 MAJOR ASSUMPTIONS

Several major assumptions influence the scope of the report and findings herein. They are summarized here:

- **Wastewater CIP Projects will be funded through grants, rates, connection/impact fees, reserves, and loans from low-cost funding sources.** The City has secured a $500,000 grant through the Clean Water State Revolving Fund (CWSRF) program for planning costs associated with necessary upgrades at the wastewater treatment plant. This cost is removed from the CIP in the rate study. Rates will be the primary revenue source used to fund capital outlay needs for existing and future customers. Connection and impact fees will only be used for projects that are related to new

[2] BOD demand is the amount of dissolved oxygen needed by aerobic biological organisms in a body of water to break down organic material present in a given water sample at certain temperature over a specific time period. The term also refers to a chemical procedure for determining this amount.
[3] Total SS is a measure of the combined content of all inorganic and organic substances contained in a liquid in molecular, ionized or micro-granular (colloidal sol) suspended form.

growth in the City and will be used to repay existing customers for up-front funding of projects benefiting new customers that existing customers pay for. Reserves will be used for immediate cash purchases (such as for the Rocha land purchase). For large infrastructure projects that are needed when the enterprise fund has insufficient cash flow, the City will apply for low interest loans and/or grants. The financial model assumes that the aeration basins and the groundwater well at the treatment plant are debt financed, and that the Prince Street to Merced Street pipe upsizing project is debt financed.

- **Existing Customers pay for Future Customers' share of CIP costs.** Capital projects benefit existing and future customers. Costs are allocated to each customer group according to their use of the facilities. With the exception of future users' share of manhole and line replacement costs that are subject to the pace of actual growth experienced in the City, all costs are paid for by existing customers. Future customers repay existing customers as cash is available. In the financial model, future customers pay for their share of debt service associated with the aeration basins and the groundwater well at the treatment plant, as well as their share of the Prince Street to Merced Street pipe upsizing project.

- **System rehabilitation costs are included in the rate model.** The City does not currently collect money for system rehabilitation, which results in capital repair and replacements only occurring when there is sufficient cash accumulated. To allow for a systematic approach to capital repair and replacement, and to help prolong the life of the assets at a lower cost, system rehabilitation is included in the rates.

- **The new rate structure is assumed to be in effect February 8, 2018 followed by July 1 of 2018, 2019, 2020, and 2021.** The financial model extends out ten years; however, only adopting a rate schedule for the next five years is recommended.

- **Annual operation and maintenance costs are increased based on historical increases and City expectations.** The analysis uses a 6.0% annual cost escalator for all operating costs except utilities, supplies and routine repairs (escalated 5.0% each year), and the internal administrative surcharge (escalated 3.0% each year).

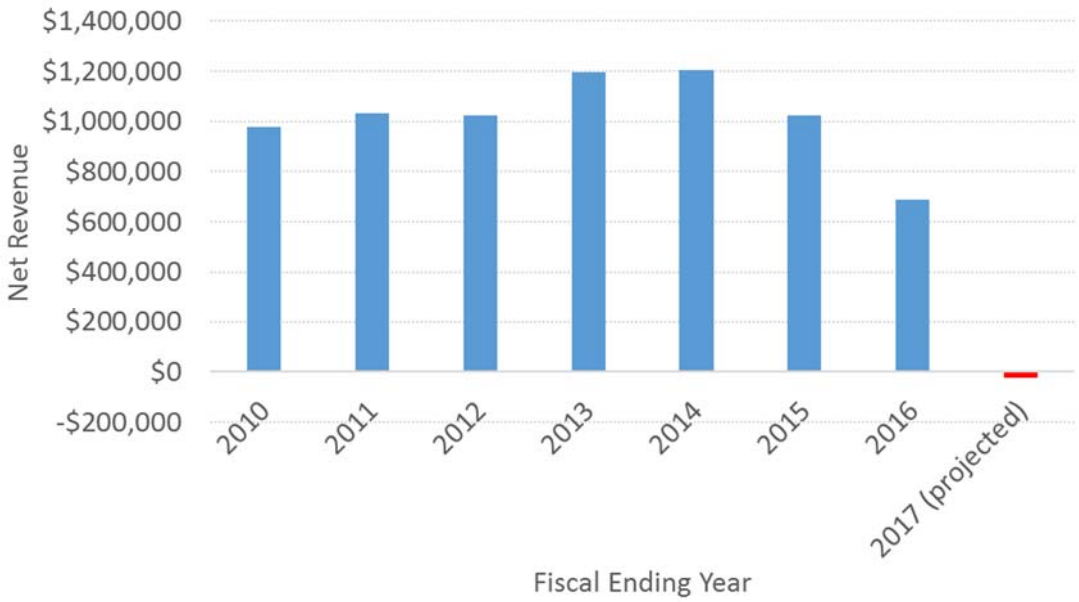
- **Rate structure is modified.** Small changes to the rate structure include: a) removal of customer classifications with no customers, b) including religious places as residential because their wastewater characteristics are more similar to residential than non-residential, c) separating grocery markets in the restaurant/food processing category because of their substantially greater water use, and d) eliminating the water allowance for non-residential and replacing it with a return flow factor based on best estimates of water reaching the wastewater treatment plant. There is a shift in costs between customer types as the cost of service has been updated to reflect the current City customer base.

Appendix A provides support tables for the wastewater rates analysis.

Section 2: SUMMARY OF FINDINGS

The wastewater enterprise fund is financially healthy; however, in fiscal year ending 2017 it is projected to have a net operating loss. With the capital improvement projects necessary over the next ten years, the fund is projected to experience further and worse net operating losses without a rate increase. **Figure 1** shows the historical net revenues of the fund and the projected net revenues for fiscal year ending 2017, excluding debt service. Debt service has been excluded from the figure due to a balloon payment for the wastewater fund's share of the City Hall purchase and retirement of all debt from the fund in 2017. Further details of historical revenues and expenditures are provided in **Tables A-1** through **A-3** in **Appendix A**.

Figure 1
Historical Net Revenues of Funds 60, 61, and 62 Combined



2.1 KEY FINDINGS

- The City must replenish its reserves for emergency system repairs and other unforeseen potential costs.

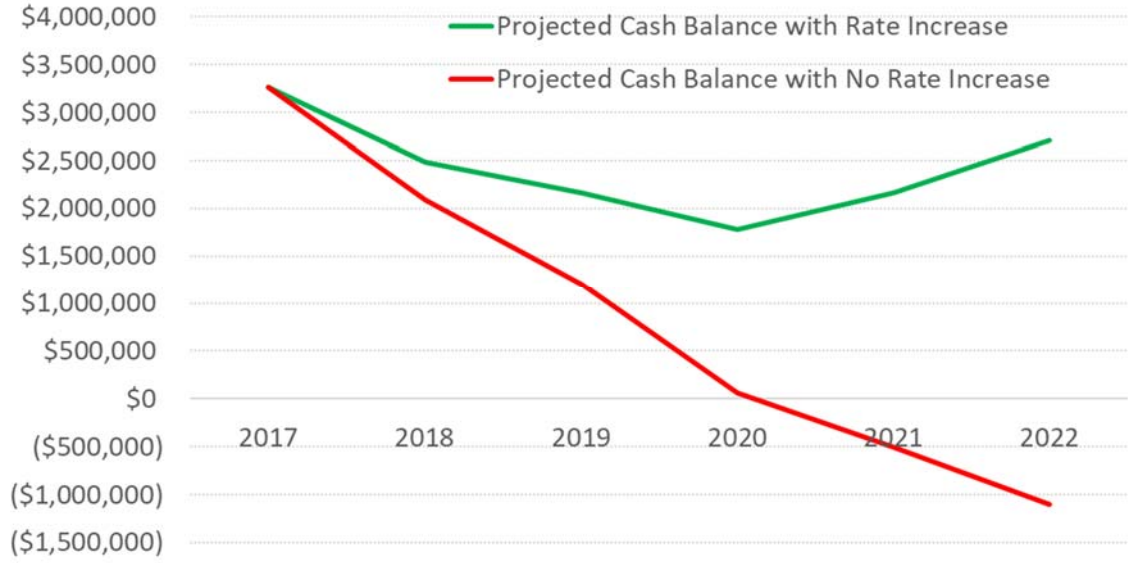
- The City needs to collect for system rehabilitation in rates so that repairs and replacement of existing assets can be conducted in a timely fashion that prolongs the life of the assets at a lower cost.

- Existing customers will pay for all the debt service associated with facilities that benefit both existing and future customers in the short-run. Future users' fees will be transferred to the enterprise fund as available. Transfers should reduce the size of rate increases in the future by retiring debt early or relying on the future users' stream of payments to pay for a portion of the debt service.

- By raising rates over the next 5 years the City will generate sufficient revenue to meet adequate bond coverage, and pay for the necessary CIP items.

- If the City does not increase rates (but completes the capital improvements as listed in this study), the wastewater enterprise fund will have to be supported with other City funds, draining the City's ability to fund other essential services. **Figure 2** shows the wastewater enterprise fund balance with and without a rate increase. The figure shows that over the next five years, $3.8 million would have to be provided by other City funds. The deficit would worsen further in the subsequent five years.

Figure 2
Projected Five-Year Wastewater Cash Balance



2.2 CALCULATED WASTEWATER RATES

Table 1 shows the calculated new rates effective February 8, 2018. Of note, religious places are now included in the residential customer category. Grocery markets have been separated into their own commercial category. The flow charge for non-residential customers is applied to total water use each month and multiplied by a return flow factor. The commercial use charge will be applied to 85% of water used each month, the restaurant/grocery use charge will be applied to 90% of water used each month, and the

industrial charge will be applied to 100% of water used each month. These percentages represent the best estimate of water that is returned to the wastewater system and sent to the wastewater treatment plant by customer category, as established by examining historical water meter reads.

Table 1
Summary of Calculated Wastewater Rates as of February 8, 2018

Customer Category	Monthly Base Charge		Flow Charge		
Residential					
1 Single Family (SF) & Religious Places	$37.31	per unit	n.a.		
1 Multi-Family (MF)	$33.58	per unit	n.a.		
1 SF + 1 MF	$70.87	per account	n.a.		
Commercial					**Return Flow Factor [2]**
1 Commercial	$51.35	per account	$3.84	per hcf	85%
1 Commercial + 1 SF	$88.65	per account	$3.84	per hcf	85%
1 Commercial + 1 MF	$84.93	per account	$3.84	per hcf	85%
1 Commercial + 2 MF	$118.51	per account	$3.84	per hcf	85%
2 Commercial	$102.69	per account	$3.84	per hcf	85%
2 Commercial + 1 SF	$140.00	per account	$3.84	per hcf	85%
2 Commercial + 3 MF	$203.43	per account	$3.84	per hcf	85%
3 Commercial	$154.04	per account	$3.84	per hcf	85%
4 Commercial	$205.38	per account	$3.84	per hcf	85%
Restaurant / Grocery					
Restaurant	$81.67	per account	$3.13	per hcf	90%
Grocery Market (Nob Hill)	$975.79	per account	$3.13	per hcf	90%
1 Commercial + 1 Restaurant	$133.01	per account	$3.13	per hcf	90%
Schools	$1.66	per student	n.a.		
Industrial [1]					
Hi-West Foods	$43.98	per account	$2.34	per hcf	100%
Di-Mare	$497.43	per account	$2.34	per hcf	100%
Foster Farms	$1,815.25	per account	$2.34	per hcf	100%
Saputo Cheese					
Capacity Charge Flow	$33,768.41	base per month for average 300,000 gallons/day			
Per Gallon per Day (average)	$0.09389	per average gallon/day			
Capacity Charge BOD	$14,460.19	base per month for average 4,010 pounds/day			
Per Pound per Day (average)	$3.00799	per average pound/day			

Source: HEC. sum rates

[1] Excludes Saputo Cheese. Di-Mare has two accounts.
[2] Multiply metered water consumption factor by the return flow factor before applying the flow charge per hcf.

Table 2 below shows current rates and the calculated five-year wastewater rate schedule by customer category.

Table 2
Five-Year Projection of Wastewater Rates

Customer Category	Base Charge	Current	Fiscal Year Ending				
			2018	2019	2020	2021	2022
		Effective Date	*2/8/2018*	*7/1/2018*	*7/1/2019*	*7/1/2020*	*7/1/2021*
Residential							
1 Single Family (SF) & Religious Places	per unit per month	$37.31	$37.31	$39.43	$41.79	$44.31	$46.96
1 Multi-Family (MF)	per unit per month	$33.58	$33.58	$35.58	$37.71	$39.99	$42.38
1 SF + 1 MF	per account per month	$70.87	$70.87	$75.01	$79.50	$84.30	$89.33
Commercial							
1 Commercial	per account per month	$37.31	$51.35	$54.35	$57.60	$61.08	$64.74
1 Commercial + 1 SF	per account per month	$74.61	$88.65	$93.78	$99.39	$105.39	$111.70
1 Commercial + 1 MF	per account per month	$70.87	$84.92	$89.93	$95.31	$101.06	$107.12
1 Commercial + 2 MF	per account per month	$104.45	$118.50	$125.51	$133.02	$141.05	$149.49
2 Commercial	per account per month	$74.61	$102.69	$108.69	$115.20	$122.15	$129.48
2 Commercial + 1 SF	per account per month	$111.91	$140.00	$148.12	$156.98	$166.46	$176.44
2 Commercial + 3 MF	per account per month	$138.03	$203.42	$215.44	$228.33	$242.12	$256.61
3 Commercial	per account per month	$111.91	$154.04	$163.04	$172.80	$183.23	$194.23
4 Commercial	per account per month	$149.21	$205.38	$217.39	$230.39	$244.30	$258.97
Commercial Flow Charge per hcf [1]		*$3.34*	*$3.84*	*$4.06*	*$4.30*	*$4.56*	*$4.84*
Restaurant / Grocery							
Restaurant	per account per month	$65.94	$81.67	$86.71	$91.91	$97.45	$103.37
Grocery Market (Nob Hill)	per account per month	$65.94	$975.79	$1,036.07	$1,098.14	$1,164.33	$1,235.07
1 Commercial + 1 Restaurant	per account per month	$103.25	$133.01	$141.06	$149.51	$158.52	$168.11
Restaurant/Grocery Flow Charge per hcf [1]		*$6.31*	*$3.13*	*$3.32*	*$3.52*	*$3.73*	*$3.96*
Schools	per student per month	$1.55	$1.66	$1.76	$1.86	$1.97	$2.09
Industrial [2]							
Hi-West Foods	per account per month	$85.83	$43.98	$46.70	$49.50	$52.49	$55.68
Di-Mare	per account per month	$85.83	$497.43	$528.29	$559.94	$593.69	$629.80
Foster Farms	per account per month	$85.83	$1,815.25	$1,918.76	$2,033.52	$2,156.34	$2,285.11
Industrial Flow Charge per hcf [1]		*$2.82*	*$2.34*	*$2.48*	*$2.62*	*$2.78*	*$2.95*
Saputo Cheese							
Capacity Charge Flow	base for 300,000 galls/day	$29,490.00	$33,768.41	$35,787.51	$37,929.86	$40,218.02	$42,644.26
Per Gallon per Day (average)		*$0.02195*	*$0.09389*	*$0.09951*	*$0.10546*	*$0.11183*	*$0.11857*
Capacity Charge BOD	base for 4,010 lbs/day	$7,851.58	$14,460.19	$15,521.01	$16,454.04	$17,440.91	$18,544.33
Per Pound per Day (average)		*$3.11*	*$3.01*	*$3.23*	*$3.42*	*$3.63*	*$3.86*

Source: HEC. 5-yr rates

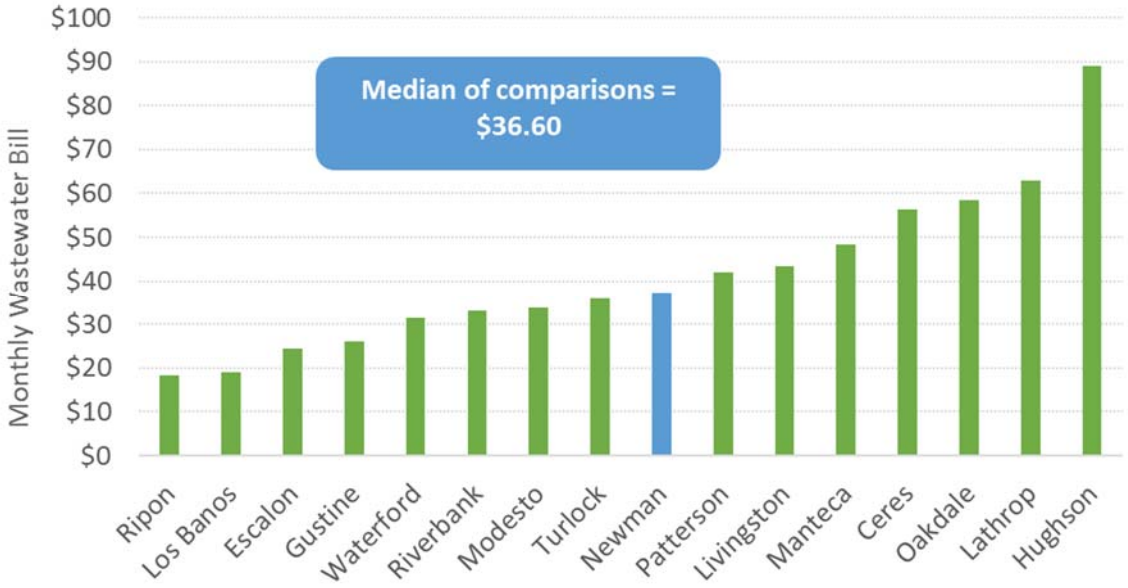
[1] Current flow charge per hcf cannot be compared to projected flow charges because in the projected flow charges there is no base allowance of water. Multiply metered water consumption factor by the return flow factor before applying the flow charge per hcf. Flow factors are 85% for commercial, 90% restaurant/grocery establishments, and 100% for industrial customers.

[2] Excludes Saputo Cheese. Di-Mare has two accounts.

Residential customers' wastewater bills would not increase in February 2018. All other customer categories would experience a rate change February 8, 2018. As a result, some customers would have higher bills, and some customers would have lower bills. Following the initial year cost of service adjustments, all rates increase 6% per year.

A comparison of Newman's wastewater bill for a typical single family home is shown in **Figure 3**. Wastewater bills are in the mid-range compared to neighboring and regional cities. Newman's residential wastewater rates will remain the same until July 1, 2018.

Figure 3
Single Family Monthly Wastewater Bill Comparison



Section 3: WASTEWATER RATES CALCULATIONS

3.1 CURRENT CONDITIONS

The City services a population of approximately 11,000 and it has sustained an annual average population increase of 2.7% since 2000. The number of occupied housing units has grown at a slightly lesser annual average rate of 2.5%. Historical City growth is illustrated in **Figure 4**. Supporting data is provided in **Table A-4**.

Figure 4
Historical City Population and Housing Units

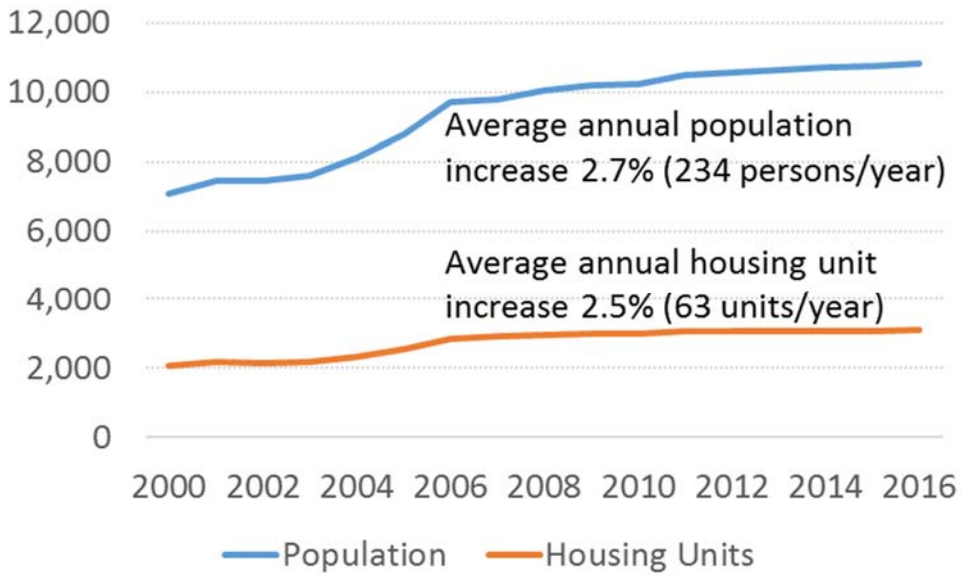


Figure 5 shows the percentage of wastewater customers by customer category. Residential customers comprise 96% of the wastewater system customer base.

Figure 6 shows the share of typical annual flow to the wastewater treatment plant by customer category. Although residential customers comprise 96% of the customer base, they only comprise 61% of the City's wastewater flow. Saputo Cheese flow comprises just over one-quarter of the total treated wastewater. Other non-residential users and schools generate 14% of total flow.

Figure 5
Wastewater Customers by Category

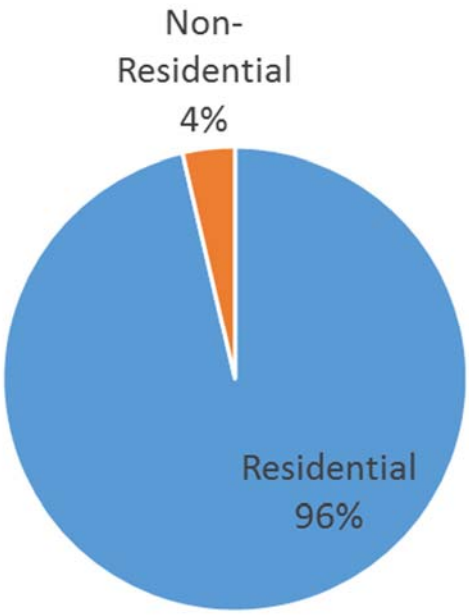
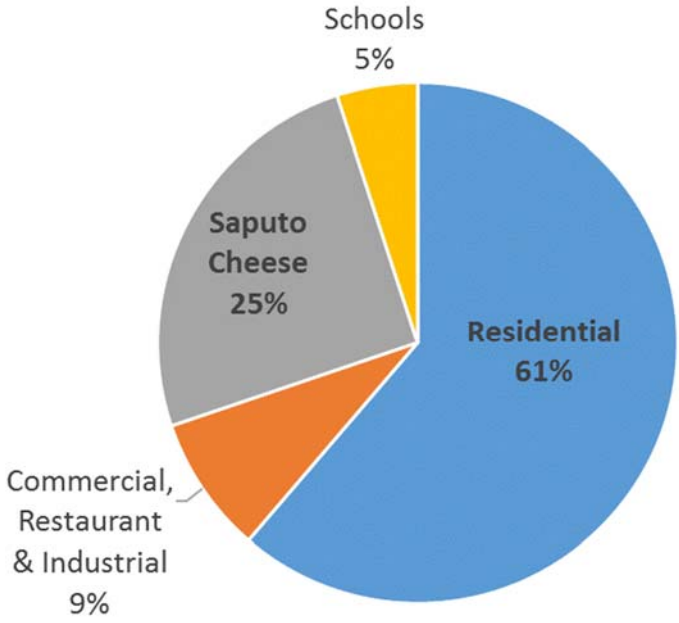


Figure 6
Wastewater Flow by Customer Category



The wastewater system is funded through monthly charges, fees, and investment earnings. **Figure 7** below shows the annual share of revenues by source for the past seven years. Rates comprise 91% of total revenues. The existing wastewater rate schedule is shown in **Table 3**.

Figure 7
Wastewater System Revenue Sources

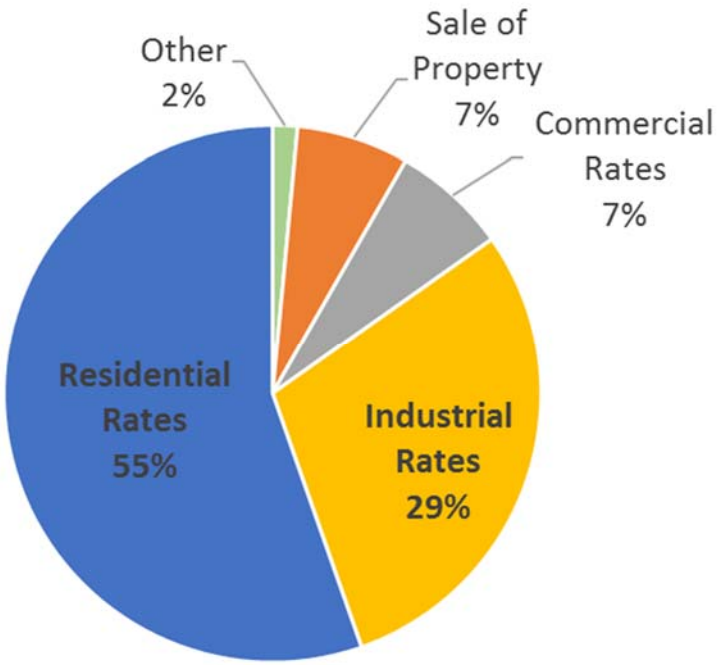


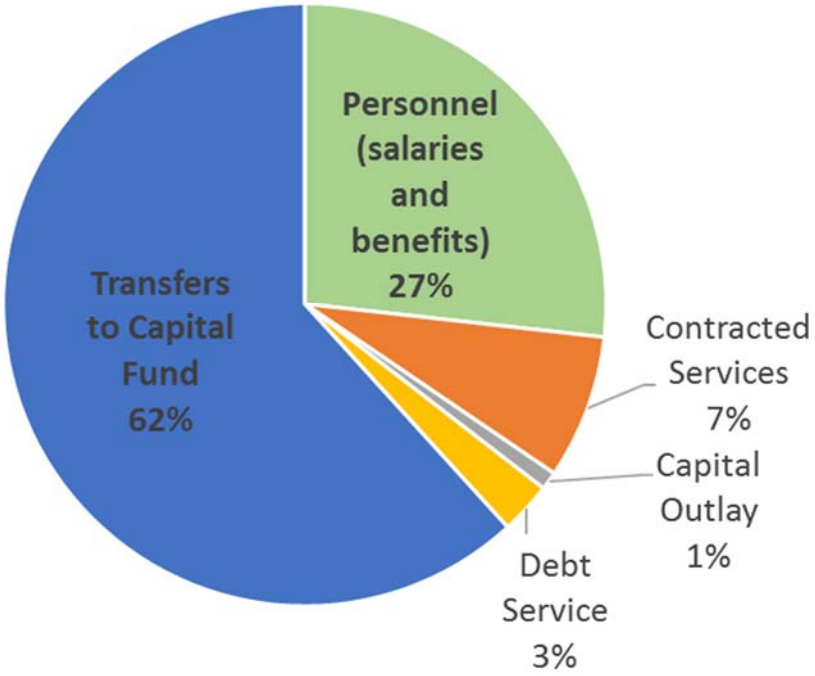
Table 3
Existing Wastewater Rate Schedule

Customer Category	Class	Base Monthly Rate	Basis of Base Charge	Excess Use Charge per HCF	Basis of Excess Charge
Residential					
Single Family	1	$37.31	Per Unit		
Multi-Family	2	$33.58	Per Unit		
Single Family Low Income	8	$37.31	Per Unit		
Multi-Family Low Income	9	$33.70	Per Unit		
House + 1 Apt	23	$70.87	Per Unit		
Schools					
Yolo Schools	4	$1.55	Per Student		
Von Renner	5	$1.55	Per Student		
Other	6	$1.55	Per Student		
Commercial					
1 Commercial + 1 Single Family	19	$74.61	Per Account	n.a.	n.a.
Commercial (Com)	20	$37.31	Per Account	n.a.	n.a.
Commercial	21	$37.31	Per Account	$3.34	Each 100 cu ft above 1,000 cu ft
Commercial + 1 Apartment	22	$70.87	Per Account	$3.34	Each 100 cu ft above 2,000 cu ft
Commercial + 1 Single Family	24	$74.61	Per Account	$3.34	Each 100 cu ft above 2,000 cu ft
Commerical + 3 Apartments	25	$138.02	Per Account	$3.34	Each 100 cu ft above 4,000 cu ft
3 Commercial + 1 Single Family	26	$149.21	Per Account	$3.34	Each 100 cu ft above 4,000 cu ft
2 Commercial + 1 Single Family	27	$111.91	Per Account	$3.34	Each 100 cu ft above 3,000 cu ft
3 Commercial	28	$111.91	Per Account	$3.34	Each 100 cu ft above 3,000 cu ft
4 Commerical	30	$149.21	Per Account	$3.34	Each 100 cu ft above 4,000 cu ft
2 Commerical	31	$74.61	Per Account	$3.34	Each 100 cu ft above 4,000 cu ft
2 Single Family	32	$74.61	Per Account	n.a.	n.a.
1 Commercial + 2 Apartments	33	$104.45	Per Account	$3.34	Each 100 cu ft above 3,000 cu ft
Commercial to 7,000 cu ft	70	$261.12	Per Account	$3.34	Each 100 cu ft above 7,000 cu ft
1 Single Family + 2 Apartments	71	$141.76	Per Account	n.a.	n.a.
Restaurant / Food Processing					
Restaurant/Food Processing	7	$65.94	Per Account	$6.31	Each 100 cu ft above 1,000 cu ft
Restaurant (Res)	10	$65.94	Per Account	$6.31	
Commercial + Restaurant	29	$103.25	Per Account	$6.31	Each 100 cu ft above 2,000 cu ft
4 Commercial + 2 Restaurant	35	$281.11	Per Account	$6.31	Each 100 cu ft above 7,000 cu ft
Industrial					
Saputo Cheese	Flow	$29,490.00	Base Rate for 300,000 gal/day	$0.02195	Average gal/day
Saputo Cheese	BOD	$7,851.58	Base Rate for 4,010 lbs/day	$3.11	Average lbs/day
Hi-West Foods		$85.83	Per Account	$2.82	Each 100 cu ft above 1,000 cu ft
DiMare - 1		$85.83	Per Account	$2.82	Each 100 cu ft above 1,000 cu ft
DiMare - 2		$85.83	Per Account	$2.82	Each 100 cu ft above 1,000 cu ft
Foster Farms		$85.83	Per Account	$2.82	Each 100 cu ft above 1,000 cu ft

Source: City of Newman. curr rates

Figure 8 displays the components of operating expenditures for the past seven years for the wastewater system. A large portion of revenues were transferred to the capital fund in recent years to pay for asset replacement and expansion of the wastewater treatment plant.

Figure 8
Historical Wastewater System Expenditures (fund 60)



Calculation of wastewater rates from fiscal year ending 2018 onwards is based on the four-step methodology outlined in Section 1. All of the tables in this section show the calculations for the first year of the analysis, fiscal year 2017-18, in order to demonstrate the model and illustrate how the rates are calculated. The same cost allocation methodology is used for all years considered in this analysis.

3.1.1. Financial

Step 1. Establish the Wastewater Customer Base and User Characteristics
Wastewater inflow at the treatment plant currently averages 1.10 million gallons per day (MGD). Historical wastewater plant influent flow is shown in **Table A-5**. The number of customers and total calculated flow for each customer and customer category, BOD, and SS characteristics are summarized in **Table 4** on page 16.

Step 2. Project the Revenue Requirement and Allocate to Collection and Treatment Costs
The revenue requirement is the amount to be raised by wastewater charges. The projection of the revenue requirement is the cornerstone for calculation of rates. This section explains the derivation of the revenue requirement for this Study. Components of the revenue requirement include:

- Operations Expenses and Reserves
- Capital Improvements
- Debt Service
- System Rehabilitation

Non-wastewater sales revenue projections are credited against projected operations costs. Non-wastewater sales include interest income, sale of property, and savings from the Solar City Project at the wastewater treatment plant.

3.1.2 Operations Expenses and Reserves

Operating expenses are projected based on fiscal year 2016-17 budgeted expenditures. Operating expenses include annual costs for personnel (including benefits), electricity, supplies and services, the administrative surcharge, as well as typical annual capital outlay for routine repairs (small items). Operating expenses are budgeted at $2.2 million for fiscal year 2016-17. The analysis uses a 6.0% annual cost escalator for all operating costs except utilities, supplies and routine repairs (escalated 5.0% each year), and the internal administrative surcharge (escalated 3.0% each year). Starting in year 5, operating expenses include the addition of a part-time wastewater treatment plant operator. Starting in year 6, costs for a full-time wastewater collection system operator are added, followed by the addition of costs for a part-time wastewater collection employee in year 7.

A comparison of historical operating expenses and indices, including the Bureau of Labor Statistics Consumer Price Index for California and the West Region as well as the Engineering News Record Construction Cost Index (ENR CCI) are shown in **Table A-6** of Appendix A. While indices increased at an average annual of 1.9%-2.7% the City's costs increased at 8.2% per year.

Table 4
Summary of User Characteristics

Customer Category	Billing Basis	No. Billing Units	Wastewater Characteristics: Flow GPD	BOD MG/L	SS MG/L	Existing Treatment Capacity/Load: Flow MGD	BOD Lbs/Day	SS Lbs/Day	Total Annual Capacity/Load: Flow MG	BOD Lbs/Year	SS Lbs/Year
		(A)	*(B)*	*(C)*	*(D)*	*'E)=(A)x(B)/1000000*	*(F)= (C)x(E)x8.34*	*(G)= (D)x(E)x8.34*	*(H)=(E)x365* [1]	*(I)=(C)x(H)x8.34*	*(J)=(D)x(H)x8.34*
Residential											
1 Single Family (SF) & Religious Places	Unit	2,962	205	200	200	0.61	1,012.83	1,012.83	221.6	369,682	369,682
1 Multi-Family (MF)	Unit	398	185	200	200	0.07	122.81	122.81	26.9	44,827	44,827
1 SF + 1 MF	Account	8	390	200	200	0.00	5.20	5.20	1.1	1,900	1,900
Commercial											
1 Commercial	Account	67	470	325	325	0.03	85.35	85.35	11.5	31,154	31,154
1 Commercial + 1 SF	Account	3	675	325	325	0.00	5.49	5.49	0.7	2,003	2,003
1 Commercial + 1 MF	Account	2	655	325	325	0.00	3.55	3.55	0.5	1,296	1,296
1 Commercial + 2 MF	Account	1	840	325	325	0.00	2.28	2.28	0.3	831	831
2 Commercial	Account	4	940	325	325	0.00	10.19	10.19	1.4	3,720	3,720
2 Commercial + 1 SF	Account	1	1,145	325	325	0.00	3.10	3.10	0.4	1,133	1,133
2 Commercial + 3 MF	Account	1	1,965	325	325	0.00	5.33	5.33	0.7	1,944	1,944
3 Commercial	Account	4	1,410	325	325	0.01	15.29	15.29	2.1	5,580	5,580
4 Commercial	Account	3	1,880	325	325	0.01	15.29	15.29	2.1	5,580	5,580
Restaurant / Grocery											
Restaurant	Account	12	580	850	650	0.01	49.34	37.73	2.5	18,009	13,772
Grocery Market (Nob Hill)	Account	1	6,930	850	650	0.01	49.13	37.57	2.5	17,931	13,712
1 Commercial + 1 Restaurant	Account	2	1,050	850	650	0.00	14.89	11.38	0.8	5,434	4,155
Schools [1]	Student	2,802	20	130	100	0.06	60.76	46.74	10.1	10,937	8,413
Industrial [2]											
Hi-West Foods	Account	1	305	925	675	0.00	2.35	1.72	0.1	859	627
Di-Mare	Account	2	3,450	925	675	0.01	53.23	38.84	2.5	19,429	14,178
Foster Farms	Account	1	18,190	474	69	0.02	71.91	10.47	6.6	26,246	3,821
TOTAL						**0.84**	**1,588.31**	**1,471.16**	**294.48**	**568,494**	**528,326**
Saputo Cheese		1	281,000	1,879	700	0.28	4,403.72	1,640.48	102.6	1,607,360	598,774
TOTAL with SAPUTO						**1.12**	**5,992.04**	**3,111.64**	**397.05**	**2,175,854**	**1,127,101**

Source: City of Newman and HEC.

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[1] Schools multiplied by 180 days per year.

[2] Excludes Saputo Cheese.

3.1.3 Capital Improvements

Tables A-7 and **A-8** of Appendix A provide the Capital Improvement Project (CIP) list of facilities in current and future dollars. Major necessary improvements include aeration basin improvements, line and manhole replacement, sewer line upgrades, sewer line upsizing from Prince Street to Merced Street, a new groundwater well for the treatment plant, and the M Street sewer line construction.

Future costs are inflated using the ENR CCI past 10-year annual average increase of 3.1%. Costs of improvements between fiscal year ending 2018 and 2027 in future dollars are estimated at $16.6 million. Of the total estimated costs, $5.1 million benefit existing customers and are to be recovered in customer rates. The remaining $11.5 million benefit future customers; these costs will be recovered through the collection of connection fees over time. Existing customers will pay up-front for projects that benefit future customers. Supporting information with capital improvements listed is provided in **Tables A-9** through **A-12**.

Table 5 below summarizes the CIP costs attributable to existing and future customers in future dollars from fiscal year ending 2018 through fiscal year ending 2027. Over the next five years, there is a total of $8.3 million in CIP costs, of which $2.0 million benefits existing users and $6.3 million benefits future users.

Table 5
Capital Improvements Costs Summary

Customer	Estimated CIP Costs in Future Dollars		
	First 5 Yrs	Next 5 Yrs	10-Yr CIP [1]
	Grant-funded projects excluded		
Existing Customer Share	$2,054,227	$3,089,686	$5,143,913
Future Customer Share [2]	$6,260,804	$5,164,799	$11,425,604
Total Existing and Future	**$8,315,032**	**$8,254,485**	**$16,569,517**

Source: City of Newman and HEC. cip share

[1] Fiscal years ending 2018 through 2027.

[2] Assumes Rocha land purchase is $2.4 million.

Table 6 on the following page shows the sources of CIP funding for existing and future customers. Half of the line and manhole replacement costs (future customers' share of the costs) will be unfunded unless the Rocha land purchase is less than $2.4 million, growth is greater than 40 units per year, or developers provide cash contributions toward the project.

If any or a combination of these occurs, additional cash will be available which could be applied to the future users' share of line and manhole replacement costs.
It is anticipated that 51% of total costs will be funded by cash and/or reserves, 45% by new debt, and the remaining 4% will be built as cash allows (currently identified as unfunded).

Table 6
Sources of CIP Funding

Funding Source	Estimated Cost
	Grant-funded projects excluded
Existing Customers	Future $'s
Cash	$2,189,202
Reserves	$328,368
Debt	$2,626,342
Total Exisitng Customers	**$5,143,913**
Future Customers	
Cash (paid by existing customers)	$2,929,743
Reserves	$2,957,534
Debt	$4,846,348
Unfunded [1]	$691,979
Total Future Customers	**$11,425,604**
Total CIP Costs	**$16,569,517**

Source: City of Newman and HEC. funded

[1] Represents 50% of manhole and line replacement costs.

3.1.4 Debt Service

All of the existing debt associated with the wastewater system will be retired in fiscal year 2016-17.

The financial model assumes that the City obtains three Clean Water State Revolving Fund (CWSRF) loans to fund three CIP projects. The first loan would fund Phase 1 aeration basin improvements and a new groundwater well for the wastewater treatment plant. The second loan would fund Phases 2 and 3 of the aeration basin improvements. The third loan would fund collection system improvements, namely the Prince Street to Merced Street sewer line upsizing. Annual debt service is estimated at approximately $262,00 for aeration basin improvements, $27,000 for the new groundwater well, and $99,000 for the Prince Street to Merced Street sewer line upsizing with this funding source. Debt service payments begin one year after completion of the project. One year of debt service must be accumulated prior to completion of the project. **Table 7** shows the estimated debt service for new facilities.

Table 7
Debt Service Estimates for New Facilities

Item	Estimated Project Costs
Loan 1	
Aeration Basin Improvements - Phase 1	**FY 2018**
Estimated Cost (inflated dollars)	$1,320,158
Contingency (5%)	$66,008
Total	**$1,386,166**
Estimated Annual Debt Service [1]	**$66,228**
Estimated Total Financing Costs	$600,666
New Groundwater Well	**FY 2018**
Estimated Cost (inflated dollars)	$531,234
Contingency (5%)	$26,562
Total	**$557,796**
Estimated Annual Debt Service [1]	**$26,650**
Estimated Total Financing Costs	$241,709
Loan 2	
Aeration Basin Improvements - Phase 2	**FY 2021**
Estimated Cost (inflated dollars)	$1,745,343
Contingency (5%)	$87,267
Total	**$1,832,611**
Estimated Annual Debt Service [1]	**$87,558**
Estimated Total Financing Costs	$794,124
Aeration Basin Improvements - Phase 3	**FY 2023**
Estimated Cost (inflated dollars)	$2,163,434
Contingency (5%)	$108,172
Total	**$2,271,605**
Estimated Annual Debt Service [1]	**$108,532**
Estimated Total Financing Costs	$984,353
Loan 3	
Prince St to Merced St Upsizing	**FY 2025**
Estimated Cost (inflated dollars)	$1,970,210
Contingency (5%)	$98,511
Total	**$2,068,721**
Estimated Annual Debt Service [1]	**$98,839**
Estimated Total Financing Costs	$896,437
Total Debt-Financed Infrastructure Cost	**$8,116,899**
Estimated Total Financing Costs	$3,517,289
Existing Customers Share of Financing Costs	*$1,224,286*
Future Users Share of Financing Costs	*$2,293,003*

Source: State Water Resources Control Board and HEC. new debt

[1] CWSRF loan assumptions:

Interest Rate	2.50%
Term (years)	30

3.1.5 System Rehabilitation Costs

Depreciation is used as the basis for which to collect rates to cover system rehabilitation costs. The Study includes the cost of depreciation in the revenue requirement. Inclusion of system rehabilitation costs demonstrates fiscal responsibility to potential future investors and is necessary to establish good credit[4]. The financial model applies all money collected for system rehabilitation costs toward capital improvements. **Table 8** shows the projected system rehabilitation costs included in the rates. Total system rehabilitation costs include costs to replace existing facilities as well as new facilities built within the rate study period. Supporting tables are found in **Tables A-13** and **A-14** of Appendix A.

[4] Per Governmental Accounting Standards Board (GASB) 34, local governments must report on the value of their infrastructure assets and plan for asset maintenance (including collecting sufficient revenue) to obtain good credit when issuing bonds or procuring other forms of financing for long-term construction projects.

Table 8
System Rehabilitation Costs in Rates

Assets	Fiscal Year Ending										
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
		1	2	3	4	5	6	7	8	9	10
Existing Asset Depreciation [1]	**$173,854**	**$179,069**	**$184,442**	**$189,975**	**$195,674**	**$201,544**	**$207,591**	**$213,818**	**$220,233**	**$226,840**	**$233,645**
New Asset Depreciation											
Sewer Collection System	$811	$16,103	$17,538	$19,017	$34,504	$37,974	$25,631	$27,300	$99,776	$103,967	$108,288
Treatment Plant	$14,998	$55,548	$58,998	$64,925	$109,334	$115,106	$171,819	$183,924	$192,462	$191,031	$194,869
Total Projected Asset Depreciation	**$15,808**	**$71,652**	**$76,536**	**$83,941**	**$143,838**	**$153,080**	**$197,449**	**$211,224**	**$292,238**	**$294,999**	**$303,156**
Total Asset Depreciation	**$189,662**	**$250,721**	**$260,978**	**$273,916**	**$339,512**	**$354,624**	**$405,040**	**$425,042**	**$512,471**	**$521,838**	**$536,801**
% Included in Rates	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
System Rehabilitation Costs	**$189,662**	**$250,721**	**$260,978**	**$273,916**	**$339,512**	**$354,624**	**$405,040**	**$425,042**	**$512,471**	**$521,838**	**$536,801**

Source: City of Newman and HEC.

[1] Increased 3% per year. assets

3.1.6 Revenue Requirement

Table 9 provides the projection of annual costs and revenues and the resulting revenue requirement through fiscal year 2027. The revenue requirement for fiscal year 2016-17 is $2.6 million; however, only $2.4 million is anticipated to be collected.

The total revenue requirement is projected to increase to $3.6 million in fiscal year 2022 and $4.8 million in fiscal year 2027. Over the Study period, 55% of total costs are considered "fixed costs" of the system. Fixed costs are costs that typically do not change regardless of how much of the sewer system capacity is used.

In the first year of the rate increase, fiscal year 2018, the revenue requirement is $2.8 million. The revenue requirement is allocated between wastewater collection and treatment. Approximately 74% of costs are allocated to the treatment plant and 26% of costs are allocated to the collection system. **Table A-15** in Appendix A shows the allocation of projected costs between the wastewater collection system and the treatment plant for fiscal year ending 2018.

Table 9
Projected Revenue Requirement

Expenses and Revenues	Inflation Factor	Budget 2017	Fiscal Year Ending 2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
			1	2	3	4	5	6	7	8	9	10
Expenses												
Personnel (salaries and benefits) **	6.0%	$776,428	$823,014	$872,395	$924,738	$980,222	$1,039,036	$1,101,378	$1,167,461	$1,237,508	$1,311,759	$1,390,464
New part-time WWTP operator **	6.0%	$0	$0	$0	$0	$0	$26,765	$28,370	$30,073	$31,877	$33,790	$35,817
New Collection System operators **	6.0%	$0	$0	$0	$0	$0	$0	$85,111	$120,290	$127,508	$135,158	$143,268
Contracted Services **	6.0%	$492,000	$521,520	$552,811	$585,980	$621,139	$658,407	$697,911	$739,786	$784,173	$831,224	$881,097
Utility - PG & E	5.0%	$265,519	$278,795	$292,735	$307,371	$322,740	$338,877	$355,821	$373,612	$392,292	$411,907	$432,502
Supplies & Routine Repairs [1]	5.0%	$120,000	$136,000	$153,100	$171,364	$190,859	$211,658	$233,833	$257,465	$282,637	$309,437	$337,956
Administrative Surcharge **	3.0%	$129,787	$133,681	$137,691	$141,822	$146,076	$150,459	$154,972	$159,622	$164,410	$169,343	$174,423
Other Operations & Maintenance	6.0%	$376,892	$399,506	$423,476	$448,884	$475,817	$504,367	$534,629	$566,706	$600,709	$636,751	$674,956
Subtotal Operating Fund Expenses		**$2,160,626**	**$2,292,515**	**$2,432,207**	**$2,580,160**	**$2,736,854**	**$2,929,567**	**$3,192,026**	**$3,415,015**	**$3,621,115**	**$3,839,368**	**$4,070,484**
Debt Service												
Existing - City Hall		$195,439	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Existing - Municipal Finance Corp.		$182,033	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
New Debt for Aeration Basin [2]			$66,228	$66,228	$110,007	$110,007	$208,052	$208,052	$262,317	$262,317	$262,317	$262,317
New Debt for Groundwater Well @ WWTP [2]			$26,650	$26,650	$26,650	$26,650	$26,650	$26,650	$26,650	$26,650	$26,650	$26,650
New Debt for Prince St. to Merced St. [2]			$0	$0	$0	$0	$0	$0	$49,419	$49,419	$98,839	$98,839
Subtotal Debt Service **		**$377,472**	**$92,878**	**$92,878**	**$136,657**	**$136,657**	**$234,702**	**$234,702**	**$338,387**	**$338,387**	**$387,806**	**$387,806**
CIP Cash - Existing Customers		$213,777	$132,830	$0	$0	$0	$0	$0	$0	$0	$0	$0
System Rehabilitation		$0	$250,721	$260,978	$273,916	$339,512	$354,624	$405,040	$425,042	$512,471	$521,838	$536,801
CIP Cash - Future Customers		$120,000	$116,871	$229,982	$237,056	$339,178	$229,826	$228,706	$426,882	$571,361	$270,775	$279,105
Operating Reserve		$0	$234,000	$285,000	$265,000	$145,000	$165,000	$80,000	($225,000)	($415,000)	($120,000)	($90,000)
Offsetting Credits												
Solar City Savings	agreement	$101,475	$110,892	$121,874	$132,655	$143,771	$155,424	$167,451	$179,930	$192,877	$206,313	$220,254
Sale of Property	constant	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000
Interest Income	constant	$20,100	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
Reimbursements	constant	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100
Connection Fees	excluded	$27,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Impact Fees	excluded	$7,745	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Offsetting Credits		**$292,420**	**$266,992**	**$277,974**	**$288,755**	**$299,871**	**$311,524**	**$323,551**	**$336,030**	**$348,977**	**$362,413**	**$376,354**
Revenue Requirement		**$2,579,455**	**$2,852,823**	**$3,023,070**	**$3,204,034**	**$3,397,330**	**$3,602,195**	**$3,816,922**	**$4,044,297**	**$4,279,357**	**$4,537,375**	**$4,807,843**
Budgeted FY 2017 Rates Revenue		$2,453,600	$2,453,600	$2,453,600	$2,453,600	$2,453,600	$2,453,600	$2,453,600	$2,453,600	$2,453,600	$2,453,600	$2,453,600
Projected Shortfall with No Rate Increase		**($125,855)**	**($399,223)**	**($569,470)**	**($750,434)**	**($943,730)**	**($1,148,595)**	**($1,363,322)**	**($1,590,697)**	**($1,825,757)**	**($2,083,775)**	**($2,354,243)**
Increase in Rates Needed from FY 2017 Rates			**16%**	**23%**	**31%**	**38%**	**47%**	**56%**	**65%**	**74%**	**85%**	**96%**
Annual Increase [3]			$399,223	$170,247	$180,963	$193,297	$204,865	$214,727	$227,374	$235,060	$258,018	$270,467
Annual Increase in Rates Needed			**16%**	**6%**	**6%**	**6%**	**6%**	**6%**	**6%**	**6%**	**6%**	**6%**
Revenue Requirement in Base Charges ** [4]	**average**		$1,571,092	$1,655,775	$1,789,197	$1,884,094	$2,109,368	$2,302,445	$2,555,618	$2,683,864	$2,869,079	$3,012,875
Percentage of Revenue Requirement in Base Charges	**55%**		50%	50%	51%	51%	54%	56%	58%	58%	59%	58%

Source: City of Newman and HEC.

rev req

[1] Includes costs for lift station routine maintenance at $10,000 per year (in 2010 $'s).

[2] Debt service payments begin one year after construction is complete. Prior to completion one year of debt service must be accumulated.

[3] Increase calculated based on FY 2017 budgeted sewer rate revenues.

[4] The average amount to be collected in base monthly charges is calculated by taking the average percentage of fixed costs shown by two stars over the ten-year period.

3.2 RATES ANALYSIS

Step 3. Allocate Revenue Requirement based on Flow and Strength and Determine Unit Costs

The cost to treat wastewater is a function of the total volume ("flow") and the level of pollutants ("strength") of the wastewater discharged by a customer.

Costs are allocated to customer categories as follows:

1. Allocate the costs (by Cost Category) to flow, BOD and SS
2. Determine the Unit Cost by Cost Category

Each of these steps is described in greater detail below.

1. Cost Allocation to Flow, BOD, and SS

Costs are allocated to flow, BOD, and SS based on percentage allocation or distribution factors. These percentage allocation factors are based on the estimated distribution of the treatment and collection facilities operations and maintenance (O&M) activities between or related to flow, BOD, and SS.

2. Unit Cost by Cost Category

The allocated costs are then divided by total annual capacity from **Table 4**. **Table A-16** in Appendix A shows the calculation of unit costs by cost category for flow, BOD, and SS. Collection costs are strictly related to flow and therefore 100 percent of the collection costs are allocated to flow. The offsetting revenues are allocated by cost category for flow, BOD and SS using the subtotal percentages from the collection and treatment cost allocations.

Step 4. Determine Revenue Requirement by Customer Type

The unit costs determined in **Table A-16** are multiplied by the flow, BOD, or SS for each customer type. These costs are then summed to determine the total costs allocated to each customer type. **Table A-17** in Appendix A shows the cost allocated to flow, BOD, and SS by customer category for fiscal year ending 2018.

Allocated Costs by Customer Category

Total allocated costs to each customer category are shown in **Table 10**. Residential customers are responsible for 52.4% of the total costs. Saputo Cheese is responsible for 37.2% of total costs. All other users including commercial, schools, restaurant/grocery, and industrial users, are responsible for 10.4% of total costs.

Table 10
Total Allocated Costs by Customer Category Fiscal Year 2017-18

Customer Type	Allocated Cost	Percentage of Cost
Residential		
1 Single Family (SF) & Religious Places	$1,325,978	46.5%
1 Multi-Family (MF)	$160,788	5.6%
1 SF + 1 MF	$6,813	0.2%
Subtotal Residential	**$1,493,579**	**52.4%**
Commercial		
1 Commercial	$75,718	2.7%
1 Commercial + 1 SF	$4,869	0.2%
1 Commercial + 1 MF	$3,150	0.1%
1 Commercial + 2 MF	$2,020	0.1%
2 Commercial	$9,041	0.3%
2 Commercial + 1 SF	$2,753	0.1%
2 Commercial + 3 MF	$4,725	0.2%
3 Commercial	$13,561	0.5%
4 Commercial	$13,561	0.5%
Subtotal Commercial	**$129,399**	**4.5%**
Restaurant / Grocery		
Restaurant	$21,570	0.8%
Grocery Market (Nob Hill)	$21,477	0.8%
1 Commercial + 1 Restaurant	$6,508	0.2%
Subtotal Restaurant / Grocery	**$49,555**	**1.7%**
Schools	$55,968	2.0%
Industrial [1]		
Hi-West Foods	$968	0.0%
Di-Mare	$21,897	0.8%
Foster Farms	$39,953	1.4%
Subtotal Industrial	**$62,818**	**2.2%**
Total	**$1,791,319**	**62.8%**
Saputo Cheese		
Saputo Cheese Flow	$743,237	26.1%
Saputo Cheese BOD	$318,267	11.2%
Total Saputo Cheese	**$1,061,504**	**37.2%**
Total with Saputo	**$2,852,823**	**100.0%**

Source: HEC. flow cost

[1] Excludes Saputo Cheese.

Table 11 on the following page presents the calculated rates for fiscal year ending 2018. The total allocated costs to each customer category provide the basis for the rates. All residential customers and religious places will pay for wastewater on a per unit basis.

Schools will pay per student. Commercial wastewater customers will pay base charges plus flow charges calculated on 85% of their metered potable water use each month. Restaurants/groceries will pay base charges plus flow charges calculated on 90% of their metered potable water use each month. Industrial customers will pay base charges plus flow charges on all of their metered potable water use each month.

Table 11
Calculated Rates by Customer Category – February 8, 2018

Customer Category	Billing Basis	No. Billing Units	Total Cost	Base	Flow	Annual Base Cost per Billing	Calculated Annual Base	Monthly Cost per Billing Unit	
								Base	Flow
				55%			[1]		[2]
Residential		*a*	*b*	*c*	*d = c-b*	*e = b/a*		*f = e/12*	
1 Single Family (SF) & Religious Places	Unit	2,962	$1,325,978	$722,937	$603,041	$448		$37.31	
1 Multi-Family (MF)	Unit	398	$160,788	$87,663	$73,124	$404		$33.58	
1 SF + 1 MF	Account	8	$6,813	$3,715	$3,099	$852		$70.87	
Commercial							*g = f*12*a*	[1]	*per HCF*
1 Commercial	Account	67	$75,718	$41,282	$34,436	$616	$41,282	$51.35	$3.84
1 Commercial + 1 SF	Account	3	$4,869	$2,655	$2,214	$885	$3,191	$88.65	$3.84
1 Commercial + 1 MF	Account	2	$3,150	$1,717	$1,433	$859	$2,040	$84.92	$3.84
1 Commercial + 2 MF	Account	1	$2,020	$1,101	$919	$1,101	$1,424	$118.50	$3.84
2 Commercial	Account	4	$9,041	$4,929	$4,112	$1,232	$4,929	$102.69	$3.84
2 Commercial + 1 SF	Account	1	$2,753	$1,501	$1,252	$1,501	$1,680	$140.00	$3.84
2 Commercial + 3 MF	Account	1	$4,725	$2,576	$2,149	$2,576	$2,444	$203.42	$3.84
3 Commercial	Account	4	$13,561	$7,394	$6,168	$1,848	$7,394	$154.04	$3.84
4 Commercial	Account	3	$13,561	$7,394	$6,168	$2,465	$7,394	$205.38	$3.84
Total Commercial			**$129,399**	**$70,550**	**$58,849**		**$71,779**		**$3.84**
Restaurant / Grocery									*per HCF*
Restaurant	Account	12	$21,570	$11,760	$9,810	$980	$11,760	$81.67	$3.13
Grocery Market (Nob Hill)	Account	1	$21,477	$11,709	$9,767	$11,709	$11,709	$975.79	$3.13
1 Commercial + 1 Restaurant	Account	2	$6,508	$3,548	$2,960	$1,774	$3,192	$133.01	$3.13
			$49,555	**$27,018**	**$22,537**		**$26,662**		**$3.13**
Schools	Student	2,802	$55,968	$30,514	$25,454	$20		$1.66	
Industrial [3]									*per HCF*
Hi-West Foods	Account	1	$968	$528	$440	$528		$43.98	$2.34
Di-Mare	Account	2	$21,897	$11,938	$9,958	$5,969		$497.43	$2.34
Foster Farms	Account	1	$39,953	$21,783	$18,170	$21,783		$1,815.25	$2.34
TOTAL [3]			**$1,791,319**	**$976,646**	**$814,673**				

Source: City of Newman and HEC. rates

[1] Based on addition of base charges for each category. For example, 2 commercial and 3 multi-family equals the addition of base charges for commercial two times and multi-family three times.

[2] Calculated based on the difference between total and calculated base charge revenues (column d OR a minus g) and divided by actual flow for 2015 (multiplied by the return flow factors). Return flow factors are 85% for commercial, 90% restaurant/grocery establishments, and 100% for industrial customers

[3] Excludes Saputo Cheese. Di-Mare has two accounts.

Calculation of the return flow factors and 2015 billed water use for commercial and restaurant customers is shown in **Table A-18**. For industrial customers, water use is influenced by production needs, not the weather. It is assumed all industrial water use reaches the wastewater treatment plant.

Table 12 shows the calculated wastewater rates for the next ten years. New rates are assumed to be effective February 8, 2018 and July 1 of each year thereafter.

Table 12
Ten-Year Projection of Wastewater Rates

Customer Category	Base Charge	Current	Fiscal Year Ending 2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8	2026 Year 9	2027 Year 10
Residential		***Effective Date***	***2/8/2018***	***7/1/2018***	***7/1/2019***	***7/1/2020***	***7/1/2021***	***7/1/2022***	***7/1/2023***	***7/1/2024***	***7/1/2025***	***7/1/2026***
1 Single Family (SF) & Religious Places	per unit per month	$37.31	$37.31	$39.43	$41.79	$44.31	$46.96	$49.97	$53.01	$56.08	$59.47	$63.01
1 Multi-Family (MF)	per unit per month	$33.58	$33.58	$35.58	$37.71	$39.99	$42.38	$45.09	$47.84	$50.61	$53.66	$56.86
1 SF + 1 MF	per account per month	$70.87	$70.87	$75.01	$79.50	$84.30	$89.33	$95.06	$100.85	$106.70	$113.13	$119.87
Commercial												
1 Commercial	per account per month	$37.31	$51.35	$54.35	$57.60	$61.08	$64.74	$68.73	$72.87	$77.10	$81.75	$86.62
1 Commercial + 1 SF	per account per month	$74.61	$88.65	$93.78	$99.39	$105.39	$111.70	$118.70	$125.88	$133.18	$141.21	$149.63
1 Commercial + 1 MF	per account per month	$70.87	$84.92	$89.93	$95.31	$101.06	$107.12	$113.82	$120.70	$127.71	$135.41	$143.48
1 Commercial + 2 MF	per account per month	$104.45	$118.50	$125.51	$133.02	$141.05	$149.49	$158.91	$168.54	$178.32	$189.08	$200.34
2 Commercial	per account per month	$74.61	$102.69	$108.69	$115.20	$122.15	$129.48	$137.46	$145.73	$154.20	$163.50	$173.24
2 Commercial + 1 SF	per account per month	$111.91	$140.00	$148.12	$156.98	$166.46	$176.44	$187.43	$198.74	$210.28	$222.96	$236.24
2 Commercial + 3 MF	per account per month	$138.03	$203.42	$215.44	$228.33	$242.12	$256.61	$272.74	$289.25	$306.04	$324.49	$343.82
3 Commercial	per account per month	$111.91	$154.04	$163.04	$172.80	$183.23	$194.23	$206.19	$218.60	$231.30	$245.24	$259.86
4 Commercial	per account per month	$149.21	$205.38	$217.39	$230.39	$244.30	$258.97	$274.93	$291.47	$308.40	$326.99	$346.47
Commercial Flow Charge per hcf [1]		*$3.34*	*$3.84*	*$4.06*	*$4.30*	*$4.56*	*$4.84*	*$5.13*	*$5.44*	*$5.76*	*$6.11*	*$6.47*
Restaurant / Grocery												
Restaurant	per account per month	$65.94	$81.67	$86.71	$91.91	$97.45	$103.37	$109.18	$115.57	$122.30	$129.67	$137.40
Grocery Market (Nob Hill)	per account per month	$65.94	$975.79	$1,036.07	$1,098.14	$1,164.33	$1,235.07	$1,304.49	$1,380.87	$1,461.23	$1,549.33	$1,641.75
1 Commercial + 1 Restaurant	per account per month	$103.25	$133.01	$141.06	$149.51	$158.52	$168.11	$177.91	$188.44	$199.40	$211.42	$224.02
Restaurant/Grocery Flow Charge per hcf [1]		*$6.31*	*$3.13*	*$3.32*	*$3.52*	*$3.73*	*$3.96*	*$4.18*	*$4.42*	*$4.68*	*$4.96*	*$5.26*
Schools	per student per month	$1.55	$1.66	$1.76	$1.86	$1.97	$2.09	$2.23	$2.37	$2.51	$2.66	$2.81
Industrial [2]												
Hi-West Foods	per account per month	$85.83	$43.98	$46.70	$49.50	$52.49	$55.68	$58.78	$62.22	$65.84	$69.81	$73.97
Di-Mare	per account per month	$85.83	$497.43	$528.29	$559.94	$593.69	$629.80	$664.92	$703.76	$744.73	$789.63	$836.74
Foster Farms	per account per month	$85.83	$1,815.25	$1,918.76	$2,033.52	$2,156.34	$2,285.11	$2,431.20	$2,579.15	$2,728.82	$2,893.34	$3,065.66
Industrial Flow Charge per hcf [1]		*$2.82*	*$2.34*	*$2.48*	*$2.62*	*$2.78*	*$2.95*	*$3.13*	*$3.32*	*$3.51*	*$3.72*	*$3.94*
Saputo Cheese												
Capacity Charge Flow	base per month	$29,490.00	$33,768.41	$35,787.51	$37,929.86	$40,218.02	$42,644.26	$45,178.27	$47,867.01	$50,649.30	$53,703.14	$56,904.44
Per Gallon per Day (average)		*$0.02195*	*$0.09389*	*$0.09951*	*$0.10546*	*$0.11183*	*$0.11857*	*$0.12562*	*$0.13309*	*$0.14083*	*$0.14932*	*$0.15822*
Capacity Charge BOD	base per month	$7,851.58	$14,460.19	$15,521.01	$16,454.04	$17,440.91	$18,544.33	$19,244.60	$20,262.62	$21,450.05	$22,743.75	$24,105.57
Per Pound per Day (average)		*$3.11*	*$3.01*	*$3.23*	*$3.42*	*$3.63*	*$3.86*	*$4.00*	*$4.21*	*$4.46*	*$4.73*	*$5.01*

Source: HEC.

rate proj mirror

[1] Current flow charge per hcf cannot be compared to projected flow charges because in the projected flow charges there is no base allowance of water.
Multiply metered water consumption factor by the return flow factor before applying the flow charge per hcf.
Flow factors are 85% for commercial, 90% restaurant/grocery establishments, and 100% for industrial customers.

[2] Excludes Saputo Cheese.

3.3 CASH FLOW

The cash flow in **Table 13** demonstrates that a robust debt service coverage will be maintained and that rates do not build up an excessive cash balance. The City is close to meeting a minimum operating reserve target of one year of operating expenditures by year five of the ten-year period. A minimum six months of operating reserves is achieved throughout the ten-year period. Projected cash balances with and without rate increases is shown in **Figure 9**. The model assumes growth of 40 dwelling units (EDUs) per year.

Figure 9
Projected Wastewater Cash Balance

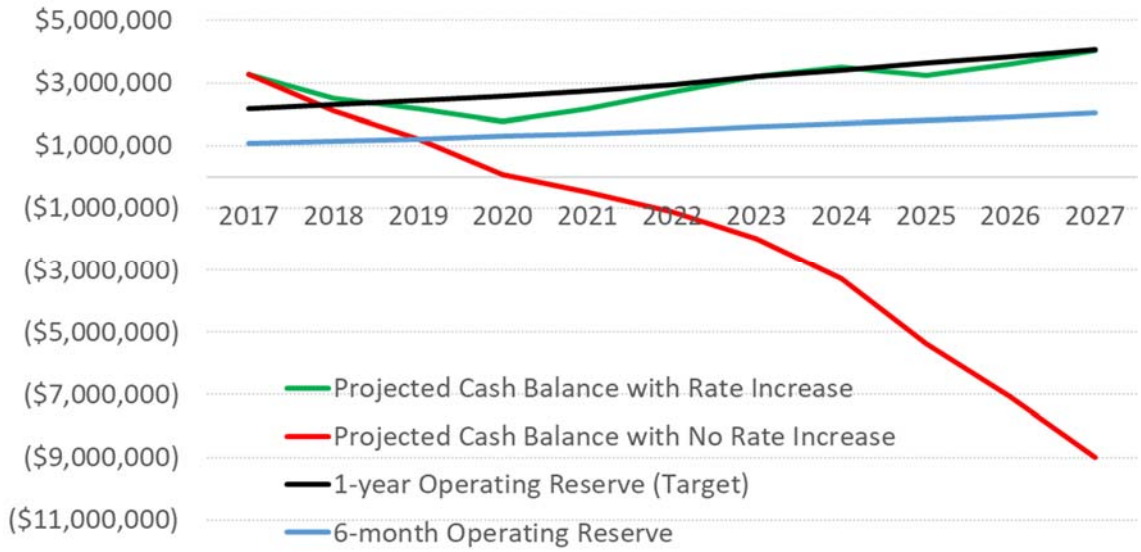


Table 13
Projected Cash Flow for Funds 60, 61, and 62 Combined

Revenues and Expenses	Budget 2017	Fiscal Year Ending 2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
	New EDUs	*40*	*40*	*40*	*40*	*40*	*40*	*40*	*40*	*40*	*40*
Operating Revenues											
Sewer Rates	$2,453,600	$2,619,943	$3,023,070	$3,204,034	$3,397,330	$3,602,195	$3,816,922	$4,044,297	$4,279,357	$4,537,375	$4,807,843
Additional Sewer Sales from Growth		$17,907	$18,926	$20,058	$21,269	$22,539	$23,983	$25,444	$26,920	$28,544	$30,243
Subtotal Sewer Sales	**$0**	**$2,637,849**	**$3,041,996**	**$3,224,091**	**$3,418,600**	**$3,624,734**	**$3,840,906**	**$4,069,741**	**$4,306,277**	**$4,565,919**	**$4,838,086**
Solar City Savings	$101,475	$110,892	$121,874	$132,655	$143,771	$155,424	$167,451	$179,930	$192,877	$206,313	$220,254
Sale of Property	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000
Interest Income	$20,100	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
Reimbursements	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100	$1,100
Connection Fees	$27,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Impact Fees	$7,745	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Revenues	**$2,746,020**	**$2,904,841**	**$3,319,970**	**$3,512,846**	**$3,718,471**	**$3,936,258**	**$4,164,457**	**$4,405,771**	**$4,655,254**	**$4,928,332**	**$5,214,440**
Operating Expenses	**$2,160,626**	**$2,292,515**	**$2,432,207**	**$2,580,160**	**$2,736,854**	**$2,929,567**	**$3,192,026**	**$3,415,015**	**$3,621,115**	**$3,839,368**	**$4,070,484**
Operating Revenue before Capital Improvements and Debt Service	**$585,394**	**$612,327**	**$887,763**	**$932,687**	**$981,616**	**$1,006,691**	**$972,431**	**$990,756**	**$1,034,139**	**$1,088,964**	**$1,143,956**
Debt Service	**$377,472**	**$92,878**	**$92,878**	**$136,657**	**$136,657**	**$234,702**	**$234,702**	**$338,387**	**$338,387**	**$387,806**	**$387,806**
Debt Service Coverage [1]	*1.55*	*6.59*	*9.56*	*6.83*	*7.18*	*4.29*	*4.14*	*2.93*	*3.06*	*2.81*	*2.95*
Existing Customers CIP PAYG	$213,777	$132,830	$0	$0	$0	$0	$0	$0	$0	$0	$0
System Rehabilitation	$0	$250,721	$260,978	$273,916	$339,512	$354,624	$405,040	$425,042	$512,471	$521,838	$536,801
Future Customers CIP PAYG	$120,000	$116,871	$229,982	$237,056	$339,178	$229,826	$228,706	$426,882	$571,361	$270,775	$279,105
Net Revenues (Deficit)	**($125,855)**	**$19,026**	**$303,926**	**$285,058**	**$166,269**	**$187,539**	**$103,983**	**($199,556)**	**($388,080)**	**($91,456)**	**($59,757)**
Beginning Fund Balance [2]	$3,588,536	$3,262,113	$2,487,498	$2,166,358	$1,781,895	$2,157,803	$2,707,200	$3,199,978	$3,500,980	$3,219,590	$3,608,179
Net Revenues (Deficit)	($125,855)	$19,026	$303,926	$285,058	$166,269	$187,539	$103,983	($199,556)	($388,080)	($91,456)	($59,757)
Additional Cash-funded CIP (not in budget)	($22,866)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rocha Land Purchase	$0	($849,974)	($876,120)	($903,071)	$0	$0	$0	$0	$0	$0	$0
Purchase Vactor Truck	$0	$0	$0	$0	$0	$0	$0	$0	($328,368)	$0	$0
M Street Sewer Line	($177,702)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Repayment from Sewer Impact Fund (fund 41)	$0	$56,333	$56,333	$89,168	$89,168	$162,701	$162,701	$228,110	$228,110	$252,820	$252,820
Add Back System Rehabilitation	$0	$0	$194,721	$144,382	$120,471	$199,158	$226,093	$272,448	$206,947	$227,225	$233,126
Sewer Operating & Capital Fund Balance	**$3,262,113**	**$2,487,498**	**$2,166,358**	**$1,781,895**	**$2,157,803**	**$2,707,200**	**$3,199,978**	**$3,500,980**	**$3,219,590**	**$3,608,179**	**$4,034,368**
Months of Operating Expenses in Reserve	18	13	11	8	9	11	12	12	11	11	12
Target Minimum Reserve [3]	$2,160,626	$2,292,515	$2,432,207	$2,580,160	$2,736,854	$2,929,567	$3,192,026	$3,415,015	$3,621,115	$3,839,368	$4,070,484

Source: City of Newman and HEC.

flow

[1] Debt service coverage must be at least 1.10.

[2] Beginning cash and cash equivalents July 1, 2016 for funds 60, 61, and 62.

[3] Cash reserve is targeted at one year of operating expenses.

Table 14 shows estimated impact fee revenue from new development. The total calculated connection/impact fee is $8,200 per EDU; however, the fee revenue is calculated using half the calculated fee. Updated connection/impact fees have yet to be adopted.

Table 14
Projected Cash Flow for Fund 41 (Impact Fees)

Revenues and Expenses	Budget 2017	Fiscal Year Ending 2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
	New EDUs	*40*	*40*	*40*	*40*	*40*	*40*	*40*	*40*	*40*	*40*
Beginning Fund Balance [1]	**$511,767**	**$574,767**	**$686,533**	**$802,503**	**$889,945**	**$981,803**	**$1,004,653**	**$1,032,141**	**$998,975**	**$642,315**	**$594,308**
Revenues											
Connection and Impact Fees [2]	$63,000	$168,100	$172,303	$176,610	$181,025	$185,551	$190,190	$194,944	$199,818	$204,814	$209,934
Expenses											
Vactor Truck	$0	$0	$0	$0	$0	$0	$0	$0	$328,368	$0	$0
Aeration Basin Debt Service Payment to Capital Fund [3]		$49,671	$49,671	$82,505	$82,505	$156,039	$156,039	$196,738	$196,738	$196,738	$196,738
New Groundwater Well Payment to Capital Fund [3]		$6,663	$6,663	$6,663	$6,663	$6,663	$6,663	$6,663	$6,663	$6,663	$6,663
Prince to Merced St Upsizing Payment to Capital Fund [3]		$0	$0	$0	$0	$0	$0	$24,710	$24,710	$49,419	$49,419
Subtotal Expenses	**$0**	**$56,333**	**$56,333**	**$89,168**	**$89,168**	**$162,701**	**$162,701**	**$228,110**	**$556,479**	**$252,820**	**$252,820**
Ending Fund Balance	**$574,767**	**$686,533**	**$802,503**	**$889,945**	**$981,803**	**$1,004,653**	**$1,032,141**	**$998,975**	**$642,315**	**$594,308**	**$551,422**

Source: HEC.

[1] Beginning cash and cash equivalents July 1, 2016.

[2] 2016 fee inflated by automatic 2.5% each year. Calculation of the 2018 Fee per EDU:

Total Cost for Future Users	$10,007,525	excludes financing cost (2016 $'S)
	$2,293,003	financing cost
	$12,300,528	**Total Future Users' Cost with financing cost**
Total EDUs Remaining to Buildout	1,500	(1,200 residential and 300 commercial)
	$8,200	**2018 fee**

The fee revenue is assumed half of what it would be if the fee was increased.

[3] For facilities paid for by existing customers that benefit future customers.

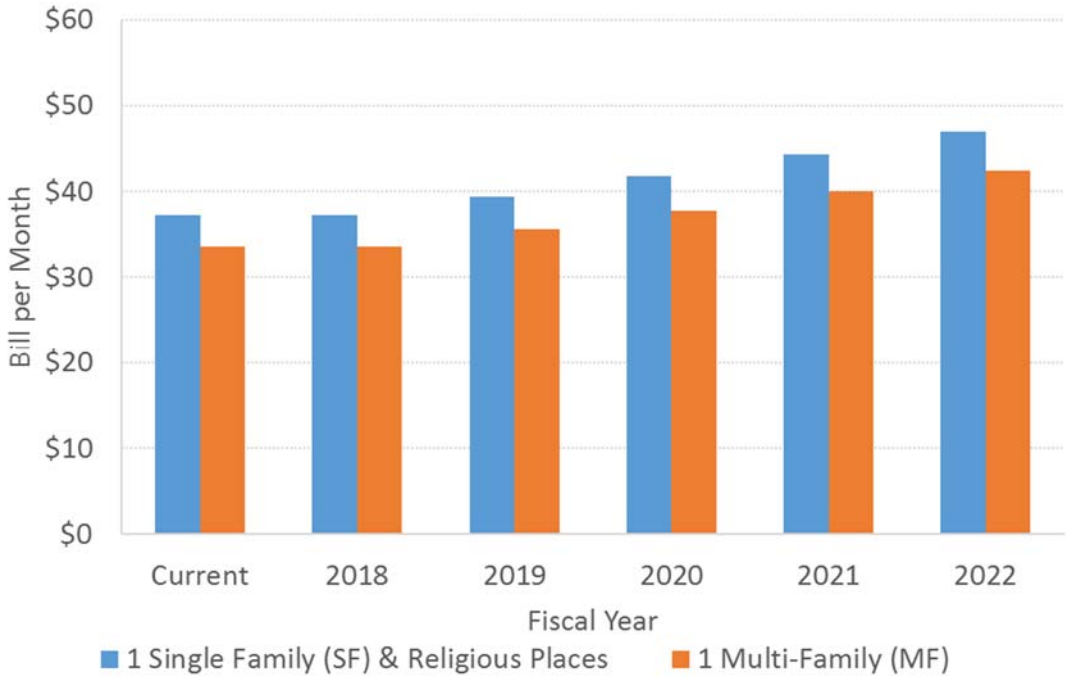
SECTION 4: IMPACT OF CALCULATED RATES

4.1 BILL IMPACTS

Residential

Figure 10 illustrates the impact of the new rate schedule on single family and multi-family units. After no initial rate increase, rates will increase 6% per year beginning July 1, 2018.

Figure 10
Residential Rate Increases



Non-Residential

Table 15 on the following page shows the impact of the February 8, 2018 rate increases to a sample of non-residential customers. The impact is shown on an average monthly basis using actual water use from 2015. Because bills for commercial customers will vary throughout the year, and by business type, the examples given are only illustrative. Each commercial customer will experience a different magnitude of bill change. Bills for some customers may initially decrease.

Table 15
Estimated Bill Impacts for Non-Residential Customers

Rate	Commercial	Restaurant	Grocery	1 Commercial + 1 Restaurant	Hi-West	DiMare - 1	DiMare - 2	Foster Farms	Saputo
Calculated using actual water usage for 2015									
Total Current Rates	$989	$1,971	$30,077	$1,725	$1,160	$1,568	$9,299	$25,366	$689,870
Total February 8, 2018 Rates	$1,506	$1,844	$25,108	$2,370	$869	$6,593	$13,108	$42,248	$1,054,843
Annual Difference	**$517**	**-$127**	**-$4,969**	**$645**	**-$291**	**$5,025**	**$3,809**	**$16,882**	**$364,974**
Monthly Difference	**$43**	**-$11**	**-$414**	**$54**	**-$24**	**$419**	**$317**	**$1,407**	**$30,414**
Percentage Increase/Decrease	52%	-6%	-17%	37%	-25%	320%	41%	67%	53%

Source: City of Newman and HEC.

bill summ

4.2 AFFORDABILITY

The State Water Resources Control Board (SWRCB), which administers the California Clean Water SRF (CWSRF) program, bases its evaluation of affordability of wastewater rates on two criteria:

1. The Median Household Income (MHI) of the community compared to the State MHI; and
2. The percentage of MHI spent on water bills.

If a community's MHI is less than 80 percent of the State MHI, the community is considered "Disadvantaged," in which case a rate greater than 1.5 percent of MHI is considered burdensome. **Table 16** shows that Newman is Disadvantaged using the 2015 1-year ACS data for the State.

Under the calculated wastewater rates for February 8, 2018, a household would pay $37.31 each month, which is 0.89 percent of the estimated median household income for Newman. The proposed wastewater rates are, per the SWRCB definitions, affordable.

Table 16
Test of Wastewater Rates Affordability

Item	Rates Until July 1, 2018
Monthly Wastewater Bill	
Monthly Median Household Income (MHI)	$4,185.42
Average Monthly Wastewater Bill (Single Family)	$37.31
Average Monthly Wastewater Bill as Percentage of MHI [1]	**0.89%**
Median Household Income (MHI)	
Estimated California [2]	$64,500
Estimated Newman [3]	$50,225
Newman MHI as a percentage of the State MHI [4]	**77.87%**

Source: HEC, California State Water Resources Control Board, and US Census Bureau. aff

[1] Per the CWSRF program, sewer bills that are <1.5% of MHI are considered affordable, between 1.5% and 2.0% a concern, and not affordable if greater than 2.0%.

[2] 2015 1-year American Community Survey.

[3] 2015 5-year American Community Survey.

[4] Per the CWSRF program, a community with an MHI <80% of the Statewide MHI is Disadvantaged

APPENDIX A

SEWER RATE STUDY

SUPPORT TABLES

Table A-1
City of Newman Wastewater Rate Study
Historical Financial Performance

DRAFT

Revenues and Expenses	Fiscal Year Ending 2010	2011	2012	2013	2014	2015	2016
Operating Revenues							
Service Charges	$2,012,545	$2,109,693	$2,388,473	$2,476,007	$2,562,265	$2,403,663	$2,377,847
Miscellaneous	$73,604	$112,710	$163,139	$266,937	$189,537	$308,250	$146,139
Total Operating Revenues	**$2,086,149**	**$2,222,403**	**$2,551,612**	**$2,742,944**	**$2,751,802**	**$2,711,913**	**$2,523,986**
Operating Expenses							
Employee Services	$432,881	$481,582	$524,351	$587,043	$493,962	$620,366	$669,197
Supplies and Services	$785,822	$742,990	$967,517	$917,275	$1,011,898	$1,014,170	$1,118,991
Depreciation	$139,474	$151,914	$167,656	$173,359	$172,400	$184,319	$193,440
Total Operating Expenses	**$1,358,177**	**$1,376,486**	**$1,659,524**	**$1,677,677**	**$1,678,260**	**$1,818,855**	**$1,981,628**
Operating Income (Loss)	**$727,972**	**$845,917**	**$892,088**	**$1,065,267**	**$1,073,542**	**$893,058**	**$542,358**
Non-Operating Revenues (Expenses)							
Investment Earnings	$47,652	$43,525	$40,149	$37,197	$36,051	$22,251	$24,803
Connection Fees	$123,305	$42,358	$2,330	$0	$2,975	$13,980	$30,290
Development Fees	$105,643	$132,806	$101,184	$104,735	$93,211	$145,299	$194,028
Interest Expense	($100,053)	($100,374)	($52,355)	($46,134)	($39,771)	($32,959)	($24,952)
Income Before Transfers	**$904,519**	**$964,232**	**$983,396**	**$1,161,065**	**$1,166,008**	**$1,041,629**	**$766,527**
Operating Transfer In	$190,000	$2,638,798	$643,920	$0	$2,195,000	$3,553,476	$223,597
Operating Transfer Out	($215,500)	($2,638,798)	($643,920)	$0	($2,195,000)	($3,553,476)	($223,597)
Change in Net Assets	**$879,019**	**$964,232**	**$983,396**	**$1,161,065**	**$1,166,008**	**$1,041,629**	**$766,527**
Total Net Assets Beginning	**$7,068,544**	**$7,947,563**	**$8,911,795**	**$9,895,191**	**$11,056,256**	**$12,222,264**	**$12,682,714**
Prior Period Adjustment	$0	$0	$0	$0	$0	($581,179)	$0
Total Net Assets Ending	**$7,947,563**	**$8,911,795**	**$9,895,191**	**$11,056,256**	**$12,222,264**	**$12,682,714**	**$13,449,241**

Source: City of Newman Audited Financial Statements. cafr

Table A-2
City of Newman Wastewater Rate Study
Funds 60 and 61 Historical Revenues and Expenditures

DRAFT

Revenues and Expenses	Fiscal Year Ending 2010	2011	2012	2013	2014	2015	2016	2017 Budgeted
OPERATING FUND (fund 60)								
Revenues								
Interest Income	$41,529	$35,658	$33,864	$32,548	$32,140	$17,028	$18,320	$17,000
Rents & Concession	$0	$0	$17,750	$0	$0	$0	$0	$0
Sale of Property	$72,525	$111,709	$132,947	$266,937	$173,936	$303,518	$141,663	$135,000
Sewer Commercial	$168,611	$165,384	$173,289	$174,327	$171,759	$186,952	$197,552	$195,000
Sewer Industrial	$567,032	$584,940	$792,492	$867,503	$947,469	$767,337	$707,674	$704,000
Sewer Residential	$1,274,436	$1,359,370	$1,422,693	$1,434,206	$1,443,037	$1,449,374	$1,472,620	$1,469,000
Reimbursements	($872)	$1,001	$12,442	$0	$15,550	$4,668	$4,397	$1,100
Total Operating Fund Revenues	**$2,123,262**	**$2,258,061**	**$2,585,476**	**$2,775,522**	**$2,783,891**	**$2,728,876**	**$2,542,227**	**$2,521,100**
Expenses								
Personnel (salaries and benefits)	$411,861	$460,399	$526,778	$575,588	$572,325	$608,981	$657,059	$762,332
Contracted Services	$128,711	$138,673	$170,190	$99,132	$102,011	$201,478	$260,138	$470,000
Utility - PG & E	$217,192	$220,103	$268,646	$251,193	$263,552	$281,310	$255,886	$250,000
Supplies	$64,110	$48,449	$98,317	$116,635	$108,470	$82,282	$82,408	$120,000
Administrative Surcharge	$78,351	$82,749	$80,378	$95,010	$110,833	$113,228	$116,274	$129,787
Other Operations & Maintenance	$158,379	$206,952	$232,335	$253,060	$275,641	$292,383	$326,516	$352,481
Capital Outlay	$6,591	$8,562	$53,618	$40,482	$8,980	$8,087	$12,492	$213,777
Debt Service	$100,053	$100,374	$52,355	$46,134	$39,771	$32,959	$24,952	$363,576
Transfers Out	$190,000	$2,638,798	$0	$0	$2,195,000	$3,553,476	$223,597	$0
Subtotal Operating Fund Expenses	**$1,355,248**	**$3,905,058**	**$1,482,617**	**$1,477,235**	**$3,676,582**	**$5,174,183**	**$1,959,321**	**$2,661,953**
Net Operating Fund Revenues	**$768,014**	**($1,646,997)**	**$1,102,860**	**$1,298,287**	**($892,691)**	**($2,445,307)**	**$582,906**	**($140,853)**
CAPITAL FUND (fund 61)								
Revenues								
Connection Fees	$123,305	$42,358	$2,330	$2,330	$2,330	$13,980	$30,290	$27,000
Impact Fees Sewer	$894	$16,214	$1,909	$1,116	$2,975	$4,683	$8,216	$7,745
Interest Income	$1,000	$3,879	$354	$0	$0	$2	$95	$100
Transfers In	$190,000	$2,638,798	$0	$0	$2,195,000	$3,553,476	$223,597	$0
Total Capital Fund Revenues	**$315,199**	**$2,701,249**	**$4,593**	**$3,446**	**$2,200,305**	**$3,572,141**	**$262,198**	**$34,845**
Expenses								
Contract Services	$32,622	$0	$6,858	$0	$0	$0	$0	$12,000
Depreciation	$139,474	$151,914	$167,656	$173,359	$172,400	$184,319	$193,440	$175,000
Admin Surcharge	$41,633	$2,182	$2,675	$0	$586	$0	$0	$0
Total Capital Fund Expenses	**$213,729**	**$154,096**	**$177,189**	**$173,359**	**$172,987**	**$184,319**	**$193,440**	**$187,000**
Capital Outlay	**$8,550**	**$0**	**$0**	**$867**	**$35,076**	**$418**	**$34,145**	**$120,000**
Net Capital Fund Revenues	**$92,920**	**$2,547,153**	**($172,596)**	**($170,779)**	**$1,992,242**	**$3,387,404**	**$34,613**	**($272,155)**
Total Revenues	$2,438,461	$4,959,310	$2,590,069	$2,778,969	$4,984,196	$6,301,017	$2,804,425	$2,555,945
Total Expenses	$1,577,527	$4,059,155	$1,659,805	$1,651,461	$3,884,645	$5,358,920	$2,186,906	$2,968,953
Net Revenues	**$860,934**	**$900,156**	**$930,264**	**$1,127,508**	**$1,099,551**	**$942,097**	**$617,520**	**($413,008)**

Source: City of Newman Financial Data.

rev exp

Table A-3
City of Newman Wastewater Rate Study
Fund 62 (Lift Stations) Historical Revenues and Expenditures

DRAFT

Revenues and Expenses	Fiscal Year Ending							
	2010	2011	2012	2013	2014	2015	2016	2017 Budget
Revenues								
Lift Station Charges	$85,819	$87,951	$88,888	$90,085	$90,881	$91,017	$88,082	$85,600
Interest Income	$2,383	$1,736	$2,970	$2,374	$2,091	$2,869	$3,363	$3,000
Administrative Surcharge	$261	$0	$0	$0	$0	$0	$0	$0
Reimbursements	$0	$0	$0	$0	$0	$65	$79	$0
Total Revenue	**$88,463**	**$89,687**	**$91,857**	**$92,459**	**$92,972**	**$93,951**	**$91,524**	**$88,600**
Expenses								
Salaries and Benefits	$21,020	$21,183	$12,539	$11,454	$1,987	$11,385	$14,965	$14,096
Contract Services	$0	$919	$3,345	$6,435	$3,461	$2,054	$2,827	$10,000
Maintenance and Operations	$47,456	$34,404	$34,272	$43,963	$22,937	$32,934	$28,304	$39,930
Capital Outlay	$2,228	$0	$921	$10,498	$0	$0	$0	$0
Total Expenses	**$70,703**	**$56,506**	**$51,076**	**$72,350**	**$28,385**	**$46,373**	**$46,096**	**$64,026**
Net Fund 62 Revenue	**$17,760**	**$33,181**	**$40,781**	**$20,109**	**$64,587**	**$47,578**	**$45,428**	**$24,574**

Source: City of Newman.

lift rev exp

Table A-4
City of Newman Wastewater Rate Study
Historical Population and Housing Estimates

DRAFT

	Population		Housing Units		
Year	**Persons**	Annual % Change	**Occupied Units**	Annual % Change	Persons per Occupied Unit
	as of January 1 [1]		*as of January 1* [1]		
2000	7,092		2,078		3.41
2001	7,443	4.9%	2,165	4.2%	3.44
2002	7,445	0.0%	2,152	-0.6%	3.46
2003	7,602	2.1%	2,186	1.6%	3.48
2004	8,099	6.5%	2,331	6.6%	3.47
2005	8,798	8.6%	2,557	9.7%	3.44
2006	9,704	10.3%	2,861	11.9%	3.39
2007	9,799	1.0%	2,910	1.7%	3.37
2008	10,029	2.3%	2,973	2.2%	3.37
2009	10,183	1.5%	3,015	1.4%	3.38
2010	10,224	0.4%	3,006	-0.3%	3.40
2011	10,474	2.4%	3,072	2.2%	3.41
2012	10,546	0.7%	3,079	0.2%	3.43
2013	10,626	0.8%	3,078	0.0%	3.45
2014	10,695	0.6%	3,077	0.0%	3.48
2015	10,753	0.5%	3,077	0.0%	3.49
2016	10,840	0.8%	3,091	0.5%	3.51
Total Change	3,748		1,013		
Avg. Annual Change	234	**2.69%**	63	**2.51%**	

Source: California Department of Finance. stats

[1] Years 2000 and 2010 calibrated to the decennial Census.

Table A-5
City of Newman Wastewater Rate Study
Historical Wastewater Plant Influent

DRAFT

Month/ Year	Influent (MGD Average)		BOD (mg/L)	
	Plant [1]	Saputo	Plant	Saputo
January 2012	1.24	0.51	1,080	1,625
February 2012	1.17	0.35	1,207	1,625
March 2012	1.21	0.25	642	1,625
April 2012	1.16	0.24	797	1,825
May 2012	1.13	0.28	593	1,392
June 2012	1.13	0.32	986	1,675
July 2012	1.13	0.26	1,300	1,750
August 2012	1.16	0.26	1,267	1,950
September 2012	1.16	0.26	912	1,575
October 2012	1.10	0.42	733	1,920
November 2012	1.10	0.49	1,345	1,900
December 2012	1.14	0.43	807	1,550
January 2013	1.10	0.42	1,208	1,650
February 2013	1.08	0.37	1,523	1,650
March 2013	1.08	0.38	1,108	2,100
April 2013	1.12	0.41	797	1,950
May 2013	1.11	0.44	947	2,140
June 2013	1.13	0.44	658	1,850
July 2013	1.09	0.41	844	2,040
August 2013	1.09	0.39	645	2,250
September 2013	1.05	0.37	883	1,633
October 2013	1.05	0.42	784	1,760
November 2013	1.08	0.36	922	2,000
December 2013	0.99	0.24	619	2,633
January 2014	1.02	0.26	1,187	2,220
February 2014	1.05	0.27	1,107	2,125
March 2014	1.06	0.28	1,290	2,267
April 2014	1.02	0.26	1,151	1,980
May 2014	1.03	0.28	996	1,950
June 2014	1.01	0.28	908	1,975
July 2014	1.03	0.26	805	2,020
August 2014	1.07	0.30	774	2,000
September 2014	1.06	0.29	854	2,100
October 2014	1.07	0.28	648	1,740
November 2014	1.08	0.30	646	2,000
December 2014	1.19	0.27	575	1,900
January 2015	1.04	0.26	644	2,025
February 2015	1.07	0.26	708	1,975
March 2015	1.10	0.30	737	2,100
April 2015	1.07	0.28	1,116	1,660
May 2015	1.05	0.26	771	1,700
June 2015	1.07	0.29	901	1,700
July 2015	1.09	0.29	702	1,600
August 2015	1.18	0.29	908	1,575
Average Dry Weather Flow	**1.10**	**0.31**		
ADWF Last 12 Months	**1.10**	**0.29**		

Source: City of Newman. plant

[1] Number is inclusive of Saputo Cheese. Saputo Cheese is listed separately because it is a significant portion of the total.

Table A-6
City of Newman Wastewater Rate Study
Comparison of Operating Expenses and Price Indices

DRAFT

Expense	Fiscal Year Ending 2010	2011	2012	2013	2014	2015	2016	Total Change	Annual Avg. % Change
Personnel (salaries and benefits)	$411,861	$460,399	$526,778	$575,588	$572,325	$608,981	$657,059	$245,198	8.1%
Contracted Services	$128,711	$138,673	$170,190	$99,132	$102,011	$201,478	$260,138	$131,427	12.4%
Utility - PG & E	$217,192	$220,103	$268,646	$251,193	$263,552	$281,310	$255,886	$38,694	2.8%
Supplies	$64,110	$48,449	$98,317	$116,635	$108,470	$82,282	$82,408	$18,297	4.3%
Administrative Surcharge	$78,351	$82,749	$80,378	$95,010	$110,833	$113,228	$116,274	$37,923	6.8%
Other Operations & Maintenance	$158,379	$206,952	$232,335	$253,060	$275,641	$292,383	$326,516	$168,137	12.8%
Total Expenses excluding Capital Outlay	**$1,058,604**	**$1,157,325**	**$1,376,643**	**$1,390,619**	**$1,432,832**	**$1,579,662**	**$1,698,280**	**$639,676**	**8.2%**
Engineering News Record	*June 2010*	*June 2011*	*June 2012*	*June 2013*	*June 2014*	*June 2015*	*June 2016*		
ENR Construction Cost Index [1]	8,805	9,053	9,291	9,542	9,800	10,039	10,337	1,532	2.7%
Bureau of Labor Statistics									
Consumer Price Index - California	227	233	238	242	247	250	256	29	2.0%
Consumer Price Index - West Region	221	228	233	236	242	244	248	27	1.9%

Source: Engineering News Record, Bureau of Labor Statistics, and the City of Newman. indices

[1] Consumer Cost Index increased by 2,624 between 2005 (7,415) and 2015, which is a 3.1% annual average increase.

			Change	Annual Avg. % Change
ENR CCI	2005	7,415		
ENR CCI	2015	10,039	2,624	3.1%

Table A-7
City of Newman Wastewater Rate Study
Wastewater CIP in 2016 Dollars

DRAFT

Improvement Type	Customer Cost Share Existing	Customer Cost Share Future	Existing Share	Total	Fiscal Year Ending 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Sewer Collection System															
Upsize Sewer Line + Manholes Prince Road to Merced Street	50%	50%	$750,000	$1,500,000	$0	$0	$0	$0	$0	$0	$0	$0	$1,500,000	$0	$0
Flap Gate Yancey Lift Station	100%	0%	$20,000	$20,000	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Upsize Sewer Line Bottlenecks	0%	100%	$0	$900,000	$0	$0	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
New Truck With Crane	100%	0%	$50,000	$50,000	$0	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Canyon Creek Sewer Pump Replacement	100%	0%	$40,000	$40,000	$0	$40,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Installation of Manhole + Line at Canal School/Hill Ferry Road	75%	25%	$15,000	$20,000	$0	$0	$0	$0	$0	$20,000	$0	$0	$0	$0	$0
Cleaning of Lines from M Street to Canal Street	100%	0%	$50,000	$50,000	$0	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Impellers Replacement	100%	0%	$20,000	$20,000	$0	$0	$0	$0	$0	$20,000	$0	$0	$0	$0	$0
Rodding Machine	85%	15%	$51,000	$60,000	$0	$0	$0	$0	$60,000	$0	$0	$0	$0	$0	$0
Sewer Line Upgrades	100%	0%	$428,571	$428,571	$0	$0	$0	$0	$0	$0	$0	$0	$142,857	$142,857	$142,857
Vactor Truck	50%	50%	$250,000	$500,000	$0	$0	$0	$0	$0	$0	$0	$0	$500,000	$0	$0
Yearly Lift Station Cleaning	100%	0%	$36,000	$36,000	$6,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
Camera for Closed-Circuit Television (CCT)	100%	0%	$75,000	$75,000	$0	$75,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Manhole Replacement	100%	0%	$36,000	$36,000	$6,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
M Street Sewer Line	100%	0%	$172,399	$172,399	$172,399	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Build Out New Trunk North and South Route	0%	100%	$0	$300,000	$0	$0	$0	$0	$0	$0	$0	$0	$100,000	$100,000	$100,000
Subtotal Sewer Collection			**$1,993,970**	**$4,207,970**	**$204,399**	**$221,000**	**$106,000**	**$106,000**	**$166,000**	**$146,000**	**$106,000**	**$106,000**	**$2,348,857**	**$348,857**	**$348,857**
Treatment Plant															
Develop McPike Ranches	15%	85%	$144,600	$964,000	$164,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$0	$0
Sludge Removal	50%	50%	$125,000	$250,000	$100,000	$50,000	$50,000	$50,000	$0	$0	$0	$0	$0	$0	$0
Aeration Basin Improvements	25%	75%	$1,125,000	$4,500,000	$250,000	$1,000,000	$0	$0	$1,500,000	$0	$1,750,000	$0	$0	$0	$0
Main Road Overlay	100%	0%	$50,000	$50,000	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
WDR Permit Renewal [1]	50%	50%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer Rates Study [1]	100%	0%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contruct Hay Barn	50%	50%	$47,500	$95,000	$0	$0	$0	$0	$95,000	$0	$0	$0	$0	$0	$0
Line and Manhole Replacement	50%	50%	$550,000	$1,100,000	$0	$0	$0	$137,500	$137,500	$137,500	$137,500	$137,500	$137,500	$137,500	$137,500
Equipment Replacement [2]	100%	0%	$67,500	$67,500	$0	$35,000	$2,500	$0	$0	$0	$0	$30,000	$0	$0	$0
Replace Weed Spray Rig	75%	25%	$4,875	$6,500	$0	$0	$0	$0	$0	$6,500	$0	$0	$0	$0	$0
Replace Load Tractor	100%	0%	$55,000	$55,000	$0	$0	$0	$0	$0	$0	$55,000	$0	$0	$0	$0
Property Maintenance	100%	0%	$77,000	$77,000	$0	$65,000	$12,000	$0	$0	$0	$0	$0	$0	$0	$0
Expand Operations Building Offices	0%	100%	$0	$50,000	$0	$0	$0	$0	$50,000	$0	$0	$0	$0	$0	$0
New Groundwater Well	75%	25%	$375,000	$500,000	$0	$500,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rocha Ranch Purchase	0%	100%	$0	$2,400,000	$0	$800,000	$800,000	$800,000	$0	$0	$0	$0	$0	$0	$0
Rocha Ranch Development	0%	100%	$0	$300,000	$0	$0	$0	$0	$0	$0	$0	$150,000	$150,000	$0	$0
Subtotal Treatment Plant			**$2,621,475**	**$10,415,000**	**$564,000**	**$2,550,000**	**$964,500**	**$1,087,500**	**$1,882,500**	**$244,000**	**$2,042,500**	**$417,500**	**$387,500**	**$137,500**	**$137,500**
Total Wastewater Infrastructure Costs (2016 Dollars)			**$4,615,445**	**$14,622,970**	**$768,399**	**$2,771,000**	**$1,070,500**	**$1,193,500**	**$2,048,500**	**$390,000**	**$2,148,500**	**$523,500**	**$2,736,357**	**$486,357**	**$486,357**

Source: City of Newman.

cip

[1] Removed from the rate study because these items are grant funded. WDR permit renewal cost is estimated at $465,000 and the sewer rates study at $35,000. The grant is $500,000.
[2] Includes 2 pickup trucks and an aluminum boat.

Table A-8
City of Newman Wastewater Rate Study
Wastewater CIP in Inflated Dollars

DRAFT

Share	Total	Fiscal Year Ending 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Sewer Collection System						*Costs Inflated 3.1% per year [1]*						
Upsize Sewer Line + Manholes Prince Road to Merced Street	$1,970,210	$0	$0	$0	$0	$0	$0	$0	$0	$1,970,210	$0	$0
Flap Gate Yancey Lift Station	$20,615	$20,615	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Upsize Sewer Line Bottlenecks	$1,116,030	$0	$0	$109,515	$112,884	$116,356	$119,935	$123,625	$127,428	$131,347	$135,388	$139,552
New Truck With Crane	$53,123	$0	$53,123	$0	$0	$0	$0	$0	$0	$0	$0	$0
Canyon Creek Sewer Pump Replacement	$42,499	$0	$42,499	$0	$0	$0	$0	$0	$0	$0	$0	$0
Installation of Manhole + Line at Canal School/Hill Ferry Road	$23,987	$0	$0	$0	$0	$0	$23,987	$0	$0	$0	$0	$0
Cleaning of Lines from M Street to Canal Street	$53,123	$0	$53,123	$0	$0	$0	$0	$0	$0	$0	$0	$0
Impellers Replacement	$23,987	$0	$0	$0	$0	$0	$23,987	$0	$0	$0	$0	$0
Rodding Machine	$69,814	$0	$0	$0	$0	$69,814	$0	$0	$0	$0	$0	$0
Sewer Line Upgrades	$580,410	$0	$0	$0	$0	$0	$0	$0	$0	$187,639	$193,411	$199,360
Vactor Truck	$656,737	$0	$0	$0	$0	$0	$0	$0	$0	$656,737	$0	$0
Yearly Lift Station Cleaning	$42,853	$6,185	$3,187	$3,285	$3,387	$3,491	$3,598	$3,709	$3,823	$3,940	$4,062	$4,187
Camera for Closed-Circuit Television (CCT)	$79,685	$0	$79,685	$0	$0	$0	$0	$0	$0	$0	$0	$0
Manhole Replacement	$42,853	$6,185	$3,187	$3,285	$3,387	$3,491	$3,598	$3,709	$3,823	$3,940	$4,062	$4,187
M Street Sewer Line	$177,702	$177,702	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Build Out New Trunk North and South Route	$406,287	$0	$0	$0	$0	$0	$0	$0	$0	$131,347	$135,388	$139,552
Subtotal Sewer Collection	**$5,359,917**	**$210,686**	**$234,805**	**$116,086**	**$119,657**	**$193,151**	**$175,106**	**$131,042**	**$135,073**	**$3,085,162**	**$472,310**	**$486,838**
Treatment Plant												
Develop McPike Ranches	$1,116,382	$169,045	$106,247	$109,515	$112,884	$116,356	$119,935	$123,625	$127,428	$131,347	$0	$0
Sludge Removal	$267,399	$103,076	$53,123	$54,758	$56,442	$0	$0	$0	$0	$0	$0	$0
Aeration Basin Improvements	$5,228,935	$257,690	$1,062,468	$0	$0	$1,745,343	$0	$2,163,434	$0	$0	$0	$0
Main Road Overlay	$51,538	$51,538	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
WDR Permit Renewal [2]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer Rates Study [2]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contruct Hay Barn	$110,538	$0	$0	$0	$0	$110,538	$0	$0	$0	$0	$0	$0
Line and Manhole Replacement	$1,383,959	$0	$0	$0	$155,215	$159,990	$164,911	$169,984	$175,213	$180,603	$186,158	$191,885
Equipment Replacement [3]	$78,153	$0	$37,186	$2,738	$0	$0	$0	$0	$38,228	$0	$0	$0
Replace Weed Spray Rig	$7,796	$0	$0	$0	$0	$0	$7,796	$0	$0	$0	$0	$0
Replace Load Tractor	$67,994	$0	$0	$0	$0	$0	$0	$67,994	$0	$0	$0	$0
Property Maintenance	$82,202	$0	$69,060	$13,142	$0	$0	$0	$0	$0	$0	$0	$0
Expand Operations Building Offices	$58,178	$0	$0	$0	$0	$58,178	$0	$0	$0	$0	$0	$0
New Groundwater Well	$531,234	$0	$531,234	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rocha Ranch Purchase	$2,629,165	$0	$849,974	$876,120	$903,071	$0	$0	$0	$0	$0	$0	$0
Rocha Ranch Development	$388,162	$0	$0	$0	$0	$0	$0	$0	$191,141	$197,021	$0	$0
Subtotal Treatment Plant	**$12,001,635**	**$581,349**	**$2,709,293**	**$1,056,273**	**$1,227,612**	**$2,190,406**	**$292,643**	**$2,525,036**	**$532,010**	**$508,971**	**$186,158**	**$191,885**
Total Wastewater Infrastructure Costs (Future $'s)	**$17,361,552**	**$792,036**	**$2,944,099**	**$1,172,359**	**$1,347,268**	**$2,383,557**	**$467,748**	**$2,656,078**	**$667,083**	**$3,594,133**	**$658,468**	**$678,723**

Source: City of Newman.

infl cip

[1] Engineering News Record (ENR) Consumer Cost Index (CCI) change 2005 to 2015:

ENR CCI 2005	7,415	Change	Annual Avg. % Change
ENR CCI 2015	10,039	2,624	**3.1%**

[2] Removed from the rate study because these items are grant funded. WDR permit renewal cost is estimated at $465,000 and the sewer rates study at $35,000. The grant is $500,000.

[3] Includes 2 pickup trucks and an aluminum boat.

Table A-9
City of Newman Wastewater Rate Study
Estimated CIP for Existing Customers in 2016 Dollars

DRAFT

Facility	Total	Fiscal Year Ending 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Sewer Collection System												
Upsize Sewer Line + Manholes Prince Road to Merced Street	**$750,000**	$0	$0	$0	$0	$0	$0	$0	$0	$750,000	$0	$0
Flap Gate Yancey Lift Station	**$20,000**	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Upsize Sewer Line Bottlenecks	**$0**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
New Truck With Crane	**$50,000**	$0	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Canyon Creek Sewer Pump Replacement	**$40,000**	$0	$40,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Installation of Manhole + Line at Canal School/Hill Ferry Road	**$15,000**	$0	$0	$0	$0	$0	$15,000	$0	$0	$0	$0	$0
Cleaning of Lines from M Street to Canal Street	**$50,000**	$0	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Impellers Replacement	**$20,000**	$0	$0	$0	$0	$0	$20,000	$0	$0	$0	$0	$0
Rodding Machine	**$51,000**	$0	$0	$0	$0	$51,000	$0	$0	$0	$0	$0	$0
Sewer Line Upgrades	**$428,571**	$0	$0	$0	$0	$0	$0	$0	$0	$142,857	$142,857	$142,857
Vactor Truck	**$250,000**	$0	$0	$0	$0	$0	$0	$0	$0	$250,000	$0	$0
Yearly Lift Station Cleaning	**$36,000**	$6,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
Camera for Closed-Circuit Television (CCT)	**$75,000**	$0	$75,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Manhole Replacement	**$36,000**	$6,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000
M Street Sewer Line	**$172,399**	$172,399	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Build Out New Trunk North and South Route	**$0**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Sewer Collection	**$1,993,970**	**$204,399**	**$221,000**	**$6,000**	**$6,000**	**$57,000**	**$41,000**	**$6,000**	**$6,000**	**$1,148,857**	**$148,857**	**$148,857**
Treatment Plant												
Develop McPike Ranches	**$144,600**	$24,600	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$15,000	$0	$0
Sludge Removal	**$125,000**	$50,000	$25,000	$25,000	$25,000	$0	$0	$0	$0	$0	$0	$0
Aeration Basin Improvements	**$1,125,000**	$62,500	$250,000	$0	$0	$375,000	$0	$437,500	$0	$0	$0	$0
Main Road Overlay	**$50,000**	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
WDR Permit Renewal [1]	**$0**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer Rates Study [1]	**$0**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contruct Hay Barn	**$47,500**	$0	$0	$0	$0	$47,500	$0	$0	$0	$0	$0	$0
Line and Manhole Replacement	**$550,000**	$0	$0	$0	$68,750	$68,750	$68,750	$68,750	$68,750	$68,750	$68,750	$68,750
Equipment Replacement [2]	**$67,500**	$0	$35,000	$2,500	$0	$0	$0	$0	$30,000	$0	$0	$0
Replace Weed Spray Rig	**$4,875**	$0	$0	$0	$0	$0	$4,875	$0	$0	$0	$0	$0
Replace Load Tractor	**$55,000**	$0	$0	$0	$0	$0	$0	$55,000	$0	$0	$0	$0
Property Maintenance	**$77,000**	$0	$65,000	$12,000	$0	$0	$0	$0	$0	$0	$0	$0
Expand Operations Building Offices	**$0**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
New Groundwater Well	**$375,000**	$0	$375,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rocha Ranch Purchase	**$0**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rocha Ranch Development	**$0**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Treatment Plant	**$2,621,475**	**$187,100**	**$765,000**	**$54,500**	**$108,750**	**$506,250**	**$88,625**	**$576,250**	**$113,750**	**$83,750**	**$68,750**	**$68,750**
Total Wastewater Infrastructure Costs (2016 Dollars)	**$4,615,445**	**$391,499**	**$986,000**	**$60,500**	**$114,750**	**$563,250**	**$129,625**	**$582,250**	**$119,750**	**$1,232,607**	**$217,607**	**$217,607**

Source: City of Newman. ex curr

[1] Removed from the rate study because these items are grant funded. WDR permit renewal cost is estimated at $465,000 and the sewer rates study at $35,000. The grant is $500,000.

[2] Includes 2 pickup trucks and an aluminum boat.

Table A-10
City of Newman Wastewater Rate Study
Estimated Existing Users CIP in Inflated Dollars

DRAFT

Facility	Funding Source	Total	Fiscal Year Ending 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Sewer Collection System							*Costs Inflated 3.1% per year [1]*						
Upsize Sewer Line + Manholes Prince Road to Merced Street	Debt	$985,105	$0	$0	$0	$0	$0	$0	$0	$0	$985,105	$0	$0
Flap Gate Yancey Lift Station	Cash	$20,615	$20,615	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Upsize Sewer Line Bottlenecks	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
New Truck With Crane	Cash	$53,123	$0	$53,123	$0	$0	$0	$0	$0	$0	$0	$0	$0
Canyon Creek Sewer Pump Replacement	Cash	$42,499	$0	$42,499	$0	$0	$0	$0	$0	$0	$0	$0	$0
Installation of Manhole + Line at Canal School/Hill Ferry Road	Cash	$17,990	$0	$0	$0	$0	$0	$17,990	$0	$0	$0	$0	$0
Cleaning of Lines from M Street to Canal Street	Cash	$53,123	$0	$53,123	$0	$0	$0	$0	$0	$0	$0	$0	$0
Impellers Replacement	Cash	$23,987	$0	$0	$0	$0	$0	$23,987	$0	$0	$0	$0	$0
Rodding Machine	Cash	$59,342	$0	$0	$0	$0	$59,342	$0	$0	$0	$0	$0	$0
Sewer Line Upgrades	Cash	$580,410	$0	$0	$0	$0	$0	$0	$0	$0	$187,639	$193,411	$199,360
Vactor Truck	Reserve	$328,368	$0	$0	$0	$0	$0	$0	$0	$0	$328,368	$0	$0
Yearly Lift Station Cleaning	Cash	$42,853	$6,185	$3,187	$3,285	$3,387	$3,491	$3,598	$3,709	$3,823	$3,940	$4,062	$4,187
Camera for Closed-Circuit Television (CCT)	Cash	$79,685	$0	$79,685	$0	$0	$0	$0	$0	$0	$0	$0	$0
Manhole Replacement	Cash	$42,853	$6,185	$3,187	$3,285	$3,387	$3,491	$3,598	$3,709	$3,823	$3,940	$4,062	$4,187
M Street Sewer Line	Reserve	$177,702	$177,702	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Build Out New Trunk North and South Route	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Sewer Collection		**$2,507,657**	**$210,686**	**$234,805**	**$6,571**	**$6,773**	**$66,323**	**$49,174**	**$7,417**	**$7,646**	**$1,508,994**	**$201,534**	**$207,733**
Treatment Plant													
Develop McPike Ranches	Cash	$167,457	$25,357	$15,937	$16,427	$16,933	$17,453	$17,990	$18,544	$19,114	$19,702	$0	$0
Sludge Removal	Cash	$133,699	$51,538	$26,562	$27,379	$28,221	$0	$0	$0	$0	$0	$0	$0
Aeration Basin Improvements	Debt	$1,307,234	$64,423	$265,617	$0	$0	$436,336	$0	$540,858	$0	$0	$0	$0
Main Road Overlay	Cash	$51,538	$51,538	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
WDR Permit Renewal [2]	Grant	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer Rates Study [2]	Grant	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contruct Hay Barn	Cash	$55,269	$0	$0	$0	$0	$55,269	$0	$0	$0	$0	$0	$0
Line and Manhole Replacement	Cash	$691,979	$0	$0	$0	$77,608	$79,995	$82,456	$84,992	$87,606	$90,301	$93,079	$95,942
Equipment Replacement [3]	Cash	$78,153	$0	$37,186	$2,738	$0	$0	$0	$0	$38,228	$0	$0	$0
Replace Weed Spray Rig	Cash	$5,847	$0	$0	$0	$0	$0	$5,847	$0	$0	$0	$0	$0
Replace Load Tractor	Cash	$67,994	$0	$0	$0	$0	$0	$0	$67,994	$0	$0	$0	$0
Property Maintenance	Cash	$82,202	$0	$69,060	$13,142	$0	$0	$0	$0	$0	$0	$0	$0
Expand Operations Building Offices	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
New Groundwater Well	Debt	$398,426	$0	$398,426	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rocha Ranch Purchase	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rocha Ranch Development	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal Treatment Plant		**$3,039,798**	**$192,855**	**$812,788**	**$59,686**	**$122,761**	**$589,053**	**$106,293**	**$712,388**	**$144,949**	**$110,003**	**$93,079**	**$95,942**
Total Wastewater Infrastructure Costs (Future Dollars)		**$5,547,455**	**$403,542**	**$1,047,593**	**$66,257**	**$129,534**	**$655,376**	**$155,466**	**$719,805**	**$152,595**	**$1,618,997**	**$294,613**	**$303,676**
Total Cash-Funded		$2,350,619	$161,417	$383,551	$66,257	$129,534	$219,041	$155,466	$178,947	$152,595	$305,523	$294,613	$303,676
Total Reserve-Funded		$506,071	$177,702	$0	$0	$0	$0	$0	$0	$0	$328,368	$0	$0
Total Debt Financed		$2,690,765	$64,423	$664,043	$0	$0	$436,336	$0	$540,858	$0	$985,105	$0	$0
TOTAL		**$5,547,455**	**$403,542**	**$1,047,593**	**$66,257**	**$129,534**	**$655,376**	**$155,466**	**$719,805**	**$152,595**	**$1,618,997**	**$294,613**	**$303,676**

Source: City of Newman, Engineering News Record, and HEC.

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[1] Engineering News Record (ENR) Consumer Cost Index (CCI) change 2005 to 2015:

		Change	Annual Avg. % Change
ENR CCI 2005	7,415		
ENR CCI 2015	10,039	2,624	**3.1%**

[2] Removed from the rate study because these items are grant funded. WDR permit renewal cost is estimated at $465,000 and the sewer rates study at $35,000. The grant is $500,000.

[3] Includes 2 pickup trucks, an aluminum boat, and UTV trailer.

Table A-11
City of Newman Wastewater Rate Study
Estimated CIP for Future Users in 2016 Dollars

DRAFT

Facility	Total	Fiscal Year Ending 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Collection System												
Upsize Sewer Line + Manholes Prince Road to Merced Street	$750,000	$0	$0	$0	$0	$0	$0	$0	$0	$750,000	$0	$0
Flap Gate Yancey Lift Station	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Upsize Sewer Line Bottlenecks	$900,000	$0	$0	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000	$100,000
New Truck With Crane	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Canyon Creek Sewer Pump Replacement	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Installation of Manhole + Line at Canal School/Hill Ferry Road	$5,000	$0	$0	$0	$0	$0	$5,000	$0	$0	$0	$0	$0
Cleaning of Lines from M Street to Canal Street	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Impellers Replacement	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rodding Machine	$9,000	$0	$0	$0	$0	$9,000	$0	$0	$0	$0	$0	$0
Sewer Line Upgrades	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Vactor Truck	$250,000	$0	$0	$0	$0	$0	$0	$0	$0	$250,000	$0	$0
Yearly Lift Station Cleaning	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Camera for Closed-Circuit Television (CCT)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Manhole Replacement	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
M Street Sewer Line	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Build Out New Trunk North and South Route	$300,000	$0	$0	$0	$0	$0	$0	$0	$0	$100,000	$100,000	$100,000
Subtotal Sewer Collection	**$2,214,000**	**$0**	**$0**	**$100,000**	**$100,000**	**$109,000**	**$105,000**	**$100,000**	**$100,000**	**$1,200,000**	**$200,000**	**$200,000**
Treatment Plant												
Develop McPike Ranches	$819,400	$139,400	$85,000	$85,000	$85,000	$85,000	$85,000	$85,000	$85,000	$85,000	$0	$0
Sludge Removal	$125,000	$50,000	$25,000	$25,000	$25,000	$0	$0	$0	$0	$0	$0	$0
Aeration Basin Improvements	$3,375,000	$187,500	$750,000	$0	$0	$1,125,000	$0	$1,312,500	$0	$0	$0	$0
Main Road Overlay	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
WDR Permit Renewal [1]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer Rates Study [1]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contruct Hay Barn	$47,500	$0	$0	$0	$0	$47,500	$0	$0	$0	$0	$0	$0
Line and Manhole Replacement	$550,000	$0	$0	$0	$68,750	$68,750	$68,750	$68,750	$68,750	$68,750	$68,750	$68,750
Equipment Replacement [2]	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Replace Weed Spray Rig	$1,625	$0	$0	$0	$0	$0	$1,625	$0	$0	$0	$0	$0
Replace Load Tractor	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Property Maintenance	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Expand Operations Building Offices	$50,000	$0	$0	$0	$0	$50,000	$0	$0	$0	$0	$0	$0
New Groundwater Well	$125,000	$0	$125,000	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rocha Ranch Purchase	$2,400,000	$0	$800,000	$800,000	$800,000	$0	$0	$0	$0	$0	$0	$0
Rocha Ranch Development	$300,000	$0	$0	$0	$0	$0	$0	$0	$150,000	$150,000	$0	$0
Subtotal Treatment Plant	**$7,793,525**	**$376,900**	**$1,785,000**	**$910,000**	**$978,750**	**$1,376,250**	**$155,375**	**$1,466,250**	**$303,750**	**$303,750**	**$68,750**	**$68,750**
Total Future Users Costs (2016 Dollars)	**$10,007,525**	**$376,900**	**$1,785,000**	**$1,010,000**	**$1,078,750**	**$1,485,250**	**$260,375**	**$1,566,250**	**$403,750**	**$1,503,750**	**$268,750**	**$268,750**

Source: City of Newman.

future cip

[1] Removed from the rate study because these items are grant funded. WDR permit renewal cost is estimated at $465,000 and the sewer rates study at $35,000. The grant is $500,000.

[2] Includes 2 pickup trucks and an aluminum boat.

Table A-12
City of Newman Wastewater Rate Study
Estimated CIP for Future Users in Inflated Dollars

DRAFT

Facility	Funding Source	Total	Fiscal Year Ending 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Collection System							*Costs Inflated 3.1% per year [1]*						
Upsize Sewer Line + Manholes Prince Road to Merced Street	Debt	$985,105	$0	$0	$0	$0	$0	$0	$0	$0	$985,105	$0	$0
Flap Gate Yancey Lift Station	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Upsize Sewer Line Bottlenecks	Cash	$1,116,030	$0	$0	$109,515	$112,884	$116,356	$119,935	$123,625	$127,428	$131,347	$135,388	$139,552
New Truck With Crane	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Canyon Creek Sewer Pump Replacement	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Installation of Manhole + Line at Canal School/Hill Ferry Road	Cash	$5,997	$0	$0	$0	$0	$0	$5,997	$0	$0	$0	$0	$0
Cleaning of Lines from M Street to Canal Street	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Impellers Replacement	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rodding Machine	Cash	$10,472	$0	$0	$0	$0	$10,472	$0	$0	$0	$0	$0	$0
Sewer Line Upgrades	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Vactor Truck	Reserve	$328,368	$0	$0	$0	$0	$0	$0	$0	$0	$328,368	$0	$0
Yearly Lift Station Cleaning	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Camera for Closed-Circuit Television (CCT)	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Manhole Replacement	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
M Street Sewer Line	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Build Out New Trunk North and South Route	Cash	$406,287	$0	$0	$0	$0	$0	$0	$0	$0	$131,347	$135,388	$139,552
Subtotal Sewer Collection		**$2,852,260**	**$0**	**$0**	**$109,515**	**$112,884**	**$126,828**	**$125,932**	**$123,625**	**$127,428**	**$1,576,168**	**$270,775**	**$279,105**
Treatment Plant													
Develop McPike Ranches	Cash	$948,925	$143,688	$90,310	$93,088	$95,951	$98,903	$101,945	$105,081	$108,313	$111,645	$0	$0
Sludge Removal	Cash	$133,699	$51,538	$26,562	$27,379	$28,221	$0	$0	$0	$0	$0	$0	$0
Aeration Basin Improvements	Debt	$3,921,701	$193,268	$796,851	$0	$0	$1,309,008	$0	$1,622,575	$0	$0	$0	$0
Main Road Overlay	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
WDR Permit Renewal [2]	Cash	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Swere Rates Study [2]	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contruct Hay Barn	Cash	$55,269	$0	$0	$0	$0	$55,269	$0	$0	$0	$0	$0	$0
Line and Manhole Replacement	Unfunded	$691,979	$0	$0	$0	$77,608	$79,995	$82,456	$84,992	$87,606	$90,301	$93,079	$95,942
Equipment Replacement [3]	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Replace Weed Spray Rig	Cash	$1,949	$0	$0	$0	$0	$0	$1,949	$0	$0	$0	$0	$0
Replace Load Tractor	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Property Maintenance	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Expand Operations Building Offices	Cash	$58,178	$0	$0	$0	$0	$58,178	$0	$0	$0	$0	$0	$0
New Groundwater Well	Debt	$132,809	$0	$132,809	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rocha Ranch Purchase	Reserve	$2,629,165	$0	$849,974	$876,120	$903,071	$0	$0	$0	$0	$0	$0	$0
Rocha Ranch Development	Cash	$388,162	$0	$0	$0	$0	$0	$0	$0	$0	$191,141	$197,021	$0
Subtotal Treatment Plant		**$8,961,837**	**$388,494**	**$1,896,505**	**$996,587**	**$1,104,850**	**$1,601,353**	**$186,350**	**$1,812,648**	**$387,061**	**$398,968**	**$93,079**	**$95,942**
Total Future Users Costs in Inflated Dollars		**$11,814,098**	**$388,494**	**$1,896,505**	**$1,106,102**	**$1,217,734**	**$1,728,181**	**$312,282**	**$1,936,273**	**$514,489**	**$1,975,136**	**$363,855**	**$375,047**
Total Cash-Funded by Existing Customers		$3,124,969	$195,226	$116,871	$229,982	$237,056	$339,178	$229,826	$228,706	$426,882	$571,361	$270,775	$279,105
Total Unfunded unless Growth is greater than 40 units/year		$691,979	$0	$0	$0	$77,608	$79,995	$82,456	$84,992	$87,606	$90,301	$93,079	$95,942
Total Reserve-Funded		$2,957,534	$0	$849,974	$876,120	$903,071	$0	$0	$0	$0	$328,368	$0	$0
Total Debt Financed		$5,039,615	$193,268	$929,660	$0	$0	$1,309,008	$0	$1,622,575	$0	$985,105	$0	$0
TOTAL		**$11,814,098**	**$388,494**	**$1,896,505**	**$1,106,102**	**$1,217,734**	**$1,728,181**	**$312,282**	**$1,936,273**	**$514,489**	**$1,975,136**	**$363,855**	**$375,047**

Source: City of Newman, Engineering News Record, and HEC.

future infl

[1] Engineering News Record (ENR) Consumer Cost Index (CCI) change 2005 to 2015:

		Change	Annual Avg. % Change
ENR CCI 2005	7,415		
ENR CCI 2015	10,039	2,624	**3.1%**

[2] Removed from the rate study because these items are grant funded. WDR permit renewal cost is estimated at $465,000 and the sewer rates study at $35,000. The grant is $500,000.

[3] Includes 2 pickup trucks and an aluminum boat.

Table A-13
City of Newman Wastewater Rate Study
Calculated Depreciation of Existing Assets

DRAFT

Existing Assets	Year Fully Depreciated	Annual Depreciation
Equipment		
Fence	2040	$138
New Holland Back Hoe - Pmt 1 of 2	2019	$1,350
Remaining Bal on New Holland Backhoe - Pmt 2 of 2	2020	$138
Aerators	2026	$1,000
John Deere Gator TE Electric Vehicle #1	2017	$542
John Deere Gator TE Electric Vehicle #2	2017	$323
Wireless Mesh	2022	$9,616
2015 Ford F250 Pickup	2019	$4,065
New Holland Tractor	2019	$5,272
HP Designjet Printer - PW Office	2020	$7,040
2004 Ford F-650 Water Truck	2020	$137
Ditch Witch FX50 Vaccum System with T18S Trailer	2020	$467
Subtotal Equipment		**$30,086**
Infrastructure		
Pipeline - Improvement	2040	$953
Pipeline - Improvement	2040	$270
Fence	2026	$58
Reseal Road	2026	$321
Fence	2026	$240
Treatment Plant-84	2024	$403
Treatment Plant-83	2023	$1,251
Treatment Plant-82	2022	$4,048
Treatment Plant-81	2021	$6,047
Treatment Plant-79	2019	$28,386
Treatment Plant-80	2020	$47,510
Ditch System	2042	$999
Aeration System-(6) 10hp Blowers	2043	$2,040
Sewer Line 3665 lf in Sherman Park	n.a.	$3,668
Storage Basin	2040	$28,918
Electric Gate	2042	$148
M St. Sewer Line Replacement	2042	$1,917
WWTP Road Improvement	2044	$505
Subtotal Infrastructure		**$127,680**
Buildings		
WWTP Office Overhang	2031	$92
Equipment Shed	2036	$421
Building Addition - Sewer	2037	$385
HVAC Unit - City Hall [1]	2018	$395
New Storage Unit	2038	$211
New City Hall [1]	2042	$10,984
Improvements [1]	2043	$2,586
Modular Building - Public Works [1]	2044	$576
Re-Roof WWTP	2044	$437
Subtotal Buildings		**$16,087**
Total Existing Assets Depreciation		**$173,854**

Source: City of Newman and HEC. exist assets

[1] Sewer fund's share of expenses.

Table A-14
City of Newman Wastewater Rate Study
Calculated Depreciation of New Assets

DRAFT

New Asset	Average Life of Asset	Fiscal Year Ending 2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Sewer Collection System	years											
Upsize Sewer Line + Manholes Prince Road to Merced Street	80	$0	$0	$0	$0	$0	$0	$0	$0	$24,628	$24,628	$24,628
Flap Gate Yancey Lift Station	30	$687	$687	$687	$687	$687	$687	$687	$687	$687	$687	$687
Upsize Sewer Line Bottlenecks	80	$0	$0	$1,369	$2,780	$4,234	$5,734	$7,279	$8,872	$10,514	$12,206	$13,950
New Truck With Crane	15	$0	$3,542	$3,542	$3,542	$3,542	$3,542	$3,542	$3,542	$3,542	$3,542	$3,542
Canyon Creek Sewer Pump Replacement	40	$0	$1,062	$1,062	$1,062	$1,062	$1,062	$1,062	$1,062	$1,062	$1,062	$1,062
Installation of Manhole + Line at Canal School/Hill Ferry Road	80	$0	$0	$0	$0	$0	$300	$300	$300	$300	$300	$300
Cleaning of Lines from M Street to Canal Street	20	$0	$2,656	$2,656	$2,656	$2,656	$2,656	$2,656	$2,656	$2,656	$2,656	$2,656
Impellers Replacement	15	$0	$0	$0	$0	$0	$1,599	$1,599	$1,599	$1,599	$1,599	$1,599
Rodding Machine	5	$0	$0	$0	$0	$13,963	$13,963	$0	$0	$0	$0	$0
Sewer Line Upgrades	80	$0	$0	$0	$0	$0	$0	$0	$0	$2,345	$4,763	$7,255
Vactor Truck	15	$0	$0	$0	$0	$0	$0	$0	$0	$43,782	$43,782	$43,782
Yearly Lift Station Cleaning	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Camera for Closed-Circuit Television (CCT)	10	$0	$7,969	$7,969	$7,969	$7,969	$7,969	$7,969	$7,969	$7,969	$7,969	$7,969
Manhole Replacement	50	$124	$187	$253	$321	$391	$463	$537	$613	$692	$773	$857
M Street Sewer Line	80	$2,221	$2,221	$2,221	$2,221	$2,221	$2,221	$2,221	$2,221	$2,221	$2,221	$2,221
Build Out New Trunk North and South Route	80	$0	$0	$0	$0	$0	$0	$0	$0	$1,642	$3,334	$5,079
Subtotal Sewer Collection		**$811**	**$16,103**	**$17,538**	**$19,017**	**$34,504**	**$37,974**	**$25,631**	**$27,300**	**$99,776**	**$103,967**	**$108,288**
Treatment Plant												
Develop McPike Ranches	80	$2,113	$3,441	$4,810	$6,221	$7,676	$9,175	$10,720	$12,313	$13,955	$13,955	$13,955
Sludge Removal	40	$2,577	$3,905	$5,274	$6,685	$6,685	$6,685	$6,685	$6,685	$6,685	$6,685	$6,685
Aeration Basin Improvements	50	$5,154	$26,403	$26,403	$26,403	$61,310	$61,310	$104,579	$104,579	$104,579	$104,579	$104,579
Main Road Overlay	10	$5,154	$5,154	$5,154	$5,154	$5,154	$5,154	$5,154	$5,154	$5,154	$0	$0
WDR Permit Renewal [1]	5	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Sewer Rates Study [1]	5	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Contruct Hay Barn	30	$0	$0	$0	$0	$3,685	$3,685	$3,685	$3,685	$3,685	$3,685	$3,685
Line and Manhole Replacement	50	$0	$0	$0	$3,104	$6,304	$9,602	$13,002	$16,506	$20,118	$23,841	$27,679
Equipment Replacement [2]	10	$0	$3,719	$3,992	$3,992	$3,992	$3,992	$3,992	$7,815	$7,815	$7,815	$7,815
Replace Weed Spray Rig	8	$0	$0	$0	$0	$0	$974	$974	$974	$974	$974	$974
Replace Load Tractor	8	$0	$0	$0	$0	$0	$0	$8,499	$8,499	$8,499	$8,499	$8,499
Property Maintenance	30	$0	$2,302	$2,740	$2,740	$2,740	$2,740	$2,740	$2,740	$2,740	$2,740	$2,740
Expand Operations Building Offices	50	$0	$0	$0	$0	$1,164	$1,164	$1,164	$1,164	$1,164	$1,164	$1,164
New Groundwater Well	50	$0	$10,625	$10,625	$10,625	$10,625	$10,625	$10,625	$10,625	$10,625	$10,625	$10,625
Rocha Ranch Purchase	n.a.	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Rocha Ranch Development	60	$0	$0	$0	$0	$0	$0	$0	$3,186	$6,469	$6,469	$6,469
Subtotal Treatment Plant		**$14,998**	**$55,548**	**$58,998**	**$64,925**	**$109,334**	**$115,106**	**$171,819**	**$183,924**	**$192,462**	**$191,031**	**$194,869**
Total New Assets Annual Depreciation		**$18,030**	**$73,873**	**$78,757**	**$86,163**	**$146,059**	**$155,301**	**$199,671**	**$213,445**	**$296,101**	**$300,554**	**$310,456**

Source: City of Newman and HEC.

new dep

[1] Removed from the rate study because these items are grant funded. WDR permit renewal cost is estimated at $465,000 and the sewer rates study at $35,000. The grant is $500,000.

[2] Includes 2 pickup trucks and an aluminum boat.

Table A-15
City of Newman Wastewater Rate Study
Projected Cost Distribution between Collection and Treatment System

DRAFT

FY 2018

Expenditures	Projected Total	Allocation		Collection			Treatment		
		Collection	Treatment	Operations	Capital	Total	Operations	Capital	Total
Operating Expenses									
Personnel (salaries and benefits)	$823,014	25%	75%	$205,753		$205,753	$617,260		$617,260
New part-time WWTP operator	$0	0%	100%	$0		$0	$0		$0
New collection system operators	$0	100%	0%	$0		$0	$0		$0
Contracted Services	$521,520	20%	80%	$104,304		$104,304	$417,216		$417,216
Utility - PG & E	$278,795	10%	90%	$27,879		$27,879	$250,915		$250,915
Supplies	$136,000	20%	80%	$27,200		$27,200	$108,800		$108,800
Administrative Surcharge	$133,681	50%	50%	$66,840		$66,840	$66,840		$66,840
Other Operations & Maintenance	$399,506	25%	75%	$99,876		$99,876		$299,629	$299,629
Debt Service	$92,878	25%	75%		$23,219	$23,219		$69,658	$69,658
CIP Cash - Existing Customers	$132,830	45%	55%		$59,773	$59,773		$73,056	$73,056
System Rehabilitation	$250,721	25%	75%		$62,680	$62,680		$188,041	$188,041
CIP Cash - Future Customers	$116,871	25%	75%		$29,218	$29,218		$87,654	$87,654
Subtotal Costs	**$2,885,815**	**24%**	**76%**	**$531,854**	**$174,891**	**$706,745**	**$1,461,032**	**$718,038**	**$2,179,070**
Operating Reserve	$234,000								
Less Offsetting Revenue	($266,992)								
Total	**$2,852,823**								

Source: HEC.

alloc

Table A-16
City of Newman Wastewater Rate Study
Unit Cost Determination

DRAFT

FY 2018

Cost Category	Allocated Costs	Percent Allocation			Cost			Total Influent			Unit Cost Per:		
		Flow	BOD	SS	Flow	BOD	SS	Flow MG	BOD Klbs	SS Klbs	Mgal of Flow ($/Mgal)	Klb of BOD ($/Klb)	Klb of SS ($/Klb)
	(A)	*(B)*	*(C)*	*(D)*	*(E) = (A)*(B)*	*(F)=(A)*(C)*	*(G)=(A)*(D)*	*(H)*	*(I)*	*(J)*	*(K)=(E)/(H)*	*(L)=(F)/(I)*	*(M)=(G)/(J)*
Operating Costs	Table A-15												
Collection System Costs	$531,854	100%	0%	0%	$531,854	$0	$0	397	2,175,854	1,127,101	$1,339.53	$0.00	$0.00
Treatment Costs	$1,461,032	60%	20%	20%	$876,619	$292,206	$292,206	397	2,175,854	1,127,101	$2,207.86	$0.13	$0.26
Capital Costs													
Collection System Costs	$174,891	100%	0%	0%	$174,891	$0	$0	397	2,175,854	1,127,101	$440.48	$0.00	$0.00
Treatment Costs	$718,038	60%	20%	20%	$430,823	$143,608	$143,608	397	2,175,854	1,127,101	$1,085.07	$0.07	$0.13
Subtotal Collection Costs	**$706,745**	**100%**	**0%**	**0%**	**$706,745**	**$0**	**$0**	**397**	**2,175,854**	**1,127,101**	**$1,780.01**	**$0.00**	**$0.00**
Subtotal Treatment Costs	**$2,179,070**	**60%**	**20%**	**20%**	**$1,307,442**	**$435,814**	**$435,814**	**397**	**2,175,854**	**1,127,101**	**$3,292.93**	**$0.20**	**$0.39**
Subtotal Costs	**$2,885,815**	**70%**	**15%**	**15%**	**$2,014,187**	**$435,814**	**$435,814**	**397**	**2,175,854**	**1,127,101**	**$5,072.94**	**$0.20**	**$0.39**
Other Costs													
Operating Reserve	$234,000	70%	15%	15%	$163,323	$35,339	$35,339	397	2,175,854	1,127,101	$411.35	$0.02	$0.03
Less Offsetting Revenue	($266,992)	70%	15%	15%	($186,350)	($40,321)	($40,321)	397	2,175,854	1,127,101	($469.34)	($0.02)	($0.04)
Subtotal Other Costs	**($32,992)**												
TOTAL COSTS	**$2,852,823**												

Source: HEC.

unit

Table A-17
City of Newman Wastewater Rate Study
Allocation of Costs to Flow, BOD, and SS by Customer Category

DRAFT

FY 2018

Unit Cost/Customer Category	Flow MG/Yr	BOD Klb/Yr	SS Klb/Yr	Collection Flow ($/Mgal)	Treatment Flow ($/Mgal)	Treatment BOD ($/Klb)	Treatment SS ($/Klb)	Other Flow ($/Mgal)	Other BOD ($/Klb)	Other SS ($/Klb)	TOTAL ALLOCATED COST
Unit Cost		---------->	***Table A-16***	***$1,780.01***	***$3,292.93***	***$0.20***	***$0.39***	***($58.00)***	***($0.002)***	***($0.004)***	
Residential											
1 Single Family (SF) & Religious Places	221.6	369,682	369,682	$394,506	$729,817	$74,046	$142,944	($12,854)	($847)	($1,634)	$1,325,978
1 Multi-Family (MF)	26.9	44,827	44,827	$47,838	$88,497	$8,979	$17,333	($1,559)	($103)	($198)	$160,788
1 SF + 1 MF	1.1	1,900	1,900	$2,027	$3,750	$380	$734	($66)	($4)	($8)	$6,813
Commercial											
1 Commercial	11.5	31,154	31,154	$20,459	$37,848	$6,240	$12,046	($667)	($71)	($138)	$75,718
1 Commercial + 1 SF	0.7	2,003	2,003	$1,316	$2,434	$401	$775	($43)	($5)	($9)	$4,869
1 Commercial + 1 MF	0.5	1,296	1,296	$851	$1,575	$260	$501	($28)	($3)	($6)	$3,150
1 Commercial + 2 MF	0.3	831	831	$546	$1,010	$166	$321	($18)	($2)	($4)	$2,020
2 Commercial	1.4	3,720	3,720	$2,443	$4,519	$745	$1,438	($80)	($9)	($16)	$9,041
2 Commercial + 1 SF	0.4	1,133	1,133	$744	$1,376	$227	$438	($24)	($3)	($5)	$2,753
2 Commercial + 3 MF	0.7	1,944	1,944	$1,277	$2,362	$389	$752	($42)	($4)	($9)	$4,725
3 Commercial	2.1	5,580	5,580	$3,664	$6,779	$1,118	$2,158	($119)	($13)	($25)	$13,561
4 Commercial	2.1	5,580	5,580	$3,664	$6,779	$1,118	$2,158	($119)	($13)	($25)	$13,561
Restaurant / Grocery											
Restaurant	2.5	18,009	13,772	$4,522	$8,365	$3,607	$5,325	($147)	($41)	($61)	$21,570
Grocery Market (Nob Hill)	2.5	17,931	13,712	$4,502	$8,329	$3,592	$5,302	($147)	($41)	($61)	$21,477
1 Commercial + 1 Restaurant	0.8	5,434	4,155	$1,364	$2,524	$1,088	$1,607	($44)	($12)	($18)	$6,508
Schools	10.1	10,937	8,413	$17,955	$33,216	$2,191	$3,253	($585)	($25)	($37)	$55,968
Industrial [1]											
Hi-West Foods	0.1	859	627	$198	$367	$172	$242	($6)	($2)	($3)	$968
Di-Mare	2.5	19,429	14,178	$4,483	$8,293	$3,892	$5,482	($146)	($44)	($63)	$21,897
Foster Farms	6.6	26,246	3,821	$11,818	$21,863	$5,257	$1,477	($385)	($60)	($17)	$39,953
TOTAL	**294.5**	**568,494**	**528,326**	**$524,178**	**$969,703**	**$113,867**	**$204,287**	**($17,079)**	**($1,302)**	**($2,336)**	**$1,791,319**
Saputo Cheese	102.6	1,607,360	598,774	$182,567	$337,739	$321,947	$231,527	($5,948)	($3,681)	($2,647)	$1,061,504
TOTAL with Saputo	**397.0**	**2,175,854**	**1,127,101**	**$706,745**	**$1,307,442**	**$435,814**	**$435,814**	**($23,027)**	**($4,982)**	**($4,982)**	**$2,852,823**

Source: HEC.

alloc cost

[1] Excludes Saputo Cheese.

Table A-18
City of Newman Wastewater Rate Study
Calculated Percentage of Water Reaching the Wastewater Treatment Plant **DRAFT**

Commercial Category		Accounts	Average Base (Winter) Monthly Flow	Annual Base Flow	Total Annual Water Use	Base Flow as % of Water Use	Study Return Flow Factor	2015 Billed Water Use
			a	*b = a*12*	*c*	*d = b/c*		
1 Commercial		67	1,056	12,669	15,072	84%		12,811
1 Commercial + 1 SF		3	60	717	1,052	68%		894
1 Commercial + 1 MF		2	14	165	186	89%		158
1 Commercial + 2 MF		1	4	48	75	64%		64
2 Commercial		4	13	153	165	93%		140
2 Commercial + 1 SF		1	6	72	100	72%		85
2 Commercial + 3 MF	[1]	1	16	189	147	129%		125
3 Commercial		4	32	384	502	76%		427
4 Commercial		3	19	225	376	60%		320
Total Commercial		**86**	**1,219**	**14,622**	**17,675**	**83%**	**85%**	**15,024**
Restaurant		12	219	2,631	2,967	89%		2,670
Grocery (Nob Hill)		1	277	3,321	4,763	70%		4,287
1 Commercial + 1 Restaurant		2	34	402	408	99%		367
Total Restaurant		**15**	**530**	**6,354**	**8,138**	**89%**	**90%**	**7,324**

Source: City of Newman billing records and HEC. return

[1] Spike in water use in one month; most likely due to a leak or water left running, results in annual base use being higher than total annual use. This is an anomaly.