



City of Tempe, Arizona

2023 Solid Waste Financial Model Update

September 12, 2023



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The City of Tempe, Arizona (City or Utility) contracted with Stantec Consulting Services Inc (Stantec) to conduct the 2021 Solid Waste Rate Study¹ in 2021 (2021 Rate Study). The 2021 Rate Study established a plan of annual solid waste rate adjustments for the period January 1, 2022 through December 31, 2027. The plan was developed through multiple work sessions with City staff whereby the then-current revenue, expense budgets and capital improvement investments for the solid waste utility were projected for 10 years defining the utility’s revenue requirements. The plan of rate adjustments was crafted to ensure the utility’s minimum operating requirements are met though out the time period for policy reserve levels, debt coverage and sustainable annual cash flows. The first year of rate adjustments identified in the 2021 Rate Study were implemented January 1, 2022. The plan of rate increases developed in the 2021 Rate Study are shown in Table 1 below.

Table 1: 2021 Rate Study Recommended Solid Waste Rate Adjustments

Effective Date	January 2023	January 2024	January 2025	January 2026	January 2027
Solid Waste Rate Increase	3.00%	3.00%	3.00%	3.00%	3.00%

In 2023, The City requested Stantec to assist in updating the Utilities’ financial model projections with actual revenue and expense results from fiscal year (FY) 2023, preliminary FY 2023 end of year reserves, and the FY 2024 adopted capital investment plan. Stantec assisted the City in updating the 2021 Rate Study financial model with the most up-to-date data projecting the Utilities’ necessary rate adjustments for the next four fiscal years. The following sections of this memorandum describe the material differences between the 2021 Rate Study rate adjustment recommendations and the updated rate adjustment plan for the Utility.

REVENUE SUFFICIENCY ANALYSIS UPDATE

Stantec assisted City staff in updating the solid waste utility financial model prepared in the 2021 Rate Study to reflect actual, unaudited, FY 2023 cash flows and the FY 2024 budget. The following tables show the variance between the 2021 Rate Study and the 2023 Financial Model Update for revenues, operating expenses, debt service, and capital for FY 2024 through FY 2027, based on the rate increases projected in the 2021 Rate Study. The dollar amounts in each table are rounded to one tenth of a million. In summary, when compared to the forecasts from the 2021 Rate Study, revenues are slightly lower, operating expenses are higher (driven largely by elevated inflation levels), capital expenditures are higher, and debt service payments are expected to occur starting in FY 2025.

¹ Final report dated August 12, 2021.

Table 2: Comparison of Operating Revenues (\$M)

	Fiscal Year 2023	Fiscal Year 2024	Fiscal Year 2025	Fiscal Year 2026	Fiscal Year 2027
2021 Rate Study	20.8	21.4	22.0	22.7	23.4
2023 Financial Model Update	20.8	20.9	21.9	22.6	23.2
Variance	0	(0.5)	(0.1)	(0.1)	(0.2)

Table 3: Comparison of Operating Expenses (\$M)

	Fiscal Year 2023	Fiscal Year 2024	Fiscal Year 2025	Fiscal Year 2026	Fiscal Year 2027
2021 Rate Study	20.8	21.5	21.8	21.4	22.5
2023 Financial Model Update	20.1	24.5	19.9	24.6	22.7
Variance	(0.7)	3.0	(1.9)	3.2	0.2

Table 4: Comparison of Capital Spending – Executed (\$M)

	Fiscal Year 2023	Fiscal Year 2024	Fiscal Year 2025	Fiscal Year 2026	Fiscal Year 2027
2021 Rate Study	0.1	0.2	0.1	0.1	0.0
2023 Financial Model Update	0.0	0.4	0.3	0.0	0.0
Variance	(0.1)	0.2	0.2	(0.1)	0.0

Table 5: Comparison of Annual Debt Service (\$M)

	Fiscal Year 2023	Fiscal Year 2024	Fiscal Year 2025	Fiscal Year 2026	Fiscal Year 2027
2021 Rate Study	0.0	0.0	0.0	0.0	0.0
2023 Financial Model Update	0.0	0.0	1.6	1.6	1.8
Variance	0.0	0.0	1.6	1.6	1.8

RESULTS

Revenue forecasts beyond FY 2023 have been reduced since the 2021 Rate Study, while operating expense forecasts have increased (except for FY 2025 due to the elimination of cost center 3723). Capital investment expectations in FY 2024 and FY 2025 have increased by about \$400K compared to the 2021 Rate Study. Between reduced revenue forecasts, increased operating and capital costs, and the addition of debt service payment obligations, the 2023 Financial Model Update is now recommending 5% rate increases for all customer classes in FY 2024. Future rate increases are forecasted to gradually decrease starting in FY 2026. The plan for Solid Waste rate increases recommended by the 2023 Financial Model Update is presented in Table 6.

Table 6: 2023 Financial Model Update Recommended Solid Waste Rate Increases

	January 2023	January 2024	January 2025	January 2026	January 2027
Solid Waste Rate Increase	0.00%	5.00%	5.00%	4.50%	4.50%

The resulting annual end-of-year reserves are contrasted in Table 7 for the 2021 Rate Study and the 2023 Financial Model Update, based on the updated assumptions discussed herein and the projected rate increases shown in Table 6.

Table 7: Comparison of Annual End of Year Reserves (\$M)

	Fiscal Year 2023	Fiscal Year 2024	Fiscal Year 2025	Fiscal Year 2026	Fiscal Year 2027
2021 Rate Study	3.4	3.2	3.5	4.8	5.8
2023 Financial Model Update	6.6	5.5	6.6	4.0	4.0
Variance	3.2	2.3	3.1	(0.8)	(1.8)

The solid waste year end operating fund balance from the 2021 Rate Study and 2023 Financial Model Update are shown in Figure 1. This figure demonstrates that the fund balance meets the minimum reserve requirement throughout the forecast period, though fund balances are drawn down closer to the target starting in FY 2026. Table 8 shows the proposed solid waste rates for adoption in January 2024, utilizing the updated rate adjustment plan from the 2023 Financial Model Update, as presented in Table 6.

Figure 1: Comparison of Annual End of Year Reserves Versus Policy Target

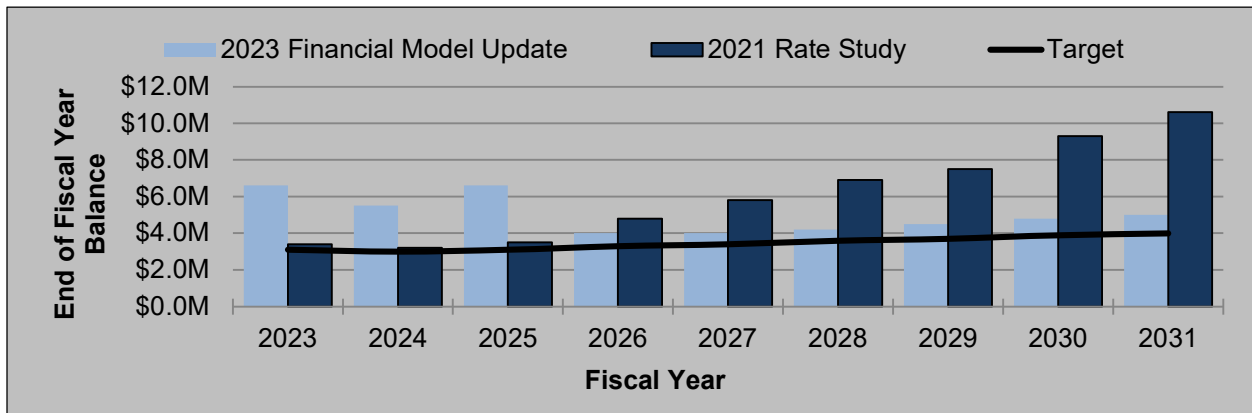


Table 8: Current and Recommended Solid Waste Rates

Residential Rates per weekly collection	Current Rate as of January 2022	Recommended Rate January 2024
96-gallon or shared 300-gallon garbage, 96-gallon recycling	\$30.32	\$31.84
65-gallon garbage, 96-gallon recycling	\$27.72	\$29.11
48-gallon garbage, 96-gallon recycling	\$26.30	\$27.62
Each 96-gallon green organics container	\$5.94	\$6.24
Each additional 96-gallon garbage container (curbside customers only)	\$20.17	\$21.18
Each additional 96-gallon recycling container	\$13.98	\$14.68
Additional collection above standard	\$80.00	\$84.00
Container replacement	\$65.00	\$68.25
Initial combined charge—one 96-gallon garbage and one 96-gallon recycling container for each newly constructed residence	\$165.90	\$174.20
Frontload Garbage Rates per weekly collection	Current Rate as of January 2022	Recommended Rate January 2024
2 Cubic Yards	\$69.04	\$72.49
3 Cubic Yards	\$73.04	\$76.69
4 Cubic Yards	\$77.05	\$80.90
6 Cubic Yards	\$86.03	\$90.33
8 Cubic Yards	\$96.43	\$101.25
96-Gallon	\$43.40	\$45.57
300-Gallon	\$55.90	\$58.70
Frontload Recycle Rates per weekly collection	Current Rate as of January 2022	Recommended Rate January 2024
2 Cubic Yards	\$54.86	\$57.60
3 Cubic Yards	\$58.04	\$60.94
4 Cubic Yards	\$61.22	\$64.28
6 Cubic Yards	\$68.36	\$71.78
8 Cubic Yards	\$76.62	\$80.45
96-Gallon	\$54.86	\$57.60
300-Gallon	\$54.86	\$57.60
Frontload Compactor Rates per weekly collection	Current Rate as of January 2022	Recommended Rate January 2024
2 Cubic Yards	\$73.27	\$76.93
3 Cubic Yards	\$80.95	\$85.00
4 Cubic Yards	\$93.38	\$98.05
6 Cubic Yards	\$136.95	\$143.80
8 Cubic Yards	\$175.52	\$184.30
Roll-Off Rates Per Pull	Current Rate as of January 2022	Recommended Rate January 2024
10, 15, 25, 40 cubic yard container or compactor	\$295.05	\$309.80

Finally, Appendix A of this memorandum includes cash flow projections that represent all anticipated revenues from residential and nonresidential customers and the overall expenses for providing solid waste services.

Disclaimer

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Additionally, the purpose of this document is to summarize Stantec’s analysis and findings related to this project, and it is not intended to address all aspects that may surround the subject area. Therefore, this document may have limitations, assumptions, or reliance on data that are not readily apparent on the face of it. Moreover, the reader should understand that Stantec was called on to provide judgments on a variety of critical factors which are incapable of precise measurement. As such, the use of this document and its findings by the City should only occur after consultation with Stantec, and any use of this document and findings by any other person is done so entirely at their own risk.

Appendix A - Solid Waste

	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031
Operating Revenue										
1 Residential and Non-Residential Rate Revenue	\$ 19,480,849	\$ 19,810,073	\$ 19,810,073	\$ 20,800,577	\$ 21,840,605	\$ 22,823,433	\$ 23,850,487	\$ 24,566,002	\$ 25,057,322	\$ 25,558,468
2 Change in Revenue From Growth	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3 Subtotal	\$ 19,480,849	\$ 19,810,073	\$ 19,810,073	\$ 20,800,577	\$ 21,840,605	\$ 22,823,433	\$ 23,850,487	\$ 24,566,002	\$ 25,057,322	\$ 25,558,468
4 Weighted Average Rate Increase	0.00%	0.00%	2.49%	2.48%	2.23%	2.23%	1.49%	0.99%	0.99%	0.99%
5 Additional Rate Revenue From Rate Increase	\$ -	\$ -	\$ 492,577	\$ 515,750	\$ 487,384	\$ 509,316	\$ 355,825	\$ 243,646	\$ 248,519	\$ 252,773
6 Total Rate Revenue	\$ 19,480,849	\$ 19,810,073	\$ 20,302,650	\$ 21,316,327	\$ 22,327,990	\$ 23,332,749	\$ 24,206,313	\$ 24,809,647	\$ 25,305,840	\$ 25,811,242
7 Plus: Other Operating Revenue	\$ 1,144,171	\$ 1,013,778	\$ 921,736	\$ 921,426	\$ 921,426	\$ 921,426	\$ 921,426	\$ 921,426	\$ 921,426	\$ 921,426
8 Equals: Total Operating Revenue	\$ 20,625,020	\$ 20,823,851	\$ 21,224,386	\$ 22,237,753	\$ 23,249,416	\$ 24,254,175	\$ 25,127,739	\$ 25,731,073	\$ 26,227,266	\$ 26,732,668
Less: Operating Expenses										
9 Operating Expenses	\$ (18,892,216)	\$ (18,841,798)	\$ (20,142,220)	\$ (18,775,019)	\$ (19,249,255)	\$ (19,737,604)	\$ (20,240,607)	\$ (20,758,850)	\$ (21,292,895)	\$ (21,843,412)
11 Equals: Net Operating Income	\$ 1,732,804	\$ 1,982,053	\$ 1,082,166	\$ 3,462,734	\$ 4,000,161	\$ 4,516,571	\$ 4,887,132	\$ 4,972,223	\$ 4,934,371	\$ 4,889,256
Plus: Non-Operating Income/(Expense)										
12 Non-Operating Revenue	\$ 208,280	\$ 1,215,558	\$ 2,227,240	\$ 347,588	\$ 347,588	\$ 347,588	\$ 347,588	\$ 347,588	\$ 347,588	\$ 347,588
14 Interest Income	\$ 32,015	\$ 53,790	\$ 72,843	\$ 70,729	\$ 62,710	\$ 50,886	\$ 53,297	\$ 57,269	\$ 61,518	\$ 65,392
15 System Development Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
16 Transfers In	\$ 180,337	\$ 155,306	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
17 Equals: Net Income	\$ 2,153,436	\$ 3,406,707	\$ 3,382,249	\$ 3,881,051	\$ 4,410,458	\$ 4,915,045	\$ 5,288,017	\$ 5,377,080	\$ 5,343,477	\$ 5,302,236
Less: Revenues Excluded From Coverage Test										
18 Excluded Debt Service Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
20 Transfers In	\$ (180,337)	\$ (155,306)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
21 Equals: Net Income Available For Debt Service	\$ 1,973,099	\$ 3,251,401	\$ 3,382,249	\$ 3,881,051	\$ 4,410,458	\$ 4,915,045	\$ 5,288,017	\$ 5,377,080	\$ 5,343,477	\$ 5,302,236
Total Senior Debt Service Coverage Test										
22 Net Income Available for Debt Service	\$ 1,973,099	\$ 3,251,401	\$ 3,382,249	\$ 3,881,051	\$ 4,410,458	\$ 4,915,045	\$ 5,288,017	\$ 5,377,080	\$ 5,343,477	\$ 5,302,236
24 Existing Bond Debt Service	\$ -	\$ -	\$ -	\$ 1,604,852	\$ 1,604,852	\$ 1,785,398	\$ 1,785,398	\$ 1,785,398	\$ 1,785,398	\$ 1,785,398
25 New Bond Debt Service (Model Calculated)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
26 Existing Other Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
27 New Other Debt Service (Model Calculated)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28 Total Annual Debt Service	Targ.	1.50	1.50	1.50	1.604,852	1,604,852	1,785,398	1,785,398	1,785,398	1,785,398
29 Calculated Senior Debt Service Coverage	\$ -	\$ -	\$ -	\$ 2.42	\$ 2.75	\$ 2.75	\$ 2.96	\$ 3.01	\$ 2.99	\$ 2.97
30 Additional Fee Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
31 Total Income for Debt Service Including Fees	Targ.	1.50	1.50	1.50	1,604,852	1,604,852	1,785,398	1,785,398	1,785,398	1,785,398
32 Calculated Senior Debt Service Coverage including Fees	\$ -	\$ -	\$ -	\$ 2.42	\$ 2.75	\$ 2.75	\$ 2.96	\$ 3.01	\$ 2.99	\$ 2.97
Total Subordinate Debt Service Coverage Test										
33 Net Income Available for Debt Service	\$ 1,973,099	\$ 3,251,401	\$ 3,382,249	\$ 3,881,051	\$ 4,410,458	\$ 4,915,045	\$ 5,288,017	\$ 5,377,080	\$ 5,343,477	\$ 5,302,236
35 Existing Loan Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
36 New Loan Debt Service (Model Calculated)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
37 Total Annual Debt Service	Targ.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
38 Calculated Subordinate Debt Service Coverage	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total All-In Debt Service Coverage Test										
39 Net Income Available for Debt Service	\$ 1,973,099	\$ 3,251,401	\$ 3,382,249	\$ 3,881,051	\$ 4,410,458	\$ 4,915,045	\$ 5,288,017	\$ 5,377,080	\$ 5,343,477	\$ 5,302,236
41 Total Bond Debt Service	\$ -	\$ -	\$ -	\$ 1,604,852	\$ 1,604,852	\$ 1,785,398	\$ 1,785,398	\$ 1,785,398	\$ 1,785,398	\$ 1,785,398
42 Total Loan Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
43 Total Other Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
44 Total Annual Debt Service	Targ.	1.50	1.50	1.50	1,604,852	1,604,852	1,785,398	1,785,398	1,785,398	1,785,398
45 Calculated All-In Debt Service Coverage	\$ -	\$ -	\$ -	\$ 2.42	\$ 2.75	\$ 2.75	\$ 2.96	\$ 3.01	\$ 2.99	\$ 2.97
46 Additional Fee Revenue	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47 Total Income for Debt Service Including Fees	Targ.	1.50	1.50	1.50	1,604,852	1,604,852	1,785,398	1,785,398	1,785,398	1,785,398
48 Calculated All-In Debt Service Coverage with Fees	\$ -	\$ -	\$ -	\$ 2.42	\$ 2.75	\$ 2.75	\$ 2.96	\$ 3.01	\$ 2.99	\$ 2.97
Cash Flow Test										
50 Net Income Available For Debt Service	\$ 1,973,099	\$ 3,251,401	\$ 3,382,249	\$ 3,881,051	\$ 4,410,458	\$ 4,915,045	\$ 5,288,017	\$ 5,377,080	\$ 5,343,477	\$ 5,302,236
51 Less: Non-Operating Expenditures										
52 Net Interfund Transfers (In - Out)	\$ (1,016,812)	\$ (543,215)	\$ (107,120)	\$ (110,334)	\$ (113,644)	\$ (117,053)	\$ (120,565)	\$ (124,181)	\$ (127,907)	\$ (131,744)
53 Debt Service Payment (Net of Development Fee Contributions)	\$ -	\$ -	\$ -	\$ (1,604,852)	\$ (1,604,852)	\$ (1,785,398)	\$ (1,785,398)	\$ (1,785,398)	\$ (1,785,398)	\$ (1,785,398)
54 Non-Revenue Fund System Development Fees	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
55 Projects Designated To Be Paid With Cash	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
56 Projects Paid With Reserve Funds	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
57 Capital Outlay	\$ (1,442,050)	\$ (1,274,070)	\$ (4,327,964)	\$ (1,100,000)	\$ (5,300,000)	\$ (3,000,000)	\$ (3,150,000)	\$ (3,150,000)	\$ (3,150,000)	\$ (3,150,000)
58 Plus: Revenues Excluded From Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
59 Net Cash Flow	\$ (485,763)	\$ 1,434,116	\$ (1,052,835)	\$ 1,065,865	\$ (2,608,037)	\$ 12,594	\$ 232,055	\$ 317,501	\$ 280,172	\$ 235,094
Unrestricted Reserve Fund Test										
60 Balance At Beginning Of Fiscal Year	\$ 5,603,000	\$ 5,117,237	\$ 6,551,351	\$ 5,498,515	\$ 6,564,379	\$ 3,956,340	\$ 3,968,933	\$ 4,200,986	\$ 4,518,485	\$ 4,798,656
62 Net Cash Flow	\$ (485,763)	\$ 1,434,116	\$ (1,052,835)	\$ 1,065,865	\$ (2,608,037)	\$ 12,594	\$ 232,055	\$ 317,501	\$ 280,172	\$ 235,094
63 Balance At End Of Fiscal Year	\$ 5,117,237	\$ 6,551,352	\$ 5,498,516	\$ 6,564,380	\$ 3,956,341	\$ 3,968,934	\$ 4,200,987	\$ 4,518,487	\$ 4,798,658	\$ 5,033,750
64 Minimum Working Capital Reserve Target	\$ 3,001,293	\$ 3,046,250	\$ 3,015,480	\$ 3,143,855	\$ 3,277,751	\$ 3,417,393	\$ 3,563,042	\$ 3,714,946	\$ 3,873,586	\$ 4,039,059
65 Excess/(Deficiency) Of Working Capital To Target	\$ 2,115,944	\$ 3,505,102	\$ 2,483,037	\$ 3,420,525	\$ 678,590	\$ 551,541	\$ 637,945	\$ 803,541	\$ 925,072	\$ 994,691