



City of Carrollton, Texas

General Obligation Debt Service Waterworks and Sewer System Debt Service

As of September 30, 2022

Prepared on June 15, 2023

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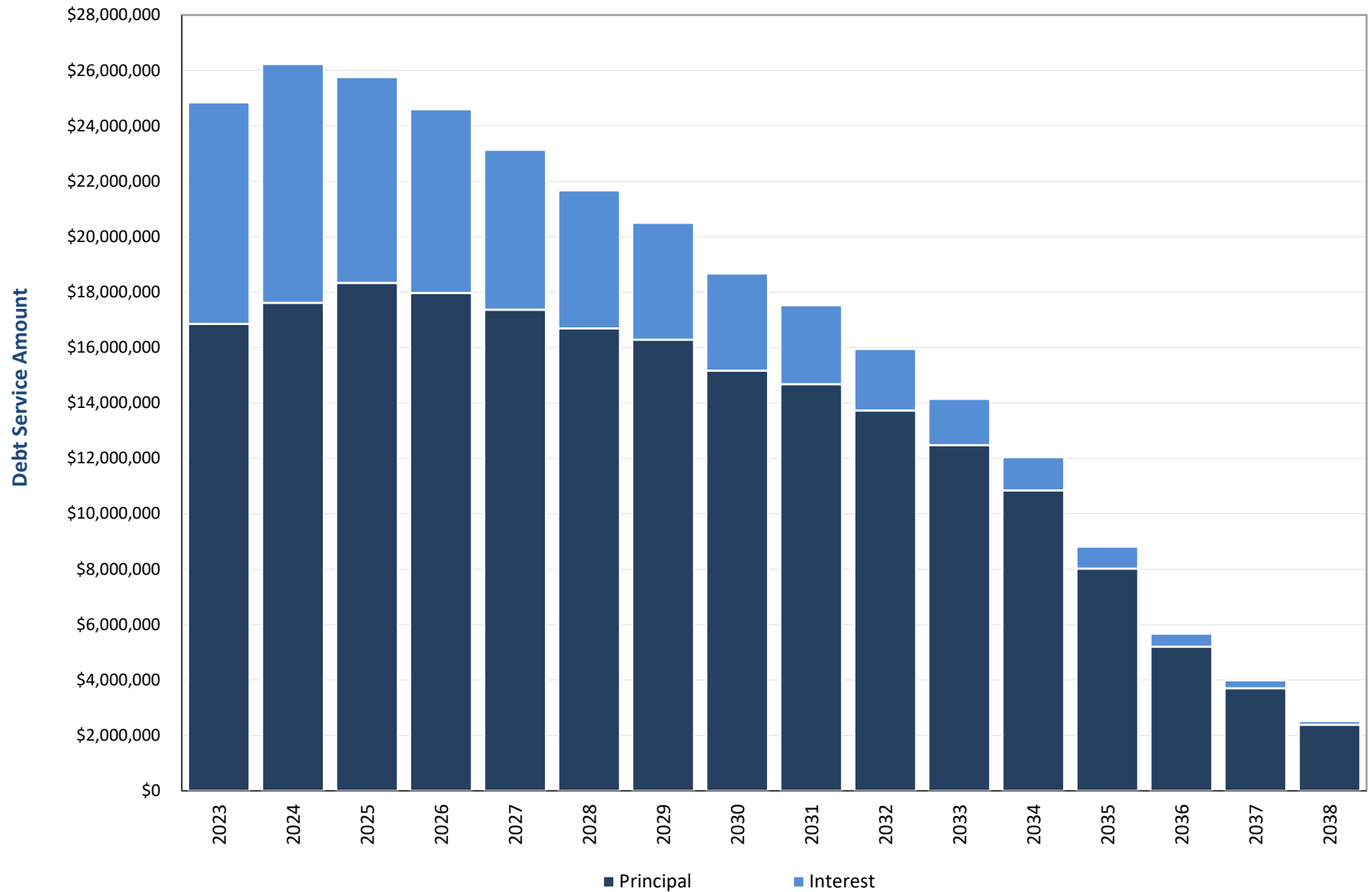
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I. General Obligation Debt

Debt Service by Principal and Interest

City of Carrollton, Texas
Outstanding General Obligation Debt Service by Principal and Interest



Fiscal Year Ending September 30

City of Carrollton, Texas
Annual General Obligation Debt Service
By Principal and Interest

FYE	Principal	Interest	Debt Service
2023	\$ 16,855,000.00	\$ 7,989,123.55	\$ 24,844,123.55
2024	17,615,000.00	8,612,032.52	26,227,032.52
2025	18,335,000.00	7,422,807.52	25,757,807.52
2026	17,970,000.00	6,628,827.52	24,598,827.52
2027	17,370,000.00	5,764,227.52	23,134,227.52
2028	16,690,000.00	4,981,077.52	21,671,077.52
2029	16,285,000.00	4,214,771.26	20,499,771.26
2030	15,170,000.00	3,499,058.76	18,669,058.76
2031	14,680,000.00	2,850,440.00	17,530,440.00
2032	13,725,000.00	2,225,640.00	15,950,640.00
2033	12,475,000.00	1,667,402.50	14,142,402.50
2034	10,845,000.00	1,193,927.50	12,038,927.50
2035	8,020,000.00	789,820.00	8,809,820.00
2036	5,200,000.00	475,730.00	5,675,730.00
2037	3,700,000.00	284,620.00	3,984,620.00
2038	2,390,000.00	119,500.00	2,509,500.00
Total	\$207,325,000.00	\$58,719,006.17	\$266,044,006.17

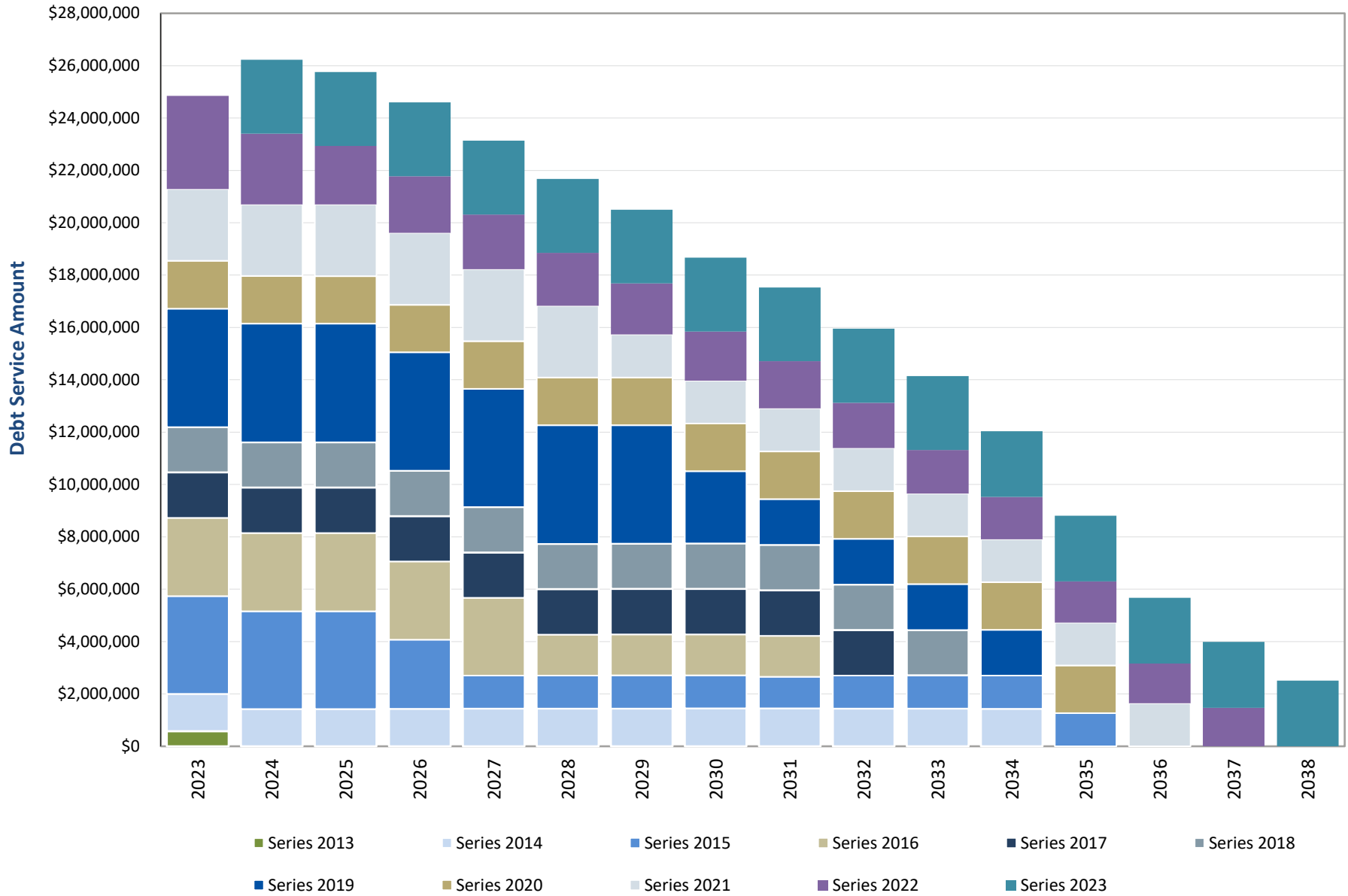
Fiscal year is assumed to be October 1 through September 30.

City of Carrollton, Texas
Semi-Annual General Obligation Debt Service
By Principal and Interest

Date	Principal	Interest	Debt Service	FYE 9/30 Debt Service
2/15/2023	-	4,155,044.79	4,155,044.79	-
8/15/2023	16,855,000.00	3,834,078.76	20,689,078.76	24,844,123.55
2/15/2024	-	4,476,028.76	4,476,028.76	-
8/15/2024	17,615,000.00	4,136,003.76	21,751,003.76	26,227,032.52
2/15/2025	-	3,711,403.76	3,711,403.76	-
8/15/2025	18,335,000.00	3,711,403.76	22,046,403.76	25,757,807.52
2/15/2026	-	3,314,413.76	3,314,413.76	-
8/15/2026	17,970,000.00	3,314,413.76	21,284,413.76	24,598,827.52
2/15/2027	-	2,882,113.76	2,882,113.76	-
8/15/2027	17,370,000.00	2,882,113.76	20,252,113.76	23,134,227.52
2/15/2028	-	2,490,538.76	2,490,538.76	-
8/15/2028	16,690,000.00	2,490,538.76	19,180,538.76	21,671,077.52
2/15/2029	-	2,107,385.63	2,107,385.63	-
8/15/2029	16,285,000.00	2,107,385.63	18,392,385.63	20,499,771.26
2/15/2030	-	1,749,529.38	1,749,529.38	-
8/15/2030	15,170,000.00	1,749,529.38	16,919,529.38	18,669,058.76
2/15/2031	-	1,425,220.00	1,425,220.00	-
8/15/2031	14,680,000.00	1,425,220.00	16,105,220.00	17,530,440.00
2/15/2032	-	1,112,820.00	1,112,820.00	-
8/15/2032	13,725,000.00	1,112,820.00	14,837,820.00	15,950,640.00
2/15/2033	-	833,701.25	833,701.25	-
8/15/2033	12,475,000.00	833,701.25	13,308,701.25	14,142,402.50
2/15/2034	-	596,963.75	596,963.75	-
8/15/2034	10,845,000.00	596,963.75	11,441,963.75	12,038,927.50
2/15/2035	-	394,910.00	394,910.00	-
8/15/2035	8,020,000.00	394,910.00	8,414,910.00	8,809,820.00
2/15/2036	-	237,865.00	237,865.00	-
8/15/2036	5,200,000.00	237,865.00	5,437,865.00	5,675,730.00
2/15/2037	-	142,310.00	142,310.00	-
8/15/2037	3,700,000.00	142,310.00	3,842,310.00	3,984,620.00
2/15/2038	-	59,750.00	59,750.00	-
8/15/2038	2,390,000.00	59,750.00	2,449,750.00	2,509,500.00
Total	\$207,325,000.00	\$58,719,006.17	\$266,044,006.17	\$266,044,006.17

Debt Service by Series

City of Carrollton, Texas
Outstanding General Obligation Debt Service by Series



Fiscal Year Ending September 30

City of Carrollton, Texas
Outstanding General Obligation Debt Service by Series

FYE	Series 2013	Series 2014	Series 2015	Series 2016	Series 2017	Series 2018
2023	577,837.50	1,423,343.76	3,730,711.26	2,995,800.00	1,734,550.00	1,733,962.50
2024		1,419,693.76	3,734,961.26	2,993,050.00	1,733,550.00	1,733,962.50
2025		1,425,293.76	3,731,711.26	2,989,800.00	1,735,750.00	1,731,212.50
2026		1,429,843.76	2,645,981.26	2,980,800.00	1,730,950.00	1,735,712.50
2027		1,438,343.76	1,260,981.26	2,971,050.00	1,734,350.00	1,731,962.50
2028		1,440,643.76	1,263,981.26	1,564,600.00	1,732,100.00	1,735,212.50
2029		1,445,487.50	1,265,031.26	1,567,900.00	1,731,600.00	1,734,962.50
2030		1,447,625.00	1,265,181.26	1,564,850.00	1,732,400.00	1,735,962.50
2031		1,447,437.50	1,208,150.00	1,565,600.00	1,735,800.00	1,734,912.50
2032		1,440,562.50	1,265,650.00		1,731,600.00	1,735,537.50
2033		1,442,187.50	1,265,225.00			1,734,600.00
2034		1,436,937.50	1,260,850.00			
2035			1,265,250.00			
2036						
2037						
2038						
Total	\$577,837.50	\$17,237,400.06	\$25,163,665.08	\$21,193,450.00	\$17,332,650.00	\$19,078,000.00

City of Carrollton, Texas
Outstanding General Obligation Debt Service by Series

FYE	Series 2019	Series 2020	Series 2021	Series 2022	Series 2023	Total
2023	4,524,850.00	1,822,200.00	2,740,250.00	3,560,618.53		24,844,123.55
2024	4,527,850.00	1,821,950.00	2,737,750.00	2,702,240.00	2,822,025.00	26,227,032.52
2025	4,528,350.00	1,819,200.00	2,741,000.00	2,232,240.00	2,823,250.00	25,757,807.52
2026	4,526,100.00	1,818,950.00	2,749,500.00	2,161,240.00	2,819,750.00	24,598,827.52
2027	4,520,850.00	1,820,950.00	2,742,750.00	2,090,240.00	2,822,750.00	23,134,227.52
2028	4,527,350.00	1,819,950.00	2,746,250.00	2,019,240.00	2,821,750.00	21,671,077.52
2029	4,524,600.00	1,820,950.00	1,644,250.00	1,948,240.00	2,816,750.00	20,499,771.26
2030	2,762,600.00	1,818,700.00	1,641,750.00	1,877,240.00	2,822,750.00	18,669,058.76
2031	1,753,850.00	1,818,200.00	1,641,250.00	1,806,240.00	2,819,000.00	17,530,440.00
2032	1,754,600.00	1,819,200.00	1,642,500.00	1,735,240.00	2,825,750.00	15,950,640.00
2033	1,752,200.00	1,822,000.00	1,639,700.00	1,664,240.00	2,822,250.00	14,142,402.50
2034	1,752,400.00	1,817,200.00	1,639,700.00	1,618,090.00	2,513,750.00	12,038,927.50
2035		1,820,000.00	1,643,800.00	1,570,520.00	2,510,250.00	8,809,820.00
2036			1,642,200.00	1,521,530.00	2,512,000.00	5,675,730.00
2037				1,471,120.00	2,513,500.00	3,984,620.00
2038					2,509,500.00	2,509,500.00
Total	\$41,455,600.00	\$23,659,450.00	\$29,592,650.00	29,978,278.53	40,775,025.00	266,044,006.17

City of Carrollton, Texas
General Obligation Improvement Bonds, Series 2013

Dated Date: July 15, 2013

Coupon Range Outstanding: 3.000%

<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Debt Service</u>	<u>FYE 9/30 Debt Service</u>
2/15/2023	-	121,087.50	121,087.50	-
8/15/2023	<u>450,000.00</u>	<u>6,750.00</u>	<u>456,750.00</u>	<u>577,837.50</u>
Total	<u>\$450,000.00</u>	<u>\$127,837.50</u>	<u>\$577,837.50</u>	<u>\$577,837.50</u>

City of Carrollton, Texas
General Obligation Improvement Bonds, Series 2014
Dated Date: April 15, 2014
Coupon Range Outstanding: 3.000% - 3.750%

<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Debt Service</u>	<u>FYE 9/30 Debt Service</u>
2/15/2023	-	234,171.88	234,171.88	-
8/15/2023	955,000.00	234,171.88	1,189,171.88	1,423,343.76
2/15/2024	-	219,846.88	219,846.88	-
8/15/2024	980,000.00	219,846.88	1,199,846.88	1,419,693.76
2/15/2025	-	205,146.88	205,146.88	-
8/15/2025	1,015,000.00	205,146.88	1,220,146.88	1,425,293.76
2/15/2026	-	189,921.88	189,921.88	-
8/15/2026	1,050,000.00	189,921.88	1,239,921.88	1,429,843.76
2/15/2027	-	174,171.88	174,171.88	-
8/15/2027	1,090,000.00	174,171.88	1,264,171.88	1,438,343.76
2/15/2028	-	157,821.88	157,821.88	-
8/15/2028	1,125,000.00	157,821.88	1,282,821.88	1,440,643.76
2/15/2029	-	140,243.75	140,243.75	-
8/15/2029	1,165,000.00	140,243.75	1,305,243.75	1,445,487.50
2/15/2030	-	121,312.50	121,312.50	-
8/15/2030	1,205,000.00	121,312.50	1,326,312.50	1,447,625.00
2/15/2031	-	98,718.75	98,718.75	-
8/15/2031	1,250,000.00	98,718.75	1,348,718.75	1,447,437.50
2/15/2032	-	75,281.25	75,281.25	-
8/15/2032	1,290,000.00	75,281.25	1,365,281.25	1,440,562.50
2/15/2033	-	51,093.75	51,093.75	-
8/15/2033	1,340,000.00	51,093.75	1,391,093.75	1,442,187.50
2/15/2034	-	25,968.75	25,968.75	-
8/15/2034	<u>1,385,000.00</u>	<u>25,968.75</u>	<u>1,410,968.75</u>	<u>1,436,937.50</u>
Total	<u>\$13,850,000.00</u>	<u>\$3,387,400.06</u>	<u>\$17,237,400.06</u>	<u>\$17,237,400.06</u>

City of Carrollton, Texas
General Obligation Improvement and Refunding Bonds, Series 2015
Dated Date: May 1, 2015
Coupon Range Outstanding: 2.200% - 5.000%

<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Debt Service</u>	<u>FYE 9/30 Debt Service</u>
2/15/2023	-	407,855.63	407,855.63	-
8/15/2023	2,915,000.00	407,855.63	3,322,855.63	3,730,711.26
2/15/2024	-	334,980.63	334,980.63	-
8/15/2024	3,065,000.00	334,980.63	3,399,980.63	3,734,961.26
2/15/2025	-	258,355.63	258,355.63	-
8/15/2025	3,215,000.00	258,355.63	3,473,355.63	3,731,711.26
2/15/2026	-	222,990.63	222,990.63	-
8/15/2026	2,200,000.00	222,990.63	2,422,990.63	2,645,981.26
2/15/2027	-	167,990.63	167,990.63	-
8/15/2027	925,000.00	167,990.63	1,092,990.63	1,260,981.26
2/15/2028	-	149,490.63	149,490.63	-
8/15/2028	965,000.00	149,490.63	1,114,490.63	1,263,981.26
2/15/2029	-	135,015.63	135,015.63	-
8/15/2029	995,000.00	135,015.63	1,130,015.63	1,265,031.26
2/15/2030	-	120,090.63	120,090.63	-
8/15/2030	1,025,000.00	120,090.63	1,145,090.63	1,265,181.26
2/15/2031	-	104,075.00	104,075.00	-
8/15/2031	1,000,000.00	104,075.00	1,104,075.00	1,208,150.00
2/15/2032	-	87,825.00	87,825.00	-
8/15/2032	1,090,000.00	87,825.00	1,177,825.00	1,265,650.00
2/15/2033	-	70,112.50	70,112.50	-
8/15/2033	1,125,000.00	70,112.50	1,195,112.50	1,265,225.00
2/15/2034	-	50,425.00	50,425.00	-
8/15/2034	1,160,000.00	50,425.00	1,210,425.00	1,260,850.00
2/15/2035	-	30,125.00	30,125.00	-
8/15/2035	<u>1,205,000.00</u>	<u>30,125.00</u>	<u>1,235,125.00</u>	<u>1,265,250.00</u>
Total	<u>\$20,885,000.00</u>	<u>\$4,278,665.08</u>	<u>\$25,163,665.08</u>	<u>\$25,163,665.08</u>

City of Carrollton, Texas
General Obligation Improvement and Refunding Bonds, Series 2016
Dated Date: May 15, 2016
Coupon Range Outstanding: 3.000% - 5.000%

<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Debt Service</u>	<u>FYE 9/30 Debt Service</u>
2/15/2023	-	370,400.00	370,400.00	-
8/15/2023	2,255,000.00	370,400.00	2,625,400.00	2,995,800.00
2/15/2024	-	314,025.00	314,025.00	-
8/15/2024	2,365,000.00	314,025.00	2,679,025.00	2,993,050.00
2/15/2025	-	254,900.00	254,900.00	-
8/15/2025	2,480,000.00	254,900.00	2,734,900.00	2,989,800.00
2/15/2026	-	192,900.00	192,900.00	-
8/15/2026	2,595,000.00	192,900.00	2,787,900.00	2,980,800.00
2/15/2027	-	128,025.00	128,025.00	-
8/15/2027	2,715,000.00	128,025.00	2,843,025.00	2,971,050.00
2/15/2028	-	87,300.00	87,300.00	-
8/15/2028	1,390,000.00	87,300.00	1,477,300.00	1,564,600.00
2/15/2029	-	66,450.00	66,450.00	-
8/15/2029	1,435,000.00	66,450.00	1,501,450.00	1,567,900.00
2/15/2030	-	44,925.00	44,925.00	-
8/15/2030	1,475,000.00	44,925.00	1,519,925.00	1,564,850.00
2/15/2031	-	22,800.00	22,800.00	-
8/15/2031	<u>1,520,000.00</u>	<u>22,800.00</u>	<u>1,542,800.00</u>	<u>1,565,600.00</u>
Total	<u>\$18,230,000.00</u>	<u>\$2,963,450.00</u>	<u>\$21,193,450.00</u>	<u>\$21,193,450.00</u>

City of Carrollton, Texas
General Obligation Improvement Bonds, Series 2017
Dated Date: April 1, 2017
Coupon Range Outstanding: 4.000% - 5.000%

<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Debt Service</u>	<u>FYE 9/30 Debt Service</u>
2/15/2023	-	292,275.00	292,275.00	-
8/15/2023	1,150,000.00	292,275.00	1,442,275.00	1,734,550.00
2/15/2024	-	269,275.00	269,275.00	-
8/15/2024	1,195,000.00	269,275.00	1,464,275.00	1,733,550.00
2/15/2025	-	245,375.00	245,375.00	-
8/15/2025	1,245,000.00	245,375.00	1,490,375.00	1,735,750.00
2/15/2026	-	220,475.00	220,475.00	-
8/15/2026	1,290,000.00	220,475.00	1,510,475.00	1,730,950.00
2/15/2027	-	194,675.00	194,675.00	-
8/15/2027	1,345,000.00	194,675.00	1,539,675.00	1,734,350.00
2/15/2028	-	161,050.00	161,050.00	-
8/15/2028	1,410,000.00	161,050.00	1,571,050.00	1,732,100.00
2/15/2029	-	125,800.00	125,800.00	-
8/15/2029	1,480,000.00	125,800.00	1,605,800.00	1,731,600.00
2/15/2030	-	96,200.00	96,200.00	-
8/15/2030	1,540,000.00	96,200.00	1,636,200.00	1,732,400.00
2/15/2031	-	65,400.00	65,400.00	-
8/15/2031	1,605,000.00	65,400.00	1,670,400.00	1,735,800.00
2/15/2032	-	33,300.00	33,300.00	-
8/15/2032	<u>1,665,000.00</u>	<u>33,300.00</u>	<u>1,698,300.00</u>	<u>1,731,600.00</u>
Total	<u>\$13,925,000.00</u>	<u>\$3,407,650.00</u>	<u>\$17,332,650.00</u>	<u>\$17,332,650.00</u>

City of Carrollton, Texas
General Obligation Improvement Bonds, Series 2018
Dated Date: May 1, 2018
Coupon Range Outstanding: 3.000% - 5.000%

<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Debt Service</u>	<u>FYE 9/30 Debt Service</u>
2/15/2023	-	316,981.25	316,981.25	-
8/15/2023	1,100,000.00	316,981.25	1,416,981.25	1,733,962.50
2/15/2024	-	289,481.25	289,481.25	-
8/15/2024	1,155,000.00	289,481.25	1,444,481.25	1,733,962.50
2/15/2025	-	260,606.25	260,606.25	-
8/15/2025	1,210,000.00	260,606.25	1,470,606.25	1,731,212.50
2/15/2026	-	230,356.25	230,356.25	-
8/15/2026	1,275,000.00	230,356.25	1,505,356.25	1,735,712.50
2/15/2027	-	198,481.25	198,481.25	-
8/15/2027	1,335,000.00	198,481.25	1,533,481.25	1,731,962.50
2/15/2028	-	165,106.25	165,106.25	-
8/15/2028	1,405,000.00	165,106.25	1,570,106.25	1,735,212.50
2/15/2029	-	129,981.25	129,981.25	-
8/15/2029	1,475,000.00	129,981.25	1,604,981.25	1,734,962.50
2/15/2030	-	100,481.25	100,481.25	-
8/15/2030	1,535,000.00	100,481.25	1,635,481.25	1,735,962.50
2/15/2031	-	77,456.25	77,456.25	-
8/15/2031	1,580,000.00	77,456.25	1,657,456.25	1,734,912.50
2/15/2032	-	52,768.75	52,768.75	-
8/15/2032	1,630,000.00	52,768.75	1,682,768.75	1,735,537.50
2/15/2033	-	27,300.00	27,300.00	-
8/15/2033	<u>1,680,000.00</u>	<u>27,300.00</u>	<u>1,707,300.00</u>	<u>1,734,600.00</u>
Total	<u>\$15,380,000.00</u>	<u>\$3,698,000.00</u>	<u>\$19,078,000.00</u>	<u>\$19,078,000.00</u>

City of Carrollton, Texas
General Obligation Improvement and Refunding Bonds, Series 2019
Dated Date: May 1, 2019
Coupon Range Outstanding: 4.000% - 5.000%

<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Debt Service</u>	<u>FYE 9/30 Debt Service</u>
2/15/2023	-	792,425.00	792,425.00	-
8/15/2023	2,940,000.00	792,425.00	3,732,425.00	4,524,850.00
2/15/2024	-	718,925.00	718,925.00	-
8/15/2024	3,090,000.00	718,925.00	3,808,925.00	4,527,850.00
2/15/2025	-	641,675.00	641,675.00	-
8/15/2025	3,245,000.00	641,675.00	3,886,675.00	4,528,350.00
2/15/2026	-	560,550.00	560,550.00	-
8/15/2026	3,405,000.00	560,550.00	3,965,550.00	4,526,100.00
2/15/2027	-	475,425.00	475,425.00	-
8/15/2027	3,570,000.00	475,425.00	4,045,425.00	4,520,850.00
2/15/2028	-	386,175.00	386,175.00	-
8/15/2028	3,755,000.00	386,175.00	4,141,175.00	4,527,350.00
2/15/2029	-	292,300.00	292,300.00	-
8/15/2029	3,940,000.00	292,300.00	4,232,300.00	4,524,600.00
2/15/2030	-	193,800.00	193,800.00	-
8/15/2030	2,375,000.00	193,800.00	2,568,800.00	2,762,600.00
2/15/2031	-	134,425.00	134,425.00	-
8/15/2031	1,485,000.00	134,425.00	1,619,425.00	1,753,850.00
2/15/2032	-	97,300.00	97,300.00	-
8/15/2032	1,560,000.00	97,300.00	1,657,300.00	1,754,600.00
2/15/2033	-	66,100.00	66,100.00	-
8/15/2033	1,620,000.00	66,100.00	1,686,100.00	1,752,200.00
2/15/2034	-	33,700.00	33,700.00	-
8/15/2034	<u>1,685,000.00</u>	<u>33,700.00</u>	<u>1,718,700.00</u>	<u>1,752,400.00</u>
Total	<u>\$32,670,000.00</u>	<u>\$8,785,600.00</u>	<u>\$41,455,600.00</u>	<u>\$41,455,600.00</u>

City of Carrollton, Texas
General Obligation Bonds, Series 2020
Dated Date: May 15, 2020
Coupon Range Outstanding: 4.000% - 5.000%

<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Debt Service</u>	<u>FYE 9/30 Debt Service</u>
2/15/2023	-	408,600.00	408,600.00	-
8/15/2023	1,005,000.00	408,600.00	1,413,600.00	1,822,200.00
2/15/2024	-	383,475.00	383,475.00	-
8/15/2024	1,055,000.00	383,475.00	1,438,475.00	1,821,950.00
2/15/2025	-	357,100.00	357,100.00	-
8/15/2025	1,105,000.00	357,100.00	1,462,100.00	1,819,200.00
2/15/2026	-	329,475.00	329,475.00	-
8/15/2026	1,160,000.00	329,475.00	1,489,475.00	1,818,950.00
2/15/2027	-	300,475.00	300,475.00	-
8/15/2027	1,220,000.00	300,475.00	1,520,475.00	1,820,950.00
2/15/2028	-	269,975.00	269,975.00	-
8/15/2028	1,280,000.00	269,975.00	1,549,975.00	1,819,950.00
2/15/2029	-	237,975.00	237,975.00	-
8/15/2029	1,345,000.00	237,975.00	1,582,975.00	1,820,950.00
2/15/2030	-	204,350.00	204,350.00	-
8/15/2030	1,410,000.00	204,350.00	1,614,350.00	1,818,700.00
2/15/2031	-	169,100.00	169,100.00	-
8/15/2031	1,480,000.00	169,100.00	1,649,100.00	1,818,200.00
2/15/2032	-	132,100.00	132,100.00	-
8/15/2032	1,555,000.00	132,100.00	1,687,100.00	1,819,200.00
2/15/2033	-	101,000.00	101,000.00	-
8/15/2033	1,620,000.00	101,000.00	1,721,000.00	1,822,000.00
2/15/2034	-	68,600.00	68,600.00	-
8/15/2034	1,680,000.00	68,600.00	1,748,600.00	1,817,200.00
2/15/2035	-	35,000.00	35,000.00	-
8/15/2035	<u>1,750,000.00</u>	<u>35,000.00</u>	<u>1,785,000.00</u>	<u>1,820,000.00</u>
Total	<u>\$17,665,000.00</u>	<u>\$5,994,450.00</u>	<u>\$23,659,450.00</u>	<u>\$23,659,450.00</u>

City of Carrollton, Texas
General Obligation Improvement and Refunding Bonds, Series 2021
Dated Date: June 1, 2021
Coupon Range Outstanding: 2.000% - 5.000%

<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Debt Service</u>	<u>FYE 9/30 Debt Service</u>
2/15/2023	-	495,125.00	495,125.00	-
8/15/2023	1,750,000.00	495,125.00	2,245,125.00	2,740,250.00
2/15/2024	-	451,375.00	451,375.00	-
8/15/2024	1,835,000.00	451,375.00	2,286,375.00	2,737,750.00
2/15/2025	-	405,500.00	405,500.00	-
8/15/2025	1,930,000.00	405,500.00	2,335,500.00	2,741,000.00
2/15/2026	-	357,250.00	357,250.00	-
8/15/2026	2,035,000.00	357,250.00	2,392,250.00	2,749,500.00
2/15/2027	-	306,375.00	306,375.00	-
8/15/2027	2,130,000.00	306,375.00	2,436,375.00	2,742,750.00
2/15/2028	-	253,125.00	253,125.00	-
8/15/2028	2,240,000.00	253,125.00	2,493,125.00	2,746,250.00
2/15/2029	-	197,125.00	197,125.00	-
8/15/2029	1,250,000.00	197,125.00	1,447,125.00	1,644,250.00
2/15/2030	-	165,875.00	165,875.00	-
8/15/2030	1,310,000.00	165,875.00	1,475,875.00	1,641,750.00
2/15/2031	-	133,125.00	133,125.00	-
8/15/2031	1,375,000.00	133,125.00	1,508,125.00	1,641,250.00
2/15/2032	-	98,750.00	98,750.00	-
8/15/2032	1,445,000.00	98,750.00	1,543,750.00	1,642,500.00
2/15/2033	-	69,850.00	69,850.00	-
8/15/2033	1,500,000.00	69,850.00	1,569,850.00	1,639,700.00
2/15/2034	-	47,350.00	47,350.00	-
8/15/2034	1,545,000.00	47,350.00	1,592,350.00	1,639,700.00
2/15/2035	-	31,900.00	31,900.00	-
8/15/2035	1,580,000.00	31,900.00	1,611,900.00	1,643,800.00
2/15/2036	-	16,100.00	16,100.00	-
8/15/2036	<u>1,610,000.00</u>	<u>16,100.00</u>	<u>1,626,100.00</u>	<u>1,642,200.00</u>
Total	<u>\$23,535,000.00</u>	<u>\$6,057,650.00</u>	<u>\$29,592,650.00</u>	<u>\$29,592,650.00</u>

City of Carrollton, Texas
General Obligation Improvement and Refunding Bonds, Series 2022
Dated Date: June 1, 2022
Coupon Range Outstanding: 3.250% - 5.000%

<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Debt Service</u>	<u>FYE 9/30 Debt Service</u>
2/15/2023	-	716,123.53	716,123.53	-
8/15/2023	2,335,000.00	509,495.00	2,844,495.00	3,560,618.53
2/15/2024	-	451,120.00	451,120.00	-
8/15/2024	1,800,000.00	451,120.00	2,251,120.00	2,702,240.00
2/15/2025	-	406,120.00	406,120.00	-
8/15/2025	1,420,000.00	406,120.00	1,826,120.00	2,232,240.00
2/15/2026	-	370,620.00	370,620.00	-
8/15/2026	1,420,000.00	370,620.00	1,790,620.00	2,161,240.00
2/15/2027	-	335,120.00	335,120.00	-
8/15/2027	1,420,000.00	335,120.00	1,755,120.00	2,090,240.00
2/15/2028	-	299,620.00	299,620.00	-
8/15/2028	1,420,000.00	299,620.00	1,719,620.00	2,019,240.00
2/15/2029	-	264,120.00	264,120.00	-
8/15/2029	1,420,000.00	264,120.00	1,684,120.00	1,948,240.00
2/15/2030	-	228,620.00	228,620.00	-
8/15/2030	1,420,000.00	228,620.00	1,648,620.00	1,877,240.00
2/15/2031	-	193,120.00	193,120.00	-
8/15/2031	1,420,000.00	193,120.00	1,613,120.00	1,806,240.00
2/15/2032	-	157,620.00	157,620.00	-
8/15/2032	1,420,000.00	157,620.00	1,577,620.00	1,735,240.00
2/15/2033	-	122,120.00	122,120.00	-
8/15/2033	1,420,000.00	122,120.00	1,542,120.00	1,664,240.00
2/15/2034	-	99,045.00	99,045.00	-
8/15/2034	1,420,000.00	99,045.00	1,519,045.00	1,618,090.00
2/15/2035	-	75,260.00	75,260.00	-
8/15/2035	1,420,000.00	75,260.00	1,495,260.00	1,570,520.00
2/15/2036	-	50,765.00	50,765.00	-
8/15/2036	1,420,000.00	50,765.00	1,470,765.00	1,521,530.00
2/15/2037	-	25,560.00	25,560.00	-
8/15/2037	<u>1,420,000.00</u>	<u>25,560.00</u>	<u>1,445,560.00</u>	<u>1,471,120.00</u>
Total	<u>\$22,595,000.00</u>	<u>\$7,383,278.53</u>	<u>\$29,978,278.53</u>	<u>\$29,978,278.53</u>

City of Carrollton, Texas
General Obligation Improvement and Refunding Bonds, Series 2023
Dated Date: May 1, 2023
Coupon Range Outstanding: 5.000%

<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Debt Service</u>	<u>FYE 9/30 Debt Service</u>
2/15/2023	-	-	-	-
8/15/2023	-	-	-	-
2/15/2024	-	1,043,525.00	1,043,525.00	-
8/15/2024	1,075,000.00	703,500.00	1,778,500.00	2,822,025.00
2/15/2025	-	676,625.00	676,625.00	-
8/15/2025	1,470,000.00	676,625.00	2,146,625.00	2,823,250.00
2/15/2026	-	639,875.00	639,875.00	-
8/15/2026	1,540,000.00	639,875.00	2,179,875.00	2,819,750.00
2/15/2027	-	601,375.00	601,375.00	-
8/15/2027	1,620,000.00	601,375.00	2,221,375.00	2,822,750.00
2/15/2028	-	560,875.00	560,875.00	-
8/15/2028	1,700,000.00	560,875.00	2,260,875.00	2,821,750.00
2/15/2029	-	518,375.00	518,375.00	-
8/15/2029	1,780,000.00	518,375.00	2,298,375.00	2,816,750.00
2/15/2030	-	473,875.00	473,875.00	-
8/15/2030	1,875,000.00	473,875.00	2,348,875.00	2,822,750.00
2/15/2031	-	427,000.00	427,000.00	-
8/15/2031	1,965,000.00	427,000.00	2,392,000.00	2,819,000.00
2/15/2032	-	377,875.00	377,875.00	-
8/15/2032	2,070,000.00	377,875.00	2,447,875.00	2,825,750.00
2/15/2033	-	326,125.00	326,125.00	-
8/15/2033	2,170,000.00	326,125.00	2,496,125.00	2,822,250.00
2/15/2034	-	271,875.00	271,875.00	-
8/15/2034	1,970,000.00	271,875.00	2,241,875.00	2,513,750.00
2/15/2035	-	222,625.00	222,625.00	-
8/15/2035	2,065,000.00	222,625.00	2,287,625.00	2,510,250.00
2/15/2036	-	171,000.00	171,000.00	-
8/15/2036	2,170,000.00	171,000.00	2,341,000.00	2,512,000.00
2/15/2037	-	116,750.00	116,750.00	-
8/15/2037	2,280,000.00	116,750.00	2,396,750.00	2,513,500.00
2/15/2038	-	59,750.00	59,750.00	-
8/15/2038	<u>2,390,000.00</u>	<u>59,750.00</u>	<u>2,449,750.00</u>	<u>2,509,500.00</u>
Total	<u>\$28,140,000.00</u>	<u>\$12,635,025.00</u>	<u>\$40,775,025.00</u>	<u>\$40,775,025.00</u>

Rating Reports



RATING ACTION COMMENTARY

Fitch Rates Carrollton, TX's \$29.6MM Series 2023 GO Improv and Rfdg Bonds 'AAA'; Outlook Stable

Wed 29 Mar, 2023 - 2:35 PM ET

Fitch Ratings - Austin - 29 Mar 2023: Fitch Ratings has assigned a 'AAA' rating to the following Carrollton, TX GO bonds:

--\$29.6 million GO improvement and refunding bonds, series 2023.

The bonds are expected to price via competitive sale the week of April 26, 2023. Proceeds will be used to fund various citywide street, park, and public safety capital improvements and refund certain outstanding debt maturities for debt service savings.

In addition, Fitch has affirmed at 'AAA' the city's Issuer Default Rating (IDR) and approximately \$185 million in outstanding GO bonds.

The Rating Outlook is Stable.

RATING ACTIONS

ENTITY / DEBT ⇅

RATING ⇅

PRIOR ⇅

Carrollton (TX) [General Government]	LT IDR	AAA Rating Outlook Stable	AAA Rating Outlook Stable
	Affirmed		
Carrollton (TX) /General Obligation - Limited Tax/1 LT	LT	AAA Rating Outlook Stable	AAA Rating Outlook Stable
	Affirmed		

[VIEW ADDITIONAL RATING DETAILS](#)

SECURITY

The bonds are payable from a limited ad valorem tax pledge capped at \$2.50 per \$100 of taxable assessed valuation (TAV), levied against all property within the city.

ANALYTICAL CONCLUSION

The 'AAA' IDR and limited tax GO bond rating reflect Carrollton's highest level of demonstrated and anticipated operating financial resilience through future economic cycles. The ratings also incorporate the city's ample expenditure flexibility, solid revenue growth prospects, low long-term liability burden and high revenue-raising ability. Fitch expects the city's fundamental economic strengths will drive further population growth and economic expansion.

Economic Resource Base

Carrollton is one of Dallas' 'inner-ring' cities, located in and along major highway and rail corridors, and near to the Dallas-Fort Worth Airport. The city is expected to reach build-out over the intermediate term. The larger economic sectors represented in the city's diverse employment base include manufacturing, construction trades, and wholesale trades.

Residents (estimated at 133,251 in 2021) also benefit from easy access to the larger Dallas-Fort Worth MSA employment base. The city's socio-economic profile is strong; the labor force exhibits educational attainment and income levels above state and U.S. averages.

KEY RATING DRIVERS

Revenue Framework: 'aaa'

Fitch expects further economic expansion will produce solid growth in the city's operating revenues that organically exceeds national inflation. This assumption is based on recent population and economic trends, and incorporates the economically sensitive nature of sales taxes. Carrollton's independent legal ability to raise property tax revenues, fees, charges for services and other locally controlled revenues is ample.

Expenditure Framework: 'aa'

Substantial expenditure flexibility is derived from strong workforce-related spending control, discretionary annual pay-go capital spending and moderate fixed carrying costs that incorporate a rapid pace of principal amortization. Growth in spending is likely to be marginally above revenue gains absent policy action.

Long-Term Liability Burden: 'aaa'

Carrollton's combined burden of debt and Fitch-adjusted net pension liabilities (NPLs) is low at around 6% of residents' 2021 estimated personal income. Fitch expects the metric to increase but remain closer to the high-end of the range for a 'aaa' assessment based on future debt plans.

Operating Performance: 'aaa'

Budget management is strong. The city's demonstrated willingness and ability to utilize its budgetary tools when necessary has preserved a strong and stable reserve cushion, contributing to the highest financial resilience assessment. General fund revenue volatility has historically been modest.

RATING SENSITIVITIES

Factors that could, individually or collectively, lead to positive rating action/upgrade:

--Not applicable for 'AAA' rated issuers.

Factors that could, individually or collectively, lead to negative rating action/downgrade:

--Material and sustained deterioration of the city's solid revenue growth prospects, closer to, or below Fitch's long-term expectations for national inflation;

--Sustained positioning of the city's liability burden at more than 10% of personal income;

--A material and sustained change to the city's ample gap-closing capacity that diminishes its superior inherent budget flexibility.

BEST/WORST CASE RATING SCENARIO

International scale credit ratings of Sovereigns, Public Finance and Infrastructure issuers have a best-case rating upgrade scenario (defined as the 99th percentile of rating transitions, measured in a positive direction) of three notches over a three-year rating horizon; and a worst-case rating downgrade scenario (defined as the 99th percentile of rating transitions, measured in a negative direction) of three notches over three years. The complete span of best- and worst-case scenario credit ratings for all rating categories ranges from 'AAA' to 'D'. Best- and worst-case scenario credit ratings are based on historical performance. For more information about the methodology used to determine sector-specific best- and worst-case scenario credit ratings, visit <https://www.fitchratings.com/site/re/10111579>.

CURRENT DEVELOPMENTS

Carrollton's FYE Sept. 30, 2022 general fund operating results were strong posting the fifth consecutive operating surplus. Positive results reflect higher than budgeted property and sales tax revenue performance and reduced spending of roughly \$11 million or 9.7% of total general fund spending. City operations generated an \$29.7 million net operating surplus (a higher than usual 23% of spending) that increased unrestricted general fund reserves to \$83.2 million or nearly 65% of spending, well above Fitch's 'aaa' financial resilience threshold and the city's target of maintaining 60 days of budgeted spending in reserves (about 16%). According to city policy, when reserve balances significantly exceed the 60-day target, the excess is typically transferred by the city to the capital project funds to fund pay-as-you-go capex.

The city was awarded a total of \$19.6 million in ARPA funds that is planned for use through fiscal 2024. The bulk of the city's ARPA funding has been directed towards revenue replacement for the recurring costs of firefighters' salaries over fiscal years 2021 and 2022 with the remainder directed towards various one-time capital projects.

For fiscal 2023, the structurally balanced \$126.8 million general operating budget was adopted with a moderate 8.5% increase yoy, led by strong (12% or \$7.9 million) projected growth in real property taxes. Sales taxes were estimated to increase yoy by roughly 8% compared to the fiscal 2022 budget. Much of the year's growth in recurring spending was directed towards a 5.6% across the board salary increase along with required step increases for public safety personnel.

Year-to-date, management reports sales tax revenues and other revenues are projected to be over budget by \$3.1 million and 600k, respectively. This revenue performance, in conjunction with the use of about \$884k of remaining ARPA funds to implement an Automated Meter Infrastructure program will likely result in a \$3.7 million general fund operating surplus (3% of budgeted spending) at the close of fiscal 2023.

CREDIT PROFILE

The city's tax base is largely residential; a mix of large multi-family properties and technology firms round out the city's 10 largest taxpayers. The city has realized steady expansion in its diverse taxable resource base, driven by a variety of commercial, industrial and retail investments as well as tax base appreciation. TAV growth has been strong as demonstrated in the 13.5% increase in fiscal 2023 to \$19.1 billion. Notably in 2019, the pharmaceuticals giant, AmerisourceBergen, opened an expanded \$75 million campus that will initially consolidate the company's North Texas workforce. The company has about 1,300 employees at the Carrollton location.

Additional tax base, population, and economic growth appears likely given the residential development (largely multi-family), new and existing industrial expansions, and further transit-oriented, mixed-use projects occurring and planned. City management reports ongoing progress towards completing key transit-oriented, mixed-use projects in and around the city's downtown and three Dallas Area Rapid Transit (DART) light-rail stations. The addition of DART's extensive northern commuter Cotton Belt rail line, which includes the DART Silver Line through Carrollton will expand the system's east-west corridor is estimated to be completed in late 2025 to mid-2026; this extension should provide further economic opportunities as well.

Revenue Framework

Property and sales taxes provide the bulk of general operating revenues (about 75% in fiscal 2022). Totalling nearly \$49 million, fiscal 2022 sales taxes increased 5% yoy. Downward recessionary volatility in sales taxes was relatively moderate in the last downturn mostly due to the implementation in 2013 of an internal sales tax funding cap for general operations limits cyclical risk related to this revenue source.

Specifically, the amount of general fund sales taxes may not increase more than 8% over the previous year's capped amount. Sales taxes received in excess of 8% are directed to fund one-time capital improvement projects. Also, the percentage of total sales tax spent for

recurring items is limited to 75% with the remaining 25% on one-time nonrecurring purposes. This nonrecurring portion totaled \$22 million in fiscal 2022.

Carrollton's 10-year CAGR of general fund revenues through fiscal 2022 was 6.7%, outpacing U.S. GDP. Future gains in the city's population, tax base, and economic activity will continue to yield solid revenue gains that exceed the rate of inflation.

At a total property tax rate of approximately \$0.56 in fiscal 2023, ample taxing margin remains under the \$2.50 per \$100 TAV cap for operations and limited tax debt service. However, the recently enacted Texas Senate Bill 2 (SB2) made a number of changes to local governments' property tax rate setting process. SB2 has diminished the city's independent legal ability to raise its operating tax levy. Similar to most other local taxing units in the state, the city is currently subject to a rollback tax rate (now the 'voter approval tax rate') levy increase of 3.5%. A ratification election that replaces the current petition process is required if the voter approval tax rate is exceeded.

However, SB2 retains some flexibility for local governments in the event of an applicable emergency/disaster declaration by the governor. Up to an 8% operating tax rate levy increase is then permitted in the two fiscal years following that declaration.

In general, annual tax rate increases are also guided by the city's measured, informal tax rate policy to maintain proportionality and utilize no more than 40% of the total tax rate to service debt obligations; the fiscal 2023 tax rate reflects a lower 26% directed towards debt service.

The tax rate limitation in SB2 excludes new additions to tax rolls and allows for banking of unused margin for up to three years. Carrollton's remaining control over property taxes as well as other local revenues such as fines, fees and charges for services is still sufficient to generate high revenue-raising flexibility relative to Fitch's assessment of expected modest revenue volatility in a typical downturn.

Expenditure Framework

Similar to many other local governments, public safety is the city's largest spending responsibility at about 60% of fiscal 2022 general fund recurring expenditures before transfers out.

Fitch believes future spending growth on average should be marginally above revenue growth absence policy action due to manageable service demands in this mature city.

The city maintains strong control over its workforce-related spending, with the ability to adjust employee headcount and compensation given the lack of organized employee bargaining units. Moderate fixed carrying costs for debt service, pension, and other post-employment benefits (OPEB; about 18% in fiscal 2022) incorporate the city's rapid pace of principal amortization of approximately 80% in 10 years, including this issuance. Expenditure flexibility is aided by the city's practice to annually transfer to a capital reserve fund sales tax receipts in excess of budget and a portion of property tax revenues, dedicated for capital purposes. These amounts totaled about \$16 million or 14% of fiscal 2022 general fund spending and transfers out, and could be reduced, deferred, or eliminated if necessary.

Long-Term Liability Burden

The long-term liability burden is low at an estimated 6% of 2021 resident personal income. Much of the liability burden (about 64%) consists of overlapping debt of \$410 million. Fitch expects the city's rapid pace of debt repayment should offset future planned borrowings as well as growth in population and personal income. As a result, Fitch believes the city's long-term liability burden will remain in line with the 'aaa' assessment.

The city's direct, tax-supported debt consists solely of voter-approved, limited tax GO bonds. The city plans to utilize its remaining, nearly \$123 million GO bond authorization through fiscal 2028 to fund the city's capital needs for street/traffic improvements, park/recreation and public safety facilities.

City employees participate in the Texas Municipal Retirement System (TMRS), a statewide, agent multiple-employer defined benefit plan. The city has reduced its pension liability with annual contributions moderately in excess of actuarial requirements. Under GASB 67 and 68, the city reported a fiscal 2022 net pension asset (NPA) of roughly \$27 million based on the plan's 6.75% investment return assumption. Adjusting for Fitch's lower standard 6% investment return assumption, the aggregate NPL for the city's plan totaled about \$22 million, with fiduciary assets covering about 96% of total estimated pension liabilities. The adjusted NPL represents less than 1% of 2021 resident personal income.

Operating Performance

Fitch believes the city of Carrollton maintains the highest capacity to reasonably absorb financial pressure resulting from an economic downturn without impairing its strong financial resilience. The city retains various budgetary tools at its disposal, which include revenue-raising authority, a historically strong reserve cushion, and solid ability to adjust expenditures. Given the city's historically strong and stable fiscal position, Fitch expects the

city will continue to prudently manage its costs in order to maintain a financial cushion consistent with the current resilience assessment.

Management's prudent and proactive budget practices reinforce the city's commitment to maintain and improve its fiscal and capital position, as reflected in sizeable pay-go capital investment through the economic cycle and annual pension funding consistently in excess of actuarial requirements. General fund results in recent fiscal years include transfers out that are largely due to continued growth in annual sales and property tax revenues; a portion of these monies are ultimately used to fund pay-go capital spending.

In addition to the sources of information identified in Fitch's applicable criteria specified below, this action was informed by information from Lumesis.

REFERENCES FOR SUBSTANTIALLY MATERIAL SOURCE CITED AS KEY DRIVER OF RATING

The principal sources of information used in the analysis are described in the Applicable Criteria.

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APPLICABLE CRITERIA

[U.S. Public Finance Tax-Supported Rating Criteria \(pub. 04 May 2021\) \(including rating assumption sensitivity\)](#)

APPLICABLE MODELS

Numbers in parentheses accompanying applicable model(s) contain hyperlinks to criteria providing description of model(s).

FAST Econometric API - Fitch Analytical Stress Test Model, v3.0.0 (1)

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Carrollton (TX)

EU Endorsed, UK Endorsed

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RatingsDirect®

Summary:

Carrollton, Texas; General Obligation

Primary Credit Analyst:

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Summary:

Carrollton, Texas; General Obligation

Credit Profile

US\$29.61 mil GO imp and rfdg bnds ser 2023 dtd 05/01/2023 due 08/15/2038

<i>Long Term Rating</i>	AAA/Stable	New
Carrollton GO		
<i>Long Term Rating</i>	AAA/Stable	Affirmed
Carrollton GO		
<i>Long Term Rating</i>	AAA/Stable	Affirmed

Credit Highlights

- S&P Global Ratings assigned its 'AAA' rating to Carrollton, Texas' roughly \$29.61 million series 2023 general obligation (GO) improvement and refunding bonds.
- At the same time, S&P Global Ratings affirmed its 'AAA' rating on the city's existing GO debt.
- The outlook is stable.

Security

Carrollton's GO bonds are a direct obligation of the city, payable from the proceeds of a continuing, direct annual ad valorem tax, within the limits prescribed by law, on all taxable property within its borders. The maximum allowable ad valorem tax rate in Texas is \$2.50 per \$100 of assessed value for all purposes with the portion dedicated to debt service limited to \$1.50. The city's total tax rate is well below the maximum at 56.25 cents: 14.52 cents for debt service. Based on the application of our criteria, "Issue Credit Ratings Linked To U.S. Public Finance Obligors' Creditworthiness," published Nov. 20, 2019, on RatingsDirect, we view the limited-tax GO debt pledge on par with the issuer credit rating (ICR), reflecting the city's general creditworthiness. Carrollton does not levy ad valorem taxes on a narrower or distinctly different property tax base, and there are no limitations on the fungibility of resources available for debt-service payment.

Carrollton's GO debt is eligible to be rated above the sovereign because we think the city can maintain better credit characteristics than the nation in a stress scenario. Under our criteria, "Ratings Above The Sovereign: Corporate And Government Ratings—Methodology And Assumptions," published Nov. 19, 2013, we consider U.S. local governments to have moderate sensitivity to national risk. The city's GO pledge is the primary source of debt security, severely limiting the possibility of negative sovereign intervention in the payment of debt or operations. The nation's Institutional Framework for local governments is predictable, allowing it significant autonomy, independent treasury management, and no history of government intervention. Carrollton also has considerable financial flexibility, demonstrated by its very strong general fund balance as a percent of expenditures, as well as very strong liquidity.

Officials intend to use series 2023 bond proceeds to fund various capital improvements citywide—including streets,

parks, public safety, and trails--and a portion of bond proceeds to refund certain GO debt for interest-cost savings.

Credit overview

Carrollton is a mature suburb of Dallas that, despite being landlocked, continues to undergo significant expansion through redevelopment, increasing its residential and commercial presence in the city, bolstered by its location along central transportation corridors. With the courtesy of ongoing developments and a strong housing market, the city has produced consistent revenue growth during the past several fiscal years, which, coupled with conservative budgeting, has led to a history of operating surpluses and reserves far in excess of its formal policy of maintaining 60 days' expenditures. Although the debt profile is, what we consider, weak, we consider it manageable with additional issuances commensurate with market value growth and debt amortizing rapidly.

The rating reflects our opinion of the city's:

- Very strong economy with access to a broad, diverse metropolitan statistical area (MSA) and ongoing economic development in the local economy, leading to a very diverse, continuously growing tax base;
- Positive operating performance and maintenance of very strong reserves and liquidity;
- Very strong management with robust, strong financial-management policies, procedures under our Financial Management Assessment (FMA) methodology and strong Institutional Framework score; and
- Weak debt profile with annual issuances expected, albeit with rapid amortization and an overfunded pension.

Environmental, social, and governance

We view Carrollton's environmental, social, and governance (ESG) risks as neutral within our credit-rating analysis when considering its economy, budgetary performance, management, and debt-and-liability profile. Notably, we view Carrollton's good governance practices as supporting its credit rating due to how well it is managing growth, reflected in its financial profile.

Outlook

The stable outlook reflects S&P Global Ratings' opinion of Carrollton's multiyear positive operating performance and maintenance of very strong reserves, as well as prudent financial management with key policies, practices that will likely provide stability when faced with evolving macro-economic conditions.

Downside scenario

We could lower the rating if budgetary performance were to become imbalanced, either due to increased fixed costs from high debt or sustained operating deficits, leading to a reserve drawdown.

Credit Opinion

Strong economic growth, very diverse tax base, benefitting from the Dallas-Fort Worth MSA

Carrollton continues to expand, growing its tax base steadily year over year with new residential and commercial developments continuously underway. The city benefits from its location 14 miles north of Dallas and 10 miles northeast of Dallas-Fort Worth International Airport, affording residents access to, and employment opportunities in,

the broad, diverse Dallas-Fort Worth MSA. In addition, Carrollton benefits from a diverse transportation system, including three light-rail stations and direct access to major thoroughfares in the Dallas Metroplex. Dallas Area Rapid Transit's (DART) Silver Line is under construction, which will connect downtown Plano and Dallas-Fort Worth Airport with a scheduled stop at the downtown Carrollton DART station.

Carrollton continues to grow its manufacturing sector with multiple companies occupying warehouse space in the city. Notably, there is a new 69,000-square-foot retail shopping center under construction. The residential market, the city's leading tax base generator, remains strong with single-, multi-, and multi-family mixed-use units increasing substantially. Despite being landlocked, the city has room to grow with the redevelopment of existing spaces.

We do not expect to change our view of Carrollton's very strong economy, reflecting its above-average property wealth and income, growing labor force, tax base, and access to the broader Dallas-Fort Worth MSA through its beneficial transit system.

A history of operating surpluses, bolstered by property and sales tax growth and the maintenance of very strong reserves

Carrollton consistently outperforms its conservative budget, resulting in a history of positive operating performance while its two main revenue sources, property taxes (43% of general fund revenue) and sales taxes (32%), continue to increase year over year. Fiscal 2022 yielded more of the same with general fund and total governmental fund surpluses.

In three fiscal years, property and sales taxes have increased by roughly 22%, correlating with growth. Due to the inherent volatility associated with sales taxes and possible looming recessionary pressure, likely decreasing consumer spending, we understand Carrollton caps the percent of total sales taxes within the operating budget to 75% of total collections with the remaining 25% spent on onetime nonrecurring expenditures. In addition, the city limits capped amount growth to no more than 8% over the previous year's capped amount.

In response to the possible implementation of Comptroller Rule 3.334, which sets forth how to handle sales tax, either origin or destination based, and which is under litigation, Carrollton has been budgeting sales tax conservatively to mitigate any effect on finances. If implemented, we do not expect the rule to result in budget pressure because the change would be relatively small; officials estimate a change of roughly \$4 million with capped sales taxes unaffected. Multiyear projections for subsequent fiscal years help insulate Carrollton from an unfavorable court decision.

Fiscal 2023 is trending positively, and officials expect to end fiscal 2023 with another operating surplus. The fiscal 2024 budget contains an operating deficit because officials plan to spend down a portion of reserves for capital projects. Carrollton has historically maintained fund balance in excess of its policy of maintaining 60 days' operating expenditures. Despite expected drawdowns, we expect reserves will likely remain, what we consider, very strong.

Since the city has a strong record of positive operating performance and conservative budgeting, underpinned by a management team committed to its financial policies, despite expected fund balance drawdowns, we expect finances will likely remain stable.

Very strong management with strong financial-management policies, practices under our FMA methodology

Carrollton has adopted a comprehensive set of financial and budgeting policies. Highlights include management's:

- Minimum general-fund-balance requirement of 60 days' operating expenditures and use of regression analysis and historical trends to form revenue forecasts;
- Monthly budget and status reports to elected officials--It amends the operating budget as needed;
- Adopted debt-management policy, which it reviews annually as part of the budget process;
- Annual, city-council-adopted, five-year, rolling capital-improvement plan with identified funding sources;
- Five-year financial forecast, which it presents to the council annually; and
- Adopted annual investment-management policy, which the city council reviews--It provides the council with quarterly investment-holdings-and-returns reports.

The Institutional Framework score for Texas municipalities is strong.

Weak debt with additional planned annual issuances but rapid amortization

Carrollton has, what we consider, a weak, but manageable, debt profile. To accommodate growth, officials expect to issue debt annually; however, since it amortizes debt rapidly, coinciding with market value growth, we do not expect additional debt will likely weaken the profile materially.

Pension and other postemployment benefits (OPEB)

We do not view pension and OPEB liabilities as an immediate credit risk for Carrollton. The city's pension plan is well funded with actuarially determined contributions. In addition, its strong funding discipline and maintenance of very healthy reserves somewhat offset the risk of significant financial deterioration tied to near-term cost escalation.

As of Dec. 31, 2021, the latest measurement date, Carrollton participates in:

- Texas Municipal Retirement System, which is 105.4% funded on a generally accepted accounting principles basis, with a net pension asset equal to \$26.6 million--Contributions are actuarially determined, and the city has recently overfunded annual required costs; actuarial assumptions include a 6.75% discount; and
- Carrollton's single-employer, defined-benefit, OPEB plan that provides postemployment medical care to grandfathered retirees--It closed this plan in 2009 and replaced it with a defined-contribution plan for nongrandfathered employees, and the city's total OPEB liability was \$3.23 million (for the closed plan) with an assumed 2% discount and pay-as-you-go contributions.

Carrollton, Texas select key credit metrics

	Most recent	--Historical information--		
		2022	2021	2020
Very strong economy				
Projected per capita effective buying income (EBI) (%) of U.S.	115.3			
Market value per capita (\$)	135,501			
Population		141,221	139,554	

Carrollton, Texas select key credit metrics (cont.)

	Most recent	--Historical information--		
		2022	2021	2020
County unemployment rate(%)			4.9	
Market value (\$000)	19,135,582	16,853,487	15,870,000	
10 largest taxpayers as a % of taxable value	4.8			
Strong budgetary performance				
Operating fund result as a % of expenditures		26.2	13.3	9.3
Total governmental fund result as a % of expenditures		29.6	30.8	21.8
Very strong budgetary flexibility				
Available reserves as a % of operating expenditures		73.4	49.2	38.2
Total available reserves (\$000)		83,206	54,413	40,568
Very strong liquidity				
Total government cash as a % of governmental fund expenditures		206.0	190.3	162.1
Total government cash as a % of governmental fund debt service		1,241.9	1,175.7	1,007.7
Very strong management				
Financial Management Assessment	Strong			
Weak debt and long-term liabilities				
Debt service as a % of governmental fund expenditures		16.6	16.2	16.1
Net direct debt as a % of governmental fund revenue	117.5			
Overall net debt as a % of market value	3.3			
Direct debt 10-year amortization (%)	79.8			
Required pension contribution as a % of governmental fund expenditures		5.0		
Other postemployment benefits actual contribution as a % of governmental fund expenditures		0.1		
Strong Institutional Framework				

Related Research

- S&P Public Finance Local GO Criteria: How We Adjust Data For Analytic Consistency, Sept. 12, 2013
- Incorporating GASB 67 And 68: Evaluating Pension/OPEB Obligations Under Standard & Poor's U.S. Local Government GO Criteria, Sept. 2, 2015
- Criteria Guidance: Assessing U.S. Public Finance Pension And Other Postemployment Obligations For GO Debt, Local Government GO Ratings, And State Ratings, Oct. 7, 2019
- 2022 Update Of Institutional Framework For U.S. Local Governments
- Through The ESG Lens 3.0: The Intersection Of ESG Credit Factors And U.S. Public Finance Credit Factors, March 2, 2022

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Summary: Carrollton, Texas; General Obligation

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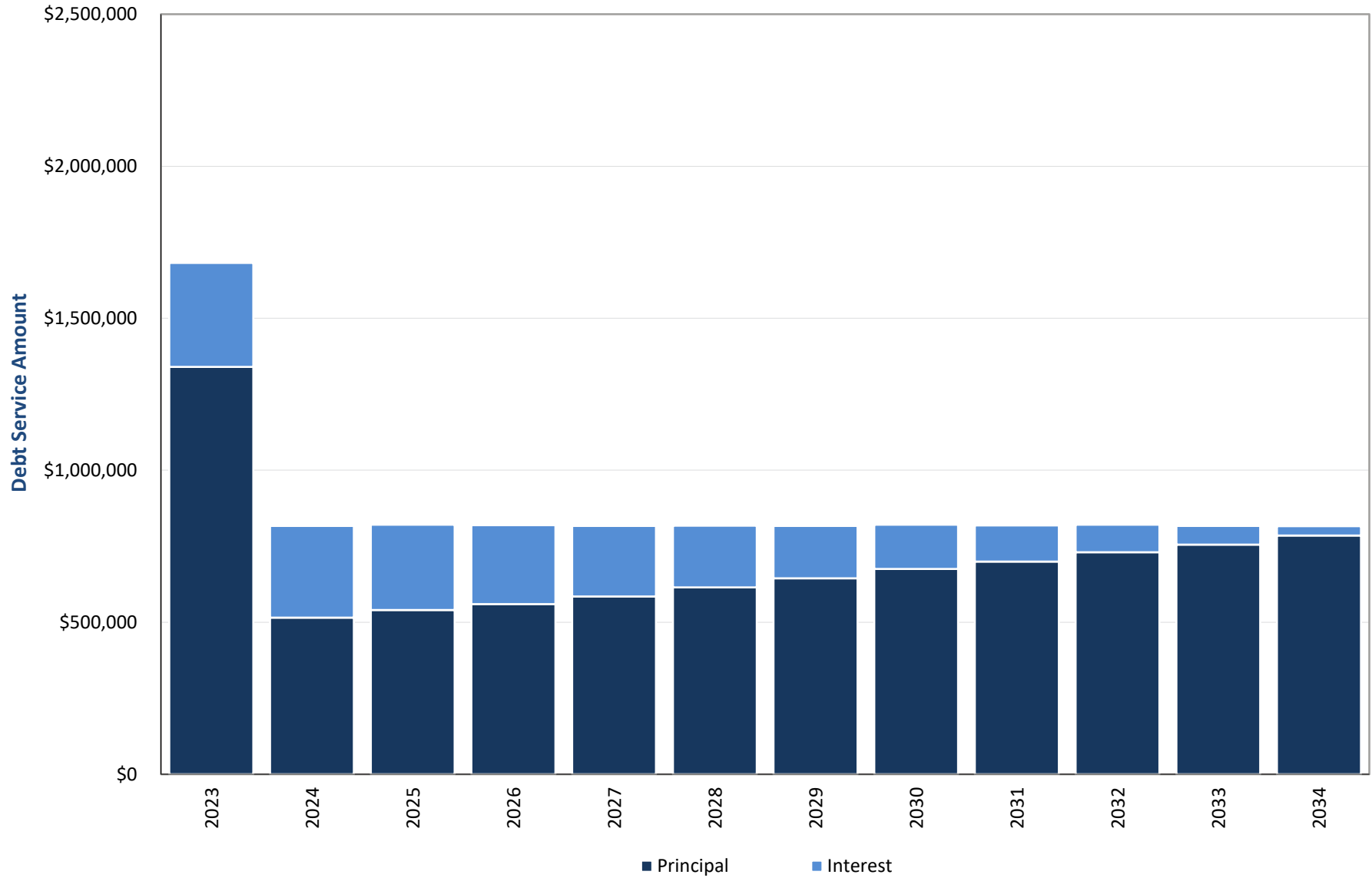
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II. Waterworks & Sewer System Debt

Debt Service by Principal and Interest

City of Carrollton, Texas

Outstanding Waterworks and Sewer System Revenue Debt Service by Principal and Interest



Fiscal Year Ending September 30

City of Carrollton, Texas
Annual Waterworks and Sewer System Revenue Debt Service
By Principal and Interest

FYE	Principal	Interest	Debt Service
2023	1,340,000.00	342,000.00	1,682,000.00
2024	515,000.00	301,800.00	816,800.00
2025	540,000.00	281,200.00	821,200.00
2026	560,000.00	259,600.00	819,600.00
2027	585,000.00	231,600.00	816,600.00
2028	615,000.00	202,350.00	817,350.00
2029	645,000.00	171,600.00	816,600.00
2030	675,000.00	145,800.00	820,800.00
2031	700,000.00	118,800.00	818,800.00
2032	730,000.00	90,800.00	820,800.00
2033	755,000.00	61,600.00	816,600.00
2034	<u>785,000.00</u>	<u>31,400.00</u>	<u>816,400.00</u>
Total	\$8,445,000.00	\$2,238,550.00	\$10,683,550.00

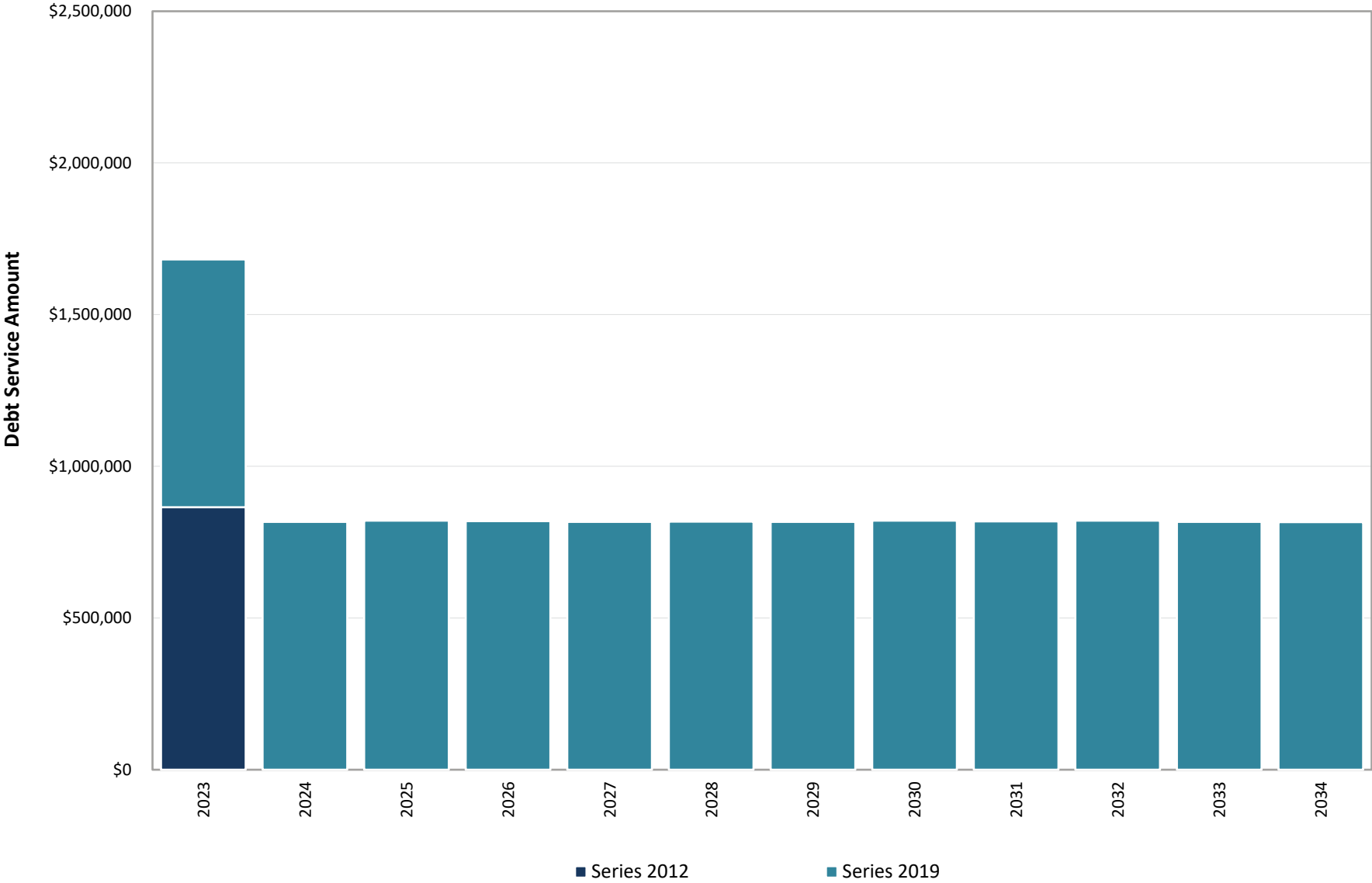
City of Carrollton, Texas
Semi-Annual Waterworks and Sewer System Revenue Debt Service
By Principal and Interest

FYE	Principal	Interest	Debt Service	FYE 9/30 Debt Service
11/01/22	-	171,000.00	171,000.00	-
05/01/23	1,340,000.00	171,000.00	1,511,000.00	1,682,000.00
11/01/23	-	150,900.00	150,900.00	-
05/01/24	515,000.00	150,900.00	665,900.00	816,800.00
11/01/24	-	140,600.00	140,600.00	-
05/01/25	540,000.00	140,600.00	680,600.00	821,200.00
11/01/25	-	129,800.00	129,800.00	-
05/01/26	560,000.00	129,800.00	689,800.00	819,600.00
11/01/26	-	115,800.00	115,800.00	-
05/01/27	585,000.00	115,800.00	700,800.00	816,600.00
11/01/27	-	101,175.00	101,175.00	-
05/01/28	615,000.00	101,175.00	716,175.00	817,350.00
11/01/28	-	85,800.00	85,800.00	-
05/01/29	645,000.00	85,800.00	730,800.00	816,600.00
11/01/29	-	72,900.00	72,900.00	-
05/01/30	675,000.00	72,900.00	747,900.00	820,800.00
11/01/30	-	59,400.00	59,400.00	-
05/01/31	700,000.00	59,400.00	759,400.00	818,800.00
11/01/31	-	45,400.00	45,400.00	-
05/01/32	730,000.00	45,400.00	775,400.00	820,800.00
11/01/32	-	30,800.00	30,800.00	-
05/01/33	755,000.00	30,800.00	785,800.00	816,600.00
11/01/33	-	15,700.00	15,700.00	-
05/01/34	<u>785,000.00</u>	<u>15,700.00</u>	<u>800,700.00</u>	<u>816,400.00</u>
Total	\$8,445,000.00	\$2,238,550.00	\$10,683,550.00	\$10,683,550.00

Debt Service by Series

City of Carrollton, Texas

Outstanding Waterworks and Sewer System Revenue Debt Service by Series



Fiscal Year Ending September 30

City of Carrollton, Texas
Outstanding Waterworks and Sewer System
Revenue Debt Service By Series

FYE	Series 2012	Series 2019	Total
2023	865,200.00	816,800.00	1,682,000.00
2024	-	816,800.00	816,800.00
2025	-	821,200.00	821,200.00
2026	-	819,600.00	819,600.00
2027	-	816,600.00	816,600.00
2028	-	817,350.00	817,350.00
2029	-	816,600.00	816,600.00
2030	-	820,800.00	820,800.00
2031	-	818,800.00	818,800.00
2032	-	820,800.00	820,800.00
2033	-	816,600.00	816,600.00
2034	-	816,400.00	816,400.00
Total	865,200.00	9,818,350.00	10,683,550.00

City of Carrollton, Texas
Waterworks and Sewer System Revenue Refunding Bonds, Series 2012
Dated Date: May 1, 2012
Coupon Range Outstanding: 3.000%

<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Debt Service</u>	<u>FYE 9/30 Debt Service</u>
11/01/22	-	12,600.00	12,600.00	-
05/01/23	<u>840,000.00</u>	<u>12,600.00</u>	<u>852,600.00</u>	<u>865,200.00</u>
Total	<u>\$840,000.00</u>	<u>\$25,200.00</u>	<u>\$865,200.00</u>	<u>\$865,200.00</u>

City of Carrollton, Texas
Waterworks and Sewer System Revenue Bonds, Series 2019
Dated Date: May 1, 2019
Coupon Range Outstanding: 4.000% - 5.000%

<u>Date</u>	<u>Principal</u>	<u>Interest</u>	<u>Debt Service</u>	<u>FYE 9/30 Debt Service</u>
11/01/22	-	158,400.00	158,400.00	-
05/01/23	500,000.00	158,400.00	658,400.00	816,800.00
11/01/23	-	150,900.00	150,900.00	-
05/01/24	515,000.00	150,900.00	665,900.00	816,800.00
11/01/24	-	140,600.00	140,600.00	-
05/01/25	540,000.00	140,600.00	680,600.00	821,200.00
11/01/25	-	129,800.00	129,800.00	-
05/01/26	560,000.00	129,800.00	689,800.00	819,600.00
11/01/26	-	115,800.00	115,800.00	-
05/01/27	585,000.00	115,800.00	700,800.00	816,600.00
11/01/27	-	101,175.00	101,175.00	-
05/01/28	615,000.00	101,175.00	716,175.00	817,350.00
11/01/28	-	85,800.00	85,800.00	-
05/01/29	645,000.00	85,800.00	730,800.00	816,600.00
11/01/29	-	72,900.00	72,900.00	-
05/01/30	675,000.00	72,900.00	747,900.00	820,800.00
11/01/30	-	59,400.00	59,400.00	-
05/01/31	700,000.00	59,400.00	759,400.00	818,800.00
11/01/31	-	45,400.00	45,400.00	-
05/01/32	730,000.00	45,400.00	775,400.00	820,800.00
11/01/32	-	30,800.00	30,800.00	-
05/01/33	755,000.00	30,800.00	785,800.00	816,600.00
11/01/33	-	15,700.00	15,700.00	-
05/01/34	<u>785,000.00</u>	<u>15,700.00</u>	<u>800,700.00</u>	<u>816,400.00</u>
Total	<u>\$7,605,000.00</u>	<u>\$2,213,350.00</u>	<u>\$9,818,350.00</u>	<u>\$9,818,350.00</u>

Rating Reports

27 JAN 2021

Fitch Affirms Carrollton, TX's Water and Sewer Revs at 'AAA'; Outlook Stable

Fitch Ratings - Austin - 27 Jan 2021: Fitch Ratings has affirmed the 'AAA' rating on the following Carrollton, Texas (the city) bonds:

--\$11.9 million outstanding waterworks and sewer system (the system) revenue bonds series 2012 and 2019.

In addition, Fitch has assessed the Stand-alone Credit Profile (SCP) of the system at 'aaa'.

The Rating Outlook is Stable.

ANALYTICAL CONCLUSION

The affirmation of the 'AAA' rating and assessment of the SCP at 'aaa' reflects the system's exceptionally low leverage, as measured by net adjusted debt-to-adjusted funds available for debt service (FADS), in the context of its very strong revenue defensibility and low operating risk profile, assessed at 'aa' and 'a', respectively. The system's financial operations are very strong. Leverage registered at 3.8x in fiscal 2019 and is expected to remain at the 2.5x to 3.0x range throughout Fitch's forward-looking analysis, supportive of the assessment. The city suspended rate increases for fiscal 2021 but expects to resume increases in fiscals 2022 and 2023 and the system plans to fund its capital spending from pay-go.

CREDIT PROFILE

Carrollton is a relatively mature city located northwest of Dallas along Interstate 35 East, in parts of Dallas, Denton, and Collin counties in the Dallas-Fort Worth Metroplex with a population of around 140,000. Most new development is in the form of infill projects in the city center and a few new developments. The city encompasses approximately 37 square miles and almost 98% of the city is developed.

The system provides retail water and sewer service to more than 36,000 residential and commercial customers within the city. The city does not own any treatment facilities but instead purchases treated water supplies on a wholesale basis from Dallas Water Utilities (DWU water and sewer revenue bonds, rated AA+; Negative Outlook). The current DWU agreement allows for 41 million gallons daily (mgd) of water with budgeted increase (if required) to approximately 45 mgd. The city owns and operates a retail sewer collection system, contracting for sewage treatment and disposal with Trinity River

Authority (TRA) (wastewater revenue bonds AA+ by Fitch) as one of 21 customers contributing to TRA's Central Regional Wastewater System (CRWS). The term of the contract is through 2023 or until all CRWS bonds are retired.

Fitch considers the system a related entity of the City of Carrollton, TX (IDR AAA/Stable Outlook) given the relationship of the water and sewer system as an enterprise fund of the city. The rating on the water and sewer revenue bonds is not currently constrained by the credit quality of the city.

Coronavirus Considerations

The outbreak of coronavirus has created an uncertain global environment for the water and sewer sector. While the water and sewer system's performance through most recently available data has not indicated material impairment, the system experienced a shift in demand from commercial to residential usage as stay-at-home orders were implemented. Fitch's ratings remain forward-looking in nature, and Fitch will continue to monitor developments related to the severity and duration of the virus outbreak, and incorporate revised expectations for future performance and assessment of key rating drivers.

Very Favorable Service Area Characteristics; Very Affordable User Charges.

Revenues are derived entirely from the system's exclusive right to provide retail water and sewer service within the service area. Service area characteristics are very favorable with above average wealth levels, average growth and unemployment rates. The system has independent rate-setting authority and rates are affordable for the vast majority of customers.

Low Operating Risk in Conjunction Elevated Lifecycle Ratio.

The operating risks assessment is supported by the system's very low operating cost burden; however, the overall assessment incorporates its elevated life cycle ratio over 50%. The elevated lifecycle ratio is somewhat mitigated by assets that are mainly distribution and collection related. Capital projects through fiscal 2024 total about \$16 million and focus primarily on renewal and replacement.

Exceptionally Strong Financial Profile.

The system's leverage ratio was 3.8x at the end of fiscal 2019, and is expected to remain supportive of

the assessment. Liquidity, while neutral to the assessment, is expected to remain robust.

Asymmetric Additive Risk Considerations

No asymmetric additive risk considerations affected this rating determination.

RATING SENSITIVITIES

Factors that could, individually or collectively, lead to a positive rating action/upgrade:

-Not applicable given the 'AAA' rating.

Factors that could, individually or collectively, lead to a negative rating action/downgrade:

--Sustained increase in leverage that approximates more than 4.0x in Fitch's base and stress cases;

--Continued weakening of the Capital Planning and Management sub-assessment could pressure the Operating Risks assessment.

Best/Worst Case Rating Scenario

International scale credit ratings of Sovereigns, Public Finance and Infrastructure issuers have a best-case rating upgrade scenario (defined as the 99th percentile of rating transitions, measured in a positive direction) of three notches over a three-year rating horizon; and a worst-case rating downgrade scenario (defined as the 99th percentile of rating transitions, measured in a negative direction) of three notches over three years. The complete span of best- and worst-case scenario credit ratings for all rating categories ranges from 'AAA' to 'D'. Best- and worst-case scenario credit ratings are based on historical performance. For more information about the methodology used to determine sector-specific best- and worst-case scenario credit ratings, visit [<https://www.fitchratings.com/site/re/10111579>].

SECURITY

The bonds are secured by a first lien on and pledge of net revenues of combined water and sewer system.

Revenue Defensibility

Revenue defensibility is considered to be very strong, assessed at 'aa'. All revenues are derived from the system's monopolistic business lines providing retail water and sewer services, and demand characteristics are strong. Customer growth is midrange, with a five-year CAGR of 0.8% as of fiscal 2019. Unemployment rates (81% of the national average) are favorable and income levels (125%) are

above average compared to the national average.

Rate flexibility is also very strong. The system has some of the lowest rates in the region and as of fiscal 2019, the combined monthly utility bill of approximately \$60 (using Fitch's standard usage of 7,500 gallons of water and 6,000 gallons of sewer flows per month) is considered to be affordable for the vast majority of customers (almost 92%).

Operating Risks

Operating risks are low and assessed at 'a'. The operating cost burden is very low at an average of \$3,800 per million gallons of water produced and sewer flows treated. The operating cost burden is influenced by the city's purchases from wholesale providers. The city does not own any treatment facilities and instead purchases treated water on a wholesale basis from DWU and has a contract for wastewater treatment service with TRA.

At 57%, the system's life cycle ratio is elevated and trending upwards over the past few years. Capital investment has averaged about 50% of depreciation annually for the past five fiscal years but this lower level of investment is somewhat offset by the fact that assets are mainly distribution and collection related.

The 2020-2024 capital improvements program (CIP) plan totals a manageable \$16.4 million and generally on par with historical spending. No debt issuances are anticipated over the next five years based on the current capital plan. These planned improvements are within the capability of the city's current pay-go funding levels. Projects are solely related to storage, distribution, and system maintenance. High priority projects include elevated storage tank and water and sewer line replacements. However, this capital plan and debt issuance requirement in the next five years could be affected by the results of a Water and Sewer Master Plan to be completed in the summer of 2021. The city conforms to a steady level of ongoing renewal and replacement relative to the capital assets but annual capital spending does not keep up with annual depreciation expenses. The city actively works to reduce inflow and infiltration as it leads to lower flows to TRA, reducing wholesale sewer costs.

Financial Profile

The financial profile is exceptionally strong and assessed at 'aaa'. The system's leverage ratio was 3.8x at the end of fiscal 2019, which increased from an average of 3.4x since fiscal 2015 as the system issued additional debt. However, leverage is expected to range from 2.5x to 3.0x through the forward look. The liquidity profile remains neutral to the assessment. At the close of fiscal 2019, the system's days cash on hand and the liquidity cushion ratio both equaled 236 days. For the same period, coverage of full obligations was 1.2x; Fitch-calculated debt service coverage for the period was 2.6x.

Fitch Analytical Stress Test (FAST)

The FAST considers the potential trend of key ratios in a base case and a stress case. The stress case is

designed to impose capital costs 10% above expected levels and evaluate potential variability in projected key ratios. Base case assumptions are informed by the system's 2020 unaudited statements and 2021 Amended Budget, which assumes no rate increase in 2021 and expected rate increases of approximately 3% and 5.5% in fiscal years 2022 and 2023, respectively. Fitch assumed operating expense growth of about 4% annually, while connection fees and transfers out are assumed at the five-year average. The CIP totals are estimated at around \$16.4 million through fiscal 2024. The CIP represent a combination of projects funded via pay-go driven primarily by maintenance with some accommodation for shifts and increases in demand in areas experiencing growth. Based on these assumptions, leverage increases to 3.0x under the base case to 3.1x in the stress case by fiscal 2021, before declining thereafter.

Given the overriding economic uncertainty related to the coronavirus, Fitch has also considered an additional sensitized downside scenario that assumes a 4% revenue decline in fiscal 2021 with a recovery stretched over the following three years. In these scenarios, leverage increases to 3.5x under the base case and to 3.6x in the stress case by fiscal 2021 then declining, also supportive of the current rating.

Sources of Information

In addition to the sources of information identified in Fitch's applicable criteria specified below, this action was informed by information from Lumesis.

REFERENCES FOR SUBSTANTIALLY MATERIAL SOURCE CITED AS KEY DRIVER OF RATING

The principal sources of information used in the analysis are described in the Applicable Criteria.

ESG Considerations

Unless otherwise disclosed in this section, the highest level of ESG credit relevance is a score of '3'. This means ESG issues are credit-neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity. For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg

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Applicable Criteria

[Public Sector, Revenue-Supported Entities Rating Criteria \(pub.27 Mar 2020\) \(including rating assumption sensitivity\)](#)

[U.S. Water and Sewer Rating Criteria \(pub.03 Apr 2020\) \(including rating assumption sensitivity\)](#)

Additional Disclosures

[Solicitation Status](#)

Endorsement Status

Carrollton (TX) EU Endorsed, UK Endorsed

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Summary:

Carrollton, Texas; Water/Sewer

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Rationale

Outlook

Summary:

Carrollton, Texas; Water/Sewer

Credit Profile

US\$8.695 mil wtrwks and swr sys rev bnds ser 2019 dtd 05/01/2019 due 05/01/2036

Long Term Rating AAA/Stable New

Carrollton ws

Long Term Rating AAA/Stable Affirmed

Rationale

S&P Global Ratings assigned its 'AAA' long-term rating to Carrollton, Texas' series 2019 waterworks and sewer system revenue bonds. At the same time, we affirmed our 'AAA' long-term rating on the city's existing water and sewer system revenue bonds. The rating reflects, in our opinion, the combination of an extremely strong enterprise risk profile and a very strong financial risk profile. The outlook is stable.

The enterprise risk profile reflects our view of the system's:

- Stable, primarily residential, customer base that benefits from participation in the broad and diverse Dallas-Fort Worth-Arlington metropolitan statistical area (MSA);
- Very low industry risk as a monopolistic service provider of an essential public utility;
- Affordable rates based on very strong income levels, with low poverty rates; and
- Good operational management practices.

The financial risk profile reflects our view of the utility system's:

- Overall adequate all-in debt service coverage (DSC);
- Extremely strong liquidity and reserves;
- Low debt levels in relation to regional peers with approximately \$14.7 million debt outstanding when including this issuance; and
- Strong financial management practices.

Proceeds from the series 2019 bonds will be used to construct a new elevated water storage facility and for additional improvements to the system.

The system's first-lien pledge of net revenues generated from water and sewer system operations secures the bonds. We believe bond provision are adequate, with a rate covenant equal to 1.2x average annual debt service and an additional bonds test equal to 1.25x average annual debt service and 1.10x the maximum annual debt service (MADS). A debt service reserve funded at average annual debt service will provide additional liquidity for the bonds.

Due to the system's limited exposure to federal revenue, we believe the rating on the city's waterworks and sewer system revenue bonds, which exceeds our sovereign rating on the U.S., is warranted. (For more information, please see the criteria article, "Ratings Above the Sovereign: Corporate And Government Ratings--Methodology And Assumptions," published Nov. 19, 2013, on RatingsDirect.) We believe the system's locally derived revenue base, which represents all system revenue, support the higher rating.

Enterprise risk

Our assessment of the utility system's enterprise risk profile is extremely strong, reflecting our view of the stable, primarily residential, customer base that benefits from participation in the broad and diverse Dallas-Fort Worth-Arlington MSA, affordable rates based on very strong income levels with low poverty rates, and a good operational management framework.

Carrollton, with a population of over 133,000, is in Denton, Collin, and Dallas counties. We consider Carrollton's economy strong, with access to the broad and diverse employment base of the Dallas-Fort Worth MSA. The city is just 14 miles north Dallas and 10 miles northeast of the Dallas-Fort Worth International Airport. Carrollton has three industrial parks and two office parks. Its economy encompasses finance, insurance, real estate, construction, technology, manufacturing, and regional/national headquarters. Furthermore, the city is the only one in the North Texas area with a foreign trade zone designation. It has more than 9,000 businesses. Median household effective buying income (MHHEBI) for the city is very strong, in our view, at 133% of the national level. The unemployment rate of the city for December 2018 was 2.9%, below the state and national averages. The customer base is stable and diverse. The 10 leading customers accounted for about 6.5% of fiscal 2018 revenues.

Currently, the average water and sewer bill for city residents is about \$51, based on an average household consumption of 6,000 gallons monthly. The city adjusted the rates in January 2019 by an average of 6.34%--2.84% in water rates and 11.09% in sewer rates. The rates are reviewed annually based on the city's internal model, and the city council has the authority to adopt recommended rates. The multiyear forecast projects an average increase of about 7% in fiscal years 2020 and 2021. The rates are affordable due to very strong income levels and are about 1% of the MHHEBI level. The poverty rate is low at 8.7%.

The city owns and operates all of the utility systems' storage, and distribution facilities. The city's water is supplied by Dallas Water Utilities (DWU) through a long-term water purchase contract. The average and peak daily demands for fiscal year 2018 are well within capacity at about 13.9 million gallons per day (mgd) and 19 mgd, respectively. The city has entered into a contract with the Trinity River Authority to treat its wastewater. The annual payments to the authority have been recorded as operating expenses of the system.

Based on our operational management assessment, we view the water system as a '2' on a six-point scale with '1' being the strongest. An assessment of good, in our view, implies that the system's operational practices and policies are good and primarily comprehensive. The city has a succession plan in place. There are also state-approved drought and disaster management plans in place. The rates are reviewed annually based on the city's internal model, and the city council has the authority to adopt recommended rates.

Financial risk

Our assessment of the utility system's financial risk profile as very strong reflects our view of the city's extremely strong liquidity position, strong financial management framework, and adequate coverage levels, coupled with debt levels which we view as low in relation to regional peers.

All-in coverage is S&P Global Ratings' adjusted DSC metric that treats certain recurring financial obligations as if they were debt, and in Carrollton's case, we include the fixed charges associated with the city's purchase contracts with DWU. Furthermore, we make an adjustment to include transfer payments to the general fund for administrative costs since we view them as a recurring use of utility revenues and exclude the transfers for the capitalization of equipping them. All-in coverage for Carrollton improved from about 1.17x in fiscal 2016 to 1.32x in fiscal 2018. The rise was primarily due to an increase in revenues as a result of the management of rates. Actual annual DSC is better and generally has remained well over 2x historically. Based on analysis of the city's long-term projections, we expect the coverage levels to remain in the current range in the near future.

The city has an extremely strong liquidity position, with unrestricted cash and investments improving from \$21.4 million in 2016 amounting to about \$23.5 million as of fiscal 2018, or 2018 days' cash on hand. Management maintains a codified reserve policy of maintaining 90 days' operating cash on hand, which the city is currently exceeding.

The city has approximately \$14.7 million in debt outstanding when including this issuance, consisting of revenue bonds. The debt-to-capitalization ratio was just under 10%. The city has a five-year capital improvement program (CIP) for the system amounting to \$18.8 million for the period 2019-2023. The funding for the program will be primarily be provided by excess revenues of the system. The city does not anticipate additional issuance of revenue bonds within the scope of this outlook. It participates in the Texas Municipal Retirement System pension plan. The funding ratio of the city was just under 99% for year 2017.

Based on our financial management assessment (FMA), we view the city as a '1' on a six- point scale, with '1' being the strongest. An FMA of strong indicates our view that practices are strong, well embedded, and likely sustainable. The management reports monthly financial activities to the city council as required by the city charter. A five-year financial forecast is updated annually as a part of the budget development process. The city prepares five-year CIP, which is updated on annual basis. There is an investment policy in place, and city maintains a liquidity target of 90 days' operating expenses on hand. A debt policy is also codified and well embedded in the city's policies. Management also produces annual audited financial statements that comply with generally accepted accounting principles (GAAP).

Outlook

The outlook reflects S&P Global Ratings' expectation that the system's financial performance and position will remain in line with recent trends. We do not anticipate pressure on coverage and liquidity in the near term, as there are only minimal identified capital needs. The front-loaded debt service schedule, competitive rates, and experienced management team all contribute to our positive view of the system's financial position.

Downside scenario

Should the city not manage revenues in relation to expenses and obligations in a timely manner, causing coverage levels and liquidity to deteriorate, there could be pressure on the rating.

Ratings Detail (As Of April 10, 2019)

Carrollton ws (AMBAC) <i>Unenhanced Rating</i>	AAA(SPUR)/Stable	Affirmed
Carrollton ws (AMBAC) <i>Unenhanced Rating</i>	AAA(SPUR)/Stable	Affirmed
Carrollton ws (FSA) <i>Unenhanced Rating</i>	AAA(SPUR)/Stable	Affirmed

Many issues are enhanced by bond insurance.

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

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