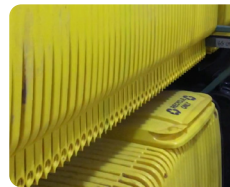
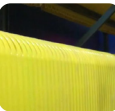




# COST OF SERVICE AND RATE DESIGN ANALYSIS

City of Stillwater, Oklahoma



PREPARED BY:



IN COORDINATION WITH:



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## EXECUTIVE SUMMARY

In July 2019, the City of Stillwater, Oklahoma (City) retained NewGen Strategies and Solutions, LLC (NewGen), to conduct a cost of service and rate design study (Study) for the solid waste utility (Utility). The purpose of this Study is to determine the cost of providing solid waste services, equitably distribute the costs to the appropriate customer classes, and design rates to safeguard the financial integrity of the Utility.

As part of the Study NewGen submitted a detailed data request to the City to collect historical and background information on operations and practices. The information requested included:

- Detailed Financial Reports and Budgets
- Solid Waste Policies and Ordinances
- Customer and Container Counts
- Personnel Rosters
- Solid Waste and Recycling Tonnage Reports
- Fleet Inventory Operating Costs

NewGen also held numerous meetings with the City staff throughout the course of the project to discuss, plan, and finalize the cost of service analysis.

### Revenue Requirement by Scenario

In developing the Test Year revenue requirement for the City, NewGen used the FY 2020 adopted budget as the basis for the Test Year. NewGen compared the FY 2020 adopted budget to historical expenses for FY 2017, FY 2018, and FY 2019. Through this comparison and with input from City staff, NewGen made adjustments to ensure that the Test Year would reflect expenses that occur on a regular basis. In addition to developing the Test Year revenue requirement, NewGen forecast the annual revenue requirement for FY 2020 through FY 2024. In order to develop this forecast, NewGen projected how costs would change over the years due to a variety of different inflation factors.

NewGen developed rate recommendations under five separate scenarios, whose revenue requirement forecasts are summarized below.

- **Scenario 1:** The revenue requirement forecast for Scenario 1 is summarized in Table ES-1. This scenario includes \$1.4 million for parking lot improvements, at the solid waste facility, to be recovered on a cash basis over FY 2021 – FY 2024.

**Table ES-1**  
**Revenue Requirement – Scenario 1**

	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
O&M Costs	\$3,977,519	\$4,039,372	\$4,102,795	\$4,167,830	\$4,234,519
Transfer to General Fund	1,928,556	900,000	1,000,000	1,000,000	1,000,000
Vehicle Replacement	773,606	844,151	911,491	945,201	978,936
PAYG Capital <sup>1</sup>	-	350,000	350,000	350,000	350,000

**Table ES-1**  
**Revenue Requirement – Scenario 1**

	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
New Debt Service	-	-	-	-	-
Total Expenses <sup>2</sup>	\$6,679,682	\$6,133,523	\$6,364,286	\$6,463,031	\$6,563,454
Miscellaneous Revenues	(567,915)	(567,915)	(567,915)	(567,915)	(567,915)
Net Revenue Requirement <sup>2,3</sup>	\$6,111,767	\$5,565,608	\$5,796,371	\$5,895,116	\$5,995,539

1. Pay-As-You-Go (i.e. cash capital outlays).

2. Any minor arithmetic deviation is due to rounding.

3. The net revenue requirement summarized in this table reflects the subtraction of miscellaneous revenues.

- **Scenario 2:** The revenue requirement forecast for Scenario 2 is summarized in Table ES-2. This scenario includes \$1.4 million for the parking lot improvements, at the solid waste facility, to be recovered through a new debt issue in FY 2024.

**Table ES-2**  
**Revenue Requirement – Scenario 2**

	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
O&M Costs	\$3,977,519	\$4,039,372	\$4,102,795	\$4,167,830	\$4,234,519
Transfer to General Fund	1,928,556	900,000	1,000,000	1,000,000	1,000,000
Vehicle Replacement	773,606	844,151	911,491	945,201	978,936
PAYG Capital	-	-	-	-	-
New Debt Service	-	-	-	-	183,204
Total Expenses <sup>1</sup>	\$6,679,682	\$5,783,523	\$6,014,286	\$6,113,031	\$6,396,659
Miscellaneous Revenues	(567,915)	(567,915)	(567,915)	(567,915)	(567,915)
Net Revenue Requirement <sup>1,2</sup>	\$6,111,767	\$5,215,608	\$5,446,371	\$5,545,116	\$5,828,743

1. Any minor arithmetic deviation is due to rounding.

2. The net revenue requirement summarized in this table reflects the subtraction of miscellaneous revenues.

- **Scenario 3:** The revenue requirement forecast for Scenario 3 is summarized in Table ES-3. This scenario includes \$1.4 million for the parking lot improvement, at the solid waste facility, to be recovered through a new debt issue in FY 2024, \$1.6 million in new debt to be issued for a recycling staging facility in FY 2021, and operating and maintenance costs for the recycling staging facility starting in FY 2023.

**Table ES-3**  
**Revenue Requirement – Scenario 3**

	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
O&M Costs	\$3,977,519	\$4,039,372	\$4,102,795	\$4,426,024	\$4,498,651
Transfer to General Fund	1,928,556	900,000	1,000,000	1,000,000	1,000,000

**Table ES-3**  
**Revenue Requirement – Scenario 3**

	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
Vehicle Replacement	773,606	844,151	911,491	945,201	978,936
PAYG Capital	-	-	-	-	-
New Debt Service	-	130,025	130,025	130,025	313,230
Total Expenses <sup>1</sup>	<b>\$6,679,682</b>	<b>\$5,913,548</b>	<b>\$6,144,311</b>	<b>\$6,501,251</b>	<b>\$6,790,816</b>
Miscellaneous Revenues	<b>(567,915)</b>	<b>(567,915)</b>	<b>(567,915)</b>	<b>(567,915)</b>	<b>(567,915)</b>
Net Revenue Requirement <sup>1,2</sup>	<b>\$6,111,767</b>	<b>\$5,345,633</b>	<b>\$5,576,396</b>	<b>\$5,933,336</b>	<b>\$6,222,901</b>

1. Any minor arithmetic deviation is due to rounding.

2. The net revenue requirement summarized in this table reflects the subtraction of miscellaneous revenues.

- **Scenario 4:** The revenue requirement forecast for Scenario 4 is summarized in Table ES-4. This scenario assumes no capital funding for parking lot improvements or a recycling staging facility.

**Table ES-4**  
**Revenue Requirement – Scenario 4**

	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
O&M Costs	\$3,977,519	\$4,039,372	\$4,102,795	\$4,167,830	\$4,234,519
Transfer to General Fund	1,928,556	900,000	1,000,000	1,000,000	1,000,000
Vehicle Replacement	773,606	844,151	911,491	945,201	978,936
PAYG Capital	-	-	-	-	-
New Debt Service	-	-	-	-	-
Total Expenses <sup>1</sup>	<b>\$6,679,682</b>	<b>\$5,783,523</b>	<b>\$6,014,286</b>	<b>\$6,113,031</b>	<b>\$6,213,454</b>
Miscellaneous Revenues	<b>(567,915)</b>	<b>(567,915)</b>	<b>(567,915)</b>	<b>(567,915)</b>	<b>(567,915)</b>
Net Revenue Requirement <sup>1,2</sup>	<b>\$6,111,767</b>	<b>\$5,215,608</b>	<b>\$5,446,371</b>	<b>\$5,545,116</b>	<b>\$5,645,539</b>

1. Any minor arithmetic deviation is due to rounding.

2. The net revenue requirement summarized in this table reflects the subtraction of miscellaneous revenues.

- **Scenario 5:** The revenue requirement forecast for Scenario 5 is summarized in Table ES-5. This scenario assumes \$1.6 million of cash funding for the recycling staging facility (FY 2021 and FY 2022), operating costs for recycling staging facility starting in FY 2023, and a total of \$800,000 of cash funding for parking lot improvements in FY 2023 and FY 2024.

**Table ES-5**  
**Revenue Requirement – Scenario 5**

	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
O&M Costs	\$3,977,519	\$4,039,372	\$4,102,795	\$4,426,024	\$4,498,651
Transfer to General Fund	1,928,556	900,000	1,000,000	1,000,000	1,000,000
Vehicle Replacement	773,606	844,151	911,491	945,201	978,936

**Table ES-5**  
**Revenue Requirement – Scenario 5**

	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
PAYG Capital <sup>1</sup>	-	800,000	800,000	400,000	400,000
New Debt Service	-	-	-	-	-
Total Expenses <sup>2</sup>	\$6,679,682	\$6,583,523	\$6,814,286	\$6,771,225	\$6,877,587
Miscellaneous Revenues	(567,915)	(567,915)	(567,915)	(567,915)	(567,915)
Net Revenue Requirement <sup>2,3</sup>	\$6,111,767	\$6,015,608	\$6,246,371	\$6,203,310	\$6,309,672

1. \$800,000 in FY 2021 and FY 2022 are for the recycling staging facility. \$400,000 in FY 2023 and FY 2024 are for the parking lot improvements.
2. Any minor arithmetic deviation is due to rounding.
3. The net revenue requirement summarized in this table reflects the subtraction of miscellaneous revenues.

## Rate Recommendations

### Residential Rates

Based on which scenario the City elects to implement, NewGen would recommend the following residential rates increases for the five scenarios. The implementation of these proposed rates will ensure the overall financial integrity of the Utility through FY 2024.

**Table ES-6**  
**Proposed Residential Rates Increases**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Increase per HH per Month (Scenario 1)	-	5%	5%	-	-
Increase per HH per Month (Scenario 2)	-	-	4%	-	4%
Increase per HH per Month (Scenario 3)	-	-	5%	5%	5%
Increase per HH per Month (Scenario 4)	-	-	4%	-	-
Increase per HH per Month (Scenario 5)	-	11.5%	-	4%	-

Table ES-7 shows the impact of the residential rate increase on a 35, 64, and 96-gallon cart customer for each of the five scenarios.



**Table ES-7  
Proposed Residential Rates**

	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
<b>Scenario 1</b>					
35-gallon cart	\$13.74	\$14.43	\$15.15	\$15.15	\$15.15
64-gallon cart	\$16.01	\$16.81	\$17.65	\$17.65	\$17.65
96-gallon cart	\$18.28	\$19.19	\$20.15	\$20.15	\$20.15
<b>Scenario 2</b>					
35-gallon cart	\$13.74	\$13.74	\$14.29	\$14.29	\$14.86
64-gallon cart	\$16.01	\$16.01	\$16.65	\$16.65	\$17.32
96-gallon cart	\$18.28	\$18.28	\$19.01	\$19.01	\$19.77
<b>Scenario 3</b>					
35-gallon cart	\$13.74	\$13.74	\$14.43	\$15.15	\$15.91
64-gallon cart	\$16.01	\$16.01	\$16.81	\$17.65	\$18.53
96-gallon cart	\$18.28	\$18.28	\$19.19	\$20.15	\$21.16
<b>Scenario 4</b>					
35-gallon cart	\$13.74	\$13.74	\$14.29	\$14.29	\$14.29
64-gallon cart	\$16.01	\$16.01	\$16.65	\$16.65	\$16.65
96-gallon cart	\$18.28	\$18.28	\$19.01	\$19.01	\$19.01
<b>Scenario 5</b>					
35-gallon cart	\$13.74	\$15.32	\$15.32	\$15.93	\$15.93
64-gallon cart	\$16.01	\$17.85	\$17.85	\$18.57	\$18.57
96-gallon cart	\$18.28	\$20.38	\$20.38	\$21.20	\$21.20

### Commercial Rear Load Rates

NewGen would recommend the following commercial rear load rates increases for the five scenarios.

**Table ES-8  
Proposed Commercial Rear Load Rates Increases**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Scenario 1	-	-	5%	5%	-
Scenario 2	-	-	5%	5%	-
Scenario 3	-	-	5%	5%	5%
Scenario 4	-	-	4%	-	-
Scenario 5	-	11.5%	-	4%	-

**Commercial Roll Off Rates**

NewGen would recommend that the City implement a different billing approach for roll off customers in FY 2021. This approach would include a delivery fee, per pull fee, and a monthly rental fee if the container is held for greater than 30 days. NewGen recommends the same delivery fee and monthly rental fee in each of the five scenarios. For Scenario 4, NewGen would recommend a slightly lower per pull fee because the City does not have to recover any capital costs.

**Table ES-9**  
**Proposed Roll Off Rates**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Delivery Fee	N/A <sup>1</sup>	\$100	\$100	\$100	\$100
Rental Fee (monthly)	N/A <sup>1</sup>	\$100	\$100	\$100	\$100
Per Pull Fee (Scenarios 1-3,5)	N/A <sup>1</sup>	\$300	\$310	\$320	\$330
Per Pull Fee (Scenario 4)	N/A <sup>1</sup>	\$280	\$290	\$300	\$310

1. NewGen would recommend no change in FY 2020 in Roll Off rates.

**Street Sweeping Rates**

NewGen would recommend the following street sweeping rates increases for the five scenarios described in table ES-10.

**Table ES-10**  
**Proposed Street Sweeping Rates**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Scenario 1	\$1.63	\$2.33	\$2.33	\$2.33	\$2.33
Scenario 2	\$1.63	\$1.63	\$2.23	\$2.23	\$2.23
Scenario 3	\$1.63	\$1.63	\$2.33	\$2.33	\$2.33
Scenario 4	\$1.63	\$1.63	\$2.18	\$2.18	\$2.18
Scenario 5	\$1.63	\$2.33	\$2.33	\$2.33	\$2.33

**Revenue Recovery from Proposed Rates**

Table ES-11 shows the forecasted revenue recovery from the proposed rates under Scenario 1.

**Table ES-11**  
**Revenue Recovery from Proposed Rates – Scenario 1**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Revenue from Proposed Rates	\$5,276,522	\$5,669,274	\$5,950,856	\$6,038,862	\$6,073,351
Revenue Requirement	\$6,111,767	\$5,565,608	\$5,796,371	\$5,895,116	\$5,995,539
Over/(Under) Recovery	(\$835,244)	\$103,666	\$154,485	\$143,746	\$77,812

Table ES-12 shows the forecasted revenue recovery from the proposed rates under Scenario 2.

**Table ES-12**  
**Revenue Recovery from Proposed Rates – Scenario 2**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Revenue from Proposed Rates	\$5,276,522	\$5,312,949	\$5,691,087	\$5,777,795	\$5,969,318
Revenue Requirement	\$6,111,767	\$5,215,608	\$5,446,371	\$5,545,116	\$5,828,743
Over/(Under) Recovery	(\$835,244)	\$97,341	\$244,716	\$232,679	\$140,574

Table ES-13 shows the forecasted revenue recovery from the proposed rates under Scenario 3.

**Table ES-13**  
**Revenue Recovery from Proposed Rates – Scenario 3**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Revenue from Proposed Rates	\$5,276,522	\$5,312,949	\$5,753,012	\$6,038,862	\$6,340,119
Revenue Requirement	\$6,111,767	\$5,345,633	\$5,576,396	\$5,933,336	\$6,222,901
Over/(Under) Recovery	(\$835,244)	(\$32,684)	\$176,616	\$105,527	\$117,218

Table ES-14 shows the forecasted revenue recovery from the proposed rates under Scenario 4.

**Table ES-14**  
**Revenue Recovery from Proposed Rates – Scenario 4**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Revenue from Proposed Rates	\$5,276,522	\$5,304,487	\$5,660,215	\$5,692,790	\$5,725,549
Revenue Requirement	\$6,111,767	\$5,215,608	\$5,446,371	\$5,545,116	\$5,645,539
Over/(Under) Recovery	(\$835,244)	\$88,879	\$213,845	\$147,674	\$80,010

Table ES-15 shows the forecasted revenue recovery from the proposed rates under Scenario 5.

**Table ES-15**  
**Revenue Recovery from Proposed Rates – Scenario 5**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Revenue from Proposed Rates	\$5,276,522	\$6,030,027	\$6,064,429	\$6,313,783	\$6,349,647
Revenue Requirement	\$6,111,767	\$6,015,608	\$6,246,371	\$6,203,310	\$6,309,672
Over/(Under) Recovery	(\$835,244)	\$14,419	(\$181,941)	\$110,473	\$39,975

### Policy Issues

- **Consider Charging for Commercial Cardboard Roll Off Collection.** At present the City does not charge for commercial collection of cardboard for either rear load or roll off containers. The City has established cardboard collection rates for roll off containers which have never been implemented. NewGen would encourage the City consider implementing some modest fee for commercial cardboard roll off collection that recovers some revenue from the commercial businesses while still encouraging those businesses to continue to divert cardboard from the landfill. The City does not have many cardboard rear load dumpster customers, so they are not seen as pressing an issue, but the City may wish to consider charging a modest fee for the rear load commercial cardboard containers as well.
- **Change in Roll Off Rate Structure.** NewGen would recommend that the City consider moving to a roll off rate structure that has four set components. The City would charge a **delivery fee** for a roll off container (regardless of size) and then a **pull fee** for when the container is full, and pulled by the City, and hauled to the landfill to be emptied. The pull fee would be the same regardless of the size of the roll off container. The client would also be required to pay a **disposal fee** associated with the weight of material that is disposed of at the landfill, at the current per ton tipping fee charged by the City. Finally, to discourage individuals from retaining a roll off container for an excessive period of time, a monthly **rental fee** would be charged for every 30 days the container is kept by the owner.

This roll off rate structure is widely used within the industry, is simpler than the City's current billing process for roll offs, and would minimize future potential billing errors on the part of the City with the use of a more simplified billing structure.

## Section 1

# INTRODUCTION

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In July 2019, the City of Stillwater, Oklahoma (City) retained NewGen Strategies and Solutions, LLC (NewGen), to conduct a cost of service and rate design study (Study) for the solid waste utility (Utility), as part of a comprehensive solid waste management plan. The purpose of this Study is to determine the cost of providing solid waste services, equitably distribute the costs to the appropriate customer classes, and design rates to safeguard the financial integrity of the Utility.

This section of the report describes the solid waste services provided by the City of Stillwater. For each of these services (also called service categories), NewGen identified a cost of providing each of these services (both capital costs, as well as operating costs).

## Background

The City of Stillwater solid waste utility currently provides solid waste and recycling collection services to approximately 14,000 households; and additionally, services commercial refuse and recycling customers via rear load and roll off collection. The Utility also provides street sweeping services and operates a convenience collection center that accepts the same items as the curbside recycling service, as well as household hazardous waste (HHW), bulky waste, and putrescible waste.

## Current Solid Waste Services and Rates

Solid waste services provided by the City include the following:

- Residential Cart Service (refuse and recycling)
- Commercial Rear Load (refuse and recycling)
- Commercial Roll Off (refuse and recycling)
- Street Sweeping Services
- Yard Waste Collection
- Bulky Waste Collection
- Convenience Collection Center

## Residential Cart Service

Residential services provided by the City include weekly residential refuse and recycling cart collection serviced via fully automated and semi-automated collection vehicles. Refuse carts are offered in 4 sizes: 35-gallon, 48-gallon, 64-gallon, and 96-gallon capacity, with different monthly rates for each cart size. The current rate for residential services is detailed in Table 1-1.

**Table 1-1  
Residential Rates**

	<b>Rate</b>
<b>Inside City Limits</b>	
35-gallon cart	\$13.74
48-gallon cart	\$14.87
64-gallon cart	\$16.01
96-gallon cart	\$18.28
House-Side 96-gallon	\$27.83
(2) 64-gallon carts	\$26.74
(2) 96-gallon carts	\$29.93
<b>Outside City Limits</b>	
35-gallon cart	\$29.52
64-gallon cart	\$30.65
96-gallon cart	\$32.93
(2) 96-gallon carts	\$44.57

As part of this monthly user fee, all residents receive:

- Once per week refuse (garbage) collection.
- Once per week recycling collection.
- Three times per month green waste collection.
- Once per month glass collection.
- Drop-off at the convenience collection center.
- Move-in cardboard removal.
- Bulk item collection.

## Commercial Rear Load Refuse

The City offers one to six times per week collection and disposal of refuse via rear load containers in sizes ranging from two to four cubic yards of capacity. The current rates for this service are aggregated in the rate matrix in Table 1-2.

**Table 1-2  
Current Commercial Rear Load Refuse Rates**

<b>Container Size (CY)</b>	<b>Collection Frequency</b>					
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
2	\$37.06	\$74.11	\$111.23	\$148.24	\$185.30	\$222.47
3	\$55.61	\$111.23	\$166.84	\$222.47	\$278.07	\$333.68
4	\$74.11	\$148.24	\$222.47	\$296.47	\$370.58	\$444.91

The current monthly rear load rates are based on the frequency of collection and size of the container. The rates increase based on the size of container and the number of weekly collections, as shown in Table 1-2. For example, a customer with a two cubic yard container that is collected once per week is charged \$37.06, while a customer that has a four cubic yard container collected once per week is charged \$74.11.

## **Commercial Roll Off Refuse**

The City provides collection and disposal services for roll off containers, ranging from 10 to 40 cubic yards (CY) in size. Roll Off customers pay a delivery fee and a daily rental fee based on the size of the container they are renting. The customers are also responsible for a disposal charge of \$42.07 for inside city limits, and \$46.28 for outside city limits.

## **Street Sweeping Services**

The City provides street sweeping services to approximately 20,000 customers.

## **Project Approach**

The goal of a cost of service and rate design study is to determine the solid waste fees required to adequately recover the costs of providing services. NewGen developed a series of key tasks that provided the foundation for the conduct of the Study. The methodology is discussed in Section 2 of this report. NewGen utilized the following sources of information regarding the City's current system and financial requirements.

## **Data Request**

NewGen submitted a detailed data request to the City to collect historical and background information on operations and practices. The information requested included:

- Detailed Financial Reports and Budgets
- Solid Waste Policies and Ordinances
- Customer and Container Counts
- Personnel Rosters
- Solid Waste and Recycling Tonnage Reports
- Fleet Inventory Operating Costs

## **Project Meetings**

NewGen held a kick-off meeting with City staff to initiate the Study. This meeting served as a forum to confirm the scope of services, discuss the data already collected, and finalize the solid waste and recycling service categories to be analyzed in the cost of service analysis.

NewGen also held numerous meetings with the City staff throughout the course of the project to discuss, plan, and finalize the cost of service analysis.

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## Section 2

# COST OF SERVICE ANALYSIS

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This section describes the tasks involved in conducting the solid waste cost of service analysis. Before describing each of the tasks in detail, NewGen has provided a brief overview of the overall cost of service analysis methodology. This section of the report also quantifies the cost of service-based rates for solid waste services.

## Methodology Overview

This overview provides the background necessary to understand how data compiled in each task provides the information required to determine the cost of service and fees required to recover the cost of service.

- **Development of the “Test Year”** – The first task in conducting the cost of service analysis is the development of an annual revenue requirement for a Test Year. The revenue requirement represents the total revenue that the solid waste operation will need to recover during a year in order to fund all expenses incurred in providing solid waste services. NewGen worked with City staff to select a period that reflected the typical operation of the solid waste system.
- **Development of the Revenue Requirement Forecast** – After developing the revenue requirement for the Test Year, NewGen worked with City staff to project changes in costs due to inflation, salary increases, new equipment, new customers, etc. This resulted in the five-year revenue requirement forecast. NewGen’s cost of service and rate design forecast was focused on a five-year period (FY 2020 – FY 2024).
- **Allocation of Costs to Service Categories** – NewGen worked with City staff to assign and allocate costs to the appropriate service categories. The service categories represent the primary solid waste services provided by the City and are listed in this section of the report, titled Allocation of Costs to Service Categories.
- **Allocation to Customer Classes** – NewGen grouped the service categories based on the customer classes that will recover each service categories’ costs. The customer classes include residential customers, commercial rear load, commercial roll off, and street sweeping.
- **Determination of Billing Units** – NewGen identified the appropriate billing units for each customer class. For example, the residential customer is charged per container (based on the size of the cart that is serviced), so the number of residential containers was utilized as the billing unit for this customer class.
- **Calculation of the Cost of Service** – NewGen distributed the costs for each customer class across the appropriate number of billing units to determine the cost of service for each customer class.

## Development of the Revenue Requirement

### Selection of the Test Year

In developing the Test Year revenue requirement for the City, NewGen used the FY 2020 adopted budget as the basis for the Test Year. NewGen compared the FY 2020 adopted budget to historical expenses for

FY 2017, FY 2018, and FY 2019. Through this comparison and with input from City staff, NewGen made adjustments to ensure that the Test Year would reflect expenses that occur on a regular basis.

### Development of the Revenue Requirement Forecast

In addition to developing the Test Year revenue requirement, NewGen forecast the annual revenue requirement for FY 2020 through FY 2024. In order to develop this forecast, NewGen projected how costs would change over the years due to a variety of different inflation factors. The assumptions used to develop the five-year forecast include the annual inflation factors shown in Table 2-1. These factors were developed based on NewGen's experience in the conduct of financial forecasts, along with input from City staff.

**Table 2-1  
Inflation Factors**

<b>Inflation Factor</b>	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
Salaries	0.00%	0.00%	0.00%	0.00%	0.00%
Benefits	0.00%	3.00%	3.00%	3.00%	3.00%
Fuel	0.00%	3.00%	3.00%	3.00%	3.00%
Vehicle Maintenance	0.00%	3.00%	3.00%	3.00%	3.00%
Capital Projects	0.00%	3.00%	3.00%	3.00%	3.00%
General Maintenance	0.00%	3.00%	3.00%	3.00%	3.00%
General	0.00%	2.30%	2.30%	2.30%	2.30%
None	0.00%	0.00%	0.00%	0.00%	0.00%

## Five Alternative Scenarios

NewGen was asked to develop five alternative scenarios for the City, two of which includes a recycling staging facility (Scenario 3 and Scenario 5). Table 2-2 summarizes the five scenarios forecasted by NewGen.

**Table 2-2  
Five Alternative Scenarios**

	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024
<b>Scenario 1 – Solid waste facility parking lot improvements cash funded</b>					
Debt Funded	\$0	\$0	\$0	\$0	\$0
PAYG	-	350,000	350,000	350,000	350,000
	\$0	\$350,000	\$350,000	\$350,000	\$350,000
<b>Scenario 2 – Solid waste facility parking lot improvements debt financed</b>					
Debt Funded	\$0	\$0	\$0	\$0	\$183,204
PAYG	-	-	-	-	-
	\$0	\$0	\$0	\$0	\$183,204
<b>Scenario 3 – Solid waste facility parking lot improvements debt financed, recycling staging facility debt financed, O&amp;M costs</b>					
Debt Funded	\$0	\$130,025	\$130,025	\$130,025	\$313,230
PAYG	-	-	-	-	-
Recycling staging facility O&M costs	-	-	-	258,194	264,132
	\$0	\$130,025	\$130,025	\$388,219	\$577,362
<b>Scenario 4 – No capital funding for Solid waste facility parking lot improvements or recycling staging facility</b>					
Debt Funded	\$0	\$0	\$0	\$0	\$0
PAYG	-	-	-	-	-
	\$0	\$0	\$0	\$0	\$0
<b>Scenario 5 – Solid waste facility parking lot improvements cash funded, recycling staging facility cash funded, O&amp;M costs</b>					
Debt Funded	\$0	\$0	\$0	\$0	\$0
PAYG	-	800,000	800,000	400,000	400,000
Recycling staging facility O&M costs	-	-	-	258,194	264,132
	\$0	\$800,000	\$800,000	\$658,194	\$664,132

### Vehicle Replacement

The revenue requirement incorporates funding for vehicle replacements scheduled to occur during the FY 2020 – FY 2024 forecast via lease payments and cash funding. The City also plans on funding the purchase of two street sweeping trucks in FY 2025 and FY 2027 via cash as shown in Table 2-3, for which the City would begin setting aside funds. Finally, the funding with cash of one pickup truck per year starting in FY 2022 is included in the forecast. NewGen worked with City staff to estimate future lease payments for the City's vehicles.

Table 2-3 summarizes the annual PAYG funding forecasted for FY 2020 – FY 2024.

**Table 2-3**  
**Projected Funding Sources**

	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
Lease Payments <sup>1</sup>	\$726,269	\$753,768	\$793,790	\$826,680	\$859,571
Street Sweeper (FY 2025)	47,337	47,337	47,337	47,337	47,337
Street Sweeper (FY 2027)	-	43,046	43,046	43,046	43,046
Pickup Trucks	-	-	27,318	28,138	28,982
<b>Total<sup>1</sup></b>	<b>\$773,606</b>	<b>\$844,151</b>	<b>\$911,491</b>	<b>\$945,201</b>	<b>\$978,936</b>

1. Any minor arithmetic deviation is due to rounding.

### Revenue Requirement

Table 2-4 shows the revenue requirement for the five-year forecast for each of the five scenarios. The detailed composition of the forecast is provided in Appendix, Schedule 1, Schedule 9, Schedule 17, Schedule 25, and Schedule 33.

**Table 2-4**  
**Solid Waste Revenue Requirement**

	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
Solid Waste Revenue Requirement (Scenario 1)	\$6,111,767	\$5,565,608	\$5,796,371	\$5,895,116	\$5,995,539
Solid Waste Revenue Requirement (Scenario 2)	\$6,111,767	\$5,215,608	\$5,446,371	\$5,545,116	\$5,828,743
Solid Waste Revenue Requirement (Scenario 3)	\$6,111,767	\$5,345,633	\$5,576,396	\$5,933,336	\$6,222,901
Solid Waste Revenue Requirement (Scenario 4)	\$6,111,767	\$5,215,608	\$5,446,371	\$5,545,116	\$5,645,539
Solid Waste Revenue Requirement (Scenario 5)	\$6,111,767	\$6,015,608	\$6,246,371	\$6,203,310	\$6,309,672

The City provides a wide variety of solid waste services to its customers. To determine the costs for each service, there is a need to allocate costs to service categories that represent the primary solid waste services provided. These categories were determined through a detailed series of discussions with City staff and are shown below.

- Residential Collection
  - Refuse
  - Recycling
  - Yard Waste
  - Glass Recycling
  - Bulky Items
  - Container Maintenance & Delivery
- Commercial Rear Load Collection
  - Rear Load Refuse
  - Cardboard
  - Container Maintenance & Delivery
- Commercial Roll Off
  - Refuse/Recycling
  - Container Maintenance
- Disposal
- Convenience Collection Center
- Street Sweeping
- Solid Waste Administration

Identification of the total costs for each service category was a critical step in determining adequate rates that reflect the cost of providing the various services. These costs were isolated by service category in order to fully recover the total revenue requirement by matching those customers that utilize the service with the actual cost for that service. Table 2-5 identifies the cost of providing each service for FY 2020 through FY 2024 for Scenario 1. The revenue requirement by service category changes modestly for each of the four other scenarios. For more detail, see Appendix, Schedule 3, Schedule 11, Schedule 19, Schedule 27, and Schedule 35.

**Table 2-5**  
**Revenue Requirement by Service Category**

Service Category	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024
<b>Residential Collection</b>					
Refuse	\$759,387	\$769,017	\$801,737	\$811,794	\$822,118
Recycling	524,227	529,988	544,975	550,837	556,842
Yard Waste	235,899	238,622	245,528	248,398	251,344
Glass	6,964	7,039	7,574	7,653	7,736
Bulky Items	459	4,009	4,096	4,258	4,420
Container Maintenance & Delivery	207,231	209,679	212,189	214,763	217,402

**Table 2-5**  
**Revenue Requirement by Service Category**

<b>Service Category</b>	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
<b>Commercial Rear Load Collection</b>					
Rear Load Refuse	\$735,256	\$777,103	\$785,481	\$821,148	\$857,051
Cardboard	54,096	54,838	55,145	55,816	56,496
Container Maintenance & Delivery	87,549	88,394	89,261	90,149	91,060
<b>Commercial Roll Off Collection</b>					
Refuse/Recycling	\$192,429	\$193,908	\$196,318	\$200,194	\$204,099
Container Maintenance	-	-	-	-	-
<b>Disposal</b>	822,000	840,906	860,247	880,033	900,273
<b>Convenience Collection Center</b>	80,045	69,492	71,700	74,644	77,626
<b>Street Sweeping</b>	329,564	375,936	379,354	382,865	386,472
<b>Solid Waste Administration<sup>1</sup></b>	2,076,662	1,406,676	1,542,766	1,552,565	1,562,600
<b>Total Revenue Requirement<sup>2</sup></b>	<b>\$6,111,767</b>	<b>\$5,565,608</b>	<b>\$5,796,371</b>	<b>\$5,895,116</b>	<b>\$5,995,539</b>

1. Administrative costs are comprised of the following: the administration portion of the budget, interfund transfers.

2. Any minor arithmetic deviation is due to rounding.

## Allocation to Customer Classes

After calculating the costs for each service category over the five-year period, NewGen allocated the costs for the various service categories to each respective customer class. This process identifies the appropriate customers to be charged for each service provided. Table 2-6 identifies how the service categories were grouped and the cost recovery basis for each service category.

**Table 2-6**  
**Recovery Basis for Service Categories**

<b>Service Category</b>	<b>Recovery Basis</b>
<b>Solid Waste Administration</b>	Distributed to all customer classes based on revenue requirement
<b>Residential Refuse Collection</b>	
Refuse	Residential Collection
Recycling	Residential Collection
Yard Waste	Residential Collection
Glass Recycling	Residential Collection
Bulky Items	Residential Collection
Cart Maintenance & Delivery	Residential Collection
<b>Commercial Rear Load Collection</b>	
Rear Load Refuse	Rear Load Collection
Cardboard	Rear Load Collection
Container Maintenance & Delivery	Rear Load Collection

**Table 2-6**  
**Recovery Basis for Service Categories**

Service Category	Recovery Basis
<b>Commercial Roll Off Collection</b>	
Refuse/Recycling	Roll Off Collection/Residential Collection
Container Maintenance	Roll Off Collection
<b>Disposal</b>	Distributed to all customer classes based on tons disposed by each class
<b>Convenience Collection Center</b>	Residential Collection
<b>Street Sweeping</b>	Street Sweeping Operation

## Determination of Billing Units

In order to calculate the appropriate rates, NewGen determined the number of annual billing units for the various customer classes. NewGen received billing data for each customer class from City staff and determined the cost of service by dividing the revenue requirement for each service category by the appropriate number of billing units. Billing unit forecasts were provided by City staff.

## Residential Collection

The residential billing units for the five-year forecast are shown in Table 2-7. The customer growth projections shown in Table 2-5 assume half a percent (0.5%) annual customer growth. These growth projections were provided by City staff.

**Table 2-7**  
**Residential Billing Units**

Cart <sup>1</sup>	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024
<b>Inside City Limits</b>					
35-Gallon Refuse Carts	1,451	1,459	1,466	1,473	1,481
48-Gallon Refuse Carts	186	187	188	189	190
64-Gallon Refuse Carts	2,336	2,348	2,360	2,371	2,383
96-Gallon Refuse Carts	8,651	8,694	8,738	8,781	8,825
Extra Carts (64-Gallon)	26	26	27	27	27
Extra Carts (96-Gallon)	378	380	382	383	385
<b>Outside City Limits</b>					
35-Gallon Refuse Carts	29	29	30	30	30
64-Gallon Refuse Carts	96	96	97	97	98
96-Gallon Refuse Carts	608	611	614	617	620
Extra Carts (96-Gallon)	44	45	45	45	45
<b>Total<sup>2</sup></b>	<b>13,806</b>	<b>13,875</b>	<b>13,944</b>	<b>14,014</b>	<b>14,084</b>

1. Growth projections provided by Client.

2. Any minor arithmetic deviation is due to rounding.

### Commercial Rear Load Refuse

The City provides commercial rear load customers with refuse and cardboard collection via dumpsters ranging in sizes from two cubic yards to four cubic yards and ranging in collection frequency from once per week to six times per week. The City bills the refuse customers a monthly fee based upon the size of the container collected, the frequency of collection, and the number of containers.<sup>1</sup> Therefore, the billing units for commercial collection consist of three components:

- **Number of Containers:** Used to recover administration and container maintenance costs
- **Annual Collections:** Used to recover the cost of collection operations
- **Annual Disposal Capacity:** Measured in cubic yards and used to recover disposal costs based on cubic yards (CY) of container capacity

Table 2-8 shows the projected billing units for commercial rear load customers. The projections were developed utilizing a 0.5 percent annual growth rate. The growth projections were provided by City staff.

**Table 2-8**  
**Commercial Solid Waste Rear Load Collection Billing Units Forecast**

Billing Units	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024
Number of Containers	791	795	799	803	807
Annual Collections	79,872	80,271	80,673	81,076	81,481
Annual Disposal Capacity (CY)	220,688	221,791	222,900	224,015	225,135

### Commercial Roll Off

The City provides commercial roll off customers with refuse and recycling collection via 10, 20, 30, and 40 cubic yard roll off containers. The City charges these customers based on a delivery fee, daily rental fee, and a tonnage charge (two ton minimum).

Table 2-9 shows the projected billing units for commercial roll off customers.

**Table 2-9**  
**Commercial Roll Off Collection Billing Units Forecast<sup>2</sup>**

Billing Units	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024
Total Annual Pulls	1,773	1,782	1,791	1,800	1,809

### Disposal

The City has an agreement with Allied Waste Services (Allied) to deliver the City's tonnage to Allied's landfill. The projected annual tons that the City will send to the landfill, by customer group, are shown in Table 2-10.

<sup>1</sup> Cardboard dumpsters are collected for free.

<sup>2</sup> These pulls include the roll offs pulled at the convenience collection center and the cardboard roll off pulls at commercial businesses, all of which are pulled for free.



**Table 2-10**  
**Disposal Tonnage Forecast**

	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
<b>Residential Refuse</b>	8,709	8,818	8,928	9,040	9,153
<b>Commercial Refuse</b>	9,728	9,849	9,972	10,097	10,223
<b>Roll Off Refuse</b>	2,228	2,256	2,284	2,313	2,342
<b>Drop-Off Refuse</b>	132	133	135	137	138
<b>Total Tons Disposed<sup>3</sup></b>	<b>20,797</b>	<b>21,057</b>	<b>21,320</b>	<b>21,586</b>	<b>21,856</b>

1. Any minor arithmetic deviation is due to rounding.

## Calculation of the Cost of Service

NewGen determined the cost of service for each of the solid waste services provided by the City. It is important to note that the cost of service-based rates are not necessarily the rates NewGen recommends be adopted by the City. In Section 3 of this report, NewGen provides its rate guidelines and recommendations based on the following factors: NewGen's cost of service analysis, the City's policies, and NewGen's solid waste rate experience.

## Residential Collection

The total residential revenue requirement for the five-year forecast for Scenario 1 is shown in Table 2-11. A detailed examination of the residential revenue requirement in each year of the forecast, for each of scenario, is provided in Appendix, Schedule 4, Schedule 12, Schedule 20, Schedule 28, and Schedule 36.

The total residential revenue requirement includes:

- All direct costs identified in Table 2-5
- A proportional share of the administration costs (based on the percentage of the total revenue requirement the direct costs represent)
- The residential disposal costs

**Table 2-11**  
**Residential Revenue Requirement**

<b>Service Category</b>	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
<b>Residential Refuse</b>					
Refuse	\$759,387	\$769,017	\$801,737	\$811,794	\$822,118
Recycling	524,227	529,988	544,975	550,837	556,842
Yard Waste	235,899	238,622	245,528	248,398	251,344
Glass	6,964	7,039	7,574	7,653	7,736
Bulky Waste	459	4,009	4,096	4,258	4,420
Container Maintenance/Delivery	207,231	209,679	212,189	214,763	217,402
<b>Convenience Collection Center</b>	<b>80,045</b>	<b>69,492</b>	<b>71,700</b>	<b>74,644</b>	<b>77,626</b>

**Table 2-11**  
**Residential Revenue Requirement**

<b>Service Category</b>	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
<b>Roll Off Refuse</b>	203,555	182,913	188,760	191,950	195,177
<b>Indirect Costs</b>					
Administration	\$1,172,543	\$774,915	\$858,274	\$857,480	\$857,006
<b>Disposal</b>					
Residential Refuse	\$272,923	\$279,201	\$285,622	\$292,192	\$298,912
Recycling	113,292	115,898	118,563	121,290	124,079
Collection Center	46,588	47,660	48,756	49,877	51,025
<b>Total Revenue Requirement<sup>1</sup></b>	<b>\$3,623,112</b>	<b>\$3,228,432</b>	<b>\$3,387,775</b>	<b>\$3,425,136</b>	<b>\$3,463,688</b>
<b>Total Revenue Requirement (Scenario 2)</b>	<b>\$3,623,112</b>	<b>\$3,024,825</b>	<b>\$3,182,373</b>	<b>\$3,221,148</b>	<b>\$3,367,122</b>
<b>Total Revenue Requirement (Scenario 3)</b>	<b>\$3,623,112</b>	<b>\$3,171,517</b>	<b>\$3,330,584</b>	<b>\$3,659,946</b>	<b>\$3,820,271</b>
<b>Total Revenue Requirement (Scenario 4)</b>	<b>\$3,623,112</b>	<b>\$3,024,825</b>	<b>\$3,182,373</b>	<b>\$3,221,148</b>	<b>\$3,261,056</b>
<b>Total Revenue Requirement (Scenario 5)</b>	<b>\$3,623,112</b>	<b>\$3,910,685</b>	<b>\$4,076,384</b>	<b>\$3,758,865</b>	<b>\$3,804,003</b>

1. Any minor arithmetic deviation is due to rounding.

The cost of service for residential customers in Scenario 1 is shown in Table 2-12. A detailed examination of the residential cost of service in each year of the forecast, for each scenario, is provided in Appendix, Schedule 4, Schedule 12, Schedule 20, Schedule 28, and Schedule 36.

**Table 2-12**  
**Residential Cost of Service**

<b>Service Category</b>	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
<b>Residential Refuse</b>					
Refuse	\$4.58	\$4.62	\$4.79	\$4.83	\$4.86
Recycling	3.16	3.18	3.26	3.28	3.29
Yard Waste	1.42	1.43	1.47	1.48	1.49
Glass	0.04	0.04	0.05	0.05	0.05
Bulky Waste	0.00	0.02	0.02	0.03	0.03
Container Maintenance/Delivery	1.25	1.26	1.27	1.28	1.29
<b>Residential Refuse Total</b>	<b>\$10.47</b>	<b>\$10.56</b>	<b>\$10.85</b>	<b>\$10.93</b>	<b>\$11.00</b>
<b>Convenience Collection Center</b>	<b>\$0.48</b>	<b>\$0.42</b>	<b>\$0.43</b>	<b>\$0.44</b>	<b>\$0.46</b>
<b>Roll Off Refuse</b>	<b>\$1.23</b>	<b>\$1.10</b>	<b>\$1.13</b>	<b>\$1.14</b>	<b>\$1.15</b>
<b>Indirect Cost</b>					
Administration	\$7.08	\$4.65	\$5.13	\$5.10	\$5.07
<b>Disposal</b>					
35-Gallon	\$1.06	\$1.08	\$1.10	\$1.12	\$1.14
48-Gallon	1.45	1.48	1.51	1.53	1.56

**Table 2-12**  
**Residential Cost of Service**

Service Category	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024
64-Gallon	1.94	1.97	2.01	2.05	2.08
96-Gallon	2.91	2.96	3.02	3.07	3.12
2 - 64-Gallon	3.88	3.95	4.02	4.09	4.17
2 - 96-Gallon	5.82	5.92	6.03	6.14	6.25
<b>Monthly Cost of Service<sup>1</sup></b>					
35-Gallon	<b>\$20.32</b>	<b>\$17.81</b>	<b>\$18.64</b>	<b>\$18.73</b>	<b>\$18.83</b>
48-Gallon	<b>\$20.71</b>	<b>\$18.21</b>	<b>\$19.05</b>	<b>\$19.15</b>	<b>\$19.25</b>
64-Gallon	<b>\$21.20</b>	<b>\$18.71</b>	<b>\$19.55</b>	<b>\$19.66</b>	<b>\$19.77</b>
96-Gallon	<b>\$22.17</b>	<b>\$19.69</b>	<b>\$20.55</b>	<b>\$20.68</b>	<b>\$20.81</b>
2 - 64-Gallon	<b>\$23.14</b>	<b>\$20.68</b>	<b>\$21.56</b>	<b>\$21.70</b>	<b>\$21.85</b>
2 - 96-Gallon	<b>\$25.08</b>	<b>\$22.65</b>	<b>\$23.57</b>	<b>\$23.75</b>	<b>\$23.94</b>

1. Any minor arithmetic deviation is due to rounding.

The cost of service for residential customers is contingent on the size of container utilized. Although most cost components, such as administration, are uniform across all cart sizes, the disposal cost component varies by size of the container. This is due to a larger container's capacity to dispose of more refuse. Residents with "extra" refuse containers only incur the cost of the additional refuse collection and the disposal capacity that the additional container allows (i.e., they do not incur any additional indirect costs, etc.).

## Commercial Rear Load Collection

The total rear load refuse revenue requirement and cost of service is shown in Table 2-13. The total rear load revenue requirement includes:

- All direct costs identified in Table 2-5
- A proportional share of the administration costs (based on the percentage of the total revenue requirement the direct costs represent)
- The commercial rear load disposal costs

**Table 2-13**  
**Rear Load Refuse Revenue Requirement & Cost of Service**

Service Category	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024
<b>Collection Cost</b>					
Refuse Collection	\$735,256	\$777,103	\$785,481	\$821,148	\$857,051
Cardboard Collection	54,096	54,838	55,145	55,816	56,496
	<b>\$789,352</b>	<b>\$831,941</b>	<b>\$840,626</b>	<b>\$876,964</b>	<b>\$913,547</b>

**Table 2-13**  
**Rear Load Refuse Revenue Requirement & Cost of Service**

<b>Service Category</b>	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
<b>Container Cost</b>					
Administration	\$87,549	\$88,394	\$89,261	\$90,149	\$91,060
Container Maintenance Cost	566,750	390,176	422,766	433,646	444,367
	<b>\$654,300</b>	<b>\$478,570</b>	<b>\$512,027</b>	<b>\$523,795</b>	<b>\$535,427</b>
<b>Volume Based Cost</b>					
Disposal Cost	\$300,294	\$307,201	\$314,266	\$321,494	\$328,888
Recycling	20,119	20,582	21,056	21,541	22,036
	<b>\$320,413</b>	<b>\$327,783</b>	<b>\$335,322</b>	<b>\$343,035</b>	<b>\$350,924</b>
<b>Total Revenue Requirement<sup>1</sup></b>	<b>\$1,764,065</b>	<b>\$1,638,295</b>	<b>\$1,687,975</b>	<b>\$1,743,793</b>	<b>\$1,799,898</b>
<b>Total Revenue Requirement (Scenario 2)</b>	<b>\$1,764,065</b>	<b>\$1,541,213</b>	<b>\$1,592,064</b>	<b>\$1,646,035</b>	<b>\$1,752,465</b>
<b>Total Revenue Requirement (Scenario 3)</b>	<b>\$1,764,065</b>	<b>\$1,503,161</b>	<b>\$1,580,002</b>	<b>\$1,612,172</b>	<b>\$1,712,623</b>
<b>Total Revenue Requirement (Scenario 4)</b>	<b>\$1,764,065</b>	<b>\$1,541,213</b>	<b>\$1,592,064</b>	<b>\$1,646,035</b>	<b>\$1,700,366</b>
<b>Total Revenue Requirement (Scenario 5)</b>	<b>\$1,764,065</b>	<b>\$1,484,275</b>	<b>\$1,529,707</b>	<b>\$1,726,698</b>	<b>\$1,782,215</b>
<b>Billing Units</b>					
Number of Containers	791	795	799	803	807
Number of Annual Collections	79,872	80,271	80,673	81,076	81,481
Number of Annual Capacity (CY)	220,688	221,791	222,900	224,015	225,135
<b>Scenario 1</b>					
Administrative and Container Cost <sup>1</sup>	\$68.93	\$50.17	\$53.41	\$54.36	\$55.29
Cost per Collection <sup>1</sup>	\$9.88	\$10.36	\$10.42	\$10.82	\$11.21
Disposal Cost per Capacity <sup>1</sup>	\$1.45	\$1.48	\$1.50	\$1.53	\$1.56

1. Any minor arithmetic deviation is due to rounding.

To identify the monthly cost of service for refuse containers the different component costs should be allocated as follows:

- Cost per Container: \$68.93 (in FY 2020) times the number of containers, PLUS
- Cost per Collection: \$9.88 (in FY 2020) times the number of collections per week, times 4.33<sup>3</sup>, PLUS
- Cost per Cubic Yard of Capacity: \$1.45 (in FY 2020) times the capacity of the container times the number of collections per week, times 4.33.

<sup>3</sup> 52 weeks per year / 12 months = 4.33 weeks per month

The example below utilizes the components listed above to generate a monthly cost of service for a 2 CY container collected 2 times per week.

Administrative and Container Cost	\$68.93/container	1 container	\$68.93 <sup>1</sup>
Collection Cost	\$9.88/collection	2 collections per week * 4.33	\$85.65 <sup>1</sup>
Disposal Cost	\$1.45/CY of capacity	2 CY container * 2 collections per week * 4.33	\$25.17 <sup>1</sup>
Monthly cost to serve 6 CY container 2 times per week			\$179.75 <sup>2</sup>

1. Product may vary from total due to rounding.

2. Total may vary slightly from commercial rear load cost of service due to rounding.

## Commercial Roll Off

Table 2-14 lists the projected cost of service for commercial roll off customers for the five-year forecast, for Scenario 1. The cost of service includes:

- All direct costs identified in Table 2-5
- A proportional share of the administration costs

**Table 2-14**  
**Roll Off Revenue Requirement**

Service Category	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024
<b>Direct Cost</b>					
Collection	\$192,429	\$193,908	\$196,318	\$200,194	\$204,099
<b>Indirect Cost</b>					
Administration	\$124,369	\$82,207	\$89,255	\$89,765	\$90,279
<b>Disposal Cost</b>	\$68,783	\$70,365	\$71,983	\$73,639	\$75,332
<b>Total Revenue Requirement<sup>1</sup></b>	<b>\$385,580</b>	<b>\$346,480</b>	<b>\$357,556</b>	<b>\$363,598</b>	<b>\$369,711</b>
<b>Total Revenue Requirement (Scenario 2)</b>	<b>\$385,580</b>	<b>\$326,025</b>	<b>\$337,307</b>	<b>\$343,362</b>	<b>\$360,074</b>
<b>Total Revenue Requirement (Scenario 3)</b>	<b>\$385,580</b>	<b>\$323,697</b>	<b>\$334,760</b>	<b>\$336,352</b>	<b>\$351,979</b>
<b>Total Revenue Requirement (Scenario 4)</b>	<b>\$385,580</b>	<b>\$326,025</b>	<b>\$337,307</b>	<b>\$343,362</b>	<b>\$349,489</b>
<b>Total Revenue Requirement (Scenario 5)</b>	<b>\$385,580</b>	<b>\$314,029</b>	<b>\$324,142</b>	<b>\$360,059</b>	<b>\$366,118</b>

1. Any minor arithmetic deviation is due to rounding.

The cost of service for roll off collection for the five-year forecast, for Scenario 1, is shown in Table 2-15.

**Table 2-15**  
**Roll Off Cost of Service**

	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024
<b>Cost per Pull</b>	\$217.47	\$194.45	\$199.67	\$202.03	\$204.4

### Disposal

The City entered into an agreement on March 5<sup>th</sup>, 2012 with Allied Waste Services of Stillwater, Inc. (Allied) to dispose of the City's waste at Allied's landfill. The current tipping fee the City is contractually obligated to pay is \$30.84. NewGen calculated the cost per ton based on what the City is budgeting for disposal costs.

**Table 2-16**  
**Disposal Revenue Requirement**

<b>Service Category</b>	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
<b>Direct Cost</b>	\$642,000	\$656,766	\$671,872	\$687,325	\$703,133
<b>Total Revenue Requirement<sup>1</sup></b>	<b>\$642,000</b>	<b>\$656,766</b>	<b>\$671,872</b>	<b>\$687,325</b>	<b>\$703,133</b>

1. Any minor arithmetic deviation is due to rounding.

**Table 2-17**  
**Disposal Cost of Service**

	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
<b>Disposal Cost per Ton</b>	\$30.87	\$31.19	\$31.51	\$31.84	\$32.17

### Processing

The City currently sends its recyclable materials to Cedar Creek Farms LLC. The City is contractually obligated to pay \$29.86 for source separated materials, and \$57.46 for single stream recyclable materials. NewGen calculated a blended cost per ton of recyclable materials based on what the City is budgeting for recycling costs.

**Table 2-18**  
**Processing Revenue Requirement**

<b>Service Category</b>	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
<b>Direct Cost</b>	\$180,000	\$184,140	\$188,375	\$192,708	\$197,140
<b>Total Revenue Requirement<sup>1</sup></b>	<b>\$180,000</b>	<b>\$184,140</b>	<b>\$188,375</b>	<b>\$192,708</b>	<b>\$197,140</b>

1. Any minor arithmetic deviation is due to rounding.

**Table 2-19**  
**Processing Cost of Service**

	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
<b>Processing Cost per Ton</b>	\$46.53	\$47.01	\$47.50	\$47.99	\$48.49

## Street Sweeping

Table 2-20 lists the projected cost of service for street sweeping customers for the five-year forecast. The cost of service includes:

- All direct costs identified in Table 2-5
- A proportional share of the administration costs

**Table 2-20**  
**Street Sweeping Revenue Requirement**

Service Category	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024
<b>Direct Cost</b>					
Street Sweeping	\$329,564	\$375,936	\$379,354	\$382,865	\$386,472
<b>Indirect Cost</b>					
Administration	\$213,000	\$159,378	\$172,471	\$171,674	\$170,948
<b>Total Revenue Requirement<sup>1</sup></b>	<b>\$542,564</b>	<b>\$535,315</b>	<b>\$551,825</b>	<b>\$554,539</b>	<b>\$557,420</b>
<b>Total Revenue Requirement (Scenario 2)</b>	<b>\$542,564</b>	<b>\$495,659</b>	<b>\$512,697</b>	<b>\$515,838</b>	<b>\$539,172</b>
<b>Total Revenue Requirement (Scenario 3)</b>	<b>\$542,564</b>	<b>\$491,144</b>	<b>\$507,777</b>	<b>\$502,432</b>	<b>\$523,845</b>
<b>Total Revenue Requirement (Scenario 4)</b>	<b>\$542,564</b>	<b>\$495,659</b>	<b>\$512,697</b>	<b>\$515,838</b>	<b>\$519,130</b>
<b>Total Revenue Requirement (Scenario 5)</b>	<b>\$542,564</b>	<b>\$472,401</b>	<b>\$487,258</b>	<b>\$547,771</b>	<b>\$550,617</b>

1. Any minor arithmetic deviation is due to rounding.

The cost of service for street sweeping for the five-year forecast is shown in Table 2-21.

**Table 2-21**  
**Street Sweeping Cost of Service**

	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024
<b>Monthly Cost per Customer</b>	\$2.26	\$2.22	\$2.28	\$2.28	\$2.28

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## Section 3

### FINDINGS AND RECOMMENDATIONS

This section provides NewGen’s FY 2020 – FY 2024 rate guidelines and recommendations for the solid waste services provided by the City. It also includes a discussion regarding several policy issues that NewGen identified during the conduct of the cost of service and rate design study.

#### Revenue Reconciliation from Current Rates

Prior to considering any rate changes, it is beneficial to evaluate the revenue projected under the current rates for FY 2020 through FY 2024 to clarify the magnitude of the under-recovery if rates are not increased. Table 3-1 shows the forecasted revenue recovery from current rates, for Scenario 1, which is projected to cumulatively under-recover by approximately \$2,716,640 over the five-year forecast.

Based on this projected under-recovery, it is important that the City put in place a rate strategy that systematically addresses the City’s primary solid waste user fee mechanisms. The following section provides NewGen’s recommended approach with regard to what rate increases should be made over the next four years, for all customer classes, to place the City on a path to secure financial sustainability.

**Table 3-1**  
**Revenue Recovery from Current Rates – Scenario 1**

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Revenue from Current Rates	\$5,276,522	\$5,302,905	\$5,329,419	\$5,356,067	\$5,382,847
Revenue Requirement	\$6,111,767	\$5,565,608	\$5,796,371	\$5,895,116	\$5,995,539
Over/(Under) Recovery	(\$835,244)	(\$262,703)	(\$466,951)	(\$539,050)	(\$612,692)
Cumulative Over/(Under) Recovery	(\$835,244)	(\$1,097,947)	(\$1,564,898)	(\$2,103,948)	(\$2,716,640)

**Table 3-2**  
**Revenue Recovery from Current Rates – Scenario 2**

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Revenue from Current Rates	\$5,276,522	\$5,302,905	\$5,329,419	\$5,356,067	\$5,382,847
Revenue Requirement	\$6,111,767	\$5,215,608	\$5,446,371	\$5,545,116	\$5,828,743
Over/(Under) Recovery	(\$835,244)	\$87,297	(\$116,951)	(\$189,050)	(\$445,897)
Cumulative Over/(Under) Recovery	(\$835,244)	(\$747,947)	(\$864,898)	(\$1,053,948)	(\$1,499,845)

**Table 3-3**  
**Revenue Recovery from Current Rates – Scenario 3**

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Revenue from Current Rates	\$5,276,522	\$5,302,905	\$5,329,419	\$5,356,067	\$5,382,847
Revenue Requirement	\$6,111,767	\$5,345,633	\$5,576,396	\$5,933,336	\$6,222,901

**Table 3-3**  
**Revenue Recovery from Current Rates – Scenario 3**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Over/(Under) Recovery	(\$835,244)	(\$42,728)	(\$246,977)	(\$577,269)	(\$840,055)
Cumulative Over/(Under) Recovery	(\$835,244)	(\$877,972)	(\$1,124,949)	(\$1,702,218)	(\$2,542,273)

**Table 3-4**  
**Revenue Recovery from Current Rates – Scenario 4**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Revenue from Current Rates	\$5,276,522	\$5,302,905	\$5,329,419	\$5,356,067	\$5,382,847
Revenue Requirement	\$6,111,767	\$5,215,608	\$5,446,371	\$5,545,116	\$5,645,539
Over/(Under) Recovery	(\$835,244)	\$87,297	(\$116,951)	(\$189,050)	(\$262,692)
Cumulative Over/(Under) Recovery	(\$835,244)	(\$747,947)	(\$864,898)	(\$1,053,948)	(\$1,316,640)

**Table 3-5**  
**Revenue Recovery from Current Rates – Scenario 5**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Revenue from Current Rates	\$5,276,522	\$5,302,905	\$5,329,419	\$5,356,067	\$5,382,847
Revenue Requirement	\$6,111,767	\$6,015,608	\$6,246,371	\$6,203,310	\$6,309,672
Over/(Under) Recovery	(\$835,244)	(\$712,703)	(\$916,951)	(\$847,244)	(\$926,825)
Cumulative Over/(Under) Recovery	(\$835,244)	(\$1,547,947)	(\$2,464,898)	(\$3,312,142)	(\$4,238,967)

## Rate Recommendations

### Residential Rates

Based on which scenario the City elects to implement, NewGen would recommend the following residential rates increases for the five scenarios. The implementation of these proposed rates will ensure the overall financial integrity of the Utility through FY 2024.

**Table 3-6**  
**Proposed Residential Rates Increases**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Increase per HH per Month (Scenario 1)	-	5%	5%	-	-
Increase per HH per Month (Scenario 2)	-	-	4%	-	4%
Increase per HH per Month (Scenario 3)	-	-	5%	5%	5%
Increase per HH per Month (Scenario 4)	-	-	4%	-	-
Increase per HH per Month (Scenario 5)	-	11.5%	-	4%	-

Table 3-7 shows the impact of the residential rate increase on a 35, 64, and 96-gallon cart customer for each of the five scenarios.

**Table 3-7**  
**Proposed Residential Rates**

	<b>Year 1 FY 2020</b>	<b>Year 2 FY 2021</b>	<b>Year 3 FY 2022</b>	<b>Year 4 FY 2023</b>	<b>Year 5 FY 2024</b>
<b>Scenario 1</b>					
35-gallon cart	\$13.74	\$14.43	\$15.15	\$15.15	\$15.15
64-gallon cart	\$16.01	\$16.81	\$17.65	\$17.65	\$17.65
96-gallon cart	\$18.28	\$19.19	\$20.15	\$20.15	\$20.15
<b>Scenario 2</b>					
35-gallon cart	\$13.74	\$13.74	\$14.29	\$14.29	\$14.86
64-gallon cart	\$16.01	\$16.01	\$16.65	\$16.65	\$17.32
96-gallon cart	\$18.28	\$18.28	\$19.01	\$19.01	\$19.77
<b>Scenario 3</b>					
35-gallon cart	\$13.74	\$13.74	\$14.43	\$15.15	\$15.91
64-gallon cart	\$16.01	\$16.01	\$16.81	\$17.65	\$18.53
96-gallon cart	\$18.28	\$18.28	\$19.19	\$20.15	\$21.16
<b>Scenario 4</b>					
35-gallon cart	\$13.74	\$13.74	\$14.29	\$14.29	\$14.29
64-gallon cart	\$16.01	\$16.01	\$16.65	\$16.65	\$16.65
96-gallon cart	\$18.28	\$18.28	\$19.01	\$19.01	\$19.01
<b>Scenario 5</b>					
35-gallon cart	\$13.74	\$15.32	\$15.32	\$15.93	\$15.93
64-gallon cart	\$16.01	\$17.85	\$17.85	\$18.57	\$18.57
96-gallon cart	\$18.28	\$20.38	\$20.38	\$21.20	\$21.20

## Commercial Rear Load Rates

NewGen would recommend the following commercial rear load rates increases for the five scenarios.

**Table 3-8**  
**Proposed Commercial Rear Load Rates Increases**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Scenario 1	-	-	5%	5%	-
Scenario 2	-	-	5%	5%	-
Scenario 3	-	-	5%	5%	5%
Scenario 4	-	-	4%	-	-
Scenario 5	-	11.5%	-	4%	-

### Commercial Roll Off Rates

NewGen would recommend that the City implement a different billing approach for roll off customers in FY 2021. This approach would include a delivery fee, per pull fee, and a monthly rental fee if the container is held for greater than 30 days. NewGen recommends the same delivery fee and monthly rental fee in each of the five scenarios. For Scenario 4, NewGen would recommend a slightly lower per pull fee because the City does not have to recover any capital costs.

**Table 3-9**  
**Proposed Roll Off Rates**

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Delivery Fee	N/A <sup>1</sup>	\$100	\$100	\$100	\$100
Rental Fee (monthly)	N/A <sup>1</sup>	\$100	\$100	\$100	\$100
Per Pull Fee (Scenarios 1-3,5)	N/A <sup>1</sup>	\$300	\$310	\$320	\$330
Per Pull Fee (Scenario 4)	N/A <sup>1</sup>	\$280	\$290	\$300	\$310

1. NewGen would recommend no change in FY 2020 in roll off rates.

### Street Sweeping Rates

NewGen would recommend the following street sweeping rates increases for the five scenarios described in table 3-10.

**Table 3-10**  
**Proposed Street Sweeping Rates**

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Scenario 1	\$1.63	\$2.33	\$2.33	\$2.33	\$2.33
Scenario 2	\$1.63	\$1.63	\$2.23	\$2.23	\$2.23
Scenario 3	\$1.63	\$1.63	\$2.33	\$2.33	\$2.33
Scenario 4	\$1.63	\$1.63	\$2.18	\$2.18	\$2.18
Scenario 5	\$1.63	\$2.33	\$2.33	\$2.33	\$2.33

### Revenue Recovery from Proposed Rates

Table 3-11 shows the forecasted revenue recovery from the proposed rates under Scenario 1.

**Table 3-11**  
**Revenue Recovery from Proposed Rates – Scenario 1**

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Revenue from Proposed Rates	\$5,276,522	\$5,669,274	\$5,950,856	\$6,038,862	\$6,073,351
Revenue Requirement	\$6,111,767	\$5,565,608	\$5,796,371	\$5,895,116	\$5,995,539
Over/(Under) Recovery	(\$835,244)	\$103,666	\$154,485	\$143,746	\$77,812
Cumulative Over/(Under) Recovery	(\$835,244)	(\$731,578)	(\$577,093)	(\$433,347)	(\$355,535)

Table 3-12 shows the forecasted revenue recovery from the proposed rates under Scenario 2.

**Table 3-12**  
**Revenue Recovery from Proposed Rates – Scenario 2**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Revenue from Proposed Rates	\$5,276,522	\$5,312,949	\$5,691,087	\$5,777,795	\$5,969,318
Revenue Requirement	\$6,111,767	\$5,215,608	\$5,446,371	\$5,545,116	\$5,828,743
Over/(Under) Recovery	(\$835,244)	\$97,341	\$244,716	\$232,679	\$140,574
Cumulative Over/(Under) Recovery	(\$835,244)	(\$737,903)	(\$493,187)	(\$260,508)	(\$119,934)

Table 3-13 shows the forecasted revenue recovery from the proposed rates under Scenario 3.

**Table 3-13**  
**Revenue Recovery from Proposed Rates – Scenario 3**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Revenue from Proposed Rates	\$5,276,522	\$5,312,949	\$5,753,012	\$6,038,862	\$6,340,119
Revenue Requirement	\$6,111,767	\$5,345,633	\$5,576,396	\$5,933,336	\$6,222,901
Over/(Under) Recovery	(\$835,244)	(\$32,684)	\$176,616	\$105,527	\$117,218
Cumulative Over/(Under) Recovery	(\$835,244)	(\$867,929)	(\$691,313)	(\$585,786)	(\$468,568)

Table 3-14 shows the forecasted revenue recovery from the proposed rates under Scenario 4.

**Table 3-14**  
**Revenue Recovery from Proposed Rates – Scenario 4**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Revenue from Proposed Rates	\$5,276,522	\$5,304,487	\$5,660,215	\$5,692,790	\$5,725,549
Revenue Requirement	\$6,111,767	\$5,215,608	\$5,446,371	\$5,545,116	\$5,645,539
Over/(Under) Recovery	(\$835,244)	\$88,879	\$213,845	\$147,674	\$80,010
Cumulative Over/(Under) Recovery	(\$835,244)	(\$746,365)	(\$532,521)	(\$384,847)	(\$304,837)

Table 3-15 shows the forecasted revenue recovery from the proposed rates under Scenario 5.

**Table 3-15**  
**Revenue Recovery from Proposed Rates – Scenario 5**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Revenue from Proposed Rates	\$5,276,522	\$6,030,027	\$6,064,429	\$6,313,783	\$6,349,647
Revenue Requirement	\$6,111,767	\$6,015,608	\$6,246,371	\$6,203,310	\$6,309,672
Over/(Under) Recovery	(\$835,244)	\$14,419	(\$181,941)	\$110,473	\$39,975
Cumulative Over/(Under) Recovery	(\$835,244)	(\$820,825)	(\$1,002,766)	(\$892,294)	(\$852,319)

## Reserves

NewGen estimated the impact each of the five scenarios will have on the City's reserves. The following tables show the forecasted reserve balances over the five-year forecast. For more detail, see Appendix, Schedule 8, Schedule 16, Schedule 24, Schedule 32, and Schedule 40.

**Table 3-16**  
**Proposed Reserves – Scenario 1**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Beginning Balance	\$1,000,000	\$222,093	\$678,362	\$1,370,914	\$1,968,752
Additions:					
Capital Contributions	\$-	\$350,000	\$350,000	\$350,000	\$350,000
Rolling Stock Funding	47,337	90,383	117,701	118,520	119,364
Interest	10,000	2,221	7,684	13,709	19,688
Over-Recovery of Rates	-	103,666	154,485	143,746	77,812
Reductions:					
Capital Projects	\$-	\$-	\$-	\$-	(\$1,400,000)
Rolling Stock Purchases	-	-	(27,318)	(28,138)	(28,982)
Under-Recovery of Rates	(835,244)	-	-	-	-
Ending Balance	<b>\$222,093</b>	<b>\$768,362</b>	<b>\$1,370,914</b>	<b>\$1,968,752</b>	<b>\$1,106,634</b>

**Table 3-17**  
**Proposed Reserves – Scenario 2**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Beginning Balance	\$1,000,000	\$222,093	\$412,037	\$751,257	\$1,081,831
Additions:					
Capital Contributions	\$-	\$-	\$-	\$-	\$-
Rolling Stock Funding	47,337	90,383	117,701	118,520	119,364
Interest	10,000	2,221	4,120	7,513	10,818
Over-Recovery of Rates	-	97,341	244,716	232,679	140,574
Reductions:					
Capital Projects	\$-	\$-	\$-	\$-	\$-
Rolling Stock Purchases	-	-	(27,318)	(28,138)	(28,982)
Under-Recovery of Rates	(835,244)	-	-	-	-
Ending Balance	<b>\$222,093</b>	<b>\$412,037</b>	<b>\$751,257</b>	<b>\$1,081,831</b>	<b>\$1,323,606</b>

**Table 3-18**  
**Proposed Reserves – Scenario 3**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Beginning Balance	\$1,000,000	\$222,093	\$282,012	\$551,831	\$753,258
Additions:					
Capital Contributions	\$-	\$-	\$-	\$-	\$-
Rolling Stock Funding	47,337	90,383	117,701	118,520	119,364
Interest	10,000	2,221	2,820	5,518	7,533
Over-Recovery of Rates	-	-	176,616	105,527	117,218
Reductions:					
Capital Projects	\$-	\$-	\$-	\$-	\$-
Rolling Stock Purchases	-	-	(27,318)	(28,138)	(28,982)
Under-Recovery of Rates	(835,244)	(32,684)	-	-	-
Ending Balance	<b>\$222,093</b>	<b>\$282,012</b>	<b>\$551,831</b>	<b>\$753,258</b>	<b>\$968,391</b>

**Table 3-19**  
**Proposed Reserves – Scenario 4**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Beginning Balance	\$1,000,000	\$222,093	\$403,575	\$711,838	\$957,013
Additions:					
Capital Contributions	\$-	\$-	\$-	\$-	\$-
Rolling Stock Funding	47,337	90,383	117,701	118,520	119,364
Interest	10,000	2,221	4,036	7,118	9,570
Over-Recovery of Rates	-	88,879	213,845	147,674	80,010
Reductions:					
Capital Projects	\$-	\$-	\$-	\$-	\$-
Rolling Stock Purchases	-	-	(27,318)	(28,138)	(28,982)
Under-Recovery of Rates	(835,244)	-	-	-	-
Ending Balance	<b>\$222,093</b>	<b>\$403,575</b>	<b>\$711,838</b>	<b>\$957,013</b>	<b>\$1,136,976</b>

**Table 3-20**  
**Proposed Reserves – Scenario 5**

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>
Beginning Balance	\$1,000,000	\$222,093	\$329,116	\$240,848	\$844,112
Additions:					
Capital Contributions	\$-	\$800,000	\$800,000	\$400,000	\$400,000
Rolling Stock Funding	47,337	90,383	117,701	118,520	119,364
Interest	10,000	2,221	3,291	2,408	8,441

**Table 3-20**  
**Proposed Reserves – Scenario 5**

	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Over-Recovery of Rates	-	14,419	-	110,473	39,975
Reductions:					
Capital Projects	\$-	(\$800,000)	(\$800,000)	\$-	\$-
Rolling Stock Purchases	-	-	(27,318)	(28,138)	(28,982)
Under-Recovery of Rates	(835,244)	-	(181,941)	-	-
Ending Balance	<b>\$222,093</b>	<b>\$329,116</b>	<b>\$240,848</b>	<b>\$844,112</b>	<b>\$1,382,910</b>

## Policy Issues

- **Consider Charging for Commercial Cardboard Roll Off Collection.** At present the City does not charge for commercial collection of cardboard for either rear load or roll off containers. The City has established cardboard collection rates for roll off containers which have never been implemented. NewGen would encourage the City consider implementing some modest fee for commercial cardboard roll off collection that recovers some revenue from the commercial businesses while still encouraging those businesses to continue to divert cardboard from the landfill. The City does not have many cardboard rear load dumpster customers, so they are not seen as pressing an issue, but the City may wish to consider charging a modest fee for the rear load commercial cardboard containers as well.
- **Change in Roll Off Rate Structure.** NewGen would recommend that the City consider moving to a roll off rate structure that has four set components. The City would charge a **delivery fee** for a roll off container (regardless of size) and then a **pull fee** for when the container is full, and pulled by the City, and hauled to the landfill to be emptied. The pull fee would be the same regardless of the size of the roll off container. The client would also be required to pay a **disposal fee** associated with the weight of material that is disposed of at the landfill, at the current per ton tipping fee charged by the City. Finally, to discourage individuals from retaining a roll off container for an excessive period of time, a monthly **rental fee** would be charged for every 30 days the container is kept by the owner.

This roll off rate structure is widely used within the industry, is simpler than the City's current billing process for roll offs, and would minimize future potential billing errors on the part of the City with the use of a more simplified billing structure.



## Appendix A

### Cost of Service Schedules

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#### List of Schedules

Schedule 1: Scenario 1 – Five-Year Revenue Requirement  
Schedule 2: Scenario 1 – Capital Improvement Plan  
Schedule 3: Scenario 1 – Five-Year Summary  
Schedule 4: Scenario 1 – Residential Cost of Service  
Schedule 5: Scenario 1 – Current Revenue Reconciliation  
Schedule 6: Scenario 1 – Proposed Rates  
Schedule 7: Scenario 1 – Proposed Revenue Reconciliation  
Schedule 8: Scenario 1 – Proposed Reserves  
Schedule 9: Scenario 2 – Five-Year Revenue Requirement  
Schedule 10: Scenario 2 – Capital Improvement Plan  
Schedule 11: Scenario 2 – Five-Year Summary  
Schedule 12: Scenario 2 – Residential Cost of Service  
Schedule 13: Scenario 2 – Current Revenue Reconciliation  
Schedule 14: Scenario 2 – Proposed Rates  
Schedule 15: Scenario 2 – Proposed Revenue Reconciliation  
Schedule 16: Scenario 2 – Proposed Reserves  
Schedule 17: Scenario 3 – Five-Year Revenue Requirement  
Schedule 18: Scenario 3 – Capital Improvement Plan  
Schedule 19: Scenario 3 – Five-Year Summary  
Schedule 20: Scenario 3 – Residential Cost of Service  
Schedule 21: Scenario 3 – Current Revenue Reconciliation  
Schedule 22: Scenario 3 – Proposed Rates  
Schedule 23: Scenario 3 – Proposed Revenue Reconciliation  
Schedule 24: Scenario 3 – Proposed Reserves  
Schedule 25: Scenario 4 – Five-Year Revenue Requirement  
Schedule 26: Scenario 4 – Capital Improvement Plan  
Schedule 27: Scenario 4 – Five-Year Summary  
Schedule 28: Scenario 4 – Residential Cost of Service  
Schedule 29: Scenario 4 – Current Revenue Reconciliation  
Schedule 30: Scenario 4 – Proposed Rates  
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Schedule 32: Scenario 4 – Proposed Reserves  
Schedule 33: Scenario 5 – Five-Year Revenue Requirement  
Schedule 34: Scenario 5 – Capital Improvement Plan  
Schedule 35: Scenario 5 – Five-Year Summary  
Schedule 36: Scenario 5 – Residential Cost of Service  
Schedule 37: Scenario 5 – Current Revenue Reconciliation  
Schedule 38: Scenario 5 – Proposed Rates  
Schedule 39: Scenario 5 – Proposed Revenue Reconciliation  
Schedule 40: Scenario 5 – Proposed Reserves

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City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 1 - 5-Year Revenue Requirement

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
1	<b>9180000 - SUA-Waste Mgmt Fund</b>						
2	71000 - Transfer Out	\$ 1,928,556	\$ 900,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	None
3	Expenditure Total:	<u>\$ 1,928,556</u>	<u>\$ 900,000</u>	<u>\$ 1,000,000</u>	<u>\$ 1,000,000</u>	<u>\$ 1,000,000</u>	
4	<b>9184818 - Solid Waste Administration</b>						
5	51001 - Full Time	\$ 165,198	\$ 165,198	\$ 165,198	\$ 165,198	\$ 165,198	Salaries
6	51021 - Social Security	8,177	8,177	8,177	8,177	8,177	Salaries
7	51022 - Retirement	6,612	6,612	6,612	6,612	6,612	Salaries
8	51023 - Health Insurance	11,987	12,347	12,717	13,099	13,491	Benefits
9	52012 - Vehicle Repair Parts	700	721	743	765	788	Vehicle Maintenance
10	52031 - Office Supplies	100	102	105	107	110	General
11	52036 - Janitorial Supplies	1,500	1,535	1,570	1,606	1,643	General
12	52042 - Food	700	716	733	749	767	General
13	52043 - Vehicle Fuel & Oil	1,000	1,030	1,061	1,093	1,126	Fuel
14	52900 - Clearing-Materials & Supplies	-	-	-	-	-	General
15	53001 - Natural Gas	3,000	3,069	3,140	3,212	3,286	General
16	53004 - Telecommunications	4,700	4,808	4,919	5,032	5,148	General
17	53013 - Land Rental	11,689	11,958	12,233	12,514	12,802	General
18	53020 - Repair-Structures	10,000	10,300	10,609	10,927	11,255	General Maintenance
19	53022 - Repair-Office Equipment	-	-	-	-	-	General Maintenance
20	53047 - Public Education	2,500	2,558	2,616	2,676	2,738	General
21	53049 - Cash Short	-	-	-	-	-	General
22	53055 - In-Service Training	5,000	5,115	5,233	5,353	5,476	General
23	53068 - Travel Expense	5,000	5,115	5,233	5,353	5,476	General
24	53069 - Professional Services	11,000	11,253	11,512	11,777	12,047	General
25	53076 - Bad Debt Expense	40,000	40,920	41,861	42,824	43,809	General
26	53124 - Tort Claim	-	-	-	-	-	General
27	53900 - Clearing-Other Services & Fees	-	-	-	-	-	General
28	54999 - Transfer to Assets-Capital	-	-	-	-	-	General
29	55500 - Interest Exp-Capital Lease	-	-	-	-	-	General
30	56001 - Indirect Costs	230,523	235,825	241,249	246,798	252,474	General
31	56002 - SUA Overhead Allocation	26,000	26,598	27,210	27,836	28,476	General
32	57000 - Depreciation Expense	-	-	-	-	-	General
33	<b>Utilities Waste Management Administration</b>	<u>\$ 545,386</u>	<u>\$ 553,956</u>	<u>\$ 562,728</u>	<u>\$ 571,707</u>	<u>\$ 580,898</u>	
34	<b>9184819 - Solid Waste Residential</b>						
35	51001 - Full Time	\$ 405,747	\$ 405,747	\$ 405,747	\$ 405,747	\$ 405,747	Salaries
36	51002 - Part Time	-	-	-	-	-	Salaries
37	51003 - Overtime	25,000	25,000	25,000	25,000	25,000	Salaries
38	51021 - Social Security	31,212	31,212	31,212	31,212	31,212	Salaries
39	51022 - Retirement	25,845	25,845	25,845	25,845	25,845	Salaries
40	51023 - Health Insurance	131,865	135,821	139,896	144,092	148,415	Benefits
41	51025 - Workers' Compensation	27,817	27,817	27,817	27,817	27,817	Salaries
42	51045 - Temporary Labor Services	-	-	-	-	-	General
43	52012 - Vehicle Repair Parts	75,000	77,250	79,568	81,955	84,413	Vehicle Maintenance
44	52024 - Other Equipment Parts	60,000	61,800	63,654	65,564	67,531	General Maintenance
45	52041 - Clothing & Uniforms	7,100	7,263	7,430	7,601	7,776	General
46	52043 - Vehicle Fuel & Oil	90,000	92,700	95,481	98,345	101,296	Fuel
47	52045 - Tools	900	921	942	964	986	General
48	52046 - Minor Supplies	3,000	3,069	3,140	3,212	3,286	General
49	52048 - Safety Equipment	1,200	1,228	1,256	1,285	1,314	General
50	53047 - Public Education	4,500	4,604	4,709	4,818	4,929	General
51	53073 - Landfill Services	270,000	276,210	282,563	289,062	295,710	General
52	55000 - Capital Lease Payments	369,031	369,031	406,855	406,855	406,855	None
53	56002 - SUA Overhead Allocation	313,359	320,566	327,939	335,482	343,198	General
54	<b>Subtotal Solid Waste Residential</b>	<u>\$ 1,841,576</u>	<u>\$ 1,866,083</u>	<u>\$ 1,929,053</u>	<u>\$ 1,954,855</u>	<u>\$ 1,981,329</u>	

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 1 - 5-Year Revenue Requirement**

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
55	<b>9184820 - Solid Waste Commercial</b>						
56	51001 - Full Time	\$ 321,548	\$ 321,548	\$ 321,548	\$ 321,548	\$ 321,548	Salaries
57	51003 - Overtime	20,000	20,000	20,000	20,000	20,000	Salaries
58	51021 - Social Security	24,450	24,450	24,450	24,450	24,450	Salaries
59	51022 - Retirement	20,493	20,493	20,493	20,493	20,493	Salaries
60	51023 - Health Insurance	59,939	61,737	63,589	65,497	67,462	Benefits
61	51025 - Workers' Compensation	-	-	-	-	-	Salaries
62	52012 - Vehicle Repair Parts	75,000	77,250	79,568	81,955	84,413	Vehicle Maintenance
63	52024 - Other Equipment Parts	5,000	5,150	5,305	5,464	5,628	General Maintenance
64	52041 - Clothing & Uniforms	7,000	7,161	7,326	7,494	7,667	General
65	52043 - Vehicle Fuel & Oil	50,000	51,500	53,045	54,636	56,275	Fuel
66	52048 - Safety Equipment	1,000	1,023	1,047	1,071	1,095	General
67	52050 - Welding Supplies	10,000	10,230	10,465	10,706	10,952	General
68	53066 - Miscellaneous Services	4,500	4,604	4,709	4,818	4,929	General
69	53073 - Landfill Services	300,000	306,900	313,959	321,180	328,567	General
70	55000 - Capital Lease Payments	243,169	278,636	278,636	307,120	335,604	None
71	56002 - SUA Overhead Allocation	146,844	150,221	153,677	157,211	160,827	General
72	<b>Subtotal Solid Waste Commercial</b>	<b>\$ 1,288,943</b>	<b>\$ 1,340,903</b>	<b>\$ 1,357,815</b>	<b>\$ 1,403,642</b>	<b>\$ 1,449,909</b>	
73	<b>9184821 - Solid Waste Street Sweeping</b>						
74	51001 - Full Time	\$ 94,912	\$ 94,912	\$ 94,912	\$ 94,912	\$ 94,912	Salaries
75	51003 - Overtime	1,000	1,000	1,000	1,000	1,000	Salaries
76	51021 - Social Security	7,031	7,031	7,031	7,031	7,031	Salaries
77	51022 - Retirement	5,759	5,759	5,759	5,759	5,759	Salaries
78	51023 - Health Insurance	35,963	37,042	38,153	39,298	40,477	Benefits
79	51025 - Workers' Compensation	36,022	36,022	36,022	36,022	36,022	Salaries
80	52012 - Vehicle Repair Parts	20,000	20,600	21,218	21,855	22,510	Vehicle Maintenance
81	52041 - Clothing & Uniforms	700	716	733	749	767	General
82	52043 - Vehicle Fuel & Oil	10,000	10,300	10,609	10,927	11,255	Fuel
83	53069 - Professional Services	-	-	-	-	-	General
84	55000 - Capital Lease Payments	-	-	-	-	-	None
85	56002 - SUA Overhead Allocation	49,600	50,741	51,908	53,102	54,323	General
86	<b>Subtotal Solid Waste Street Sweeping</b>	<b>\$ 260,987</b>	<b>\$ 264,123</b>	<b>\$ 267,345</b>	<b>\$ 270,655</b>	<b>\$ 274,056</b>	
87	<b>9184822 - Solid Waste Convenience Collection Center</b>						
88	51001 - Full Time	\$ 18,144	\$ 18,144	\$ 18,144	\$ 18,144	\$ 18,144	Salaries
89	51003 - Overtime	-	-	-	-	-	Salaries
90	51021 - Social Security	1,327	1,327	1,327	1,327	1,327	Salaries
91	51022 - Retirement	1,093	1,093	1,093	1,093	1,093	Salaries
92	51023 - Health Insurance	-	-	-	-	-	Benefits
93	52041 - Clothing & Uniforms	-	-	-	-	-	General
94	53066 - Miscellaneous Services	50,000	51,150	52,326	53,530	54,761	General
95	<b>Subtotal Solid Waste Convenience Collection Center</b>	<b>\$ 70,564</b>	<b>\$ 71,714</b>	<b>\$ 72,890</b>	<b>\$ 74,094</b>	<b>\$ 75,325</b>	
96	<b>9184823 - Solid Waste Roll-off Service</b>						
97	51001 - Full Time	\$ 81,143	\$ 81,143	\$ 81,143	\$ 81,143	\$ 81,143	Salaries
98	51003 - Overtime	8,000	8,000	8,000	8,000	8,000	Salaries
99	51021 - Social Security	6,425	6,425	6,425	6,425	6,425	Salaries
100	51022 - Retirement	5,341	5,341	5,341	5,341	5,341	Salaries
101	51023 - Health Insurance	11,988	12,348	12,718	13,100	13,493	Benefits
102	51025 - Workers' Compensation	11,403	11,403	11,403	11,403	11,403	Salaries
103	52012 - Vehicle Repair Parts	15,000	15,450	15,914	16,391	16,883	Vehicle Maintenance
104	52041 - Clothing & Uniforms	700	716	733	749	767	General
105	52043 - Vehicle Fuel & Oil	15,000	15,450	15,914	16,391	16,883	Fuel
106	53073 - Landfill Services	72,000	73,656	75,350	77,083	78,856	General
107	55000 - Capital Lease Payments	114,069	106,102	108,299	112,706	117,112	None
108	<b>Subtotal Solid Waste Roll-off Service</b>	<b>\$ 341,069</b>	<b>\$ 336,034</b>	<b>\$ 341,239</b>	<b>\$ 348,732</b>	<b>\$ 356,305</b>	

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 1 - 5-Year Revenue Requirement

Line No.	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
<b>9184824 - Solid Waste Recycling</b>						
110 51001 - Full Time	\$ 122,062	\$ 122,062	\$ 122,062	\$ 122,062	\$ 122,062	Salaries
111 51003 - Overtime	4,000	4,000	4,000	4,000	4,000	Salaries
112 51021 - Social Security	9,476	9,476	9,476	9,476	9,476	Salaries
113 51022 - Retirement	7,564	7,564	7,564	7,564	7,564	Salaries
114 51023 - Health Insurance	11,988	12,348	12,718	13,100	13,493	Benefits
115 51025 - Workers' Compensation	473	473	473	473	473	Salaries
116 52012 - Vehicle Repair Parts	6,000	6,180	6,365	6,556	6,753	Vehicle Maintenance
117 52041 - Clothing & Uniforms	700	716	733	749	767	General
118 52043 - Vehicle Fuel & Oil	10,000	10,300	10,609	10,927	11,255	Fuel
119 53047 - Public Education	3,000	3,069	3,140	3,212	3,286	General
120 53073 - Landfill Services	180,000	184,140	188,375	192,708	197,140	General
121 55000 - Capital Lease Payments	-	-	-	-	-	None
122 Subtotal Solid Waste Recycling	\$ 355,263	\$ 360,328	\$ 365,515	\$ 370,827	\$ 376,268	
<b>9284818 - Utilities Waste Mgmt Admin - RESERVE FUND</b>						
124 53069 - Professional Services	\$ -	\$ -	\$ -	\$ -	\$ -	None
125 Expenditure Total:	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>9284821 - Util Waste Mgmt Street sweep - RESERVE FUND</b>						
127 54001 - Vehicles	\$ -	\$ -	\$ -	\$ -	\$ -	None
128 Expenditure Total:	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>9284823 - Waste Mgmt Roll-off Service - RESERVE FUND</b>						
130 54001 - Vehicles	\$ -	\$ -	\$ -	\$ -	\$ -	None
131 Expenditure Total:	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>Capital Improvement Plan</b>						
133 Parking Lot Improvements	\$ -	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000	None
134 Street Sweeper (2025)	47,337	47,337	47,337	47,337	47,337	None
135 Street Sweeper (2027)	-	43,046	43,046	43,046	43,046	None
136 Pickup Trucks	-	-	27,318	28,138	28,982	None
137 Subtotal Capital Improvement Plan	\$ 47,337	\$ 440,383	\$ 467,701	\$ 468,520	\$ 469,364	
<b>Proposed Debt</b>						
139 Principal	\$ -	\$ -	\$ -	\$ -	\$ -	None
140 Interest	-	-	-	-	-	None
141 Subtotal Proposed Debt	\$ -	\$ -	\$ -	\$ -	\$ -	
142 TOTAL EXPENSES	\$ 6,679,682	\$ 6,133,523	\$ 6,364,286	\$ 6,463,031	\$ 6,563,454	
<b>REVENUES</b>						
144 44504 - Residential Refuse Sales	\$ 28,415	\$ 28,415	\$ 28,415	\$ 28,415	\$ 28,415	None
145 44505 - Commercial Refuse Sales	95,220	95,220	95,220	95,220	95,220	None
146 44506 - Residential Recycling	-	-	-	-	-	None
147 44507 - Commercial Recycling	-	-	-	-	-	None
148 44508 - Roll-Off Container	-	-	-	-	-	None
149 44509 - Street Sweeping	-	-	-	-	-	None
150 48006 - Blue Trash Bags	10,000	10,000	10,000	10,000	10,000	None
151 48213 - Collection Center-Recycling	12,000	12,000	12,000	12,000	12,000	None
152 48214 - Collection Center-Refuse	25,000	25,000	25,000	25,000	25,000	None
153 48700 - Miscellaneous Revenue	-	-	-	-	-	None
154 48721 - Gain on Sale of Assets	-	-	-	-	-	None

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 1 - 5-Year Revenue Requirement

Line No.	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
155 48903 - SUA Revenue Allocation	397,280	397,280	397,280	397,280	397,280	None
156 Subtotal Revenues	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	
157 61000 - Transfer In	\$ -	\$ -	\$ -	\$ -	\$ -	None
158 Revenue Total:	\$ -	\$ -	\$ -	\$ -	\$ -	
159 TOTAL REVENUES	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	
160 Net Revenue Requirement	\$ 6,111,767	\$ 5,565,608	\$ 5,796,371	\$ 5,895,116	\$ 5,995,539	

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 1 - Capital Improvement Plan

Line No.	Description	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024	Year 6 FY 2025	Year 7 FY 2026	Year 8 FY 2027	Year 9 FY 2028	Year 10 FY 2029	Total	Notes
1	<b>Facility Improvements</b>												
2	Parking Lot	\$ -	\$ -	\$ -	\$ -	\$ 1,400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,400,000	A
3	<b>Sum:</b>	\$ -	\$ -	\$ -	\$ -	\$ 1,400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,400,000	
4	<b>FY 2020 - FY 2024 Total:</b>	\$ 1,400,000											
5													
6	<b>Rolling Stock Purchases</b>												
7	Street Sweeper	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 284,022	\$ -	\$ -	\$ -	\$ -	\$ 284,022	B
8	Street Sweeper	-	-	-	-	-	-	-	301,319	-	-	301,319	C
9	Pickup Truck	-	-	27,318	28,138	28,982	29,851	30,747	31,669	-	-	176,705	D
10	<b>Sum:</b>	\$ -	\$ -	\$ 27,318	\$ 28,138	\$ 28,982	\$ 313,873	\$ 30,747	\$ 332,988	\$ -	\$ -	\$ 762,046	
11	<b>FY 2020 - FY 2024 Total:</b>	\$ 84,438											
12	<b>Funding Schedule</b>												
13	Street Sweeper	\$ 47,337	\$ 47,337	\$ 47,337	\$ 47,337	\$ 47,337	\$ 47,337	\$ 49,902	\$ 49,902	\$ 49,902	\$ 49,902	\$ 483,629	E
14	Street Sweeper	-	43,046	43,046	43,046	43,046	43,046	43,046	43,046	52,941	52,941	407,200	F
15	Pickup Truck	-	-	27,318	28,138	28,982	29,851	30,747	31,669	-	-	176,705	D
16	Parking Lot	-	350,000	350,000	350,000	350,000	-	-	-	-	-	1,400,000	G
17	<b>Sum:</b>	\$ 47,337	\$ 440,383	\$ 467,701	\$ 468,520	\$ 469,364	\$ 120,234	\$ 123,694	\$ 124,616	\$ 102,842	\$ 102,842	\$ 2,467,534	
18	<b>FY 2020 - FY 2024 Total:</b>	\$ 1,893,305											
19	<b>Lease Obligations</b>												
20	Schedule #038 - Four Freightliner Trucks	\$ 80,632	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 80,632	H
21	Schedule #039 Two Mack Roll Off Trucks	37,145	-	-	-	-	-	-	-	-	-	37,145	I
22	Schedule #040 - Six trucks for Waste Management	369,031	369,031	-	-	-	-	-	-	-	-	738,062	J
23	Schedule #041 - Seven Freightliner Refuse Trucks	162,537	278,636	278,636	139,318	-	-	-	-	-	-	859,127	K
24	Schedule #041 - Two Roll off trucks	40,849	70,027	70,027	35,013	-	-	-	-	-	-	215,916	L
25	Schedule #042 - One Roll off truck	36,075	36,075	-	-	-	-	-	-	-	-	72,150	M
26	Schedule #043 - Six trucks for Waste Management	-	-	406,855	406,855	406,855	-	-	-	-	-	1,220,565	N
27	Schedule #044 - Seven Freightliner Refuse Trucks	-	-	-	167,802	335,604	335,604	167,802	-	-	-	1,006,811	O
28	Schedule #044 - Two Roll off trucks	-	-	-	39,420	78,840	78,840	39,420	-	-	-	236,521	P
29	Schedule #045 - One Roll off truck	-	-	38,272	38,272	38,272	-	-	-	-	-	114,816	Q
30	Schedule #046 - Six trucks for Waste Management	-	-	-	-	-	444,582	444,582	444,582	-	-	1,333,745	R
31	Schedule #047 - Seven Freightliner Refuse Trucks	-	-	-	-	-	183,362	366,723	366,723	366,723	183,362	1,100,170	S
32	Schedule #047 - Two Roll off trucks	-	-	-	-	-	43,075	86,151	86,151	43,075	-	258,453	T
33	Schedule #048 - One Roll off truck	-	-	-	-	-	41,821	41,821	41,821	-	-	125,462	U
34	Schedule #049 - Six trucks for Waste Management	-	-	-	-	-	-	-	485,806	485,806	-	971,613	V
35	Schedule #050 - Seven Freightliner Refuse Trucks	-	-	-	-	-	-	-	-	-	200,364	200,364	W
36	Schedule #050 - Two Roll off trucks	-	-	-	-	-	-	-	-	-	47,070	47,070	X
37	Schedule #051 - One Roll off truck	-	-	-	-	-	-	-	45,699	45,699	-	91,397	Y
38	<b>Sum:</b>	\$ 726,269	\$ 753,768	\$ 793,790	\$ 826,680	\$ 859,571	\$ 900,846	\$ 920,062	\$ 939,277	\$ 984,379	\$ 1,005,376	\$ 8,710,019	
39	<b>FY 2020 - FY 2024 Total:</b>	\$ 3,960,079											

**Notes:**

A. Per City staff, the City plans on repairing its parking lot in year 5.

B. Per City staff, a Street Sweeper costs \$245,000, NewGen has inflated this cost by 3% over 5 years (\$245,000 x (1.03<sup>5</sup>)) = \$284,022.C. Per City staff, a Street Sweeper costs \$245,000, NewGen has inflated this cost by 3% over 7 years (\$245,000 x (1.03<sup>7</sup>)) = \$301,319.

D. Per City staff, the City plans on purchasing a pickup truck each year for 6 years starting in Year 3. NewGen has assumed 3% inflation on a \$25,000 pickup truck.

E. The City has 6 years to fund the purchase of the street sweeper in 2025, NewGen has planned on setting aside monies each year to fund the vehicle purchase in 2025 (\$284,022/6 = \$47,337). In year 7, NewGen has assumed the City would begin to fund the purchase of the next street sweeper using a seven-year life ((\$284,022 x 1.03<sup>7</sup>)/7) = \$49,902).

- F. The City has 7 years to fund the purchase of the street sweeper in 2027, NewGen has planned on setting aside monies each year to fund the vehicle purchase in 2027 ( $\$301,319/7 = \$43,046$ ). In year 9, NewGen has assumed the City would begin to fund the purchase of the next street sweeper using a seven-year life ( $(\$301,319 \times 1.03^7)/7 = \$52,941$ ).
- G. Beginning in Year 2, the City has 4 years to fund the parking lot improvements ( $\$1,400,000/4 = \$350,000$ ).
- H. Per the buyback agreement, the City paid for 6 months of Schedule #038 in FY 2020.
- I. Per the buyback agreement, the City paid for 6 months of Schedule #039 in FY 2020.
- J. The City will stop paying lease payments for Schedule #40 in June of 2021.
- K. The City will stop paying lease payments for the seven rear load trucks in Schedule #041 in December 2022.
- L. The City will stop paying lease payments for the two Roll off trucks in Schedule #041 in Decembmer 2022.
- M. The City will stop paying lease payments for the one Roll off truck in Schedule #042 in June 2021.
- N. NewGen estimated future lease payments by multiplying the purchase price of six side load trucks by 3% over 2 years, and assumed the same lease schedule as schedule #040, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$295,000 \times 1.03^2 \times 6 \text{ trucks} \times 65\% / 3 \text{ years} = \$406,855$ ).
- O. NewGen estimated future lease payments by multiplying the purchase price of seven rear load trucks by 3% over 3 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$202,500 \times 1.03^3 \times 7 \text{ trucks} \times 65\% / 3 \text{ years} = \$335,604$ ). The first and last years are split into 6 month payments to reflect schedule #041.
- P. NewGen estimated future lease payments by multiplying the purchase price of two roll off trucks by 3% over 3 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$166,500 \times 1.03^3 \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$78,840$ ). The first and last years are split into 6 month payments to reflect schedule #041.
- Q. NewGen estimated future lease payments by multiplying the purchase price of one roll off truck by 3% over 5 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$166,500 \times 1.03^5 \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$38,272$ ).
- R. NewGen estimated future lease payments by multiplying the purchase price of six side load trucks by 3% over 5 years, and assumed the same lease schedule as schedule #040, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$295,000 \times 1.03^5 \times 6 \text{ trucks} \times 65\% / 3 \text{ years} = \$444,582$ ).
- S. NewGen estimated future lease payments by multiplying the purchase price of seven rear load trucks by 3% over 6 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$202,500 \times 1.03^6 \times 7 \text{ trucks} \times 65\% / 3 \text{ years} = \$366,723$ ). The first and last years are split into 6 month payments to reflect schedule #041.
- T. NewGen estimated future lease payments by multiplying the purchase price of two roll off trucks by 3% over 6 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$166,500 \times 1.03^6 \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$86,151$ ). The first and last years are split into 6 month payments to reflect schedule #041.
- U. NewGen estimated future lease payments by multiplying the purchase price of one roll off truck by 3% over 5 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$166,500 \times 1.03^5 \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$41,821$ ).
- V. NewGen estimated future lease payments by multiplying the purchase price of six side load trucks by 3% over 8 years, and assumed the same lease schedule as schedule #040, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$295,000 \times 1.03^8 \times 6 \text{ trucks} \times 65\% / 3 \text{ years} = \$485,806$ ).
- W. NewGen estimated future lease payments by multiplying the purchase price of seven rear load trucks by 3% over 9 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$202,500 \times 1.03^9 \times 7 \text{ trucks} \times 65\% / 3 \text{ years} = \$3400,728$ ). The first and last years are split into 6 month payments to reflect schedule #041.
- X. NewGen estimated future lease payments by multiplying the purchase price of two roll off trucks by 3% over 9 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$166,500 \times 1.03^9 \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$94,139$ ). The first and last years are split into 6 month payments to reflect schedule #041.
- Y. NewGen estimated future lease payments by multiplying the purchase price of one roll off truck by 3% over 8 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$166,500 \times 1.03^8 \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$45,699$ ).



**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 1 - 5-Year Summary**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Residential Collection</b>					
2	Refuse	\$ 759,387	\$ 769,017	\$ 801,737	\$ 811,794	\$ 822,118
3	Recycling	524,227	529,988	544,975	550,837	556,842
4	Yard Waste	235,899	238,622	245,528	248,398	251,344
5	Glass	6,964	7,039	7,574	7,653	7,736
6	Bulky Waste	459	4,009	4,096	4,258	4,420
7	Container Maintenance/Delivery	207,231	209,679	212,189	214,763	217,402
8	Subtotal Residential Collection	\$ 1,734,165	\$ 1,758,354	\$ 1,816,099	\$ 1,837,703	\$ 1,859,862
9	<b>Commercial Rear-Load</b>					
10	Refuse	\$ 735,256	\$ 777,103	\$ 785,481	\$ 821,148	\$ 857,051
11	Cardboard	54,096	54,838	55,145	55,816	56,496
12	Container Maintenance/Delivery	87,549	88,394	89,261	90,149	91,060
13	Subtotal Commercial Rear-Load	\$ 876,901	\$ 920,336	\$ 929,886	\$ 967,113	\$ 1,004,607
14	<b>Commercial Roll-off</b>					
15	Refuse/Recycling	\$ 192,429	\$ 193,908	\$ 196,318	\$ 200,194	\$ 204,099
16	Container Maintenance/Delivery	-	-	-	-	-
17	Subtotal Commercial Roll-off	\$ 192,429	\$ 193,908	\$ 196,318	\$ 200,194	\$ 204,099
18	Disposal	\$ 822,000	\$ 840,906	\$ 860,247	\$ 880,033	\$ 900,273
19	Convenience Collection Center	\$ 80,045	\$ 69,492	\$ 71,700	\$ 74,644	\$ 77,626
20	Street Sweeping	\$ 329,564	\$ 375,936	\$ 379,354	\$ 382,865	\$ 386,472
21	Administration	\$ 2,076,662	\$ 1,406,676	\$ 1,542,766	\$ 1,552,565	\$ 1,562,600
22	Total	\$ 6,111,767	\$ 5,565,608	\$ 5,796,371	\$ 5,895,116	\$ 5,995,539

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 1 - Residential Cost of Service**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Direct Costs</b>					
2	Residential Collection					
3	Refuse	\$ 759,387	\$ 769,017	\$ 801,737	\$ 811,794	\$ 822,118
4	Recycling	524,227	529,988	544,975	550,837	556,842
5	Yard Waste	235,899	238,622	245,528	248,398	251,344
6	Glass	6,964	7,039	7,574	7,653	7,736
7	Bulky Waste	459	4,009	4,096	4,258	4,420
8	Container Maintenance/Delivery	207,231	209,679	212,189	214,763	217,402
9	Subtotal Residential Collection	\$ 1,734,165	\$ 1,758,354	\$ 1,816,099	\$ 1,837,703	\$ 1,859,862
10	Convenience Collection Center	\$ 80,045	\$ 69,492	\$ 71,700	\$ 74,644	\$ 77,626
11	Portion of Roll-off	\$ 203,555	\$ 182,913	\$ 188,760	\$ 191,950	\$ 195,177
12	<b>Indirect Costs</b>					
13	Administration	\$ 1,172,543	\$ 774,915	\$ 858,274	\$ 857,480	\$ 857,006
14	<b>Disposal Cost</b>					
15	Residential Refuse	\$ 272,923	\$ 279,201	\$ 285,622	\$ 292,192	\$ 298,912
16	Recycling	113,292	115,898	118,563	121,290	124,079
17	Collection Center	46,588	47,660	48,756	49,877	51,025
18	Total Disposal	\$ 432,804	\$ 442,758	\$ 452,942	\$ 463,359	\$ 474,017
19	<b>Total Residential Cost of Service</b>	<b>\$ 3,623,112</b>	<b>\$ 3,228,432</b>	<b>\$ 3,387,775</b>	<b>\$ 3,425,136</b>	<b>\$ 3,463,688</b>
20	Billing Units (Customers by Cart Size)					
21	35	1,481	1,488	1,496	1,503	1,511
22	48	186	187	188	189	190
23	64	2,432	2,444	2,457	2,469	2,481
24	96	9,257	9,303	9,350	9,396	9,443
25	Customers with Extra					
26	128	26	26	27	27	27
27	192	424	426	428	431	433
28	Total Units	13,806	13,875	13,944	14,014	14,084
29	<b>Direct Costs</b>					
30	Residential Collection					
31	Refuse	\$ 4.58	\$ 4.62	\$ 4.79	\$ 4.83	\$ 4.86
32	Recycling	3.16	3.18	3.26	3.28	3.29
33	Yard Waste	1.42	1.43	1.47	1.48	1.49
34	Glass	0.04	0.04	0.05	0.05	0.05
35	Bulky Waste	0.00	0.02	0.02	0.03	0.03
36	Container Maintenance/Delivery	1.25	1.26	1.27	1.28	1.29
37	Subtotal Residential Collection	\$ 10.47	\$ 10.56	\$ 10.85	\$ 10.93	\$ 11.00
38	Portion of Roll-off	\$ 1.23	\$ 1.10	\$ 1.13	\$ 1.14	\$ 1.15
39	Convenience Collection Center	\$ 0.48	\$ 0.42	\$ 0.43	\$ 0.44	\$ 0.46
40	<b>Indirect Cost</b>					
41	Administration	\$ 7.08	\$ 4.65	\$ 5.13	\$ 5.10	\$ 5.07
		\$ 7.08	\$ 4.65	\$ 5.13	\$ 5.10	\$ 5.07
42	Budgeted Landfill Services	\$ 432,804	\$ 442,758	\$ 452,942	\$ 463,359	\$ 474,017
43	Monthly Capacity	5,156,112	5,181,893	5,207,802	5,233,841	5,260,011
44	\$/Gallon per month	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01
45	Monthly Disposal cost (by Container size)					
46	35	\$ 1.06	\$ 1.08	\$ 1.10	\$ 1.12	\$ 1.14
47	48	\$ 1.45	\$ 1.48	\$ 1.51	\$ 1.53	\$ 1.56
48	64	\$ 1.94	\$ 1.97	\$ 2.01	\$ 2.05	\$ 2.08

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 1 - Residential Cost of Service**

			Year 1 2020		Year 2 2021		Year 3 2022		Year 4 2023		Year 5 2024
49	96	\$	2.91	\$	2.96	\$	3.02	\$	3.07	\$	3.12
50	128	\$	3.88	\$	3.95	\$	4.02	\$	4.09	\$	4.17
51	192	\$	5.82	\$	5.92	\$	6.03	\$	6.14	\$	6.25
52	<b>Monthly COS (Single Cart)</b>										
53	35	\$	20.32	\$	17.81	\$	18.64	\$	18.73	\$	18.83
54	48	\$	20.71	\$	18.21	\$	19.05	\$	19.15	\$	19.25
55	64	\$	21.20	\$	18.71	\$	19.55	\$	19.66	\$	19.77
56	96	\$	22.17	\$	19.69	\$	20.55	\$	20.68	\$	20.81
57	<b>Monthly COS (Multiple Carts)</b>										
58	64	\$	23.14	\$	20.68	\$	21.56	\$	21.70	\$	21.85
59	96	\$	25.08	\$	22.65	\$	23.57	\$	23.75	\$	23.94

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 1 - Current Revenue Reconciliation**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Residential</b>					
2	Net Revenue Requirement	\$ 3,623,112	\$ 3,228,432	\$ 3,387,775	\$ 3,425,136	\$ 3,463,688
3	Revenue	\$ 3,078,712	\$ 3,094,106	\$ 3,109,576	\$ 3,125,124	\$ 3,140,750
4	Over/(Under)	\$ (544,400)	\$ (134,326)	\$ (278,199)	\$ (300,012)	\$ (322,938)
5	Cumulative Over/(Under)	\$ (544,400)	\$ (678,726)	\$ (956,925)	\$ (1,256,937)	\$ (1,579,876)
6	<b>Commercial Rear Load</b>					
7	Net Revenue Requirement	\$ 1,764,065	\$ 1,638,295	\$ 1,687,975	\$ 1,743,793	\$ 1,799,898
8	Revenue					
9	Commercial	\$ 943,834	\$ 948,553	\$ 953,296	\$ 958,063	\$ 962,853
10	Apartment Resident Paying with Dumpster	652,332	655,594	658,872	662,166	665,477
11	Shared Accounts	68,838	69,182	69,528	69,875	70,225
12	Total Revenue	\$ 1,665,004	\$ 1,673,329	\$ 1,681,696	\$ 1,690,104	\$ 1,698,555
13	Over/(Under)	\$ (99,061)	\$ 35,034	\$ (6,279)	\$ (53,689)	\$ (101,344)
14	Cumulative Over/(Under)	\$ (99,061)	\$ (64,027)	\$ (70,306)	\$ (123,995)	\$ (225,339)
15	<b>Roll-Off</b>					
16	Revenue Requirement	\$ 385,580	\$ 346,480	\$ 357,556	\$ 363,598	\$ 369,711
17	Less Costs allocated to Residential	\$ (203,555)	\$ (182,913)	\$ (188,760)	\$ (191,950)	\$ (195,177)
18	Net Revenue Requirement	\$ 182,025	\$ 163,566	\$ 168,795	\$ 171,648	\$ 174,533
19	Revenue	\$ 141,606	\$ 142,314	\$ 143,026	\$ 143,741	\$ 144,460
20	Over/(Under)	\$ (40,419)	\$ (21,252)	\$ (25,770)	\$ (27,907)	\$ (30,074)
21	Cumulative Over/(Under)	\$ (40,419)	\$ (61,671)	\$ (87,441)	\$ (115,348)	\$ (145,421)
22	<b>Street Sweeping</b>					
23	Net Revenue Requirement	\$ 542,564	\$ 535,315	\$ 551,825	\$ 554,539	\$ 557,420
24	Revenue	\$ 391,200	\$ 393,156	\$ 395,122	\$ 397,097	\$ 399,083
25	Over/(Under)	\$ (151,364)	\$ (142,159)	\$ (156,703)	\$ (157,442)	\$ (158,337)
26	Cumulative Over/(Under)	\$ (151,364)	\$ (293,523)	\$ (450,226)	\$ (607,667)	\$ (766,004)
27	<b>Total Revenue Requirement</b>	\$ 6,111,767	\$ 5,565,608	\$ 5,796,371	\$ 5,895,116	\$ 5,995,539
28	<b>Total Revenues</b>	\$ 5,276,522	\$ 5,302,905	\$ 5,329,419	\$ 5,356,067	\$ 5,382,847
29	<b>Total Over/(Under)</b>	\$ (835,244)	\$ (262,703)	\$ (466,951)	\$ (539,050)	\$ (612,692)
30	<b>Cumulative Over/(Under)</b>	\$ (835,244)	\$ (1,097,947)	\$ (1,564,898)	\$ (2,103,948)	\$ (2,716,640)

**City of Stillwater, Oklahoma**  
**Cost of Service and Rate Design Study**  
**Scenario 1 - Proposed Rates**

	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
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**Residential Rates****Inside City Limits**

35-gallon cart	\$ 13.74	\$ 14.43	\$ 15.15	\$ 15.15	\$ 15.15
64-gallon cart	\$ 16.01	\$ 16.81	\$ 17.65	\$ 17.65	\$ 17.65
(2) 64-gallon carts	\$ 26.74	\$ 28.08	\$ 29.48	\$ 29.48	\$ 29.48
96-gallon cart	\$ 18.28	\$ 19.19	\$ 20.15	\$ 20.15	\$ 20.15
(2) 96-gallon carts	\$ 29.93	\$ 31.43	\$ 33.00	\$ 33.00	\$ 33.00
House-side 96-gallon cart	\$ 27.83	\$ 29.22	\$ 30.68	\$ 30.68	\$ 30.68
Opt-Out Rate	\$ 15.36	\$ 16.13	\$ 16.93	\$ 16.93	\$ 16.93
48-gallon cart	\$ 14.87	\$ 15.61	\$ 16.39	\$ 16.39	\$ 16.39
Non Subscriber - Residential	\$ 2.46	\$ 2.58	\$ 2.71	\$ 2.71	\$ 2.71
Non Subscriber - Commercial	\$ 25.02	\$ 26.27	\$ 27.58	\$ 27.58	\$ 27.58

**Outside City Limits**

35-gallon cart	\$ 29.52	\$ 31.00	\$ 32.55	\$ 32.55	\$ 32.55
64-gallon cart	\$ 30.65	\$ 32.18	\$ 33.79	\$ 33.79	\$ 33.79
(2) 64-gallon carts	N/A	N/A	N/A	N/A	N/A
96-gallon cart	\$ 32.93	\$ 34.58	\$ 36.31	\$ 36.31	\$ 36.31
(2) 96-gallon carts	\$ 44.57	\$ 46.80	\$ 49.14	\$ 49.14	\$ 49.14
House-side 96-gallon cart	N/A	N/A	N/A	N/A	N/A

Residential Rate Increase %

5% 5% 0% 0%

**Street Sweeping Rates**

Street Sweeping Rate	\$ 1.63	\$ 2.33	\$ 2.33	\$ 2.33	\$ 2.33
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**Roll-Off Rates****10 Cubic Yard**

Delivery Fee	\$ 126.20
Daily rental	
Inside City Limits	\$ 10.52
Outside City Limits	\$ 11.57

**20 Cubic Yard**

Delivery Fee	\$ 131.45
Daily rental	
Inside City Limits	\$ 12.62
Outside City Limits	\$ 13.88

**30 Cubic Yard**

Delivery Fee	\$ 136.71
Daily rental	
Inside City Limits	\$ 14.72
Outside City Limits	\$ 16.19

**40 Cubic Yard**

Delivery Fee	\$ 141.97
Daily rental	
Inside City Limits	\$ 16.83
Outside City Limits	\$ 18.51

**Disposal per ton**

Inside City Limits	\$ 42.07
Outside City Limits	\$ 46.28

**Delivery Fee**

\$ 100.00 \$ 100.00 \$ 100.00 \$ 100.00

**Per Pull Fee**

\$ 300.00 \$ 310.00 \$ 320.00 \$ 330.00

**Commercial Shared Rates**

Shared Accounts	\$ 25.02	\$ 25.02	\$ 26.27	\$ 27.58	\$ 27.58
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## Commercial Rate Matrix

FY 2020						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 37.06	\$ 74.11	\$ 111.23	\$ 148.24	\$ 185.30	\$ 222.47
3	\$ 55.61	\$ 111.23	\$ 166.84	\$ 222.47	\$ 278.07	\$ 333.68
4	\$ 74.11	\$ 148.24	\$ 222.47	\$ 296.47	\$ 370.58	\$ 444.91
Proposed Rate Increase	0%					

FY 2021						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 37.06	\$ 74.11	\$ 111.23	\$ 148.24	\$ 185.30	\$ 222.47
3	\$ 55.61	\$ 111.23	\$ 166.84	\$ 222.47	\$ 278.07	\$ 333.68
4	\$ 74.11	\$ 148.24	\$ 222.47	\$ 296.47	\$ 370.58	\$ 444.91
Proposed Rate Increase	0%					

FY 2022						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 38.91	\$ 77.82	\$ 116.79	\$ 155.65	\$ 194.57	\$ 233.59
3	\$ 58.39	\$ 116.79	\$ 175.18	\$ 233.59	\$ 291.97	\$ 350.36
4	\$ 77.82	\$ 155.65	\$ 233.59	\$ 311.29	\$ 389.11	\$ 467.16
Proposed Rate Increase	5.0%					

FY 2023						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 40.86	\$ 81.71	\$ 122.63	\$ 163.43	\$ 204.30	\$ 245.27
3	\$ 61.31	\$ 122.63	\$ 183.94	\$ 245.27	\$ 306.57	\$ 367.88
4	\$ 81.71	\$ 163.43	\$ 245.27	\$ 326.85	\$ 408.57	\$ 490.52
Proposed Rate Increase	5.0%					

FY 2024						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 40.86	\$ 81.71	\$ 122.63	\$ 163.43	\$ 204.30	\$ 245.27
3	\$ 61.31	\$ 122.63	\$ 183.94	\$ 245.27	\$ 306.57	\$ 367.88
4	\$ 81.71	\$ 163.43	\$ 245.27	\$ 326.85	\$ 408.57	\$ 490.52
Proposed Rate Increase	0%					

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 1 - Proposed Revenue Reconciliation**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Residential</b>					
2	Net Revenue Requirement	\$ 3,623,112	\$ 3,228,432	\$ 3,387,775	\$ 3,425,136	\$ 3,463,688
3	Revenue	\$ 3,078,712	\$ 3,248,811	\$ 3,428,308	\$ 3,445,449	\$ 3,462,677
4	Over/(Under)	\$ (544,400)	\$ 20,379	\$ 40,532	\$ 20,313	\$ (1,011)
5	Cumulative Over/(Under)	\$ (544,400)	\$ (524,021)	\$ (483,489)	\$ (463,175)	\$ (464,187)
6	<b>Commercial Rear Load</b>					
7	Net Revenue Requirement	\$ 1,764,065	\$ 1,638,295	\$ 1,687,975	\$ 1,743,793	\$ 1,799,898
8	Revenue					
9	Commercial	\$ 943,834	\$ 948,553	\$ 1,000,960	\$ 1,056,275	\$ 1,061,556
10	Apartment Resident Paying with Dumpster	652,332	688,373	726,406	730,038	733,688
11	Shared Accounts	68,838	69,182	73,004	77,038	77,423
12	Total Revenue	\$ 1,665,004	\$ 1,706,109	\$ 1,800,370	\$ 1,863,351	\$ 1,872,667
13	Over/(Under)	\$ (99,061)	\$ 67,814	\$ 112,395	\$ 119,557	\$ 72,769
14	Cumulative Over/(Under)	\$ (99,061)	\$ (31,247)	\$ 81,148	\$ 200,705	\$ 273,474
15	<b>Roll-Off</b>					
16	Revenue Requirement	\$ 385,580	\$ 346,480	\$ 357,556	\$ 363,598	\$ 369,711
17	Less Costs allocated to Residential	\$ (203,555)	\$ (182,913)	\$ (188,760)	\$ (191,950)	\$ (195,177)
18	Net Revenue Requirement	\$ 182,025	\$ 163,566	\$ 168,795	\$ 171,648	\$ 174,533
19	Revenue	\$ 141,606	\$ 152,358	\$ 157,372	\$ 162,432	\$ 167,539
20	Over/(Under)	\$ (40,419)	\$ (11,208)	\$ (11,423)	\$ (9,215)	\$ (6,994)
21	Cumulative Over/(Under)	\$ (40,419)	\$ (51,628)	\$ (63,051)	\$ (72,266)	\$ (79,260)
22	<b>Street Sweeping</b>					
23	Net Revenue Requirement	\$ 542,564	\$ 535,315	\$ 551,825	\$ 554,539	\$ 557,420
24	Revenue	\$ 391,200	\$ 561,996	\$ 564,806	\$ 567,630	\$ 570,468
25	Over/(Under)	\$ (151,364)	\$ 26,681	\$ 12,981	\$ 13,091	\$ 13,048
26	Cumulative Over/(Under)	\$ (151,364)	\$ (124,683)	\$ (111,702)	\$ (98,611)	\$ (85,562)
27	<b>Total Revenue Requirement</b>	\$ 6,111,767	\$ 5,565,608	\$ 5,796,371	\$ 5,895,116	\$ 5,995,539
28	<b>Total Revenues</b>	\$ 5,276,522	\$ 5,669,274	\$ 5,950,856	\$ 6,038,862	\$ 6,073,351
29	<b>Total Over/(Under)</b>	\$ (835,244)	\$ 103,666	\$ 154,485	\$ 143,746	\$ 77,812
30	<b>Cumulative Over/(Under)</b>	\$ (835,244)	\$ (731,578)	\$ (577,093)	\$ (433,347)	\$ (355,535)

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 1 - Proposed Reserves

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Working Capital Reserve</b>					
2	Beginning Balance	\$ 1,000,000	\$ 222,093	\$ 768,362	\$ 1,370,914	\$ 1,968,752
3	Additions:					
4	Capital Contributions	\$ -	\$ 350,000	\$ 350,000	\$ 350,000	\$ 350,000
5	Rolling Stock Funding	47,337	90,383	117,701	118,520	119,364
6	Interest	10,000	2,221	7,684	13,709	19,688
7	Over-Recovery of Rates	-	103,666	154,485	143,746	77,812
8	Reductions:					
9	Capital Projects	\$ -	\$ -	\$ -	\$ -	\$ (1,400,000)
10	Rolling Stock Purchases	-	-	(27,318)	(28,138)	(28,982)
11	Under-Recovery of Rates	(835,244)	-	-	-	-
12	Ending Balance	\$ 222,093	\$ 768,362	\$ 1,370,914	\$ 1,968,752	\$ 1,106,634



City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 2 - 5-Year Revenue Requirement

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
1	<b>9180000 - SUA-Waste Mgmt Fund</b>						
2	71000 - Transfer Out	\$ 1,928,556	\$ 900,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	None
3	Expenditure Total:	<u>\$ 1,928,556</u>	<u>\$ 900,000</u>	<u>\$ 1,000,000</u>	<u>\$ 1,000,000</u>	<u>\$ 1,000,000</u>	
4	<b>9184818 - Solid Waste Administration</b>						
5	51001 - Full Time	\$ 165,198	\$ 165,198	\$ 165,198	\$ 165,198	\$ 165,198	Salaries
6	51021 - Social Security	8,177	8,177	8,177	8,177	8,177	Salaries
7	51022 - Retirement	6,612	6,612	6,612	6,612	6,612	Salaries
8	51023 - Health Insurance	11,987	12,347	12,717	13,099	13,491	Benefits
9	52012 - Vehicle Repair Parts	700	721	743	765	788	Vehicle Maintenance
10	52031 - Office Supplies	100	102	105	107	110	General
11	52036 - Janitorial Supplies	1,500	1,535	1,570	1,606	1,643	General
12	52042 - Food	700	716	733	749	767	General
13	52043 - Vehicle Fuel & Oil	1,000	1,030	1,061	1,093	1,126	Fuel
14	52900 - Clearing-Materials & Supplies	-	-	-	-	-	General
15	53001 - Natural Gas	3,000	3,069	3,140	3,212	3,286	General
16	53004 - Telecommunications	4,700	4,808	4,919	5,032	5,148	General
17	53013 - Land Rental	11,689	11,958	12,233	12,514	12,802	General
18	53020 - Repair-Structures	10,000	10,300	10,609	10,927	11,255	General Maintenance
19	53022 - Repair-Office Equipment	-	-	-	-	-	General Maintenance
20	53047 - Public Education	2,500	2,558	2,616	2,676	2,738	General
21	53049 - Cash Short	-	-	-	-	-	General
22	53055 - In-Service Training	5,000	5,115	5,233	5,353	5,476	General
23	53068 - Travel Expense	5,000	5,115	5,233	5,353	5,476	General
24	53069 - Professional Services	11,000	11,253	11,512	11,777	12,047	General
25	53076 - Bad Debt Expense	40,000	40,920	41,861	42,824	43,809	General
26	53124 - Tort Claim	-	-	-	-	-	General
27	53900 - Clearing-Other Services & Fees	-	-	-	-	-	General
28	54999 - Transfer to Assets-Capital	-	-	-	-	-	General
29	55500 - Interest Exp-Capital Lease	-	-	-	-	-	General
30	56001 - Indirect Costs	230,523	235,825	241,249	246,798	252,474	General
31	56002 - SUA Overhead Allocation	26,000	26,598	27,210	27,836	28,476	General
32	57000 - Depreciation Expense	-	-	-	-	-	General
33	<b>Utilities Waste Management Administration</b>	<u>\$ 545,386</u>	<u>\$ 553,956</u>	<u>\$ 562,728</u>	<u>\$ 571,707</u>	<u>\$ 580,898</u>	
34	<b>9184819 - Solid Waste Residential</b>						
35	51001 - Full Time	\$ 405,747	\$ 405,747	\$ 405,747	\$ 405,747	\$ 405,747	Salaries
36	51002 - Part Time	-	-	-	-	-	Salaries
37	51003 - Overtime	25,000	25,000	25,000	25,000	25,000	Salaries
38	51021 - Social Security	31,212	31,212	31,212	31,212	31,212	Salaries
39	51022 - Retirement	25,845	25,845	25,845	25,845	25,845	Salaries
40	51023 - Health Insurance	131,865	135,821	139,896	144,092	148,415	Benefits
41	51025 - Workers' Compensation	27,817	27,817	27,817	27,817	27,817	Salaries
42	51045 - Temporary Labor Services	-	-	-	-	-	General
43	52012 - Vehicle Repair Parts	75,000	77,250	79,568	81,955	84,413	Vehicle Maintenance
44	52024 - Other Equipment Parts	60,000	61,800	63,654	65,564	67,531	General Maintenance
45	52041 - Clothing & Uniforms	7,100	7,263	7,430	7,601	7,776	General
46	52043 - Vehicle Fuel & Oil	90,000	92,700	95,481	98,345	101,296	Fuel
47	52045 - Tools	900	921	942	964	986	General
48	52046 - Minor Supplies	3,000	3,069	3,140	3,212	3,286	General
49	52048 - Safety Equipment	1,200	1,228	1,256	1,285	1,314	General
50	53047 - Public Education	4,500	4,604	4,709	4,818	4,929	General
51	53073 - Landfill Services	270,000	276,210	282,563	289,062	295,710	General
52	55000 - Capital Lease Payments	369,031	369,031	406,855	406,855	406,855	None
53	56002 - SUA Overhead Allocation	313,359	320,566	327,939	335,482	343,198	General
54	<b>Subtotal Solid Waste Residential</b>	<u>\$ 1,841,576</u>	<u>\$ 1,866,083</u>	<u>\$ 1,929,053</u>	<u>\$ 1,954,855</u>	<u>\$ 1,981,329</u>	

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 2 - 5-Year Revenue Requirement

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
55	<b>9184820 - Solid Waste Commercial</b>						
56	51001 - Full Time	\$ 321,548	\$ 321,548	\$ 321,548	\$ 321,548	\$ 321,548	Salaries
57	51003 - Overtime	20,000	20,000	20,000	20,000	20,000	Salaries
58	51021 - Social Security	24,450	24,450	24,450	24,450	24,450	Salaries
59	51022 - Retirement	20,493	20,493	20,493	20,493	20,493	Salaries
60	51023 - Health Insurance	59,939	61,737	63,589	65,497	67,462	Benefits
61	51025 - Workers' Compensation	-	-	-	-	-	Salaries
62	52012 - Vehicle Repair Parts	75,000	77,250	79,568	81,955	84,413	Vehicle Maintenance
63	52024 - Other Equipment Parts	5,000	5,150	5,305	5,464	5,628	General Maintenance
64	52041 - Clothing & Uniforms	7,000	7,161	7,326	7,494	7,667	General
65	52043 - Vehicle Fuel & Oil	50,000	51,500	53,045	54,636	56,275	Fuel
66	52048 - Safety Equipment	1,000	1,023	1,047	1,071	1,095	General
67	52050 - Welding Supplies	10,000	10,230	10,465	10,706	10,952	General
68	53066 - Miscellaneous Services	4,500	4,604	4,709	4,818	4,929	General
69	53073 - Landfill Services	300,000	306,900	313,959	321,180	328,567	General
70	55000 - Capital Lease Payments	243,169	278,636	278,636	307,120	335,604	None
71	56002 - SUA Overhead Allocation	146,844	150,221	153,677	157,211	160,827	General
72	<b>Subtotal Solid Waste Commercial</b>	<b>\$ 1,288,943</b>	<b>\$ 1,340,903</b>	<b>\$ 1,357,815</b>	<b>\$ 1,403,642</b>	<b>\$ 1,449,909</b>	
73	<b>9184821 - Solid Waste Street Sweeping</b>						
74	51001 - Full Time	\$ 94,912	\$ 94,912	\$ 94,912	\$ 94,912	\$ 94,912	Salaries
75	51003 - Overtime	1,000	1,000	1,000	1,000	1,000	Salaries
76	51021 - Social Security	7,031	7,031	7,031	7,031	7,031	Salaries
77	51022 - Retirement	5,759	5,759	5,759	5,759	5,759	Salaries
78	51023 - Health Insurance	35,963	37,042	38,153	39,298	40,477	Benefits
79	51025 - Workers' Compensation	36,022	36,022	36,022	36,022	36,022	Salaries
80	52012 - Vehicle Repair Parts	20,000	20,600	21,218	21,855	22,510	Vehicle Maintenance
81	52041 - Clothing & Uniforms	700	716	733	749	767	General
82	52043 - Vehicle Fuel & Oil	10,000	10,300	10,609	10,927	11,255	Fuel
83	53069 - Professional Services	-	-	-	-	-	General
84	55000 - Capital Lease Payments	-	-	-	-	-	None
85	56002 - SUA Overhead Allocation	49,600	50,741	51,908	53,102	54,323	General
86	<b>Subtotal Solid Waste Street Sweeping</b>	<b>\$ 260,987</b>	<b>\$ 264,123</b>	<b>\$ 267,345</b>	<b>\$ 270,655</b>	<b>\$ 274,056</b>	
87	<b>9184822 - Solid Waste Convenience Collection Center</b>						
88	51001 - Full Time	\$ 18,144	\$ 18,144	\$ 18,144	\$ 18,144	\$ 18,144	Salaries
89	51003 - Overtime	-	-	-	-	-	Salaries
90	51021 - Social Security	1,327	1,327	1,327	1,327	1,327	Salaries
91	51022 - Retirement	1,093	1,093	1,093	1,093	1,093	Salaries
92	51023 - Health Insurance	-	-	-	-	-	Benefits
93	52041 - Clothing & Uniforms	-	-	-	-	-	General
94	53066 - Miscellaneous Services	50,000	51,150	52,326	53,530	54,761	General
95	<b>Subtotal Solid Waste Convenience Collection Center</b>	<b>\$ 70,564</b>	<b>\$ 71,714</b>	<b>\$ 72,890</b>	<b>\$ 74,094</b>	<b>\$ 75,325</b>	
96	<b>9184823 - Solid Waste Roll-off Service</b>						
97	51001 - Full Time	\$ 81,143	\$ 81,143	\$ 81,143	\$ 81,143	\$ 81,143	Salaries
98	51003 - Overtime	8,000	8,000	8,000	8,000	8,000	Salaries
99	51021 - Social Security	6,425	6,425	6,425	6,425	6,425	Salaries
100	51022 - Retirement	5,341	5,341	5,341	5,341	5,341	Salaries
101	51023 - Health Insurance	11,988	12,348	12,718	13,100	13,493	Benefits
102	51025 - Workers' Compensation	11,403	11,403	11,403	11,403	11,403	Salaries
103	52012 - Vehicle Repair Parts	15,000	15,450	15,914	16,391	16,883	Vehicle Maintenance
104	52041 - Clothing & Uniforms	700	716	733	749	767	General
105	52043 - Vehicle Fuel & Oil	15,000	15,450	15,914	16,391	16,883	Fuel
106	53073 - Landfill Services	72,000	73,656	75,350	77,083	78,856	General
107	55000 - Capital Lease Payments	114,069	106,102	108,299	112,706	117,112	None
108	<b>Subtotal Solid Waste Roll-off Service</b>	<b>\$ 341,069</b>	<b>\$ 336,034</b>	<b>\$ 341,239</b>	<b>\$ 348,732</b>	<b>\$ 356,305</b>	

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 2 - 5-Year Revenue Requirement

Line No.	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
<b>9184824 - Solid Waste Recycling</b>						
110 51001 - Full Time	\$ 122,062	\$ 122,062	\$ 122,062	\$ 122,062	\$ 122,062	Salaries
111 51003 - Overtime	4,000	4,000	4,000	4,000	4,000	Salaries
112 51021 - Social Security	9,476	9,476	9,476	9,476	9,476	Salaries
113 51022 - Retirement	7,564	7,564	7,564	7,564	7,564	Salaries
114 51023 - Health Insurance	11,988	12,348	12,718	13,100	13,493	Benefits
115 51025 - Workers' Compensation	473	473	473	473	473	Salaries
116 52012 - Vehicle Repair Parts	6,000	6,180	6,365	6,556	6,753	Vehicle Maintenance
117 52041 - Clothing & Uniforms	700	716	733	749	767	General
118 52043 - Vehicle Fuel & Oil	10,000	10,300	10,609	10,927	11,255	Fuel
119 53047 - Public Education	3,000	3,069	3,140	3,212	3,286	General
120 53073 - Landfill Services	180,000	184,140	188,375	192,708	197,140	General
121 55000 - Capital Lease Payments	-	-	-	-	-	None
122 Subtotal Solid Waste Recycling	\$ 355,263	\$ 360,328	\$ 365,515	\$ 370,827	\$ 376,268	
<b>9284818 - Utilities Waste Mgmt Admin - RESERVE FUND</b>						
124 53069 - Professional Services	\$ -	\$ -	\$ -	\$ -	\$ -	None
125 Expenditure Total:	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>9284821 - Util Waste Mgmt Street sweep - RESERVE FUND</b>						
127 54001 - Vehicles	\$ -	\$ -	\$ -	\$ -	\$ -	None
128 Expenditure Total:	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>9284823 - Waste Mgmt Roll-off Service - RESERVE FUND</b>						
130 54001 - Vehicles	\$ -	\$ -	\$ -	\$ -	\$ -	None
131 Expenditure Total:	\$ -	\$ -	\$ -	\$ -	\$ -	
<b>Capital Improvement Plan</b>						
133 Parking Lot Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	None
134 Street Sweeper (2025)	47,337	47,337	47,337	47,337	47,337	None
135 Street Sweeper (2027)	-	43,046	43,046	43,046	43,046	None
136 Pickup Trucks	-	-	27,318	28,138	28,982	None
137 Subtotal Capital Improvement Plan	\$ 47,337	\$ 90,383	\$ 117,701	\$ 118,520	\$ 119,364	
<b>Proposed Debt</b>						
139 Principal	\$ -	\$ -	\$ -	\$ -	\$ 113,202	None
140 Interest	-	-	-	-	70,002	None
141 Subtotal Proposed Debt	\$ -	\$ -	\$ -	\$ -	\$ 183,204	
142 TOTAL EXPENSES	\$ 6,679,682	\$ 5,783,523	\$ 6,014,286	\$ 6,113,031	\$ 6,396,659	
<b>REVENUES</b>						
144 44504 - Residential Refuse Sales	\$ 28,415	\$ 28,415	\$ 28,415	\$ 28,415	\$ 28,415	None
145 44505 - Commercial Refuse Sales	95,220	95,220	95,220	95,220	95,220	None
146 44506 - Residential Recycling	-	-	-	-	-	None
147 44507 - Commercial Recycling	-	-	-	-	-	None
148 44508 - Roll-Off Container	-	-	-	-	-	None
149 44509 - Street Sweeping	-	-	-	-	-	None
150 48006 - Blue Trash Bags	10,000	10,000	10,000	10,000	10,000	None
151 48213 - Collection Center-Recycling	12,000	12,000	12,000	12,000	12,000	None
152 48214 - Collection Center-Refuse	25,000	25,000	25,000	25,000	25,000	None
153 48700 - Miscellaneous Revenue	-	-	-	-	-	None
154 48721 - Gain on Sale of Assets	-	-	-	-	-	None

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 2 - 5-Year Revenue Requirement

Line No.	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
155 48903 - SUA Revenue Allocation	397,280	397,280	397,280	397,280	397,280	None
156 Subtotal Revenues	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	
157 61000 - Transfer In	\$ -	\$ -	\$ -	\$ -	\$ -	None
158 Revenue Total:	\$ -	\$ -	\$ -	\$ -	\$ -	
159 TOTAL REVENUES	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	
160 Net Revenue Requirement	\$ 6,111,767	\$ 5,215,608	\$ 5,446,371	\$ 5,545,116	\$ 5,828,743	

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 2 - Capital Improvement Plan

Line No.	Description	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024	Year 6 FY 2025	Year 7 FY 2026	Year 8 FY 2027	Year 9 FY 2028	Year 10 FY 2029	Total	Notes
1	<b>Facility Improvements</b>												
2	Parking Lot	\$ -	\$ -	\$ -	\$ -	\$ 1,400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,400,000	A
3	<b>Sum:</b>	\$ -	\$ -	\$ -	\$ -	\$ 1,400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,400,000	
4	<b>FY 2020 - FY 2024 Total:</b>	\$ 1,400,000											
5													
6	<b>Rolling Stock Purchases</b>												
7	Street Sweeper	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 284,022	\$ -	\$ -	\$ -	\$ -	\$ 284,022	B
8	Street Sweeper	-	-	-	-	-	-	-	301,319	-	-	\$ 301,319	C
9	Pickup Truck	-	-	27,318	28,138	28,982	29,851	30,747	31,669	-	-	\$ 176,705	D
10	<b>Sum:</b>	\$ -	\$ -	\$ 27,318	\$ 28,138	\$ 28,982	\$ 313,873	\$ 30,747	\$ 332,988	\$ -	\$ -	\$ 762,046	
11	<b>FY 2020 - FY 2024 Total:</b>	\$ 84,438											
12	<b>Funding Schedule</b>												
13	Street Sweeper	\$ 47,337	\$ 47,337	\$ 47,337	\$ 47,337	\$ 47,337	\$ 47,337	\$ 49,902	\$ 49,902	\$ 49,902	\$ 49,902	\$ 483,629	E
14	Street Sweeper	-	43,046	43,046	43,046	43,046	43,046	43,046	43,046	52,941	52,941	\$ 407,200	F
15	Pickup Truck	-	-	27,318	28,138	28,982	29,851	30,747	31,669	-	-	\$ 176,705	D
16	<b>Sum:</b>	\$ 47,337	\$ 90,383	\$ 117,701	\$ 118,520	\$ 119,364	\$ 120,234	\$ 123,694	\$ 124,616	\$ 102,842	\$ 102,842	\$ 1,067,534	
17	<b>FY 2020 - FY 2024 Total:</b>	\$ 493,305											
18	<b>Lease Obligations</b>												
19	Schedule #038 - Four Freightliner Trucks	\$ 80,632	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 80,632	H
20	Schedule #039 Two Mack Roll Off Trucks	37,145	-	-	-	-	-	-	-	-	-	\$ 37,145	I
21	Schedule #040 - Six trucks for Waste Management	369,031	369,031	-	-	-	-	-	-	-	-	\$ 738,062	J
22	Schedule #041 - Seven Freightliner Refuse Trucks	162,537	278,636	278,636	139,318	-	-	-	-	-	-	\$ 859,127	K
23	Schedule #041 - Two Roll off trucks	40,849	70,027	70,027	35,013	-	-	-	-	-	-	\$ 215,916	L
24	Schedule #042 - One Roll off truck	36,075	36,075	-	-	-	-	-	-	-	-	\$ 72,150	M
25	Schedule #043 - Six trucks for Waste Management	-	-	406,855	406,855	406,855	-	-	-	-	-	\$ 1,220,565	N
26	Schedule #044 - Seven Freightliner Refuse Trucks	-	-	-	167,802	335,604	335,604	167,802	-	-	-	\$ 1,006,811	O
27	Schedule #044 - Two Roll off trucks	-	-	-	39,420	78,840	78,840	39,420	-	-	-	\$ 236,521	P
28	Schedule #045 - One Roll off truck	-	-	38,272	38,272	38,272	-	-	-	-	-	\$ 114,816	Q
29	Schedule #046 - Six trucks for Waste Management	-	-	-	-	-	444,582	444,582	444,582	-	-	\$ 1,333,745	R
30	Schedule #047 - Seven Freightliner Refuse Trucks	-	-	-	-	-	-	183,362	366,723	366,723	183,362	\$ 1,100,170	S
31	Schedule #047 - Two Roll off trucks	-	-	-	-	-	-	43,075	86,151	86,151	43,075	\$ 258,453	T
32	Schedule #048 - One Roll off truck	-	-	-	-	-	41,821	41,821	41,821	-	-	\$ 125,462	U
33	Schedule #049 - Six trucks for Waste Management	-	-	-	-	-	-	-	-	485,806	485,806	\$ 971,613	V
34	Schedule #050 - Seven Freightliner Refuse Trucks	-	-	-	-	-	-	-	-	-	200,364	\$ 200,364	W
35	Schedule #050 - Two Roll off trucks	-	-	-	-	-	-	-	-	-	47,070	\$ 47,070	X
36	Schedule #051 - One Roll off truck	-	-	-	-	-	-	-	-	45,699	45,699	\$ 91,397	Y
37	<b>Sum:</b>	\$ 726,269	\$ 753,768	\$ 793,790	\$ 826,680	\$ 859,571	\$ 900,846	\$ 920,062	\$ 939,277	\$ 984,379	\$ 1,005,376	\$ 8,710,019	
38	<b>FY 2020 - FY 2024 Total:</b>	\$ 3,960,079											

**Notes:**

A. Per City staff, the City plans on repairing its parking lot in year 5.

B. Per City staff, a Street Sweeper costs \$245,000, NewGen has inflated this cost by 3% over 5 years (\$245,000 x (1.03^5)) = \$284,022.

C. Per City staff, a Street Sweeper costs \$245,000, NewGen has inflated this cost by 3% over 7 years (\$245,000 x (1.03^7)) = \$301,319.

D. Per City staff, the City plans on purchasing a pickup truck each year for 6 years starting in Year 3. NewGen has assumed 3% inflation on a \$25,000 pickup truck.

E. The City has 6 years to fund the purchase of the street sweeper in 2025, NewGen has planned on setting aside monies each year to fund the vehicle purchase in 2025 (\$284,022/6 = \$47,337). In year 7, NewGen has assumed the City would begin to fund the purchase of the next street sweeper using a seven-year life ((\$284,022 x 1.03^7)/7) = \$49,902.

F. The City has 7 years to fund the purchase of the street sweeper in 2027, NewGen has planned on setting aside monies each year to fund the vehicle purchase in 2027 (\$301,319/7 = \$43,046). In year 9, NewGen has assumed the City would begin to fund the purchase of the next street sweeper using a seven-year life ((\$301,319 x 1.03^7)/7) = \$52,941.

G. Beginning in Year 2, the City has 4 years to fund the parking lot improvements  $(\$1,400,000/4 = \$350,000)$ .

H. Per the buyback agreement, the City paid for 6 months of Schedule #038 in FY 2020.

I. Per the buyback agreement, the City paid for 6 months of Schedule #039 in FY 2020.

J. The City will stop paying lease payments for Schedule #40 in June of 2021.

K. The City will stop paying lease payments for the seven rear load trucks in Schedule #041 in December 2022.

L. The City will stop paying lease payments for the two Roll off trucks in Schedule #041 in Decembmer 2022.

M. The City will stop paying lease payments for the one Roll off truck in Schedule #042 in June 2021.

N. NewGen estimated future lease payments by multiplying the purchase price of six side load trucks by 3% over 2 years, and assumed the same lease schedule as schedule #040, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$295,000 \times 1.03^2) \times 6 \text{ trucks} \times 65\% / 3 \text{ years} = \$406,855$

O. NewGen estimated future lease payments by multiplying the purchase price of seven rear load trucks by 3% over 3 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$202,500 \times 1.03^3) \times 7 \text{ trucks} \times 65\% / 3 \text{ years} = \$335,604$ . The first and last years are split into 6 month payments to reflect schedule #041.

P. NewGen estimated future lease payments by multiplying the purchase price of two roll off trucks by 3% over 3 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^3) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$78,840$ . The first and last years are split into 6 month payments to reflect schedule #041.

Q. NewGen estimated future lease payments by multiplying the purchase price of one roll off truck by 3% over 5 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^5) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$38,272$ .

R. NewGen estimated future lease payments by multiplying the purchase price of six side load trucks by 3% over 5 years, and assumed the same lease schedule as schedule #040, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$295,000 \times 1.03^5) \times 6 \text{ trucks} \times 65\% / 3 \text{ years} = \$444,582$

S. NewGen estimated future lease payments by multiplying the purchase price of seven rear load trucks by 3% over 6 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$202,500 \times 1.03^6) \times 7 \text{ trucks} \times 65\% / 3 \text{ years} = \$366,723$ . The first and last years are split into 6 month payments to reflect schedule #041.

T. NewGen estimated future lease payments by multiplying the purchase price of two roll off trucks by 3% over 6 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^6) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$86,151$ . The first and last years are split into 6 month payments to reflect schedule #041.

U. NewGen estimated future lease payments by multiplying the purchase price of one roll off truck by 3% over 5 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^5) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$41,821$ .

V. NewGen estimated future lease payments by multiplying the purchase price of six side load trucks by 3% over 8 years, and assumed the same lease schedule as schedule #040, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$295,000 \times 1.03^8) \times 6 \text{ trucks} \times 65\% / 3 \text{ years} = \$485,806$

W. NewGen estimated future lease payments by multiplying the purchase price of seven rear load trucks by 3% over 9 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$202,500 \times 1.03^9) \times 7 \text{ trucks} \times 65\% / 3 \text{ years} = \$3400,728$ . The first and last years are split into 6 month payments to reflect schedule #041.

X. NewGen estimated future lease payments by multiplying the purchase price of two roll off trucks by 3% over 9 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^9) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$94,139$ . The first and last years are split into 6 month payments to reflect schedule #041.

Y. NewGen estimated future lease payments by multiplying the purchase price of one roll off truck by 3% over 8 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^8) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$45,699$ .

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 2 - 5-Year Summary**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Residential Collection</b>					
2	Refuse	\$ 759,387	\$ 769,017	\$ 801,737	\$ 811,794	\$ 822,118
3	Recycling	524,227	529,988	544,975	550,837	556,842
4	Yard Waste	235,899	238,622	245,528	248,398	251,344
5	Glass	6,964	7,039	7,574	7,653	7,736
6	Bulky Waste	459	4,009	4,096	4,258	4,420
7	Container Maintenance/Delivery	207,231	209,679	212,189	214,763	217,402
8	Subtotal Residential Collection	\$ 1,734,165	\$ 1,758,354	\$ 1,816,099	\$ 1,837,703	\$ 1,859,862
9	<b>Commercial Rear-Load</b>					
10	Refuse	\$ 735,256	\$ 777,103	\$ 785,481	\$ 821,148	\$ 857,051
11	Cardboard	54,096	54,838	55,145	55,816	56,496
12	Container Maintenance/Delivery	87,549	88,394	89,261	90,149	91,060
13	Subtotal Commercial Rear-Load	\$ 876,901	\$ 920,336	\$ 929,886	\$ 967,113	\$ 1,004,607
14	<b>Commercial Roll-off</b>					
15	Refuse/Recycling	\$ 192,429	\$ 193,908	\$ 196,318	\$ 200,194	\$ 204,099
16	Container Maintenance/Delivery	-	-	-	-	-
17	Subtotal Commercial Roll-off	\$ 192,429	\$ 193,908	\$ 196,318	\$ 200,194	\$ 204,099
18	Disposal	\$ 822,000	\$ 840,906	\$ 860,247	\$ 880,033	\$ 900,273
19	Convenience Collection Center	\$ 80,045	\$ 69,492	\$ 71,700	\$ 74,644	\$ 77,626
20	Street Sweeping	\$ 329,564	\$ 375,936	\$ 379,354	\$ 382,865	\$ 386,472
21	Administration	\$ 2,076,662	\$ 1,056,676	\$ 1,192,766	\$ 1,202,565	\$ 1,395,804
22	<b>Total</b>	<b>\$ 6,111,767</b>	<b>\$ 5,215,608</b>	<b>\$ 5,446,371</b>	<b>\$ 5,545,116</b>	<b>\$ 5,828,743</b>

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 2 - Residential Cost of Service**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Direct Costs</b>					
2	Residential Collection					
3	Refuse	\$ 759,387	\$ 769,017	\$ 801,737	\$ 811,794	\$ 822,118
4	Recycling	524,227	529,988	544,975	550,837	556,842
5	Yard Waste	235,899	238,622	245,528	248,398	251,344
6	Glass	6,964	7,039	7,574	7,653	7,736
7	Bulky Waste	459	4,009	4,096	4,258	4,420
8	Container Maintenance/Delivery	207,231	209,679	212,189	214,763	217,402
9	Subtotal Residential Collection	\$ 1,734,165	\$ 1,758,354	\$ 1,816,099	\$ 1,837,703	\$ 1,859,862
10	Convenience Collection Center	\$ 80,045	\$ 69,492	\$ 71,700	\$ 74,644	\$ 77,626
11	Portion of Roll-off	\$ 203,555	\$ 172,115	\$ 178,071	\$ 181,267	\$ 190,090
12	<b>Indirect Costs</b>					
13	Administration	\$ 1,172,543	\$ 582,105	\$ 663,562	\$ 664,176	\$ 765,527
14	<b>Disposal Cost</b>					
15	Residential Refuse	\$ 272,923	\$ 279,201	\$ 285,622	\$ 292,192	\$ 298,912
16	Recycling	113,292	115,898	118,563	121,290	124,079
17	Collection Center	46,588	47,660	48,756	49,877	51,025
18	Total Disposal	\$ 432,804	\$ 442,758	\$ 452,942	\$ 463,359	\$ 474,017
19	<b>Total Residential Cost of Service</b>	<b>\$ 3,623,112</b>	<b>\$ 3,024,825</b>	<b>\$ 3,182,373</b>	<b>\$ 3,221,148</b>	<b>\$ 3,367,122</b>
20	Billing Units (Customers by Cart Size)					
21	35	1,481	1,488	1,496	1,503	1,511
22	48	186	187	188	189	190
23	64	2,432	2,444	2,457	2,469	2,481
24	96	9,257	9,303	9,350	9,396	9,443
25	Customers with Extra					
26	128	26	26	27	27	27
27	192	424	426	428	431	433
28	Total Units	13,806	13,875	13,944	14,014	14,084
29	<b>Direct Costs</b>					
30	Residential Collection					
31	Refuse	\$ 4.58	\$ 4.62	\$ 4.79	\$ 4.83	\$ 4.86
32	Recycling	3.16	3.18	3.26	3.28	3.29
33	Yard Waste	1.42	1.43	1.47	1.48	1.49
34	Glass	0.04	0.04	0.05	0.05	0.05
35	Bulky Waste	0.00	0.02	0.02	0.03	0.03
36	Container Maintenance/Delivery	1.25	1.26	1.27	1.28	1.29
37	Subtotal Residential Collection	\$ 10.47	\$ 10.56	\$ 10.85	\$ 10.93	\$ 11.00
38	Portion of Roll-off	\$ 1.23	\$ 1.03	\$ 1.06	\$ 1.08	\$ 1.12
39	Convenience Collection Center	\$ 0.48	\$ 0.42	\$ 0.43	\$ 0.44	\$ 0.46
40	<b>Indirect Cost</b>					
41	Administration	\$ 7.08	\$ 3.50	\$ 3.97	\$ 3.95	\$ 4.53
		\$ 7.08	\$ 3.50	\$ 3.97	\$ 3.95	\$ 4.53
42	Budgeted Landfill Services	\$ 432,804	\$ 442,758	\$ 452,942	\$ 463,359	\$ 474,017
43	Monthly Capacity	5,156,112	5,181,893	5,207,802	5,233,841	5,260,011
44	\$/Gallon per month	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01
45	Monthly Disposal cost (by Container size)					
46	35	\$ 1.06	\$ 1.08	\$ 1.10	\$ 1.12	\$ 1.14
47	48	\$ 1.45	\$ 1.48	\$ 1.51	\$ 1.53	\$ 1.56
48	64	\$ 1.94	\$ 1.97	\$ 2.01	\$ 2.05	\$ 2.08



**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 2 - Residential Cost of Service**

			Year 1 2020		Year 2 2021		Year 3 2022		Year 4 2023		Year 5 2024
49	96	\$	2.91	\$	2.96	\$	3.02	\$	3.07	\$	3.12
50	128	\$	3.88	\$	3.95	\$	4.02	\$	4.09	\$	4.17
51	192	\$	5.82	\$	5.92	\$	6.03	\$	6.14	\$	6.25
52	<b>Monthly COS (Single Cart)</b>										
53	35	\$	20.32	\$	16.59	\$	17.41	\$	17.52	\$	18.26
54	48	\$	20.71	\$	16.99	\$	17.82	\$	17.93	\$	18.68
55	64	\$	21.20	\$	17.48	\$	18.32	\$	18.44	\$	19.20
56	96	\$	22.17	\$	18.47	\$	19.33	\$	19.47	\$	20.24
57	<b>Monthly COS (Multiple Carts)</b>										
58	64	\$	23.14	\$	19.46	\$	20.33	\$	20.49	\$	21.28
59	96	\$	25.08	\$	21.43	\$	22.34	\$	22.54	\$	23.37

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 2 - Current Revenue Reconciliation**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Residential</b>					
2	Net Revenue Requirement	\$ 3,623,112	\$ 3,024,825	\$ 3,182,373	\$ 3,221,148	\$ 3,367,122
3	Revenue	\$ 3,078,712	\$ 3,094,106	\$ 3,109,576	\$ 3,125,124	\$ 3,140,750
4	Over/(Under)	\$ (544,400)	\$ 69,281	\$ (72,797)	\$ (96,024)	\$ (226,372)
5	Cumulative Over/(Under)	\$ (544,400)	\$ (475,119)	\$ (547,916)	\$ (643,940)	\$ (870,312)
6	<b>Commercial Rear Load</b>					
7	Net Revenue Requirement	\$ 1,764,065	\$ 1,541,213	\$ 1,592,064	\$ 1,646,035	\$ 1,752,465
8	Revenue					
9	Commercial	\$ 943,834	\$ 948,553	\$ 953,296	\$ 958,063	\$ 962,853
10	Apartment Resident Paying with Dumpster	652,332	655,594	658,872	662,166	665,477
11	Shared Accounts	68,838	69,182	69,528	69,875	70,225
12	Total Revenue	\$ 1,665,004	\$ 1,673,329	\$ 1,681,696	\$ 1,690,104	\$ 1,698,555
13	Over/(Under)	\$ (99,061)	\$ 132,115	\$ 89,632	\$ 44,069	\$ (53,911)
14	Cumulative Over/(Under)	\$ (99,061)	\$ 33,054	\$ 122,686	\$ 166,755	\$ 112,844
15	<b>Roll-Off</b>					
16	Revenue Requirement	\$ 385,580	\$ 326,025	\$ 337,307	\$ 343,362	\$ 360,074
17	Less Costs allocated to Residential	\$ (203,555)	\$ (172,115)	\$ (178,071)	\$ (181,267)	\$ (190,090)
18	Net Revenue Requirement	\$ 182,025	\$ 153,910	\$ 159,236	\$ 162,095	\$ 169,984
19	Revenue	\$ 141,606	\$ 142,314	\$ 143,026	\$ 143,741	\$ 144,460
20	Over/(Under)	\$ (40,419)	\$ (11,596)	\$ (16,211)	\$ (18,354)	\$ (25,525)
21	Cumulative Over/(Under)	\$ (40,419)	\$ (52,015)	\$ (68,226)	\$ (86,579)	\$ (112,104)
22	<b>Street Sweeping</b>					
23	Net Revenue Requirement	\$ 542,564	\$ 495,659	\$ 512,697	\$ 515,838	\$ 539,172
24	Revenue	\$ 391,200	\$ 393,156	\$ 395,122	\$ 397,097	\$ 399,083
25	Over/(Under)	\$ (151,364)	\$ (102,503)	\$ (117,576)	\$ (118,741)	\$ (140,089)
26	Cumulative Over/(Under)	\$ (151,364)	\$ (253,867)	\$ (371,443)	\$ (490,183)	\$ (630,273)
27	<b>Total Revenue Requirement</b>	\$ 6,111,767	\$ 5,215,608	\$ 5,446,371	\$ 5,545,116	\$ 5,828,743
28	<b>Total Revenues</b>	\$ 5,276,522	\$ 5,302,905	\$ 5,329,419	\$ 5,356,067	\$ 5,382,847
29	<b>Total Over/(Under)</b>	\$ (835,244)	\$ 87,297	\$ (116,951)	\$ (189,050)	\$ (445,897)
30	<b>Cumulative Over/(Under)</b>	\$ (835,244)	\$ (747,947)	\$ (864,898)	\$ (1,053,948)	\$ (1,499,845)

**City of Stillwater, Oklahoma**  
**Cost of Service and Rate Design Study**  
**Scenario 2 - Proposed Rates**

	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
<b>Residential Rates</b>					
<b><u>Inside City Limits</u></b>					
35-gallon cart	\$ 13.74	\$ 13.74	\$ 14.29	\$ 14.29	\$ 14.86
64-gallon cart	\$ 16.01	\$ 16.01	\$ 16.65	\$ 16.65	\$ 17.32
(2) 64-gallon carts	\$ 26.74	\$ 26.74	\$ 27.81	\$ 27.81	\$ 28.92
96-gallon cart	\$ 18.28	\$ 18.28	\$ 19.01	\$ 19.01	\$ 19.77
(2) 96-gallon carts	\$ 29.93	\$ 29.93	\$ 31.13	\$ 31.13	\$ 32.37
House-side 96-gallon cart	\$ 27.83	\$ 27.83	\$ 28.94	\$ 28.94	\$ 30.10
Opt-Out Rate	\$ 15.36	\$ 15.36	\$ 15.97	\$ 15.97	\$ 16.61
48-gallon cart	\$ 14.87	\$ 14.87	\$ 15.46	\$ 15.46	\$ 16.08
Non Subscriber - Residential	\$ 2.46	\$ 2.46	\$ 2.56	\$ 2.56	\$ 2.66
Non Subscriber - Commercial	\$ 25.02	\$ 25.02	\$ 26.02	\$ 26.02	\$ 27.06
<b><u>Outside City Limits</u></b>					
35-gallon cart	\$ 29.52	\$ 29.52	\$ 30.70	\$ 30.70	\$ 31.93
64-gallon cart	\$ 30.65	\$ 30.65	\$ 31.88	\$ 31.88	\$ 33.15
(2) 64-gallon carts	N/A	N/A	N/A	N/A	N/A
96-gallon cart	\$ 32.93	\$ 32.93	\$ 34.25	\$ 34.25	\$ 35.62
(2) 96-gallon carts	\$ 44.57	\$ 44.57	\$ 46.35	\$ 46.35	\$ 48.21
House-side 96-gallon cart	N/A	N/A	N/A	N/A	N/A
Residential Rate Increase %		0%	4%	0%	4%
<b>Street Sweeping Rates</b>					
Street Sweeping Rate	\$ 1.63	\$ 1.63	\$ 2.23	\$ 2.23	\$ 2.23
<b>Roll-Off Rates</b>					
<b>10 Cubic Yard</b>					
Delivery Fee	\$ 126.20				
Daily rental					
Inside City Limits	\$ 10.52				
Outside City Limits	\$ 11.57				
<b>20 Cubic Yard</b>					
Delivery Fee	\$ 131.45				
Daily rental					
Inside City Limits	\$ 12.62				
Outside City Limits	\$ 13.88				
<b>30 Cubic Yard</b>					
Delivery Fee	\$ 136.71				
Daily rental					
Inside City Limits	\$ 14.72				
Outside City Limits	\$ 16.19				
<b>40 Cubic Yard</b>					
Delivery Fee	\$ 141.97				
Daily rental					
Inside City Limits	\$ 16.83				
Outside City Limits	\$ 18.51				
<b>Disposal per ton</b>					
Inside City Limits	\$ 42.07				
Outside City Limits	\$ 46.28				
Delivery Fee	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00
Per Pull Fee	\$ 300.00	\$ 310.00	\$ 320.00	\$ 320.00	\$ 330.00
<b>Commercial Shared Rates</b>					
Shared Accounts	\$ 25.02	\$ 25.02	\$ 26.27	\$ 27.58	\$ 27.58

## Commercial Rate Matrix

FY 2020						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 37.06	\$ 74.11	\$ 111.23	\$ 148.24	\$ 185.30	\$ 222.47
3	\$ 55.61	\$ 111.23	\$ 166.84	\$ 222.47	\$ 278.07	\$ 333.68
4	\$ 74.11	\$ 148.24	\$ 222.47	\$ 296.47	\$ 370.58	\$ 444.91
Proposed Rate Increase	0%					

FY 2021						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 37.06	\$ 74.11	\$ 111.23	\$ 148.24	\$ 185.30	\$ 222.47
3	\$ 55.61	\$ 111.23	\$ 166.84	\$ 222.47	\$ 278.07	\$ 333.68
4	\$ 74.11	\$ 148.24	\$ 222.47	\$ 296.47	\$ 370.58	\$ 444.91
Proposed Rate Increase	0%					

FY 2022						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 38.91	\$ 77.82	\$ 116.79	\$ 155.65	\$ 194.57	\$ 233.59
3	\$ 58.39	\$ 116.79	\$ 175.18	\$ 233.59	\$ 291.97	\$ 350.36
4	\$ 77.82	\$ 155.65	\$ 233.59	\$ 311.29	\$ 389.11	\$ 467.16
Proposed Rate Increase	5.0%					

FY 2023						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 40.86	\$ 81.71	\$ 122.63	\$ 163.43	\$ 204.30	\$ 245.27
3	\$ 61.31	\$ 122.63	\$ 183.94	\$ 245.27	\$ 306.57	\$ 367.88
4	\$ 81.71	\$ 163.43	\$ 245.27	\$ 326.85	\$ 408.57	\$ 490.52
Proposed Rate Increase	5.0%					

FY 2024						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 40.86	\$ 81.71	\$ 122.63	\$ 163.43	\$ 204.30	\$ 245.27
3	\$ 61.31	\$ 122.63	\$ 183.94	\$ 245.27	\$ 306.57	\$ 367.88
4	\$ 81.71	\$ 163.43	\$ 245.27	\$ 326.85	\$ 408.57	\$ 490.52
Proposed Rate Increase	0%					

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 2 - Proposed Revenue Reconciliation**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Residential</b>					
2	Net Revenue Requirement	\$ 3,623,112	\$ 3,024,825	\$ 3,182,373	\$ 3,221,148	\$ 3,367,122
3	Revenue	\$ 3,078,712	\$ 3,094,106	\$ 3,233,959	\$ 3,250,129	\$ 3,397,035
4	Over/(Under)	\$ (544,400)	\$ 69,281	\$ 51,586	\$ 28,981	\$ 29,913
5	Cumulative Over/(Under)	\$ (544,400)	\$ (475,119)	\$ (423,533)	\$ (394,552)	\$ (364,639)
6	<b>Commercial Rear Load</b>					
7	Net Revenue Requirement	\$ 1,764,065	\$ 1,541,213	\$ 1,592,064	\$ 1,646,035	\$ 1,752,465
8	Revenue					
9	Commercial	\$ 943,834	\$ 948,553	\$ 1,000,960	\$ 1,056,275	\$ 1,061,556
10	Apartment Resident Paying with Dumpster	652,332	655,594	685,226	688,653	719,780
11	Shared Accounts	68,838	69,182	73,004	77,038	77,423
12	Total Revenue	\$ 1,665,004	\$ 1,673,329	\$ 1,759,190	\$ 1,821,965	\$ 1,858,759
13	Over/(Under)	\$ (99,061)	\$ 132,115	\$ 167,126	\$ 175,930	\$ 106,294
14	Cumulative Over/(Under)	\$ (99,061)	\$ 33,054	\$ 200,181	\$ 376,111	\$ 482,404
15	<b>Roll-Off</b>					
16	Revenue Requirement	\$ 385,580	\$ 326,025	\$ 337,307	\$ 343,362	\$ 360,074
17	Less Costs allocated to Residential	\$ (203,555)	\$ (172,115)	\$ (178,071)	\$ (181,267)	\$ (190,090)
18	Net Revenue Requirement	\$ 182,025	\$ 153,910	\$ 159,236	\$ 162,095	\$ 169,984
19	Revenue	\$ 141,606	\$ 152,358	\$ 157,372	\$ 162,432	\$ 167,539
20	Over/(Under)	\$ (40,419)	\$ (1,552)	\$ (1,864)	\$ 338	\$ (2,445)
21	Cumulative Over/(Under)	\$ (40,419)	\$ (41,971)	\$ (43,836)	\$ (43,498)	\$ (45,943)
22	<b>Street Sweeping</b>					
23	Net Revenue Requirement	\$ 542,564	\$ 495,659	\$ 512,697	\$ 515,838	\$ 539,172
24	Revenue	\$ 391,200	\$ 393,156	\$ 540,565	\$ 543,268	\$ 545,985
25	Over/(Under)	\$ (151,364)	\$ (102,503)	\$ 27,868	\$ 27,430	\$ 6,812
26	Cumulative Over/(Under)	\$ (151,364)	\$ (253,867)	\$ (225,999)	\$ (198,569)	\$ (191,757)
27	<b>Total Revenue Requirement</b>	\$ 6,111,767	\$ 5,215,608	\$ 5,446,371	\$ 5,545,116	\$ 5,828,743
28	<b>Total Revenues</b>	\$ 5,276,522	\$ 5,312,949	\$ 5,691,087	\$ 5,777,795	\$ 5,969,318
29	<b>Total Over/(Under)</b>	\$ (835,244)	\$ 97,341	\$ 244,716	\$ 232,679	\$ 140,574
30	<b>Cumulative Over/(Under)</b>	\$ (835,244)	\$ (737,903)	\$ (493,187)	\$ (260,508)	\$ (119,934)

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 2 - Proposed Reserves

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Working Capital Reserve</b>					
2	Beginning Balance	\$ 1,000,000	\$ 222,093	\$ 412,037	\$ 751,257	\$ 1,081,831
3	Additions:					
4	Capital Contributions	\$ -	\$ -	\$ -	\$ -	\$ -
5	Rolling Stock Funding	47,337	90,383	117,701	118,520	119,364
6	Interest	10,000	2,221	4,120	7,513	10,818
7	Over-Recovery of Rates	-	97,341	244,716	232,679	140,574
8	Reductions:					
9	Capital Projects	\$ -	\$ -	\$ -	\$ -	\$ -
10	Rolling Stock Purchases	-	-	(27,318)	(28,138)	(28,982)
11	Under-Recovery of Rates	(835,244)	-	-	-	-
12	Ending Balance	\$ 222,093	\$ 412,037	\$ 751,257	\$ 1,081,831	\$ 1,323,606

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 3 - 5-Year Revenue Requirement

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Notes:	Inflation Factor
1	<b>9180000 - SUA-Waste Mgmt Fund</b>							
2	71000 - Transfer Out	\$ 1,928,556	\$ 900,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	None	
3	Expenditure Total:	\$ 1,928,556	\$ 900,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000		
4	<b>9184818 - Solid Waste Administration</b>							
5	51001 - Full Time	\$ 165,198	\$ 165,198	\$ 165,198	\$ 165,198	\$ 165,198	Salaries	
6	51021 - Social Security	8,177	8,177	8,177	8,177	8,177	Salaries	
7	51022 - Retirement	6,612	6,612	6,612	6,612	6,612	Salaries	
8	51023 - Health Insurance	11,987	12,347	12,717	13,099	13,491	Benefits	
9	52012 - Vehicle Repair Parts	700	721	743	765	788	Vehicle Maintenance	
10	52031 - Office Supplies	100	102	105	107	110	General	
11	52036 - Janitorial Supplies	1,500	1,535	1,570	1,606	1,643	General	
12	52042 - Food	700	716	733	749	767	General	
13	52043 - Vehicle Fuel & Oil	1,000	1,030	1,061	1,093	1,126	Fuel	
14	52900 - Clearing-Materials & Supplies	-	-	-	-	-	General	
15	53001 - Natural Gas	3,000	3,069	3,140	3,212	3,286	General	
16	53004 - Telecommunications	4,700	4,808	4,919	5,032	5,148	General	
17	53013 - Land Rental	11,689	11,958	12,233	12,514	12,802	General	
18	53020 - Repair-Structures	10,000	10,300	10,609	10,927	11,255	General Maintenance	
19	53022 - Repair-Office Equipment	-	-	-	-	-	General Maintenance	
20	53047 - Public Education	2,500	2,558	2,616	2,676	2,738	General	
21	53049 - Cash Short	-	-	-	-	-	General	
22	53055 - In-Service Training	5,000	5,115	5,233	5,353	5,476	General	
23	53068 - Travel Expense	5,000	5,115	5,233	5,353	5,476	General	
24	53069 - Professional Services	11,000	11,253	11,512	11,777	12,047	General	
25	53076 - Bad Debt Expense	40,000	40,920	41,861	42,824	43,809	General	
26	53124 - Tort Claim	-	-	-	-	-	General	
27	53900 - Clearing-Other Services & Fees	-	-	-	-	-	General	
28	54999 - Transfer to Assets-Capital	-	-	-	-	-	General	
29	55500 - Interest Exp-Capital Lease	-	-	-	-	-	General	
30	56001 - Indirect Costs	230,523	235,825	241,249	246,798	252,474	General	
31	56002 - SUA Overhead Allocation	26,000	26,598	27,210	27,836	28,476	General	
32	57000 - Depreciation Expense	-	-	-	-	-	General	
33	<b>Utilities Waste Management Administration</b>	<b>\$ 545,386</b>	<b>\$ 553,956</b>	<b>\$ 562,728</b>	<b>\$ 571,707</b>	<b>\$ 580,898</b>		
34	<b>9184819 - Solid Waste Residential</b>							
35	51001 - Full Time	\$ 405,747	\$ 405,747	\$ 405,747	\$ 405,747	\$ 405,747	Salaries	
36	51002 - Part Time	-	-	-	-	-	Salaries	
37	51003 - Overtime	25,000	25,000	25,000	25,000	25,000	Salaries	
38	51021 - Social Security	31,212	31,212	31,212	31,212	31,212	Salaries	
39	51022 - Retirement	25,845	25,845	25,845	25,845	25,845	Salaries	
40	51023 - Health Insurance	131,865	135,821	139,896	144,092	148,415	Benefits	
41	51025 - Workers' Compensation	27,817	27,817	27,817	27,817	27,817	Salaries	
42	51045 - Temporary Labor Services	-	-	-	-	-	General	
43	52012 - Vehicle Repair Parts	75,000	77,250	79,568	81,955	84,413	Vehicle Maintenance	
44	52024 - Other Equipment Parts	60,000	61,800	63,654	65,564	67,531	General Maintenance	
45	52041 - Clothing & Uniforms	7,100	7,263	7,430	7,601	7,776	General	
46	52043 - Vehicle Fuel & Oil	90,000	92,700	95,481	98,345	101,296	Fuel	
47	52045 - Tools	900	921	942	964	986	General	
48	52046 - Minor Supplies	3,000	3,069	3,140	3,212	3,286	General	
49	52048 - Safety Equipment	1,200	1,228	1,256	1,285	1,314	General	
50	53047 - Public Education	4,500	4,604	4,709	4,818	4,929	General	
51	53073 - Landfill Services	270,000	276,210	282,563	289,062	295,710	General	
52	55000 - Capital Lease Payments	369,031	369,031	406,855	406,855	406,855	None	
53	56002 - SUA Overhead Allocation	313,359	320,566	327,939	335,482	343,198	General	
54	<b>Subtotal Solid Waste Residential</b>	<b>\$ 1,841,576</b>	<b>\$ 1,866,083</b>	<b>\$ 1,929,053</b>	<b>\$ 1,954,855</b>	<b>\$ 1,981,329</b>		

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 3 - 5-Year Revenue Requirement

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Notes:	Inflation Factor
55	<b>9184820 - Solid Waste Commercial</b>							
56	51001 - Full Time	\$ 321,548	\$ 321,548	\$ 321,548	\$ 321,548	\$ 321,548	Salaries	
57	51003 - Overtime	20,000	20,000	20,000	20,000	20,000	Salaries	
58	51021 - Social Security	24,450	24,450	24,450	24,450	24,450	Salaries	
59	51022 - Retirement	20,493	20,493	20,493	20,493	20,493	Salaries	
60	51023 - Health Insurance	59,939	61,737	63,589	65,497	67,462	Benefits	
61	51025 - Workers' Compensation	-	-	-	-	-	Salaries	
62	52012 - Vehicle Repair Parts	75,000	77,250	79,568	81,955	84,413	Vehicle Maintenance	
63	52024 - Other Equipment Parts	5,000	5,150	5,305	5,464	5,628	General Maintenance	
64	52041 - Clothing & Uniforms	7,000	7,161	7,326	7,494	7,667	General	
65	52043 - Vehicle Fuel & Oil	50,000	51,500	53,045	54,636	56,275	Fuel	
66	52048 - Safety Equipment	1,000	1,023	1,047	1,071	1,095	General	
67	52050 - Welding Supplies	10,000	10,230	10,465	10,706	10,952	General	
68	53066 - Miscellaneous Services	4,500	4,604	4,709	4,818	4,929	General	
69	53073 - Landfill Services	300,000	306,900	313,959	321,180	328,567	General	
70	55000 - Capital Lease Payments	243,169	278,636	278,636	307,120	335,604	None	
71	56002 - SUA Overhead Allocation	146,844	150,221	153,677	157,211	160,827	General	
72	<b>Subtotal Solid Waste Commercial</b>	<b>\$ 1,288,943</b>	<b>\$ 1,340,903</b>	<b>\$ 1,357,815</b>	<b>\$ 1,403,642</b>	<b>\$ 1,449,909</b>		
73	<b>9184821 - Solid Waste Street Sweeping</b>							
74	51001 - Full Time	\$ 94,912	\$ 94,912	\$ 94,912	\$ 94,912	\$ 94,912	Salaries	
75	51003 - Overtime	1,000	1,000	1,000	1,000	1,000	Salaries	
76	51021 - Social Security	7,031	7,031	7,031	7,031	7,031	Salaries	
77	51022 - Retirement	5,759	5,759	5,759	5,759	5,759	Salaries	
78	51023 - Health Insurance	35,963	37,042	38,153	39,298	40,477	Benefits	
79	51025 - Workers' Compensation	36,022	36,022	36,022	36,022	36,022	Salaries	
80	52012 - Vehicle Repair Parts	20,000	20,600	21,218	21,855	22,510	Vehicle Maintenance	
81	52041 - Clothing & Uniforms	700	716	733	749	767	General	
82	52043 - Vehicle Fuel & Oil	10,000	10,300	10,609	10,927	11,255	Fuel	
83	53069 - Professional Services	-	-	-	-	-	General	
84	55000 - Capital Lease Payments	-	-	-	-	-	None	
85	56002 - SUA Overhead Allocation	49,600	50,741	51,908	53,102	54,323	General	
86	<b>Subtotal Solid Waste Street Sweeping</b>	<b>\$ 260,987</b>	<b>\$ 264,123</b>	<b>\$ 267,345</b>	<b>\$ 270,655</b>	<b>\$ 274,056</b>		
87	<b>9184822 - Solid Waste Convenience Collection Center</b>							
88	51001 - Full Time	\$ 18,144	\$ 18,144	\$ 18,144	\$ 18,144	\$ 18,144	Salaries	
89	51003 - Overtime	-	-	-	-	-	Salaries	
90	51021 - Social Security	1,327	1,327	1,327	1,327	1,327	Salaries	
91	51022 - Retirement	1,093	1,093	1,093	1,093	1,093	Salaries	
92	51023 - Health Insurance	-	-	-	-	-	Benefits	
93	52041 - Clothing & Uniforms	-	-	-	-	-	General	
94	53066 - Miscellaneous Services	50,000	51,150	52,326	53,530	54,761	General	
95	<b>Subtotal Solid Waste Convenience Collection Center</b>	<b>\$ 70,564</b>	<b>\$ 71,714</b>	<b>\$ 72,890</b>	<b>\$ 74,094</b>	<b>\$ 75,325</b>		
96	<b>9184823 - Solid Waste Roll-off Service</b>							
97	51001 - Full Time	\$ 81,143	\$ 81,143	\$ 81,143	\$ 81,143	\$ 81,143	Salaries	
98	51003 - Overtime	8,000	8,000	8,000	8,000	8,000	Salaries	
99	51021 - Social Security	6,425	6,425	6,425	6,425	6,425	Salaries	
100	51022 - Retirement	5,341	5,341	5,341	5,341	5,341	Salaries	
101	51023 - Health Insurance	11,988	12,348	12,718	13,100	13,493	Benefits	
102	51025 - Workers' Compensation	11,403	11,403	11,403	11,403	11,403	Salaries	
103	52012 - Vehicle Repair Parts	15,000	15,450	15,914	16,391	16,883	Vehicle Maintenance	
104	52041 - Clothing & Uniforms	700	716	733	749	767	General	
105	52043 - Vehicle Fuel & Oil	15,000	15,450	15,914	16,391	16,883	Fuel	
106	53073 - Landfill Services	72,000	73,656	75,350	77,083	78,856	General	
107	55000 - Capital Lease Payments	114,069	106,102	108,299	112,706	117,112	None	
108	<b>Subtotal Solid Waste Roll-off Service</b>	<b>\$ 341,069</b>	<b>\$ 336,034</b>	<b>\$ 341,239</b>	<b>\$ 348,732</b>	<b>\$ 356,305</b>		



City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 3 - 5-Year Revenue Requirement

Line No.	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Notes:	Inflation Factor
<b>9184824 - Solid Waste Recycling</b>							
110 51001 - Full Time	\$ 122,062	\$ 122,062	\$ 122,062	\$ 122,062	\$ 122,062	Salaries	
111 51003 - Overtime	4,000	4,000	4,000	4,000	4,000	Salaries	
112 51021 - Social Security	9,476	9,476	9,476	9,476	9,476	Salaries	
113 51022 - Retirement	7,564	7,564	7,564	7,564	7,564	Salaries	
114 51023 - Health Insurance	11,988	12,348	12,718	13,100	13,493	Benefits	
115 51025 - Workers' Compensation	473	473	473	473	473	Salaries	
116 52012 - Vehicle Repair Parts	6,000	6,180	6,365	6,556	6,753	Vehicle Maintenance	
117 52041 - Clothing & Uniforms	700	716	733	749	767	General	
118 52043 - Vehicle Fuel & Oil	10,000	10,300	10,609	10,927	11,255	Fuel	
119 53047 - Public Education	3,000	3,069	3,140	3,212	3,286	General	
120 53073 - Landfill Services	180,000	184,140	188,375	192,708	197,140	General	
121 55000 - Capital Lease Payments	-	-	-	-	-	None	
122 Subtotal Solid Waste Recycling	\$ 355,263	\$ 360,328	\$ 365,515	\$ 370,827	\$ 376,268		
<b>9284818 - Utilities Waste Mgmt Admin - RESERVE FUND</b>							
124 53069 - Professional Services	\$ -	\$ -	\$ -	\$ -	\$ -	None	
125 Expenditure Total:	\$ -	\$ -	\$ -	\$ -	\$ -		
<b>9284821 - Util Waste Mgmt Street sweep - RESERVE FUND</b>							
127 54001 - Vehicles	\$ -	\$ -	\$ -	\$ -	\$ -	None	
128 Expenditure Total:	\$ -	\$ -	\$ -	\$ -	\$ -		
<b>9284823 - Waste Mgmt Roll-off Service - RESERVE FUND</b>							
130 54001 - Vehicles	\$ -	\$ -	\$ -	\$ -	\$ -	None	
131 Expenditure Total:	\$ -	\$ -	\$ -	\$ -	\$ -		
<b>Capital Improvement Plan</b>							
133 Recycling Staging Facility Operating Costs	\$ -	\$ -	\$ -	\$ 258,194	\$ 264,132	A General	
134 Street Sweeper (2025)	47,337	47,337	47,337	47,337	47,337	None	
135 Street Sweeper (2027)	-	43,046	43,046	43,046	43,046	None	
136 Pickup Trucks	-	-	27,318	28,138	28,982	None	
137 Subtotal Capital Improvement Plan	\$ 47,337	\$ 90,383	\$ 117,701	\$ 376,714	\$ 383,497		
<b>Proposed Debt</b>							
139 Principal Issuance 1	\$ -	\$ 49,031	\$ 51,513	\$ 54,121	\$ 56,861	None	
140 Interest Issuance 1	-	80,995	78,512	75,905	73,165	None	
141 Principal Issuance 2	-	-	-	-	113,202	None	
142 Interest Issuance 2	-	-	-	-	70,002	None	
143 Subtotal Proposed Debt	\$ -	\$ 130,025	\$ 130,025	\$ 130,025	\$ 313,230		
144 TOTAL EXPENSES	\$ 6,679,682	\$ 5,913,548	\$ 6,144,311	\$ 6,501,251	\$ 6,790,816		
<b>REVENUES</b>							
146 44504 - Residential Refuse Sales	\$ 28,415	\$ 28,415	\$ 28,415	\$ 28,415	\$ 28,415	None	
147 44505 - Commercial Refuse Sales	95,220	95,220	95,220	95,220	95,220	None	
148 44506 - Residential Recycling	-	-	-	-	-	None	
149 44507 - Commercial Recycling	-	-	-	-	-	None	
150 44508 - Roll-Off Container	-	-	-	-	-	None	
151 44509 - Street Sweeping	-	-	-	-	-	None	
152 48006 - Blue Trash Bags	10,000	10,000	10,000	10,000	10,000	None	
153 48213 - Collection Center-Recycling	12,000	12,000	12,000	12,000	12,000	None	
154 48214 - Collection Center-Refuse	25,000	25,000	25,000	25,000	25,000	None	
155 48700 - Miscellaneous Revenue	-	-	-	-	-	None	
156 48721 - Gain on Sale of Assets	-	-	-	-	-	None	

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 3 - 5-Year Revenue Requirement

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Notes:	Inflation Factor
157	48903 - SUA Revenue Allocation	397,280	397,280	397,280	397,280	397,280		None
158	<b>Subtotal Revenues</b>	<b>\$ 567,915</b>	<b>\$ 567,915</b>	<b>\$ 567,915</b>	<b>\$ 567,915</b>	<b>\$ 567,915</b>		
159	61000 - Transfer In	\$ -	\$ -	\$ -	\$ -	\$ -		None
160	Revenue Total:	\$ -	\$ -	\$ -	\$ -	\$ -		
161	<b>TOTAL REVENUES</b>	<b>\$ 567,915</b>	<b>\$ 567,915</b>	<b>\$ 567,915</b>	<b>\$ 567,915</b>	<b>\$ 567,915</b>		
162	<b>Net Revenue Requirement</b>	<b>\$ 6,111,767</b>	<b>\$ 5,345,633</b>	<b>\$ 5,576,396</b>	<b>\$ 5,933,336</b>	<b>\$ 6,222,901</b>		

**Notes:**

A. From NewGen's recycling analysis, Scenario 3, Alternative 2. The sum of amortized equipment costs, labor costs, operation & maintenance costs, and fuel costs, less current collection center costs (\$93,750 + \$170,830 + \$24,500 + \$43,114 - \$74,000 = \$258,194).

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 3 - Capital Improvement Plan

Line No.	Description	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024	Year 6 FY 2025	Year 7 FY 2026	Year 8 FY 2027	Year 9 FY 2028	Year 10 FY 2029	Total	Notes
1	<b>Facility Improvements</b>												
2	Parking Lot	\$ -	\$ -	\$ -	\$ -	\$ 1,400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,400,000	A
3	<b>Sum:</b>	\$ -	\$ -	\$ -	\$ -	\$ 1,400,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,400,000	
4	<b>FY 2020 - FY 2024 Total:</b>	\$ 1,400,000											
5													
6	<b>Rolling Stock Purchases</b>												
7	Street Sweeper	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 284,022	\$ -	\$ -	\$ -	\$ -	\$ 284,022	B
8	Street Sweeper	-	-	-	-	-	-	-	301,319	-	-	301,319	C
9	Pickup Truck	-	-	27,318	28,138	28,982	29,851	30,747	31,669	-	-	176,705	D
10	<b>Sum:</b>	\$ -	\$ -	\$ 27,318	\$ 28,138	\$ 28,982	\$ 313,873	\$ 30,747	\$ 332,988	\$ -	\$ -	\$ 762,046	
11	<b>FY 2020 - FY 2024 Total:</b>	\$ 84,438											
12	<b>Funding Schedule</b>												
13	Street Sweeper	\$ 47,337	\$ 47,337	\$ 47,337	\$ 47,337	\$ 47,337	\$ 47,337	\$ 49,902	\$ 49,902	\$ 49,902	\$ 49,902	\$ 483,629	E
14	Street Sweeper	-	43,046	43,046	43,046	43,046	43,046	43,046	43,046	52,941	52,941	407,200	F
15	Pickup Truck	-	-	27,318	28,138	28,982	29,851	30,747	31,669	-	-	176,705	D
16	<b>Sum:</b>	\$ 47,337	\$ 90,383	\$ 117,701	\$ 118,520	\$ 119,364	\$ 120,234	\$ 123,694	\$ 124,616	\$ 102,842	\$ 102,842	\$ 1,067,534	
17	<b>FY 2020 - FY 2024 Total:</b>	\$ 493,305											
18	<b>Lease Obligations</b>												
19	Schedule #038 - Four Freightliner Trucks	\$ 80,632	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	80,632	H
20	Schedule #039 Two Mack Roll Off Trucks	37,145	-	-	-	-	-	-	-	-	-	37,145	I
21	Schedule #040 - Six trucks for Waste Management	369,031	369,031	-	-	-	-	-	-	-	-	738,062	J
22	Schedule #041 - Seven Freightliner Refuse Trucks	162,537	278,636	278,636	139,318	-	-	-	-	-	-	859,127	K
23	Schedule #041 - Two Roll off trucks	40,849	70,027	70,027	35,013	-	-	-	-	-	-	215,916	L
24	Schedule #042 - One Roll off truck	36,075	36,075	-	-	-	-	-	-	-	-	72,150	M
25	Schedule #043 - Six trucks for Waste Management	-	-	406,855	406,855	406,855	-	-	-	-	-	1,220,565	N
26	Schedule #044 - Seven Freightliner Refuse Trucks	-	-	-	167,802	335,604	335,604	167,802	-	-	-	1,006,811	O
27	Schedule #044 - Two Roll off trucks	-	-	-	39,420	78,840	78,840	39,420	-	-	-	236,521	P
28	Schedule #045 - One Roll off truck	-	-	38,272	38,272	38,272	-	-	-	-	-	114,816	Q
29	Schedule #046 - Six trucks for Waste Management	-	-	-	-	-	444,582	444,582	444,582	-	-	1,333,745	R
30	Schedule #047 - Seven Freightliner Refuse Trucks	-	-	-	-	-	-	183,362	366,723	366,723	183,362	1,100,170	S
31	Schedule #047 - Two Roll off trucks	-	-	-	-	-	-	43,075	86,151	86,151	43,075	258,453	T
32	Schedule #048 - One Roll off truck	-	-	-	-	-	41,821	41,821	41,821	-	-	125,462	U
33	Schedule #049 - Six trucks for Waste Management	-	-	-	-	-	-	-	-	485,806	485,806	971,613	V
34	Schedule #050 - Seven Freightliner Refuse Trucks	-	-	-	-	-	-	-	-	-	200,364	200,364	W
35	Schedule #050 - Two Roll off trucks	-	-	-	-	-	-	-	-	-	47,070	47,070	X
36	Schedule #051 - One Roll off truck	-	-	-	-	-	-	-	-	45,699	45,699	91,397	Y
37	<b>Sum:</b>	\$ 726,269	\$ 753,768	\$ 793,790	\$ 826,680	\$ 859,571	\$ 900,846	\$ 920,062	\$ 939,277	\$ 984,379	\$ 1,005,376	\$ 8,710,019	
38	<b>FY 2020 - FY 2024 Total:</b>	\$ 3,960,079											

**Notes:**

A. Per City staff, the City plans on repairing its parking lot in year 5.

B. Per City staff, a Street Sweeper costs \$245,000, NewGen has inflated this cost by 3% over 5 years (\$245,000 x (1.03^5)) = \$284,022.

C. Per City staff, a Street Sweeper costs \$245,000, NewGen has inflated this cost by 3% over 7 years (\$245,000 x (1.03^7)) = \$301,319.

D. Per City staff, the City plans on purchasing a pickup truck each year for 6 years starting in Year 3. NewGen has assumed 3% inflation on a \$25,000 pickup truck.

E. The City has 6 years to fund the purchase of the street sweeper in 2025, NewGen has planned on setting aside monies each year to fund the vehicle purchase in 2025 (\$284,022/6 = \$47,337). In year 7, NewGen has assumed the City would begin to fund the purchase of the next street sweeper using a seven-year life ((\$284,022 x 1.03^7)/7) = \$49,902.

F. The City has 7 years to fund the purchase of the street sweeper in 2027, NewGen has planned on setting aside monies each year to fund the vehicle purchase in 2027 (\$301,319/7 = \$43,046). In year 9, NewGen has assumed the City would begin to fund the purchase of the next street sweeper using a seven-year life ((\$301,319 x 1.03^7)/7) = \$52,941.

G. Beginning in Year 2, the City has 4 years to fund the parking lot improvements  $(\$1,400,000/4 = \$350,000)$ .

H. Per the buyback agreement, the City paid for 6 months of Schedule #038 in FY 2020.

I. Per the buyback agreement, the City paid for 6 months of Schedule #039 in FY 2020.

J. The City will stop paying lease payments for Schedule #40 in June of 2021.

K. The City will stop paying lease payments for the seven rear load trucks in Schedule #041 in December 2022.

L. The City will stop paying lease payments for the two Roll off trucks in Schedule #041 in Decembmer 2022.

M. The City will stop paying lease payments for the one Roll off truck in Schedule #042 in June 2021.

N. NewGen estimated future lease payments by multiplying the purchase price of six side load trucks by 3% over 2 years, and assumed the same lease schedule as schedule #040, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$295,000 \times 1.03^2) \times 6 \text{ trucks} \times 65\% / 3 \text{ years} = \$406,855$

O. NewGen estimated future lease payments by multiplying the purchase price of seven rear load trucks by 3% over 3 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$202,500 \times 1.03^3) \times 7 \text{ trucks} \times 65\% / 3 \text{ years} = \$335,604$ . The first and last years are split into 6 month payments to reflect schedule #041.

P. NewGen estimated future lease payments by multiplying the purchase price of two roll off trucks by 3% over 3 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^3) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$78,840$ . The first and last years are split into 6 month payments to reflect schedule #041.

Q. NewGen estimated future lease payments by multiplying the purchase price of one roll off truck by 3% over 5 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^5) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$38,272$ .

R. NewGen estimated future lease payments by multiplying the purchase price of six side load trucks by 3% over 5 years, and assumed the same lease schedule as schedule #040, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$295,000 \times 1.03^5) \times 6 \text{ trucks} \times 65\% / 3 \text{ years} = \$444,582$

S. NewGen estimated future lease payments by multiplying the purchase price of seven rear load trucks by 3% over 6 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$202,500 \times 1.03^6) \times 7 \text{ trucks} \times 65\% / 3 \text{ years} = \$366,723$ . The first and last years are split into 6 month payments to reflect schedule #041.

T. NewGen estimated future lease payments by multiplying the purchase price of two roll off trucks by 3% over 6 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^6) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$86,151$ . The first and last years are split into 6 month payments to reflect schedule #041.

U. NewGen estimated future lease payments by multiplying the purchase price of one roll off truck by 3% over 5 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^5) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$41,821$ .

V. NewGen estimated future lease payments by multiplying the purchase price of six side load trucks by 3% over 8 years, and assumed the same lease schedule as schedule #040, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$295,000 \times 1.03^8) \times 6 \text{ trucks} \times 65\% / 3 \text{ years} = \$485,806$

W. NewGen estimated future lease payments by multiplying the purchase price of seven rear load trucks by 3% over 9 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$202,500 \times 1.03^9) \times 7 \text{ trucks} \times 65\% / 3 \text{ years} = \$3400,728$ . The first and last years are split into 6 month payments to reflect schedule #041.

X. NewGen estimated future lease payments by multiplying the purchase price of two roll off trucks by 3% over 9 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^9) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$94,139$ . The first and last years are split into 6 month payments to reflect schedule #041.

Y. NewGen estimated future lease payments by multiplying the purchase price of one roll off truck by 3% over 8 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^8) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$45,699$ .

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Schedule 3 - 5-Year Summary**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Residential Collection</b>					
2	Refuse	\$ 759,387	\$ 769,017	\$ 801,737	\$ 811,794	\$ 822,118
3	Recycling	524,227	660,013	675,001	939,056	951,000
4	Yard Waste	235,899	238,622	245,528	248,398	251,344
5	Glass	6,964	7,039	7,574	7,653	7,736
6	Bulky Waste	459	4,009	4,096	4,258	4,420
7	Container Maintenance/Delivery	207,231	209,679	212,189	214,763	217,402
8	Subtotal Residential Collection	\$ 1,734,165	\$ 1,888,379	\$ 1,946,125	\$ 2,225,922	\$ 2,254,019
9	<b>Commercial Rear-Load</b>					
10	Refuse	\$ 735,256	\$ 777,103	\$ 785,481	\$ 821,148	\$ 857,051
11	Cardboard	54,096	54,838	55,145	55,816	56,496
12	Container Maintenance/Delivery	87,549	88,394	89,261	90,149	91,060
13	Subtotal Commercial Rear-Load	\$ 876,901	\$ 920,336	\$ 929,886	\$ 967,113	\$ 1,004,607
14	<b>Commercial Roll-off</b>					
15	Refuse/Recycling	\$ 192,429	\$ 193,908	\$ 196,318	\$ 200,194	\$ 204,099
16	Container Maintenance/Delivery	-	-	-	-	-
17	Subtotal Commercial Roll-off	\$ 192,429	\$ 193,908	\$ 196,318	\$ 200,194	\$ 204,099
18	Disposal	\$ 822,000	\$ 840,906	\$ 860,247	\$ 880,033	\$ 900,273
19	Convenience Collection Center	\$ 80,045	\$ 69,492	\$ 71,700	\$ 74,644	\$ 77,626
20	Street Sweeping	\$ 329,564	\$ 375,936	\$ 379,354	\$ 382,865	\$ 386,472
21	Administration	\$ 2,076,662	\$ 1,056,676	\$ 1,192,766	\$ 1,202,565	\$ 1,395,804
22	Total	\$ 6,111,767	\$ 5,345,633	\$ 5,576,396	\$ 5,933,336	\$ 6,222,901

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 3 - Residential COS**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Direct Costs</b>					
2	Residential Collection					
3	Refuse	\$ 759,387	\$ 769,017	\$ 801,737	\$ 811,794	\$ 822,118
4	Recycling	524,227	660,013	675,001	939,056	951,000
5	Yard Waste	235,899	238,622	245,528	248,398	251,344
6	Glass	6,964	7,039	7,574	7,653	7,736
7	Bulky Waste	459	4,009	4,096	4,258	4,420
8	Container Maintenance/Delivery	207,231	209,679	212,189	214,763	217,402
9	Subtotal Residential Collection	\$ 1,734,165	\$ 1,888,379	\$ 1,946,125	\$ 2,225,922	\$ 2,254,019
10	Convenience Collection Center	\$ 80,045	\$ 69,492	\$ 71,700	\$ 74,644	\$ 77,626
11	Portion of Roll-off	\$ 203,555	\$ 170,886	\$ 176,726	\$ 177,566	\$ 185,817
12	<b>Indirect Costs</b>					
13	Administration	\$ 1,172,543	\$ 600,001	\$ 683,091	\$ 718,454	\$ 828,792
14	<b>Disposal Cost</b>					
15	Residential Refuse	\$ 272,923	\$ 279,201	\$ 285,622	\$ 292,192	\$ 298,912
16	Recycling	113,292	115,898	118,563	121,290	124,079
17	Collection Center	46,588	47,660	48,756	49,877	51,025
18	Total Disposal	\$ 432,804	\$ 442,758	\$ 452,942	\$ 463,359	\$ 474,017
19	<b>Total Residential Cost of Service</b>	<b>\$ 3,623,112</b>	<b>\$ 3,171,517</b>	<b>\$ 3,330,584</b>	<b>\$ 3,659,946</b>	<b>\$ 3,820,271</b>
20	Billing Units (Customers by Cart Size)					
21	35	1,481	1,488	1,496	1,503	1,511
22	48	186	187	188	189	190
23	64	2,432	2,444	2,457	2,469	2,481
24	96	9,257	9,303	9,350	9,396	9,443
25	Customers with Extra					
26	128	26	26	27	27	27
27	192	424	426	428	431	433
28	Total Units	13,806	13,875	13,944	14,014	14,084
29	<b>Direct Costs</b>					
30	Residential Collection					
31	Refuse	\$ 4.58	\$ 4.62	\$ 4.79	\$ 4.83	\$ 4.86
32	Recycling	3.16	3.96	4.03	5.58	5.63
33	Yard Waste	1.42	1.43	1.47	1.48	1.49
34	Glass	0.04	0.04	0.05	0.05	0.05
35	Bulky Waste	0.00	0.02	0.02	0.03	0.03
36	Container Maintenance/Delivery	1.25	1.26	1.27	1.28	1.29
37	Subtotal Residential Collection	\$ 10.47	\$ 11.34	\$ 11.63	\$ 13.24	\$ 13.34
38	Portion of Roll-off	\$ 1.23	\$ 1.03	\$ 1.06	\$ 1.06	\$ 1.10
39	Convenience Collection Center	\$ 0.48	\$ 0.42	\$ 0.43	\$ 0.44	\$ 0.46
40	<b>Indirect Cost</b>					
41	Administration	\$ 7.08	\$ 3.60	\$ 4.08	\$ 4.27	\$ 4.90
		\$ 7.08	\$ 3.60	\$ 4.08	\$ 4.27	\$ 4.90
42	Budgeted Landfill Services	\$ 432,804	\$ 442,758	\$ 452,942	\$ 463,359	\$ 474,017
43	Monthly Capacity	5,156,112	5,181,893	5,207,802	5,233,841	5,260,011
44	\$/Gallon per month	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01
45	Monthly Disposal cost (by Container size)					
46	35	\$ 1.06	\$ 1.08	\$ 1.10	\$ 1.12	\$ 1.14
47	48	\$ 1.45	\$ 1.48	\$ 1.51	\$ 1.53	\$ 1.56
48	64	\$ 1.94	\$ 1.97	\$ 2.01	\$ 2.05	\$ 2.08

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 3 - Residential COS**

			Year 1 2020		Year 2 2021		Year 3 2022		Year 4 2023		Year 5 2024
49	96	\$	2.91	\$	2.96	\$	3.02	\$	3.07	\$	3.12
50	128	\$	3.88	\$	3.95	\$	4.02	\$	4.09	\$	4.17
51	192	\$	5.82	\$	5.92	\$	6.03	\$	6.14	\$	6.25
52	<b>Monthly COS (Single Cart)</b>										
53	35	\$	20.32	\$	17.47	\$	18.30	\$	20.13	\$	20.94
54	48	\$	20.71	\$	17.87	\$	18.70	\$	20.54	\$	21.36
55	64	\$	21.20	\$	18.36	\$	19.21	\$	21.05	\$	21.88
56	96	\$	22.17	\$	19.35	\$	20.21	\$	22.08	\$	22.92
57	<b>Monthly COS (Multiple Carts)</b>										
58	64	\$	23.14	\$	20.34	\$	21.22	\$	23.10	\$	23.96
59	96	\$	25.08	\$	22.31	\$	23.23	\$	25.15	\$	26.05

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 3 - Current Revenue Reconciliation**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Residential</b>					
2	Net Revenue Requirement	\$ 3,623,112	\$ 3,171,517	\$ 3,330,584	\$ 3,659,946	\$ 3,820,271
3	Revenue	\$ 3,078,712	\$ 3,094,106	\$ 3,109,576	\$ 3,125,124	\$ 3,140,750
4	Over/(Under)	\$ (544,400)	\$ (77,411)	\$ (221,007)	\$ (534,822)	\$ (679,521)
5	Cumulative Over/(Under)	\$ (544,400)	\$ (621,811)	\$ (842,818)	\$ (1,377,640)	\$ (2,057,161)
6	<b>Commercial Rear Load</b>					
7	Net Revenue Requirement	\$ 1,764,065	\$ 1,530,161	\$ 1,580,002	\$ 1,612,172	\$ 1,712,623
8	Revenue					
9	Commercial	\$ 943,834	\$ 948,553	\$ 953,296	\$ 958,063	\$ 962,853
10	Apartment Resident Paying with Dumpster	652,332	655,594	658,872	662,166	665,477
11	Shared Accounts	68,838	69,182	69,528	69,875	70,225
12	Total Revenue	\$ 1,665,004	\$ 1,673,329	\$ 1,681,696	\$ 1,690,104	\$ 1,698,555
13	Over/(Under)	\$ (99,061)	\$ 143,168	\$ 101,694	\$ 77,932	\$ (14,068)
14	Cumulative Over/(Under)	\$ (99,061)	\$ 44,107	\$ 145,801	\$ 223,733	\$ 209,664
15	<b>Roll-Off</b>					
16	Revenue Requirement	\$ 385,580	\$ 323,697	\$ 334,760	\$ 336,352	\$ 351,979
17	Less Costs allocated to Residential	\$ (203,555)	\$ (170,886)	\$ (176,726)	\$ (177,566)	\$ (185,817)
18	Net Revenue Requirement	\$ 182,025	\$ 152,811	\$ 158,034	\$ 158,785	\$ 166,163
19	Revenue	\$ 141,606	\$ 142,314	\$ 143,026	\$ 143,741	\$ 144,460
20	Over/(Under)	\$ (40,419)	\$ (10,497)	\$ (15,008)	\$ (15,044)	\$ (21,703)
21	Cumulative Over/(Under)	\$ (40,419)	\$ (50,916)	\$ (65,924)	\$ (80,969)	\$ (102,672)
22	<b>Street Sweeping</b>					
23	Net Revenue Requirement	\$ 542,564	\$ 491,144	\$ 507,777	\$ 502,432	\$ 523,845
24	Revenue	\$ 391,200	\$ 393,156	\$ 395,122	\$ 397,097	\$ 399,083
25	Over/(Under)	\$ (151,364)	\$ (97,988)	\$ (112,655)	\$ (105,335)	\$ (124,762)
26	Cumulative Over/(Under)	\$ (151,364)	\$ (249,353)	\$ (362,007)	\$ (467,342)	\$ (592,104)
27	<b>Total Revenue Requirement</b>	\$ 6,111,767	\$ 5,345,633	\$ 5,576,396	\$ 5,933,336	\$ 6,222,901
28	<b>Total Revenues</b>	\$ 5,276,522	\$ 5,302,905	\$ 5,329,419	\$ 5,356,067	\$ 5,382,847
29	<b>Total Over/(Under)</b>	\$ (835,244)	\$ (42,728)	\$ (246,977)	\$ (577,269)	\$ (840,055)
30	<b>Cumulative Over/(Under)</b>	\$ (835,244)	\$ (877,972)	\$ (1,124,949)	\$ (1,702,218)	\$ (2,542,273)



**City of Stillwater, Oklahoma**  
**Cost of Service and Rate Design Study**  
**Scenario 3 - Proposed Rates**

	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
<b>Residential Rates</b>					
<b><u>Inside City Limits</u></b>					
35-gallon cart	\$ 13.74	\$ 13.74	\$ 14.43	\$ 15.15	\$ 15.91
64-gallon cart	\$ 16.01	\$ 16.01	\$ 16.81	\$ 17.65	\$ 18.53
(2) 64-gallon carts	\$ 26.74	\$ 26.74	\$ 28.08	\$ 29.48	\$ 30.95
96-gallon cart	\$ 18.28	\$ 18.28	\$ 19.19	\$ 20.15	\$ 21.16
(2) 96-gallon carts	\$ 29.93	\$ 29.93	\$ 31.43	\$ 33.00	\$ 34.65
House-side 96-gallon cart	\$ 27.83	\$ 27.83	\$ 29.22	\$ 30.68	\$ 32.22
Opt-Out Rate	\$ 15.36	\$ 15.36	\$ 16.13	\$ 16.93	\$ 17.78
48-gallon cart	\$ 14.87	\$ 14.87	\$ 15.61	\$ 16.39	\$ 17.21
Non Subscriber - Residential	\$ 2.46	\$ 2.46	\$ 2.58	\$ 2.71	\$ 2.85
Non Subscriber - Commercial	\$ 25.02	\$ 25.02	\$ 26.27	\$ 27.58	\$ 28.96
<b><u>Outside City Limits</u></b>					
35-gallon cart	\$ 29.52	\$ 29.52	\$ 31.00	\$ 32.55	\$ 34.17
64-gallon cart	\$ 30.65	\$ 30.65	\$ 32.18	\$ 33.79	\$ 35.48
(2) 64-gallon carts	N/A	N/A	N/A	N/A	N/A
96-gallon cart	\$ 32.93	\$ 32.93	\$ 34.58	\$ 36.31	\$ 38.12
(2) 96-gallon carts	\$ 44.57	\$ 44.57	\$ 46.80	\$ 49.14	\$ 51.60
House-side 96-gallon cart	N/A	N/A	N/A	N/A	N/A
Residential Rate Increase %		0%	5%	5%	5%
<b>Street Sweeping Rates</b>					
Street Sweeping Rate	\$ 1.63	\$ 1.63	\$ 2.33	\$ 2.33	\$ 2.33
<b>Roll-Off Rates</b>					
<b>10 Cubic Yard</b>					
Delivery Fee	\$ 126.20				
Daily rental					
Inside City Limits	\$ 10.52				
Outside City Limits	\$ 11.57				
<b>20 Cubic Yard</b>					
Delivery Fee	\$ 131.45				
Daily rental					
Inside City Limits	\$ 12.62				
Outside City Limits	\$ 13.88				
<b>30 Cubic Yard</b>					
Delivery Fee	\$ 136.71				
Daily rental					
Inside City Limits	\$ 14.72				
Outside City Limits	\$ 16.19				
<b>40 Cubic Yard</b>					
Delivery Fee	\$ 141.97				
Daily rental					
Inside City Limits	\$ 16.83				
Outside City Limits	\$ 18.51				
<b>Disposal per ton</b>					
Inside City Limits	\$ 42.07				
Outside City Limits	\$ 46.28				
Delivery Fee	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00
Per Pull Fee	\$ 300.00	\$ 310.00	\$ 320.00	\$ 320.00	\$ 330.00
<b>Commercial Shared Rates</b>					
Shared Accounts	\$ 25.02	\$ 25.02	\$ 26.27	\$ 27.58	\$ 28.96

## Commercial Rate Matrix

FY 2020						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 37.06	\$ 74.11	\$ 111.23	\$ 148.24	\$ 185.30	\$ 222.47
3	\$ 55.61	\$ 111.23	\$ 166.84	\$ 222.47	\$ 278.07	\$ 333.68
4	\$ 74.11	\$ 148.24	\$ 222.47	\$ 296.47	\$ 370.58	\$ 444.91
Proposed Rate Increase	0%					

FY 2021						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 37.06	\$ 74.11	\$ 111.23	\$ 148.24	\$ 185.30	\$ 222.47
3	\$ 55.61	\$ 111.23	\$ 166.84	\$ 222.47	\$ 278.07	\$ 333.68
4	\$ 74.11	\$ 148.24	\$ 222.47	\$ 296.47	\$ 370.58	\$ 444.91
Proposed Rate Increase	0%					

FY 2022						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 38.91	\$ 77.82	\$ 116.79	\$ 155.65	\$ 194.57	\$ 233.59
3	\$ 58.39	\$ 116.79	\$ 175.18	\$ 233.59	\$ 291.97	\$ 350.36
4	\$ 77.82	\$ 155.65	\$ 233.59	\$ 311.29	\$ 389.11	\$ 467.16
Proposed Rate Increase	5.0%					

FY 2023						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 40.86	\$ 81.71	\$ 122.63	\$ 163.43	\$ 204.30	\$ 245.27
3	\$ 61.31	\$ 122.63	\$ 183.94	\$ 245.27	\$ 306.57	\$ 367.88
4	\$ 81.71	\$ 163.43	\$ 245.27	\$ 326.85	\$ 408.57	\$ 490.52
Proposed Rate Increase	5.0%					

FY 2024						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 42.90	\$ 85.80	\$ 128.76	\$ 171.60	\$ 214.52	\$ 257.53
3	\$ 64.38	\$ 128.76	\$ 193.14	\$ 257.53	\$ 321.90	\$ 386.27
4	\$ 85.80	\$ 171.60	\$ 257.53	\$ 343.19	\$ 429.00	\$ 515.05
Proposed Rate Increase	5.0%					

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 3 - Proposed Revenue Reconciliation**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Residential</b>					
2	Net Revenue Requirement	\$ 3,623,112	\$ 3,171,517	\$ 3,330,584	\$ 3,659,946	\$ 3,820,271
3	Revenue	\$ 3,078,712	\$ 3,094,106	\$ 3,265,055	\$ 3,445,449	\$ 3,635,810
4	Over/(Under)	\$ (544,400)	\$ (77,411)	\$ (65,529)	\$ (214,497)	\$ (184,460)
5	Cumulative Over/(Under)	\$ (544,400)	\$ (621,811)	\$ (687,340)	\$ (901,836)	\$ (1,086,297)
6	<b>Commercial Rear Load</b>					
7	Net Revenue Requirement	\$ 1,764,065	\$ 1,530,161	\$ 1,580,002	\$ 1,612,172	\$ 1,712,623
8	Revenue					
9	Commercial	\$ 943,834	\$ 948,553	\$ 1,000,960	\$ 1,056,275	\$ 1,114,635
10	Apartment Resident Paying with Dumpster	652,332	655,594	691,815	730,038	770,373
11	Shared Accounts	68,838	69,182	73,004	77,038	81,294
12	Total Revenue	\$ 1,665,004	\$ 1,673,329	\$ 1,765,779	\$ 1,863,351	\$ 1,966,301
13	Over/(Under)	\$ (99,061)	\$ 143,168	\$ 185,777	\$ 251,178	\$ 253,678
14	Cumulative Over/(Under)	\$ (99,061)	\$ 44,107	\$ 229,884	\$ 481,063	\$ 734,741
15	<b>Roll-Off</b>					
16	Revenue Requirement	\$ 385,580	\$ 323,697	\$ 334,760	\$ 336,352	\$ 351,979
17	Less Costs allocated to Residential	\$ (203,555)	\$ (170,886)	\$ (176,726)	\$ (177,566)	\$ (185,817)
18	Net Revenue Requirement	\$ 182,025	\$ 152,811	\$ 158,034	\$ 158,785	\$ 166,163
19	Revenue	\$ 141,606	\$ 152,358	\$ 157,372	\$ 162,432	\$ 167,539
20	Over/(Under)	\$ (40,419)	\$ (453)	\$ (662)	\$ 3,647	\$ 1,376
21	Cumulative Over/(Under)	\$ (40,419)	\$ (40,872)	\$ (41,534)	\$ (37,887)	\$ (36,511)
22	<b>Street Sweeping</b>					
23	Net Revenue Requirement	\$ 542,564	\$ 491,144	\$ 507,777	\$ 502,432	\$ 523,845
24	Revenue	\$ 391,200	\$ 393,156	\$ 564,806	\$ 567,630	\$ 570,468
25	Over/(Under)	\$ (151,364)	\$ (97,988)	\$ 57,029	\$ 65,198	\$ 46,623
26	Cumulative Over/(Under)	\$ (151,364)	\$ (249,353)	\$ (192,323)	\$ (127,125)	\$ (80,502)
27	<b>Total Revenue Requirement</b>	\$ 6,111,767	\$ 5,345,633	\$ 5,576,396	\$ 5,933,336	\$ 6,222,901
28	<b>Total Revenues</b>	\$ 5,276,522	\$ 5,312,949	\$ 5,753,012	\$ 6,038,862	\$ 6,340,119
29	<b>Total Over/(Under)</b>	\$ (835,244)	\$ (32,684)	\$ 176,616	\$ 105,527	\$ 117,218
30	<b>Cumulative Over/(Under)</b>	\$ (835,244)	\$ (867,929)	\$ (691,313)	\$ (585,786)	\$ (468,568)

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 3 - Proposed Reserves

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Working Capital Reserve</b>					
2	Beginning Balance	\$ 1,000,000	\$ 222,093	\$ 282,012	\$ 551,831	\$ 753,258
3	Additions:					
4	Capital Contributions	\$ -	\$ -	\$ -	\$ -	\$ -
5	Rolling Stock Funding	47,337	90,383	117,701	118,520	119,364
6	Interest	10,000	2,221	2,820	5,518	7,533
7	Over-Recovery of Rates	-	-	176,616	105,527	117,218
8	Reductions:					
9	Capital Projects	\$ -	\$ -	\$ -	\$ -	\$ -
10	Rolling Stock Purchases	-	-	(27,318)	(28,138)	(28,982)
11	Under-Recovery of Rates	(835,244)	(32,684)	-	-	-
12	Ending Balance	\$ 222,093	\$ 282,012	\$ 551,831	\$ 753,258	\$ 968,391

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 4 - 5-Year Revenue Requirement

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
1	<b>9180000 - SUA-Waste Mgmt Fund</b>						
2	71000 - Transfer Out	\$ 1,928,556	\$ 900,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	None
3	Expenditure Total:	<u>\$ 1,928,556</u>	<u>\$ 900,000</u>	<u>\$ 1,000,000</u>	<u>\$ 1,000,000</u>	<u>\$ 1,000,000</u>	
4	<b>9184818 - Solid Waste Administration</b>						
5	51001 - Full Time	\$ 165,198	\$ 165,198	\$ 165,198	\$ 165,198	\$ 165,198	Salaries
6	51021 - Social Security	8,177	8,177	8,177	8,177	8,177	Salaries
7	51022 - Retirement	6,612	6,612	6,612	6,612	6,612	Salaries
8	51023 - Health Insurance	11,987	12,347	12,717	13,099	13,491	Benefits
9	52012 - Vehicle Repair Parts	700	721	743	765	788	Vehicle Maintenance
10	52031 - Office Supplies	100	102	105	107	110	General
11	52036 - Janitorial Supplies	1,500	1,535	1,570	1,606	1,643	General
12	52042 - Food	700	716	733	749	767	General
13	52043 - Vehicle Fuel & Oil	1,000	1,030	1,061	1,093	1,126	Fuel
14	52900 - Clearing-Materials & Supplies	-	-	-	-	-	General
15	53001 - Natural Gas	3,000	3,069	3,140	3,212	3,286	General
16	53004 - Telecommunications	4,700	4,808	4,919	5,032	5,148	General
17	53013 - Land Rental	11,689	11,958	12,233	12,514	12,802	General
18	53020 - Repair-Structures	10,000	10,300	10,609	10,927	11,255	General Maintenance
19	53022 - Repair-Office Equipment	-	-	-	-	-	General Maintenance
20	53047 - Public Education	2,500	2,558	2,616	2,676	2,738	General
21	53049 - Cash Short	-	-	-	-	-	General
22	53055 - In-Service Training	5,000	5,115	5,233	5,353	5,476	General
23	53068 - Travel Expense	5,000	5,115	5,233	5,353	5,476	General
24	53069 - Professional Services	11,000	11,253	11,512	11,777	12,047	General
25	53076 - Bad Debt Expense	40,000	40,920	41,861	42,824	43,809	General
26	53124 - Tort Claim	-	-	-	-	-	General
27	53900 - Clearing-Other Services & Fees	-	-	-	-	-	General
28	54999 - Transfer to Assets-Capital	-	-	-	-	-	General
29	55500 - Interest Exp-Capital Lease	-	-	-	-	-	General
30	56001 - Indirect Costs	230,523	235,825	241,249	246,798	252,474	General
31	56002 - SUA Overhead Allocation	26,000	26,598	27,210	27,836	28,476	General
32	57000 - Depreciation Expense	-	-	-	-	-	General
33	<b>Utilities Waste Management Administration</b>	<u>\$ 545,386</u>	<u>\$ 553,956</u>	<u>\$ 562,728</u>	<u>\$ 571,707</u>	<u>\$ 580,898</u>	
34	<b>9184819 - Solid Waste Residential</b>						
35	51001 - Full Time	\$ 405,747	\$ 405,747	\$ 405,747	\$ 405,747	\$ 405,747	Salaries
36	51002 - Part Time	-	-	-	-	-	Salaries
37	51003 - Overtime	25,000	25,000	25,000	25,000	25,000	Salaries
38	51021 - Social Security	31,212	31,212	31,212	31,212	31,212	Salaries
39	51022 - Retirement	25,845	25,845	25,845	25,845	25,845	Salaries
40	51023 - Health Insurance	131,865	135,821	139,896	144,092	148,415	Benefits
41	51025 - Workers' Compensation	27,817	27,817	27,817	27,817	27,817	Salaries
42	51045 - Temporary Labor Services	-	-	-	-	-	General
43	52012 - Vehicle Repair Parts	75,000	77,250	79,568	81,955	84,413	Vehicle Maintenance
44	52024 - Other Equipment Parts	60,000	61,800	63,654	65,564	67,531	General Maintenance
45	52041 - Clothing & Uniforms	7,100	7,263	7,430	7,601	7,776	General
46	52043 - Vehicle Fuel & Oil	90,000	92,700	95,481	98,345	101,296	Fuel
47	52045 - Tools	900	921	942	964	986	General
48	52046 - Minor Supplies	3,000	3,069	3,140	3,212	3,286	General
49	52048 - Safety Equipment	1,200	1,228	1,256	1,285	1,314	General
50	53047 - Public Education	4,500	4,604	4,709	4,818	4,929	General
51	53073 - Landfill Services	270,000	276,210	282,563	289,062	295,710	General
52	55000 - Capital Lease Payments	369,031	369,031	406,855	406,855	406,855	None
53	56002 - SUA Overhead Allocation	313,359	320,566	327,939	335,482	343,198	General
54	<b>Subtotal Solid Waste Residential</b>	<u>\$ 1,841,576</u>	<u>\$ 1,866,083</u>	<u>\$ 1,929,053</u>	<u>\$ 1,954,855</u>	<u>\$ 1,981,329</u>	

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 4 - 5-Year Revenue Requirement**

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
55	<b>9184820 - Solid Waste Commercial</b>						
56	51001 - Full Time	\$ 321,548	\$ 321,548	\$ 321,548	\$ 321,548	\$ 321,548	Salaries
57	51003 - Overtime	20,000	20,000	20,000	20,000	20,000	Salaries
58	51021 - Social Security	24,450	24,450	24,450	24,450	24,450	Salaries
59	51022 - Retirement	20,493	20,493	20,493	20,493	20,493	Salaries
60	51023 - Health Insurance	59,939	61,737	63,589	65,497	67,462	Benefits
61	51025 - Workers' Compensation	-	-	-	-	-	Salaries
62	52012 - Vehicle Repair Parts	75,000	77,250	79,568	81,955	84,413	Vehicle Maintenance
63	52024 - Other Equipment Parts	5,000	5,150	5,305	5,464	5,628	General Maintenance
64	52041 - Clothing & Uniforms	7,000	7,161	7,326	7,494	7,667	General
65	52043 - Vehicle Fuel & Oil	50,000	51,500	53,045	54,636	56,275	Fuel
66	52048 - Safety Equipment	1,000	1,023	1,047	1,071	1,095	General
67	52050 - Welding Supplies	10,000	10,230	10,465	10,706	10,952	General
68	53066 - Miscellaneous Services	4,500	4,604	4,709	4,818	4,929	General
69	53073 - Landfill Services	300,000	306,900	313,959	321,180	328,567	General
70	55000 - Capital Lease Payments	243,169	278,636	278,636	307,120	335,604	None
71	56002 - SUA Overhead Allocation	146,844	150,221	153,677	157,211	160,827	General
72	<b>Subtotal Solid Waste Commercial</b>	<b>\$ 1,288,943</b>	<b>\$ 1,340,903</b>	<b>\$ 1,357,815</b>	<b>\$ 1,403,642</b>	<b>\$ 1,449,909</b>	
73	<b>9184821 - Solid Waste Street Sweeping</b>						
74	51001 - Full Time	\$ 94,912	\$ 94,912	\$ 94,912	\$ 94,912	\$ 94,912	Salaries
75	51003 - Overtime	1,000	1,000	1,000	1,000	1,000	Salaries
76	51021 - Social Security	7,031	7,031	7,031	7,031	7,031	Salaries
77	51022 - Retirement	5,759	5,759	5,759	5,759	5,759	Salaries
78	51023 - Health Insurance	35,963	37,042	38,153	39,298	40,477	Benefits
79	51025 - Workers' Compensation	36,022	36,022	36,022	36,022	36,022	Salaries
80	52012 - Vehicle Repair Parts	20,000	20,600	21,218	21,855	22,510	Vehicle Maintenance
81	52041 - Clothing & Uniforms	700	716	733	749	767	General
82	52043 - Vehicle Fuel & Oil	10,000	10,300	10,609	10,927	11,255	Fuel
83	53069 - Professional Services	-	-	-	-	-	General
84	55000 - Capital Lease Payments	-	-	-	-	-	None
85	56002 - SUA Overhead Allocation	49,600	50,741	51,908	53,102	54,323	General
86	<b>Subtotal Solid Waste Street Sweeping</b>	<b>\$ 260,987</b>	<b>\$ 264,123</b>	<b>\$ 267,345</b>	<b>\$ 270,655</b>	<b>\$ 274,056</b>	
87	<b>9184822 - Solid Waste Convenience Collection Center</b>						
88	51001 - Full Time	\$ 18,144	\$ 18,144	\$ 18,144	\$ 18,144	\$ 18,144	Salaries
89	51003 - Overtime	-	-	-	-	-	Salaries
90	51021 - Social Security	1,327	1,327	1,327	1,327	1,327	Salaries
91	51022 - Retirement	1,093	1,093	1,093	1,093	1,093	Salaries
92	51023 - Health Insurance	-	-	-	-	-	Benefits
93	52041 - Clothing & Uniforms	-	-	-	-	-	General
94	53066 - Miscellaneous Services	50,000	51,150	52,326	53,530	54,761	General
95	<b>Subtotal Solid Waste Convenience Collection Center</b>	<b>\$ 70,564</b>	<b>\$ 71,714</b>	<b>\$ 72,890</b>	<b>\$ 74,094</b>	<b>\$ 75,325</b>	
96	<b>9184823 - Solid Waste Roll-off Service</b>						
97	51001 - Full Time	\$ 81,143	\$ 81,143	\$ 81,143	\$ 81,143	\$ 81,143	Salaries
98	51003 - Overtime	8,000	8,000	8,000	8,000	8,000	Salaries
99	51021 - Social Security	6,425	6,425	6,425	6,425	6,425	Salaries
100	51022 - Retirement	5,341	5,341	5,341	5,341	5,341	Salaries
101	51023 - Health Insurance	11,988	12,348	12,718	13,100	13,493	Benefits
102	51025 - Workers' Compensation	11,403	11,403	11,403	11,403	11,403	Salaries
103	52012 - Vehicle Repair Parts	15,000	15,450	15,914	16,391	16,883	Vehicle Maintenance
104	52041 - Clothing & Uniforms	700	716	733	749	767	General
105	52043 - Vehicle Fuel & Oil	15,000	15,450	15,914	16,391	16,883	Fuel
106	53073 - Landfill Services	72,000	73,656	75,350	77,083	78,856	General
107	55000 - Capital Lease Payments	114,069	106,102	108,299	112,706	117,112	None
108	<b>Subtotal Solid Waste Roll-off Service</b>	<b>\$ 341,069</b>	<b>\$ 336,034</b>	<b>\$ 341,239</b>	<b>\$ 348,732</b>	<b>\$ 356,305</b>	

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 4 - 5-Year Revenue Requirement

Line No.	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
109	<b>9184824 - Solid Waste Recycling</b>					
110	51001 - Full Time	\$ 122,062	\$ 122,062	\$ 122,062	\$ 122,062	Salaries
111	51003 - Overtime	4,000	4,000	4,000	4,000	Salaries
112	51021 - Social Security	9,476	9,476	9,476	9,476	Salaries
113	51022 - Retirement	7,564	7,564	7,564	7,564	Salaries
114	51023 - Health Insurance	11,988	12,348	12,718	13,100	Benefits
115	51025 - Workers' Compensation	473	473	473	473	Salaries
116	52012 - Vehicle Repair Parts	6,000	6,180	6,365	6,556	Vehicle Maintenance
117	52041 - Clothing & Uniforms	700	716	733	749	General
118	52043 - Vehicle Fuel & Oil	10,000	10,300	10,609	10,927	Fuel
119	53047 - Public Education	3,000	3,069	3,140	3,212	General
120	53073 - Landfill Services	180,000	184,140	188,375	192,708	General
121	55000 - Capital Lease Payments	-	-	-	-	None
122	<b>Subtotal Solid Waste Recycling</b>	<b>\$ 355,263</b>	<b>\$ 360,328</b>	<b>\$ 365,515</b>	<b>\$ 370,827</b>	<b>\$ 376,268</b>
123	<b>9284818 - Utilities Waste Mgmt Admin - RESERVE FUND</b>					
124	53069 - Professional Services	\$ -	\$ -	\$ -	\$ -	None
125	<b>Expenditure Total:</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
126	<b>9284821 - Util Waste Mgmt Street sweep - RESERVE FUND</b>					
127	54001 - Vehicles	\$ -	\$ -	\$ -	\$ -	None
128	<b>Expenditure Total:</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
129	<b>9284823 - Waste Mgmt Roll-off Service - RESERVE FUND</b>					
130	54001 - Vehicles	\$ -	\$ -	\$ -	\$ -	None
131	<b>Expenditure Total:</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
132	<b>Capital Improvement Plan</b>					
133	Parking Lot Improvements	\$ -	\$ -	\$ -	\$ -	None
134	Street Sweeper (2025)	47,337	47,337	47,337	47,337	None
135	Street Sweeper (2027)	-	43,046	43,046	43,046	None
136	Pickup Trucks	-	-	27,318	28,138	None
137	<b>Subtotal Capital Improvement Plan</b>	<b>\$ 47,337</b>	<b>\$ 90,383</b>	<b>\$ 117,701</b>	<b>\$ 118,520</b>	<b>\$ 119,364</b>
138	<b>Proposed Debt</b>					
139	Principal	\$ -	\$ -	\$ -	\$ -	None
140	Interest	-	-	-	-	None
141	<b>Subtotal Proposed Debt</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
142	<b>TOTAL EXPENSES</b>	<b>\$ 6,679,682</b>	<b>\$ 5,783,523</b>	<b>\$ 6,014,286</b>	<b>\$ 6,113,031</b>	<b>\$ 6,213,454</b>
143	<b>REVENUES</b>					
144	44504 - Residential Refuse Sales	\$ 28,415	\$ 28,415	\$ 28,415	\$ 28,415	None
145	44505 - Commercial Refuse Sales	95,220	95,220	95,220	95,220	None
146	44506 - Residential Recycling	-	-	-	-	None
147	44507 - Commercial Recycling	-	-	-	-	None
148	44508 - Roll-Off Container	-	-	-	-	None
149	44509 - Street Sweeping	-	-	-	-	None
150	48006 - Blue Trash Bags	10,000	10,000	10,000	10,000	None
151	48213 - Collection Center-Recycling	12,000	12,000	12,000	12,000	None
152	48214 - Collection Center-Refuse	25,000	25,000	25,000	25,000	None
153	48700 - Miscellaneous Revenue	-	-	-	-	None
154	48721 - Gain on Sale of Assets	-	-	-	-	None

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 4 - 5-Year Revenue Requirement

Line No.	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
155 48903 - SUA Revenue Allocation	397,280	397,280	397,280	397,280	397,280	None
156 Subtotal Revenues	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	
157 61000 - Transfer In	\$ -	\$ -	\$ -	\$ -	\$ -	None
158 Revenue Total:	\$ -	\$ -	\$ -	\$ -	\$ -	
159 TOTAL REVENUES	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	
160 Net Revenue Requirement	\$ 6,111,767	\$ 5,215,608	\$ 5,446,371	\$ 5,545,116	\$ 5,645,539	



City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 4 - Capital Improvement Plan

Line No.	Description	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024	Year 6 FY 2025	Year 7 FY 2026	Year 8 FY 2027	Year 9 FY 2028	Year 10 FY 2029	Total	Notes
1	<b>Facility Improvements</b>												
2	Parking Lot	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	A
3	Sum:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
4	<b>FY 2020 - FY 2024 Total:</b>	\$ -											
5													
6	<b>Rolling Stock Purchases</b>												
7	Street Sweeper	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 284,022	\$ -	\$ -	\$ -	\$ -	\$ 284,022	B
8	Street Sweeper	-	-	-	-	-	-	-	301,319	-	-	301,319	C
9	Pickup Truck	-	-	27,318	28,138	28,982	29,851	30,747	31,669	-	-	176,705	D
10	Sum:	\$ -	\$ -	\$ 27,318	\$ 28,138	\$ 28,982	\$ 313,873	\$ 30,747	\$ 332,988	\$ -	\$ -	\$ 762,046	
11	<b>FY 2020 - FY 2024 Total:</b>	\$ 84,438											
12	<b>Funding Schedule</b>												
13	Street Sweeper	\$ 47,337	\$ 47,337	\$ 47,337	\$ 47,337	\$ 47,337	\$ 47,337	\$ 49,902	\$ 49,902	\$ 49,902	\$ 49,902	\$ 483,629	E
14	Street Sweeper	-	43,046	43,046	43,046	43,046	43,046	43,046	43,046	52,941	52,941	407,200	F
15	Pickup Truck	-	-	27,318	28,138	28,982	29,851	30,747	31,669	-	-	176,705	D
16	Parking Lot	-	-	-	-	-	-	-	-	-	-	-	G
17	Sum:	\$ 47,337	\$ 90,383	\$ 117,701	\$ 118,520	\$ 119,364	\$ 120,234	\$ 123,694	\$ 124,616	\$ 102,842	\$ 102,842	\$ 1,067,534	
18	<b>FY 2020 - FY 2024 Total:</b>	\$ 493,305											
19	<b>Lease Obligations</b>												
20	Schedule #038 - Four Freightliner Trucks	\$ 80,632	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	80,632	H
21	Schedule #039 Two Mack Roll Off Trucks	37,145	-	-	-	-	-	-	-	-	-	37,145	I
22	Schedule #040 - Six trucks for Waste Management	369,031	369,031	-	-	-	-	-	-	-	-	738,062	J
23	Schedule #041 - Seven Freightliner Refuse Trucks	162,537	278,636	278,636	139,318	-	-	-	-	-	-	859,127	K
24	Schedule #041 - Two Roll off trucks	40,849	70,027	70,027	35,013	-	-	-	-	-	-	215,916	L
25	Schedule #042 - One Roll off truck	36,075	36,075	-	-	-	-	-	-	-	-	72,150	M
26	Schedule #043 - Six trucks for Waste Management	-	-	406,855	406,855	406,855	-	-	-	-	-	1,220,565	N
27	Schedule #044 - Seven Freightliner Refuse Trucks	-	-	-	167,802	335,604	335,604	167,802	-	-	-	1,006,811	O
28	Schedule #044 - Two Roll off trucks	-	-	-	39,420	78,840	78,840	39,420	-	-	-	236,521	P
29	Schedule #045 - One Roll off truck	-	-	38,272	38,272	38,272	-	-	-	-	-	114,816	Q
30	Schedule #046 - Six trucks for Waste Management	-	-	-	-	-	444,582	444,582	444,582	-	-	1,333,745	R
31	Schedule #047 - Seven Freightliner Refuse Trucks	-	-	-	-	-	183,362	366,723	366,723	366,723	183,362	1,100,170	S
32	Schedule #047 - Two Roll off trucks	-	-	-	-	-	43,075	86,151	86,151	43,075	43,075	258,453	T
33	Schedule #048 - One Roll off truck	-	-	-	-	-	41,821	41,821	41,821	-	-	125,462	U
34	Schedule #049 - Six trucks for Waste Management	-	-	-	-	-	-	-	485,806	485,806	-	971,613	V
35	Schedule #050 - Seven Freightliner Refuse Trucks	-	-	-	-	-	-	-	-	-	200,364	200,364	W
36	Schedule #050 - Two Roll off trucks	-	-	-	-	-	-	-	-	-	47,070	47,070	X
37	Schedule #051 - One Roll off truck	-	-	-	-	-	-	-	45,699	45,699	-	91,397	Y
38	Sum:	\$ 726,269	\$ 753,768	\$ 793,790	\$ 826,680	\$ 859,571	\$ 900,846	\$ 920,062	\$ 939,277	\$ 984,379	\$ 1,005,376	\$ 8,710,019	
39	<b>FY 2020 - FY 2024 Total:</b>	\$ 3,960,079											

**Notes:**

A. Per City staff, for Scenario 4, the City will not improve their parking lot.

B. Per City staff, a Street Sweeper costs \$245,000, NewGen has inflated this cost by 3% over 5 years ( $\$245,000 \times (1.03^5) = \$284,022$ ).C. Per City staff, a Street Sweeper costs \$245,000, NewGen has inflated this cost by 3% over 7 years ( $\$245,000 \times (1.03^7) = \$301,319$ ).

D. Per City staff, the City plans on purchasing a pickup truck each year for 6 years starting in Year 3. NewGen has assumed 3% inflation on a \$25,000 pickup truck.

E. The City has 6 years to fund the purchase of the street sweeper in 2025, NewGen has planned on setting aside monies each year to fund the vehicle purchase in 2025 ( $\$284,022/6 = \$47,337$ ). In year 7, NewGen has assumed the City would begin to fund the purchase of the next street sweeper using a seven-year life ( $(\$284,022 \times 1.03^7)/7 = \$49,902$ ).

- F. The City has 7 years to fund the purchase of the street sweeper in 2027, NewGen has planned on setting aside monies each year to fund the vehicle purchase in 2027 ( $\$301,319/7 = \$43,046$ ). In year 9, NewGen has assumed the City would begin to fund the purchase of the next street sweeper using a seven-year life ( $(\$301,319 \times 1.03^7)/7 = \$52,941$ ).
- G. Per City staff, for Scenario 4, the City will not improve their parking lot.
- H. Per the buyback agreement, the City paid for 6 months of Schedule #038 in FY 2020.
- I. Per the buyback agreement, the City paid for 6 months of Schedule #039 in FY 2020.
- J. The City will stop paying lease payments for Schedule #40 in June of 2021.
- K. The City will stop paying lease payments for the seven rear load trucks in Schedule #041 in December 2022.
- L. The City will stop paying lease payments for the two Roll off trucks in Schedule #041 in Decembmer 2022.
- M. The City will stop paying lease payments for the one Roll off truck in Schedule #042 in June 2021.
- N. NewGen estimated future lease payments by multiplying the purchase price of six side load trucks by 3% over 2 years, and assumed the same lease schedule as schedule #040, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$295,000 \times 1.03^2 \times 6 \text{ trucks} \times 65\% / 3 \text{ years} = \$406,855$ ).
- O. NewGen estimated future lease payments by multiplying the purchase price of seven rear load trucks by 3% over 3 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$202,500 \times 1.03^3 \times 7 \text{ trucks} \times 65\% / 3 \text{ years} = \$335,604$ ). The first and last years are split into 6 month payments to reflect schedule #041.
- P. NewGen estimated future lease payments by multiplying the purchase price of two roll off trucks by 3% over 3 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$166,500 \times 1.03^3 \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$78,840$ ). The first and last years are split into 6 month payments to reflect schedule #041.
- Q. NewGen estimated future lease payments by multiplying the purchase price of one roll off truck by 3% over 5 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$166,500 \times 1.03^5 \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$38,272$ ).
- R. NewGen estimated future lease payments by multiplying the purchase price of six side load trucks by 3% over 5 years, and assumed the same lease schedule as schedule #040, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$295,000 \times 1.03^5 \times 6 \text{ trucks} \times 65\% / 3 \text{ years} = \$444,582$ ).
- S. NewGen estimated future lease payments by multiplying the purchase price of seven rear load trucks by 3% over 6 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$202,500 \times 1.03^6 \times 7 \text{ trucks} \times 65\% / 3 \text{ years} = \$366,723$ ). The first and last years are split into 6 month payments to reflect schedule #041.
- T. NewGen estimated future lease payments by multiplying the purchase price of two roll off trucks by 3% over 6 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$166,500 \times 1.03^6 \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$86,151$ ). The first and last years are split into 6 month payments to reflect schedule #041.
- U. NewGen estimated future lease payments by multiplying the purchase price of one roll off truck by 3% over 5 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$166,500 \times 1.03^5 \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$41,821$ ).
- V. NewGen estimated future lease payments by multiplying the purchase price of six side load trucks by 3% over 8 years, and assumed the same lease schedule as schedule #040, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$295,000 \times 1.03^8 \times 6 \text{ trucks} \times 65\% / 3 \text{ years} = \$485,806$ ).
- W. NewGen estimated future lease payments by multiplying the purchase price of seven rear load trucks by 3% over 9 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$202,500 \times 1.03^9 \times 7 \text{ trucks} \times 65\% / 3 \text{ years} = \$3400,728$ ). The first and last years are split into 6 month payments to reflect schedule #041.
- X. NewGen estimated future lease payments by multiplying the purchase price of two roll off trucks by 3% over 9 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$166,500 \times 1.03^9 \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$94,139$ ). The first and last years are split into 6 month payments to reflect schedule #041.
- Y. NewGen estimated future lease payments by multiplying the purchase price of one roll off truck by 3% over 8 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles ( $\$166,500 \times 1.03^8 \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$45,699$ ).

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 4 - 5-Year Summary**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Residential Collection</b>					
2	Refuse	\$ 759,387	\$ 769,017	\$ 801,737	\$ 811,794	\$ 822,118
3	Recycling	524,227	529,988	544,975	550,837	556,842
4	Yard Waste	235,899	238,622	245,528	248,398	251,344
5	Glass	6,964	7,039	7,574	7,653	7,736
6	Bulky Waste	459	4,009	4,096	4,258	4,420
7	Container Maintenance/Delivery	207,231	209,679	212,189	214,763	217,402
8	Subtotal Residential Collection	\$ 1,734,165	\$ 1,758,354	\$ 1,816,099	\$ 1,837,703	\$ 1,859,862
9	<b>Commercial Rear-Load</b>					
10	Refuse	\$ 735,256	\$ 777,103	\$ 785,481	\$ 821,148	\$ 857,051
11	Cardboard	54,096	54,838	55,145	55,816	56,496
12	Container Maintenance/Delivery	87,549	88,394	89,261	90,149	91,060
13	Subtotal Commercial Rear-Load	\$ 876,901	\$ 920,336	\$ 929,886	\$ 967,113	\$ 1,004,607
14	<b>Commercial Roll-off</b>					
15	Refuse/Recycling	\$ 192,429	\$ 193,908	\$ 196,318	\$ 200,194	\$ 204,099
16	Container Maintenance/Delivery	-	-	-	-	-
17	Subtotal Commercial Roll-off	\$ 192,429	\$ 193,908	\$ 196,318	\$ 200,194	\$ 204,099
18	Disposal	\$ 822,000	\$ 840,906	\$ 860,247	\$ 880,033	\$ 900,273
19	Convenience Collection Center	\$ 80,045	\$ 69,492	\$ 71,700	\$ 74,644	\$ 77,626
20	Street Sweeping	\$ 329,564	\$ 375,936	\$ 379,354	\$ 382,865	\$ 386,472
21	Administration	\$ 2,076,662	\$ 1,056,676	\$ 1,192,766	\$ 1,202,565	\$ 1,212,600
22	Total	\$ 6,111,767	\$ 5,215,608	\$ 5,446,371	\$ 5,545,116	\$ 5,645,539

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 4 - Residential Cost of Service**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Direct Costs</b>					
2	Residential Collection					
3	Refuse	\$ 759,387	\$ 769,017	\$ 801,737	\$ 811,794	\$ 822,118
4	Recycling	524,227	529,988	544,975	550,837	556,842
5	Yard Waste	235,899	238,622	245,528	248,398	251,344
6	Glass	6,964	7,039	7,574	7,653	7,736
7	Bulky Waste	459	4,009	4,096	4,258	4,420
8	Container Maintenance/Delivery	207,231	209,679	212,189	214,763	217,402
9	Subtotal Residential Collection	\$ 1,734,165	\$ 1,758,354	\$ 1,816,099	\$ 1,837,703	\$ 1,859,862
10	Convenience Collection Center	\$ 80,045	\$ 69,492	\$ 71,700	\$ 74,644	\$ 77,626
11	Portion of Roll-off	\$ 203,555	\$ 172,115	\$ 178,071	\$ 181,267	\$ 184,502
12	<b>Indirect Costs</b>					
13	Administration	\$ 1,172,543	\$ 582,105	\$ 663,562	\$ 664,176	\$ 665,049
14	<b>Disposal Cost</b>					
15	Residential Refuse	\$ 272,923	\$ 279,201	\$ 285,622	\$ 292,192	\$ 298,912
16	Recycling	113,292	115,898	118,563	121,290	124,079
17	Collection Center	46,588	47,660	48,756	49,877	51,025
18	Total Disposal	\$ 432,804	\$ 442,758	\$ 452,942	\$ 463,359	\$ 474,017
19	<b>Total Residential Cost of Service</b>	<b>\$ 3,623,112</b>	<b>\$ 3,024,825</b>	<b>\$ 3,182,373</b>	<b>\$ 3,221,148</b>	<b>\$ 3,261,056</b>
20	Billing Units (Customers by Cart Size)					
21	35	1,481	1,488	1,496	1,503	1,511
22	48	186	187	188	189	190
23	64	2,432	2,444	2,457	2,469	2,481
24	96	9,257	9,303	9,350	9,396	9,443
25	Customers with Extra					
26	128	26	26	27	27	27
27	192	424	426	428	431	433
28	Total Units	13,806	13,875	13,944	14,014	14,084
29	<b>Direct Costs</b>					
30	Residential Collection					
31	Refuse	\$ 4.58	\$ 4.62	\$ 4.79	\$ 4.83	\$ 4.86
32	Recycling	3.16	3.18	3.26	3.28	3.29
33	Yard Waste	1.42	1.43	1.47	1.48	1.49
34	Glass	0.04	0.04	0.05	0.05	0.05
35	Bulky Waste	0.00	0.02	0.02	0.03	0.03
36	Container Maintenance/Delivery	1.25	1.26	1.27	1.28	1.29
37	Subtotal Residential Collection	\$ 10.47	\$ 10.56	\$ 10.85	\$ 10.93	\$ 11.00
38	Portion of Roll-off	\$ 1.23	\$ 1.03	\$ 1.06	\$ 1.08	\$ 1.09
39	Convenience Collection Center	\$ 0.48	\$ 0.42	\$ 0.43	\$ 0.44	\$ 0.46
40	<b>Indirect Cost</b>					
41	Administration	\$ 7.08	\$ 3.50	\$ 3.97	\$ 3.95	\$ 3.93
		\$ 7.08	\$ 3.50	\$ 3.97	\$ 3.95	\$ 3.93
42	Budgeted Landfill Services	\$ 432,804	\$ 442,758	\$ 452,942	\$ 463,359	\$ 474,017
43	Monthly Capacity	5,156,112	5,181,893	5,207,802	5,233,841	5,260,011
44	\$/Gallon per month	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01
45	Monthly Disposal cost (by Container size)					
46	35	\$ 1.06	\$ 1.08	\$ 1.10	\$ 1.12	\$ 1.14
47	48	\$ 1.45	\$ 1.48	\$ 1.51	\$ 1.53	\$ 1.56
48	64	\$ 1.94	\$ 1.97	\$ 2.01	\$ 2.05	\$ 2.08

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 4 - Residential Cost of Service**

			Year 1 2020		Year 2 2021		Year 3 2022		Year 4 2023		Year 5 2024
49	96	\$	2.91	\$	2.96	\$	3.02	\$	3.07	\$	3.12
50	128	\$	3.88	\$	3.95	\$	4.02	\$	4.09	\$	4.17
51	192	\$	5.82	\$	5.92	\$	6.03	\$	6.14	\$	6.25
52	<b>Monthly COS (Single Cart)</b>										
53	35	\$	20.32	\$	16.59	\$	17.41	\$	17.52	\$	17.63
54	48	\$	20.71	\$	16.99	\$	17.82	\$	17.93	\$	18.05
55	64	\$	21.20	\$	17.48	\$	18.32	\$	18.44	\$	18.57
56	96	\$	22.17	\$	18.47	\$	19.33	\$	19.47	\$	19.61
57	<b>Monthly COS (Multiple Carts)</b>										
58	64	\$	23.14	\$	19.46	\$	20.33	\$	20.49	\$	20.66
59	96	\$	25.08	\$	21.43	\$	22.34	\$	22.54	\$	22.74

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Schedule 4 - Current Revenue Reconciliation**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Residential</b>					
2	Net Revenue Requirement	\$ 3,623,112	\$ 3,024,825	\$ 3,182,373	\$ 3,221,148	\$ 3,261,056
3	Revenue	\$ 3,078,712	\$ 3,094,106	\$ 3,109,576	\$ 3,125,124	\$ 3,140,750
4	Over/(Under)	\$ (544,400)	\$ 69,281	\$ (72,797)	\$ (96,024)	\$ (120,306)
5	Cumulative Over/(Under)	\$ (544,400)	\$ (475,119)	\$ (547,916)	\$ (643,940)	\$ (764,246)
6	<b>Commercial Rear Load</b>					
7	Net Revenue Requirement	\$ 1,764,065	\$ 1,541,213	\$ 1,592,064	\$ 1,646,035	\$ 1,700,366
8	Revenue					
9	Commercial	\$ 943,834	\$ 948,553	\$ 953,296	\$ 958,063	\$ 962,853
10	Apartment Resident Paying with Dumpster	652,332	655,594	658,872	662,166	665,477
11	Shared Accounts	68,838	69,182	69,528	69,875	70,225
12	Total Revenue	\$ 1,665,004	\$ 1,673,329	\$ 1,681,696	\$ 1,690,104	\$ 1,698,555
13	Over/(Under)	\$ (99,061)	\$ 132,115	\$ 89,632	\$ 44,069	\$ (1,812)
14	Cumulative Over/(Under)	\$ (99,061)	\$ 33,054	\$ 122,686	\$ 166,755	\$ 164,943
15	<b>Roll-Off</b>					
16	Revenue Requirement	\$ 385,580	\$ 326,025	\$ 337,307	\$ 343,362	\$ 349,489
17	Less Costs allocated to Residential	\$ (203,555)	\$ (172,115)	\$ (178,071)	\$ (181,267)	\$ (184,502)
18	Net Revenue Requirement	\$ 182,025	\$ 153,910	\$ 159,236	\$ 162,095	\$ 164,987
19	Revenue	\$ 141,606	\$ 142,314	\$ 143,026	\$ 143,741	\$ 144,460
20	Over/(Under)	\$ (40,419)	\$ (11,596)	\$ (16,211)	\$ (18,354)	\$ (20,528)
21	Cumulative Over/(Under)	\$ (40,419)	\$ (52,015)	\$ (68,226)	\$ (86,579)	\$ (107,107)
22	<b>Street Sweeping</b>					
23	Net Revenue Requirement	\$ 542,564	\$ 495,659	\$ 512,697	\$ 515,838	\$ 519,130
24	Revenue	\$ 391,200	\$ 393,156	\$ 395,122	\$ 397,097	\$ 399,083
25	Over/(Under)	\$ (151,364)	\$ (102,503)	\$ (117,576)	\$ (118,741)	\$ (120,047)
26	Cumulative Over/(Under)	\$ (151,364)	\$ (253,867)	\$ (371,443)	\$ (490,183)	\$ (610,230)
27	<b>Total Revenue Requirement</b>	\$ 6,111,767	\$ 5,215,608	\$ 5,446,371	\$ 5,545,116	\$ 5,645,539
28	<b>Total Revenues</b>	\$ 5,276,522	\$ 5,302,905	\$ 5,329,419	\$ 5,356,067	\$ 5,382,847
29	<b>Total Over/(Under)</b>	\$ (835,244)	\$ 87,297	\$ (116,951)	\$ (189,050)	\$ (262,692)
30	<b>Cumulative Over/(Under)</b>	\$ (835,244)	\$ (747,947)	\$ (864,898)	\$ (1,053,948)	\$ (1,316,640)

**City of Stillwater, Oklahoma**  
**Cost of Service and Rate Design Study**  
**Scenario 4 - Proposed Rates**

	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
<b>Residential Rates</b>					
<b><u>Inside City Limits</u></b>					
35-gallon cart	\$ 13.74	\$ 13.74	\$ 14.29	\$ 14.29	\$ 14.29
64-gallon cart	\$ 16.01	\$ 16.01	\$ 16.65	\$ 16.65	\$ 16.65
(2) 64-gallon carts	\$ 26.74	\$ 26.74	\$ 27.81	\$ 27.81	\$ 27.81
96-gallon cart	\$ 18.28	\$ 18.28	\$ 19.01	\$ 19.01	\$ 19.01
(2) 96-gallon carts	\$ 29.93	\$ 29.93	\$ 31.13	\$ 31.13	\$ 31.13
House-side 96-gallon cart	\$ 27.83	\$ 27.83	\$ 28.94	\$ 28.94	\$ 28.94
Opt-Out Rate	\$ 15.36	\$ 15.36	\$ 15.97	\$ 15.97	\$ 15.97
48-gallon cart	\$ 14.87	\$ 14.87	\$ 15.46	\$ 15.46	\$ 15.46
Non Subscriber - Residential	\$ 2.46	\$ 2.46	\$ 2.56	\$ 2.56	\$ 2.56
Non Subscriber - Commercial	\$ 25.02	\$ 25.02	\$ 26.02	\$ 26.02	\$ 26.02
<b><u>Outside City Limits</u></b>					
35-gallon cart	\$ 29.52	\$ 29.52	\$ 30.70	\$ 30.70	\$ 30.70
64-gallon cart	\$ 30.65	\$ 30.65	\$ 31.88	\$ 31.88	\$ 31.88
(2) 64-gallon carts	N/A	N/A	N/A	N/A	N/A
96-gallon cart	\$ 32.93	\$ 32.93	\$ 34.25	\$ 34.25	\$ 34.25
(2) 96-gallon carts	\$ 44.57	\$ 44.57	\$ 46.35	\$ 46.35	\$ 46.35
House-side 96-gallon cart	N/A	N/A	N/A	N/A	N/A
Residential Rate Increase %		0%	4%	0%	0%
<b>Street Sweeping Rates</b>					
Street Sweeping Rate	\$ 1.63	\$ 1.63	\$ 2.18	\$ 2.18	\$ 2.18
<b>Roll-Off Rates</b>					
<b>10 Cubic Yard</b>					
Delivery Fee	\$ 126.20				
Daily rental					
Inside City Limits	\$ 10.52				
Outside City Limits	\$ 11.57				
<b>20 Cubic Yard</b>					
Delivery Fee	\$ 131.45				
Daily rental					
Inside City Limits	\$ 12.62				
Outside City Limits	\$ 13.88				
<b>30 Cubic Yard</b>					
Delivery Fee	\$ 136.71				
Daily rental					
Inside City Limits	\$ 14.72				
Outside City Limits	\$ 16.19				
<b>40 Cubic Yard</b>					
Delivery Fee	\$ 141.97				
Daily rental					
Inside City Limits	\$ 16.83				
Outside City Limits	\$ 18.51				
<b>Disposal per ton</b>					
Inside City Limits	\$ 42.07				
Outside City Limits	\$ 46.28				
Delivery Fee	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00
Per Pull Fee	\$ 280.00	\$ 290.00	\$ 300.00	\$ 310.00	\$ 310.00
<b>Commercial Shared Rates</b>					
Shared Accounts	\$ 25.02	\$ 25.02	\$ 26.02	\$ 26.02	\$ 26.02

## Commercial Rate Matrix

FY 2020						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 37.06	\$ 74.11	\$ 111.23	\$ 148.24	\$ 185.30	\$ 222.47
3	\$ 55.61	\$ 111.23	\$ 166.84	\$ 222.47	\$ 278.07	\$ 333.68
4	\$ 74.11	\$ 148.24	\$ 222.47	\$ 296.47	\$ 370.58	\$ 444.91
Proposed Rate Increase	0%					

FY 2021						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 37.06	\$ 74.11	\$ 111.23	\$ 148.24	\$ 185.30	\$ 222.47
3	\$ 55.61	\$ 111.23	\$ 166.84	\$ 222.47	\$ 278.07	\$ 333.68
4	\$ 74.11	\$ 148.24	\$ 222.47	\$ 296.47	\$ 370.58	\$ 444.91
Proposed Rate Increase	0%					

FY 2022						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 38.54	\$ 77.07	\$ 115.68	\$ 154.17	\$ 192.71	\$ 231.37
3	\$ 57.83	\$ 115.68	\$ 173.51	\$ 231.37	\$ 289.19	\$ 347.03
4	\$ 77.07	\$ 154.17	\$ 231.37	\$ 308.33	\$ 385.40	\$ 462.71
Proposed Rate Increase	4.0%					

FY 2023						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 38.54	\$ 77.07	\$ 115.68	\$ 154.17	\$ 192.71	\$ 231.37
3	\$ 57.83	\$ 115.68	\$ 173.51	\$ 231.37	\$ 289.19	\$ 347.03
4	\$ 77.07	\$ 154.17	\$ 231.37	\$ 308.33	\$ 385.40	\$ 462.71
Proposed Rate Increase	0.0%					

FY 2024						
	Frequency of Collection					
	1	2	3	4	5	6
	1x	2x	3x	4x	5x	6x
Cubic Yard Capacity						
2	\$ 38.54	\$ 77.07	\$ 115.68	\$ 154.17	\$ 192.71	\$ 231.37
3	\$ 57.83	\$ 115.68	\$ 173.51	\$ 231.37	\$ 289.19	\$ 347.03
4	\$ 77.07	\$ 154.17	\$ 231.37	\$ 308.33	\$ 385.40	\$ 462.71
Proposed Rate Increase	0%					



**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 4 - Proposed Revenue Reconciliation**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Residential</b>					
2	Net Revenue Requirement	\$ 3,623,112	\$ 3,024,825	\$ 3,182,373	\$ 3,221,148	\$ 3,261,056
3	Revenue	\$ 3,078,712	\$ 3,094,106	\$ 3,233,959	\$ 3,250,129	\$ 3,266,380
4	Over/(Under)	\$ (544,400)	\$ 69,281	\$ 51,586	\$ 28,981	\$ 5,324
5	Cumulative Over/(Under)	\$ (544,400)	\$ (475,119)	\$ (423,533)	\$ (394,552)	\$ (389,228)
6	<b>Commercial Rear Load</b>					
7	Net Revenue Requirement	\$ 1,764,065	\$ 1,541,213	\$ 1,592,064	\$ 1,646,035	\$ 1,700,366
8	Revenue					
9	Commercial	\$ 943,834	\$ 948,553	\$ 991,408	\$ 996,365	\$ 1,001,347
10	Apartment Resident Paying with Dumpster	652,332	655,594	685,226	688,653	692,096
11	Shared Accounts	68,838	69,182	72,309	72,670	73,034
12	Total Revenue	\$ 1,665,004	\$ 1,673,329	\$ 1,748,943	\$ 1,757,688	\$ 1,766,477
13	Over/(Under)	\$ (99,061)	\$ 132,115	\$ 156,880	\$ 111,653	\$ 66,110
14	Cumulative Over/(Under)	\$ (99,061)	\$ 33,054	\$ 189,934	\$ 301,587	\$ 367,697
15	<b>Roll-Off</b>					
16	Revenue Requirement	\$ 385,580	\$ 326,025	\$ 337,307	\$ 343,362	\$ 349,489
17	Less Costs allocated to Residential	\$ (203,555)	\$ (172,115)	\$ (178,071)	\$ (181,267)	\$ (184,502)
18	Net Revenue Requirement	\$ 182,025	\$ 153,910	\$ 159,236	\$ 162,095	\$ 164,987
19	Revenue	\$ 141,606	\$ 143,896	\$ 148,868	\$ 153,885	\$ 158,950
20	Over/(Under)	\$ (40,419)	\$ (10,015)	\$ (10,369)	\$ (8,209)	\$ (6,038)
21	Cumulative Over/(Under)	\$ (40,419)	\$ (50,434)	\$ (60,802)	\$ (69,011)	\$ (75,049)
22	<b>Street Sweeping</b>					
23	Net Revenue Requirement	\$ 542,564	\$ 495,659	\$ 512,697	\$ 515,838	\$ 519,130
24	Revenue	\$ 391,200	\$ 393,156	\$ 528,445	\$ 531,087	\$ 533,743
25	Over/(Under)	\$ (151,364)	\$ (102,503)	\$ 15,748	\$ 15,249	\$ 14,613
26	Cumulative Over/(Under)	\$ (151,364)	\$ (253,867)	\$ (238,120)	\$ (222,870)	\$ (208,257)
27	<b>Total Revenue Requirement</b>	\$ 6,111,767	\$ 5,215,608	\$ 5,446,371	\$ 5,545,116	\$ 5,645,539
28	<b>Total Revenues</b>	\$ 5,276,522	\$ 5,304,487	\$ 5,660,215	\$ 5,692,790	\$ 5,725,549
29	<b>Total Over/(Under)</b>	\$ (835,244)	\$ 88,879	\$ 213,845	\$ 147,674	\$ 80,010
30	<b>Cumulative Over/(Under)</b>	\$ (835,244)	\$ (746,365)	\$ (532,521)	\$ (384,847)	\$ (304,837)

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 4 - Proposed Reserves

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Working Capital Reserve</b>					
2	Beginning Balance	\$ 1,000,000	\$ 222,093	\$ 403,575	\$ 711,838	\$ 957,013
3	Additions:					
4	Capital Contributions	\$ -	\$ -	\$ -	\$ -	\$ -
5	Rolling Stock Funding	47,337	90,383	117,701	118,520	119,364
6	Interest	10,000	2,221	4,036	7,118	9,570
7	Over-Recovery of Rates	-	88,879	213,845	147,674	80,010
8	Reductions:					
9	Capital Projects	\$ -	\$ -	\$ -	\$ -	\$ -
10	Rolling Stock Purchases	-	-	(27,318)	(28,138)	(28,982)
11	Under-Recovery of Rates	(835,244)	-	-	-	-
12	Ending Balance	\$ 222,093	\$ 403,575	\$ 711,838	\$ 957,013	\$ 1,136,976

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 5 - 5-Year Revenue Requirement

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
1	<b>9180000 - SUA-Waste Mgmt Fund</b>						
2	71000 - Transfer Out	\$ 1,928,556	\$ 900,000	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000	None
3	Expenditure Total:	<u>\$ 1,928,556</u>	<u>\$ 900,000</u>	<u>\$ 1,000,000</u>	<u>\$ 1,000,000</u>	<u>\$ 1,000,000</u>	
4	<b>9184818 - Solid Waste Administration</b>						
5	51001 - Full Time	\$ 165,198	\$ 165,198	\$ 165,198	\$ 165,198	\$ 165,198	Salaries
6	51021 - Social Security	8,177	8,177	8,177	8,177	8,177	Salaries
7	51022 - Retirement	6,612	6,612	6,612	6,612	6,612	Salaries
8	51023 - Health Insurance	11,987	12,347	12,717	13,099	13,491	Benefits
9	52012 - Vehicle Repair Parts	700	721	743	765	788	Vehicle Maintenance
10	52031 - Office Supplies	100	102	105	107	110	General
11	52036 - Janitorial Supplies	1,500	1,535	1,570	1,606	1,643	General
12	52042 - Food	700	716	733	749	767	General
13	52043 - Vehicle Fuel & Oil	1,000	1,030	1,061	1,093	1,126	Fuel
14	52900 - Clearing-Materials & Supplies	-	-	-	-	-	General
15	53001 - Natural Gas	3,000	3,069	3,140	3,212	3,286	General
16	53004 - Telecommunications	4,700	4,808	4,919	5,032	5,148	General
17	53013 - Land Rental	11,689	11,958	12,233	12,514	12,802	General
18	53020 - Repair-Structures	10,000	10,300	10,609	10,927	11,255	General Maintenance
19	53022 - Repair-Office Equipment	-	-	-	-	-	General Maintenance
20	53047 - Public Education	2,500	2,558	2,616	2,676	2,738	General
21	53049 - Cash Short	-	-	-	-	-	General
22	53055 - In-Service Training	5,000	5,115	5,233	5,353	5,476	General
23	53068 - Travel Expense	5,000	5,115	5,233	5,353	5,476	General
24	53069 - Professional Services	11,000	11,253	11,512	11,777	12,047	General
25	53076 - Bad Debt Expense	40,000	40,920	41,861	42,824	43,809	General
26	53124 - Tort Claim	-	-	-	-	-	General
27	53900 - Clearing-Other Services & Fees	-	-	-	-	-	General
28	54999 - Transfer to Assets-Capital	-	-	-	-	-	General
29	55500 - Interest Exp-Capital Lease	-	-	-	-	-	General
30	56001 - Indirect Costs	230,523	235,825	241,249	246,798	252,474	General
31	56002 - SUA Overhead Allocation	26,000	26,598	27,210	27,836	28,476	General
32	57000 - Depreciation Expense	-	-	-	-	-	General
33	<b>Utilities Waste Management Administration</b>	<u>\$ 545,386</u>	<u>\$ 553,956</u>	<u>\$ 562,728</u>	<u>\$ 571,707</u>	<u>\$ 580,898</u>	
34	<b>9184819 - Solid Waste Residential</b>						
35	51001 - Full Time	\$ 405,747	\$ 405,747	\$ 405,747	\$ 405,747	\$ 405,747	Salaries
36	51002 - Part Time	-	-	-	-	-	Salaries
37	51003 - Overtime	25,000	25,000	25,000	25,000	25,000	Salaries
38	51021 - Social Security	31,212	31,212	31,212	31,212	31,212	Salaries
39	51022 - Retirement	25,845	25,845	25,845	25,845	25,845	Salaries
40	51023 - Health Insurance	131,865	135,821	139,896	144,092	148,415	Benefits
41	51025 - Workers' Compensation	27,817	27,817	27,817	27,817	27,817	Salaries
42	51045 - Temporary Labor Services	-	-	-	-	-	General
43	52012 - Vehicle Repair Parts	75,000	77,250	79,568	81,955	84,413	Vehicle Maintenance
44	52024 - Other Equipment Parts	60,000	61,800	63,654	65,564	67,531	General Maintenance
45	52041 - Clothing & Uniforms	7,100	7,263	7,430	7,601	7,776	General
46	52043 - Vehicle Fuel & Oil	90,000	92,700	95,481	98,345	101,296	Fuel
47	52045 - Tools	900	921	942	964	986	General
48	52046 - Minor Supplies	3,000	3,069	3,140	3,212	3,286	General
49	52048 - Safety Equipment	1,200	1,228	1,256	1,285	1,314	General
50	53047 - Public Education	4,500	4,604	4,709	4,818	4,929	General
51	53073 - Landfill Services	270,000	276,210	282,563	289,062	295,710	General
52	55000 - Capital Lease Payments	369,031	369,031	406,855	406,855	406,855	None
53	56002 - SUA Overhead Allocation	313,359	320,566	327,939	335,482	343,198	General
54	<b>Subtotal Solid Waste Residential</b>	<u>\$ 1,841,576</u>	<u>\$ 1,866,083</u>	<u>\$ 1,929,053</u>	<u>\$ 1,954,855</u>	<u>\$ 1,981,329</u>	

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 5 - 5-Year Revenue Requirement

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
55	<b>9184820 - Solid Waste Commercial</b>						
56	51001 - Full Time	\$ 321,548	\$ 321,548	\$ 321,548	\$ 321,548	\$ 321,548	Salaries
57	51003 - Overtime	20,000	20,000	20,000	20,000	20,000	Salaries
58	51021 - Social Security	24,450	24,450	24,450	24,450	24,450	Salaries
59	51022 - Retirement	20,493	20,493	20,493	20,493	20,493	Salaries
60	51023 - Health Insurance	59,939	61,737	63,589	65,497	67,462	Benefits
61	51025 - Workers' Compensation	-	-	-	-	-	Salaries
62	52012 - Vehicle Repair Parts	75,000	77,250	79,568	81,955	84,413	Vehicle Maintenance
63	52024 - Other Equipment Parts	5,000	5,150	5,305	5,464	5,628	General Maintenance
64	52041 - Clothing & Uniforms	7,000	7,161	7,326	7,494	7,667	General
65	52043 - Vehicle Fuel & Oil	50,000	51,500	53,045	54,636	56,275	Fuel
66	52048 - Safety Equipment	1,000	1,023	1,047	1,071	1,095	General
67	52050 - Welding Supplies	10,000	10,230	10,465	10,706	10,952	General
68	53066 - Miscellaneous Services	4,500	4,604	4,709	4,818	4,929	General
69	53073 - Landfill Services	300,000	306,900	313,959	321,180	328,567	General
70	55000 - Capital Lease Payments	243,169	278,636	278,636	307,120	335,604	None
71	56002 - SUA Overhead Allocation	146,844	150,221	153,677	157,211	160,827	General
72	<b>Subtotal Solid Waste Commercial</b>	<b>\$ 1,288,943</b>	<b>\$ 1,340,903</b>	<b>\$ 1,357,815</b>	<b>\$ 1,403,642</b>	<b>\$ 1,449,909</b>	
73	<b>9184821 - Solid Waste Street Sweeping</b>						
74	51001 - Full Time	\$ 94,912	\$ 94,912	\$ 94,912	\$ 94,912	\$ 94,912	Salaries
75	51003 - Overtime	1,000	1,000	1,000	1,000	1,000	Salaries
76	51021 - Social Security	7,031	7,031	7,031	7,031	7,031	Salaries
77	51022 - Retirement	5,759	5,759	5,759	5,759	5,759	Salaries
78	51023 - Health Insurance	35,963	37,042	38,153	39,298	40,477	Benefits
79	51025 - Workers' Compensation	36,022	36,022	36,022	36,022	36,022	Salaries
80	52012 - Vehicle Repair Parts	20,000	20,600	21,218	21,855	22,510	Vehicle Maintenance
81	52041 - Clothing & Uniforms	700	716	733	749	767	General
82	52043 - Vehicle Fuel & Oil	10,000	10,300	10,609	10,927	11,255	Fuel
83	53069 - Professional Services	-	-	-	-	-	General
84	55000 - Capital Lease Payments	-	-	-	-	-	None
85	56002 - SUA Overhead Allocation	49,600	50,741	51,908	53,102	54,323	General
86	<b>Subtotal Solid Waste Street Sweeping</b>	<b>\$ 260,987</b>	<b>\$ 264,123</b>	<b>\$ 267,345</b>	<b>\$ 270,655</b>	<b>\$ 274,056</b>	
87	<b>9184822 - Solid Waste Convenience Collection Center</b>						
88	51001 - Full Time	\$ 18,144	\$ 18,144	\$ 18,144	\$ 18,144	\$ 18,144	Salaries
89	51003 - Overtime	-	-	-	-	-	Salaries
90	51021 - Social Security	1,327	1,327	1,327	1,327	1,327	Salaries
91	51022 - Retirement	1,093	1,093	1,093	1,093	1,093	Salaries
92	51023 - Health Insurance	-	-	-	-	-	Benefits
93	52041 - Clothing & Uniforms	-	-	-	-	-	General
94	53066 - Miscellaneous Services	50,000	51,150	52,326	53,530	54,761	General
95	<b>Subtotal Solid Waste Convenience Collection Center</b>	<b>\$ 70,564</b>	<b>\$ 71,714</b>	<b>\$ 72,890</b>	<b>\$ 74,094</b>	<b>\$ 75,325</b>	
96	<b>9184823 - Solid Waste Roll-off Service</b>						
97	51001 - Full Time	\$ 81,143	\$ 81,143	\$ 81,143	\$ 81,143	\$ 81,143	Salaries
98	51003 - Overtime	8,000	8,000	8,000	8,000	8,000	Salaries
99	51021 - Social Security	6,425	6,425	6,425	6,425	6,425	Salaries
100	51022 - Retirement	5,341	5,341	5,341	5,341	5,341	Salaries
101	51023 - Health Insurance	11,988	12,348	12,718	13,100	13,493	Benefits
102	51025 - Workers' Compensation	11,403	11,403	11,403	11,403	11,403	Salaries
103	52012 - Vehicle Repair Parts	15,000	15,450	15,914	16,391	16,883	Vehicle Maintenance
104	52041 - Clothing & Uniforms	700	716	733	749	767	General
105	52043 - Vehicle Fuel & Oil	15,000	15,450	15,914	16,391	16,883	Fuel
106	53073 - Landfill Services	72,000	73,656	75,350	77,083	78,856	General
107	55000 - Capital Lease Payments	114,069	106,102	108,299	112,706	117,112	None
108	<b>Subtotal Solid Waste Roll-off Service</b>	<b>\$ 341,069</b>	<b>\$ 336,034</b>	<b>\$ 341,239</b>	<b>\$ 348,732</b>	<b>\$ 356,305</b>	

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 5 - 5-Year Revenue Requirement

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
109	<b>9184824 - Solid Waste Recycling</b>						
110	51001 - Full Time	\$ 122,062	\$ 122,062	\$ 122,062	\$ 122,062	\$ 122,062	Salaries
111	51003 - Overtime	4,000	4,000	4,000	4,000	4,000	Salaries
112	51021 - Social Security	9,476	9,476	9,476	9,476	9,476	Salaries
113	51022 - Retirement	7,564	7,564	7,564	7,564	7,564	Salaries
114	51023 - Health Insurance	11,988	12,348	12,718	13,100	13,493	Benefits
115	51025 - Workers' Compensation	473	473	473	473	473	Salaries
116	52012 - Vehicle Repair Parts	6,000	6,180	6,365	6,556	6,753	Vehicle Maintenance
117	52041 - Clothing & Uniforms	700	716	733	749	767	General
118	52043 - Vehicle Fuel & Oil	10,000	10,300	10,609	10,927	11,255	Fuel
119	53047 - Public Education	3,000	3,069	3,140	3,212	3,286	General
120	53073 - Landfill Services	180,000	184,140	188,375	192,708	197,140	General
121	55000 - Capital Lease Payments	-	-	-	-	-	None
122	<b>Subtotal Solid Waste Recycling</b>	<b>\$ 355,263</b>	<b>\$ 360,328</b>	<b>\$ 365,515</b>	<b>\$ 370,827</b>	<b>\$ 376,268</b>	
123	<b>9284818 - Utilities Waste Mgmt Admin - RESERVE FUND</b>						
124	53069 - Professional Services	\$ -	\$ -	\$ -	\$ -	\$ -	None
125	<b>Expenditure Total:</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
126	<b>9284821 - Util Waste Mgmt Street sweep - RESERVE FUND</b>						
127	54001 - Vehicles	\$ -	\$ -	\$ -	\$ -	\$ -	None
128	<b>Expenditure Total:</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
129	<b>9284823 - Waste Mgmt Roll-off Service - RESERVE FUND</b>						
130	54001 - Vehicles	\$ -	\$ -	\$ -	\$ -	\$ -	None
131	<b>Expenditure Total:</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
132	<b>Capital Improvement Plan</b>						
133	Parking Lot Improvements	\$ -	\$ -	\$ -	\$ 400,000	\$ 400,000	None
134	Street Sweeper (2025)	47,337	47,337	47,337	47,337	47,337	None
135	Street Sweeper (2027)	-	43,046	43,046	43,046	43,046	None
136	Pickup Trucks	-	-	27,318	28,138	28,982	None
137	Recycling Staging Facility	-	800,000	800,000	258,194	264,132	General
138	<b>Subtotal Capital Improvement Plan</b>	<b>\$ 47,337</b>	<b>\$ 890,383</b>	<b>\$ 917,701</b>	<b>\$ 776,714</b>	<b>\$ 783,497</b>	
139	<b>Proposed Debt</b>						
140	Principal	\$ -	\$ -	\$ -	\$ -	\$ -	None
141	Interest	-	-	-	-	-	None
142	<b>Subtotal Proposed Debt</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	
143	<b>TOTAL EXPENSES</b>	<b>\$ 6,679,682</b>	<b>\$ 6,583,523</b>	<b>\$ 6,814,286</b>	<b>\$ 6,771,225</b>	<b>\$ 6,877,587</b>	
144	<b>REVENUES</b>						
145	44504 - Residential Refuse Sales	\$ 28,415	\$ 28,415	\$ 28,415	\$ 28,415	\$ 28,415	None
146	44505 - Commercial Refuse Sales	95,220	95,220	95,220	95,220	95,220	None
147	44506 - Residential Recycling	-	-	-	-	-	None
148	44507 - Commercial Recycling	-	-	-	-	-	None
149	44508 - Roll-Off Container	-	-	-	-	-	None
150	44509 - Street Sweeping	-	-	-	-	-	None
151	48006 - Blue Trash Bags	10,000	10,000	10,000	10,000	10,000	None
152	48213 - Collection Center-Recycling	12,000	12,000	12,000	12,000	12,000	None
153	48214 - Collection Center-Refuse	25,000	25,000	25,000	25,000	25,000	None
154	48700 - Miscellaneous Revenue	-	-	-	-	-	None
155	48721 - Gain on Sale of Assets	-	-	-	-	-	None

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 5 - 5-Year Revenue Requirement

Line No.	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024	Inflation Factor
156 48903 - SUA Revenue Allocation	397,280	397,280	397,280	397,280	397,280	None
157 Subtotal Revenues	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	
158 61000 - Transfer In	\$ -	\$ -	\$ -	\$ -	\$ -	None
159 Revenue Total:	\$ -	\$ -	\$ -	\$ -	\$ -	
160 TOTAL REVENUES	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	\$ 567,915	
161 Net Revenue Requirement	\$ 6,111,767	\$ 6,015,608	\$ 6,246,371	\$ 6,203,310	\$ 6,309,672	

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 5 - Capital Improvement Plan

Line No.	Description	Year 1 FY 2020	Year 2 FY 2021	Year 3 FY 2022	Year 4 FY 2023	Year 5 FY 2024	Year 6 FY 2025	Year 7 FY 2026	Year 8 FY 2027	Year 9 FY 2028	Year 10 FY 2029	Total	Notes
1	<b>Facility Improvements</b>												
2	Parking Lot	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,400,000	\$ -	\$ -	\$ -	\$ 1,400,000	A
3	Sum:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,400,000	\$ -	\$ -	\$ -	\$ 1,400,000	
4	<b>FY 2020 - FY 2024 Total:</b>	\$ -											
5	<b>Rolling Stock Purchases</b>												
6	Street Sweeper	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 284,022	\$ -	\$ -	\$ -	\$ -	\$ 284,022	B
7	Street Sweeper	-	-	-	-	-	-	-	301,319	-	-	301,319	C
8	Pickup Truck	-	-	27,318	28,138	28,982	29,851	30,747	31,669	-	-	176,705	D
9	Sum:	\$ -	\$ -	\$ 27,318	\$ 28,138	\$ 28,982	\$ 313,873	\$ 30,747	\$ 332,988	\$ -	\$ -	\$ 762,046	
10	<b>FY 2020 - FY 2024 Total:</b>	\$ 84,438											
11	<b>Funding Schedule</b>												
12	Street Sweeper	\$ 47,337	\$ 47,337	\$ 47,337	\$ 47,337	\$ 47,337	\$ 47,337	\$ 49,902	\$ 49,902	\$ 49,902	\$ 49,902	\$ 483,629	E
13	Street Sweeper	-	43,046	43,046	43,046	43,046	43,046	43,046	43,046	52,941	52,941	407,200	F
14	Pickup Truck	-	-	27,318	28,138	28,982	29,851	30,747	31,669	-	-	176,705	D
15	Parking Lot	-	-	-	400,000	400,000	300,000	300,000	-	-	-	1,400,000	G
16	Sum:	\$ 47,337	\$ 90,383	\$ 117,701	\$ 518,520	\$ 519,364	\$ 420,234	\$ 423,694	\$ 124,616	\$ 102,842	\$ 102,842	\$ 2,467,534	
17	<b>FY 2020 - FY 2024 Total:</b>	\$ 1,293,305											
18	<b>Lease Obligations</b>												
19	Schedule #038 - Four Freightliner Trucks	\$ 80,632	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 80,632	H
20	Schedule #039 Two Mack Roll Off Trucks	37,145	-	-	-	-	-	-	-	-	-	37,145	I
21	Schedule #040 - Six trucks for Waste Management	369,031	369,031	-	-	-	-	-	-	-	-	738,062	J
22	Schedule #041 - Seven Freightliner Refuse Trucks	162,537	278,636	278,636	139,318	-	-	-	-	-	-	859,127	K
23	Schedule #041 - Two Roll off trucks	40,849	70,027	70,027	35,013	-	-	-	-	-	-	215,916	L
24	Schedule #042 - One Roll off truck	36,075	36,075	-	-	-	-	-	-	-	-	72,150	M
25	Schedule #043 - Six trucks for Waste Management	-	-	406,855	406,855	406,855	-	-	-	-	-	1,220,565	N
26	Schedule #044 - Seven Freightliner Refuse Trucks	-	-	-	167,802	335,604	335,604	167,802	-	-	-	1,006,811	O
27	Schedule #044 - Two Roll off trucks	-	-	-	39,420	78,840	78,840	39,420	-	-	-	236,521	P
28	Schedule #045 - One Roll off truck	-	-	38,272	38,272	38,272	-	-	-	-	-	114,816	Q
29	Schedule #046 - Six trucks for Waste Management	-	-	-	-	-	444,582	444,582	444,582	-	-	1,333,745	R
30	Schedule #047 - Seven Freightliner Refuse Trucks	-	-	-	-	-	183,362	366,723	366,723	366,723	183,362	1,100,170	S
31	Schedule #047 - Two Roll off trucks	-	-	-	-	-	43,075	86,151	86,151	86,151	43,075	258,453	T
32	Schedule #048 - One Roll off truck	-	-	-	-	-	41,821	41,821	41,821	-	-	125,462	U
33	Schedule #049 - Six trucks for Waste Management	-	-	-	-	-	-	-	485,806	485,806	-	971,613	V
34	Schedule #050 - Seven Freightliner Refuse Trucks	-	-	-	-	-	-	-	-	-	200,364	200,364	W
35	Schedule #050 - Two Roll off trucks	-	-	-	-	-	-	-	-	-	47,070	47,070	X
36	Schedule #051 - One Roll off truck	-	-	-	-	-	-	-	45,699	45,699	-	91,397	Y
37	Sum:	\$ 726,269	\$ 753,768	\$ 793,790	\$ 826,680	\$ 859,571	\$ 900,846	\$ 920,062	\$ 939,277	\$ 984,379	\$ 1,005,376	\$ 8,710,019	
38	<b>FY 2020 - FY 2024 Total:</b>	\$ 3,960,079											

**Notes:**

A. Per City staff, the City plans on repairing its parking lot in FY 2026.

B. Per City staff, a Street Sweeper costs \$245,000, NewGen has inflated this cost by 3% over 5 years ( $\$245,000 \times (1.03^5) = \$284,022$ ).C. Per City staff, a Street Sweeper costs \$245,000, NewGen has inflated this cost by 3% over 7 years ( $\$245,000 \times (1.03^7) = \$301,319$ ).

D. Per City staff, the City plans on purchasing a pickup truck each year for 6 years starting in Year 3. NewGen has assumed 3% inflation on a \$25,000 pickup truck.

E. The City has 6 years to fund the purchase of the street sweeper in 2025, NewGen has planned on setting aside monies each year to fund the vehicle purchase in 2025 ( $\$284,022/6 = \$47,337$ ). In year 7, NewGen has assumed the City would begin to fund the purchase of the next street sweeper using a seven-year life ( $(\$284,022 \times 1.03^7)/7 = \$49,902$ ).

- F. The City has 7 years to fund the purchase of the street sweeper in 2027, NewGen has planned on setting aside monies each year to fund the vehicle purchase in 2027  $(\$301,319/7 = \$43,046)$ . In year 9, NewGen has assumed the City would begin to fund the purchase of the next street sweeper using a seven-year life  $((\$301,319 \times 1.03^7)/7) = \$52,941$ .
- G. Beginning in Year 4, the City has 4 years to fund the parking lot improvements.
- H. Per the buyback agreement, the City paid for 6 months of Schedule #038 in FY 2020.
- I. Per the buyback agreement, the City paid for 6 months of Schedule #039 in FY 2020.
- J. The City will stop paying lease payments for Schedule #40 in June of 2021.
- K. The City will stop paying lease payments for the seven rear load trucks in Schedule #041 in December 2022.
- L. The City will stop paying lease payments for the two Roll off trucks in Schedule #041 in Decembmer 2022.
- M. The City will stop paying lease payments for the one Roll off truck in Schedule #042 in June 2021.
- N. NewGen estimated future lease payments by multiplying the purchase price of six side load trucks by 3% over 2 years, and assumed the same lease schedule as schedule #040, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$295,000 \times 1.03^2) \times 6 \text{ trucks} \times 65\% / 3 \text{ years} = \$406,855$
- O. NewGen estimated future lease payments by multiplying the purchase price of seven rear load trucks by 3% over 3 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$202,500 \times 1.03^3) \times 7 \text{ trucks} \times 65\% / 3 \text{ years} = \$335,604$ . The first and last years are split into 6 month payments to reflect schedule #041.
- P. NewGen estimated future lease payments by multiplying the purchase price of two roll off trucks by 3% over 3 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^3) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$78,840$ . The first and last years are split into 6 month payments to reflect schedule #041.
- Q. NewGen estimated future lease payments by multiplying the purchase price of one roll off truck by 3% over 5 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^5) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$38,272$ .
- R. NewGen estimated future lease payments by multiplying the purchase price of six side load trucks by 3% over 5 years, and assumed the same lease schedule as schedule #040, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$295,000 \times 1.03^5) \times 6 \text{ trucks} \times 65\% / 3 \text{ years} = \$444,582$
- S. NewGen estimated future lease payments by multiplying the purchase price of seven rear load trucks by 3% over 6 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$202,500 \times 1.03^6) \times 7 \text{ trucks} \times 65\% / 3 \text{ years} = \$366,723$ . The first and last years are split into 6 month payments to reflect schedule #041.
- T. NewGen estimated future lease payments by multiplying the purchase price of two roll off trucks by 3% over 6 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^6) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$86,151$ . The first and last years are split into 6 month payments to reflect schedule #041.
- U. NewGen estimated future lease payments by multiplying the purchase price of one roll off truck by 3% over 5 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^5) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$41,821$ .
- V. NewGen estimated future lease payments by multiplying the purchase price of six side load trucks by 3% over 8 years, and assumed the same lease schedule as schedule #040, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$295,000 \times 1.03^8) \times 6 \text{ trucks} \times 65\% / 3 \text{ years} = \$485,806$
- W. NewGen estimated future lease payments by multiplying the purchase price of seven rear load trucks by 3% over 9 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$202,500 \times 1.03^9) \times 7 \text{ trucks} \times 65\% / 3 \text{ years} = \$3400,728$ . The first and last years are split into 6 month payments to reflect schedule #041.
- X. NewGen estimated future lease payments by multiplying the purchase price of two roll off trucks by 3% over 9 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^9) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$94,139$ . The first and last years are split into 6 month payments to reflect schedule #041.
- Y. NewGen estimated future lease payments by multiplying the purchase price of one roll off truck by 3% over 8 years, and assumed that after the buyback the City would pay for 65% of the total purchase price of the vehicles  $(\$166,500 \times 1.03^8) \times 2 \text{ trucks} \times 65\% / 3 \text{ years} = \$45,699$ .



**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 5 - 5-Year Summary**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Residential Collection</b>					
2	Refuse	\$ 759,387	\$ 769,017	\$ 801,737	\$ 811,794	\$ 822,118
3	Recycling	524,227	1,329,988	1,344,975	809,031	820,975
4	Yard Waste	235,899	238,622	245,528	248,398	251,344
5	Glass	6,964	7,039	7,574	7,653	7,736
6	Bulky Waste	459	4,009	4,096	4,258	4,420
7	Container Maintenance/Delivery	207,231	209,679	212,189	214,763	217,402
8	Subtotal Residential Collection	\$ 1,734,165	\$ 2,558,354	\$ 2,616,099	\$ 2,095,897	\$ 2,123,994
9	<b>Commercial Rear-Load</b>					
10	Refuse	\$ 735,256	\$ 777,103	\$ 785,481	\$ 821,148	\$ 857,051
11	Cardboard	54,096	54,838	55,145	55,816	56,496
12	Container Maintenance/Delivery	87,549	88,394	89,261	90,149	91,060
13	Subtotal Commercial Rear-Load	\$ 876,901	\$ 920,336	\$ 929,886	\$ 967,113	\$ 1,004,607
14	<b>Commercial Roll-off</b>					
15	Refuse/Recycling	\$ 192,429	\$ 193,908	\$ 196,318	\$ 200,194	\$ 204,099
16	Container Maintenance/Delivery	-	-	-	-	-
17	Subtotal Commercial Roll-off	\$ 192,429	\$ 193,908	\$ 196,318	\$ 200,194	\$ 204,099
18	Disposal	\$ 822,000	\$ 840,906	\$ 860,247	\$ 880,033	\$ 900,273
19	Convenience Collection Center	\$ 80,045	\$ 69,492	\$ 71,700	\$ 74,644	\$ 77,626
20	Street Sweeping	\$ 329,564	\$ 375,936	\$ 379,354	\$ 382,865	\$ 386,472
21	Administration	\$ 2,076,662	\$ 1,056,676	\$ 1,192,766	\$ 1,602,565	\$ 1,612,600
22	Total	\$ 6,111,767	\$ 6,015,608	\$ 6,246,371	\$ 6,203,310	\$ 6,309,672

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 5 - Residential Cost of Service**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Direct Costs</b>					
2	Residential Collection					
3	Refuse	\$ 759,387	\$ 769,017	\$ 801,737	\$ 811,794	\$ 822,118
4	Recycling	524,227	1,329,988	1,344,975	809,031	820,975
5	Yard Waste	235,899	238,622	245,528	248,398	251,344
6	Glass	6,964	7,039	7,574	7,653	7,736
7	Bulky Waste	459	4,009	4,096	4,258	4,420
8	Container Maintenance/Delivery	207,231	209,679	212,189	214,763	217,402
9	Subtotal Residential Collection	\$ 1,734,165	\$ 2,558,354	\$ 2,616,099	\$ 2,095,897	\$ 2,123,994
10	Convenience Collection Center	\$ 80,045	\$ 69,492	\$ 71,700	\$ 74,644	\$ 77,626
11	Portion of Roll-off	\$ 203,555	\$ 165,782	\$ 171,121	\$ 190,082	\$ 193,281
12	<b>Indirect Costs</b>					
13	Administration	\$ 1,172,543	\$ 674,299	\$ 764,522	\$ 934,883	\$ 935,086
14	<b>Disposal Cost</b>					
15	Residential Refuse	\$ 272,923	\$ 279,201	\$ 285,622	\$ 292,192	\$ 298,912
16	Recycling	113,292	115,898	118,563	121,290	124,079
17	Collection Center	46,588	47,660	48,756	49,877	51,025
18	Total Disposal	\$ 432,804	\$ 442,758	\$ 452,942	\$ 463,359	\$ 474,017
19	<b>Total Residential Cost of Service</b>	<b>\$ 3,623,112</b>	<b>\$ 3,910,685</b>	<b>\$ 4,076,384</b>	<b>\$ 3,758,865</b>	<b>\$ 3,804,003</b>
20	Billing Units (Customers by Cart Size)					
21	35	1,481	1,488	1,496	1,503	1,511
22	48	186	187	188	189	190
23	64	2,432	2,444	2,457	2,469	2,481
24	96	9,257	9,303	9,350	9,396	9,443
25	Customers with Extra					
26	128	26	26	27	27	27
27	192	424	426	428	431	433
28	Total Units	13,806	13,875	13,944	14,014	14,084
29	<b>Direct Costs</b>					
30	Residential Collection					
31	Refuse	\$ 4.58	\$ 4.62	\$ 4.79	\$ 4.83	\$ 4.86
32	Recycling	3.16	7.99	8.04	4.81	4.86
33	Yard Waste	1.42	1.43	1.47	1.48	1.49
34	Glass	0.04	0.04	0.05	0.05	0.05
35	Bulky Waste	0.00	0.02	0.02	0.03	0.03
36	Container Maintenance/Delivery	1.25	1.26	1.27	1.28	1.29
37	Subtotal Residential Collection	\$ 10.47	\$ 15.37	\$ 15.63	\$ 12.46	\$ 12.57
38	Portion of Roll-off	\$ 1.23	\$ 1.00	\$ 1.02	\$ 1.13	\$ 1.14
39	Convenience Collection Center	\$ 0.48	\$ 0.42	\$ 0.43	\$ 0.44	\$ 0.46
40	<b>Indirect Cost</b>					
41	Administration	\$ 7.08	\$ 4.05	\$ 4.57	\$ 5.56	\$ 5.53
		\$ 7.08	\$ 4.05	\$ 4.57	\$ 5.56	\$ 5.53
42	Budgeted Landfill Services	\$ 432,804	\$ 442,758	\$ 452,942	\$ 463,359	\$ 474,017
43	Monthly Capacity	5,156,112	5,181,893	5,207,802	5,233,841	5,260,011
44	\$/Gallon per month	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.01
45	Monthly Disposal cost (by Container size)					
46	35	\$ 1.06	\$ 1.08	\$ 1.10	\$ 1.12	\$ 1.14
47	48	\$ 1.45	\$ 1.48	\$ 1.51	\$ 1.53	\$ 1.56
48	64	\$ 1.94	\$ 1.97	\$ 2.01	\$ 2.05	\$ 2.08

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 5 - Residential Cost of Service**

			Year 1 2020		Year 2 2021		Year 3 2022		Year 4 2023		Year 5 2024
49	96	\$	2.91	\$	2.96	\$	3.02	\$	3.07	\$	3.12
50	128	\$	3.88	\$	3.95	\$	4.02	\$	4.09	\$	4.17
51	192	\$	5.82	\$	5.92	\$	6.03	\$	6.14	\$	6.25
52	<b>Monthly COS (Single Cart)</b>										
53	35	\$	20.32	\$	21.91	\$	22.75	\$	20.72	\$	20.84
54	48	\$	20.71	\$	22.31	\$	23.16	\$	21.13	\$	21.26
55	64	\$	21.20	\$	22.80	\$	23.66	\$	21.64	\$	21.79
56	96	\$	22.17	\$	23.79	\$	24.67	\$	22.67	\$	22.83
57	<b>Monthly COS (Multiple Carts)</b>										
58	64	\$	23.14	\$	24.78	\$	25.67	\$	23.69	\$	23.87
59	96	\$	25.08	\$	26.75	\$	27.68	\$	25.73	\$	25.95

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 5 - Current Revenue Reconciliation**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Residential</b>					
2	Net Revenue Requirement	\$ 3,623,112	\$ 3,910,685	\$ 4,076,384	\$ 3,758,865	\$ 3,804,003
3	Revenue	\$ 3,078,712	\$ 3,094,106	\$ 3,109,576	\$ 3,125,124	\$ 3,140,750
4	Over/(Under)	\$ (544,400)	\$ (816,579)	\$ (966,807)	\$ (633,741)	\$ (663,253)
5	Cumulative Over/(Under)	\$ (544,400)	\$ (1,360,979)	\$ (2,327,787)	\$ (2,961,527)	\$ (3,624,781)
6	<b>Commercial Rear Load</b>					
7	Net Revenue Requirement	\$ 1,764,065	\$ 1,484,275	\$ 1,529,707	\$ 1,726,698	\$ 1,782,215
8	Revenue					
9	Commercial	\$ 943,834	\$ 948,553	\$ 953,296	\$ 958,063	\$ 962,853
10	Apartment Resident Paying with Dumpster	652,332	655,594	658,872	662,166	665,477
11	Shared Accounts	68,838	69,182	69,528	69,875	70,225
12	Total Revenue	\$ 1,665,004	\$ 1,673,329	\$ 1,681,696	\$ 1,690,104	\$ 1,698,555
13	Over/(Under)	\$ (99,061)	\$ 189,054	\$ 151,988	\$ (36,593)	\$ (83,660)
14	Cumulative Over/(Under)	\$ (99,061)	\$ 89,993	\$ 241,982	\$ 205,388	\$ 121,728
15	<b>Roll-Off</b>					
16	Revenue Requirement	\$ 385,580	\$ 314,029	\$ 324,142	\$ 360,059	\$ 366,118
17	Less Costs allocated to Residential	\$ (203,555)	\$ (165,782)	\$ (171,121)	\$ (190,082)	\$ (193,281)
18	Net Revenue Requirement	\$ 182,025	\$ 148,247	\$ 153,021	\$ 169,977	\$ 172,837
19	Revenue	\$ 141,606	\$ 142,314	\$ 143,026	\$ 143,741	\$ 144,460
20	Over/(Under)	\$ (40,419)	\$ (5,933)	\$ (9,996)	\$ (26,236)	\$ (28,378)
21	Cumulative Over/(Under)	\$ (40,419)	\$ (46,352)	\$ (56,348)	\$ (82,584)	\$ (110,961)
22	<b>Street Sweeping</b>					
23	Net Revenue Requirement	\$ 542,564	\$ 472,401	\$ 487,258	\$ 547,771	\$ 550,617
24	Revenue	\$ 391,200	\$ 393,156	\$ 395,122	\$ 397,097	\$ 399,083
25	Over/(Under)	\$ (151,364)	\$ (79,245)	\$ (92,137)	\$ (150,673)	\$ (151,534)
26	Cumulative Over/(Under)	\$ (151,364)	\$ (230,609)	\$ (322,746)	\$ (473,419)	\$ (624,953)
27	<b>Total Revenue Requirement</b>	\$ 6,111,767	\$ 6,015,608	\$ 6,246,371	\$ 6,203,310	\$ 6,309,672
28	<b>Total Revenues</b>	\$ 5,276,522	\$ 5,302,905	\$ 5,329,419	\$ 5,356,067	\$ 5,382,847
29	<b>Total Over/(Under)</b>	\$ (835,244)	\$ (712,703)	\$ (916,951)	\$ (847,244)	\$ (926,825)
30	<b>Cumulative Over/(Under)</b>	\$ (835,244)	\$ (1,547,947)	\$ (2,464,898)	\$ (3,312,142)	\$ (4,238,967)

**City of Stillwater, Oklahoma**  
**Cost of Service and Rate Design Study**  
**Scenario 5 - Proposed Rates**

	Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
<b>Residential Rates</b>					
<b><u>Inside City Limits</u></b>					
35-gallon cart	\$ 13.74	\$ 15.32	\$ 15.32	\$ 15.93	\$ 15.93
64-gallon cart	\$ 16.01	\$ 17.85	\$ 17.85	\$ 18.57	\$ 18.57
(2) 64-gallon carts	\$ 26.74	\$ 29.82	\$ 29.82	\$ 31.01	\$ 31.01
96-gallon cart	\$ 18.28	\$ 20.38	\$ 20.38	\$ 21.20	\$ 21.20
(2) 96-gallon carts	\$ 29.93	\$ 33.37	\$ 33.37	\$ 34.71	\$ 34.71
House-side 96-gallon cart	\$ 27.83	\$ 31.03	\$ 31.03	\$ 32.27	\$ 32.27
Opt-Out Rate	\$ 15.36	\$ 17.13	\$ 17.13	\$ 17.81	\$ 17.81
48-gallon cart	\$ 14.87	\$ 16.58	\$ 16.58	\$ 17.24	\$ 17.24
Non Subscriber - Residential	\$ 2.46	\$ 2.74	\$ 2.74	\$ 2.85	\$ 2.85
Non Subscriber - Commercial	\$ 25.02	\$ 27.90	\$ 27.90	\$ 29.01	\$ 29.01
<b><u>Outside City Limits</u></b>					
35-gallon cart	\$ 29.52	\$ 32.91	\$ 32.91	\$ 34.23	\$ 34.23
64-gallon cart	\$ 30.65	\$ 34.17	\$ 34.17	\$ 35.54	\$ 35.54
(2) 64-gallon carts	N/A	N/A	N/A	N/A	N/A
96-gallon cart	\$ 32.93	\$ 36.72	\$ 36.72	\$ 38.19	\$ 38.19
(2) 96-gallon carts	\$ 44.57	\$ 49.70	\$ 49.70	\$ 51.68	\$ 51.68
House-side 96-gallon cart	N/A	N/A	N/A	N/A	N/A
Residential Rate Increase %		11.5%	0.0%	4%	0%
<b>Street Sweeping Rates</b>					
Street Sweeping Rate	\$ 1.63	\$ 2.33	\$ 2.33	\$ 2.33	\$ 2.33
<b>Roll-Off Rates</b>					
<b>10 Cubic Yard</b>					
Delivery Fee	\$ 126.20				
Daily rental					
Inside City Limits	\$ 10.52				
Outside City Limits	\$ 11.57				
<b>20 Cubic Yard</b>					
Delivery Fee	\$ 131.45				
Daily rental					
Inside City Limits	\$ 12.62				
Outside City Limits	\$ 13.88				
<b>30 Cubic Yard</b>					
Delivery Fee	\$ 136.71				
Daily rental					
Inside City Limits	\$ 14.72				
Outside City Limits	\$ 16.19				
<b>40 Cubic Yard</b>					
Delivery Fee	\$ 141.97				
Daily rental					
Inside City Limits	\$ 16.83				
Outside City Limits	\$ 18.51				
<b>Disposal per ton</b>					
Inside City Limits	\$ 42.07				
Outside City Limits	\$ 46.28				
Delivery Fee	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00	\$ 100.00
Per Pull Fee	\$ 300.00	\$ 310.00	\$ 320.00	\$ 330.00	\$ 330.00
<b>Commercial Shared Rates</b>					
Shared Accounts	\$ 25.02	\$ 27.90	\$ 27.90	\$ 29.01	\$ 29.01

## Commercial Rate Matrix

		FY 2020					
		Frequency of Collection					
		1	2	3	4	5	6
Cubic Yard Capacity		1x	2x	3x	4x	5x	6x
	2	\$ 37.06	\$ 74.11	\$ 111.23	\$ 148.24	\$ 185.30	\$ 222.47
	3	\$ 55.61	\$ 111.23	\$ 166.84	\$ 222.47	\$ 278.07	\$ 333.68
	4	\$ 74.11	\$ 148.24	\$ 222.47	\$ 296.47	\$ 370.58	\$ 444.91
Proposed Rate Increase		0%					

		FY 2021					
		Frequency of Collection					
		1	2	3	4	5	6
Cubic Yard Capacity		1x	2x	3x	4x	5x	6x
	2	\$ 41.32	\$ 82.63	\$ 124.02	\$ 165.29	\$ 206.61	\$ 248.05
	3	\$ 62.01	\$ 124.02	\$ 186.03	\$ 248.05	\$ 310.05	\$ 372.05
	4	\$ 82.63	\$ 165.29	\$ 248.05	\$ 330.56	\$ 413.20	\$ 496.07
Proposed Rate Increase		11.5%					

		FY 2022					
		Frequency of Collection					
		1	2	3	4	5	6
Cubic Yard Capacity		1x	2x	3x	4x	5x	6x
	2	\$ 41.32	\$ 82.63	\$ 124.02	\$ 165.29	\$ 206.61	\$ 248.05
	3	\$ 62.01	\$ 124.02	\$ 186.03	\$ 248.05	\$ 310.05	\$ 372.05
	4	\$ 82.63	\$ 165.29	\$ 248.05	\$ 330.56	\$ 413.20	\$ 496.07
Proposed Rate Increase		0.0%					

		FY 2023					
		Frequency of Collection					
		1	2	3	4	5	6
Cubic Yard Capacity		1x	2x	3x	4x	5x	6x
	2	\$ 42.97	\$ 85.94	\$ 128.98	\$ 171.90	\$ 214.87	\$ 257.97
	3	\$ 64.49	\$ 128.98	\$ 193.47	\$ 257.97	\$ 322.45	\$ 386.93
	4	\$ 85.94	\$ 171.90	\$ 257.97	\$ 343.78	\$ 429.73	\$ 515.91
Proposed Rate Increase		4.0%					

		FY 2024					
		Frequency of Collection					
		1	2	3	4	5	6
Cubic Yard Capacity		1x	2x	3x	4x	5x	6x
	2	\$ 42.97	\$ 85.94	\$ 128.98	\$ 171.90	\$ 214.87	\$ 257.97
	3	\$ 64.49	\$ 128.98	\$ 193.47	\$ 257.97	\$ 322.45	\$ 386.93
	4	\$ 85.94	\$ 171.90	\$ 257.97	\$ 343.78	\$ 429.73	\$ 515.91
Proposed Rate Increase		0%					

**City of Stillwater, Oklahoma**  
**Solid Waste Cost of Service and Rate Design Study**  
**Scenario 5 - Proposed Revenue Reconciliation**

		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Residential</b>					
2	Net Revenue Requirement	\$ 3,623,112	\$ 3,910,685	\$ 4,076,384	\$ 3,758,865	\$ 3,804,003
3	Revenue	\$ 3,078,712	\$ 3,449,928	\$ 3,467,178	\$ 3,623,894	\$ 3,642,013
4	Over/(Under)	\$ (544,400)	\$ (460,757)	\$ (609,206)	\$ (134,971)	\$ (161,990)
5	Cumulative Over/(Under)	\$ (544,400)	\$ (1,005,157)	\$ (1,614,363)	\$ (1,749,334)	\$ (1,911,324)
6	<b>Commercial Rear Load</b>					
7	Net Revenue Requirement	\$ 1,764,065	\$ 1,484,275	\$ 1,529,707	\$ 1,726,698	\$ 1,782,215
8	Revenue					
9	Commercial	\$ 943,834	\$ 1,057,620	\$ 1,062,908	\$ 1,110,951	\$ 1,116,506
10	Apartment Resident Paying with Dumpster	652,332	730,987	734,642	767,848	771,687
11	Shared Accounts	68,838	77,138	77,524	81,028	81,433
12	Total Revenue	\$ 1,665,004	\$ 1,865,745	\$ 1,875,074	\$ 1,959,826	\$ 1,969,626
13	Over/(Under)	\$ (99,061)	\$ 381,470	\$ 345,367	\$ 233,129	\$ 187,411
14	Cumulative Over/(Under)	\$ (99,061)	\$ 282,409	\$ 627,776	\$ 860,905	\$ 1,048,316
15	<b>Roll-Off</b>					
16	Revenue Requirement	\$ 385,580	\$ 314,029	\$ 324,142	\$ 360,059	\$ 366,118
17	Less Costs allocated to Residential	\$ (203,555)	\$ (165,782)	\$ (171,121)	\$ (190,082)	\$ (193,281)
18	Net Revenue Requirement	\$ 182,025	\$ 148,247	\$ 153,021	\$ 169,977	\$ 172,837
19	Revenue	\$ 141,606	\$ 152,358	\$ 157,372	\$ 162,432	\$ 167,539
20	Over/(Under)	\$ (40,419)	\$ 4,111	\$ 4,351	\$ (7,545)	\$ (5,298)
21	Cumulative Over/(Under)	\$ (40,419)	\$ (36,308)	\$ (31,958)	\$ (39,502)	\$ (44,800)
22	<b>Street Sweeping</b>					
23	Net Revenue Requirement	\$ 542,564	\$ 472,401	\$ 487,258	\$ 547,771	\$ 550,617
24	Revenue	\$ 391,200	\$ 561,996	\$ 564,806	\$ 567,630	\$ 570,468
25	Over/(Under)	\$ (151,364)	\$ 89,595	\$ 77,547	\$ 19,859	\$ 19,851
26	Cumulative Over/(Under)	\$ (151,364)	\$ (61,769)	\$ 15,778	\$ 35,638	\$ 55,489
27	<b>Total Revenue Requirement</b>	\$ 6,111,767	\$ 6,015,608	\$ 6,246,371	\$ 6,203,310	\$ 6,309,672
28	<b>Total Revenues</b>	\$ 5,276,522	\$ 6,030,027	\$ 6,064,429	\$ 6,313,783	\$ 6,349,647
29	<b>Total Over/(Under)</b>	\$ (835,244)	\$ 14,419	\$ (181,941)	\$ 110,473	\$ 39,975
30	<b>Cumulative Over/(Under)</b>	\$ (835,244)	\$ (820,825)	\$ (1,002,766)	\$ (892,294)	\$ (852,319)

City of Stillwater, Oklahoma  
Solid Waste Cost of Service and Rate Design Study  
Scenario 5 - Proposed Reserves

Line No.		Year 1 2020	Year 2 2021	Year 3 2022	Year 4 2023	Year 5 2024
1	<b>Working Capital Reserve</b>					
2	Beginning Balance	\$ 1,000,000	\$ 222,093	\$ 329,116	\$ 240,848	\$ 844,112
3	Additions:					
4	Capital Contributions	\$ -	\$ 800,000	\$ 800,000	\$ 400,000	\$ 400,000
5	Rolling Stock Funding	47,337	90,383	117,701	118,520	119,364
6	Interest	10,000	2,221	3,291	2,408	8,441
7	Over-Recovery of Rates	-	14,419	-	110,473	39,975
8	Reductions:					
9	Capital Projects	\$ -	\$ (800,000)	\$ (800,000)	\$ -	\$ -
10	Rolling Stock Purchases	-	-	(27,318)	(28,138)	(28,982)
11	Under-Recovery of Rates	(835,244)	-	(181,941)	-	-
12	Ending Balance	\$ 222,093	\$ 329,116	\$ 240,848	\$ 844,112	\$ 1,382,910



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PREPARED BY:

