Basic Financial

This page left blank intentionally.

Statement of Net Position

December 31, 2019 (dollars in thousands)

	Primary Government			
	Governmental Activities	Business-type Activities	Total	Component Units
Assets				
Cash on hand	$ 6,601	$ -	$ 6,601	$ -
Cash and cash equivalents	1,734,002	63,452	1,797,454	82,509
Investments	-	1,171,660	1,171,660	197
Receivables (net of allowances):				
Taxes	620,948	-	620,948	171,060
Notes	64,118	-	64,118	-
Accounts	23,347	88,073	111,420	4,738
Accrued interest	9,264	7,503	16,767	398
Other	-	-	-	15,508
Due from other governments	63,477	-	63,477	-
Internal balances	34,131	(34,131)	-	-
Inventories	200	10,775	10,975	-
Prepaid items and other assets	13,337	17,748	31,085	2,349
Restricted assets:				
Cash and cash equivalents	232,501	93,796	326,297	37,027
Investments	-	2,522,351	2,522,351	260,187
Accounts receivable	-	15,786	15,786	-
Accrued interest receivable	-	12,571	12,571	-
Long-term receivables (net of allowances)	36,948	30,552	67,500	-
Prepaid expense	-	329	329	-
Interest rate swaps	-	4,589	4,589	-
Assets held for disposition	9,755	-	9,755	-
Capital assets:				
Land and construction in progress	861,940	1,327,706	2,189,646	42,613
Buildings, improvements, infrastructure, collections, and equipment, net of accumulated depreciation	2,498,287	3,809,097	6,307,384	157,986
Total Assets	**6,208,856**	**9,141,857**	**15,350,713**	**774,572**
Deferred Outflows of Resources				
Accumulated decrease in fair value of hedging derivatives	24,617	4,106	28,723	-
Deferred loss on refundings	13,546	75,338	88,884	18,241
Items related to OPEB and pension plans	506,989	70,444	577,433	-
Total Deferred Outflows of Resources	**545,152**	**149,888**	**695,040**	**18,241**

See accompanying notes to basic financial statements.

Statement of Net Position, continued

December 31, 2019 (dollars in thousands)

	Primary Government			
	Governmental Activities	Business-type Activities	Total	Component Units
Liabilities				
Vouchers payable	167,055	184,956	352,011	9,720
Accrued liabilities	60,964	24,072	85,036	32,431
Unearned revenue	28,109	16,469	44,578	7,170
Interest rate swaps	27,271	36,097	63,368	-
Advances and advance rent	4,863	40,001	44,864	2,575
Due to taxing unit	514	-	514	-
Due to other governments	-	2,960	2,960	207
Liabilities payable from restricted assets	-	63,762	63,762	-
Noncurrent liabilities:				
Due within one year	185,115	273,095	458,210	33,697
Due in more than one year	3,704,306	6,561,828	10,266,134	686,290
Total Liabilities	**4,178,197**	**7,203,240**	**11,381,437**	**772,090**
Deferred Inflows of Resources				
Property taxes	510,920	-	510,920	165,384
Deferred gain on refunding	4,011	4,072	8,083	-
Items related to pension and OPEB plans	9,150	5,553	14,703	-
Total Deferred Inflows of Resources	**524,081**	**9,625**	**533,706**	**165,384**
Net Position				
Net investment in capital assets	1,955,118	517,177	2,472,295	(78,112)
Restricted for:				
Capital projects and grants	1,440,819	19,694	1,460,513	128,908
Emergency use	61,675	-	61,675	83,409
Debt service	216,885	476,888	693,773	35,653
Donor and other restrictions:				
Expendable	-	-	-	17,418
Nonexpendable	3,000	-	3,000	-
Other purposes	23,074	-	23,074	-
Unrestricted (deficit)	(1,648,841)	1,065,121	(583,720)	(331,937)
Total Net Position (Deficit)	**$ 2,051,730**	**$ 2,078,880**	**$ 4,130,610**	**$ (144,661)**

See accompanying notes to basic financial statements

Statement of Activities

For the Year Ended December 31, 2019 (dollars in thousands)

		Program Revenues		
Functions/Programs	**Expenses**	**Charges for Services**	**Operating Grants and Contributions**	**Capital Grants and Contributions**
Primary Government				
Governmental Activities:				
General government	$ 553,292	$ 101,603	$ 28,415	$ 15,325
Public safety	724,031	99,548	25,012	40
Public works	378,125	78,883	24,616	59,431
Human services	163,930	470	96,093	-
Health	112,395	2,315	10,604	-
Parks and recreation	111,776	16,491	1,771	30,516
Cultural activities	168,960	87,319	2,317	2,924
Community development	64,884	51,039	17,763	-
Economic opportunity	9,873	668	7,689	-
Interest on long-term debt	74,432	-	-	-
Total Governmental Activities	**2,361,698**	**438,336**	**214,280**	**108,236**
Business-type Activities:				
Wastewater management	138,617	107,829	-	10,752
Denver airport system	1,059,258	1,021,802	-	15,301
Environmental services	12,997	11,406	-	-
Golf course	12,821	10,137	-	-
Total Business-type Activities	**1,223,693**	**1,151,174**	**-**	**26,053**
Total Primary Government	**$ 3,585,391**	**$ 1,589,510**	**$ 214,280**	**$ 134,289**
Component Units	**$ 265,521**	**$ 103,295**	**$ 13,636**	**$ -**

General Revenues, Special Item and Transfers

Taxes

Facilities development admissions

Lodgers

Motor vehicle ownership fee

Occupational privilege

Property

Sales and use

Specific ownership

Telephone

Investment and interest income

Other revenues

Special item

Transfers

Capital asset transfer

Total General Revenues, Special Item and Transfers

Change in net position

Net position (deficit) - January 1, as previously reported

Correction of an error

Net Position (deficit) - January 1, as restated

Net Position (deficit) - December 31

See accompanying notes to basic financial statements.

Governmental Activities	Business-type Activities	Total	Component Units
Net (Expense) Revenue and Changes in Net Position — Primary Government			
$ (407,949)	$ -	$ (407,949)	
(599,431)	-	(599,431)	
(215,195)	-	(215,195)	
(67,367)	-	(67,367)	
(99,476)	-	(99,476)	
(62,998)	-	(62,998)	
(76,400)	-	(76,400)	
3,918	-	3,918	
(1,516)	-	(1,516)	
(74,432)	-	(74,432)	
(1,600,846)	**-**	**(1,600,846)**	
-	(20,036)	(20,036)	
-	(22,155)	(22,155)	
-	(1,591)	(1,591)	
-	(2,684)	(2,684)	
-	**(46,466)**	**(46,466)**	
(1,600,846)	**(46,466)**	**(1,647,312)**	
			$ (148,590)
15,859	-	15,859	-
134,047	-	134,047	120,988
32,020	-	32,020	-
54,940	-	54,940	-
479,346	-	479,346	37,595
896,924	-	896,924	-
88	-	88	5,883
13,208	-	13,208	-
83,806	181,626	265,432	4,128
57,196	70,781	127,977	76,341
-	(65,793)	(65,793)	-
1,324	(1,324)	-	-
1,282	(1,282)	-	-
1,770,040	**184,008**	**1,954,048**	**244,935**
169,194	137,542	306,736	96,345
1,930,534	1,941,338	3,871,872	(241,006)
(47,998)	-	(47,998)	-
1,882,536	1,941,338	3,823,874	(241,006)
$ 2,051,730	**$ 2,078,880**	**$ 4,130,610**	**$ (144,661)**

Balance Sheet - Governmental Funds

December 31, 2019 (dollars in thousands)

	General	Human Services	Other Governmental Funds	Total Governmental Funds
Assets				
Cash on hand	$ 171	$ 40	$ 6,390	$ 6,601
Cash and cash equivalents	221,393	88,534	1,376,711	1,686,638
Receivables (net of allowances of $158,458):				
Taxes	238,457	72,906	309,585	620,948
Notes	2,735	-	61,383	64,118
Accounts	30,128	209	28,822	59,159
Accrued interest	2,495	1	6,465	8,961
Interfund receivable	37,758	15	238	38,011
Due from other governments	5	9,977	53,495	63,477
Prepaid items and other assets	11,651	-	1,686	13,337
Restricted assets:				
Cash and cash equivalents	84,654	-	147,847	232,501
Assets held for disposition	-	-	9,755	9,755
Total Assets	**$ 629,447**	**$ 171,682**	**$ 2,002,377**	**$ 2,803,506**
Liabilities and Fund Balances				
Liabilities:				
Vouchers payable	$ 52,785	$ 8,771	$ 104,419	$ 165,975
Accrued liabilities	30,987	2,211	3,013	36,211
Due to taxing units	483	-	31	514
Interfund payable	16	1,436	2,617	4,069
Unearned revenue	454	-	27,751	28,205
Advances	97	306	4,460	4,863
Compensated absences	-	-	33	33
Total Liabilities	**84,822**	**12,724**	**142,324**	**239,870**
Deferred Inflows of Resources:				
Unavailable revenues - property taxes levied in advance	155,651	73,458	281,402	510,511
Unavailable revenues - long-term receivables	18,893	-	18,055	36,948
Total Deferred Inflows of Resources	**174,544**	**73,458**	**299,457**	**547,459**
Fund Balances:				
Nonspendable	11,651	-	4,686	16,337
Restricted	85,127	85,500	1,550,650	1,721,277
Committed	74,677	-	4,203	78,880
Assigned	-	-	1,057	1,057
Unassigned	198,626	-	-	198,626
Total Fund Balances	**370,081**	**85,500**	**1,560,596**	**2,016,177**
Total Liabilities, Deferred Inflows of Resources, and Fund Balances	**$ 629,447**	**$ 171,682**	**$ 2,002,377**	**$ 2,803,506**

See accompanying notes to basic financial statements.

Reconciliation of the Balance Sheet - Governmental Funds to the Statement of Net Position

December 31, 2019 (dollars in thousands)

Amounts reported for governmental activities in the statement of net position are different because:

Total fund balance-governmental funds.	$ 2,016,177
Capital assets used in governmental activities, excluding internal service funds of $2,414 are not financial resources, and therefore, are not reported in the funds.	3,357,813
Accrued interest payable not included in the funds.	(24,426)
Deferred inflow of resources related are not available to pay for current period expenditures and therefore, are not recorded in the funds.	
Pensions	(7,342)
Gain on refunding	(4,011)
OPEB	(1,808)
Long term receivables	36,948
Property tax	(409)
Deferred outflow of resources are not financial resources, and therefore are not reported in the funds and include:	
Accumulated decrease in fair value of hedging derivatives	24,617
Pensions	476,006
Loss on refunding	13,546
OPEB	30,983
Interest rate swap liability.	(27,271)
Internal service funds are used by management to charge the cost of these funds to their primary users-governmental funds. The assets and liabilities of the internal service funds are included in governmental activities in the statement of net position.	20,831
Long-term liabilities, including bonds payable, are not due and payable in the current period and therefore are not reported in the governmental funds (this excludes internal service liabilities of $29,497).	(3,859,924)
Net position of governmental activities	**$ 2,051,730**

See accompanying notes to basic financial statements

Statement of Revenues, Expenditures, and Changes in Fund Balances - Governmental Funds

For the Year Ended December 31, 2019 (dollars in thousands)

	General	Human Services	Other Governmental Funds	Total Governmental Funds
Revenues				
Taxes:				
Facilities development admission	$ -	$ -	$ 15,859	$ 15,859
Lodgers	34,968	-	99,079	134,047
Motor vehicle ownership fee	32,020	-	-	32,020
Occupational privilege	54,940	-	-	54,940
Property	131,294	73,949	274,103	479,346
Sales and use	720,416	-	176,508	896,924
Specific ownership	-	-	88	88
Telephone	1,486	-	11,722	13,208
Special assessments	-	-	1,818	1,818
Licenses and permits	67,754	-	1,568	69,322
Intergovernmental revenues	40,509	95,484	144,428	280,421
Charges for services	216,736	552	95,720	313,008
Investment and interest income	26,915	2	56,454	83,371
Fines and forfeitures	39,182	-	397	39,579
Contributions	61	609	6,477	7,147
Other revenue	11,379	138	55,676	67,193
Total Revenues	**1,377,660**	**170,734**	**939,897**	**2,488,291**
Expenditures				
Current:				
General government	318,230	-	148,293	466,523
Public safety	631,274	-	87,650	718,924
Public works	162,932	-	201,166	364,098
Health	57,764	-	49,459	107,223
Human services	1,910	162,364	-	164,274
Parks and recreation	80,846	-	18,331	99,177
Cultural activities	54,135	-	88,671	142,806
Community development	33,598	-	41,453	75,051
Economic opportunity	1,692	-	7,949	9,641
Debt service:				
Principal retirement	18,674	1,690	125,748	146,112
Interest	7,521	137	67,439	75,097
Capital outlay	-	-	170,325	170,325
Total Expenditures	**1,368,576**	**164,191**	**1,006,484**	**2,539,251**
Excess (deficiency) of revenues over (under) expenditures	9,084	6,543	(66,587)	(50,960)
Other Financing Sources (Uses)				
Sale of capital assets	755	-	13,674	14,429
Issuance of capital leases	4,888	-	-	4,888
Bond premium	-	-	25,821	25,821
Bond premium - refunding	-	-	6,273	6,273
Payment to escrow	-	-	(56,221)	(56,221)
Issuance of bonds	-	-	199,175	199,175
Issuance of bonds - refunding	-	-	50,140	50,140
Insurance recoveries	233	-	732	965
Transfers in	50,405	5,400	164,065	219,870
Transfers out	(80,064)	(8,694)	(129,788)	(218,546)
Total Other Financing Sources (Uses)	**(23,783)**	**(3,294)**	**273,871**	**246,794**
Net change in fund balances	(14,699)	3,249	207,284	195,834
Fund balances - January 1	384,780	82,251	1,353,312	1,820,343
Fund Balances - December 31	**$ 370,081**	**$ 85,500**	**$ 1,560,596**	**$ 2,016,177**

See accompanying notes to basic financial statements.

Reconciliation of the Statement of Revenues, Expenditures and Changes in Fund Balances - Governmental Funds to the Statement of Activities

For the Year Ended December 31, 2019 (dollars in thousands)

Amounts reported for governmental activities in the statement of activities are different because:

Net change in fund balances - total governmental funds	$ 195,834
Governmental funds report capital outlays as expenditures. However, in the statement of activities the cost of those assets is allocated over their estimated useful lives and reported as depreciation expense. This is the amount by which capital outlay and capital related expenditures exceeded depreciation expense in the current period:	
Capital expenditures excluding capital transfer	304,157
Depreciation expense (excluding internal service)	(159,549)
Loss on disposal of assets	(3,497)
Certain revenues are recorded in the funds under modified accrual but not considered revenue in the statement of activities.	
Donation of capital assets from enterprise funds	1,282
Donation of capital assets from others	34,948
The issuance of long-term debt and other obligations (e.g., bonds, certificates of participation, and capital leases) provides current financial resources to governmental funds, while the repayment of the principal of long-term debt consumes the current financial resources of governmental funds. Neither transaction, however has any effect on change in net position. Also, governmental funds report the effect of premiums, discounts, and similar items when debt is first issued, whereas these amounts are amortized in the statement of activities. These differences in the treatment of long-term debt and related items consist of:	
General obligation bonds	(249,315)
Capital lease obligations	(4,888)
Premium on debt issued in current year	(32,094)
Principal retirement on bonds	167,405
Amortization of premium, discounts, and deferred gain (loss) on refunding	(1,978)
Capital lease principal payments	32,942
Principal payments on GID revenue note	87
Principal payments on intergovernmental agreement	616
Some expenses reported in the statement of activities do not require the use of current financial resources and, therefore, are not reported as expenditures in governmental funds:	
Compensated absences (excluding internal service)	(7,090)
Accrued interest payable	665
Legal liability	(1,700)
Amortization of imputed debt-swap	435
Portion of pension expense that do not require current financial resources	(397,535)
Pension amortization	294,104
Portion of OPEB and OPEB implicit expense that do not require current financial resources	(20,560)
OPEB and OPEB implicit amortization	17,297
Internal service funds are used by management to charge their cost to individual funds. The net expense of certain activities of internal service funds is reported within governmental activities.	(2,372)
Change in net position of governmental activities	**$ 169,194**

See accompanying notes to basic financial statements

Statement of Net Position - Proprietary Funds

December 31, 2019 (dollars in thousands)

	Business-type Activities - Enterprise Funds	
	Wastewater Management	Denver Airport System
Assets		
Current assets:		
Cash and cash equivalents	$ 7,327	$ 28,948
Investments	30,777	169,964
Receivables (net of allowance for uncollectibles of $2,599):		
Accounts	25,526	59,674
Accrued interest	1,145	6,220
Inventories	-	10,613
Interfund receivable	453	-
Prepaid items and other assets	182	17,564
Restricted assets:		
Cash and cash equivalents	-	87,543
Investments	9,620	417,532
Accounts receivable	-	15,786
Accrued interest receivable	-	12,541
Total Current Assets	**75,030**	**826,385**
Noncurrent assets:		
Investments - restricted	42,269	2,052,930
Investments - unrestricted	135,237	835,682
Capital assets:		
Land and construction in progress	138,154	1,185,025
Buildings and improvements	17,975	4,299,531
Improvements other than buildings	1,046,032	1,306,005
Machinery and equipment	15,195	974,696
Collections		
Intangibles	6,375	32,432
Accumulated depreciation	(347,863)	(3,572,991)
Net capital assets	875,868	4,224,698
Long-term receivables (net of allowances)	-	30,548
Prepaid expense and other	-	329
Interest rate swaps	-	4,589
Total Noncurrent Assets	**1,053,374**	**7,148,776**
Total Assets	**1,128,404**	**7,975,161**
Deferred Outflows of Resources		
Accumulated decrease in fair value of hedging activities	-	4,106
Deferred loss on refundings	236	75,102
Items related to pension and OPEB plans	13,560	52,164
Total Deferred Outflows of Resources	**13,796**	**131,372**

See accompanying notes to basic financial statements

			Governmental Activities
	Other Enterprise Funds	Total Enterprise Funds	Internal Service Funds
	$ 27,177	$ 63,452	$ 47,364
	-	200,741	-
	2,873	88,073	1,136
	138	7,503	303
	162	10,775	200
	1,723	2,176	20
	2	17,748	-
	6,253	93,796	-
	-	427,152	-
	-	15,786	-
	30	12,571	-
	38,358	**939,773**	**49,023**
	-	2,095,199	-
	-	970,919	-
	4,527	1,327,706	-
	40,373	4,357,879	5,046
	-	2,352,037	-
	10,817	1,000,708	2,769
	21	21	-
	-	38,807	-
	(19,501)	(3,940,355)	(5,401)
	36,237	5,136,803	2,414
	4	30,552	-
	-	329	-
	-	4,589	-
	36,241	**8,238,391**	**2,414**
	74,599	**9,178,164**	**51,437**
	-	4,106	-
	-	75,338	-
	4,720	70,444	-
	4,720	**149,888**	**-**

continued

Statement of Net Position - Proprietary Funds, continued

December 31, 2019 (dollars in thousands)

	Business-type Activities - Enterprise Funds	
	Wastewater Management	Denver Airport System
Liabilities		
Current liabilities:		
Vouchers payable	$ 2,249	$ 158,477
Revenue bonds payable	7,395	-
Revenue credit payable	-	40,000
Accrued Liabilities	2,302	21,473
Unearned revenue	15,970	-
Interfund payable	2,966	31,467
Advance rent	-	40,001
Capital lease obligations	758	-
Compensated absences	780	2,579
Claims reserve	-	-
Construction payable	23,317	-
Due to other governments	2,960	-
OPEB implicit rate subsidy	173	662
Current liabilities (payable from restricted assets):		
Vouchers payable	-	2,329
Retainages payable	-	26,832
Notes payable	-	2,192
Accrued interest and other liabilities	-	29,114
Other accrued liabilities	-	5,063
Revenue bonds payable	-	216,290
Total Current Liabilities	**58,870**	**576,479**
Noncurrent liabilities:		
Interest rate swaps	-	36,097
Notes payable	-	2,235
Revenue bonds payable, net	249,853	5,955,004
Net pension and OPEB liability	50,102	212,643
Capital lease obligations	3,580	-
Compensated absences	2,865	7,579
Legal and claims reserve	-	56,500
Total Noncurrent Liabilities	**306,400**	**6,270,058**
Total Liabilities	**365,270**	**6,846,537**
Deferred Inflows of Resources		
Deferred gain on refunding of debt	-	4,072
Items related to pension and OPEB plans	921	4,279
Total Deferred Inflows of Resources	**921**	**8,351**
Net Position		
Net investment in capital assets	643,089	(157,375)
Restricted for:		
Capital projects	-	13,835
Debt service	-	476,888
Unrestricted	132,920	918,297
Total Net Position	**$ 776,009**	**$ 1,251,645**
Adjustment to reflect consolidation of internal service fund activities related to enterprise funds		
Net position of business-type activities		

See accompanying notes to basic financial statements

Other Enterprise Funds	Total Enterprise Funds	Governmental Activities Internal Service Funds
$ 913	$ 161,639	$ 983
655	8,050	-
-	40,000	
297	24,072	65
499	16,469	-
1,644	36,077	61
-	40,001	-
986	1,744	-
562	3,921	119
-	-	9,566
-	23,317	-
-	2,960	-
63	898	-
424	2,753	-
-	26,832	-
-	2,192	-
-	29,114	-
-	5,063	-
-	216,290	-
6,043	**641,392**	**10,794**
-	36,097	-
-	2,235	-
-	6,204,857	-
17,491	280,236	-
3,133	6,713	-
843	11,287	237
-	56,500	19,575
21,467	**6,597,925**	**19,812**
27,510	**7,239,317**	**30,606**
-	4,072	-
353	5,553	-
353	**9,625**	**-**
31,463	517,177	2,414
5,859	19,694	-
-	476,888	-
14,134	1,065,351	18,417
$ 51,456	2,079,110	**$ 20,831**
	(230)	
	$ 2,078,880	

Statement of Revenues, Expenses, and Changes in Fund Net Position - Proprietary Funds

For the Year Ended December 31, 2019 (dollars in thousands)

	Business-type Activities - Enterprise Funds	
	Wastewater Management	**Denver Airport System**
Operating Revenues		
Charges for services	$ 107,829	$ 867,793
Other revenue	64,121	-
Total Operating Revenues	**171,950**	**867,793**
Operating Expenses		
Personnel services	31,629	194,317
Contractual services	20,111	241,264
Supplies and materials	1,440	28,649
Depreciation and amortization	23,479	203,321
District water treatment charges	52,209	-
Other operating expenses	334	63,742
Legal and claims reserve	-	56,500
Total Operating Expenses	**129,202**	**787,793**
Operating income	42,748	80,000
Nonoperating Revenues (Expenses)		
Investment and interest income	9,211	171,096
Passenger facility charges	-	132,484
Customer facility fee	-	21,525
Intergovernmental revenue	2,952	-
Disposition of assets	270	-
Interest expense	(8,849)	(270,394)
Other revenue (expense)	(1,845)	(1,054)
Net Nonoperating Revenues (Expenses)	**1,739**	**53,657**
Income before capital grants, contributions, and transfers	44,487	133,657
Capital grants and contributions	10,752	15,301
Transfers out	(13)	-
Capital asset transfer	(14,371)	(485)
Special item	-	(65,793)
Change in net position	40,855	82,680
Net position - January 1	735,154	1,168,965
Net Position - December 31	**$ 776,009**	**$ 1,251,645**
Change in net position of enterprise funds		
Adjustment to reflect consolidation of internal service fund activities related to enterprise funds		
Change in net position of business-type activities		

See accompanying notes to basic financial statements.

Other Enterprise Funds	Total Enterprise Funds	Governmental Activities Internal Service Funds
$ 21,543	$ 997,165	$ 19,057
3,374	67,495	681
24,917	**1,064,660**	**19,738**
14,197	240,143	2,703
6,032	267,407	2,277
1,238	31,327	7,659
1,962	228,762	74
-	52,209	9,380
2,334	66,410	1,094
-	56,500	1,885
25,763	**942,758**	**25,072**
(846)	121,902	(5,334)
1,319	181,626	2,548
-	132,484	-
-	21,525	-
90	3,042	-
(26)	244	-
(52)	(279,295)	-
-	(2,899)	-
1,331	**56,727**	**2,548**
485	178,629	(2,786)
	26,053	-
(1,311)	(1,324)	-
14,856	-	-
-	(65,793)	-
14,030	137,565	(2,786)
37,426	1,941,545	23,617
$ 51,456	**$ 2,079,110**	**$ 20,831**
	$ 137,565	
	(23)	
	$ 137,542	

Statement of Cash Flows - Proprietary Funds

For the Year Ended December 31, 2019 (dollars in thousands)

	Business-type Activities - Enterprise Funds	
	Wastewater Management	Denver Airport System
Cash Flows From Operating Activities		
Receipts from customers	$ 174,203	$ 887,667
Payments to suppliers	(66,527)	(304,109)
Payments to employees	(27,030)	(177,250)
Other receipts	-	-
Interfund activity	(9,554)	(21,318)
Claims paid	-	-
Net Cash Provided by (Used in) Operating Activities	**71,092**	**384,990**
Cash Flows From Noncapital Financing Activities		
Operating grants received	-	-
Transfers (out)	(13)	-
Net Cash (Used In) Noncapital Financing Activities	**(13)**	**-**
Cash Flows From Capital and Related Financing Activities		
Proceeds from issuance of debt	-	412,325
Bond issue costs	-	(897)
Principal payments	(7,791)	(191,633)
Interest payments	(9,756)	(290,683)
Passenger facility charges	-	131,189
Car rental customer facility charges	-	22,596
Payments on capital assets acquired through construction payables	(24,029)	-
Acquisition and construction of capital assets	(86,650)	(597,314)
Payments to escrow for current refunding of debt	-	(431,950)
Proceeds from sale of assets	270	511
Contributions and advances	3,016	17,306
Intergovernmental revenues	2,952	-
Net Cash Provided by (Used In) Capital and Related Financing Activities	**(121,988)**	**(928,550)**
Cash Flows From Investing Activities		
Purchases of investments	(547,733)	(2,134,790)
Proceeds from sale of investments	587,983	2,605,017
Sale of assets held for disposition	-	183
Payments to maintain assets held for disposition	-	(29)
Payments from swap termination	-	(32,061)
Interest received	9,080	95,566
Net Cash Provided by (Used In) Investing Activities	**49,330**	**533,886**
Net increase (decrease) in cash and cash equivalents	(1,579)	(9,674)
Cash and cash equivalents - January 1	8,906	126,165
Cash and Cash Equivalents - December 31	**$ 7,327**	**$ 116,491**

See accompanying notes to basic financial statements

		Governmental Activities
Other Enterprise Funds	Total Enterprise Funds	Internal Service Funds
$ 21,779	$ 1,083,649	$ 19,484
(9,228)	(379,864)	(11,176)
(12,395)	(216,675)	(2,699)
3,378	3,378	681
-	(30,872)	-
-	-	(9,380)
3,534	**459,616**	**(3,090)**
90	90	-
(1,311)	(1,324)	-
(1,221)	**(1,234)**	**-**
-	412,325	-
-	(897)	-
(620)	(200,044)	-
(52)	(300,491)	-
-	131,189	-
-	22,596	-
-	(24,029)	-
(3,039)	(687,003)	(1,502)
-	(431,950)	-
-	781	-
-	20,322	-
-	2,952	-
(3,711)	**(1,054,249)**	**(1,502)**
-	(2,682,523)	-
-	3,193,000	-
-	183	-
-	(29)	-
-	(32,061)	-
1,275	105,921	2,540
1,275	**584,491**	**2,540**
(123)	(11,376)	(2,052)
33,553	168,624	49,416
$ 33,430	**$ 157,248**	**$ 47,364**

continued

Statement of Cash Flows - Proprietary Funds, continued

For the Year Ended December 31, 2019 (dollars in thousands)

	Business-type Activities - Enterprise Funds	
	Wastewater Management	Denver Airport System
Reconciliation of Operating Income (Loss) to Net Cash Provided by (Used in) Operating Activities		
Operating income (loss)	$ 42,748	$ 80,000
Adjustments to reconcile operating income to net cash provided by (used in) operating activities:		
Depreciation and amortization	23,479	203,321
Loss on disposal of assets	-	-
Changes in Assets and Liabilities		
Accounts receivable, net of allowance	1,186	16,495
Due to/from other City departments/agencies	(395)	7,108
Interfund receivable	-	-
Inventories	-	925
Prepaid items and other assets	16	(1,267)
Vouchers payable	648	516
Unearned revenue	1,462	5,026
Accrued and other liabilities	219	17
Interfund payable	24	-
Due to Metro Wastewater Reclamation District	(2,675)	-
Legal and claims reserved	-	56,500
Deferred outflows of resources pension and OPEB related	-	(29,276)
Deferred inflows of resources pension and OPEB related	-	(8,457)
Net pension and OPEB liability	4,380	54,082
Net Cash Provided by (Used in) Operating Activities	**$ 71,092**	**$ 384,990**
Noncash Activities		
Assets acquired through capital contributions	$ 7,736	$ -
Assets acquired through city capital contributions, net	-	-
Unrealized gain on investments		73,074
Unrealized gain on derivatives	-	396
Capital assets acquired through accounts payable	23,317	152,495
Amortization of bond premiums and deferred losses and gains on bond refundings	849	18,737
Net gain (loss) on disposal of capital assets	-	(3,209)
Capital assets transferred to other City departments/agencies	(15,653)	(485)

See accompanying notes to basic financial statements

	Other Enterprise Funds	Total Enterprise Funds	Governmental Activities Internal Service Funds
	$ (846)	$ 121,902	$ (5,334)
	1,962	228,762	74
	26	26	-
	250	17,931	415
	-	6,713	-
	91	91	12
	(4)	921	(85)
	-	(1,251)	-
	21	1,185	(67)
	(106)	6,382	-
	151	387	4
	336	360	6
	-	(2,675)	-
	-	56,500	1,885
	(2,919)	(32,195)	-
	(543)	(9,000)	-
	5,115	63,577	-
	$ 3,534	**$ 459,616**	**$ (3,090)**
	$ 14,856	$ 22,592	$ -
	-	-	-
	-	396	-
	-	175,812	-
	-	19,586	-
	-	(3,209)	-
	14,856	(1,282)	-

Statement of Fiduciary Net Position - Fiduciary Funds

December 31, 2019 (dollars in thousands)

	Pension, Health, and Other Employee Benefit Trust Funds	Private-Purpose Trust Funds	Agency Funds
Assets			
Cash and cash equivalents	$ 21,341	$ 1,584	$ 44,109
Securities lending collateral	81,272	-	-
Receivables (net of allowance for uncollectibles of $5,084):			
Taxes	-	-	1,197,263
Accounts	199	-	17
Accrued interest	1,849	-	-
Investments:			
U.S. Government obligations	111,787	-	-
Domestic stocks and bonds	891,497	-	-
International stocks	401,302	-	-
Mutual funds	552,095	-	-
Alternative investments	524,465	-	-
Real estate	175,521	-	-
Other	436,272	-	-
Total Investments	**3,092,939**	**-**	**-**
Prepaid and other assets	36	-	-
Capital assets, net of accumulated depreciation	3,168	-	-
Total Assets	**3,200,804**	**1,584**	**$ 1,241,389**
Liabilities			
Vouchers payable	8,855	838	16,488
Securities lending obligation	81,762	-	-
Other accrued liabilities	-	53	10,502
Due to taxing units	-	326	1,214,399
Total Liabilities	**90,617**	**1,217**	**$ 1,241,389**
Net Position			
Net position restricted for pensions	2,258,481	-	
Net position held in trust for OPEB benefits	71,690	-	
Net position held in trust for deferred compensation benefits	780,016	-	
Net position held in trust for other purposes	-	367	
Net Position Restricted for Pensions OPEB and Other Purposes	**$ 3,110,187**	**$ 367**	

See accompanying notes to basic financial statements.

Statement of Changes in Fiduciary Net Position - Fiduciary Funds

For the Year Ended December 31, 2019 (dollars in thousands)

	Pension, Health, and Other Employee Benefit Trust Funds	Private-Purpose Trust Funds
Additions		
Contributions:		
City and County of Denver	$ 87,997	$ -
Denver Health and Hospital Authority	4,553	-
Plan members	110,822	-
Total Contributions	**203,372**	**-**
Investment earnings:		
Net appreciation in fair value of investments	382,237	-
Interest and dividends	45,768	21
Total Investment Earnings	**428,005**	**21**
Less investment expense	(15,006)	-
Net Investment Earnings	**412,999**	**21**
Securities lending income (expense):		
Securities lending income	3,379	-
Borrower rebates	(2,753)	-
Agent fees	(157)	-
Net Earnings from Securities Lending	**469**	**-**
Total Net Investment Earnings	**413,468**	**21**
Total Additions	**616,840**	**21**
Deductions		
Benefits	303,203	-
Refunds of contributions	5,481	-
Administrative expenses	4,935	-
Total Deductions	**313,619**	**-**
Change in net position	303,221	21
Net position - January 1	2,806,966	346
Net Position -December 31	**$ 3,110,187**	**$ 367**

See accompanying notes to basic financial statements

Statement of Net Position - Component Units

December 31, 2019 (dollars in thousands)

	Denver Convention Center Hotel Authority	Denver Urban Renewal Authority	Downtown Denver Development Authority	National Western Center Authority	Other Component Units	Total
Assets						
Cash and cash equivalents	$ 3,448	$ 8,200	$ 8,396	$ 1,903	$ 60,562	$ 82,509
Investments	-	-	-	-	197	197
Receivables (net of allowances):						
Taxes	-	115,118	39,961	-	15,981	171,060
Accounts	3,227	476	-	-	1,035	4,738
Accrued interest	-	398	-	-	-	398
Other	-	6,041	-	-	9,467	15,508
Prepaid items and other assets	2,023	104	-	9	213	2,349
Restricted Assets:						
Cash and cash equivalents	-	36,504	-	-	523	37,027
Investments	117,229	142,958	-	-	-	260,187
Capital Assets:						
Land and construction in progress	24,321	-	-	-	18,292	42,613
Buildings and improvements	242,342	-	-	32	339	242,713
Machinery and equipment	34,622	286	-	47	7,639	42,594
Accumulated depreciation	(116,679)	(168)	-	(8)	(10,466)	(127,321)
Net Capital Assets	**184,606**	**118**	**-**	**71**	**15,804**	**200,599**
Total Assets	**310,533**	**309,917**	**48,357**	**1,983**	**103,782**	**774,572**
Deferred Outflows of Resources						
Deferred amount on refundings	4,834	12,139		-	1,268	18,241
Total Deferred Outflows of Resources	**4,834**	**12,139**	**-**	**-**	**1,268**	**18,241**
Liabilities						
Vouchers payable	3,418	11	-	15	6,276	9,720
Accrued liabilities	10,800	21,249	-	63	319	32,431
Unearned revenue	7,141	-	-	-	29	7,170
Advances	2,261	314	-	-	-	2,575
Due to other governments	-	205	-	-	2	207
Noncurrent liabilities:						
Due within one year	2,545	20,955	9,293	-	904	33,697
Due in more than one year	295,468	231,330	146,715	-	12,777	686,290
Total Liabilities	**321,633**	**274,064**	**156,008**	**78**	**20,307**	**772,090**
Deferred Inflows of Resources						
Property taxes	-	109,442	39,961	-	15,981	165,384
Total Deferred Inflows of Resources	**-**	**109,442**	**39,961**	**-**	**15,981**	**165,384**
Net Position						
Net investment in capital assets	(81,877)	118	-	71	3,576	(78,112)
Restricted for:						
Capital projects	33,925	94,942	-	-	41	128,908
Emergency use	43,750	-	-	-	39,659	83,409
Debt service	1,316	33,943	-	-	394	35,653
Donor and other restrictions:						
Expendable	11,541	5,830	-	47	-	17,418
Unrestricted (deficit)	(14,921)	(196,283)	(147,612)	1,787	25,092	(331,937)
Total Net Position (Deficit)	**$ (6,266)**	**$ (61,450)**	**$ (147,612)**	**$ 1,905**	**$ 68,762**	**$ (144,661)**

See accompanying notes to basic financial statements

Statement of Activities - Component Units

For the Year Ended December 31, 2019 (dollars in thousands)

	Denver Convention Center Hotel Authority	Denver Urban Renewal Authority	Downtown Denver Development Authority	National Western Center Authority	Other Component Units	Total
Expenses	$ 107,651	$ 102,455	$ 5,969	$ 2,202	$ 47,244	$ 265,521
Program Revenues						
Charges for services	102,912	-	-	-	383	103,295
Operating grants and contributions	-	2,995	-	1,560	9,081	13,636
Total Program Revenues	**102,912**	**2,995**	**-**	**1,560**	**9,464**	**116,931**
Net expenses	(4,739)	(99,460)	(5,969)	(642)	(37,780)	(148,590)
General Revenues						
Taxes:						
Lodgers	-	120,988	-	-	-	120,988
Property	-	-	24,054	-	13,541	37,595
Specific ownership	-	5,384	-	-	499	5,883
Investment and interest income	2,412	1,316	114	9	277	4,128
Other revenues	11,503	-	-	1,698	63,140	76,341
Net General Revenues	**13,915**	**127,688**	**24,168**	**1,707**	**77,457**	**244,935**
Change in net position	9,176	28,228	18,199	1,065	39,677	96,345
Net position: January 1	(15,442)	(89,678)	(165,811)	840	29,085	(241,006)
Net Position (Deficit) - December 31	**$ (6,266)**	**$ (61,450)**	**$ (147,612)**	**$ 1,905**	**$ 68,762**	**$ (144,661)**

See accompanying notes to basic financial statements.

This page left blank intentionally.

Contents

I. Summary of Significant Accounting Policies

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP) applicable to governmental entities. A summary of the City and County of Denver's significant accounting policies applied in the preparation of these financial statements follows.

Note A – Reporting Entity

The City and County of Denver (City) was incorporated in 1861 and became a Colorado Home Rule City on March 29, 1904, under the provisions of Article XX of the Constitution of Colorado, as amended, when the people of the City ratified a Charter providing for a Mayor-Council form of government. The City is operated by authority of the powers granted by its Charter. The City provides typical municipal services except for education, public housing, and sewage treatment that are administered by other governmental entities.

As required by U.S. GAAP, these financial statements present the City (primary government) and its component units. The component units discussed below are included in the City's reporting entity because of the significance of their operational or financial relationships with the City in accordance with Governmental Accounting Standards Board (GASB) Statement No. 14, The Financial Reporting Entity, GASB Statement No. 39, Determining Whether Certain Organizations Are Component Units – an amendment of GASB Statement No. 14, and GASB Statement No. 61, The Financial Reporting Entity: Omnibus – an amendment of GASB Statements No. 14 and No. 34, and GASB Statement No. 80, Blending Requirements for Certain Component Units-an amendment of GASB Statement No. 14. Certain amounts reported in the individual component unit financial statements have been reclassified to conform to the City's accounting policies. Each component unit has a December 31 year-end. Each component unit has a December 31 year-end, with the exception of Denver College Success Corporation who has a September 30 year-end.

1. Blended Component Units

Gateway Village, Denver 14th Street, and RiNo General Improvement District (GID) – The districts were created by the City as separate legal entities pursuant to state statute. Per statute, the City Council serves as ex officio Board of Directors for the districts. District Advisory Boards, appointed by the City Council, conduct and manage all affairs of the districts, which provide capital improvement and maintenance services entirely to the City, subject to overall approval and supervision of the ex officio Board of Directors. The districts are reported herein in the City's special revenue and debt service funds.

2. Discretely Presented Component Units

Cherry Creek North, Cherry Creek Subarea, Colfax, Downtown Denver, Old South Gaylord, West Colfax, Federal Boulevard, Bluebird, Colfax-Mayfair, Five Points, Santa Fe, and RiNo Business Improvement Districts (BID) – Each BID was created by the City as a separate legal entity pursuant to state statute for the purpose of maintaining public improvements and planning development activities within each BID's geographic boundaries. The City appoints the governing boards of the BIDs and is able to impose its will through the approval of the BID's operating budgets.

Caring for Denver Foundtion (CDF) - The CDF was organized as a nonprofit corporation resulting from a City ordinance, which also provides for an increase of sales tax of .25 percentage points to supplement mental health programs. CDF utilizes a portion of this tax to address Denver's mental health and substance misuse needs by growing community informed solution, dismantling stigma, and turning the community's desire to help into action. Of CDF's thirteen-member Board of Directors six are appointed by the Mayor, two are appointed by the Denver District Attorney, and the remaining five are appointed by City Council.

Denver College Success Corporation (DCSC) - The DCSC was organized as a nonprofit corporation resulting from a City ordinance, which also provides for an increase of sales and use tax of .08 percentage points. This tax is utilized by DSCS to increase post-secondary institution enrollment and completion for City residents by expanding the capacity of scholarship-granting nonprofit organizations to support scholarship recipients. By City ordinance, DCBC is obligated to have a seven-member Board of Directors, which six members are appointed by the Mayor and confirmed by City Council. The remaining Board member is a member of City Council and appointed by City Council.

Denver Convention Center Hotel Authority (DCCHA) – The DCCHA was organized by the City as a nonprofit corporation in accordance with State law for the purpose of owning, acquiring, constructing, equipping, operating and financing a hotel adjacent to the City's convention center. The Mayor appoints the Board of Directors of the DCCHA, subject to City Council confirmation, and a financial benefit/burden relationship exists as a result of an economic development agreement between the City and DCCHA. According to the agreement DCCHA distributes certain excess revenues to the City, makes payments in lieu of taxes to the City, and has entered into a room block agreement which coordinates the reservation of hotel room blocks with events scheduled at the City's convention center. The City makes semi-annual economic development payments to the DCCHA, which totaled $11,000,000 in 2019. The City also has the right to purchase the hotel at the purchase option price per the agreement.

Denver Downtown Development Authority (DDDA) – The DDDA was created for the purpose of promoting public health, safety, prosperity, security, and general welfare in order to halt or prevent deterioration of property values or structures within the central business district and to assist in the development and redevelopment of the central business district, especially to benefit the property within the boundaries of the Authority. The City entered into a cooperation agreement with DDDA in 2009 authorizing the Authority to collect and disburse property and sales tax increment revenues. Historically the DDDA collected property and sales tax increment revenue from the City and disbursed it to the Denver Union Station Project Authority (DUSPA) and the DUS Metropolitan Districts. In 2017, all of the outstanding debt of DUSPA was refinanced, a portion was assumed by the DDDA, and DUSPA was dissolved. Post-refinancing, the DDDA generates revenue from property tax increment, sales tax increment, and pledged revenues from the DUS Metropolitan Districts, Urban Drainage and Flood Control District (d/b/a Mile High Flood District), and School District No. 1 in the City and County of Denver and the State of Colorado. The Central Platte Valley Metropolitan District, Cherry Creek Subarea Business Improvement District, and Market Station Metropolitan Districts also exist within the boundaries of the DDDA and receive property tax revenue from the DDDA. The Board of Directors is appointed by the Mayor and confirmed by City Council, and City Council may remove any director at will. These appointments and the ability of the City to impose its will on the Authority make the City financially accountable for the Authority.

Denver Preschool Program, Inc. (DPP) – DPP is a nonprofit corporation organized to administer the Denver Preschool Program that provides tuition credits for children of Denver families the year before the child is eligible for kindergarten. The City is legally obligated to provide financial support to DPP, as the program is funded by a sales and use tax increase of fifteen one-hundredths of one percent (0.15%) that was voter-approved through December 2026. The Mayor appoints 10 of the 11 DPP board members and City Council appoints a council member as the other board member. The City appointments to the governing body and its financial obligations to DPP make the City financially accountable for the DPP.

Denver Urban Renewal Authority (DURA) – DURA was created as a separate legal entity by the City pursuant to the state Urban Renewal Law to acquire, clear, rehabilitate, conserve, develop or redevelop identified slum or blighted areas existing within the City and to prevent future blight from developing. In addition, for health and safety purposes, DURA provides housing rehabilitation assistance in the form of low-interest loans to low-income Denver homeowners through two City housing rehabilitation programs.

The Mayor appoints the DURA board of directors subject to City Council approval. Any urban renewal project undertaken by DURA must receive prior approval by the City. A significant amount of DURA's financing comes from incremental property and sales tax revenue from the City. In 2009, DURA established Denver Neighborhood Revitalization, Inc. (DNRI), a registered State of Colorado not-for-profit organization and component unit of DURA, to address the needs in the Denver community related to foreclosed and/or abandoned homes through the admistration of the Neighborhood Stabilization Program (NSP) funds awarded by the City and County of Denver. DNRI administered this program under contract with the City. The contract ended in March 2019 and management of DNRI are evaluating further operations for additional ways DNRI can continue its mission of neighborhood revitalization. In 2019, DURA implemented the provisions of GASB Statement No. 84, *Fiduciary Activities*. For presentation purposes, DURA and DNRI financial activity is combined.

National Western Center Authority – The National Western Center Authority is a Colorado nonprofit corporation that partners with the City to program, operate, and maintain the year-round campus for agricultural education, innovation, and entertainment. The actions of the Authority are guided by a 13-person board, made up of 11 voting directors and two non-voting directors. The voting directors include six appointments by the Denver mayor: two Colorado State University appointees, two Western Stock Show Association appointees, and one Globeville, Elryia, or Swansea resident mayoral appointee. A second Globeville, Elyria, or Swansea resident will be appointed by the mayor as a non-voting director. The City Chief Financial Officer will also serve as a non-voting director and Treasurer of the Board. The funding for the Authority's work comes from the partners as defined in the Framework agreement between the City and County of Denver, Western Stock Show Association, and Colorado State University.

Complete financial statements, as applicable, for the following individual component units can be obtained from their respective administrative offices:

Bluebird BID
8005 South Chester Street, Suite 150
Centennial, Colorado 80112

Caring for Denver Foundation
Kaleidoscope Collaborative Center
1035 Osage Street, 8th Floor
Denver, Colorado 80204

Cherry Creek North BID
299 Milwaukee Street, Suite 201
Denver, Colorado 80206

Cherry Creek Subarea BID
1573 South Jamaica Street
Denver, Colorado 80012

Colfax BID
P. O. Box 18853
Denver, Colorado 80218

Colfax-Mayfair BID
P. O. Box 202161
Denver, Colorado 80220

Downtown Denver BID
511 16th Street, Suite 200
Denver, Colorado 80202

Denver 14th Street GID
1515 Arapahoe Street, Tower 3, Suite 100
Denver, Colorado 80202

Denver College Success Corporation
789 Sherman Street, Suite 610
Denver, Colorado 80203

Denver Convention Center Hotel Authority
1225 17th Street, Suite 3050
Denver, Colorado 80202

Denver Downtown Development Authority
201 West Colfax Avenue, Department 1109
Denver, Colorado 80202

Denver Preschool Program, Inc.
305 Park Avenue West, Suite B
Denver, Colorado 80205

Denver Urban Renewal Authority
1555 California Street, Suite 200
Denver, Colorado 80202

Federal Boulevard BID
P. O. Box 11817
Denver, Colorado 80211

Five Points BID
1127 Sherman Street, Suite 100
Denver, Colorado 80205

Gateway Village GID
8390 E. Crescent Parkway, Suite 300
Greenwood Village, Colorado 80111

National Western Center Authority
1705 17th Street. Suite 200
Denver, Colorado 80202

Old South Gaylord BID
1076 South Gaylord Street
Denver, Colorado 80209

RiNO BID/GID
3525 Walnut Street
Denver, Colorado 80205

Santa Fe BID
725 Santa Fe Drive
Denver, Colorado 80204

West Colfax BID
3275 West 14th Avenue, Suite 202
Denver, Colorado 80207

3. Fiduciary Component Unit.

Denver Employees Retirement Plan (DERP) – The DERP is a separate legal entity established by City ordinance to provide pension benefits for substantially all City employees, except police officers and fire fighters. The Mayor appoints the members of the DERP governing board. The DERP is presented herein in the City's fiduciary funds as Pension and Health Benefits Trust Funds. The net position of the DERP is held for the sole benefit of the participants and is not available for appropriation by the City.

4. Related Organizations.

The City appoints members to the boards of the following organizations. The City's accountability for the organizations does not extend beyond making these appointments and there is no fiscal dependency by these organizations on the City.

Denver Health and Hospital Authority (Authority) – The Authority is a political subdivision and body corporate of the State of Colorado. The Authority is governed by a nine-member board, all appointed by the Mayor. The Authority entered into contractual agreements with the City to obtain and operate the City's existing hospital system. In accordance with the contractual agreements between the Authority and the City, the City paid the Authority $123,277,000 for providing various health related services to the City and its residents during 2019. In addition, the Authority made payments in the amount of $1,215,000 to the City for human services, fleet, sheriff, and various human resources services.

Denver Housing Authority (DHA) – The DHA was created by ordinance in accordance with U.S. Department of Housing and Urban Development (HUD) regulations. Its five-member board, appointed by the Mayor, controls the daily administration and operations of the DHA. The DHA is dependent on Federal funds from HUD and, as a result, is not financially dependent on the City. In addition, the City is not responsible for any deficits incurred and has no fiscal management control over the DHA.

Denver Public Library Trust (DPL Trust) – The DPL Trust is a charitable entity formed by the Library Commission and the DPL Friends Foundation to accept inherited interests through a bequest. All assets of the DPL Trust derive from a percentage of an interest in two real estate partnerships. The Library

Commission appoints the trustees of the DPL Trust. All funds received by the DPL Trust are deposited into a bank account managed by the DPL Trust and quarterly transferred to the DPL Friends Foundation. The monies may be requested during the Denver Public Library's annual budget request from the DPL Friends Foundation.

Denver Water Board – The Denver Water Board was created pursuant to the City Charter as a separate legal entity to oversee the City's water system. The Denver Water Board's five-member governing body is appointed by the Mayor, but the City is not financially accountable for the Denver Water Board because the Denver Water Board has the power to levy property taxes to support general obligation bonds issued by the Denver Water Board and the Denver Water Boards' determination of the necessity for the mill levy would be subject to approval or modification by the City. The Denver Water Board had no general obligation bonds outstanding as of December 31, 2019, and no longer has authority to issue general obligation bonds.

Lowry Economic Redevelopment Authority (Lowry) – Lowry was created as a public entity by contract between the City and another local government under the Colorado Governmental Immunity Act, CRS Section 24-10-01. Lowry is a separate legal entity intended to maintain, manage, promote, and implement economic redevelopment of the former Lowry Air Force Base. The City is not fiscally accountable for Lowry. Lowry is governed by a nine-member board of directors of which the Mayor appoints seven.

Stapleton Development Corporation (SDC) – The City and DURA created a nonprofit corporation whose objectives would include, but not be limited to, planning an orderly public purpose assessment and redevelopment program for the former Stapleton International Airport property and implementing the redevelopment plan for the property. The SDC board of directors is composed of 11 voting members; the Mayor appoints 9 and 2 are appointed by DURA. All 11 members are confirmed by the City Council. Neither the City nor DURA is financially accountable for SDC, as the City and DURA cannot impose their will on SDC, nor does a financial benefit or burden exist between the entities.

Note B – Government-Wide and Fund Financial Statements

The government-wide financial statements, which include the statement of net position and statement of activities, report information on all of the non-fiduciary activities of the primary government and its component units. Eliminations have been made to minimize the double-counting of internal activities. Governmental activities, which generally are supported by taxes, intergovernmental revenues, and other nonexchange transactions, are reported separately from business-type activities, which rely generally on fees and charges to external parties. The primary government is reported separately from certain legally separate component units for which the primary government is financially accountable.

The statement of net position reports all of the City's assets and deferred outflows of resources, and liabilities and deferred inflows of resources, with the difference being presented as net position.

The statement of activities demonstrates the extent to which the direct expenses of a given function or business-type activity is offset by program revenues. Direct expenses are clearly identifiable with a specific function. Program revenues include: 1) charges to customers who purchase, use, or directly benefit from goods, services provided by the programs, and 2) grants and contributions that are restricted to meeting the operational or capital requirements of a particular program. Taxes and other items not properly included among program revenues are reported as general revenues.

Separate fund financial statements are provided for governmental funds, proprietary funds, fiduciary funds (even though fiduciary funds are excluded from the government-wide financial statements), and component units. The emphasis of fund financial statements is on major governmental funds, enterprise funds, and component units, each reported as a separate column. All remaining governmental funds, enterprise funds, and component units, are aggregated and reported as nonmajor funds.

Note C – Measurement Focus, Basis of Accounting, and Statement Presentation

The government-wide financial statements are reported using the economic resources measurement focus and the accrual basis of accounting, as are the proprietary and fiduciary funds, and discretely presented component unit financial statements. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of the related cash flows. On an accrual basis, property taxes are recognized in the year for which they are levied. Grants and similar items are recognized as revenue as soon as all eligibility requirements have been met.

Governmental fund financial statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Under the modified accrual basis of accounting, revenues are recognized when they are measurable and available. Available means collectible within the current period, or soon enough thereafter, to pay liabilities of the current period or when matured. The City considers all revenue as available, if collected within 60 days after year end. Property taxes, sales and use taxes, franchise taxes, occupational privilege taxes, interest revenue, fines, and charges for services are susceptible to accrual. Other receipts, licenses, permits, and parking meter revenues become measurable and available when cash is received by the City and are recognized as revenue at that time. Grant revenue is considered available if it is expected to be collected within one year and all eligibility requirements are met. Expenditures are recorded when the related liability is incurred, except for debt service expenditures, and certain compensated absences and claims and judgments, which are recognized when the payment is due.

The City reports the following major governmental funds:

- The **General Fund** is the City's primary operating fund. It accounts for all financial resources of the general government, except those required to be reported in another fund. This fund is financed primarily by sales tax, property tax, and charges for services.
- The **Human Services special revenue fund** is used to account for proceeds of restricted revenue to be used for public assistance and welfare activities. This fund is financed primarily by intergovernmental revenue and property taxes.

The City reports the following major proprietary funds:

- The **Wastewater Management fund** accounts for the City's storm and sewer operations. This fund is financed primarily by sanitary sewer and storm drainage charges.
- The **Denver Airport System fund** accounts for the operation of the City's airport system which includes Denver International Airport. This fund is financed primarily by facility rentals, parking revenues, and landing fees.

The City reports the Denver Convention Center Hotel Authority, Denver Urban Renewal Authority, Denver Downtown Development Authority, and the National Western Center Authority component units as major component units.

Additionally, the City reports the following fund-types:

- **Internal service funds** account for asphalt plant and workers' compensation services provided to the various departments and agencies of the City on a cost reimbursement basis.
- **Pension trust funds** account for the Denver Employees Retirement Plan, which accumulate resources for pension and health benefit payments to qualified City retirees.

- **Other employee benefits trust fund** accounts for the Deferred Compensation Fund, which holds and administers resources to qualified city employees who participate in the plan. Assets are reserved solely for deferred compensation benefits.
- The **private-purpose trust funds** are used to account for resources legally held in trust by the City for use by various organizations for various purposes, such as COBRA payments and unclaimed warrants. All resources of the funds, including any earnings on invested resources, may be used to support the various activities of the organizations. There is no requirement to preserve the resources as capital.
- **Agency funds** account for clearing funds for payroll and benefit provider payments, and collected receipts being temporarily held for allocation to other entities. The agency funds are custodial in nature and do not involve measurement of results of operations. The effect of interfund activity generally has been eliminated from the government-wide financial statements. Exceptions to this practice include payments and other charges between the City's enterprise funds and various other functions of the government. Elimination of these charges would distort the direct costs and program revenues reported for the various functions affected.

Proprietary funds distinguish operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. The principal operating revenues of the enterprise and internal service funds are charges to customers for sales and services. Operating expenses for the enterprise and internal service funds include the administrative expenses, cost of sales and services, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

When both restricted and unrestricted resources are available for use, the City uses the restricted resources first, then unrestricted resources as needed. If no other restrictions exist, the order of spending of resources will be committed, assigned, and lastly unassigned.

Note D – Assets, Deferred Outflows of Resources, Liabilities, Deferred Inflows of Resources, and Net Position or Fund Balances

1. **Cash and Investments.** For the primary government, except when prohibited by trust agreements, the operating cash in each fund is maintained in one consolidated pool by the City. Cash in excess of operating requirements is invested by the City. The City Charter, Section 2.5.3(C) and the Denver Revised Municipal Code, Section 20-21, authorize that investments may be made in U.S. Government obligations, its agencies and sponsored corporations, prime commercial paper, prime bankers' acceptances, certificates of deposit issued by eligible banks and savings and loan associations, local government investment pools, repurchase agreements, forward purchase agreements, securities lending agreements, highly rated municipal securities, high grade corporate bonds, asset-backed securities, supranational debt obligations, federal agency collateralized mortgage obligations (CMO), federal agency mortgage pass through securities (MBS), money market funds that purchase only the types of securities specified herein, and other similar securities as may be authorized by ordinance. The pension trust funds and component units maintain deposits and investments outside of the City's investment pools. These are primarily in demand deposits and equities, and U.S. Government obligations.

   Investments, unless otherwise noted, are stated at fair value, which is primarily determined based upon quoted market prices or other significant, observable inputs, at year end. Fair values of real estate and other investments are determined by independent periodic appraisals. Investments in repurchase agreements and the guaranteed investment contract are stated at cost, while investments in the local government investment pools and certain investments in the Fiduciary Funds are stated at net asset value (NAV).

2. **Cash Equivalents.** The City's investments held in the consolidated pool with original maturities of three months or less from the purchase date are classified as cash equivalents. For investments owned by wastewater, the airport system, the pension trust funds, and the component units, investments with original maturities of three months or less from the date of purchase are considered cash equivalents.

3. **Property Taxes Receivable.** Property taxes are reported as a receivable and as deferred inflows of resources when the levy is certified by the City's Assessor on or before December 15 of each year, unless there is a special election. Property taxes receivable is reduced by an allowance for uncollectible taxes. Included in property taxes receivable is an amount of assessed property tax that is expected to be reimbursed to the City by the State for the State's Senior Veteran Property Tax Exemption program rather than being paid by the taxpayer themselves. Property taxes are due and considered earned on January 1 following the year levied. The first and second halves become delinquent on March 1 and June 16, respectively. Tax rate levy authority for the 2019 fiscal year was approved when Resolution 1070, Series of 2019, was adopted by the City Council and approved by the Mayor.

4. **Water and Wastewater Service Accounts.** Sanitary sewer accounts are maintained, billed, and collected by the Water Board in connection with its water accounts. The Wastewater Management enterprise fund is responsible for billing and collecting storm drainage charges using a cycle billing system. Flat rate accounts and certain cycle billings are billed in advance on a monthly basis and revenues relating to future years are classified as unearned revenue. Metered accounts are billed in arrears and have been accrued.

5. **Interfund Receivables/Payables.** During the course of operations, numerous transactions occur between individual funds for goods provided or services rendered. The balances from these transactions are classified as "interfund receivable" or "interfund payable" on the balance sheet/statement of net position. Other interfund receivables/payables between individual funds have occurred because some funds have overdrawn their equity share of pooled cash.

6. **Due from Other Governments.** Due from other governments includes amounts due from grantors for grants for specific programs and capital projects. Program and capital grants for capital assets are recorded as receivables and revenues when all eligibility requirements are met. Revenues received in advance of project costs being incurred or for which eligibility requirements have not been met are unearned. In the governmental funds, revenue recognition also depends on the timing of cash collections (availability).

7. **Inventories and Prepaid Items.** The City values inventories at cost, which approximates market, and accounts for them using either the weighted average method or the first-in/first-out method. The costs of governmental fund-type inventories are recorded as expenditures when purchased.

   Payments made to vendors for services representing costs applicable to future accounting periods are recorded as prepaid items in both the government-wide and fund financial statements. The cost of prepaid items in the governmental funds are recorded as an expense when consumed.

8. **Restricted Assets.** Certain assets of the General Fund, General Government special revenue fund and certain component units are classified as restricted assets because their use is completely restricted by State statute (see **Note IV-D-8**).

   In the General Fund, certain monies related to COPs and capital leases (see **Note III-E-1**) are classified as restricted in accordance with lease requirements.

Certain resources of the governmental activities and the Denver Airport System enterprise fund are classified as restricted assets because their use is limited by applicable bond covenants. These covenants require the accumulation of resources for current principal and interest on both bonds and subordinate bonds, principal and redemption price on term bonds subject to mandatory redemption, principal and interest emergency reserve, and operating and maintenance emergency reserve.

Certain assets of the Environmental Services enterprise fund have been restricted by external parties to be used for future plant and equipment expenditures and payment of certain liabilities.

9. **Capital Assets.** Land, collections, construction in progress, buildings, equipment, infrastructure, and intangible assets are reported in the applicable governmental or business-type activities, or component unit columns of the government-wide financial statements. Such assets are recorded at cost or estimated cost if purchased or constructed. Donated capital assets are recorded at their estimated acquisition value at the date of donation. The capitalization threshold of the City is $5,000 except for internally-generated software, which has a threshold of $50,000. The costs of normal maintenance and repairs that do not add to the value of the assets or materially extend assets' lives are not capitalized.

Assets under capital leases are recorded at the present value of future minimum lease payments and are amortized over the shorter of the lease term or the estimated useful life of the asset.

Capital assets of the City and certain component units are depreciated on a straight-line basis over the following estimated useful lives:

Buildings and improvements	5 to 50 years
Motor vehicles and motorized equipment	5 to 20 years
Furniture, machinery, and equipment	3 to 20 years
Collections, excluding library books	15 years
Library books	4 years
Infrastructure	6 to 50 years
Intangibles	3 to 5 years

Library books are depreciated over a four-year life using the composite method. The Western History artwork collection is not capitalized because these assets are held for public exhibition rather than financial gain and the value cannot be determined. They are protected and preserved and proceeds from any sales must be used to acquire other items for collection. In addition, artwork acquired through the Estate of Clyfford Still is not capitalized because the collection must be held for public exhibition and sale of the collection, or any piece of the collection, is prohibited, under the terms of the will and the donation agreement. A value has not been assigned to the Clyfford Still collection and due to the rarity of the collection combined with restrictions within the will for its ownership and exhibition, its ultimate value may be impossible to establish with any certainty.

Assets held for disposition in governmental funds consist of foreclosed property and land pending future sale. No depreciation is recorded for assets held for disposition.

10. **Long-term Obligations.** The City records long-term debt and other long-term obligations as liabilities in the government-wide and proprietary fund financial statements. Bond premiums and discounts are amortized over the life of the bonds using the effective interest method or the straight-line method, which is not materially different than the effective-interest method, over the term of the debt. Bond premiums and discounts are presented as an addition or reduction (net) of the face amount of the bond payable. With few exceptions, bonds issued by the City are tax-exempt and subject to federal arbitrage regulations.

In the fund financial statements for governmental fund-types, bond issuance costs, other than prepaid insurance, are recognized as expenditures during the current period even if withheld from actual net proceeds. Bond proceeds and bond premiums are reported as an other financing source. Bond discounts are reported as an other financing use.

11. **Compensated Absences.** The City has vacation, sick, and paid time off leave policies covering substantially all its employees, as follows:

- Career Service Authority
- Fire and Police Departments' Classified Service
- Undersheriff
- District Attorney and Judges

Employees may accumulate earned but unused benefits up to a specified maximum. The City has recorded an accrued liability for compensated absences in the government-wide and proprietary fund financial statements that was calculated using the vesting method.

12. **Unearned Revenues.** Unearned revenues reflect amounts that have been received before the City has a legal claim to the funds. In subsequent periods, when the City has a legal claim to the resources, the unearned revenue is removed from the statement of net position/balance sheet and revenue is recognized.

13. **Pensions.** For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions and pension expense, information about the fiduciary net position of the Denver Employees Retirement Plan (DERP) the Statewide Defined Benefit Plan and Old Hire Fire and Police Pension Plans, administered by the Fire and Police Pension Association of Colorado (FPPA) and the Public Employees' Retirement Association of Colorado Pension Plans (PERA), and additions to/deductions from the various pension plan's fiduciary net position have been determined on the same basis as they are reported by DERP, FPPA, and PERA. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

14. **Other Post-Employment Benefits (OPEB).** For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB and OPEB expense, information about the fiduciary net position of the Denver Employees Retirement Plan (DERP), and the Public Employees' Retirement Association of Colorado Pension Plans (PERA), and additions to/deductions from the various OPEB plan's fiduciary net position have been determined on the same basis as they are reported by DERP, and PERA. For this purpose, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

15. **Deferred Outflows of Resources and Deferred Inflows of Resources.** A deferred inflow of resources is an acquisition of net position by the City that is applicable to a future reporting period and a deferred outflow of resources is a consumption of net position by the City that is applicable to a future reporting period. Both deferred inflows and outflows are reported in the Statement of Net Position but are not recognized in the financial statements as revenues, expenses, and reduction of liabilities or increase in assets until the period(s) to which they relate. The City reports deferred outflows of resources for pension and OPEB related amounts for the City's share of the difference between projected and actual earnings for the City's share of the difference between contributions to the individual plans and the proportionate share of the contributions, for changes of assumptions or other inputs, the difference between expected and actual

experience, and contributions subsequent to the measurement date. Deferred outflows of resources of the City also consist of the accumulated decrease in fair value of hedging derivatives and the deferred loss on refunding.

The City reports deferred inflows of resources for pension and OPEB related amounts in the government wide financial statements or the City's share of the difference between expected and actual experience and for the City's share of the difference between contributions to the individual plans proportionate share of the contributions and the difference between projected and actual earnings. The City also reports deferred inflows of resources for property tax receivables that are levied for the next fiscal year, and deferred gain on refunding.

Under the modified accrual basis of accounting, revenue and other fund financial resources are recognized in the period in which they become both measurable and available. Assets recorded in the fund financial statements for which the revenues are not available are reported as a deferred inflow of resources. Deferred inflows of resources are also comprised of property tax and long-term receivables that are unavailable in the fund statements.

16. Net Position. In the government-wide and fund financial statements, net position is the difference between assets, liabilities, deferred inflows of resources, and deferred outflows of resources. Net investment in capital assets, represents capital assets; less accumulated depreciation; and less any outstanding borrowings related to the acquisition, construction, or improvement of those assets. Certain net positions are restricted for capital projects, emergency use, debt service, and by donor restrictions.

17. Fund Balance. In the governmental fund financial statements, governmental funds report nonspendable, restricted, committed, assigned, and unassigned fund balance classifications based on the nature and extent of the constraints placed on the fund balances.

18. Encumbrances. Encumbrances for contracts and purchase orders are unencumbered at year end and reappropriated against the subsequent year's budget. As of December 31, 2019, the encumbrances reflected in **Table 1** (dollars in thousands) were reappropriated against the 2020 budget for remaining prior year encumbrances.

Table 1

Governmental Activities:	
General Fund	$ 74,677
Human Services Fund	14,059
Other Governmental Funds	341,701
Internal Service Funds	2,618
Total Governmental Activities	**$ 433,055**
Business-type Activities:	
Wastewater Management	$ 80,095
Denver Airport System	674,019
Other Enterprise Funds	2,492
Total Business-type Activities	**$ 756,606**

19. Special Item. GASB issued pronouncement No. 34, B*asic Financial Statements - and Management's Discussion and Analysis - For State and Local Governmentns* (GASB 34). GASB 34 defines Special Item as transactions or other events within the control of managment that are significant and either unusual in nature or infrequent in occurence. On August 12, 2019, the City, for and on behalf of the Airport, exercised its right to terminate the Great Hall Agreement for convenience, with an effective termination date of

November 12, 2019. A portion of the cost associated with the termination payments were determined to not be capitalizable and have been recorded as a Special Item on the Statement of Revenues, Expenses, and Changes in Net Position.

Note E – Implementation of New Accounting Principles

Governmental Accounting Standards Board Statement No. 89. In 2019, the City implemented provisions of GASB Statement No. 89 (Statement No. 89), Accounting for Interest Cost Incurred before the End of a Construction Period. This Statement establishes accounting requirements for interest cost incurred before the end of a construction period. Such interest cost includes all interest that previously was accounted for in accordance with the requirements of paragraphs 5–22 of Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements*, which are superseded by this Statement. This Statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. As a result, interest cost incurred before the end of a construction period will not be included in the historical cost of a capital asset reported in a business-type activity or enterprise fund. Statement No. 89 was implemented prospectively therefore any existing capitalized interest costs as of December 31, 2018 will remain capitalized.

Note F - Restatement

Prior Period Adjustment. The financial statements for the year ended December 31, 2018 have been restated as a result of incorrect capitalization related to capital assets and calculation of depreciation expense which resulted in a restatement of beginning net position at January 1, 2019 for the governmental activities. The adjustment reduced governmental activities depreciation expense for 2018 by $12,447, thereby increasing change in net position of governmental activities for 2018 by $12,447. The restatement decreased beginning net position by $47,998,000 for the governmental activities, and the effect of the restatement on beginning balances is reflected in **Table 2** (in thousands):

Table 2

	As Originally Stated	Adjustment	As Restated
Capital assets not being depreciated:			
Land and land rights	$ 583,127	$ (325)	$ 582,802
Construction in progress	214,698	(77,836)	136,862
Total capital assets not being depreciated	**797,825**	**(78,161)**	**719,664**
Capital assets being depreciated:			
Buildings and improvements	2,420,934	-	2,420,934
Equipment and other	337,319	6,173	343,492
Collections	49,771	-	49,771
Intangibles	58,391	-	58,391
Infrastructure	1,733,215	11,543	1,744,758
Total capital assets being depreciated	**4,599,630**	**17,716**	**4,617,346**
Less accumulated depreciation for:			
Buildings and improvements	(937,559)	-	(937,559)
Equipment and other	(247,344)	(1,375)	(248,719)
Collections	(26,100)	(718)	(26,818)
Intangibles	(53,646)	-	(53,646)
Infrastructure	(903,351)	14,540	(888,811)
Total accumulated depreciation	**(2,168,000)**	**12,447**	**(2,155,553)**
Governmental Activities capital assets, net	**$ 3,229,455**	**$ (47,998)**	**$ 3,181,457**

II. Stewardship, Compliance, and Accountability

Note A – Deficit Fund Equity

At December 31, 2019, the Cherry Creek North BID, Denver Convention Center Hotel Authority (DCCHA), the Denver Urban Renewal Authority (DURA), and the Downtown Denver Development Authority component units had deficit net position in the amounts of $90,000, $6,266,000, $61,450,000 and $147,612,000, respectively.

The DCCHA component unit will use revenue from its hotel facility to fund its deficit net position. DDDA receives sales and property tax revenue to fund its deficit net position. The DURA component unit uses Tax Increment Financing (TIF), which is additional incremental property and sales taxes generated by redevelopment projects, to fund its deficit net position. Cherry Creek North BID receives property tax revenue to fund its deficit net position.

Note B – Excess Expenditures Over Authorizations

There were no budget basis expenditures that exceeded authorization as of December 31, 2019.

III. Detailed Notes for All Funds

Note A – Deposits and Investments

1. **Deposits.** The City Charter, Section 2.5.3(c), requires all banking or savings and loan institutions to pledge sufficient collateral as required by law (Public Deposit Protection Act (CRS, 11-10.5-101)) before any public funds are deposited. In addition, the City's Investment Policy requires that certificates of deposit be purchased from institutions that are certified as Eligible Public Depositories by the appropriate state regulatory agency. Under the Colorado Public Deposit Protection Act (PDPA), all deposits exceeding the amount insured by the FDIC are to be fully collateralized at 102.00% of the deposits with specific approved securities identified in the act. The eligible collateral pledged must be held in custody by any Federal Reserve Bank, or branch thereof, or held in escrow by some other bank in a manner as the banking commissioner shall prescribe by rule and regulation or may be segregated from the other assets of the eligible public depository and held in its own trust department. All collateral so held must be clearly identified as being security maintained or pledged for the aggregate amount of public deposits accepted and held on deposit by the eligible public depository. Deposits collateralized under the PDPA are considered collateralized with securities held by the pledging financial institutions' trust department or agent in the "City's name."

   Custodial credit risk is the risk that, in the event of a failure of a financial institution or counterparty, the City would not be able to recover its deposits, investments or collateral securities. At December 31, 2019, the bank balance and carrying amounts of accounts managed by the Manager of Finance (the Manager) were $9,356,000 and $16,513,000 respectively. The City's deposits, except for the pension trust fund and certain component units' deposits are subject to, and in accordance with PDPA.

   All deposits for DURA, DDDA, and DCCHA were not subject to custodial credit risk at December 31, 2019, since they were covered by FDIC or PDPA. The National Western Center Authority maintains a bank account at one institution, which is insured by the FDIC up to $250,000. The funds in this account may, at times, exceed the amounts insured by the FDIC. The Authority has never experienced any losses related to these amounts.

2. **Investments.** It is the policy of the City to invest its funds in a manner which will provide for the highest investment return consistent with the preservation of principal and provision of the liquidity necessary for daily cash flow demands. The City's Investment Policy applies to all investment activity of the City under the control of the Manager, including investments of certain monies related to all governmental and business-type activities, and trust and agency funds. The City's Investment Policy does not apply to the investments of the deferred compensation plan, the Denver Employee Retirement Plan or componenet units. The City's investment Policy does not apply to the investments of the deferred compensation plan, the Denver Employee Retirement Plan, or component units. Other monies that may from time to time be deposited with the Manager for investment shall also be administered in accordance with the Investment Policy.

The City Charter, Section 2.5.3(c), and Revised Municipal Code, Section 20-21, authorize the investments that the City can hold. The Investment Policy requires that investments shall be managed in accordance with portfolio theory management principles to compensate for actual or anticipated changes in market interest rates. To the extent possible, investment maturity will be matched with anticipated cash flow requirements of each investment portfolio. Additionally, to the extent possible, investments will be diversified by security type, market sector, and institution. This diversification is required in order that potential losses on individual securities do not exceed the income generated from the remainder of the portfolios. Deviations from expectations shall be reported in a timely fashion and appropriate action taken to control adverse developments.

At December 31, 2019, the City's investment balances, including fiduciary funds were as shown in **Table 3**.

Table 3

City Investment Balances
December 31, 2019 (dollars in thousands)

	Fair Value
Money market funds	$ 1,000
Local government investment pool	144,927
Common stock	308,387
Commercial paper	124,721
Mutual funds	1,106,914
Municipal bonds	229,614
U.S. Treasury securities	1,267,383
U.S. agency securities	2,017,485
Corporate bonds	1,066,983
Structured products[1]	518,010
Multinational fixed income[2]	606,984
Annuity contracts	209,830
Real estate	175,521
Other	1,145,195
Total Investments	**$ 8,922,954**

[1]Includes asset backed securities, collateralized mortgage obligations, and mortgage backed securities.
[2] Includes supranational securities. Supranationals are U.S. dollar denominated bonds of international organizations such as the World Bank and International Monetary Fund.

The DERP pension trust fund had securities lending collateral of $81,272,000 at December 31, 2019; see **Note 7** of the DERP comprehensive annual financial report (available at https://www.derp.org) for additional discussion related to this balance.

At December 31, 2019, the investment balances of the discretely presented component units were as shown in **Table 4**.

Table 4

Component Units Investment Balances

December 31, 2019 (dollars in thousands)

		Fair Value
Money market funds	$	158,641
Local government investment pool		937
Certificates of deposit		9,801
Municipal bonds		4,253
Commercial paper		5,934
U.S. Treasury securities		53,125
U.S. agency securities		14,371
Corporate bonds		7,970
Multinational fixed income[1]		5,352
Total Investments	**$**	**260,384**

[1] Includes supranational securities. Supranationals are U.S. dollar denominated bonds of international organizations such as the World Bank and International Monetary Fund.

A reconciliation of cash and investments as shown in the basic financial statements as of December 31, 2019, is shown in **Table 5**.

Table 5

Reconciliation of Cash and Investments

December 31, 2019 (dollars in thousands)

Governmental and Business-type Activities		**Primary Government**		**Component Units**		**Total**
Cash on hand	$	6,601	$	-	$	6,601
Cash and cash equivalents		1,797,454		82,509		1,879,963
Investments		1,171,660		197		1,171,857
Restricted cash and cash equivalents		326,297		37,027		363,324
Restricted investments		2,522,351		260,187		2,782,538
Total Governmental and Business-type Activities	**$**	**5,824,363**	**$**	**379,920**	**$**	**6,204,283**
Fiduciary						
Cash on hand	$	-	$	-	$	-
Cash and cash equivalents		67,034		-		67,034
Investments		3,092,939		-		3,092,939
Total Fiduciary	**$**	**3,159,973**	**$**	**-**	**$**	**3,159,973**
Total	**$**	**8,984,336**	**$**	**379,920**	**$**	**9,364,256**
Less deposit balance[1]		**(61,382)**		**(119,536)**		**(180,918)**
Total	**$**	**8,922,954**	**$**	**260,384**	**$**	**9,183,338**

[1] The carrying amount of the City's deposits of $30,231,000, less outstanding checks of $10,052,000, plus petty cash of $107,000, plus fiduciary cash of $21,342,000, plus General Improvement District cash of $1,281,000 and cash

Fair Value Measurements. The City categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

Equities within all asset classes that are classified in Level 1 are valued using prices quoted in active markets for those securities. Equity and equity derivative securities classified in Level 2 are securities whose values are derived daily from associated traded securities. The City currently does not maintain equity securities classified as Level 3. Fixed income securities and derivatives within all asset classes that are classified in Level 2 are valued using either a bid evaluation or a matrix pricing technique. Bid evaluations may include market quotations, yields, maturities, call features, and ratings. Matrix pricing issued to value securities based on the securities' relationship to benchmark quoted prices. Such securities include U.S. Treasuries, corporate and agency bonds, bank loans, and structured products. Level 2 fixed income securities have non-proprietary information that was readily available to market participants, from multiple independent sources, which are known to be actively involved in the market. The city currently does not maintain fixed income securities classified as Level 3.

Investments that are measured at fair value using the net asset value (NAV) per share (or its equivalent) as a proxy are not classified in the fair value hierarchy. See **Table 7** for further detail. Short-term securities generally include investments in money market-type securities reported at amortized cost, which approximates market or fair value.

Investment derivative instruments determination of fair value consists of a two-step process. First settlement prices are determined by utilizing the income approach under GASB 72 from "mid-market" pricing data available from public and subscription source. The second step is to determine the credit valuation adjustment for the derivative instrument. The purpose of the credit valuation adjustment is to quantify the nonperformance risk of the reporting entity as well as the nonperformance risk of the counterparty. Fair value is then determined as the settlement price of the derivative instrument adjusted by the credit valuation adjust of both the reporting entity's payment obligation and the counterparty's payment obligations.

The City has the following recurring fair value measurements as of December 31, 2019 as shown in **Table 6**:

Table 6

Fair Value Measurements

December 31, 2019 (dollars in thousands)

Governmental and Business-type Activities	Fair Value	Level 1	Level 2	Level 3
Municipal bonds	$ 227,940	$ -	$ 227,940	$ -
Mutual funds	53	53	-	-
Commercial paper	123,664	-	123,664	-
U.S. Treasury securities	1,227,645	-	1,227,645	-
U.S. agency securities	1,921,601	-	1,921,601	-
Corporate bonds	843,932	-	843,932	-
Structured products	514,175	-	514,175	-
Multinational fixed income	602,396	-	602,396	-
Governmental and Business-type Activities	**$ 5,461,406**	**$ 53**	**$ 5,461,353**	**$ -**
Total investments measured at the NAV[1]	143,701	-	-	-
Total other investments not valued at fair value	182,272	-	-	-
Total Governmental and Business-type Activities	**$ 5,787,379**	**$ -**	**$ -**	**$ -**

Fiduciary	Fair Value	Level 1	Level 2	Level 3
Municipal Bonds	$ 1,674	$ -	$ 1,674	$ -
Common stock	308,387	308,387	-	-
Commercial paper	1,057	-	1,057	-
U.S. Treasury securities	39,738	30,145	9,593	-
U.S. agency securities	95,883	-	95,883	-
Corporate bonds	223,051	-	223,051	-
Structured products	3,835	-	3,835	-
Multinational fixed income	4,588	-	4,588	-
Mutual funds	1,106,862	1,106,862	-	-
Other (self directed brokerage)	147,073	147,073	-	-
Total Fiduciary	**$ 1,932,148**	**$ 1,592,467**	**$ 339,681**	**$ -**
Total investments measured at the NAV[2]	$ 886,833	$ -	$ -	$ -
Total other investments not valued at fair value[3]	316,594	-	-	-
Total Fiduciary	**$ 3,135,575**	**$ -**	**$ -**	**$ -**
Total Investments	**$ 8,922,954**	**$ -**	**$ -**	**$ -**

Major Component Units	Fair Value	Level 1	Level 2	Level 3
Municipal bonds	4,253	-	4,253	-
Commercial paper	5,934	-	5,934	-
U.S. Treasury securities	53,125	53,125	-	-
U.S. agency securities	14,371	-	14,371	-
Corporate bonds	7,970	7,970	-	-
Multinational fixed income	5,352	-	5,352	-
Major Component Units	**$ 91,005**	**$ 61,095**	**$ 29,910**	**$ -**
Total investments measured at the NAV[4]	739	-	-	-
Total other investments not valued at fair value[5]	168,443	-	-	-
Total Major Component Units	**$ 260,187**	**$ -**	**$ -**	**$ -**

Police Retiree Health Fund	Fair Value	Level 1	Level 2	Level 3
Stocks, Options, and ETFs	$ 4,308	$ 4,308	$ -	$ -
Mutual Funds	1,187	1,187	-	-
Total Police Retiree Fund	**$ 5,495**	**$ 5,495**	**$ -**	**$ -**

Governmental and Business-type Activities				
Investment derivative instruments:				
Interest rate swaps[6]	$ 58,779	$ -	$ -	$ -
Total Governmental and Business-Type Activities	**$ 58,779**	**$ -**	**$ -**	**$ -**

[1] Balance held at Colotrust $109,312,000, balance held at CSAFE of $34,389,000.

[2] Balance held at Colotrust $931,000, balance held at CSAFE $294,000. See **Table 7** for detail of $885,608,000 measured at the NAV.

[3] Includes Deferred Compensation Plan amounts of $209,830,000 of synthetic guaranteed investment contracts and $11,686,000 of loans to participants. Includes $95,078,000 of money market funds.

[4] December 31, 2019 balance held at Colotrust of $739,000.

[5] Includes $158,642,000 of money market funds and $9,801,000 of Certificates of Deposit.

[6] Net of $4,589,000 of interest rate swaps at an asset position and $63,368,000 in a liability position, which $36,097,000 is for business type activities and $27,271,000 is governmental interest rate swaps at a liability positions. Refer to **Tables 37** and **41**.

Synthetic Guaranteed Investment Contracts – An option in the City's deferred compensation plan includes a custom stable value fund that includes synthetic guaranteed investment contracts (SGICs). The contracts provide a stable rate of return to the participants. The value of the underlying investments is $209,830,000 as of December 31, 2019

Table 7

Investments Measured at the NAV

December 31, 2019 (dollars in thousands)

	December 31	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Fixed Income Investments				
Private debt	$ 153,257	$ 19,900	Not eligible	n/a
Emerging market debt	59,750	-	Monthly	3 days
Total Fixed Income Investments	**$ 213,007**	**$ 19,900**		
Real Estate Investments				
Real estate - open-end	$ 145,515	$ -	Quarterly	20-90 days
Real estate - closed-end	30,005	27,734	Not eligible	n/a
Total real estate investments	**$ 175,520**	**$ 27,734**		
Alternative Investments				
Private equity	$ 241,022	$ 82,723	Not eligible	n/a
Energy investments	106,723	35,691	Not eligible	n/a
Timber	36,053	-	Not eligible	n/a
Total alternative investments	**$ 383,798**	**$ 118,414**		
Absolute Return				
Hedge Fund	$ 113,283	$ -	Quarterly	65 days
Total Absolute Return	**$ 113,283**	**$ -**		
Total Investments Measured at the NAV	**$ 885,608**	**$ 166,048**		

Fixed Income Investments

- Private debt investments are intended to generate returns by lending money to various businesses and enterprises, or by purchasing loans originated by other lenders. There are six commingled investment pools, each taking the form of a partnership or similar structure. The debt may be secured or unsecured, and various yield enhancing techniques may be used, such as royalty sharing, equity options, or the application of leverage. Liquidity of these closed-end funds is determined by the monetization of underlying investments, and subject to reinvestment terms.
- Investments in emerging market debt seek to purchase the publicly traded sovereign or corporate debt obligations of developing nations.

Real Estate Investments

- Real Estate Investments - Open end real estate investments are pooled investments that own and operate commercial property. Returns are generated from income and price appreciation. These funds have perpetual life, and periodically accept contributions or honor redemptions.
- Closed end real estate investments consist of pooled funds to own and operate commercial property. These funds have a finite life, and funds are returned as investments are liquidated.

Alternative Investments

- Private equity utilizes a fund of funds approach to make investments in venture capital, buyouts, and other corporate finance transactions.
- Energy investments are a diversified portfolio of energy assets, including interests in oil, natural gas, power generation, and renewables

- Timber investments are made in both domestic and international timberland. Returns are generated through the acquisition, management, harvesting and sale of timber.

Absolute Return Investments

- Absolute Return Investments - A hedge fund of funds is used to generate returns that are higher than core fixed income, with significantly lower risk than public equities. A multi strategy approach is used to improve consistency of returns while limiting downside risk.

Interest Rate Risk. Interest rate risk is the risk that changes in financial market interest rates will adversely affect the value of an investment. The City's Investment Policy limits interest rate risk for investments under the control of the Manager by limiting the maximum maturity of investments. Investments in commercial paper have a maximum maturity of 270 days. Corporate debt obligations have a maximum maturity of five years. U.S. Treasury, agency, and supranational, municipal, and asset-backed securities can have a maximum maturity of 10 years. Agency mortgage-backed securities have a maximum maturity of 31 years with an average life limitation of 20 years. Agency collateralized mortgage obligations have a maximum maturity of 31 years with an average life limitation of 10 years. To further mitigate interest rate risk, the investment policy limits investments in asset-backed securities, mortgage-backed securities, and collateralized mortgage obligations to a combined maximum of 20.00% of the City's overall investments. The City also minimizes interest rate risk by maintaining a concentration of its portfolio invested in short-term and extremely liquid investments. The Manager is authorized to waive certain portfolio constraints when such action is deemed to be in the best interest of the City. The Manager has waived the maximum maturity for certain investments in U.S. agency securities that are part of the Denver Airport System structured pool created to facilitate an economic defeasance of a portion of the future debt service payments due on certain airport system bonds, and also the investments held for the Cable Land Trust and Workman's Compensation. Maturities of the underlying investments in the local government investment pool are limited by the pool's investment policies to less than one year.

At December 31, 2019, the City's investment balances and maturities for those investments subject to interest rate risk are shown in **Table 8** and **Table 9** (dollars in thousands):

Table 8

		Investment Maturities in Years			
Investment Type	**Fair Value**	**Less than 1**	**1 - 5**	**6 - 10**	**Greater than 10**
For the City					
Local government investment pool	$ 144,612	$ 144,612	$ -	$ -	$ -
Money market funds	1,000	1,000	-	-	-
Municipal bonds	229,614	32,315	179,913	13,652	3,734
U.S. Treasury securities	1,237,238	285,305	764,315	187,618	-
U.S. agency securities	1,935,844	287,873	1,400,126	245,520	2,325
Corporate bonds	850,344	161,903	688,441	-	-
Multinational fixed income	606,984	54,401	453,265	99,318	-
Structured products	518,010	10,420	437,921	64,445	5,224
Commercial paper	124,721	124,721	-	-	-
Total	**$ 5,648,367**	**$ 1,102,550**	**$ 3,923,981**	**$ 610,553**	**$ 11,283**

Table 9

Investment Type	Fair Value	Investment Maturities in Years: Less than 1	1 - 5	6 - 10	Greater than 10
For DERP					
U.S. Treasury securities	$ 30,145	$ 5,042	$ 15,009	$ 10,094	$ -
U.S. agency securities	81,642	7,294	27,019	32,014	15,315
Asset backed	59	-	-	-	59
Corporate	36	29	-	-	7
Non-U.S. Government bonds	-	-	-	-	-
Mortgage backed	-	-	-	-	-
For Deferred Compensation Plan					
Mutual funds	**$ 48,456**	**$ -**	**$ -**	**$ 48,456**	**$ -**
Total	**$ 160,338**	**$ 12,365**	**$ 42,028**	**$ 90,564**	**$ 15,381**

Investments with undetermined or without maturity dates:	Fair Value	Investment Maturities in Years: Less than 1	1 - 5	6 - 10	Greater than 10
For Police Retiree Health Fund					
Stocks, Options, and ETFs	$ 4,308	$ -	$ -	$ -	$ -
Mutual Funds	1,187	-	-	-	-
Total	**$ 5,495**	**$ -**	**$ -**	**$ -**	**$ -**

The City's portfolio of U.S. agency securities and corporate bonds includes callable securities. As of December 31, 2019, the City owned agency, corporate bond, and municipal bond callable securities with a fair value of $34,787,000, 28,406,000, and $1,009,000 respectively.

Credit Quality Risk. Credit quality risk is the risk that the issuer or other counterparty to a debt security will not fulfill its obligations to the City. Moody's, Standard & Poor's, and Fitch Ratings are the three primary Nationally Recognized Securities Rating Organizations (NRSRO) that assess this risk and assign a credit quality rating for most investments. Obligations of the U.S. Government or obligations explicitly guaranteed by the U.S. Government are assigned credit quality ratings of AAA by Fitch and Aaa by Moody's, both with stable outlooks as of December 31, 2019. Standard and Poor's rate securities of the U.S. Government AA+ also with a stable outlook. Of the City's investments at December 31, 2019, commercial paper, municipal bonds, corporate debt obligations, structured products, local government investment pools, and supranational securities were subject to credit quality risk

The City's Investment Policy requires that commercial paper be rated by at least two NRSRO with a minimum short-term rating of A-1, P-1, or F-1 at the time of purchase. The Investment Policy requires that the municipal bonds have a minimum underlying issuer rating from at least two of the three rating agencies of A+ or its equivalent. The Investment Policy requires that corporate debt obligations have a minimum underlying issuer rating from at least two of the NRSRO or A- or its equivalent. The Investment Policy requires that asset-backed securities have a minimum underlying issuer rating from at least two of the NRSRO of AA- or its equivalent. The Investment Policy requires that mortgage-backed securities and collateralized mortgage obligations that had ratings of at least Aaa by Moody's, AAA by Fitch and AA+ by Standard & Poor's. The Investment Policy also requires local government investment pools to be in compliance with Title 24 Part 7 of Article 24 of the Colorado Revised Statues. The Investment Policy also requires supranational securities by issued by institutions with debt obligations rated AAA, or the equivalent, by at least two NRSROs.

Information on the credit ratings associated with the City's investments (excluding DERP) as of December 31, 2019, is shown in **Table 10** (dollars in thousands).

Table 10

S&P	Commercial Paper	Municipal Bonds	Corporate Debt Obligations	Asset Backed Securities	Collateralized Mortgage Obligations	Local Government Investment Pools	Money Market Funds	Multinational Fixed Income	Total
AAA	$ -	$ 45,794	$ 104,338	$ 228,930	$ 12,104	$ 144,612	$ 1,000	$ 546,930	$ 1,083,708
AA+ to AA-	-	164,051	383,046	-	10,102	-	-	-	557,199
A+ to A-	-	3,542	362,960	-	-	-	-	-	366,502
A-1+ to A-1	124,721	-	-	-	-	-	-	-	124,721
NR	-	16,227	-	92,135	174,739	-	-	60,054	343,155
Total	**$ 124,721**	**$ 229,614**	**$ 850,344**	**$ 321,065**	**$ 196,945**	**$ 144,612**	**$ 1,000**	**$ 606,984**	**$ 2,475,285**
Moody's									
Aaa	$ -	$ 46,881	$ 104,338	$ 235,899	$ 33,255	$ -	$ 1,000	$ 601,981	$ 1,023,354
Aa1 to Aa2	-	161,487	157,685	-	-	-	-	-	319,172
Aa3 to A1	-	15,267	306,268	-	-	-	-	-	321,535
A2 to A3	-	-	282,053	-	-	-	-	-	282,053
P-1	124,721	-	-	-	-	-	-	-	124,721
NR	-	5,979	-	85,166	163,690	144,612	-	5,003	404,450
Total	**$ 124,721**	**$ 229,614**	**$ 850,344**	**$ 321,065**	**$ 196,945**	**$ 144,612**	**$ 1,000**	**$ 606,984**	**$ 2,475,285**
U.S. Treasury securities									$ 1,237,238
U.S. Agency securities									1,935,844
Total									**$ 5,648,367**

The DERP manages credit risk through the constraints on investments specified in each manager's investment guidelines included in the Plan's Investment Policy. Securities implicitly governed by the U.S. Government are included.

Information on the credit ratings associated with the DERP investments in debt securities at December 31, 2019, is shown in **Table 11** (dollars in thousands).

Table 11

Credit Ratings for DERP

December 31, 2019 (dollars in thousands)

S&P	Moody's	Asset Backed	Corporate Bonds	Implicit U.S. Government Bonds	Total
AA+ to AA-	Aa3 to A1	$ -	$ -	$ 81,642	$ 81,642
CC+ to CC-	Ca	59	-	-	59
NR	NR	-	36	-	36
Total		**$ 59**	**$ 36**	**$ 81,642**	**$ 81,737**
U.S. Government					30,145
Non-rated funds					429,550
Total					**$ 541,432**

NR - no rating available

Custodial Credit Risk. Custodial credit risk for investments is the risk that, in the event of a failure, the City will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. Investments are exposed to custodial credit risk if they are uninsured, are not registered in the City's name, and are held by either the counterparty to the investment purchase or are held by the counterparty's trust department or agent but not held in the City's name. None of the City's investments owned at December 31, 2019, were subject to custodial credit risk.

In accordance with the City’s Investment Policy, all of the City’s repurchase agreements are collateralized at 102.00% of the market value of the portfolio by U.S. agency securities at the time of purchase. Collateral valuation is calculated and adjusted at least once per week and adjusted on an as needed basis. Collateral for all investments, including repurchase agreements, are held in the City’s name by the City’s custodian, Principal Financial Group.

DERP has no formal policy for custodial credit risk. At December 31, 2019, there were no investments, repurchase agreements, or collateral securities subject to custodial credit risk.

Concentration of Credit Risk. Concentration of credit risk is the risk of loss attributed to the magnitude of the City’s investment in a single issuer. The City’s Investment Policy states that a maximum of 5.00% of the portfolio may be invested in commercial paper, municipal securities, corporate debt obligations, certificates of deposit, asset-backed securities, or mortgage-backed securities issued by any one obligor. The City’s Investment Policy states that a maximum of 10.00% of the portfolio may be invested in an individual supranational obligor, local government investment pool, money market mutual fund, or collateralized mortgage obligation. The City's Investment Policy also limits investments in U.S. agency securities to 80.00% of total investments and no more than 25.00% in a single issue. The City’s Investment Policy also limits investments in U.S. agency securities to 25.00% of total investments. The City’s Investment Policy limits concentrations even further with a combined maximum of 50.00% of the portfolio that can be invested in corporate debt obligations, commercial paper, and certificates of deposit as well as a combined maximum of 20.00% of the portfolio that can be invested in structured products. As of December 31, 2019, all investments were in compliance with this policy. More than 5.00% of the City's investments are in individual issuers: Federal Home Loan Bank (15.30%), Federal National Mortgage Association (11.96%), and International Bank for Reconstruction and Development (6.01%).

The DERP Investment Policy mandates that no managed account may invest more than 5.00% of managed assets in the securities of a single issuer. As of December 31, 2019, all DERP investments were in compliance with this policy.

Foreign Currency Risk. Foreign Currency risk is the risk that changes in exchange rates will adversely affect their value of an investment or deposit. The City’s Investment Policy, excluding the DERP pension trust fund, does not allow for investments in foreign currency. The DERP pension trust fund Investment Policy allows 16.00% to 26.0% of total investments to be invested in international equities and 1.00% to 4.00% of total investments to be invested in international fixed income. The DERP pension trust fund exposure to foreign currency risk as of December 31, 2019, is reflected in **Table 12** (dollars in thousands).

Table 12

Foreign Currency	Equities	Fixed Income	Total
Australian Dollar	$ 9,819	$ -	$ 9,819
Brazilian Real	12,439	5,754	18,193
British Pound Sterling	34,928	-	34,928
Canadian Dollar	14,662	-	14,662
Chilean Peso	1,066	1,697	2,763
Chinese Yuan	34,916	-	34,916
Czech Koruna	-	1,040	1,040
Columbian Peso	1,599	6,160	7,759
Danish Krone	2,559	-	2,559
Euro	65,881	-	65,881
Hong Kong Dollar	30,143	-	30,143
Hungarian Forint	2,132	705	2,837
Indian Rupee	13,327	-	13,327
Indonesian Rupiah	2,665	7,301	9,966
Japanese Yen	51,140	-	51,140
Malaysian Ringgit	2,843	6,913	9,756
Mexican Peso	3,732	9,894	13,626
New Israeli Shekel	916	-	916
Norwegian Krone	3,315	-	3,315
Peru Sole	-	30	30
Philippine Peso	-	167	167
Polish Zloty	3,199	3,430	6,629
Qatari Riyal	533	-	533
Romanian Leu	-	1,828	1,828
Russian Ruble	9,951	4,792	14,743
Singapore Dollar	3,663	-	3,663
South Korean Won	27,594	2,420	30,014
South African Rand	9,240	5,252	14,492
Swedish Krona	4,108	-	4,108
Swiss Franc	10,502	-	10,502
Taiwan Dollar	25,320	-	25,320
Thai Baht	4,975	789	5,764
Turkish Lira	2,665	1,482	4,147
United Arab Emirati Dirham	1,777	-	1,777
Other	2,931	-	2,931
Total Foreign Deposits and Investments	**$ 394,540**	**$ 59,654**	**$ 454,194**

3. **Denver Convention Center Hotel Authority (DCCHA).** DCCHA's investments were not subject to custodial credit risk at December 31, 2019, since they consisted solely of money market funds that are not evidenced by securities and are in DCCHA's name.

4. **Denver Urban Renewal Authority (DURA).** DURA'S investment policy limits investment maturities as a means of managing its exposure to fair value losses from increasing interest rates. At December 31, 2019, DURA's investment balances and maturities are shown **Table 13** (dollars in thousands).

Table 13

Investment Type	Fair Value	Investment Maturities in Years: Less than 1	1 - 5
U.S. Treasury securities	$ 53,125	$ 17,323	$ 35,802
Structured products	1,269	-	1,269
U.S. agency securities	13,102	3,176	9,926
Corporate bonds	7,970	1,004	6,966
Multinational fixed income	5,352	1,924	3,428
Municipal bonds	4,253	376	3,877
Commercial paper	5,934	5,934	-
Total	**$ 91,005**	**$ 29,737**	**$ 61,268**

Securities Lending. Although the City is authorized to enter into securities lending programs with certain qualified dealers, it had no security lending transactions in 2019. Under this program, investment securities owned by the City are loaned to the dealer up to a maximum of one year in exchange for a predetermined fee. The City continues to receive interest earnings on the loaned securities. The securities are collateralized by the dealer. The collateral is held in the City's name by Principal Financial Group, the City's custodian. Collateral for these transactions is limited to permissible investments included in the City's Investment Policy with maturities not exceeding one year from the date of settlement. The initial market value of the collateral for each investment position maintained with a dealer shall be 102.00% of the market value of the securities being collateralized. Market value includes investment principal plus accrued interest. Collateral valuation levels with each dealer must be determined on at least a weekly basis, and deficiencies from the required 102.00% level must be cured no later than the following business day. The City had no securities on loan as of December 31, 2019.

The DERP pension trust fund participates in a securities lending program to augment income. The program is administered by the DERP custodial agent bank, which lends certain securities for a predetermined period of time, to an independent broker/dealer (borrower) in exchange for collateral. Collateral may be cash, U.S. Government securities, defined letters of credit or other collateral approved by the DERP. Loans of domestic securities are initially collateralized at 102.00% of the fair value of securities lent. Loans of international securities are initially collateralized at 105.00% of the fair value of securities lent. The DERP continues to receive interest and dividends during the loan period as well as a fee from the borrower. There are no restrictions on the amount of securities that can be lent at one time. The duration of securities lending loans generally matches the maturation of the investments made with cash collateral. At December 31, 2019, the fair value of underlying securities lent was $124,891,000. The fair value of associated collateral was $130,022,000 of this amount, $81,272,000 represents the fair value of cash collateral and $48,750,000 is the fair value of non-cash collateral not reported on the financial statements. The DERP pension trust fund does not have the ability to pledge or sell non-cash collateral unless the borrower defaults, therefore it is not reported on the financial statements.

Note B – Receivables

1. **Accounts Receivables and Allowances.** The City reviews its accounts receivables periodically and allowances for doubtful accounts are established based upon management's assessment of collection.

Table 14 represents the accounts receivables and allowances for doubtful accounts at December 31, 2019.

Table 14

Accounts Receivables and Allowances Summary
December 31, 2019 (dollars in thousands)

	Governmental Activities				
Receivable	General	Human Services	Other Governmental Funds	Internal Service Funds	Total
Property taxes	$ 154,167	$ 73,313	$ 283,281	$ -	**$ 510,761**
Other taxes	85,057	-	27,736	-	**112,793**
Notes	16,154	-	145,290	-	**161,444**
Accounts	11,235	209	10,808	1,136	**23,388**
Long-term accounts	73,834	-	21,599	-	**95,433**
Accrued interest	2,495	1	6,465	303	**9,264**
Gross Receivable	**342,942**	**73,523**	**495,179**	**1,439**	**913,083**
Allowances	(69,127)	(407)	(88,924)	-	**(158,458)**
Net Receivable	**$ 273,815**	**$ 73,116**	**$ 406,255**	**$ 1,439**	**$ 754,625**

	Business-type Activities				Fiduciary Funds
Receivable	Wastewater Management	Denver Airport System	Nonmajor Business-type	Total	Agency and DERP
Property taxes	$ -	$ -	$ -	**$ -**	$ 1,199,222
Other taxes	-	-	-	**-**	3,125
Accounts	25,526	78,059	2,873	**106,458**	216
Long-term accounts	-	30,548	7	**30,555**	
Accrued interest	1,145	18,761	168	**20,074**	1,849
Gross Receivable	**26,671**	**127,368**	**3,048**	**157,087**	**1,204,412**
Allowances	-	(2,599)	(3)	**(2,602)**	(5,084)
Net Receivable	**$ 26,671**	**$ 124,769**	**$ 3,045**	**$ 154,485**	**$ 1,199,328**

2. **Notes Receivable.** The special revenue funds', General Fund, related organizations, and component unit notes receivable balance at December 31, 2019, is shown in **Table 15** (dollars in thousands).

Table 15

	December 31		Percent of Total Related Notes Receivable
Neighborhood Development Loans	$ 11,140		n/a
Economic Development Loans	20,801		n/a
Housing Development Loans	129,503		n/a
Total Office of Economic Development	**161,444**		
Less allowances for delinquent loans	10,497		n/a
Less allowances for forgivable loans	86,829		n/a
Notes Receivable, Net	**$ 64,118**		
Denver Health and Hospital Park Hill Health Clinic	$ 1,765		1.09%
Denver Housing Authority	9,680		6.00%
Total Related Organizations Notes Receivable	**$ 11,445**	[1]	
Denver Urban Renewal Authority	$ 4,676	[1]	2.90%
Denver Building Housing	$ 3,238	[1]	2.01%

[1]Amounts included in the notes receivable balance above.

Allowance for uncollectables for notes receivable of $97,326,000 is included in the accounts receivable allowance of $158,458,000 in **Table 14**. The Neighborhood, Economic and Housing Development loans are funded from both federal U.S. Housing and Urban Development grants and City monies designated for affordable housing. Recipients of affordable housing loans target low- and moderate-income households, special needs and the homeless. Rental and occupancy covenants are recorded on these properties for affordability periods of 20 years or more. Housing loans may be fully forgivable at the end of the affordability period, due and payable in full, or due and payable based on occupancy rates or other conditions. The Economic Development loans are made to qualified program recipients under the Community Development Block Grant to provide business owners with funds to promote job creation and growth in targeted areas. Loans are collateralized by the underlying properties.

3. **Long-Term Receivables Allowance.** Included in long-term receivables are amounts related to reimbursement for construction costs, parking fines and court fines. The City recorded an allowance for uncollectible accounts for governmental activities of $58,485,000. The DURA component recorded an allowance of $589,000.

4. **Operating Leases.** The Denver Airport System leases portions of its Denver International Airport buildings and improvements to concession tenants under non-cancelable operating leases. Lease terms vary from 1 to 30 years. The operating leases require retail concessions to pay a minimum guarantee or percentage of gross receipts, whichever is greater. Revenue from these operating leases of $91,700,000, was recognized in the Denver Airport System enterprise fund during the year ended December 31, 2019. Minimum future rentals due from concessions under operating leases are shown in **Table 16** (dollars in thousands).

Table 16

Year		
2020	$	58,551
2021		45,059
2022		39,712
2023		34,191
2024		28,450
2025-2029		55,451
2030-2033		4,030
Total	**$**	**265,444**

The United Airlines lease provides it can be terminated by the airline if the airline's cost per enplaned passenger exceeds $20 in 1990 dollars. Current costs per enplaned passenger did not approach this limit for 2019. Rental rates for airlines are established using the rate making methodology whereby a compensatory method is used to set terminal rental rates and a residual method is used to set landing fees. Rentals, fees, and charges must generate gross revenues together with other available funds sufficient to meet rate maintenance covenants per governing bond ordinances.

Note C – Interfund Receivables, Payables, and Transfers

Tables 17 and **18** (dollars in thousands) reflect the City's interfund balances as of December 31, 2019.

1. **Interfund Payables/Receivables.**

These balances result from the time lag between the dates that interfund goods and services are provided or reimbursable expenditures occur, transactions are recorded in the accounting system, and payments between funds are made. In addition, some balances result from the overdraft of cash balances in the payable funds.

Table 17

	Payable Fund							
Receivable Fund	General Fund	Human Services	Nonmajor Governmental	Wastewater Management	Denver Airport System	Nonmajor Business-type	Internal Service	Total
General Fund	$ -	$ 1,436	$ 873	$ 2,966	$ 30,778	$ 1,644	$ 61	$ 37,758
Human Services	15	-	-	-	-	-	-	15
Nonmajor Governmental	1	-	-	-	237	-	-	238
Wastewater Management	-	-	1	-	452	-	-	453
Nonmajor Business-type	-	-	1,723	-	-	-	-	1,723
Internal Service	-	-	20	-	-	-	-	20
Total	**$ 16**	**$ 1,436**	**$ 2,617**	**$ 2,966**	**$ 31,467**	**$ 1,644**	**$ 61**	**$ 40,207**

2. Transfers.

Transfers are used to move revenues from the fund in which the City budget requires collection to the fund required to expend the monies, and to move unrestricted revenues collected in the General Fund to finance various activities accounted for in other funds.

Table 18

	Transfers Out					
Transfers In	General Fund	Human Services	Nonmajor Governmental	Wastewater Management	Nonmajor Business	Total
General Fund	$ -	$ 7,041	$ 42,464	$ -	$ 900	$ 50,405
Human Services	2,200	-	3,200	-	-	5,400
Nonmajor Governmental	77,864	1,653	84,124	13	411	164,065
Total out	**$ 80,064**	**$ 8,694**	**$ 129,788**	**$ 13**	**$ 1,311**	**$ 219,870**

Note D – Capital Assets

Capital asset activity for the year ended December 31, 2019, are shown in **Tables 19** and **20**.

1. Governmental Activities.

Table 19

Governmental Activities
For the Year Ended December 31, 2019 (dollars in thousands)

	January 1 as restated	Additions	Deletions	Transfers	December 31
Capital assets not being depreciated:					
Land and land rights	$ 582,802	$ 46,112	$ (334)	$ 34,508	$ 663,088
Construction in progress	136,862	169,238	-	(107,248)	198,852
Total capital assets not being depreciated	**719,664**	**215,350**	**(334)**	**(72,740)**	**861,940**
Capital assets being depreciated:					
Buildings and improvements	2,420,934	12,974	(4,111)	32,665	2,462,462
Equipment and other	343,492	42,589	(39,935)	11,229	357,375
Collections	49,771	5,195	(6,367)	113	48,712
Intangibles	58,391	770	(1,415)	1,447	59,193
Infrastructure	1,744,758	63,730	(3,761)	28,568	1,833,295
Total capital assets being depreciated	**4,617,346**	**125,258**	**(55,589)**	**74,022**	**4,761,037**
Less accumulated depreciation for:					
Buildings and improvements	(937,559)	(65,527)	3,785	-	(999,301)
Equipment and other	(248,719)	(29,021)	38,662	-	(239,078)
Collections	(26,818)	(6,277)	5,463	-	(27,632)
Intangibles	(53,646)	(984)	1,415	-	(53,215)
Infrastructure	(888,811)	(57,814)	3,101	-	(943,524)
Total accumulated depreciation	**(2,155,553)**	**(159,623)**	**52,426**	**-**	**(2,262,750)**
Total capital assets being depreciated, net	**2,461,793**	**(34,365)**	**(3,163)**	**74,022**	**2,498,287**
Governmental Activities capital assets, net	**$ 3,181,457**	**$ 180,985**	**$ (3,497)**	**$ 1,282**	**$ 3,360,227**

2. Business-type Activities.

Table 20

Business-type Activities

For the Year Ended December 31, 2019 (dollars in thousands)

	January 1	Additions	Deletions	Transfers	December 31
Capital assets not being depreciated:					
Land and land rights	$ 333,955	$ -	$ -	$ 178	$ 334,133
Construction in progress	523,965	722,985	(9,232)	(244,145)	993,573
Total capital assets not being depreciated	**857,920**	**722,985**	**(9,232)**	**(243,967)**	**1,327,706**
Capital assets being depreciated:					
Buildings and improvements	4,380,370	69	(6,732)	(15,828)	4,357,879
Improvements other than buildings	2,183,371	8,703	(2,458)	162,421	2,352,037
Machinery and equipment	929,059	7,801	(27,144)	90,992	1,000,708
Collections	21	-	-	-	21
Intangibles	34,499	-	(792)	5,100	38,807
Total capital assets being depreciated	**7,527,320**	**16,573**	**(37,126)**	**242,685**	**7,749,452**
Less accumulated depreciation for:					
Buildings and improvements	(2,082,845)	(121,889)	4,561	-	(2,200,173)
Improvements other than buildings	(873,146)	(61,632)	1,173	-	(933,605)
Machinery and equipment	(759,616)	(40,635)	26,436	-	(773,815)
Intangibles	(28,948)	(4,606)	792	-	(32,762)
Total accumulated depreciation	**(3,744,555)**	**(228,762)**	**32,962**	**-**	**(3,940,355)**
Total capital assets being depreciated, net	**3,782,765**	**(212,189)**	**(4,164)**	**242,685**	**3,809,097**
Business-type Activities capital assets, net	**$ 4,640,685**	**$ 510,796**	**$ (13,396)**	**$ (1,282)**	**$ 5,136,803**

3. Major Discretely Presented Component Units.

Capital Asset activity for the Denver Convention Center Hotel Authority, Denver Urban Renewal Authority, and the National Wester Center Authority component units is shown in **Table 21**.

Table 21

Discretely Presented Component Units

For the Year Ended December 31, 2019 (dollars in thousands)

	January 1	Additions and Transfers	Deletions	December 31
Capital assets not being depreciated:				
Land and land rights	$ 23,421	$ -	$ -	$ 23,421
Construction in progress	537	7,770	(7,407)	900
Total capital assets not being depreciated	**23,958**	**7,770**	**(7,407)**	**24,321**
Capital assets being depreciated:				
Buildings and improvements	239,571	6,356	(3,458)	242,469
Machinery and equipment	35,389	2,293	(2,822)	34,860
Total capital assets being depreciated	**274,959**	**8,649**	**(6,280)**	**277,329**
Less accumulated depreciation for:				
Buildings and improvements	(81,702)	(9,030)	1,376	(89,356)
Machinery and equipment	(27,088)	(3,185)	2,774	(27,499)
Total accumulated depreciation	**(108,790)**	**(12,215)**	**4,150**	**(116,855)**
Total capital assets being depreciated, net	**166,169**	**(3,566)**	**(2,130)**	**160,474**
Discretely Presented Component Units Capital Assets, net	**$ 190,127**	**$ 4,204**	**$ (9,537)**	**$ 184,795**

[1] Excludes net capital assets of $15,804 of Other Component Units.

4. **Depreciation Expense.** Depreciation expense that was charged to governmental activities' functions is shown in **Table 22** (dollars in thousands).

Table 22

General government	$	18,380
Public safety		16,679
Public works, including depreciation of infrastructure		75,706
Human services		1,058
Health		556
Parks and recreation		18,680
Cultural activities		28,418
Community development		72
Capital assets held by internal service funds		74
Total	**$**	**159,623**

5. **Construction Commitments.** The City's governmental and business-type activities have entered into construction and professional services contracts having remaining commitments under contract as of December 31, 2019, as shown in **Table 23** (dollars in thousands).

Table 23

Governmental Activities:		
Winter Park Capital	$	1,958
Capital Improvements		79,646
Conservation Trust		3,566
Bond Projects		144,457
Other Capital Projects		43,181
Entertainment and Culture		2,947
Total Governmental Activities	**$**	**275,755**
Business-type Activities:		
Wastewater Management	$	80,095
Denver Airport System		674,019
Total Business-type Activities	**$**	**754,114**

The commitments for these funds are not reflected in the accompanying financial statements. Only the unpaid amounts incurred to date for these contracts are included as liabilities in the financial statements.

6. **Tax Abatements.** The City negotiates property tax abatement agreements on an individual basis and has tax abatement agreements with 63 entities as of December 31, 2019.

Pursuant to sections 30-11-123 and 31-15-903, CRS, and Chapter 53, Article XVI, DRMC, the City is authorized under the Business Incentive Program to enter into agreements with qualifying taxpayers for an incentive tax credit in the amount of the general fund portion of the taxes upon the taxpayer's new taxable personal property assessed by the City upon the new taxable personal property located at or within a new business facility, or directly attributable to an expanded business facility and located at or within the expanded facility, and used in connection with the operation of the new or expanded facility.

If at any time after the City grants an incentive tax credit, the City, in its sole discretion determines that Taxpayer did not meet all requirements of sections 30-11-123 and 31-15-903, CRS, Chapter 53, Article XVI, DRMC or other incentive tax credit requirements of the City under section 53-544, DRMC in the tax year for which a credit was granted, Taxpayer agrees that City may issue to Taxpayer a Special Notice of Valuation, and assess and collect from Taxpayer, in the manner provided for in the Colorado Revised Statutes, taxes in the amount of the incentive tax credit for the subject tax year.

The City has not made any commitments as part of the agreements other than to reduce taxes. The City is not subject to any tax abatement agreements entered into by other governmental entities. Total tax abatements as of December 31, 2019 were $333,000.

DURA has entered into agreements with various redevelopers to reimburse developer expenditures for certain capital improvements using tax increment financing above a stated base, that is collected by the City and passed through to DURA. These reimbursements are conditional on the developer meeting specified obligations and will only be paid when enough tax increment revenue relating to the specific project is collected. As of December 31, 2019, the approved reimbursement obligations where tax increment revenue has already been collected and will be paid to various redevelopers was $19,000,000.

Note E – Lease Obligations

1. **Capitalized Leases and Certificates of Participation.** The governmental activities capital leases are for various properties including the Wellington Webb Municipal Office Building, 2000 West Third Avenue Wastewater building, the Denver office building at 200 W. 14th Ave., District 1, 2, 3, and 5 Police Stations, Fire Station #10, certain Human Services facilities, the Buell Theatre, the 5440 Roslyn maintenance facility property, and the public parking unit within the Cultural Center parking garage. The capital leases also include certain computer software and network equipment, and public works, safety, and parks and recreation equipment. Capitalized Leases and Certificates of Participation (COPs) outstanding, excluding unamortized premium of 413,785,000, at December 31, 2019, are $439,273,000.

The City provided funding for the construction of parking facilities adjacent to the Denver Museum of Nature and Sciences (DMNS) the Denver Zoo, and the Denver Botanic Gardens (DBG) from proceeds of certificates of participation (COP) financings. Under separate agreements, the DMNS, the Denver Zoological Foundation Inc., and DBG agreed to increase their admission charges and provide a portion of their admission revenues to help make the COP lease payments. In 2019, the DMNS collected and remitted $606,000 to the City to be applied to the lease payments. The Zoo collected and remitted $642,000. DBG collected and deposited $1,698,000 with a trustee to be applied to lease payments.

In addition to base rental payments, the lease agreement related to the Wellington Webb Municipal Office Building requires the City to make all payments for any swap agreements relating to the Series 2008A Certificates of Participation (COPs) entered into by the lessor. There are 3 swap agreements considered to be hybrid instruments embedded in the lease. See **Note III-G-7** for detailed information regarding the swaps.

The Airport entered into an Installment Purchase Agreement on January 5, 2016 with Santander for $4,100,000, to finance various capital equipment purchases at a rate of 1.19%. Payments are due annually. Assets under capital leases at December 31, 2019 totaled $80,000, net of accumulated depreciation of $5,900,000. The related net book values of plant and equipment under capital lease obligations as of December 31, 2019, are shown in **Table 24** (dollars in thousands).

Table 24

	Governmental Activities	Business-type Activities
Buildings	$ 444,330	$ -
Equipment	44,882	6,832
Intangibles	69	-
Land	16,667	-
Less accumulated depreciation	(207,118)	(1,857)
Net Book Value	**$ 298,830**	**$ 4,975**

Table 25 (dollars in thousands) is a schedule by year of future minimum lease obligations together with the present value of the net minimum lease payments as of December 31, 2019.

Table 25

Year		Governmental Activities		Business-type Activities
2020	$	49,291	$	1,981
2021		47,607		2,018
2022		44,369		2,054
2023		39,151		2,090
2024		33,815		985
2025-2029		172,012		-
2030-2034		113,431		-
2035-2039		40,748		-
2040-2044		40,756		-
2045-2048		32,595		-
Total minimum lease payments	**$**	**613,775**	**$**	**9,128**
Less amounts representing interest		(174,502)		(671)
Present Value of Minimum Lease Payments	**$**	**439,273**	**$**	**8,457**

2. **Operating Leases.** The City is committed under various cancelable leases for property and equipment. These leases are considered for accounting purposes to be operating leases. Lease expenses for the year ended December 31, 2019, were approximately $7,974,000, for governmental activities and $912,000, for business-type activities. The City expects these leases to be replaced in the ordinary course of business with similar leases. Future minimum lease payments should be approximately the same amount.

Note F – Rates and Charges

The Denver Airport System Airport establishes annually, as adjusted semi-annually, airline facility rentals, landing fees, and other charges sufficient to recover the costs of operations (excluding certain debt service payments), maintenance, and debt service related to the airfield and the space rented by the airlines. Any differences between amounts collected from and actual costs allocated to the airlines' leased spaces are credited or billed to the airlines.

50.00% of Net Revenues (as defined by the bond ordinance) remaining at the end of the year with an annual cap of $40,000,000 are to be credited in the following year to the airline rates and charges. The Net Revenues credited to the airlines totaled $40,000,000 for 2019. A liability for this amount was accrued as of December 31, 2019.

Note G – Long-Term Debt

1. **General Obligation Bonds.** The City issues general obligation bonds to provide for the acquisition and construction of major capital facilities. General obligation bonds have been issued for both governmental and business-type activities. General obligation bonds are reported in the proprietary funds if they are expected to be repaid from proprietary fund revenues.

In May 2019, the city issued general obligation bonds, series 2019A-B-C, in the amount of $249,315,000. The bonds were issued to finance repairs and improvements to the City's various cultural facilities, including but not limited to renovation, upgrade and expansion projects, improvements to security and safety systems and accessibility improvements infrastructure as well as to current refund the city's outstanding general obligation Better Denver and Zoo Bonds, series 2009A, with the proceeds of the 2019B. Prior to the defeasance, the principle amounts outstanding to be paid from escrow as of December 31, 2019, was $62,540,000. The refunding resulted in present value savings of $6,019,638 and a gain of $1,878,000.

General obligation bonds are direct obligations and pledge the full faith and credit of the City. These bonds are generally issued as 15 to 20-year serial bonds, except for refunding issues. General obligation bonds outstanding, including compound interest of $10,548,000 and excluding unamortized premium of $44,764,000, at December 31, 2019, are $853,404,000. Interest rates vary from 2.30% to 5.65% with a net interest cost of 1.75% to 5.56%.

Annual debt service requirements to maturity for general obligation bonds are shown in **Table 26** (dollars in thousands).

Table 26

	Governmental Activities	
	General Government	
Year	**Principal** [1]	**Interest** [2]
2020	$ 103,990	$ 37,205
2021	82,570	34,160
2022	75,976	39,309
2023	57,900	30,489
2024	59,690	25,308
2025-2029	332,300	88,765
2030-2034	130,430	9,164
Total	**$ 842,856**	**$ 264,400**

[1] Does not include $7,215 and $3,333 of compound interest on the Series 2007 and 2014A mini-bonds respectively, or unamortized premium of $44,764,000.

[2] Excludes Build America Bonds interest subsidy. The City is eligible to receive $50 million over the remaining life of its Direct Pay Build America Bonds to subsidize interest payments.

2. **Revenue Bonds.** The City and component units issue bonds and notes where income derived from acquired or constructed assets is pledged to pay debt service. Certain Airport system revenue bonds are subject to mandatory redemption requirements in 2015, and subsequent years. Revenue bonds outstanding, excluding unamortized premium (net of discount) of $41,659,000 and $28,348,000 for the primary government and the component unit DCCHA respectively, at December 31, 2019, are shown in **Table 27** (dollars in thousands).

Table 27

Purpose	**Net Interest Cost**	**Interest Rates**	**Amount**
Excise Tax Revenue	3.28-3.89%	1.54-5.00%	$ 611,596
Wastewater Management	2.41-3.39%	3.00-5.00%	235,885
Golf Enterprise	4.80%	4.75-5.00%	655
Denver Airport System			5,757,420
Total primary government			**$ 6,605,556**
DCCHA component unit			269,665
Total			**$ 6,875,221**

Revenue bonds' debt service requirements to maturity are shown in **Tables 28** and **29** (dollars in thousands).

Table 28

	Governmental Activities	
	Principal [1]	Interest
2020	$ 17,200	$ 22,431
2021	14,260	22,050
2022	15,910	21,738
2023	17,990	21,021
2024	12,205	20,220
2025-2029	87,294	92,497
2030-2034	77,600	106,685
2035-2039	50,029	134,257
2040-2044	139,062	64,411
2045-2049	175,080	21,324
Total	**$ 606,630**	**$ 526,634**

	Business-type Activities					
	Wastewater Management		Denver Airport System		Golf Enterprise	
	Principal [2]	Interest	Principal [3]	Interest	Principal	Interest
2020	7,395	9,295	216,290	260,153	655	31
2021	7,735	8,958	220,500	251,885	-	-
2022	8,085	8,606	244,790	243,902	-	-
2023	6,275	8,238	262,125	234,900	-	-
2024	6,550	7,956	290,920	224,206	-	-
2025-2029	37,395	35,156	1,281,995	951,742	-	-
2030-2034	40,850	27,455	1,091,150	667,465	-	-
2035-2039	42,210	19,716	864,380	436,353	-	-
2040-2044	50,840	11,090	756,150	230,072	-	-
2045-2049	28,550	1,890	529,120	64,423	-	-
Total	**$ 235,885**	**$ 138,360**	**$ 5,757,420**	**$ 3,565,101**	**$ 655**	**$ 31**

[1]Does not include unamortized premium of $ 41,659
[2]Does not include unamortized premium of $ 21,364
[3]Does not include unamortized premium of $ 413,874

Table 29

	Component Unit	
	DCCHA	
Year	Principal [1]	Interest
2020	$ 2,545	$ 13,248
2021	2,985	13,146
2022	8,670	13,026
2023	9,100	12,593
2024	9,555	12,138
2025-2029	55,445	53,027
2030-2034	70,760	37,709
2035-2039	89,945	18,529
2040	20,660	1,033
Total	**$ 269,665**	**$ 174,449**

[1]Does not include unamortized premium of $28,348.

In January 2000, the City increased the tax rate on its lodger's tax by 1.75% and short-term auto rental tax by 1.75%. The City has pledged the increase portion of those taxes for debt service on $149,190,000 of Series 2005A Excise Tax Revenue Refunding Bonds issued in August 2005, and $73,630,000 of Series 2009A Excise Tax Revenue Refunding Bonds issued in May 2009. The bonds were issued for the purpose of refunding bonds that financed the expansion of the Colorado Convention Center and were payable through 2023.

In November 2015, Denver voters approved the indefinite extension of each of the 1.75% lodger's tax and the 1.75% auto rental tax increases ("Excise Tax Increases") and authorized the issuance of up to $778 million of new excise tax revenue bonds supported by pledged portions of the lodger's, food and beverage, and 23 auto rental taxes for the purpose of financing tourism-related projects for the National Western Center and for improvements to the Colorado Convention Center.

In April 2016, the city issued Dedicated Tax Revenue Refunding and Improvement Bonds, Series 2016AB, in the amount of $397,310,000. The bonds were issued to fund the initial costs of the National Western Center and Colorado Convention Center improvements, as well as to advance refund all of the outstanding 2005A and 2009A bonds. Effective April 6, 2016, all of the outstanding 2005A and 2009A bonds were defeased and advance refunded resulting in a present value savings of $3,608,000 and a deferred loss of $17,517,000. The City pledged additional revenues to the repayment of the 2016A-B bonds that were not pledged to the repayment of the 2005A and 2009A bonds. The previously unpledged 3.25% and 3.5% portions of the lodger's tax and auto rental tax, respectively, have been pledged to the repayment of the 2016A-B bonds. No new excise taxes or increases to existing excise taxes were imposed in conjunction with the issuance of 2016A-B bonds.

The Series 2016A bonds are fixed rate bonds with final maturity in 2046; The Series 2016B bonds are fixed rate bonds with final maturity in 2032. The total principal and interest remaining to be paid on the bonds is $528,938,000 with annual combined debt service requirements ranging from $7,327,000 to $36,353,000. In 2019, debt service paid and net revenue available for debt service was $34,608,000 and $122,594,000 respectively.

In August 2018, the city issued Dedicated Tax Revenue Current Interest and Capital Appreciation Bonds, Series 2018A and 2018B, in the amount of $300,000,000. The bonds were issued to finance and defray the cost of acquiring, constructing, installing and improving the National Western Center campus, as well as fund the reserve fund and pay the cost of issuing the Series 2018 bonds. The previously unpledged 3.25% and 3.50% portions of the lodger's tax and auto rental tax, respectively, have been pledged to the repayment of the bonds. No new excise taxes or increases to existing excise taxes were imposed in conjunction with the issuance of the Series 2018A or 2018B bonds.

The Series 2018A bonds are fixed rate bonds with final maturity in 2048; The Series 2018B bonds are fixed rate bonds with final maturity in 2029. The total principal and interest remaining to be paid on the bonds is $604,325,000 with annual combined debt service requirements ranging from $5,679,000 to $49,103,000. In 2019, debt service paid and net pledged revenue available for debt service was $10,223,000 and $36,619,000, respectively.

On August 20, 2019, the Airport, issued the Airport System Subordinate Revenue Bonds Series 2019A (AMT) (Series 2019A) and Series 2019B (Taxable) (Series 2019B) for $145,900,000 and $22,700,000, respectively. The Series 2019A and Series 2019B proceeds coupled with Airport contributions of approximately $54,700,000 were used to refund the Series 2008C2 and Series 2008C3 Bonds, terminate the 1998 Swap Agreements with Goldman Sachs Capital Markets, L.P. and Societe Generale, New York Branch, and fund for costs of issuance. The Series 2019A and Series 2019B Bonds are scheduled to mature on November 15, 2031 and November 15, 2020, respectively, and bear fixed interest of 1.37% and 2.12%, respectively. The Series 2019A Bonds have a Mandatory Tender of $25,900,000 due on November 15, 2025. The issuance yielded an approximate net present value savings of $1,500,000.

On November 15, 2019, the Airport issued the Airport System Subordinate Revenue Bonds Series 2019C (Non-AMT) (Series 2019C) and Series 2019D (Non-AMT) (Series 2019D) for $120,000,000 and $83,700,000, respectively. The Series 2019C and Series 2019D proceeds coupled with Airport contributions of approximately $15,300,000 million were used to refund the Series 2009A and Series 2016B Bonds, terminate the 2006A Swap Agreements with JP Morgan Chase Bank, and fund the costs of issuance. The issuance yielded an approximate net present value savings of $41,500,000.

Included in the Airport System's revenue bonds are $32,000,000 of Series 1992F, G; $23,400,000 of Series 2002C, $45,600,000 of Series 2008B, $79,100,000 of Series 2008C1-C3, $87,355,000 of Series 2009C and $109,100,000 of Series 2007G1-G2 of Airport Revenue Bonds Series. The Series 2008C2-C3 were refunded on August 20, 2019, with Series 2019A-B Bonds coupled with an Airport contribution. These bonds are currently credit facility bonds, which bear interest at rates indexed to 1-month LIBOR and are subject to mandatory redemption when the credit facilities and reimbursement agreements supporting them expire and upon the occurrence of certain other events of default. These agreements will either be extended, replaced, or the bonds will be refunded prior to the expiration date.

The City, through its Wastewater Management Division, has pledged future income from its storm drainage and sanitary sewerage facilities, net of operating expenses, for debt service on $50,425,000 of Series 2012 Wastewater Revenue Bonds issued in January 2012, and for debt service on $115,000,000 of Series 2016 Wastewater Revenue bonds issued in November of 2016 and for debt service of $103,050,000 of Series 2018 Wastewater Revenue bonds. The Series 2012 bonds were issued for the purpose of refunding the remaining $20,350,000 of Series 2002 Wastewater Revenue bonds outstanding and to finance improvements to the storm drainage facilities. The Series 2016 bonds were issued to finance capital improvement projects. The Series 2018 were issued to finance additional capital improvement projects. The total principal and interest remaining to be paid on the bonds is $374,245,000 with annual requirements ranging from $5,661,000 to $16,690,000. Over the past 10 years, annual net revenues available for debt service have averaged $33,957,000. In 2019, debt service paid and net revenue available for debt service was $16,707,000 and $66,237,000, respectively.

The City, through its Golf Division, has pledged future income from its golf facilities, net of operating expenses, for debt service on $7,365,000 of Series 2005 Golf Enterprise Revenue Bonds issued in March 2006. The bonds were issued for the purpose of financing the construction of certain golf facilities of the City and are payable through 2020. The total principal and interest remaining to be paid on the bonds is $686,000 with annual requirements of approximately $686,000. Over the past 10 years annual net revenues available for debt service have averaged $1,606,000. In 2019, debt service paid and net revenue available for debt service was $682,000 and $2,147,000 respectively.

For detailed information on individual bond issues see **Other Supplementary Schedules – Combined Schedule of Bonds Payable and Escrows**.

3. **Other Debt.** DURA's note payable and tax increment bonds, exclusive of unamortized premium of $19,196,000, and a discount of $452,000, at December 31, 2019, are comprised of the following individual issues shown in **Table 30** (dollars in thousands).

Table 30

Purpose	Interest Rates		Amount
Series 2010B-1	3.00-5.00%	$	41,650
Series 2013A-1	5.00%		88,305
Series 2014D-2	4.10-4.19%		34,990
Series 2018 A	5.25%		63,760
Note payable			4,676
Total		**$**	**233,381**

On June 23, 2016, the RiNo Denver General Improvement district issued $3,000,000 of revenue notes for the purpose of financing improvements to Brighton Boulevard between 29th and 44th Streets. The revenue notes were issued with a fixed rate of 3.55% and mature on 6/1/2036. Debt service for the RiNo General Improvement District's revenue note is to be paid from special assessments collected from property owners fronting Brighton Boulevard within the district.

On August 17, 2017 the Denver 14th Street General Improvement district issued a $4,000,000 refunding revenue note with an interest rate of 2.83% with principal due annually beginning on December 1,2019 through December 1, 2031, at which time the interest rate will be reset at the then Federal Home Loan Board of Des Moines, Iowa one year advance rate. Interest is payable semiannually commencing June 1, 2019. The proceeds of the loan were used to advance refund the General Improvement Districts 2010 Revenue Bonds whose proceeds were used to provide funds to pay the costs and expenses of the 14th street streetscape and sidewalk improvements. The Notes are subject to redemption at the option of the GID on December 1, 2019 and on any date thereafter from any legally available funds at a redemption price equal to the principal amount of each note plus a redemption premium of 1.5% through December 1, 2022, 1% premium from 2023 through December 1, 2027, .5% premium from 2028 through December 1, 2032 and no premium from 2033 through 2034. The note is secured by the pledged revenue derived from the imposition of capital charges on property owners within the District. The Capital charges constitute a perpetual lien on and against such property, and if capital charges are not paid when due, may be foreclosed the same as a mechanics lien.

Debt service requirements to maturity for DURA, DDDA, RiNo GID, and 14th Street GID's bonds and revenue notes are shown in **Table 31** (dollars in thousands).

Table 31

	DURA		DDDA		RiNo GID		14th Street GID	
Year	**Principal**	**Interest**	**Principal**	**Interest**	**Principal**	**Interest**	**Principal**	**Interest**
2020	$ 20,955	$ 11,230	$ 9,293	$ 5,377	$ 91	$ 69	$ 205	$ 106
2021	21,610	10,223	9,729	5,043	94	66	205	100
2022	25,855	9,214	10,248	4,708	97	62	215	95
2023	28,680	8,009	10,770	4,356	101	59	220	88
2024	32,010	6,665	11,278	3,997	104	56	225	82
2025-2029	55,895	15,749	104,690	11,876	581	218	1,235	311
2030-2034	16,920	9,786	-	-	693	106	1,335	126
2035-2039	26,780	4,852	-	-	233	7	-	-
2040	-	-	-	-	-	-	-	-
Total	**$ 228,705**	**$ 75,728**	**$ 156,008**	**$ 35,357**	**$ 1,994**	**$ 643**	**$ 3,640**	**$ 908**

Debt service for DURA's note, payable to the City, is dependent on the availability of tax increment financing (TIF) revenue. Due to the uncertainty of this revenue the payments cannot be estimated. Payments will be made quarterly on the 10th of January, April, June and October, and will consist of the entirety of DURA's receipt of TIF revenues. The note is to be paid over a 25-year period, with interest accruing at a rate of 2.00% per annum. The maturity date is May 11, 2037.

4. **Indentures and Reporting Requirements.** The City is subject to a number of limitations and restrictions contained in various indentures. Such limitations and covenants include: continued collection of pledged revenues, segregation of pledged revenues, and maintenance of specified levels of bond reserve funds, permissible investment of bond proceeds and pledged revenues, and ongoing disclosure to the secondary bond market in accordance with the Securities and Exchange Commission's Rule 15c2-12. The City is in compliance with all significant covenants.

5. **Notes payable.** The Airport System entered into a $20,500,000 Master Installment Purchase Agreement with Sovereign Leasing, LLC on January 10, 2012, to finance capital equipment purchases, at a rate of 1.9595% based on a 30/360 calculation for 2012. The payment schedules relating to the note requirements as of December 31, 2019, are shown in **Table 32** (dollars in thousands).

Table 32

	Denver International Airport			
Year		**Principal**		**Interest**
2020	$	2,192	$	71
2021		2,235		27
Total	**$**	**4,427**	**$**	**98**

6. **Changes in Long-term Liabilities.** Long-term liability activity for the year ended December 31, 2019, is shown in **Tables 33** and **34** (dollars in thousands).

Table 33

Governmental Activities		**January 1**		**Additions**		**Deletions**		**December 31**		**Due within one year**
Legal liability	$	9,300	$	5,825	$	4,125	$	11,000	$	-
Compensated absences:										
Classified service employees - 3,384		103,867		47,434		43,251		108,050		4,193
Career Service employees - 6,671		51,535		50,815		47,919		54,431		4,935
Net pension liability		1,121,591		354,887		7,642		1,468,836		-
Net OPEB liability		76,584		15,756		-		92,340		3,977
OPEB implicit rate subsidy liability		110,704		4,804		-		115,508		8,120
Claims payable		27,256		11,265		9,380		29,141		9,500
General obligation bonds[1]		747,114		250,740		144,450		853,404		103,990
GID revenue notes		5,921		-		287		5,634		296
Excise tax revenue bonds[2]		630,659		3,692		22,755		611,596		17,200
Capitalized lease obligations and COPs		467,327		4,888		32,942		439,273		32,904
Unamortized premium		79,109		32,094		10,995		100,208		-
Intergovernmental agreement		616		-		616		-		-
Total Governmental Activities	**$**	**3,431,583**	**$**	**782,200**	**$**	**324,362**	**$**	**3,889,421**	**$**	**185,115**

[1] Ending balance includes compound interest from the 2007 and 2014A mini-bonds of $10,548.

[2] Ending balance includes compound interest of $4,966

Table 34

	January 1	Additions	Deletions	December 31	Due within one year
Business-type Activities					
Wastewater Management:					
Revenue bonds	$ 242,975	$ -	$ 7,090	$ 235,885	$ 7,395
Unamortized premium	22,296	-	933	21,363	-
Net pension liability	31,170	13,897	-	45,067	-
Net OPEB liability	2,405	786		3,191	-
OPEB implicit rate subsidy liability	1,972	173	128	2,017	173
Capitalized lease obligations	5,039	-	701	4,338	758
Compensated absences	3,578	166	99	3,645	780
Total Wastewater Management	**309,435**	**15,022**	**8,951**	**315,506**	**9,106**
Denver Airport System:					
Legal liability	-	56,500	-	56,500	-
Revenue bonds	5,965,435	372,315	620,410	5,717,340	216,290
Economic defeasance	40,080	-	-	40,080	-
Unamortized premium	409,278	38,761	34,165	413,874	-
Revenue credit payable	40,000	-	-	40,000	40,000
Net pension liability	140,679	63,266	11,955	191,990	-
Net OPEB liability	10,855	3,435	696	13,594	-
OPEB implicit rate subsidy liability	7,693	28	-	7,721	662
Notes payable	6,576	-	2,149	4,427	2,192
Capitalized lease obligations	1,024	-	1,024	-	-
Compensated absences	10,142	8,502	8,486	10,158	2,579
Total Denver Airport System	**6,631,762**	**486,307**	**678,885**	**6,495,684**	**261,723**
Nonmajor enterprise funds:					
Revenue bonds	1,275	-	620	655	655
Net pension liability	11,036	5,678	941	15,773	-
Net OPEB liability	852	255	55	1,052	-
OPEB implicit rate subsidy liability	550	179	-	729	63
Capitalized lease obligations	-	5,119	1,000	4,119	986
Compensated absences	1,338	753	686	1,405	562
Total nonmajor enterprise funds	**15,051**	**11,984**	**3,302**	**23,733**	**2,266**
Total Business-type Activities	**$ 6,956,248**	**$ 513,313**	**$ 691,138**	**$ 6,834,923**	**$ 273,095**
Major Component Units:					
Revenue bonds[1]	$ 302,323	$ -	$ 4,310	$ 298,013	$ 2,545
Increment bonds and notes payable[2]	457,031	-	48,898	408,133	30,248
Compensated absences	153	89	82	160	-
Total Major Component Units	**$ 759,507**	**$ 89**	**$ 53,290**	**$ 706,306**	**$ 32,793**

[1]Includes unamortized premium of $28,348.
[2]Includes unamortized premium of $19,196 and unamortized discount of $452.

The legal liability, compensated absences, net other post-employment benefit (OPEB) liability and other accrued liabilities in the governmental activities are generally liquidated by the General Fund. The other governmental funds include a note payable liquidated by the Community Development special revenue fund and a claims payable liquidated by the Workers' Compensation internal service fund. The amount available for long-term debt in the debt service funds and in the special revenue fund was $192,552,000.

7. **Swap Agreements.** Included in the City's governmental activities are three derivatives that are embedded in the City's certificated lease for the Webb Municipal Office Building. The intent of the three pay-fixed, receive-variable interest rate swaps is to protect against rising interest rates on the variable rate 2008A Certificates of Participation (COPs). In 2003, Civic Center Office Building, Inc., the lessor, entered into two swap agreements with JP Morgan, associated with the 2003C1 and 2003C2 COPs, and one swap

agreement with Lehman Brothers that was associated with the 2003C3 COPs. In October 2008, due to the deteriorating credit rating of the insurer (AMBAC), the outstanding COPs were refunded by the Series 2008A1-A3 Refunding Certificates of Participation, terminating the three swaps. To maintain the interest rate hedge related to the lease payments, the derivative instruments with JP Morgan were amended and new swaps were entered into that were associated with the 2008A1 and 2008A2 COPs. The derivative instrument with Lehman Brothers was terminated and replaced with an agreement with Royal Bank of Canada (RBC). A new swap was initiated under the RBC agreement that was associated with the 2008A3 COPs. At the time of termination of the 2003 swaps, the JP Morgan swaps had negative fair values, and no termination payments were made. In addition to a termination payment made to Lehman Brothers by the City, an up-front payment of $475,000 was received from RBC at the initiation of the 2008 replacement swap. These events resulted in off-market components of the swaps that are being treated as implied loans for accounting purposes and are being amortized through investment revenues over the life of the new hedges.

As of December 31, 2019, all three swaps are effective cash flow hedges and the fair values and changes in fair values are reported in the government-wide Statement of Net Position as deferred outflows of governmental activities. The combined fair market value of the three swaps as of December 31, 2019 was ($27,271,000). The year-end fair values were calculated using the mid-market LIBOR swap curves as of December 31, 2019. The fair values represent the difference between the present value of the fixed payments and the present value of the floating payments, at forward floating rates as of December 31, 2019. When the present value of payments to be made by the City exceeds the present value of payments to be received, the swap has a negative value to the City. When the present value of payments to be received by the City exceeds that of payments to be made, the swap has a positive value to the City.

Table 35 provides the swap associated debt rates as of December 31, 2019.

Table 35

Swap	2008A1	2008A2	2008A3
Associated debt	**2008A1 COP**	**2008A2 COP**	**2008A3 COP**
Fixed payment to counterparty	3.400%	3.400%	3.130%
Variable payment from counterparty (68% LIBOR)	-(1.186%)	-(1.186%)	-(1.186%)
Net swap interest rate	2.214%	2.214%	1.944%
Variable-rate certificate coupon payment	1.700%	1.700%	1.700%
Net swap and certificate rate	**3.914%**	**3.914%**	**3.644%**

As rates vary, lease interest payments and net swap payments will vary. As of December 31, 2019, lease payment requirements of the related variable rate COPs and the net swap payments, assuming current rates remain the same, for their terms, are summarized in **Table 36** (dollars in thousands).

Table 36

Year	Principal	Interest	Interest Rate Swaps Net
2020	$ 10,410	$ 3,273	$ 4,033
2021	11,055	3,096	3,806
2022	11,735	2,908	3,566
2023	12,460	2,709	3,311
2024-2028	73,960	10,099	12,187
2029-2031	72,925	2,834	3,274
Total	**$ 192,545**	**$ 24,919**	**$ 30,177**

Table 37 (dollars in thousands) provides the fair values and the 2019 changes in fair value of the on-market and the implied loan portions of the swaps as of December 31, 2019, and the accounting classifications of the changes in fair value for the year then ended.

Table 37

Counterparty	Effective Date	Notional Amount	Termination Date	Associated Debt Series	Fair Values 12/31/2019	Change in Fair Value		Classification
2008A1 Swap Agreements								
JP Morgan Chase Bank	7/17/03	$ 58,310	12/1/29	2008A1 COP	$ (6,994)	$ (1,257)		Deferred outflow
							$ (224)	Investment revenue
2008A2 Swap Agreements								
JP Morgan Chase Bank	7/17/03	49,155	12/1/29	2008A2 COP	(5,896)	(1,061)		Deferred outflow
							(189)	Investment revenue
2008A3 Swap Agreements								
Royal Bank of Canada	10/1/08	85,080	12/1/31	2008A3 COP	(14,381)	(3,725)		Deferred outflow
							(22)	Investment revenue
Total		**$ 192,545**			**$ (27,271)**	**$ (6,043)**	**$ (435)**	

Note: Certain City derivatives have been reported as investment derivatives in accordance with the provisions of GASB 53. Additionally, investment income on these derivatives has been recognized in accordance with GASB 53. The City does not enter into derivative transactions for investment purposes, nor does the City Charter allow for the investment in derivatives investments.

The risk involved in the three swaps flows through the lease from Civic Center Office Building, Inc. (the "lessor") to the City. The following risks are generally associated with swap agreements:

- **Credit risk –** All of the governmental activity swaps rely on the performance of the respective swap counterparties. The City is exposed to the risk of these counterparties being unable to fulfill their financial obligations to the lessor. The City measures the extent of the risk based on the credit ratings of each counterparty and the fair value of the swap agreement. As of December 31, 2019, there was no risk of loss to the City, as the swap agreements had negative fair values. The credit ratings of the counterparties as of December 31, 2019, are shown in **Table 38**.

Table 38

Counterparty (Credit Support Provider)	Ratings of the Counterparty or its Credit Support Provider		
	S&P	Moody's	Fitch
JP Morgan Chase Bank	A-	A2	AA-
Royal Bank of Canada	AA-	Aa2	AA

- **Termination risk –** Any party to these swap agreements may terminate the swap if the other party fails to perform under the terms of the contract. Additionally, the lessor may terminate any of the swap agreements at any time at its sole discretion. If the swap had a negative fair value at the time of termination the City could be liable to the counterparty for a termination payment equal to the fair market value of the swap. If any of the swaps were terminated, the associated variable rate certificates would no longer have the benefit of the interest rate hedge.

- **Interest rate risk –** The City is exposed to interest rate risk on the swaps. In regard to the pay fixed, receive variable swaps, as the London Interbank Offered Rate (LIBOR) index rate decreases, the City's net payments on the swaps increase.

- **Basis risk –** The City pays interest at variable rates on the COPs associated with the swaps. Each of the swap agreements provide for the applicable counterparty to make variable rate payments based on the LIBOR index. To the extent that the variable rate paid on the certificates is different than the rate received from the counterparties based on LIBOR, there may be a net loss or benefit to the City.

The Airport has entered into interest rate swap agreements in order to protect against rising interest rates. The 1999 and 2009A swap agreements all pay fixed–receive variable rate cash flow hedges, with the variable payment from the counterparty based on the USD-SIFMA Municipal Swap Index and the variable rate of the bonds. The rest of the Airport's swap agreements are considered investment derivatives in accordance with the provisions of GASB Statement No. 53, A*ccounting and Financial Reporting for Derivative Instruments* (GASB 53). Additionally, investment income on these derivatives has also been recognized in accordance with GASB 53. The City does not enter into derivative transactions for investment purposes, nor does the City Charter allow for the investment in derivative investments.

On December 18, 2019, the Airport fully terminated the 2002 Swap Agreement with Goldman Sachs Bank. There was no cost to the Airport for the termination and it yielded a de minimis net cash inflow.

On November 6, 2019, the Airport fully terminated the 2006A Swap Agreement with JP Morgan Chase Bank at a cost of $10.6 million. The termination was funded from Series 2019D Bonds proceeds.

On August 20, 2019, the Airport fully terminated the 1998 Swap Agreements with Goldman Sachs Capital Markets, L.P. and Societe Generale, New York Branch at a cost of $11.3 million and $11.4 million, respectively, and was funded from Series 2019B Bonds proceeds.

On March 13, 2019, the Airport fully terminated the 2005 and 2006B Swap Agreements with the Royal Bank of Canada and Piper Jaffray Financial Projects, LLC. There was no cost to the airport for these terminations and yielded a net cash inflow of $1.19 million.

On December 7, 2018, the Airport fully terminated the 2005 and 2006B Swap Agreements with Jackson Financial Products, LLC. There was no cost to the Airport for these terminations and yielded a net cash inflow of $1.16 million.

Table 39 provides a profile of the terms of the Airport's swap agreements (all rates as of December 31, 2019).

Table 39

SWAP	**1999 2009A**	**2005 2006B**	**2006A 2008A**	**2008B**
Associated Debt	**2002C 2008B, 2009C**	**2016A**	**2016B 2007G1-G2**	**2008B 2008C1**
Payment to counterparty	5.603%	5.297%	4.009%	4.760%
Payment from counterparty	1.610%	5.319%	1.234%	1.436%
Net swap interest rate	3.993%	-0.022%	2.775%	3.324%
Associated bond interest rate	1.364%	5.000%	2.096%	1.944%
Net swap and bond rate	**5.357%**	**4.978%**	**4.871%**	**5.268%**

As rates vary, variable rate bond interest payments and net swap payments will vary. As of December 31, 2019, debt service requirements of the related variable rate debt and net swap payments for the

Airport System’s cash flow hedges (1998, 1999 and 2009A swap agreements), assuming current interest rates remain the same, for their terms, are reflected in **Table 40** (dollars in thousands).

Table 40

Year	Principal	Interest	Interest Rate Swaps Net	Total
2020	$ 23,100	$ 1,871	$ 5,479	$ 30,450
2021	22,560	1,565	3,477	27,602
2022	16,700	1,273	1,311	19,284
2023	5,500	1,049	-	6,549
2024	5,800	942	-	6,742
2025-2029	43,300	3,003	-	46,303
2030-2032	20,255	378	-	20,633
Total	**$ 137,215**	**$ 10,081**	**$ 10,267**	**$ 157,563**

Variable Rate Bonds and Swap payments are calculated using rates in effect on December 31, 2019.

Table 41 (dollars in thousands) provides a summary of the Airport's interest rate swap transactions as of December 31, 2019.

Table 41

Counterparty	Effective Date	Notional Amount	Bond/Swap Termination Date	Associated Debt Series	Payable Swap	Variable Receivable Swap Rate	Changes in Fair Value Classification	Changes in Fair Value Amount	Fair Values December 31
Hedging Derivatives									
1998 Swap Agreements									
Goldman Sachs Capital Markets, L.P.	10/4/00	-	8/20/19	-	-	-	Deferred outflow	$ -	$ -
							Investment income	1,748	
Societe Generale, New York Branch	10/4/00	-	8/20/19	-	-	-	Deferred outflow	-	-
							Investment income	1,992	
1999 Swap Agreements									
Goldman Sachs Capital Markets, L.P.	10/4/01	91,778	11/1/22	[1]	5.6179%	SIFMA	Deferred outflow	1,850	(5,225)
				[1]	5.5529%	SIFMA	Investment income	(2,488)	
Merrill Lynch Capital Services, Inc.	10/4/01	45,889	11/1/22				Deferred outflow	925	(2,575)
							Investment income	(1,217)	
Investment Derivatives									
2002 Swap Agreements									
Goldman Sachs Capital Markets, L.P.	4/15/02	91,778	12/18/19	-	-	-	Investment income	261	-
2005 Swap Agreements									
Royal Bank of Canada	11/15/06	-	3/13/19	-	-	-	Investment income	(3)	-
JP Morgan Chase Bank, N.A.	11/15/06	41,992	11/15/25	2106A [3]	3.6874%	70% LIBOR	Investment income	281	(4,044)
Piper Jaffray Financial Products, Inc.	11/15/06	-	3/13/209	-	-	-	Investment income	(3)	-
2006A Swap Agreements									
JP Morgan Chase Bank, N.A.	11/15/07	113,700	11/6/19	-	-	-	Investment income	583	-
GKB Financial Services Corp.	11/15/07	37,900	11/15/25	2007F-G/2014A [2]	4.0085%	70% LIBOR	Investment income	(35)	(3,315)
2006B Swap Agreements									
Royal Bank of Canada	11/15/06	-	3/13/19	-	-	-	Investment income	12	-
JP Morgan Chase Bank, N.A.	11/15/06	41,992	11/15/25	[3]	SIFMA	4.0855%	Investment income	(278)	4,589
Piper Jaffray Financial Products, Inc.	11/15/06	-	3/13/19	-	-	-	Investment income	(2)	-
2008A Swap Agreements									
Royal Bank of Canada	12/18/08	75,800	11/15/25	2007F-G/2016B [2, 4]	4.0085%	70% LIBOR	Investment income	(69)	(6,631)
2008B Swap Agreements									
Loop Financial Products I, LLC	1/8/09	90,076	11/15/25	2008C1 [2]	4.7600%	70% LIBOR + 0.1%	Investment income	(229)	(11,679)
2009A Swap Agreements									
Loop Financial Products I, LLC	1/12/10	45,888	11/15/22	[1]	5.6229%	SIFMA	Deferred outflow	1,331	(2,628)
							Investment income	(948)	
TOTAL									**$ (31,508)**

[1] Swaps are currently associated with Series 2009C bonds, Series 2008B, and a portion of the Series 2002C bonds.
[2] A portion of the Series 2002C bonds are additionally associated with these swaps.
[3] Previously associated with 2006A. Swaps currently associated with Series 2016A.
[4] Previously associated with 2014A. Swaps currently associated with Series 2016B.

Note: Certain City derivatives have been reported as investment derivatives in accordance with the provisions of GASB 53. Additionally, investment income on these derivatives has also been recognize in accordance with GASB 53. The City does not enter into derivative transactions for investment purposes, nor does the City Charter allow for the investment in derivative investments.

Payments by the Airport System to counterparties relating to these swap agreements, including termination payments, are Subordinate Obligations, subordinate to debt service payments on the Airport System’s Senior Bonds, and on parity with the Airport System’s Subordinate Bonds. The year-end fair values were calculated using the mid-market LIBOR and BMA swap curves as of December 31, 2019. Fair values represent the difference between the present value of the fixed payments and the present value of the floating payments, at forward floating rates as of December 31, 2019. When the present value of payments to be made by the Airport System exceeds the present value of payments to be received, the swap has a negative value to the Airport System. When the present value of payments to be received by the Airport System exceeds that of payments to be made, the swap has a positive value to the Airport System.

The following risks are generally associated with swap agreements:

Credit Risk – All of the Airport System's swap agreements rely upon the performance of swap counterparties. The Airport System is exposed to the risk of these counterparties being unable to fulfill their financial obligations to the Airport System. The Airport System measures the extent of this risk based upon the credit ratings of the counterparty and the fair value of the swap agreement. If the Airport System delivers a surety policy or other credit support document guaranteeing its obligations under the swap agreement that is rated in the highest rating category of either Standard & Poor's, Moody's Investors Service or Fitch, for any swap agreement, the counterparty to that agreement is obligated to either be rated, or provide credit support securing its obligations under the swap agreement rated in the highest rating category of either Standard & Poor's, Moody's Investors Service or Fitch; or, under certain circumstances, provide collateral. The Airport System is obligated, under the swap agreements, to provide such surety policy or credit support if the unsecured and unenhanced ratings of the Airport System's Senior Bonds is below any two of BBB by Standard & Poor's, Baa2 by Moody's Investors Service or BBB by Fitch. As of December 31, 2019, the ratings of the Airport System's Senior Bonds were A+ by Standard & Poor's (with a stable outlook), A1 by Moody's Investors Service (with a stable outlook) and A+ by Fitch (with a stable outlook). Therefore, no surety policy or credit has been provided to the counterparties by the Airport System. Failure of either the Airport System or the counterparty to provide credit support or collateral, as described in the swap agreements, is a termination event under the swap agreements (see Termination Risk below). The ratings of the counterparties, or their credit support providers, as of December 31, 2019, are shown in **Table 42**.

Table 42

Counterparty (Credit Support Provider)	Ratings of the Counterparty or its Credit Support Provider		
	S&P	Moody's	Fitch
Goldman Sachs Capital Markets, L.P. (Goldman Sachs Group, Inc.)	BBB+	A3	A
JP Morgan Chase Bank, N.A.	A+	Aa2	AA
LOOP Financial Products, LLC (Deutsche Bank, AG, New York Branch)	BBB+	A3	BBB
Merrill Lynch Capital Services, Inc. (Merrill Lynch & Co., Inc.)	A-	A2	A+
Royal Bank of Canada	AA-	Aa2	AA
Societe Generale, New York Branch	A	A1	A+
GKB Financial Services Corporation II, Inc. (Societe Generale New York Branch)	A	A1	A+

NR - no rating available.

As of December 31, 2019, there was no risk of loss for the swap agreements that had negative fair values. For the swap agreements that had positive fair values, the risk of loss is the amount of the derivative's fair value.

- **Termination Risk –** Any party to the Airport System's swap agreements may terminate the swap if the other party fails to perform under the terms of the contract. Additionally, the Airport System may terminate any of its swap agreements at any time at its sole discretion. Further, certain credit events can lead to a termination event under the swap agreements (see Credit Risk on preceding page). If, at the time of termination, the swap has a negative fair value, the Airport System could be liable to the counterparty for a payment equal to the swap's fair value. If any of the Airport System's swap agreements are terminated, the associated variable rate bonds would either no longer be hedged with a synthetic fixed interest rate or the nature of the basis risk associated with the swap agreement may change. The Airport System is not aware of any existing event that would lead to a termination event with respect to any of its swap agreements.

- **Interest Rate Risk –** The Airport System is exposed to interest rate risk in that as the variable rates of the swap agreements decrease, the Airport System's net payments on the swap agreements increase.

- **Basis Risk –** Each of the Airport System's swap agreements is associated with certain debt obligations or other swaps. The Airport System pays interest at variable interest rates on some of the associated debt obligations and associated swaps. The Airport System receives variable payments under some of its swap agreements. To the extent the variable rate on the associated debt or the associated swap paid by the Airport System is based on an index different than that used to determine the variable payments received by the Airport System under the swap agreement, there may be an increase or decrease in the synthetic interest rate intended under the swap agreement.

Note H – Fund Balances

In accordance with GASB Statement No. 54, fund balances are classified as nonspendable, restricted, committed, assigned or unassigned. When expenditures are incurred that use funds from more than one classification, the City will generally determine the order which the funds are used on a case-by-case basis, taking into account any applicable requirements of grant agreements, contracts, business circumstances, or other constraints. If no restrictions otherwise exist, the order of spending of resources will be restricted, committed, assigned and lastly, unassigned.

The City has a target of maintaining a General Fund balance reserve that is 15.00% of budgeted expenditures and should not go below 10.00% of budgeted expenditures, except in response to a severe crisis, economic or otherwise.

Fund balances by classification are detailed in **Table 43** (dollars in thousands).

Table 43

	General	Human Services	Other Governmental Funds	Total Governmental Funds
Fund Balances				
Nonspendable:				
Endowment	$ -	$ -	$ 3,000	$ 3,000
Prepaid items	11,651	-	1,686	13,337
Total Nonspendable	**11,651**	**-**	**4,686**	**16,337**
Restricted:				
General government	4,341	-	164,586	168,927
Public safety - admin	-	-	26,205	26,205
Public safety - fire	-	-	5	5
Public safety - police	-	-	75	75
Public safety - sheriff	-	-	381	381
Public works	-	-	821,229	821,229
Human services	-	85,500	-	85,500
Health	-	-	13,796	13,796
Parks & recreation	-	-	114,678	114,678
Cultural activities	-	-	71,660	71,660
Community development	-	-	58,817	58,817
Economic opportunity	-	-	14,988	14,988
Assets held for disposition	-	-	9,755	9,755
Loans receivable	-	-	61,383	61,383
Long-term debt	19,737	-	192,466	212,203
Emergency use	61,049	-	626	61,675
Total Restricted	**85,127**	**85,500**	**1,550,650**	**1,721,277**
Committed:				
General government	27,077	-	-	27,077
Public safety - admin	1,005	-	-	1,005
Public safety - fire	529	-	-	529
Public safety - police	2,063	-	-	2,063
Public safety - sheriff	5,482	-	-	5,482
Public works	19,195	-	-	19,195
Health	12,388	-	-	12,388
Parks & recreation	2,207	-	1,342	3,549
Cultural Activities	2,544	-	2,861	5,405
Community development	1,156	-	-	1,156
Economic opportunity	1,031	-	-	1,031
Total Committed	**74,677**	**-**	**4,203**	**78,880**
Assigned:				
General government	-	-	-	-
Public safety - admin	-	-	-	-
Health	-	-	-	-
Parks & recreation	-	-	1,057	1,057
Economic opportunity	-	-	-	-
Special funds	-	-	-	-
Total Assigned	**-**	**-**	**1,057**	**1,057**
Unassigned	**198,626**	**-**	**-**	**198,626**
Total Fund Balances	**$ 370,081**	**$ 85,500**	**$ 1,560,596**	**$ 2,016,177**

- **Nonspendable Fund Balances –** Nonspendable fund balances are amounts that cannot be spent because they are either not in a spendable form or are legally or contractually required to be maintained intact.

  The City has two types of nonspendable fund balances: Prepaid items and an endowment. The prepaid items, which total $13,337,000 are in a nonspendable form and the endowment totaling $3,000,000 is in a permanent fund whose earnings are used for the maintenance of the residence known as Cableland.

- **Restricted Fund Balances –** Restricted fund balances represent amounts constrained by external parties, enabling legislation and/or constitutional provisions.

- **Committed Fund Balances –** Committed funds can only be used for specific purposes pursuant to constraints imposed by City Council, the highest level of decision-making authority in the City. City Council's formal action to establish committed funds, and to rescind committed funds, is through passage of ordinance.

- **Assigned Fund Balances –** Assigned fund balances are constrained for specific purposes by City Council as authorized by the City's charter.

- **Unassigned Fund Balance –** Unassigned fund balance is the residual classification for the General Fund. A negative unassigned fund balance occurs when expenditures exceed amounts that are nonspendable, restricted, committed, or assigned.

IV. Other Note Disclosures

Note A – Risk Management

The City is exposed to various risks of losses related to torts; theft of, damage to, and destruction of assets; errors and omissions; and natural disasters. In addition, the City is party to numerous pending or threatened lawsuits under which it may be required to pay certain amounts upon final disposition of these matters. The City has historically retained these risks, except where it has determined that commercial insurance is more cost beneficial or legally required. The City has covered all claim settlements and judgments out of its General Fund resources, except where specifically identifiable to an enterprise fund. The City currently reports substantially all of its risk management activities, except workers' compensation (see **Note IV-C**), in its General Fund. Claims expenditures and liabilities are reported when it is probable that a loss has occurred, and the amount of that loss can be reasonably estimated. Current liabilities are reported when the liability has matured. These losses include an estimate of claims that have been incurred but not reported.

The Lowry Landfill, which accepted hazardous waste from the late 1960s to 1980, is listed on the national Superfund list. This means that the contamination at the site will be mitigated under the auspices of the U.S. Environmental Protection Agency. Under federal law, the City, as owner and operator of the facility is one of the parties responsible for cleanup of the site. The City's share of the remaining costs for cleanup could be incurred over the next 5 to 30 years. The City's liability for a portion of the cleanup costs is probable but cannot be reasonably estimated.

With respect to matters expecting to be settled subsequent to 2019, the City Attorney estimates the amount of liability determined as probable and incurred but not reported claims and judgments at December 31, 2019, to be approximately $11,000,000. The City Attorney also estimates that pending cases having a reasonably possible likelihood of resulting in an additional liability aggregating approximately $2,500,000 at December 31, 2019.

Changes in the long-term legal liability during the past two years are shown in **Table 44** (dollars in thousands).

Table 44

	2019	2018
Beginning balance - January 1	$ 9,300	$ 9,565
Current year claims and changes in estimates	5,825	725
Claims settled	(4,125)	(990)
Ending balance - December 31	**$ 11,000**	**$ 9,300**

Pursuant to Colorado law, if a monetary judgment is rendered against the City, and the City fails to provide for the payment of such judgment, the Board of County Commissioners must levy a tax (not to exceed 10 mills per annum) upon all of the taxable property within the City for the purpose of making provision for the payment of the judgment. The City must continue to levy such tax until the judgment is discharged. Such mill levy is in addition to all other mill levies for other purposes. The Colorado Governmental Immunity Act establishes limits for claims made against governmental entities. These limits are $350,000 per injury or $990,000 per occurrence. See **Note IV-D-5** regarding Denver Airport System related litigation.

Note B – Pollution Remediation

The City had four underground storage tanks that leaked and were under remediation. Funds spent on remediation were partially reimbursed up to 50.00% of the cost by the Colorado Petroleum Storage Tank Trust. As of December 31, 2019, the underground storage tanks were fully remediated, and no additional costs are anticipated to incur.

The Environmental Protection Agency has listed a large area in north Denver on the National Priorities List of Superfund Sites because of lead, arsenic and cadmium contamination found in soils in residential neighborhoods. EPA has divided the Site into three operable units. Operable Unit 1 (OU1) consists of the contaminated residential soils in north Denver. Operable Unit 2 (OU2) is the Grant-Omaha Smelter Site. Operable Unit 3 (OU3) is the Argo Smelter Site.

ASARCO, Inc. finished the remediation of Operable Unit 1 in 2006 and has not claimed that the City is responsible for any of those costs; therefore, management believes the possibility that the City has any liability associated with OU1 is remote.

The EPA has named the City a Potentially Responsible Party (PRP) at OU2 as the current owner of part of the site where the former Grant-Omaha Smelter was located. Denver has entered into an Administrative Order on Consent to perform a remedial investigation and feasibility study and has paid $18,000 of EPA’s past costs. Whether this site is contaminated or whether it will require remediation cannot be determined until completion of the remedial investigation and feasibility study. The City’s responsibility for some of the investigation and cleanup costs is probable; however, at this early stage in the process it is not possible to estimate the costs associated with this site, therefore no liability has been accrued. ASARCO, Inc. is another significant PRP at the site. ASARCO, Inc. filed bankruptcy and the City filed a contingent claim for environmental remediation costs and reached a settlement with ASARCO for $640,000 which payment has been received. The City has no connection to OU3 and EPA has not asserted that the City has any responsibility for investigation or clean up, therefore management believes the possibility is remote that the City has any liability associated with OU3.

Note C – Insurance

The City has a Workers' Compensation self-insurance trust established in accordance with State Statutes to be held for the benefit of the City's employees. This trust is included in the Workers' Compensation internal service fund. The Workers' Compensation internal service fund compensates City employees, or their eligible dependents, for injuries as authorized by the State Workers' Compensation law, in addition to maintaining in-house records of claims. The Workers' Compensation program is part of the City's Risk Management Office, which also provides safety training and loss prevention for all City departments and agencies.

The Department of Labor and Employment of the State of Colorado establishes the amount of funding required each year for the City to maintain its self-insured permit. The requirement is calculated using the average amount of claims paid over the previous three years plus the outstanding liability for claims as of the end of the previous year. This requirement at December 31, 2019, for 2020, was $18,870,000. The Workers' Compensation internal service fund has current assets and appropriations set aside in 2019 to satisfy this requirement. These funds may only be used for payment of workers' compensation benefits and administrative costs.

The City has purchased reinsurance coverage in order to reduce its risk. For the period from January 1, 2019 through December 31, 2019, the self-retention amount was $2,500,000 for all employees. The City had no settlements in the past three years that exceeded its self-retention levels.

Liabilities are reported when it is probable that a loss has occurred, and the amount of the loss can be reasonably estimated and includes an amount for claims that have been incurred but not reported. Claim liabilities are calculated considering the effects of inflation, recent claim settlement trends, and other economic and social factors. The liability is reported in the Workers' Compensation internal service fund and was discounted for investment income. Changes in the liability during the past two years are shown in **Table 45** (dollars in thousands).

Table 45

	2019	2018
Beginning balance, undiscounted - January 1	$ 27,256	$ 26,282
Current year claims and changes in estimates	16,976	14,934
Claims paid	(9,380)	(8,422)
Ending balance undiscounted	**34,852**	**32,794**
Less discount	(5,711)	(5,538)
Ending balance - December 31	**$ 29,141**	**$ 27,256**

The City has opted to provide salary continuation for qualifying, full-time employees who are temporarily disabled for more than three scheduled workdays or shifts by a compensable work injury. The rates and duration of salary continuation vary depending on the collective bargaining agreement or CSA rules, which apply. For the first 90 days, City departments or agencies cover the cost of salary continuation. After 90 days, salary continuation is charged to the Workers' Compensation Fund. As of December 31, 2019, the City paid $1,054,000 for salary continuation benefits.

The City began self-insuring for employee dental benefits on January 1, 2005. Premiums are paid into the Dental Self-Insurance Fund to pay claims, claim reserves, and administrative costs. All claims are reviewed and approved for payment by Delta Dental of Colorado in accordance with the administrative services agreement with the City. There is no annual exposure limit for participants of the Exclusive Provider Organization (EPO) plan. The annual exposure limit for the participants of the Preferred Provider Organization (PPO) High is $2,000/year. The annual exposure limit for participants of the preferred Provider Organization Low is $1,250/year. Claims liabilities for 2019, which will be paid in 2020, were as follows:

	2019	2018
Beginning balance - January 1	$ 217	$ 434
Current year claims and changes in estimates	8,749	8,692
Claims settled	(8,574)	(8,909)
Ending balance - December 31	**$ 392**	**$ 217**

Note D – Subsequent Events

1. **COVID-19.** As a result of the spread of the COVID-19 coronavirus, economic uncertainties have arisen which will result in declining revenues and have a negative impact on the Citywide budget. At this point, the extent to which COVID-19 may impact the City's financial condition and operations is uncertain. The City has formal financial policies and operating practices, including multiple reserves, that will be used to address budgetary shortfalls and maintain core city services. In addition, the City has already received federal funding of $126,800,000 as part of the CARES Act and $17,730,000 from FEMA to help cover costs related to the City's response to COVID-19.

2. **Convention Center of Colorado.** As a result of the national, state and local emergency declarations due to COVID-19, the Mayor of the City and County of Denver ordered the immediate cancellation of all public events at certain venues owned and operated by the City, including the Convention Center. The Authority's revenue is derived from hotel operations, including the Hotel's multiple restaurants and bookings in connection with the Colorado Convention Center events. The hotel operations were suspended temporarily but will begin accepting guests starting July 9, 2020. The Authority is continuing to evaluate the potential impact of COVID-19 on future operations and the availability of its reserve accounts should the need to access them arise.

3. **Denver Airport System.** On November 15, 2017, Adams County and its constituent cities filed a notice of default, alleging that the City and County of Denver's airport is in violation of the noise-related requirements of the Intergovernmental Agreement on a New Airport executed in 1988, alleging that the Airport exceeded "noise exposure performance standards" in the years 2014, 2015 and 2016. This matter went to trial before the Jefferson County District Court. On June 19, 2020, the Jefferson County District Court of Colorado issued Findings of Fact and Conclusion (Order) related to the claim filed by the Complaint and ruled in favor of the Complaint's claim with respect to (i) the City's use of an alternative noise monitoring system and (ii) Class II violations for 2014, 2015, and 2016 for the judgment amount of $33,500,000 plus interest accrued. The City is evaluating the Order and available options, but has recorded the judgment amount as a legal liability in the Denver Airport System enterprise fund.

Note E – Contingencies

1. **Legal Debt Margin.** Per the City Charter, the City's indebtedness for general obligation bonds shall not exceed 3.00% of actual value as determined by the last final assessment of the taxable property within the City. At December 31, 2019, the City's general obligation debt outstanding was $842,856,000 and the City's legal debt margin was $4,455,093,000 or 2.60% of actual value of taxable property.

2. **Prior Years' Defeased Bonds.** At various dates in prior years, the City and certain component units have placed proceeds from bond issues and cash contributions in irrevocable refunding escrow accounts. The amounts deposited in the irrevocable escrow accounts are invested in U.S. Treasury obligations that, together with interest earned thereon, would provide amounts sufficient for payment of all principal and interest of the bond issues on each remaining payment date. The likelihood of the earnings and principal maturities of the U.S. Treasury obligations not being sufficient to pay the defeased bond issues appears remote. Accordingly, the escrow accounts and outstanding defeased bonds are not included in the accompanying financial statements. Defeased bonds principal outstanding at December 31, 2019, for the City and Denver International Airport, was $166,185,000 and $32,200,000, respectively.

3. **Grants and Other.** Under the terms of federal and state grants, periodic audits are required, and certain costs may be questioned as not being appropriate expenditures under the terms of the grants. Such audits could lead to reimbursement to the grantor agencies. City management believes disallowances, if any, will be immaterial to its financial position and activities.

The City is responsible for administering certain federal and state social services programs for which the related revenue and expenditures are not included in the accompanying financial statements since the state now makes the grant disbursements.

Table 46 (dollars in thousands) lists Denver County electronic benefit transfers (EBT) authorizations, warrant expenditures, and total expenditures associated with the Human Services special revenue fund for the year ended December 31, 2019.

Table 46

Program	City EBT Authorizations	City Share of Authorizations	Expenditures by City Warrant	City Share of Authorizations Plus Expenditures by City Warrant	Total Expenditures
Adult Protective Service	$ -	$ -	$ 3,087	$ 3,087	$ 3,087
Aid to Needy & Disabled	3,255	651	-	651	3,255
Child Care	21,229	2,017	1,578	3,594	22,807
Child Support Enforcement[2]	88	55	15,310	15,366	15,398
Child Support Grant - IV-D BICS Grant	-	-	27	27	27
Child Welfare	13,113	2,781	36,152	38,933	49,265
Child Welfare - IV-E Waiver Intervention	-	-	807	807	807
Child Welfare - IV-E Waiver Savings	-	-	74	74	74
Child Welfare Discretionary Grants	119	32	109	141	228
Child Welfare Staffing SB15-242	-	-	3,481	3,481	3,481
Child Welfare Subadopt & Relative Guardianship	7,531	756	-	756	7,531
Colorado Works Admin[2]	36	2	7,839	7,841	7,875
Colorado Works Non-Admin	17,785	3,130	775	3,906	18,560
Core Services	3,762	657	2,922	3,579	6,684
County Administration - CDHS[2]	250	61	17,405	17,466	17,655
County Administration - HCPF Enhanced	-	-	11,350	11,350	11,350
County Administration - HCPF Regular[2]	265	49	5,257	5,306	5,522
County Initiative TANF	1	1	-	1	1
County Only Pass Thru	-	(115)	-	(115)	-
Federal Grants	-	-	4,201	4,201	4,201
Food Assistance Benefits & Collections	115,297	-	-	-	115,297
Food Assistance Job Search	(0)	(0)	1,801	1,801	1,801
Foster Care Adoption Recruitment	-	-	5	5	5
Home Care Allowance	913	46	-	46	913
Low Income Energy Assistance	2,971	-	50	50	3,021
Non-allocated Programs	131	128	9	137	140
Old Age Pension	16,801	-	967	967	17,768
SSI-Home Care Allowance	1,080	54	-	54	1,080
TANF Collections-EBT	(663)	(133)	-	(133)	(663)
Title IV-B Sub Part 2 - PSSF	-	-	312	312	312
Title IV-E Independent Living	-	-	207	207	207
Total	**$ 203,963**	**$ 10,173**	**$ 113,725**	**$ 123,898**	**$ 317,688**

[1] Does not include audit adjustments, TANF Collections - IV-D Retained, Medicaid Collections, Federal and State Incentives, County Tax Base Relief and programs not settled in County Financial Management System (CFMS), with the exception of Federal grants, which are also captured in the CAFR. It also excludes County Wide Cost Allocation Pass Thru, as these amounts are not earned by expenses incurred by Human Services.

[2] The State pays Direct Settled items for EBT Administration, The Work Number, IRS Fees and Locator fees and then charges the counties for those costs. These are not true EBT payments, but are amounts settled via CFMS.

4. **Conduit Debt Obligations.** From time to time, the City issues industrial development revenue bonds, single-family mortgage revenue bonds, multi-family mortgage revenue bonds, construction loan revenue bonds, and special obligation revenue bonds to provide financial assistance to private-sector entities for the acquisition and construction of private, industrial, and commercial facilities deemed to be in the public interest. The bonds are secured by the property financed and are payable solely from payments received on the underlying mortgage loans. Upon repayment of the bonds, ownership of the acquired facilities transfers to the private-sector entity served by the bond issuance. Not the City, the State, nor any political subdivision thereof is obligated in any manner for repayment of the bonds. Accordingly, the bonds are not reported as liabilities in the accompanying financial statements. As of December 31, 2019, the aggregate principal amount payable for the bonds, excluding the Airport's Special Facility Revenue bonds, was approximately $35,252,000.

   To finance the acquisition and construction of various facilities at Denver International Airport, the City issued three series of Special Facility Revenue Bonds. These bonds are special limited obligations of the City, payable and secured by a pledge of certain revenues to be received from lease agreements for these facilities. The bonds do not constitute a debt or pledge of the full faith and credit of the City or the Airport System, and accordingly, have not been reported in the accompanying financial statements. As of December 31, 2019, Airport Special Facility Revenue Bonds outstanding totaled $250,575,000.

5. **Denver Airport System.** The City and Adams County entered into an intergovernmental agreement for Denver International, dated April 21, 1988 (the Intergovernmental Agreement). The Intergovernmental Agreement establishes maximum levels of noise that should not be exceeded on an average annual basis at various grid points surrounding the Airport. Penalties must be paid to Adams County when these maximums are exceeded.

   The Airport System is involved in claims and lawsuits and is the subject of certain other investigations. The Airport System and its legal counsel estimate that the ultimate resolution of these matters will not materially affect the accompanying financial statements of the Airport System.

   Under the terms of the Federal grants, periodic audits are required, and certain costs may be questioned as not being appropriate expenditures under the terms of the grants. Such audits could lead to reimbursement to the grantor agencies. The Airport System management believes disallowances, if any will be immaterial to its financial position and activities of the Airport.

   The City, for and on behalf of the Airport, is undertaking renovations to Jeppesen Terminal including the Great Hall (an open area of approximately 1 million square feet located on Levels 5 and 6 of Jeppesen Terminal) designed to, among other things, enhance security of the passengers and the Airport, improve passenger flow and increase and improve concessions areas. The City, for and on behalf of the Airport, granted to Denver Great Hall LLC, a Delaware limited liability company (the "Great Hall Developer") an exclusive right to design, construct, finance, operate and maintain certain specified areas within Jeppesen Terminal, including the renovation and reconfiguration of a portion of the Great Hall (the "Great Hall Project"), pursuant to the Development Agreement dated August 24, 2017 (the "Great Hall Agreement") between the City, for and on behalf of the Airport, and the Great Hall Developer. On August 12, 2019, the City, for and on behalf of the Airport, exercised its right to terminate the Great Hall Agreement for convenience, which termination became effective November 12, 2019. As a result of such termination, the City, for and on behalf of the Airport, owed a termination payment to the Great Hall Developer in an amount determined pursuant to the terms of the Great Hall Agreement. The termination payment consists of several components: 1) a net lender liability payment reimbursing Great Hall Developers for costs of design, construction and management work completed through the Termination Date (paid partially from reserve funds available from the prior issuance of Revenue Bonds (Denver International Airport Great Hall Project) Series 2017 by the Public Finance Authority on behalf of Great Hall Developer); (2) an equity payment equal to the return that Great Hall Developer's equity members expected to receive on their investment in Great Hall Developer; (3) contractor breakage costs representing the costs incurred by Great Hall Developer and its contractors because of the termination of the Great Hall Agreement that would not have been incurred but for the termination of the Great Hall Agreement; (4) redundancy costs representing reimbursements to Great Hall Developer for costs incurred in terminating employees who will not continue with Great Hall Developer or an affiliate of Great Hall Developer after termination of the Great Hall Agreement; and (5) transition costs representing the amount spent by Great Hall Developer to wind down the work and transition the Great Hall Project to the City, for and on behalf of the Department.

The City, for and on behalf of the Airport, entered into a Final Agreement Regarding Termination dated March 13, 2020 (the "Termination Agreement") with Great Hall Developer, Ferrovial Agroman West, LLC and Great Hall Builders, LLC ("Great Hall Builders") to settle all disputes among the parties to the Termination Agreement relating to the Great Hall Agreement, resolve certain relief event claims filed by Great Hall Developer on its own behalf and on behalf of Great Hall Builders under the Great Hall Agreement and settle the final amount of the total Termination Payment. As set forth in the Termination Agreement, the City, for and on behalf of the Airport, has made a series of payments toward the Termination Payment which, together with the amount referenced in the prior paragraph, resulted in the full and final Termination Payment amount of $183.7 million. This amount falls within the estimated range of the Termination Payment of $170.0 million to $210.0 million previously disclosed by the City, for and on behalf of the Airport. Pursuant to the Termination Agreement, no other payments are due from the City, for and on behalf of the Airport, as a result of the termination of the Great Hall Agreement and all claims for payments against the City, for and on behalf of the Airport, have been dismissed.

As of December 31, 2019, the Airport recorded a total cost incurred of $187.4 million related to the termination of the Great Hall Agreement, of which $50.4 million are accrued cost paid after December 31, 2019 on the Statement of Net Position. This cost included the $183.7 million related to the termination to Great Hall Partners and $3.7 million in additional costs related to the termination of the agreement. For the year ended December 31, 2019, the Airport recorded $65.8 million of the $187.4 million as Special Item on the Statement of Revenue, Expenses, and Changes in Net Position. This amount represents costs incurred determined not to be capitalizable.

6. **Environmental Services.** State and federal laws will require the City to close the Denver Arapahoe Disposal Site (DADS) once its capacity is reached and to monitor and maintain the site for 30 subsequent years. The contracted operator is responsible for all closure and post-closure costs for the landfill's individual cells while they are under contract to operate the landfill. However, the ultimate responsibility rests with the City as owner of the facility. The City contractually shifted this financial responsibility to its operator as described below.

Effective October 1, 1997, the City renegotiated its contract with Waste Management of Colorado, Inc. (WMC), the current operator of DADS. As a result, the City assigned its responsibility for all closure and post-closure costs to WMC. To cover these costs, WMC has provided a performance bond of $3,000,000, provided a corporate guarantee from their parent company, Waste Management, Inc (WMI), and posted a financial assurance plan with the State of Colorado (including an insurance certificate of $25,663,000 as of April 2017). Due to this assignment of closure and post-closure costs to WMC, the City no longer recognizes the related closure and post-closure costs liability in its financial statements.

7. **Denver Urban Renewal Authority.** In connection with DURA's development of the Denver Dry Building, DURA has guaranteed certain loans made to the Denver Building Housing, Ltd. by the Bank of Denver with an outstanding balance of $2,321,000 at December 31, 2019. In addition, DURA has guaranteed all obligations of the Denver Dry Development Corporation as general partner, under the terms and conditions of the limited partnership agreement of the Denver Building Housing, Ltd. No amounts have been recorded as a liability in the financial statements, as DURA management believes the possibility of having to make payments under these guarantees is remote.

8. **TABOR.** At the general election held November 3, 1992, the voters of the State approved an amendment to the Colorado Constitution limiting the ability of the State and local governments, such as the City, to increase revenues, debt and spending, and restricting property, income, and other taxes. In addition, the amendment requires that the State and local governments obtain voter approval to create any multiple fiscal year direct or indirect debt or other financial obligation whatsoever without adequate present cash reserves pledged irrevocably and held for payments in all future fiscal years. The amendment excludes from its restrictions the borrowings and fiscal operations of enterprises. Enterprises are defined to include government-owned businesses authorized to issue their own revenue bonds and receiving less than 1.00% of their revenues in grants from all Colorado State and local governments combined. The amendment also requires the establishment of an Emergency Reserve equal to 3.00% of fiscal year spending excluding debt service for all years subsequent to 1994. The City has established an emergency reserve of $61,675,000. The amendment is also applicable to several component units, which have established emergency reserves of $83,428,000.

In November 2005, local voters approved Referred Measure 1B to allow the City to retain revenues collected, with the exception of property tax revenue, in excess of the limits established by the state amendment to the constitution for 10 fiscal years beginning with fiscal year 2005 and thereafter retain and spend any excess revenues up to the amount of the revenue cap as defined. For 2019, TABOR revenues exceeded the established limits by $531,278,000.

In November 2012, Denver voters approved Referred Measure 2A to allow the City to retain all revenues collected beginning in 2013.

There are numerous uncertainties about the interpretation of the amendment and its application to particular governmental entities and their operations. It is possible that the constitutionality of the amendment as applied in some situations may be challenged on various grounds, including the argument that the amendment conflicts with other constitutional provisions and violates the protections afforded by the federal constitution against impairment of contract.

9. **National Western Center.** The National Western Center redevelopment requires the acquisition of 10 residential parcels and 28 commercial parcels. The City negotiates a purchase price with property owners and reimburses property owners for the reasonable cost of obtaining their own appraisal.

Note F – Deferred Compensation Plan

1. **Description of the Plan.** The Deferred Compensation Plan (Plan) was adopted by the City to provide a means by which public employees could defer a portion of their current income and related income taxes to future years. Under Section 457 of the Internal Revenue Code, amounts deferred, and income earned on those funds are not taxed until made available to the participant. The Plan's publicly available financial report can be obtained by contacting the City of Denver Controller's Office at 201 West Colfax Avenue, Department 1109, Denver, Colorado, 80202.

2. **Administration of the Plan.** The Deferred Compensation Governing Committee of the City manages the Plan. The Committee has designated a third-party administrator for the Plan to account for all deferred compensation, withdrawals, interest income credited, and the individual balance for each participant. In addition, the administrators execute individual participant agreements and provide Plan information and counseling to all eligible employees.

3. **Investments.** Investments are recorded at fair value. In compliance with the City Charter, the Deferred Compensation Governing Committee has approved certain options for investment. All investments are transferred to a retirement trust investment fund offered by Nationwide Retirement Plans. The Plan provides for self-directed investments by the participants.

4. **Contributions.** Participation in the Plan is voluntary and is open to all City employees. The City does not make any contributions. The maximum deferral in any one year is generally limited to 100.00% of a participant's pre-deferred taxable income or $19,000 for 2019. Those who are age 50 and older may save an additional $6,500 per year. However, special provisions, applicable during the last three taxable years before a participant attains normal retirement age under the Plan, or any year thereafter prior to the participants' separation from service, may increase the annual maximum up to $38,000 for 2019. Total contributions by employees were $47,437,000 for 2019.

5. **Withdrawals.** Withdrawals from the Plan may be made upon retirement, termination of employment with the City, or in hardship cases as approved by the Administrator. Upon death, amounts credited to the participant are paid to the beneficiary designated by the participant.

   Eligible participants may elect the Systematic Withdrawal Option, purchase an annuity, or receive a lump-sum distribution. The Systemic Withdrawal Option allows eligible participants to withdraw specified amounts from their account at regular intervals. The balance of their account remains in the pool of Plan assets and continues to be invested as directed by the participant. The annuity option allows eligible participants to purchase a payment stream for a period certain or for the lifetime of the annuitant. Contracts purchased under this annuity option remain as assets of the Plan. The periodic distributions are accounted for as withdrawals in the year disbursed.

6. **Assets.** All amounts of compensation deferred under the Plan, all property and rights purchased with those amounts, and all income attributable to those amounts, property, or rights are held in trust by the City for the exclusive benefit of the participants and their beneficiaries. The assets of the Plan are reported as an other employee benefit trust fund of the City.

7. **Plan Termination and Amendments.** The City can at any time elect to amend, modify, or terminate the Plan. However, notice must be given to all participants at least 45 days prior to the effective date of an amendment. No amendments will deprive the participants of any benefits they were entitled to prior to the change. If the Plan is terminated, all amounts then credited to the participants are to be paid out by the administrators under the normal withdrawal requirements and procedures.

8. **Component Units.** Several component units offer plans similar to the City's which are also qualified under Section 457 of the Internal Revenue Code.

Note G – Pension Plans

The City has six pension plans covering substantially all employees of the primary government, as follows:

- Denver Employees Retirement Plan (DERP)
- Fire and Police Pension Plan - Statewide Defined Benefit Plan (FPPA SWDB)
- Public Employees' Retirement Association of Colorado Pension Plan - State Division Trust Fund (PERA SDTF)
- Public Employees' Retirement Association of Colorado Pension Plan - Judicial Division Trust Fund (PERA JDTF)
- Denver Old Hire Fire Pension Fund (FPPA Old Hire Fire)
- Denver Old Hire Police Pension Fund (FPPA Old Hire Police)

The majority of the City's employees are covered under the Denver Employees Retirement Plan. Full time firemen and policemen are covered under the Fire and Police Pension Association plans, and county court judges and the District Attorney are covered under the Public Employees' Retirement Association of Colorado. In addition to the six plans offered, several component units offer various types of pension plans, which include deferred annuity plans and defined contribution plans.

A summary of pension related items as of and for the year ended December 31, 2019, is presented in **Table 47** (dollars in thousands).

Table 47

Plan	Net Pension Liability	Deferred Outflows of Resources	Deferred Inflows of Resources	Pension Expense (Income)
DERP:				
Governmental Activities	$ 1,135,565	$ 259,097	$ -	$ 177,297
Business-type Activities	252,830	65,664	4,635	37,880
FPPA SWDB	40,822	152,789	743	6,436
PERA SDTF	794	181	566	(76)
PERA JDTF	7,186	3,287	6,033	(917)
Old hire Fire	170,356	29,183	-	16,781
Old hire Police	114,113	31,469	-	16,271
Total	**$ 1,721,666**	**$ 541,670**	**$ 11,977**	**$ 253,672**

1. **Cost Sharing Multiple-Employer Defined Benefit Pension Plans.**

- The Denver Employees Retirement Plan (DERP)

Plan Description. The Denver Employees Retirement Plan (DERP) administers a cost sharing multiple-employer defined benefit plan to eligible members. The DERP is administered by the DERP Retirement Board in accordance with sections 18-401 through 18-430.7 of the City's Revised Municipal Code. Amendments to the plan are made by ordinance. These Code sections establish the plan, provide complete information on the DERP, and vests the authority for the benefit and contribution provisions with the City Council. The DERP Retirement Board acts as the trustee of the Plan's assets.

The Plan provides retirement, death and disability benefits for its members and their beneficiaries. Members who were hired before July 1, 2011 and retire at or after age 65 (or at age 55 if the sum of their age and credited service is at least 75) are entitled to an annual retirement benefit, in an amount equal to 2.00% of their final average salary for each year of credited service, payable monthly for life. Effective for employees hired after September 1, 2004, the formula multiplier was reduced to 1.50% final average salary is based on the member's highest salary during a period of 36 consecutive months of credited service. Members with five years of credited service may retire at or after age 55 and receive a reduced retirement benefit.

For members who were hired after July 1, 2011, they must be age 60 and have combined credited service of at least 85 to receive a normal retirement prior to age 65. Final average salary is based on the member's highest salary during a period of 60 consecutive months of credited service. Five-year vesting is required of all employees to qualify for a benefit, regardless of their age at the time of termination of employment.

Annual cost of living adjustment is granted on an ad hoc basis. The estimated cost of benefit and contribution provisions is determined annually by an independent actuary, recommended by the plan's Board, and enacted into ordinance by Denver City Council.

The Plan is accounted for using the economic resources measurement focus and the accrual basis of accounting. DERP issues a publicly available comprehensive annual financial report that can be obtained at https://www.derp.org.

Funding Policy. The City contributes 12.50% of covered payroll and employees make a pre-tax contribution of 8.00% in accordance with Section 18-407 of the Revised Municipal Code of the City. The City's contributions to DERP for the year ended December 31, 2019, were $83,255,000, which equaled the required contributions.

Pension Expense, Deferred Outflows of Resources, and Deferred Inflows of Resources Related to Pensions. At December 31, 2019, the City reported a liability of $1,388,395,000 for its proportionate share of the net pension liability related to DERP. The net pension liability was measured as of December 31, 2018, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of January 1, 2018. Standard update procedures were used to roll forward the total pension liability to December 31, 2018. The City's proportion of the net pension liability was based on City contributions to DERP for the calendar year 2018 relative to the total contributions of participating employers to DERP.

At December 31, 2018, the City's proportion was 92.03%, which was an increase of 1.33% from its proportion measured as of December 31, 2017.

The components of the City's proportionate share of the net pension liability related to DERP as of December 31, 2019, are presented in **Table 48** (dollars in thousands).

Table 48

	Governmental Activities	Business-type Activities	Total
Total pension liability	$ 2,688,147	$ 598,509	$ 3,286,656
Plan fiduciary net positon	1,552,582	345,679	1,898,261
Net pension liability	**$ 1,135,565**	**$ 252,830**	**$ 1,388,395**

For the year ended December 31, 2019, the governmental activities and the business-type activities recognized pension expense of $177,297,000 and $37,880,000 respectively. A summary of the City's deferred outflows of resources and deferred inflows of resources related to pensions for DERP as of December 31, 2019, is presented in **Table 49** (dollars in thousands).

Table 49

	Governmental Activities	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	$ 14,358	$ -
Changes of assumptions or other inputs	100,706	-
Net difference between projected and actual earnings on pension plan investments	66,464	-
Changes in proportion	9,970	-
Contributions subsequent to the measurement date	67,599	-
Total	**$ 259,097**	**$ -**

	Business-type Activities	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	$ 3,196	$ -
Changes of assumptions or other inputs	22,422	-
Net difference between projected and actual earnings on pension plan investments	14,798	-
Changes in proportion	9,592	4,635
Contributions subsequent to the measurement date	15,656	-
Total	**$ 65,664**	**$ 4,635**

	Total	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	$ 17,554	$ -
Changes of assumptions or other inputs	123,128	-
Net difference between projected and actual earnings on pension plan investments	81,262	-
Changes in proportion	19,562	4,635
Contributions subsequent to the measurement date	83,255	-
Total	**$ 324,761**	**$ 4,635**

The $83,255,000 reported as deferred outflows of resources related to pensions, resulting from contributions subsequent to the measurement date, will be recognized as a reduction of the net pension liability in the year ended December 31, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized as pension expense as presented in **Table 50** (dollars in thousands).

Table 50

Year	Governmental Activities	Business-type Activities	Total
2020	$ 88,012	$ 18,828	$ 106,840
2021	47,555	12,557	60,112
2022	20,401	6,053	26,454
2023	35,530	7,935	43,465
2024	-	-	-
Thereafter	-	-	-
Total	**$ 191,498**	**$ 45,373**	**$ 236,871**

The total pension liability in the January 1, 2018 actuarial valuation was determined using the actuarial assumptions and other inputs presented in **Table 51**.

Table 51

	DERP
Investment rate of return	7.50%
Salary increases	3.00-7.00%
Inflation	2.50%

Mortality rates were based on the RP-2014 Combined Mortality Table (gender specific) projected with the Ultimate MP Scale with a multiplier of 110% male and 105% female.

The latest experience study was conducted in 2018 covering the 5-year period of January 1, 2013 to December 31, 2017.

The long-term expected rate of return on pension plan investments was determined using a building block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return were adopted by the plan's trustees after considering input from the plan's investment consultant and actuary(s). For each major asset class that is included in the pension plan's target asset allocation as of December 31, 2018, these best estimates are summarized in **Table 52**.

Table 52

Asset Class	Target Allocation	Long-Term Expected Rate of Return
U.S. Equities		
Large Cap	12.00%	3.80%
Large Cap Value	3.50%	4.30%
Large Cap Growth	3.50%	3.80%
Small Cap Value	1.25%	4.50%
Small Cap Growth	2.25%	4.00%
Total U.S. Equities	**22.50%**	
International Equities		
International Large Cap	2.00%	4.30%
International Large Cap Value	4.00%	5.30%
International Large Cap Growth	4.00%	4.80%
International Small Cap Value	5.50%	4.80%
Emerging Markets	8.00%	6.30%
Total International Equities	**23.50%**	
Fixed Income		
Governments	5.00%	0.50%
Core Fixed Income	6.50%	1.00%
Emerging Market Debt	2.50%	4.30%
Private Debt	4.00%	5.00%
Distress Debt	2.50%	6.50%
Total Fixed Income	**20.50%**	
Real Estate		
Non-core Real Estate	3.20%	5.80%
Core Real Estate	4.80%	3.80%
Total Real Estate	**8.00%**	
Alternatives		
Hedge Funds	5.00%	3.30%
MLP	7.00%	6.30%
Private Equity	7.00%	6.50%
Private Energy	5.50%	6.50%
Timber	1.00%	3.00%
Total Alternatives	**25.50%**	
Total Asset Class	**100.00%**	

Discount Rate. The discount rate used to measure the total pension liability remained at 7.50%. This single discount rate was based on the expected rate of return on pension plan investments remained at 7.50%. The projection of cash flows used to determine this single rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the City's Proportionate Share of the Net Pension Liability to Changes in the Discount Rate. Table 53 presents the City's proportionate share of the net pension liability, calculated using a discount rate of 7.50%, as well as what the City's proportionate share of the net pension liability would be if it were calculated using a discount rate that is one percentage-point lower or one percentage-point higher (dollars in thousands):

Table 53

City's proportionate share of the net pension liability	1% Decrease 6.50%	Current Discount Rate 7.50%	1% Increase 8.50%
Governmental Activities	$ 1,426,387	$ 1,135,565	$ 890,897
Business-type activities	317,582	252,830	198,356
Total	**$ 1,743,969**	**$ 1,388,395**	**$ 1,089,253**

Pension Plan Fiduciary Net Position. Detailed information about the pension plan's fiduciary net position is available in the separately issued DERP financial reports found at https://www.derp.org/index.cfm/ID/38.

- **Fire and Police Pension Plan – Statewide Defined Benefit Plan (FPPA SWDB)**

Plan Description. Full-time firefighters and police officers hired on or after April 8, 1978, participate in the Statewide Defined Benefit Plan - Fire and Police Pension Plan (FPPA SWDB). The plan is a cost-sharing multiple-employer defined benefit pension plan administered by the Fire and Police Pension Association of Colorado (FPPA) that provides normal, early, vested, or deferred retirement and death benefits. Authority for the plan, including benefit and contribution provisions, is derived from Title 31, Articles 30, 30.5, and 31 of the Colorado Revised Statutes. The plan is amended by statute and is accounted for using the economic resources measurement focus and the accrual basis of accounting. FPPA issues a publicly available comprehensive annual financial report that can be obtained at http://fppaco.org/toc_frames.html.

Funding Policy. Statute requires the City contribute 8.00% of base salary and employees make a pre-tax contribution of 10.50% for a total contribution rate of 18.50%. In 2014, employees elected to increase the member contribution rate to the plan beginning in 2015. Employee contribution rates will increase 0.50% annually through 2022 to a total of 12% of base salary. Employer contributions will remain at 8.00% resulting in a combined contribution rate of 20.00% in 2022. The City's contributions to the FPPA SWDB for the year ended December 31, 2019, were $18,079,000.

Pension Liabilities, Pension Expense, Deferred Outflows of Resources, and Deferred Inflows of Resources Related to Pensions. At December 31, 2019, the City reported a liability of $40,822,000 for its proportionate share of the net pension liability related to the FPPA SWDB plan. The net pension liability was measured as of December 31, 2018, and the total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of Januaury 1, 2019. Standard update procedures were used to roll forward the total pension liability to December 31, 2018. The City's proportion of the net pension liabilitiy was based on City contributions to FPPA SWDB plan for the calendar year 2018 relative to the total contributions of participating employers to the FPPA SWDB plan.

At December 31, 2018, the City's proportion was 32.29%, which was a decrease of 2.67% from its proportion measured as of December 31, 2017.

For the year ended December 31, 2019, the City recognized pension expense of $6,436,000. The components of the City's proportionate share of the net pension liabilitiy related to FPPA SWDB as of December 31, 2019, are presented in **Table 54** (dollars in thousands).

Table 54

	FPPA SWDB
Total pension liability	$ 856,655
Plan fiduciary net positon	815,833
Net pension liability	**$ 40,822**

A summary of the City's deferred outflows of resources and deferred inflows of resources related to pensions for FPPA SWDB as of December 31, 2019, is presented in **Table 55** (dollars in thousands).

Table 55

	FPPA SWDB	
Sources	**Deferred Outflows of Resources**	**Deferred Inflows of Resources**
Difference between expected and actual experience	$ 52,452	$ 436
Changes of assumptions or other inputs	39,534	-
Net difference between projected and actual earnings on pension plan investments	32,113	-
Change in proportion	10,611	307
Contributions subsequent to the measurement date	18,079	-
Total	**$ 152,789**	**$ 743**

The $18,079,000 reported as deferred outflows of resources related to pensions, resulting from contributions subsequent to the measurement date, will be recognized as a decrease increase in the net pension liability in the year ended December 31, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized as pension expense as presented in **Table 56** (dollars in thousands).

Table 56

Year	**FPPA SWDB**
2020	$ 24,770
2021	18,067
2022	15,581
2023	24,920
2024	12,806
Thereafter	37,823
Total	**$ 133,967**

The total pension liability in the December 31, 2018 actuarial valuation was determined using the actuarial assumptions and other inputs presented in **Table 57** (dollars in thousands).

Table 57

	FPPA SWDB
Investment rate of return	7.00%
Salary increases	4.25-11.25%
Inflation	2.50%

For determining the total pension liability, the post-retirement mortality tables for non-disabled retirees uses the 2006 central rates from the RP-2014 Annuitant Mortality Tables projected to 2018 using the MP-2017 projection scales, and the projected prospectively using the ultimate rates of the scale for all years. The pre-retirement off-duty mortality tables are adjusted to 50.00% of the RP-2014 mortality tables for active employees. The on-duty mortality rate is 0.00015.

For determining the actuarial determined contributions, the post-retirement mortality tables for non-disabled retirees is a blend of the Annuitant and Employee RP-2014 generational mortality tables with blue collar adjustment projected with Scale BB. The pre-retirement off-duty mortality tables are adjusted to 55.00% of the RP-2014 mortality tables for actives employees. The on-duty mortality rate is 0.00020.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense, and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighing the expected future real rates of return by the target asset allocation percentage and by adding expected inflation (assumed at 2.00%). Best estimates of arithmetic real rates of return for each major asset class included in the Fund's target asset allocation as of December 31, 2018, are summarized in **Table 58**.

Table 58

Asset Class	Target Allocation	Long-Term Expected Rate of Return
Global equity	37.00%	8.03%
Equity long/short	9.00%	6.45%
Private markets	24.00%	10.00%
Fixed income	15.00%	2.90%
Absolute return	9.00%	5.08%
Managed futures	4.00%	5.35%
Cash	2.00%	2.52%
Total Asset Class	**100.00%**	

Discount Rate. The discount rate used to measure the total pension liability decreased from 7.50% to 7.00%. The projection of cash flows used to determine the discount rate assumed that contributions from participating employers will be made based on the actuarially determined rates based on the Board's funding policy, which establishes the contractually required rates under Colorado statutes.

Based on those assumptions, the SWDB plan fiduciary net position was projected to be available to make all the projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the City's Proportionate Share of the Net Pension Liability (Asset) to Changes in the Discount Rate. Table 59 presents the City's proportionate share of the net pension liability, calculated using a discount rate of 7.00%, as well as what the City's proportionate share of plan's net pension liability (asset) would be if it were calculated using a discount rate that is 1% lower or 1% higher (dollars in thousands):

Table 59

	1% Decrease	Single Discount Rate Assumption	1% Increase
	6.00%	7.00%	8.00%
City's proportionate share of the net pension liability (asset)	$ 158,301	$ 40,822	$ (56,626)

Pension Plan Fiduciary Net Position. Detailed information about the pension plan's fiduciary net position is available in the separately issued FPPA financial reports found at http://fppaco.org/toc_frames.html.

- **Public Employees' Retirement Association of Colorado Pension Plans (PERA).**

Plan Description. County court judges and the District Attorney of the City are provided with pensions through the State Division Trust Fund (SDTF) or the Judicial Division Trust Fund (JDTF) —cost-sharing multiple-employer defined benefit pension plans administered by PERA. PERA provides retirement, disability, and survivor benefits that are specified in Title 24, Article 51 of the Colorado Revised Statutes (C.R.S), administrative rules set forth at 8 C.C.R. 1502-1, and applicable provisions of the federal Internal Revenue Code. Colorado State law provisions may be amended from time to time by the Colorado General Assembly. Plan benefits are specified in Title 24, Article 51 of the Colorado Revised Statutes (CRS), administrative rules set forth at 8 C.C.R. 1502-1, and applicable provisions of the federal Internal Revenue Code. Colorado State law provisions may be amended from time to time by the Colorado General Assembly. The plans are accounted for using the economic resources measurement focus and the accrual basis of accounting. PERA issues a publicly available comprehensive annual financial report that can be obtained at www.copera.org/investments/pera-financial-reports.

Funding Policy. Eligible employees are required to contribute 8.75% of their PERA-includable salary. The City contributes 19.13% of includable salaries to the SDTF and 16.34% of includable salaries to the JDTF. Employer contributions are recognized by the SDTF and the JDTF in the period in which the compensation becomes payable to the member and the City is statutorily committed to pay the contributions to the plans. The City's contributions to the SDTF for the year ended December 31, 2019, were $42,000. The City's contributions to the JDTF for the years ended December 31, 2019, were $598,000.

Pension Liabilities, Pension Expense, Deferred Outflows of Resources, and Deferred Inflows of Resources Related to Pensions. At December 31, 2019, the City reported a liability of $794,000 and $7,186,000 for the SDTF and JDTF, respectively, for its proportionate share of the net pension liability related to the PERA plans. The net pension liabilities were measured as of December 31, 2018, and the total pension liabilities used to calculate the net pension liabilities was determined by an actuarial valuation as of December 31, 2017. Standard update procedures were used to roll forward the total pension liabilities to December 31, 2018. The City's proportion of the net pension liabilities were based on City contributions to the SDTF and JDTF plan for the calendar year 2018 relative to the total contributions of participating employers to the SDTF and JDTF plans.

At December 31, 2018, the City's proportion of the SDTF was 0.007%, which was a decrease of 0.001% from its proportion measured as of December 31, 2017.

At December 31, 2018, the City's proportion of the JDTF was 5.09% which was a decrease 0.92% from its proportion measured as of December 31, 2017.

The components of the City's net pension liability related to PERA as of December 31, 2019, are presented in **Table 60** (dollars in thousands).

Table 60

	SDTF	JDTF
Total pension liability	$ 1,768	$ 22,796
Plan fiduciary net positon	974	15,610
Net pension liability	**$ 794**	**$ 7,186**

For the year ended December 31, 2019, the City recognized pension income of $76,000 for the SDTF and $917,000 of pension income for the JDFT. A summary of the City's deferred outflows of resources and deferred inflows of resources related to pensions for the SDTF and JDTF plans as of December 31, 2019, is presented in **Table 61** (dollars in thousands).

Table 61

	SDTF		JDTF		Total	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	$ 23	$ -	$ 1,042	$ -	$ 1,065	$ -
Changes of assumptions or other inputs	42	410	835	4,511	877	4,921
Net difference between projected and actual earnings on pension plan investments	40	-	653	-	693	-
Change in proportion	34	156	159	1,522	193	1,678
Contributions subsequent to the measurement date	42	-	598	-	640	-
Total	**$ 181**	**$ 566**	**$ 3,287**	**$ 6,033**	**$ 3,468**	**$ 6,599**

The $42,000 and $598,000 reported by the SDTF and JDTF plans, respectively, as deferred outflows of resources related to pensions, resulting from contributions subsequent to the measurement date, will be recognized as a reduction of the net pension liability in the year ended December 31, 2020.

Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized as pension expense as presented in **Table 62** (dollars in thousands).

Table 62

Year		SDTF		JDTF
2020	$	(193)	$	(283)
2021		(258)		(791)
2022		2		(1,260)
2023		22		(1,010)
2024		-		-
Thereafter		-		-
Total	**$**	**(427)**	**$**	**(3,344)**

The total pension liability in the December 31, 2018 actuarial valuation was determined using the actuarial assumptions and other inputs in **Table 63**.

Table 63

	SDTF	JDTF
Price inflation	2.40%	2.40%
Salary increases, including wage inflation	3.50-9.17%	4.00-5.00%
Investment Rate of Return, net of pension plan investment expenses, including price inflation	7.25%	7.25%

The actuarial assumptions used in the December 31, 2017 valuation were based on the results of the 2016 experience analysis for the periods January 1, 2012 through December 31, 2015, as well as, the October 28, 2016 actuarial assumptions workshop and were adopted by PERA's Board during the November 18, 2016 Board meeting.

Healthy mortality assumptions for active members were based on the RP-2014 White Collar Employee Mortality Table, a table specifically developed for actively working people. To allow for an appropriate margin of improved mortality prospectively, the mortality rates incorporate a 70% factor applied to male rates and a 55% factor applied to female rates.

Healthy, post-retirement mortality assumptions reflect the RP-2014 Healthy Annuitant Mortality Table, adjusted as follows:

- **Males:** Mortality improvement projected to 2018 using the MP-2015 projection scale, a 73% factor and 93% factor for the SDTF and the JDTF applied to rates for ages less than 80, a 108% factor applied to rates for ages 80 and above for the SDTF and a 113% factor for the JDTF, and further adjustments for credibility.

- **Females:** Mortality improvement projected to 2020 using the MP-2015 projection scale, a 78% and 68% factor for the SDTF and the JDFT applied to rates for ages less than 80, a 109% factor applied to rates for ages 80 and above for the SDTF and a 106% factor for the JDTF, and further adjustments for credibility.

The mortality assumption for disabled retirees was based on 90% of the RP-2014 Disabled Retiree Mortality Table.

The long-term expected return on plan assets is reviewed as part of regular experience studies prepared every four or five years for PERA. Recently, this assumption has been reviewed more frequently. The most recent analyses were outlined in presentations to PERA's Board on October 28, 2016.

Several factors were considered in evaluating the long-term rate of return assumption for the Trust Fund, including long-term historical data, estimates inherent in current market data, and a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected return, net of investment expense and inflation) were developed by the investment consultant for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target allocation percentage and then adding expected inflation.

As of the most recent analysis on the long-term expected rate of return presented to the PERA Board on November 18, 2016, the target allocation and best estimates of geometric real rates of return for each major asset class are summarized in **Table 64**.

Table 64

Asset Class	Target Allocation	30-Year Expected Geometric Real Rate of Return
U.S. Equity - Large Cap	21.20%	4.30%
U.S. Equity - Small Cap	7.42%	4.80%
Non U. S. Equity - Developed	18.55%	5.20%
Non U. S. Equity - Emerging	5.83%	5.40%
Core Fixed Income	19.32%	1.20%
High Yield	1.38%	4.30%
Non U.S. Fixed Income - Developed	1.84%	0.60%
Emerging Market Debt	0.46%	3.90%
Core Real Estate	8.50%	4.90%
Opportunity Fund	6.00%	3.80%
Private Cash Equity	8.50%	6.60%
Cash	1.00%	0.20%
Total Asset Class	**100.00%**	

In setting the long-term expected rate of return, projections employed to model future returns provide a range of expected long-term returns that, including expected inflation, ultimately support a long-term expected rate of return assumption of 7.25%.

SDTF Discount Rate. The discount rate used to measure the total pension liability was 7.25%. The basis for the projection of liabilities and the Fiduciary Net Position used to determine the discount rate was an actuarial valuation performed as of December 31, 2017 and the financial status of the Trust Fund as of the prior measurement date (December 31, 2017). In addition, the following methods and assumptions were used in the projection of cash flows:

- Total covered payroll for the initial projection year consists of the covered payroll of the active membership present on the valuation date and the covered payroll of future plan members assumed to be hired during the year. In subsequent projection years, total covered payroll was assumed to increase annually at a rate of 3.50%.

- Employee contributions were assumed to be made at the member contribution rates in effect for each year, including the scheduled increases in SB 18-200. Employee contributions for future plan members were used to reduce the estimated amount of total service costs for future plan members.
- Employer contributions were assumed to be made at rates equal to the fixed statutory rates specified in law for each year, including the scheduled increases in SB 18-200. Employer contributions also include current and estimated future AED and SAED, until the actuarial value funding ratio reaches 103.00%, at which point, the AED and SAED will each drop 0.50% every year until they are zero. Additionally, estimated employer contributions included reductions for the funding of the AIR and retiree health care benefits. For future plan members, employer contributions were further reduced by the estimated amount of total service costs for future plan members not financed by their member contributions.
- As specified by law, the State of Colorado, as a non-employer contributing entity, will provide an annual direct distribution of $225,000,000 (actual dollars), commencing July 1, 2018, and is proportioned between the State, School, Judicial, and DPS Division Trust Funds based upon the covered payroll of each Division. The annual direct distribution ceases when all Division Trust Funds are fully funded.
- Employer contributions and the amount of total service costs for future plan members were based upon a process used by the plan to estimate future actuarially determined contributions assuming an analogous future plan member growth rate.
- The AIR balance was excluded from the initial fiduciary net position, as, per statute, AIR amounts cannot be used to pay benefits until transferred to either the retirement benefits reserve or the survivor benefits reserve, as appropriate. AIR transfers to the fiduciary net position and the subsequent AIR benefit payments were estimated and included in the projections.
- Benefit payments and contributions were assumed to be made at the middle of the year.

Based on the above assumptions and methods, the projection test indicates the SDTF's fiduciary net position was projected to be available to make all projected future benefit payments of current members. The long-term expected rate of return of 7.25% on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability. The discount rate determination does not use the municipal bond index rate, and the discount rate is 7.25%.

As of the prior measurement date, the long-term expected rate of return on plan investments of 7.25% and the municipal bond index rate of 3.43% were used in the discount rate determination resulting in a discount rate of 4.72%.

Sensitivity of the City's proportionate share of the net pension liability to changes in the discount rate. Table 65 presents the City's proportionate share of the net pension liability calculated using the discount rate of 7.25%, as well as what the City's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1 percentage-point lower (6.25%) or 1 percentage-point higher (8.25%) than the current rate (dollars in thousands).

Table 65

	1% Decrease 6.25%	Current Discount Rate 7.25%	1% Increase 8.25%
City's proportionate share of the net pension liability	$ 1,737	$ 794	$ 1,117

JDTF Discount Rate. The discount rate used to measure the total pension liability was 7.25%. The projection of cash flows used to determine the discount rate applied the actuarial cost method and assumptions shown above. In addition, the following methods and assumptions were used in the projection of cash flows:

- Total covered payroll for the initial projection year consists of the covered payroll of the active membership present on the valuation date and the covered payroll of future plan members assumed to be hired during the year. In subsequent projection years, total covered payroll was assumed to increase annually at a rate of 3.50%
- Employer contributions were assumed to be made at rates equal to the fixed statutory rates specified in law each year, including the scheduled increase in SB 18-200. Employeer contributions also include current and estimated future AED and SAED, until the actuarial value funding ratio reaches 103%, at which point, the AED and SAED will each drop 0.50% every year until they are zero. Additionally, estimated employer contributions included reductions for the funding of the AIR and retiree health care benefits. For future plan members, employer contributions were further reduced by the estimated amount of total service costs for future plan members not financed by their member contributions.
- As specified in law, the State will provide an annual direct distribution of $225 million (actual dollars), commencing July 1, 2018, that is proportioned between the State, School, Judicial, and DPS Division Trust Funds based upon the covered payroll of each Division. The annual direct distribution ceases when all Division Trust Funds are fully funded.
- Employer contributions and the amount of total service costs for future plan members were based upon a process used by the plan to estimate future actuarially determined contributions assuming an analogous future plan member growth rate.
- The AIR balance was excluded from the initial fiduciary net position, as, per statute, AIR amounts cannot be used to pay benefits until transferred to either the retirement benefits reserve or the survivor benefits reserve, as appropriate. AIR transfers to the fiduciary net position and the subsequent AIR benefit payments were estimated and included in the projections.
- Benefit payments and contributions were assumed to be made at the end of the month.

Based on the above assumptions and methods, the Trust Fund's fiduciary net position was projected to be available to make all projected future benefit payments of current members. Therefore, the long-term expected rate of return is 7.25% on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability. The discount rate determination does not use the municipal bond index rate, and therefore, the discount rate is 7.25%.

As of the prior measurement date, the long-term expected rate of return on plan investments of 7.25% and the municipal bond index rate of 3.43% were used in the discount rate determination resulting in a blended discount rate of 5.41%.

Sensitivity of the City's proportionate share of the net pension liability to changes in the discount rate. Table 66 presents the City's proportionate share of the net pension liability calculated using the discount rate of 7.25%, as well as what the City's proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) than the current rate (dollars in thousands).

Table 66

	1% Decrease 6.25%	Current Discount Rate 7.25%	1% Increase 8.25%
City's proportionate share of the net pension liability	$ 9,537	$ 7,186	$ 5,163

Pension Plan Fiduciary Net Position. Detailed information about the pension plan's fiduciary net position is available in the separately issued PERA financial reports found at https://www.copera.org/investments/pera-financial-reports.

2. Agent Single-Employer Defined Benefit Plans

- **Denver Old Hire Fire and Police Pension Funds (FPPA Old Hire Fire and Police)**

Plan Description. The Old Hire plans are agent multiple-employer defined benefit pension plans that are administered by the Fire and Police Pension Association (FPPA). Authority for the plans, including benefit and contribution provisions, is derived from Title 31, Articles 30, 30.5, and 31 of the Colorado Revised Statutes. The Plans are amended by statute. The plans provide normal, early, vested, or deferred retirement benefits to plan participants. The Old Hire pension plans are for fire fighter and police employees hired before April 8, 1978. The plans are accounted for using the economic resources measurement focus and the accrual basis of accounting and are closed to new entrants. FPPA issues a publicly available comprehensive annual financial report that includes the old hire plans and can be obtained at http://fppaco.org/toc_frames.html.

Funding Policy. The City is required to contribute to the Old Hire plans at an actuarially determined rate. Modification of the Old Hire plans is regulated by state law and by FPPA Rules and Regulations as authorized by state law. Changes to contribution requirements require an affirmative vote of 65.00% of active members and City Council ordinance. The City's contributions to the FPPA Old Hire Fire and Police plans for the year ended December 31, 2019 were $17,248,000 and $8,803,000, respectively.

Plan Membership. The plan membership of the Old Hire plans as of December 31, 2019 is presented in **Table 67**.

Table 67

Members	Old Hire Fire	Old Hire Police	Total
Retirees and beneficiaries	$ 760	$ 1,009	$ 1,769
Inactive, non-retired beneficiaries	-	-	-
Active members	1	-	1
Total	**$ 761**	**$ 1,009**	**$ 1,770**

Pension Liabilities, Pension Expense, Deferred Outflows of Resources, and Deferred Inflows of Resources Related to Pensions. At December 31, 2019, the City reported a liability of $170,356,000 and $114,113,000 for the Old Hire Fire and Old Hire Police plans, respectively, for the net pension liability related to the FPPA old hire plans. The net pension liabilities were measured as of December 31, 2018, and the total pension liabilities used to calculate the net pension liabilities was determined by an actuarial valuation as of January 1, 2018. Standard update procedures were used to roll forward the total pension liabilities to December 31, 2018.

The components of the net pension liability of the City as of December 31, 2019, is presented in **Table 68** (dollars in thousands).

Table 68

	Old Hire Fire	Old Hire Police
Total pension liability	$ 477,782	$ 683,289
Fiduciary net position	307,426	569,176
Net Pension Liability	**$ 170,356**	**$ 114,113**

For the year ended December 31, 2019, the City recognized $16,781,000 and $16,271,000 of pension expense for the Old Hire Fire and Old Hire Police plans, respectively. A summary of the City's deferred outflows of resources and deferred inflows of resources related to pensions for the Old Hire Fire and Old Hire Police plans as of December 31, 2019, is presented in **Table 69** (dollars in thousands).

Table 69

	Old Hire Fire	
	Deferred Outflows of Resources	**Deferred Inflows of Resources**
Difference between expected and actual experience	$ -	$ -
Changes of assumptions or other inputs	-	-
Net difference between projected and actual earnings on pension plan investments	11,935	-
Change in proportion	-	-
Contributions subsequent to the measurement date	17,248	-
Total	**$ 29,183**	**$ -**

	Old Hire Police	
	Deferred Outflows of Resources	**Deferred Inflows of Resources**
Difference between expected and actual experience	$ -	$ -
Changes of assumptions or other inputs	-	-
Net difference between projected and actual earnings on pension plan investments	22,666	
Change in proportion	-	-
Contributions subsequent to the measurement date	8,803	-
Total	**$ 31,469**	**$ -**

The $17,248,000 and $8,803,000 reported by the Old Hire Fire and Old Hire Police plans, respectively, as deferred outflows of resources related to pensions, resulting from contributions subsequent to the measurement date, will be recognized as a reduction of the net pension liability in the year ended December 31, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized as pension expense as presented in **Table 70** (dollars in thousands).

Table 70

Year	Old Hire Fire	Old Hire Police
2020	$ 5,381	$ 10,108
2021	1,573	3,153
2022	274	650
2023	4,707	8,755
2024	-	-
Thereafter	-	-
Total	**$ 11,935**	**$ 22,666**

The changes in net pension liability for Old Hire Fire and Old Hire Police plans are presented in **Table 71**.

Table 71

	Old Hire Fire		
	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
Balances as of January 1, 2019	$ 486,432	$ 334,242	**$ 152,190**
Changes for the year:			
Service cost	-	-	**-**
Interest	34,880	-	**34,880**
Differences between expected and actual experience	-	-	**-**
Changes of assumptions	-	-	**-**
Contributions - employer	-	16,355	**(16,355)**
Contributions - employee	-	3	**(3)**
Net investment income	-	531	**(531)**
Benefit payments	(43,529)	(43,529)	**-**
Administrative expense	-	(175)	**175**
Other changes	-	-	**-**
Total Net Changes	**$ (8,649)**	**$ (26,815)**	**$ 18,166**
Balances as of December 31, 2019	**$ 477,783**	**$ 307,427**	**$ 170,356**

	Old Hire Police		
	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
Balances as of January 1, 2019	$ 691,036	$ 618,126	**$ 72,910**
Changes for the year:			
Service cost	-	-	**-**
Interest	49,712	-	**49,712**
Differences between expected and actual experience	-	-	**-**
Changes of assumptions	-	-	
Contributions - employer	-	7,988	**(7,988)**
Contributions - employee	-	-	**-**
Net investment income	-	754	**(754)**
Benefit payments	(57,458)	(57,458)	**-**
Administrative expense	-	(233)	**233**
Other changes	-	-	**-**
Total Net Changes	**$ (7,746)**	**$ (48,949)**	**$ 41,203**
Balances as of December 31, 2019	**$ 683,290**	**$ 569,177**	**$ 114,113**

The long-term expected rate of return on pension plan investments was determined using a building block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the Plans target asset allocation as of December 31, 2018 are summarized in **Table 72**.

Table 72

Asset Class	Target Allocation	Long-Term Expected Rate of Return
Cash	2.00%	2.52%
Fixed income	15.00%	2.90%
Managed funds	4.00%	5.35%
Absolute return	9.00%	5.08%
Equity long/short	9.00%	6.45%
Global equity	37.00%	8.03%
Private markets	24.00%	10.00%
Total	**100.00%**	

The total pension liability in the December 31, 2018 actuarial valuation was determined using the actuarial assumptions and other inputs reflected in **Table 73**.

Table 73

	Old Hire Fire	Old Hire Police
Investment rate of return	7.50%	7.50%
Salary increases	n/a	n/a
Inflation	2.50%	2.50%

Mortality rates were based on the RP-2014 Mortality Tables for Blue Collar Employees for ages less than 55. For ages 65 and older, RP-2014 Mortality Tables for Blue Collar Healthy Annuitants. For ages 55 through 64, a blend of the previous tables. All tables are projected with Scale BB.

For Disabled (pre-1980), mortality rates were based on the RP-2014 Disabled Generational Mortality Table generationally projected with Scale BB with a minimum 3.00% rate for males and 2.00% rate for females.

The discount rate used to measure the total pension liability was 7.50%. The projection of cash flows used to determine the discount rate assumed that contributions from participating employers will be made based on the actuarially determined rates based on the Board's funding policy, which establishes the contractually required rates under Colorado statutes. Based on those assumptions, the plan fiduciary net position was projected to be available to make all the projected future benefit payments of current plan members. Therefore, the long-term expected rate of return of pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the City's Net Pension Liability to Changes in the Discount Rate. Table 74 presents the City's net pension liability, calculated using a discount rate of 7.50%, as well as what the City's net pension liability would be if it were calculated using a discount rate that is 1.00% lower (6.50%) or 1.00% higher (8.50%) (dollars in thousands):

Table 74

	1% Decrease 6.50%	Current Discount Rate 7.50%	1% Increase 8.50%
Old Hire Fire net pension liability	$ 211,348	$ 170,356	$ 134,867
Old Hire Police net pension liability	176,422	114,113	60,505

Pension Plan Fiduciary Net Position. Detailed information about the pension plan's fiduciary net position is available in the separately issued FPPA financial reports found at http://fppaco.org/toc_frames.html.

Each retirement system issues a publicly available financial report that includes financial statements and required supplementary information of that plan. Those reports are available by contacting:

Colorado PERA
P. O. Box 5800
Denver, Colorado 80217-5800

Denver Employees Retirement Plan
777 Pearl Street
Denver, Colorado 80203

Fire and Police Pension Association
5290 DTC Parkway, Suite 100
Greenwood Village, Colorado 80111

Note G - Other Post Employment Benefit (OPEB) Plans

The City has seven OPEB benefits covering substantially all employees of the primary government, as follows:

- Denver Employee Retirement Plan (DERP)
- DERP Implicit Rate Subsidy
- Public Employees' Retirement Association of Colorado (PERA) Plan Health Care Trust Fund (HCTF)
- Denver Police Retiree Health Fund (PRHF)
- Fire and Police Pension Association Statewide Death and Disability Plan (SWD&D)
- Fire and Police Implicit Rate Subsidy
- The Post Employment Health Plan (PEHP) for Firefighters

The majority of the City's employees, and certain employees of Denver Health and Hospital Authority, are covered under the Denver Employee Retirement Plan which includes an implicit rate subsidy. County court judges and the District Attorney are covered under the Public Employees' Retirement Association of Colorado Health Care Trust Fund. The Denver Police Retiree Health Fund covers individuals who became members after January 1, 1996 and are considered the classified service of the police department. The SWD&D Plan benefits are available for members not eligible for normal retirement under a defined benefit plan, or members who have not met 25 years of accumulated service and age 55 under a money purchase plan. The Fire and Police Pension Association Implicit Rate Subsidy cover eligible fire fighter retirees and police officer retirees who participate in the health insurance programs offered by the City. The Post Employment Health Plan for Firefighters includes firefighters covered by a collective bargaining agreement between the Union and the City to provide post-employment health benefits.

A summary of OPEB related items as of and for the year ended December 31, 2019, is presented in **Table 75** (dollars in thousands).

Table 75

OPEB Plan		Net OPEB Liability		Deferred Outflows of Resources		Deferred Inflows of Resources		OPEB Expense
DERP:								
Governmental Activities	$	80,472	$	12,426	$	496	$	6,199
Business-type Activities		17,837		3,354		466		1,388
HCTF		519		52		17		41
PRHF		11,349		5,068		1,173		1,176
Total	**$**	**110,177**	**$**	**20,900**	**$**	**2,152**	**$**	**8,804**

Implicit Rate Subsidy		OPEB Liability		Deferred Outflows of Resources		Deferred Inflows of Resources		OPEB Expense
DERP:								
Governmental Activities	$	69,228	$	8,401	$	122	$	5,142
Business-type Activities		10,467		1,426		452		733
Fire and Police		46,280		5,036		-		3,876
Total	**$**	**125,975**	**$**	**14,863**	**$**	**574**	**$**	**9,751**

1. The Denver Employee Retirement Health Plan (DERP) and DERP Implicit Rate Subsidy

1a. DERP Participants' Plan Description. The Denver Employees Retirement Plan (the Plan) administers a cost-sharing multiple-employer defined benefit plan providing pension and post-employment health benefits to eligible members. The Plan was established in 1963 by the City and County of Denver, Colorado. During 1996, the Denver Health and Hospital Authority (DHHA) was created and joined the Plan as a contractual entity. In 2001, the Plan became closed to new entrants from DHHA. All risks and costs are shared by the City and County of Denver (the City) and DHHA. There is a single actuarial evaluation performed annually that covers both the pension and post-employment health benefits. All assets of the Plan are funds held in trust by the Plan for its members for the exclusive purpose of paying pension and post-employment health benefits.

Sections 18-401 through 18-430.7 of the City's Revised Municipal Code should be referred to for complete details of the Plan.

The Plan provides retirement, death and disability benefits for its members and their beneficiaries. Members who were hired before September 1, 2004 and retire at or after age 65 (or at age 55 if the sum of their age and credited service is at least 75) are entitled to an annual retirement benefit, in an amount equal to 2.00% of their final average salary for each year of credited service, payable monthly for life. Effective for employees hired on or after September 1, 2004, the formula multiplier was reduced to 1.50%. Final average salary is based on the member's highest salary during a consecutive 36-month period of credited service. Members with five years of credited service may retire at or after age 55 and receive a reduced retirement benefit.

For members who were hired on or after July 1, 2011, they must be age 60 and have combined credited service of at least 85 in order to receive a normal retirement prior to age 65. Final average salary is based on the member's highest salary during a consecutive 60-month period of credited service. Five-year vesting is required of all employees in order to qualify for a benefit, regardless of their age at the time of termination of employment. Annual cost of living adjustment is granted on an ad hoc basis. The estimated cost of benefit and contribution provisions is determined annually by an independent actuary, recommended by the Plan's Board, and enacted into ordinance by the Denver City Council.

The health benefits account was established by City Ordinance in 1991 to provide, beginning January 1, 1992, post-employment health care benefits in the form of a premium reduction to retired members, their spouses and dependents, spouses and dependents of deceased active and retired members, and members of the Plan awaiting approval of retirement applications. During 2018, the monthly health insurance premium reduction was $12.50 per year of service for retired participants not yet eligible for Medicare, and $6.25 per year of service for retirees eligible for Medicare. The health insurance premium reduction can be applied to the payment of medical, dental, and/or vision insurance premiums. The benefit recipient pays any remaining portion of the premiums.

Funding Policy for DERP Participants. The City is required to contribute at a rate of 1.34% of annual covered payroll. The contribution requirements for the City are established under the City's Revised Municipal Code. For the year ended December 31, 2019, contributions were $4,855,000.

OPEB Liabilities, OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB. At December 31, 2019, the City reported a liability of $98,309,000 for its proportionate share of the net OPEB liability. The net OPEB liability was measured as of December 31, 2018, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of January 1, 2018. Standard update procedures were used to roll-forward the total OPEB liability to December 31, 2018. The City's proportion of the net OPEB was based on contributions to DERP for the calendar year 2018 relative to the total contributions of participating employers to the DERP.

At December 31, 2018, the City's proportion was 93.99% for OPEB, which was an increase of 0.63% from its proportion measured as of December 31, 2017.

The components of the City's proportionate share of the net OPEB liability related to DERP as of December 31, 2019, are presented in **Table 76** (dollars in thousands).

Table 76

OPEB Plan	**Governmental Activities**	**Business-type Activities**	**Total**
Total OPEB liability	$ 132,303	$ 29,326	$ 161,629
Plan fiduciary net positon	51,831	11,489	63,320
Net OPEB liability	**$ 80,472**	**$ 17,837**	**$ 98,309**

For the year ended December 31, 2019, the City recognized OPEB expense for the DERP plan of $7,587,000.

A summary of the City's deferred outflows of resources and deferred inflows of resources related to OPEB as of December 31, 2019, is presented in **Table 77** (dollars in thousands).

Table 77

OPEB Plan	Governmental Activities Deferred Outflows of Resources	Governmental Activities Deferred Inflows of Resources
Net difference between projected and actual earnings on OPEB plan investments	$ 373	$ -
Changes of assumptions or inputs	4,693	-
Net difference between projected and actual earnings on pension plan investments	2,294	-
Changes in proportion and differences between contributions recognized and proportionate share of contributions	1,124	496
Contributions subsequent to the measurement date	3,942	-
Total	**$ 12,426**	**$ 496**

OPEB Plan	Business-type Activities Deferred Outflows of Resources	Business-type Activities Deferred Inflows of Resources
Net difference between projected and actual earnings on OPEB plan investments	$ 83	$ -
Changes of assumptions or inputs	1,040	-
Net difference between projected and actual earnings on pension plan investments	508	-
Changes in proportion and differences between contributions recognized and proportionate share of contributions	810	466
Contributions subsequent to the measurement date	913	-
Total	**$ 3,354**	**$ 466**

OPEB Plan	Total Deferred Outflows of Resources	Total Deferred Inflows of Resources
Net difference between projected and actual earnings on OPEB plan investments	$ 456	$ -
Changes of assumptions or inputs	5,733	-
Net difference between projected and actual earnings on pension plan investments	2,802	-
Changes in proportion and differences between contributions recognized and proportionate share of contributions	1,934	962
Contributions subsequent to the measurement date	4,855	-
Total	**$ 15,780**	**$ 962**

The $4,855,000 reported as deferred outflows of resources related to OPEB, resulting from contributions subsequent to the measurement date, will be recognized as a reduction of the net OPEB liability in the year ended December 31, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB and the implicit rate subsidy will be recognized as OPEB expense as presented in **Table 78** (dollars in thousands).

Table 78

OPEB Plan Year	Governmental Activities	Business-type Activities	Total
2020	$ 2,117	$ 484	$ 2,601
2021	2,117	484	2,601
2022	2,007	530	2,537
2023	1,747	477	2,224
2024	-	-	-
Thereafter	-	-	-
Total	**$ 7,988**	**$ 1,975**	**$ 9,963**

The total OPEB liability in the January 1, 2018 actuarial valuation was determined using the following actuarial cost method, actuarial assumptions and other inputs presented in **Table 79**.

Table 79

OPEB Plan	DERP
Valuation date	January 1, 2018
Measurement date	December 31, 2018
Experience study	Conducted in 2018 covering the 5-year period of January 1, 2013 to December 31, 2017
Actuarial Method	Entry Age Normal
Long-term investment rate of return	7.50%
Discount rate	7.50%
Projected salary increases	3.00-7.00%
Inflation	2.50%
Mortality	RP-2014 Combined Mortality Table (genderspecific) projected with the Ultimate MP Scale with a multiplier of 110% male and 105% female

The target allocation and best estimates of geometric real rates of return for each major asset class are summarized in **Table 80**.

Table 80

Asset Class	Target Allocation	Long-Term Expected Rate of Return
U. S. Equities		
Large Cap	12.00%	4.90%
Large Cap Value	3.50%	5.30%
Large Cap Growth	3.50%	4.70%
Small Cap Value	2.20%	5.50%
Small Cap Growth	1.30%	5.00%
Total U.S. Equities	**22.50%**	
International Equities		
International Large Cap	2.00%	5.80%
International Large Cap Value	4.00%	6.30%
International Large Cap Growth	4.00%	5.50%
International Small Cap Value	5.50%	6.00%
Emerging Markets	8.00%	7.80%
Total International Equities	**23.50%**	
Fixed Income		
Governments	5.00%	0.60%
Core Fixed Income	6.50%	1.10%
Emerging Market Debt	2.50%	4.60%
Private Debt	4.00%	7.50%
Distress Debt	2.50%	7.50%
Total Fixed Income	**20.50%**	
Real Estate		
Non-Core Real Estate	3.20%	5.90%
Core Real Estate	4.80%	4.10%
Total Real Estate	**8.00%**	
Alternatives		
Hedge Funds	5.00%	2.60%
MLP	7.00%	7.20%
Private Equity	7.00%	7.50%
Private Energy	5.50%	7.30%
Timber	1.00%	3.60%
Total Alternatives	**25.50%**	
Total Asset Class	**100.00%**	

Discount rate. A single discount rate of 7.50% was used to measure the total OPEB liability. This single discount rate was based on the expected rate of return on OPEB plan investments of 7.50%. The projection of cash flows used to determine this single rate assumed that plan member and employer contributions will be made at the current contribution rate. Based on these assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability.

Sensitivity of the City's proportionate share of the net OPEB liability to changes in Discount Rate. Table 81 presents the net OPEB liability using the current discount rate applicable to the DERP benefit structure, as well as if it were calculated using a discount rate that is 1 percentage-point lower or 1 percentage-point higher (dollars in thousands).

Table 81

City's proportionate share of the net OPEB liability	1% Decrease 6.50%	Current Discount Rate 7.50%	1% Increase 8.50%
Governmental Activities	$ 93,502	$ 80,472	$ 69,388
Business-type activities	20,725	17,837	15,380
Total	**$ 114,227**	**$ 98,309**	**$ 84,768**

As the plan is paid at a fixed dollar value, there is not an actuarially adjusted value for healthcare costs and thus Healthcare Cost Trend Rates are not applicable to this plan.

OPEB plan fiduciary net position. Detailed information about the DERP's fiduciary net position is available in DERP's comprehensive annual financial report which can be obtained at www.derp.org.

1b. DERP Implicit Rate Subsidy

DERP Implicit Subsidy Plan Description. The City acts in a single-employer capacity by providing health insurance to eligible Career Service retirees and their qualified dependents through the City's group insurance plans. The claims experience of active employees and pre-Medicare retirees is co-mingled in setting premium rates for the plans in which City employees and retirees participate. To be eligible, a retiree must be a minimum of 55 years of age if hired prior to July 1, 2011, and a minimum of 60 years of age if hired after July 1, 2011, with 5 years of service and have begun receiving their pension benefit. Coverage ceases when one reaches Medicare age.

Funding Policy for DERP Implicit Subsidy Plan. DERP retirees are responsible for 100.00% of the blended premium rate, The City's required contribution toward the implicit rate subsidy is based on pay-as-you-go financing. No assets are accumulated in a trust to pay for benefits. For the year ended December 31, 2019, contributions were $6,832,000.

Participation Rate DERP Implicit Subsidy Plan. As authorized by section 18-412 of the City's Revised Municipal Code, DERP retirees are allowed to participate in the health insurance programs offered to active employees.

- **Participating active employees:** 50.00% of active DERP employees currently covered in the City's medical plans are assumed to continue their current medical plan election in retirement.
- **Actives not currently participating:** 25.00% of active DERP employees not currently covered by a City healthcare plan are assumed to elect coverage in the Kaiser DHMO plan at or before retirement.
- **Vested terminated employees**: 40.00% of vested terminated employees with 16 or more years of City/County service are assumed to elect coverage in the Kaiser DHMO plan when they retire and begin their pension benefits.
- **Retired participants:** Existing medical plan elections are assumed to be continued through retirement until the earlier of the retiree's death or the date he or she becomes eligible for Medicare.

Spouse Coverage

- **Active participants:** 25% of those assumed to elect coverage in retirement are assumed to be married participants electing coverage for their spouse until their death. Husbands are assumed to be three years older than their wives.
- **Retired participants:** Existing elections for spouse coverage are assumed to be maintained through retirement. Actual spouse information is used where available; otherwise the assumptions for spouses of active employees are applied.

Excise tax on high-cost plans

The Patient Protection and Affordable Care Act (ACA) included a 40% excise tax on high-cost employer sponsored health coverage. The tax applied to the aggregate annual cost of an employee's applicable coverage that exceeds a dollar limit. Implementation of this tax had been delayed by subsequent legislation to 2022. This excise tax was repealed by Senate Amendment to H.R. 1865, Further Consolidated Appropriations Act, 2020, and signed by the President on December 20, 2019. Although this change occurred after the valuation date and measurement date, the assumptions changed, now assuming the City will no longer bear any such excise tax liability

Table 82 displays Plan participants at December 31, 2018, the date of the latest actuarial valuation.

Table 82

	Plan Participants
Inactive employees currently receiving benefit payments	1,124
Inactive employees entitled to but not yet receiving benefit payments	306
Active employees	8,755
Total	**10,185**

The components of the implicit rate subsidy liability related to DERP as of December 31, 2019, are presented in **Table 83** (dollars in thousands).

Table 83

Implicit Rate Subsidy	Governmental Activities	Business-type Activities	Total
Total OPEB liability	$ 69,228	$ 10,467	$ 79,695

For the year ended December 31, 2019, the City recognized OPEB expense of $5,875,000 for the implicit rate subsidy. A summary of the City's deferred outflows of resources and deferred inflows of resources related to OPEB as of December 31, 2019, is presented in **Table 84** (dollars in thousands).

Table 84

	Governmental Activities	
Implicit Rate subsidy	**Deferred Outflows of Resources**	**Deferred Inflows of Resources**
Difference between expected actual experience	$ 482	$ -
Changes of assumptions or other inputs	1,623	-
Changes in proportion	361	122
Benefit claims made subsequent to the measurement date	5,935	-
Total	**$ 8,401**	**$ 122**

	Business-type Activities	
Implicit Rate subsidy	**Deferred Outflows of Resources**	**Deferred Inflows of Resources**
Difference between expected actual experience	$ 73	$ -
Changes of assumptions or other inputs	236	-
Changes in proportion	220	452
Benefit claims made subsequent to the measurement date	897	-
Total	**$ 1,426**	**$ 452**

	Total	
Implicit Rate subsidy	**Deferred Outflows of Resources**	**Deferred Inflows of Resources**
Difference between expected actual experience	$ 555	$ -
Changes of assumptions or other inputs	1,859	-
Changes in proportion	581	574
Benefit claims made subsequent to the measurement date	6,832	-
Total	**$ 9,827**	**$ 574**

The $6,832,000 reported as deferred outflows of resources related to the implicit rate subsidy, resulting from benefit claims paid subsequent to the measurement date, will be recognized as a reduction of the net implicit rate subsidy liability in the year ended December 31, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB and the implicit rate subsidy will be recognized as OPEB expense as presented in **Table 85** (dollars in thousands).

Table 85

Implicit Rate Subsidy Year	Governmental Activities	Business-type Activities	Total
2020	$ 339	$ 6	$ 345
2021	339	6	345
2022	339	6	345
2023	339	6	345
2024	339	6	345
Thereafter	649	47	696
Total	**$ 2,344**	**$ 77**	**$ 2,421**

The implicit rate subsidy liability in the December 31, 2018 actuarial valuation was determined using the following actuarial cost method, actuarial assumptions and other inputs presented in **Table 86**.

Table 86

Implicit Rate Subsidy	DERP
Valuation date	December 31, 2018
Measurement date	December 31, 2018
Actuarial Method	Entry Age Normal
Asset valuation method	Market value of assets ($0; plan is not yet funded)
Discount rate	4.11%
Participants valued	Only current active employees under age 65, non-Medicare retired participants and covered spouses are valued. No future entrants are considered in this valuation.
Projected salary increases	3.00% per year
Inflation	2.50%
Mortality	RP-2000 MacLeod Watts Scale 2018 projected generationally from 2000.
Healthcare trend	Medical plan premiums and claims costs by age are assumed to increase 1.05% each January 1 of 2017-2021. On January 1, 2022 and later the rate is 5%.
Medicare eligibility	Presumed to be eligible for Medicare Parts A and B at age 65
Demographic assumptions	Follow those used in the most recent (January 2018) actuarial valuation of the Denver Employees Retirement Plan, except for a different basis used to project future mortality improvements.

Discount rate. When the financing of OPEB liabilities is on a pay-as-you-go basis, GASB 75 requires that the discount rate used for valuing liabilities be based on the yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale). The basis chosen by the City was the Bond Buyer General Obligation 20 – Bond Municipal Bond Index. As such, a 4.11% discount was used to measure the implicit rate liability.

Sensitivity of the City's implicit rate subsidy liability to changes in the Health Care Cost Trend Rates. **Table 87** presents the total OPEB liability using the current discount rate applicable to the DERP benefit structure, as well as if it were calculated using a discount rate that is 1 percentage-point lower or 1 percentage-point higher (dollars in thousands).

Table 87

OPEB Liability - Implicit Rate Subsidy	1% Decrease 3.11%	Current Discount Rate 4.11%	1% Increase 5.11%
Governmental Activities	$ 74,652	$ 69,228	$ 64,336
Business-type activities	11,286	10,467	9,727
Total	**$ 85,938**	**$ 79,695**	**$ 74,063**

The change in the healthcare cost trend rate is presented in **Table 88** (dollars in thousands).

Table 88

Change in Healthcare Cost Trend Rate	Current Trend (1.00%)	Current Trend	Current Trend 1.00%
Governmental Activities OPEB Liability	$ 63,652	$ 69,228	$ 75,756
Increase (decrease)	(5,576)		6,528
% Increase (decrease)	(8.05%)		9.43%
Business-type Activities OPEB Liability	$ 9,610	$ 10,467	$ 11,454
Increase (decrease)	(857)	-	987
% Increase (decrease)	(8.19%)	0.00%	9.43%

The change in the total OPEB liability is presented in **Table 89** (dollars in thousands).

Table 89

	Total OPEB Liability
Balances as of January 1, 2019	$ 78,593
Changes for the year:	
Service cost	2,742
Interest	2,788
Benefit changes	-
Differences between expected and actual experience	628
Changes of assumptions	987
Benefit payments	(6,043)
Employee contributions	-
Employer contributions	-
Net investment income	-
Benefit payments	-
Administrative expense	-
Total Net Changes	**$ 1,102**
Balances as of December 31, 2019	**$ 79,695**

2. Public Employees' Retirement Association of Colorado (PERA)

PERA Participants' Plan Description. The City provides OPEB to county judges and the District Attorney through the HCTF—a cost-sharing multiple-employer defined benefit OPEB plan administered by PERA. The HCTF is established under Title 24, Article 51, Part 12 of the Colorado Revised Statutes (C.R.S.), as amended. Colorado State law provisions may be amended from time to time by the Colorado General Assembly. Title 24, Article 51, Part 12 of the C.R.S., as amended, sets forth a framework that grants authority to the PERA Board to contract, self-insure, and authorize disbursements necessary in order to carry out the purposes of the PERACare program, including the administration of the premium subsidies. Colorado State law provisions may be amended from time to time by the Colorado General Assembly.

The HCTF provides a health care premium subsidy to eligible participating PERA benefit recipients and retirees who choose to enroll in one of the PERA health care plans, however, the subsidy is not available if only enrolled in the dental and/or vision plan(s). The health care premium subsidy is based upon the benefit structure under which the member retires and the member's years of service credit. For members who retire having service credit with employers in the Denver Public Schools (DPS) Division and one or more of the other four Divisions (State, School, Local Government and Judicial), the premium subsidy is allocated between the HCTF and the Denver Public Schools Health Care Trust Fund (DPS HCTF). The basis for the amount of the premium subsidy funded by each trust fund is the percentage of the member contribution account balance from each division as it relates to the total member contribution account balance from which the retirement benefit is paid.

C.R.S. § 24-51-1202 et seq. specifies the eligibility for enrollment in the health care plans offered by PERA and the amount of the premium subsidy. The law governing a benefit recipient’s eligibility for the subsidy and the amount of the subsidy differs slightly depending under which benefit structure the benefits are calculated. All benefit recipients under the PERA benefit structure and all retirees under the DPS benefit structure are eligible for a premium subsidy, if enrolled in a health care plan under PERACare.

Enrollment in the PERACare is voluntary and is available to benefit recipients and their eligible dependents, certain surviving spouses, and divorced spouses and guardians, among others. Eligible benefit recipients may enroll into the program upon retirement, upon the occurrence of certain life events, or on an annual basis during an open enrollment period.

The maximum service-based premium subsidy is $230 per month for benefit recipients who are under 65 years of age and who are not entitled to Medicare; the maximum service-based subsidy is $115 per month for benefit recipients who are 65 years of age or older or who are under 65 years of age and entitled to Medicare. The basis for the maximum service-based subsidy, in each case, is for benefit recipients with retirement benefits based on 20 or more years of service credit. There is a 5 % reduction in the subsidy for each year less than 20. The benefit recipient pays the remaining portion of the premium to the extent the subsidy does not cover the entire amount.

For benefit recipients who have not participated in Social Security and who are not otherwise eligible for premium-free Medicare Part A for hospital-related services, C.R.S. § 24-51-1206(4) provides an additional subsidy. According to the statute, PERA cannot charge premiums to benefit recipients without Medicare Part A that are greater than premiums charged to benefit recipients with Part A for the same plan option, coverage level, and service credit. Currently, for each individual PERACare enrollee, the total premium for Medicare coverage is determined assuming plan participants have both Medicare Part A and Part B and the difference in premium cost is paid by the HCTF or the DPS HCTF on behalf of benefit recipients not covered by Medicare Part A.

Funding Policy for PERA Participants’ Plan. The City is required to contribute at a rate of 1.02% of PERA-includable salary for all PERA members. No member contributions are required. The contribution requirements for the City are established under Title 24, Article 51, Section 208(1)(f) of the C.R.S, as amended. For the year ended December 31, 2019, contributions to the HCTF were $35,000.

OPEB Liabilities, OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB. At December 31, 2019, the City reported a liability of $519,000 for its proportionate share of the net OPEB liability. The net OPEB liability for the HCTF was measured as of December 31, 2018, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of December 31, 2016. Standard update procedures were used to roll-forward the total OPEB liability to December 31, 2018. The City's proportion of the net OPEB liability was based on contributions to the HCTF for the calendar year 2018 relative to the total contributions of participating employers to the HCTF.

At December 31, 2018, the City's proportion was 3.82%, which was a decrease of 0.002% from its proportion measured as of December 31, 2017.

The components of the City's proportionate share of the net OPEB liability related to PERA HCTF as of December 31, 2019, are presented in **Table 90** (dollars in thousands).

Table 90

		HCTF
Total OPEB liability	$	626
Plan fiduciary net position		107
Net OPEB liability	**$**	**519**

For the year ended December 31, 2019, the City recognized OPEB expense for the PERA HCTF plan of $41,000. A summary of the City's deferred outflows of resources and deferred inflows of resources related to OPEB as of December 31, 2019, is presented in **Table 91** (dollars in thousands).

Table 91

	HCTF			
	Deferred Outflows of Resources		Deferred Inflows of Resources	
Difference between expected and actual experience	$	2	$	1
Changes in assumptions or other inputs		4		-
Net difference between projected and actual earnings on OPEB plan investments		4		-
Change in proportion		7		16
Contributions subsequent to the measurement date		35		-
Total	**$**	**52**	**$**	**17**

The $35,000 reported as deferred outflows of resources related to OPEB, resulting from contributions subsequent to the measurement date, will be recognized as a reduction of the net OPEB liability in the year ended December 31, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized as OPEB expense as presented in **Table 92** (dollars in thousands).

Table 92

Year		HCTF
2020	$	3
2021		-
2022		-
2023		2
2024		(2)
Thereafter		(3)
Total	**$**	**-**

The total OPEB liability in the December 31, 2017 actuarial valuation was determined using the following actuarial cost method, actuarial assumptions and other inputs presented in **Table 93**.

Table 93

HCTF	
Valuation date	December 31, 2017
Measurement date	December 31, 2018
Actuarial Method	Entry Age Normal
Price inflation	2.40%
Real wage growth	1.10%
Wage inflation	3.50%
Salary increases, including wage inflation	3.50% in aggregate
Long-term investment rate of return, net of OPEB investment expenses, including price inflation	7.25%
Discount rate	7.25%
Health care cost trend rates PERA benefit structure:	
Service-based premium subsidy	0.00%
PERACare Medicare plans	5.00%
Medicare Part A premiums	3.25% gradually increasing to 5.00% in 2025

Calculations are based on the benefits provided under the terms of the substantive plan in effect at the time of each actuarial valuation and on the pattern of sharing of costs between employers of each fund to that point.

Health care cost trend rates reflect the change in per capita health costs over time due to factors such as medical inflation, utilization, plan design, and technology improvements. For the PERA benefit structure, health care cost trend rates are needed to project the future costs associated with providing benefits to those PERACare enrollees not eligible for premium-free Medicare Part A.

Health care cost trend rates for the PERA benefit structure are based on published annual health care inflation surveys in conjunction with actual plan experience (if credible), building block models and heuristics developed by health plan actuaries and administrators, and projected trends for the Federal Hospital Insurance Trust Fund (Medicare Part A premiums) provided by the Centers for Medicare & Medicaid Services. Effective December 31, 2016, the health care cost trend rates for Medicare Part A premiums were revised to reflect the current expectation of future increases in rates of inflation applicable to Medicare Part A premiums.

The PERA benefit structure health care cost trend rates that were used to measure the total OPEB liability are presented in **Table 94**.

Table 94

Year	**PERACare Plans**	**Medicare Part A Premiums**
2018	5.00%	3.25%
2019	5.00%	3.50%
2020	5.00%	3.75%
2021	5.00%	4.00%
2022	5.00%	4.25%
2023	5.00%	4.50%
2024	5.00%	4.75%
Thereafter	5.00%	5.00%

Mortality assumptions for the determination of the total pension liability for each of the Division Trust Funds as shown below are applied, as applicable, in the determination of the total OPEB liability for the HCTF. Affiliated employers of the State, School, Local Government, and Judicial Divisions participate in the HCTF.

Healthy mortality assumptions for active members were based on the RP-2014 White Collar Employee Mortality Table, a table specifically developed for actively working people. To allow for an appropriate margin of improved mortality prospectively, the mortality rates incorporate a 70%, factor applied to male rates and a 55.00% factor applied to female rates.

Healthy, post-retirement mortality assumptions for the State and Local Government Divisions were based on the RP-2014 Healthy Annuitant Mortality Table, adjusted as follows:

- **Males:** Mortality improvement projected to 2019 using the MP-2015 projection scale, a 73% factor applied to rates for ages less than 80, a 108% factor applied to rates for ages 80 and above, and further adjustments for credibility.
- **Females:** Mortality improvement projected to 2020 using the MP-2015 projection scale, a 78% factor applied to rates for ages less than 80, a 109% factor applied to rates for ages 80 and above, and further adjustments for credibility.

Healthy, post-retirement mortality assumptions for the School and Judicial Divisions were based on the RP-2014 White Collar Healthy Annuitant Mortality Table, adjusted as follows:

- **Males:** Mortality improvement projected to 2019 using the MP-2015 projection scale, a 93 % factor applied to rates for ages less than 80, a 113 % factor applied to rates for ages 80 and above, and further adjustments for credibility.
- **Females:** Mortality improvement projected to 2020 using the MP-2015 projection scale, a 68 % factor applied to rates for ages less than 80, a 106 % factor applied to rates for ages 80 and above, and further adjustments for credibility.

For disabled retirees, the mortality assumption was based on 90 % of the RP-2014 Disabled Retiree Mortality Table.

The following economic and demographic assumptions were specifically developed for, and used in, the measurement of the obligations for the HCTF:

- The assumed rates of PERACare participation were revised to reflect more closely actual experience.
- Initial per capita health care costs for those PERACare enrollees under the PERA benefit structure who are expected to attain age 65 and older ages and are not eligible for premium-free Medicare Part A benefits were updated to reflect the change in costs for the 2018 plan year.
- The percentage of PERACare enrollees who will attain age 65 and older ages and are assumed to not qualify for premium-free Medicare Part A coverage were revised to more closely reflect actual experience.
- The percentage of disabled PERACare enrollees who are assumed to not qualify for premium-free Medicare Part A coverage were revised to reflect more closely actual experience.
- Assumed election rates for the PERACare coverage options that would be available to future PERACare enrollees who will qualify for the “No Part A Subsidy” when they retire were revised to more closely reflect actual experience.

- Assumed election rates for the PERACare coverage options that will be available to those current PERACare enrollees, who qualify for the “No Part A Subsidy” but have not reached age 65, were revised to more closely reflect actual experience.
- The health care cost trend rates for Medicare Part A premiums were revised to reflect the then-current expectation of future increases in rates of inflation applicable to Medicare Part A premiums.
- The rates of PERACare coverage election for spouses of eligible inactive members and future retirees were revised to more closely reflect actual experience.
- The assumed age differences between future retirees and their participating spouses were revised to reflect more closely actual experience.

The actuarial assumptions used in the December 31, 2017, valuations were based on the results of the 2016 experience analysis for the periods January 1, 2012, through December 31, 2015, as well as, the October 28, 2016, actuarial assumptions workshop and were adopted by the PERA Board during the November 18, 2016, Board meeting. In addition, certain actuarial assumptions pertaining to per capita health care costs and their related trends are analyzed and reviewed by PERA’s actuary, as needed.

The long-term expected return on plan assets is reviewed as part of regular experience studies prepared every four or five years for PERA. Recently, this assumption has been reviewed more frequently. The most recent analyses were outlined in presentations to PERA’s Board on October 28, 2016.

Several factors were considered in evaluating the long-term rate of return assumption for the HCTF, including long-term historical data, estimates inherent in current market data, and a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected return, net of investment expense and inflation) were developed for each major asset class. These ranges were combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and then adding expected inflation.

As of the most recent adoption of the long-term expected rate of return by the PERA Board, the target asset allocation and best estimates of geometric real rates of return for each major asset class are presented in **Table 95**.

Table 95

Asset Class	Target Allocation	30-Year Expected Geometric Real Rate of Return
U.S. equity - large cap	21.20%	4.30%
U.S. equity - small cap	7.42%	4.80%
Non U.S. equity - developed	18.55%	5.20%
Non U.S. equity - emerging	5.83%	5.40%
Core fixed income	19.32%	1.20%
High yield	1.38%	4.30%
Non U.S. fixed income - developed	1.84%	0.60%
Emerging market debt	0.46%	3.90%
Core real estate	8.50%	4.90%
Opportunity fund	6.00%	3.80%
Private cash equity	8.50%	6.60%
Cash	1.00%	0.20%
Total Asset Class	**100.00%**	

In setting the long-term expected rate of return, projections employed to model future returns provide a range of expected long-term returns that, including expected inflation, ultimately support a long-term expected rate of return assumption of 7.25%.

Sensitivity of the City's proportionate share of the net OPEB liability to changes in the Health Care Cost Trend Rates.

Table 96 presents the net OPEB liability using the current health care cost trend rates applicable to the PERA benefit structure, as well as if it were calculated using health care cost trend rates that are one percentage-point lower or one percentage-point higher (dollars in thousands).

Table 96

	1% Decrease	Current Trend Rate	1% Increase
PERACare Medicare Trend Rate	4.00%	5.00%	6.00%
Initial Medicare Part A Trend Rate	2.25%	3.25%	4.25%
Ultimate Medicare Part A Trend Rate	3.25%	4.25%	5.25%
Net OPEB Liability	**$ 505**	**$ 519**	**$ 536**

Discount rate. The discount rate used to measure the total OPEB liability was 7.25%. The projection of cash flows used to determine the discount rate applied the actuarial cost method and assumptions shown above. In addition, the following methods and assumptions were used in the projection of cash flows:

- Updated health care cost trend rates for Medicare Part A premiums as of the December 31, 2018 measurement date.
- Total covered payroll for the initial projection year consists of the covered payroll of the active membership present on the valuation date and the covered payroll of future plan members assumed to be hired during the year. In subsequent projection years, total covered payroll was assumed to increase annually at a rate of 3.50%.
- Employer contributions were assumed to be made at rates equal to the fixed statutory rates specified in law and effective as of the measurement date. For future plan members, employer contributions were reduced by the estimated amount of total service costs for future plan members.
- Employer contributions and the amount of total service costs for future plan members were based upon a process used by the plan to estimate future actuarially determined contributions assuming an analogous future plan member growth rate.
- Transfers of a portion of purchase service agreements intended to cover the costs associated with OPEB benefits were estimated and included in the projections.
- Benefit payments and contributions were assumed to be made at the end of the month.

Based on the above assumptions and methods, the projection test indicates the HCTF's fiduciary net position was projected to make all projected future benefit payments of current members. Therefore, the long-term expected rate of return of 7.25% on OPEB plan investments was applied to all periods of projected benefit payments to determine the total OPEB liability. The discount rate determination does not use the municipal bond index rate, and therefore, the discount rate is 7.25%.

Sensitivity of the City's proportionate share of the net OPEB liability to changes in the discount rate.

Table 97 presents the proportionate share of the net OPEB liability calculated using the discount rate of 7.25%, as well as what the proportionate share of the net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) (dollars in thousands).

Table 97

	1% Decrease 6.25%	Current Discount Rate 7.25%	1% Increase 8.25%
City's proportionate share of the net OPEB liability	$ 581	$ 519	$ 466

OPEB plan fiduciary net position. Detailed information about the HCTF's fiduciary net position is available in PERA's comprehensive annual financial report which can be obtained at www.copera.org/investments/pera-financial-reports.

3. The Denver Police Retiree Health Fund (PRHF)

Denver Police Retiree Health Fund Plan Description. The City acts in a single-employer capacity by providing health insurance to eligible Police retirees and their qualified dependents through the City's group insurance plans. Denver Police retirees are allowed to participate in the health insurance programs offered to active employees. To be eligible, a retiree must terminate his/her employment on or after January 1, 1996, and has a vested right to receive a pension from the State of Colorado Fire and Police Pension Association based on years of service as an employee, whether or not such individual is currently eligible to receive or is receiving such a pension; or any former employee who commences on or after January 1, 1996, to receive and is thereafter receiving a total disability pension from the State of Colorado Fire and Police Pension Association. Coverage ceases when one reaches Medicare age. As of the December 31, 2018 actuarial valuation, there are 1,517 active employees under age 65 covered under the health insurance plans and 73 vested terminated employees. In addition, there are 207 retired employees not yet covered by Medicare who are covered by the plans.

Funding Policy for Denver Police Retiree Health Fund Participants. The City contributes annual contributions to the Denver Police Retiree Health Fund as stipulated in the respective collective bargaining agreement. As of December 31, 2019, the City contributed $1,078,000 to the fund as stipulated in Article 29.1 of the collective bargaining agreement.

The monthly benefit for a Recipient shall not exceed the lesser of:

- The Plan's Maximum Monthly Benefit of $200;
- 100.00% of the Recipient's actual health insurance, which amount is to be used for the exclusive purpose of paying or defraying such health insurance costs. There will be a presumption that the Recipient's health insurance costs are in the amount shown by such proof as is required by the Administrator; and
- The amount based upon a Recipient's years of service as a member of the Police Department of the City is reflected in **Table 98**:

Table 98

Years of Service	Percentage of the Maximum Monthly Benefit
10-14	40.00%
15-19	60.00%
20-24	80.00%
25+	100.00%

OPEB Liabilities, OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB. At December 31, 2019, the City reported a liability of $11,349,000 for the net OPEB liability. The net OPEB liability for the Denver Police Retiree Fund was measured as of December 31, 2018, and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of December 31, 2018. Standard update procedures were used to roll-forward the total OPEB liability to December 31, 2018.

The components of the net OPEB liability related to the Denver Police Retiree Fund as of December 31, 2019 are presented in **Table 99** (dollars in thousands).

Table 99

	PRHF
Total OPEB liability	$ 15,536
Plan fiduciary net positon	4,187
Net OPEB liability	**$ 11,349**
Plan Fiduciary Net Position as percentage of total OPEB liability	**26.95%**

For the year ended December 31, 2019, the City recognized OPEB expense for the Denver Police Retiree Health Fund of $1,176,000. A summary of the City's deferred outflows of resources and deferred inflows of resources related to OPEB as of December 31, 2019, is presented in **Table 100** (dollars in thousands).

Table 100

	PRHF	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	-	1,173
Changes of assumptions or other inputs	3,796	
Net difference between projected and actual earnings on OPEB plan investments	194	-
Contributions subsequent to the measurement date	1,078	-
Total	**$ 5,068**	**$ 1,173**

The $1,078,000 reported as deferred outflows of resources related to OPEB, resulting from contributions subsequent to the measurement date, will be recognized as a reduction of the net OPEB liability in the year ended December 31, 2019. Other amounts reported as deferred inflows of resources will be recognized as OPEB expense as presented in **Table 101**.

Table 101

Year	PRHF
2020	324
2021	324
2022	324
2023	377
2024	289
Thereafter	1,179
	$ 2,817

The total OPEB liability determined using the following actuarial cost method, actuarial assumptions and other inputs is presented in **Table 102**.

Table 102

	PRHF
Valuation Date	December 31, 2018
Actuarial method	Entry age normal
Discount rate	4.65%
Asset valuation method	Market value assets
Salary increases, including wage inflation	3.00%
Investment Rate of Return, net of OPEB plan investment expenses, including price inflation	6.00%

The current assumptions were adopted by the Board in 2017 for first use in this valuation following a regularly scheduled experience study. The rationale for all of the current assumptions is included in that report, dated July 1, 2017.

Participants Valued:

Only current active employees and retired participants and covered dependents are valued. No future entrants are considered in this valuation.

Mortality rates:

- **Healthy retirees and beneficiaries:** For ages less than 55, RP-2014 Mortality Tables for Blue Collar Employees. For ages 65 and older, RP-2014 Mortality Tables for Blue Collar Healthy Annuitants. For ages 55 through 64, a blend of the previous tables. All tables are projected with Scale BB.
- **Active Members:** RP-2014 Mortality Tables for Blue Collar Employees, projected with Scale BB, 55.00% multiplier for off-duty mortality. Increased by 0.02% for on-duty related Fire and Police experience.
- **Mortality Improvement:** MacLeod Watts Scale 2018 applied generationally.

Future Increases in the Maximum Monthly Benefit:

The Maximum Monthly Benefit paid by the Fund is assumed to increase at the rate of 1.50% to 3.50% per year.

Participation Rate:

- **Active and vested former employees:** All future retirees who qualify for benefits under this program will elect to receive them and that their monthly benefit will be the vested portion of the Maximum Monthly Benefit.
- **Retired participants:** All existing retirees are assumed to receive the vested portion of the Maximum Monthly Benefit for the remaining period for which they qualify for payments.

Surviving Spouse Benefits:

- **Active and vested terminated participants:** 50.00% of future retirees are assumed to have a spouse who might qualify for continuation of benefits in the event that the employee dies in the line of duty or after retirement and prior to receiving all of his or her benefits under this Program. Husbands are assumed to be three years older than their wives.
- **Retired participants:** Current spouse coverage information was used to project potential survivor benefits for existing retirees.

The target allocations for each major asset class are summarized in **Table 103**.

Table 103

Asset Class	Target Allocation
Stocks, options, and ETFs	80.91%
Cash	0.27%
Mutual funds	18.82%
Total Asset Class	**100.00%**

Discount rate. The discount rate used to measure the total OPEB liability decreased from 6.00% to 4.65%. The projection of cash flows used to determine the discount rate applied the actuarial cost method and assumptions shown above. In addition, the following methods and assumptions were used in the projection of the cash flows:

The City's contribution to the Fund have exceeded 100.00% of the Actuarially Determined Contributions (ADC) and it is assumed that future City contribution levels will continue at or above the currently negotiated levels. As such, with the City's approval, the discount rate used in this valuation is 4.65%, the long term expected return on trust assets. The ADC are based on the following two components, which are then adjusted with interest to fiscal year end:

- The amounts attributed to service performed in the current fiscal year (the normal cost) and
- Amortization of the unfunded actuarial accrued liability (UAAL) over a closed 20-year period with payments determined as a level percent of payroll (using an assumed 3.00% per year aggregate payroll increase).

Sensitivity of the net OPEB liability to changes in the discount rate and Health Care Cost Trend Rates. The discount rate used for net OPEB liability is 4.65%. Healthcare Cost Trend Rate (as applied in projecting future increases in maximum benefits provided by the Fund) is 3.5% per year. The impact of 1.00% increase or decrease in these assumptions is shown in **Table 104**.

Table 104

Chanage in Discount rate	Current - 1.00% 3.65%	Current 4.65%	Current + 1.00% 5.65%
Net OPEB liability	$ 12,625	$ 11,349	$ 10,178
Increase (decrease)	1,275		(1,171)
% Increase (decrease)	11.20%		(10.30%)

Change in Healthare Cost Trend Rate	Current Trend (1.00%)	Current Trend	Current Trend + 1.00%
Net OPEB liability	$ 9,860	$ 11,349	$ 13,064
Increase (decrease)	(1,489)		1,715
% Increase (decrease)	(13.10%)		15.10%

The change in the net OPEB liability is presented in **Table 105** (dollars in thousands).

Table 105

	2019		
	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
Balances as of January 1, 2019	$ 11,971	$ 3,874	$ 8,097
Changes for the Year:			
Service cost	372	-	372
Interest	727	-	727
Benefit Changes	-	-	-
Differences between expected and actual experience	(1,302)	-	(1,302)
Changes of assumptions	4,214	-	4,214
Benefit payments	(446)	-	(446)
Employee contributions	-	-	-
Employer contributions	-	955	(955)
Net invesment income	-	(196)	196
Benefit payments	-	(446)	446
Administrative expense	-	-	-
Total Net Changes	**$ 3,565**	**$ 313**	**$ 3,252**
Balances as of December 31, 2019	**$ 15,536**	**$ 4,187**	**$ 11,349**

4. SWD&D Participants' Plan Description.

The Plan is a cost-sharing multiple-employer defined benefit death and disability plan covering full-time employees of substantially all fire and police departments in Colorado. As of August 5, 2003, the Plan may include part-time police and fire employees. Contributions to the Plan are used solely for the payment of death and disability benefits. Employers who are covered by Social Security may elect supplementary coverage by the Plan. The Plan was established in 1980 pursuant to Colorado Revised Statutes and currently has 269 participating employer departments. Included in that number are 6 contributing employers as of December 31, 2018, who are covered by Social Security and have elected supplementary coverage by the Plan. The Plan assets are included in the Fire & Police Members' Benefit Investment Fund. Plan benefits provide 24-hour coverage, both on- and off-duty and are available for members not eligible for normal retirement under a defined benefit plan, or members who have not met 25 years of accumulated service and age 55 under a money purchase plan. In the case of an on-duty death, benefits may be payable to the surviving spouse or dependent children of active members who were eligible to retire but were still working. Death and disability benefits are free from state and federal taxes in the event that a member's disability is determined to be the result of an on-duty injury or an occupational disease.

Funding Policy for SWD&D Participants' Plan. Prior to 1997, the Plan was primarily funded by the State of Colorado, whose contributions were established by Colorado statute. In 1997 the State made a one-time contribution of $39,000,000 to fund past and future service costs for all firefighters and police officers hired prior to January 1, 1997. No further State contributions are anticipated. Members hired on or after January 1, 1997, began contributing 2.40% of base salary to this Plan as of January 1, 1997. Contributions may be increased 0.10% biennially by the FPPA Board. The contributions increased to 2.70% of base salary as of January 1, 2017. This percentage can vary depending on actuarial experience. All contributions are made by members or on behalf of members. The 2.70% contribution may be paid entirely by the employer or member, or it may be split between the employer and the member as determined at the local level. As all contributions are considered employee contributions, the City does not make any contributions to this plan, and there is no net OPEB liability to the City. The plan has 1,238 retirees and beneficiaries currently receiving benefits and 12,747 active non-vested members.

OPEB plan fiduciary net position. Detailed information about the FPPA's fiduciary net position is available in their comprehensive annual financial report which can be obtained at https://www.fppaco.org/annual-reports.html.

5. Fire and Police Pension Health Plan Implicit Rate Subsidy

Fire and Police Participants' Plan Description. City acts in a single-employer capacity by providing access to health insurance to eligible fire and police retirees and their qualified dependents through the respective groups' insurance plans. Based on City practice, fire fighter retirees and police officer retirees are allowed to participate in the health insurance programs offered to active employees. Fire fighters and police officers hired prior to April 8, 1978, are eligible for this coverage with a minimum of 25 years of service; however, police officers are also eligible when they begin collecting their pension benefit should they not obtain 25 years of service. For fire and police employees hired after April 7, 1978, they must have elected to begin collecting their pension and be a minimum of 55 years of age with 5 years of service or attained age 50 with 30 years of service. Coverage ceases when one reaches Medicare age. As of the December 31, 2018 actuarial valuation, there are 2,543 active employees under age 65 covered under the health insurance plans and 77 vested-terminated employers. In addition, there are 234 retired employees not yet covered by Medicare who are covered by the plans. There is no stand-alone financial report for this medical coverage benefit and it is not included in the report.

Funding Policy for Fire and Police Participants' Plan. Fire and police retirees are responsible for 100.00% of the blended premium rate. The City's required contribution toward the implicit rate subsidy is based on pay-as-you-go financing, and no assets are accumulated in a trust to pay for benefits. For the year ended December 31, 2019, contributions were $2,186,000. All contributions are considered employer contributions.

OPEB Liabilities, OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB. At December 31, 2019, the City reported a liability of $46,280,000 for the total OPEB implicit rate liability. The OPEB implicit rate liability for the Fire and Police plan was measured as of December 31, 2018. The total OPEB implicit rate liability was determined by an actuarial valuation as of December 31, 2018. Standard update procedures were used to roll-forward the total OPEB implicit rate liability to December 31, 2018.

The components of the total OPEB liability related to the Fire and Police Implicit Rate Subsidy as of December 31, 2019 are presented in **Table 106** (dollars in thousands).

Table 106

Fire and Police Implicit Rate Subsidy		
Total OPEB implicit rate liability	$	46,280

For the year ended December 31, 2019, the City recognized OPEB implicit rate expense for Fire and Police of $3,876,000. A summary of the City's deferred outflows of resources and deferred inflows of resources related to the OPEB implicit rate subsidy as of December 31, 2019, is presented in **Table 107** (dollars in thousands).

Table 107

	Fire and Police Implicit Rate Subsidy			
		Deferred Outflows of Resources		Deferred Inflows of Resources
Changes of assumptions or other inputs	$	2,282	$	-
Net difference between projected and actual earnings on OPEB plan investments		568		-
Benefits paid subsequent to the measurement date		2,186		-
Total	**$**	**5,036**	**$**	**-**

The $2,186,000 reported as deferred outflows of resources related to the Fire and Police OPEB implicit rate subsidy, resulting from benefit claims paid subsequent to the measurement date, will be recognized as a reduction of the total OPEB implicit rate liability in the year ended December 31, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized as OPEB expense as presented in **Table 108** (dollars in thousands).

Table 108

Year		
2020	$	325
2021		325
2022		325
2023		325
2024		325
Thereafter		1,225
Total	**$**	**2,850**

The total OPEB implicit rate liability in the December 31, 2018 actuarial valuation was determined using the following actuarial cost method, actuarial assumptions and other inputs presented in **Table 109**.

Table 109

	Fire and Police Implicit Rate Subsidy
Valuation Date	December 31, 2018
Actuarial method	Entry age normal
Discount rate	4.11% as of 12/31/2018
Asset valuation method	Market value of assets
Salary increases, including wage inflation	5.50%
	Demographic assumptions (i.e., rates of retirement, termination, disability, and mortality) follow those used in the most recent (January 2018) actuarial valuation of the Fire & Police Pension Association retirement plan, except for the basis used to project future mortality improvements.

Participation Rate. The health benefits account was established by City Ordinance to provide post-employment health care benefits in the form of a premium reduction to retired members, their spouses and dependents, spouses and dependents of deceased active and retired members, and members of the Plan awaiting approval of retirement applications.

- **Participating active employees:** 35.00% of active fire and police employees currently covered in the City's medical plans are assumed to continue their current medical plan election in retirement.
- **Actives not currently participating:** 17.50% of active fire and police employees not currently covered by a City healthcare plan are assumed to elect coverage in the following plans at or before retirement: (a) if police: Kaiser DHMO; (b) if fire: Kaiser HMO Vested terminated employees: 35.00% of vested employees age 45 or older with 10 or more years fire and police service are assumed to elect coverage in the Kaiser plan available when they retire and begin their pension benefits.
- **Retired participants:** Existing medical plan elections are assumed to be maintained through retirement until the earlier of the retiree's death or the date he or she becomes eligible for Medicare.
- **Active and vested terminated participants:** 50.00% of those assumed to elect coverage in retirement are assumed to be married participants electing coverage for their spouse until their death. Husbands are assumed to be three years older than their wives.
- **Retired participants:** Existing elections for spouse coverage are assumed to be maintained through retirement. Actual spouse information is used where available; otherwise the assumptions for spouses of active employees are applied.

The Patient Protection and Affordable Care Act (ACA) included a 40% excise tax on high-cost employer sponsored health coverage. The tax applied to the aggregate annual cost of an employee's applicable coverage that exceeds a dollar limit. Implementation of this tax had been delayed by subsequent legislation to 2022. This excise tax was repealed by Senate Amendment to H.R. 1865, Further Consolidated Appropriations Act, 2020, and signed by the President on December 20, 2019. Although this change occurred after the valuation date and measurement date, the assumptions changed and the City will no longer bear any such excise tax liability.

Development of Age-related Premiums:

Actual premium rates for fire and police retirees and their spouses were adjusted to an age-related basis by applying medical claim cost factors developed from the data presented in the report, "Health Care Costs – From Birth to Death", sponsored by the Society of Actuaries.

Representative claims costs derived for retirees not currently covered or not expected to be eligible for Medicare appear in **Table 110**.

Table 110

	Expected Monthly Claims by Medical Plan for Selected Ages							
	Male				Female			
Medical plan	**48**	**53**	**58**	**63**	**48**	**53**	**58**	**63**
Police								
Kaiser DHMO	$ 482	$ 637	$ 812	$ 1,006	$ 624	$ 735	$ 832	$ 977
Kaiser HDHP	490	647	824	1,022	634	747	844	992
United HDHP	582	770	980	1,215	754	888	1,004	1,180
United Navigate DHMO	539	713	908	1,126	698	823	930	1,093
Fire								
Kaiser HMO	$ 608	$ 803	$ 1,023	$ 1,268	$ 786	$ 927	$ 1,048	$ 1,231
Kaiser HDHMO	482	637	812	1,007	624	736	832	977
Kaiser Triple Options	709	936	1,193	1,479	917	1,081	1,222	1,435

In developing these factors, it was assumed there were 1.8 children per participant covering children with an average age of 12.3. Actual spouse ages were used if available. Otherwise husbands were assumed to be three years older than their wives.

Mortality rates:

- **Healthy retirees and beneficiaries:** For ages less than 55, RP-2014 Mortality Tables for Blue Collar Employees. For ages 65 and older, RP-2014 Mortality Tables for Blue Collar Healthy Annuitants. For ages 55 through 64, a blend of the previous tables. All tables are projected with Scale BB.

- **Active Members:** RP-2014 Mortality Tables for Blue Collar Employees, projected with Scale BB, 55.00% multiplier for off-duty mortality. Increased by 0.02% for on-duty related Fire and Police experience.

- **Mortality Improvement:** MacLeod Watts Scale 2018 applied generationally

- **Future Increases in the Maximum Monthly Benefit:** The Maximum Monthly Benefit paid by the Fund is assumed to increase at the rate of 1.50% per year.

Sensitivity of the total OPEB implicit rate liability to changes in the discount rate and Health Care Cost Trend Rates. **Table 111** presents the net OPEB implicit rate liability using the current discount rate and health care cost trend rates applicable to the Fire and Police plan benefit structure, as well as if it were calculated using a discount rate and trend rate that is one percentage-point lower or one percentage-point higher (dollars in thousands).

Table 111

Discount Rate Implicit Rate Subsidy	1% Decrease 3.11%	Current Discount Rate 4.11%	1% Increase 5.11%
OPEB Liability	50,515	46,280	42,439
Increase (decrease)	(4,235)		3,841
% Increase (decrease)	(9.15%)		8.30%

Health Care Cost Trend Rate Implicit Rate Subsidy	1% Decrease	Current Trend	1% Increase
OPEB Liability	41,479	46,280	51,888
Increase (decrease)	(4,801)		5,608
% Increase (decrease)	(10.37%)		12.12%

Discount Rate. The discount rate was changed from 3.56% as of December 31, 2018, to 4.11% as of December 31, 2018, based on the published change in return for the applicable municipal bond index. The basis chosen by the City was the Bond Buyer General Obligation 20 – Bond Municipal Bond Index.

The change in the total OPEB liability is presented in **Table 112** (dollars in thousands).

Table 112

	Total OPEB Liability
Balances as of January 1, 2019	$ 42,326
Changes for the year:	
Service cost	2,010
Interest	1,542
Benefit changes	-
Differences between expected and actual experience	630
Changes of assumptions	1,857
Benefit payments	-
Employee contributions	-
Employer contributions	(2,085)
Net investment income	-
Benefit payments	-
Administrative expense	-
Total Net Changes	**$ 3,954**
Balances as of December 31, 2018	**$ 46,280**

6. Postemployment Health Plan for Firefighters

PEHP Plan Description. The City provides other postemployment benefits to certain collectively bargained employees through a defined contribution OPEB trust administered by a third-party provider appointed by the City. The Plan is established under the collective bargaining agreement effective as of December 15, 2015. The trust provides post-retirement reimbursement of qualifying medical care expenses and healthcare insurance premiums for the benefit of eligible City employees who are participants in the plan, and their dependents. Those benefits are intended to qualify as a voluntary employees' beneficiary association within the meaning of section 501(c)(9) of the Internal Revenue Code of 1986, as amended.

Funding Policy for the PEHP. Subject to appropriation, the City is required to contribute at a rate of 1.00% per year of base pay on behalf of each firefighter. The contribution requirements for the City are established under the collective bargaining agreement, as amended. For the year ended December 31, 2019, contributions to the PEHP were $1,253,000. The City may periodically change its contributions to the trust, consistent with the objectives of the plan and applicable law by a mutually agreeable method between the City and the plan administrator.

Each system issues a publicly available financial report that includes financial statements and required supplementary information of that plan. Those reports are available by contacting:

Colorado PERA
P. O. Box 5800
Denver, Colorado 80217-5800

Fire and Police Pension Association
5290 DTC Pkwy #100
Greenwood Village, CO 80111

Postemployment Health Plan
Nationwide Retirement Solutions
P.O. Box 182797
Columbus, OH 43218-2797

Denver Employees Retirement Plan
777 Pearl Street
Denver, Colorado 80203

City and County of Denver
201 West Colfax Avenue
Denver, Colorado, 80202

* * *

This page left blank intentionally.

Required Supplementary Information Budgetary Comparison Schedule - General Fund and Human Services Special Revenue Fund

Year Ended December 31, 2019 (dollars in thousands)

	General Fund			
	Budget			Variance with
	Original	Final	Actual	Final Budget
Revenues				
Taxes	$ 980,355	$ 969,622	$ 975,124	$ 5,502
Licenses and permits	60,295	59,501	67,754	8,253
Intergovernmental revenues	39,970	41,009	40,509	(500)
Charges for services	215,380	210,945	216,736	5,791
Investment and interest income	14,356	16,248	26,915	10,667
Fines and forfeitures	50,320	47,980	39,182	(8,798)
Contributions	-	-	61	61
Other revenue	7,743	5,225	11,379	6,154
Total Revenues	**1,368,419**	**1,350,530**	**1,377,660**	**27,130**
Budget Basis Expenditures				
General government	360,221	349,122	340,779	8,343
Public safety	632,172	632,256	626,764	5,492
Public works	176,833	173,470	169,907	3,563
Human services	6,025	6,025	1,910	4,115
Health	57,470	58,260	57,764	496
Parks and recreation	81,342	81,369	79,790	1,579
Cultural activities	55,284	55,324	54,214	1,110
Community development	35,607	36,501	35,756	745
Economic opportunity	10,862	1,692	1,692	-
Total Budget Basis Expenditures	**1,415,816**	**1,394,019**	**1,368,576**	**25,443**
Excess (deficiency) of revenues over budget basis expenditures	(47,397)	(43,489)	9,084	52,573
Other Financing Sources (Uses)				
Sale of capital assets	-	-	755	-
Issuance of capital leases	-	-	4,888	4,888
Insurance recoveries	-	-	233	233
Transfers in	41,826	51,345	50,405	(940)
Transfers out	(115,460)	(167,888)	(80,064)	87,824
Total Other Financing Sources (Uses)	**(73,634)**	**(116,543)**	**(23,783)**	**92,005**
Excess (deficiency) of revenues and other financing sources over budget basis expenditures and other financing uses	**$ (121,031)**	**$ (160,032)**	(14,699)	**$ 144,578**
Fund balances - January 1			384,780	
Fund Balance - December 31			**$ 370,081**	

See accompanying notes to required supplementary information.

	Human Services Special Revenue Fund			
	Budget			Variance with
	Original	Final	Actual	Final Budget
	$ 74,014	$ 74,014	$ 73,949	$ (65)
	-	-	-	-
	117,237	117,237	95,484	(21,753)
	544	544	552	8
	-	-	2	(2)
	-	-	-	-
	-	-	609	609
	-	-	138	138
	191,795	**191,795**	**170,734**	**(21,065)**
	-	-	-	-
	-	-	-	-
	-	-	-	-
	190,846	192,467	164,191	28,276
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	-	-	-
	190,846	**192,467**	**164,191**	**28,276**
	949	(672)	6,543	7,215
	-	-	-	-
	-	-	-	-
	-	-	-	-
	-	5,400	5,400	-
	(1,815)	(8,694)	(8,694)	-
	(1,815)	**(3,294)**	**(3,294)**	**-**
	$ (866)	**$ (3,966)**	3,249	**$ 7,215**
			82,251	
			$ 85,500	

Notes to Required Supplementary Information Budgetary Comparison Schedule

The City adheres to the following procedures in establishing the budgetary data for governmental fund types reflected in the financial statements:

1. Formal budgetary integration for expenditures is employed during the year for the general, special revenue, and capital projects funds except for certain special assessment projects and general improvement district funds. Formal budgetary integration is not employed for debt service funds, and certain special assessment projects and general improvement district funds included in capital projects and debt service funds, because effective budgetary control is alternatively achieved through bond and general obligation bond indenture provisions.

2. Budgets for appropriation in the General, Human Services special revenue, and capital projects funds are adopted on a basis consistent with GAAP. The General Fund and Human Services special revenue fund legally adopt budgets on an annual basis for expenditures. All other special revenue funds and the capital projects funds adopt budgets on a project length basis.

3. On or before July 1, heads of all City departments and agencies submit requests for appropriations to the budget officer who compiles the requests and submits a comprehensive budget request document to the Mayor. Thereafter, on or before September 15 of each year, the Mayor briefs the City Council on the tentative revenue and expenditure plans for the ensuing year. After receiving and considering City Council's recommendations, the Mayor prepares and submits to the City Council, on or before the third Monday in October of each year, a proposed budgetary report which includes all projected revenues and expenditures, the amount to be raised by taxation to pay interest on general obligation bonded indebtedness, and the amounts to be expended during the ensuing year for capital improvement projects identifying the sources of revenue for financing such projects . Upon receipt of the proposed budget, the City Council publishes a notice that the budget is open for inspection by the public and that a public hearing on the proposed budget will be held by no later than the fourth Monday in October. After the public hearing and consideration is given to the input by the public, the City Council, not later than the second Monday in November, adopts the budget by passage of an ordinance.

4. Authorization to transfer budgeted amounts between departments (appropriations) within any fund or revisions that alter the total expenditures of any fund must be approved by the City Council. Management can transfer budgeted amounts between line items within departments (appropriations). The legal level of budgetary control is established and maintained at the funded project level for special revenue and capital projects funds and at the department level for all other funds. Budgeted amounts are as originally adopted and as amended by the City Council throughout the year.

5. Unencumbered appropriations in the General Fund and Human Services special revenue fund lapse at year end. The unencumbered appropriations in the remaining special revenue funds and capital projects funds do not lapse at year end but terminate upon expiration of the grant or project fiscal year or term.

Required Supplementary Information
Schedule of City's Proportionate Share of the Net Pension Liability - DERP
December 31, 2019 (dollars in thousands)

	City's Proportion of the Net Pension Liability	City's Proportionate Share of the Net Pension Liability	City's Covered Payroll	City's Proportionate Share of the Net Pension Liability (Asset) as a Percentage of its Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability
DERP					
December 31, 2015	88.88%	$ 778,462	557,646	139.60%	70.12%
December 31, 2016	89.51%	1,055,539	571,367	184.74%	62.26%
December 31, 2017	89.84%	1,095,568	574,914	190.56%	62.26%
December 31, 2018	90.70%	1,063,754	541,545	196.43%	65.49%
December 31, 2019	92.03%	1,388,395	542,111	256.11%	57.76%

Note: Information is not available prior to 2015. In future reports, additional years will be added until 10 years of historical data are presented.

Note: Information presented in this schedule has been determined as of the City's measurement date (December 31 of the year prior to the most recent fiscal year) of the collective net pension liability in accordance with Governmental Accounting Standards Board Statement No. 68.

Note: **Changes in assumptions**. The discount rate used to measure the total pension liability at December 31, 2017 changed from 7.75% to 7.50% from the prior measurement date.

Required Supplementary Information
Schedule of City Contributions - DERP
December 31, 2019 (dollars in thousands)

	Statutorily Required Contributions	Contributions in Relation to Statutorily Required Contribution	Contribution Deficiency (Excess)	City's Covered Payroll	Contributions as a % of Covered Payroll
DERP					
December 31, 2015	$ 64,443	$ 60,181	$ 4,262	$ 560,157	10.74%
December 31, 2016	59,159	64,345	(5,186)	574,914	11.19%
December 31, 2017	64,404	64,404	-	541,545	11.89%
December 31, 2018	75,096	75,096	-	542,111	13.85%
December 31, 2019	83,255	83,255	-	569,297	14.62%

Note: Information is not available prior to 2015. In future reports, additional years will be added until 10 years of historical data are presented.

Note: Information presented in this schedule has been determined as of the City's most recent fiscal year end (December 31) in accordancewith Governmental Accounting Standards Board Statement No. 68.

Note: There were no benefit changes during the year. As of October 1, 2015, the valuation interest was lowered from 8% to 7.75%. The latest experience study was conducted in 2018 covering the 5-year period of January 1, 2013 to December 31, 2017. At the time, the recommended mortality table was expected to produce a margin of 8% on the retired male mortality experience and 7% on the retired female experience (Sourcr: Denver Employees Retirement Plan 2013 Actuarial Experience Study for the period ending December 31, 2012, page 24).

Required Supplementary Information
Schedule of City's Proportionate Share of the Net Pension Liability - FPPA SWDB
December 31, 2019 (dollars in thousands)

	City's Proportion of the Net Pension Liability (Asset)	City's Proportionate Share of the Net Pension Liability (Asset)	City's Covered Payroll	City's Proportionate Share of the Net Pension Liability (Asset) as a Percentage of its Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability
FPPA SWDB					
December 31, 2015	39.51%	$ (44,591)	$ 230,820	19.32%	106.80%
December 31, 2016	39.81%	(701)	251,518	0.28%	100.10%
December 31, 2017	38.18%	13,797	257,016	5.37%	98.21%
December 31, 2018	34.96%	(50,290)	200,006	25.14%	106.34%
December 31, 2019	32.29%	40,822	236,503	17.26%	95.20%

Note: Information is not available prior to 2015. In future reports, additional years will be added until 10 years of historical data are presented.

Note: Information presented in this schedule has been determined as of the City's measurement date (December 31 of the year prior to the most recent fiscal year) of the collective net pension liability in accordance with Governmental Accounting Standards Board Statement No. 68.

Required Supplementary Information
Schedule of City Contributions - FPPA SWDB
December 31, 2019 (dollars in thousands)

FPPA	Statutorily Required Contributions	Contributions in Relation to Statutorily Required Contribution	Contribution Deficiency (Excess)	City's Covered Payroll	Contributions as a % of Covered Payroll
SWDB					
December 31, 2015	$ 20,121	$ 15,299	$ 4,822	$ 251,518	6.08%
December 31, 2016	20,561	15,648	4,913	257,016	6.09%
December 31, 2017	16,000	15,934	66	200,006	7.97%
December 31, 2018	18,920	17,396	1,524	236,503	7.36%
December 31, 2019	20,035	18,079	1,956	250,435	7.22%

Note: Information is not available prior to 2015. In future reports, additional years will be added until 10 years of historical data are presented.

Note: Information presented in this schedule has been determined as of the City's most recent fiscal year end (December 31) in accordance with Governmental Accounting Standards Board Statement No. 68.

Note: Changes in Assumptions. At least every five years, the FPPA's Board of Directors, in accordance with best practices, reviews its economic and demographic actuarial assumptions. At its July 2015 meeting, the Board of Directors reviewed and approved recommended changes to the actuarial assumptions. The recommendations were made by the FPPA's actuaries, Gabriel, Roeder, Smith & Co., based upon their analysis of past experience and expectations of the future. The assumption change were effective for actuarial valuations beginning January 1, 2016 and were use din the rollforward calculation of total pension liability as of December 31, 2015. Actuarial assumptions effective for actuarial valuations prior to January 1, 2016 were used in the determination of the actuarially determined contributions as of December 31, 2015. The actuarial assumptions impact actuarial factors for benefit purposes such as purchases of service credit and other benefits where actuarial factors as used.

The discount rate used to measure the total pension liability at December 31, 2018 decreased from 7.50% to 7.00% from the prior year measurement date.

Required Supplementary Information
Schedule of City's Proportionate Share of the Net Pension Liability - PERA
December 31, 2019 (dollars in thousands)

	City's Proportion of the Net Pension Liability	City's Proportionate Share of the Net Pension Liability	State of Colorado's Share of the Net Pension Liability	City's Covered Payroll	City's Proportionate Share of the Net Pension Liability (Asset) as a Percentage of its Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total Pension Liability
PERA SDTF						
December 31, 2015	0.007%	$ 674	$ -	$ 207	325.60%	59.80%
December 31, 2016	0.007%	755	-	221	341.63%	56.10%
December 31, 2017	0.007%	1,358	-	203	668.97%	42.60%
December 31, 2018	0.008%	1,677	-	314	534.08%	43.20%
December 31, 2019	0.007%	794	5	220	360.91%	55.11%
PERA JDTF						
December 31, 2015	6.400%	$ 8,854	$ -	$ 2,800	316.21%	66.90%
December 31, 2016	6.018%	11,066	-	2,986	370.60%	60.10%
December 31, 2017	5.840%	14,835	-	2,864	517.98%	53.20%
December 31, 2018	6.009%	13,945	-	2,841	490.85%	58.70%
December 31, 2019	5.087%	7,186	70	2,878	249.69%	68.48%

Note: Information is not available prior to 2015. In future reports, additional years will be added until 10 years of historical data are presented.

Note: Information presented in this schedule has been determined as of the City's measurement date (December 31 of the year prior to the most recent fiscal year) of the collective net pension liability in accordance with Governmental Accounting Standards Board Statement No. 68.

Required Supplementary Information
Schedule of City's Contributions - PERA
December 31, 2019 (dollars in thousands)

PERA	Statutorily Required Contributions	Contributions in Relation to Statutorily Required Contribution	Contribution Deficiency (Excess)	City's Covered Payroll	Contributions as a % of Covered Payroll
SDTF					
December 31, 2015	$ 36	$ 37	$ (1)	$ 221	16.74%
December 31, 2016	37	37	-	203	18.23%
December 31, 2017	46	46	-	314	14.65%
December 31, 2018	43	43	-	220	19.55%
December 31, 2019	43	43	-	225	19.11%
JDTF					
December 31, 2015	$ 488	$ 488	$ -	$ 2,986	16.34%
December 31, 2016	468	468	-	2,864	16.34%
December 31, 2017	468	468	-	2,841	16.47%
December 31, 2018	504	504	-	2,878	17.51%
December 31, 2019	598	598	-	3,148	19.00%

Note: Information is not available prior to 2015. In future reports, additional years will be added until 10 years of historical data are presented.

Note: 2019 contributions include $4,900 for the SDTF and $70,000 for the JDTF from the special funding situation with the State of Colorado as a non-employer contributing entity per SB-18-200.

Note: Information presented in this schedule has been determined as of the City's most recent fiscal year end (December 31) in accordance with Governmental Accounting Standards Board Statement No. 68.

Note: Changes to assumptions or other inputs since the December 31, 2013 actuarial valuation are as follows:

- The following changes were made:
  - Valuation of the full survivor benefit without any reduction for possible remarriage
  - Reflection of the employer match on separation benefits for all eligible years
  - Reflection of one year of service eligibility for survivor annuity benefit
  - Refinement of the 18 month annual increase timing
  - Refinements to directly value certain and life, modified cash refund and pop-up benefit forms.
- The following changes were made:
  - Recognition of merit salary increases in the first projection year
  - Eliminiation of the assumption that 35% of future disabled members elect to receive a refund
  - Removal of the negative value adjustment for liabilities associated with refunds of future terminating members
  - Adjustments to the timing of the normal cost and unfunded actuarial accrued liability payment calculations to reflect contributions throughout the year

Required Supplementary Information
Schedule of City's Contributions - FPPA Old Hire Fire and Police
December 31, 2019 (dollars in thousands)

FPPA	Actuarially determined Required Contributions	Contributions in Relation to Actuarially Required Contribution	Contribution Deficiency (Excess)	Employer's Covered Payroll	Contributions as a % of Covered Payroll
Old Hire Fire					
December 31, 2015	$ 13,061	$ 15,912	$ (2,851)	$ 139	11447.48%
December 31, 2016	13,053	13,061	(8)	90	14512.22%
December 31, 2017	16,355	16,355	-	n/a	n/a
December 31, 2018	16,355	16,355	-	n/a	n/a
December 31, 2019	17,248	17,248	-	n/a	n/a
Old Hire Police					
December 31, 2015	$ 16,262	$ 18,977	$ (2,715)	$ 102	18604.90%
December 31, 2016	5,027	5,027	-	n/a	n/a
December 31, 2017	7,988	7,988	-	n/a	n/a
December 31, 2018	7,988	7,988	-	n/a	n/a
December 31, 2019	8,803	8,803	-	n/a	n/a

Note: Information is not available prior to 2015. In future reports, additional years will be added until 10 years of historical data are presented.

Note: Information presented in this schedule has been determined as of the City's most recent fiscal year end (December 31) in accordance with Governmental Accounting Standards Board Statement No. 68.

Notes to Schedule

Valuation date: Actuarially determined contributions rates are calculated as of January 1 of even numbered years. The contribution rates have a one-year lag, so the actuarial valuation as of January 1, 2012, determines the contribution amounts for 2013 and 2014.

	Old Hire Fire	Old Hire Police
Methods and assumptions used to determine contribution rates:		
Actuarial cost method	Entry Age Normal	Entry Age Normal
Amortization method	Level Dollar, Open	Level Dollar, Open
Remaining amortization period	17 Years	20 Years
Asset valuation method	5-Year smoothed market	5-Year smoothed market
Inflation	2.50%	2.50%
Salary increases	n/a	n/a
Investment rate of return	7.50%	7.50%
Retirement age	Any remaining actives are assumed to retire immediately.	Any remaining actives are assumed to retire immediately.
Mortality	Post-retirement: RP-2014 Combined Mortality Table, with Blue Collar Adjustment Disabled: RP-2014 Disabled Mortality All tables projected with Scale BB.	Post-retirement: RP-2014 Combined Mortality Table, with Blue Collar Adjustment Disabled: RP-2014 Disabled Mortality All tables projected with Scale BB.

Note: **Changes in assumptions.** The FPPA's Board of Directors, in accordance with best practices, reviews its economic and demographic actuarial assumptions at least every five years. Beginning in the 2016 valuations, the inflation assumption was reduced from 3.0% to 2.5%, the real return on investments was increased 5.0% for an overall nominal investment return of 7.5%, an explicit charge for administration expenses was added in the actuarial contribution calculation, the base mortality tables were revised with the explicit assumption for rising longevity in the future to reflect current mortality studies, and the expected incidence of total disability was increased.

Changes in benefit terms: No changes to benefit provisions occurred since the prior valuation. However, the member contributions increased 0.50% of base salary.

Required Supplementary Information
Schedule of Changes in the City's Net Pension Liability and Related Ratios - FPPA Old Hire Fire
December 31, 2019 (dollars in thousands)

FPPA Old Hire Fire	2015	2016	2017	2018	2019
Total pension liability					
Service Cost	$ -	$ -	$ -	$ -	$ -
Interest	34,596	34,026	35,748	35,214	34,880
Changes of benefit terms	-	-	-	-	-
Differences between actual and expected experience	-	(699)	-	3,533	-
Changes of assumptions	-	32,102	-	-	-
Benefit payments, including refunds of employee contributions	(42,249)	(42,134)	(42,834)	(42,893)	(43,529)
Net change in total pension liability	**(7,653)**	**23,295**	**(7,086)**	**(4,146)**	**(8,649)**
Total pension liability - beginning	**482,022**	**474,369**	**497,664**	**490,578**	**486,432**
Total pension liability - ending	**$ 474,369**	**$ 497,664**	**$ 490,578**	**$ 486,432**	**$ 477,783**
Plan fiduciary net position					
Contributions - employer	$ 13,944	$ 16,803	$ 13,061	$ 16,355	$ 16,355
Contributions - employee	7	7	8	8	3
Net investment income	23,465	6,174	17,084	44,879	531
Benefit payments, including refunds of employee contributions	(42,249)	(42,134)	(42,834)	(42,893)	(43,529)
Administrative expense	(545)	(488)	(518)	(146)	(175)
Net change in plan fiduciary net position	**(5,378)**	**(19,638)**	**(13,199)**	**18,203**	**(26,815)**
Plan fiduciary net position - beginning	354,255	348,877	329,238	316,039	334,242
Plan fiduciary net position - ending	**$ 348,877**	**$ 329,239**	**$ 316,039**	**$ 334,242**	**$ 307,427**
Net Pension Liability	**$ 125,492**	**$ 168,425**	**$ 174,539**	**$ 152,190**	**$ 170,356**
Plan fiduciary net position as a percentage of the total pension liability	73.55%	66.16%	64.42%	68.71%	64.34%
Covered payroll	87	90	90	96	n/a
Net pension liability as a percentage of covered payroll	143734.99%	187436.70%	194240.85%	158531.25%	-

Note: Information is not available prior to 2015. In future reports, additional years will be added until 10 years of historical data are presented.

Note: Information presented in this schedule has been determined as of the City's measurement date (December 31 of the year prior to the most recent fiscal year) of the collective net pension liability in accordance with Governmental Accounting Standards Board Statement No. 68.

Required Supplementary Information
Schedule of Changes in the City's Net Pension Liability and Related Ratios - FPPA Old Hire Police
December 31, 2019 (dollars in thousands)

FPPA Old Hire Police	2015	2016	2017	2018	2019
Total pension liability					
Service Cost	$ -	$ -	$ -	$ -	$ -
Interest	49,249	48,801	50,590	50,141	49,712
Changes of benefit terms	-	-	-	-	-
Differences between actual and expected experience	-	(12,201)	-	983	-
Changes of assumptions	-	43,358	-	-	-
Benefit payments, including refunds of employee contributions	(55,137)	(55,326)	(56,901)	(56,248)	(57,458)
Net change in total pension liability	**(5,888)**	**24,632**	**(6,311)**	**(5,124)**	**(7,746)**
Total pension liability - beginning	**683,727**	**677,839**	**702,471**	**696,160**	**691,036**
Total pension liability - ending	**$ 677,839**	**$ 702,471**	**$ 696,160**	**$ 691,036**	**$ 683,290**
Plan fiduciary net position					
Contributions - employer	$ 16,262	$ 18,089	$ 5,027	$ 7,988	$ 7,988
Contributions - employee	5	-	-	-	-
Net investment income	42,091	11,278	30,983	82,545	754
Benefit payments, including refunds of employee contributions	(55,137)	(55,326)	(56,901)	(56,248)	(57,458)
Administrative expense	(977)	(910)	(1,013)	(194)	(233)
Net change in plan fiduciary net position	**$ 2,244**	**$ (26,869)**	**$ (21,904)**	**$ 34,091**	**$ (48,949)**
Plan fiduciary net position - beginning	**630,564**	**632,808**	**605,939**	**584,035**	**618,126**
Plan fiduciary net position - ending	**$ 632,808**	**$ 605,939**	**$ 584,035**	**$ 618,126**	**$ 569,177**
Net Pension Liability	**$ 45,031**	**$ 96,532**	**$ 112,125**	**$ 72,910**	**$ 114,113**
Plan fiduciary net position as a percentage of the total pension liability	93.36%	86.26%	83.89%	89.45%	83.30%
Covered payroll	90	n/a	n/a	n/a	n/a
Net pension liability as a percentage of covered payroll	50070.05%	n/a	n/a	n/a	n/a

Note: Information is not available prior to 2015. In future reports, additional years will be added until 10 years of historical data are presented.

Note: Information presented in this schedule has been determined as of the City's measurement date (December 31 of the year prior to the most recent fiscal year) of the collective net pension liability in accordance with Governmental Accounting Standards Board Statement No. 68.

Required Supplementary Information
Schedule of City's Proportionate Share of the Net OPEB Liability - DERP
December 31, 2019 (dollars in thousands)

	City's Proportion of the Net OPEB Liability	City's Proportionate Share of the Net OPEB Liability	City's Covered Payroll	City's Proportionate Share of the Net OPEB Liability (Asset) as a Percentage of its Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability
DERP					
December 31, 2018	93.36%	$ 78,593	$ 541,545	14.51%	45.98%
December 31, 2019	93.99%	$ 98,309	$ 542,111	18.13%	39.18%

Note: Information is not available prior to 2018. In future reports, additional years will be added until 10 years of historical data are presented.

Note: Information presented in this schedule has been determined as of the City's measurement date (December 31 of the year prior to the most recent fiscal year) of the collective net pension liability in accordance with Governmental Accounting Standards Board Statement No. 75.

Required Supplementary Information
Schedule of City Contributions - DERP OPEB

December 31, 2019 (dollars in thousands)

	Statutorily Required Contributions	Contributions in Relation to Statutorily Required Contribution	Contribution Deficiency (Excess)	City's Covered Payroll	Contributions as a % of Covered Payroll
DERP OPEB					
December 31, 2018	$ 4,651	$ 4,651	$ -	$ 542,111	0.86%
December 31, 2019	4,855	4,855	-	569,297	0.85%

Note: Information is not available prior to 2018. In future reports, additional years will be added until 10 years of historical data are presented.

Note: Information presented in this schedule has been determined as of the City's most recent fiscal year end (December 31) in accordance with Governmental Accounting Standards Board Statement No. 75.

Note: There were no benefit changes during the year.

Required Supplementary Information
Schedule of Changes in the City's OPEB Liability - DERP Implicit Rate Subsidy

December 31, 2019 (dollars in thousands)

	Total OPEB Liability	
DERP Implicit Rate Subsidy	**2018**	**2019**
Balances as of January 1	$ 77,906	$ 78,593
Changes for the year:		
Service cost	2,548	2,742
Interest	2,926	2,788
Benefit changes	-	-
Differences between expected and actual experience	-	628
Transition to Entry Age Normal	-	-
Changes of assumptions	1,312	987
Benefit payments	(6,099)	(6,043)
Employee contributions	-	-
Employer contributions	-	-
Net investment income	-	-
Benefit payments	-	-
Administrative expense	-	-
Total Changes	**$ 687**	**$ 1,102**
Balances as of December 31	**$ 78,593**	**$ 79,695**
Covered-employee payroll	**$ 541,545**	**$ 542,111**
OPEB liability as a percentage of covered-employee payroll	**14.51%**	**14.70%**

Note: Information is not available prior to 2018. In future reports additional years will be added until 10 years of historical are presented.

Note: Information presented in this schedule has been determined as of the City's measurement date (December 31 of the year prior to the most recent fiscal year) of the collective net pension liability in accordance with Governmental Accounting Standards Board Statement No. 75.

Notes to Required Supplementary Information: There were no benefit changes during the year. The latest experience study was conducted in 2013 covering the 5-year period of January 1, 2008 to December 31, 2012. At the time, the recommended mortality table was expected to produce a margin of 8% on the retired male mortality experience and 7% on the retired female experience (Source: Denver Employees Retirement Plan 2013 Actuarial Experience Study for the period ending December 31, 2012, page 24). No assets are accumulated in a trust to pay related benefits.

Required Supplementary Information
Schedule of City's Proportionate Share of the Net OPEB Liability - PERA HCTF
December 31, 2019 (dollars in thousands)

	City's Proportion of the Net OPEB Liability	City's Proportionate Share of the Net OPEB Liability	City's Covered Payroll	City's Proportionate Share of the Net OPEB Liability (Asset) as a Percentage of its Covered Payroll	Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability
PERA					
December 31, 2018	0.04%	$ 515	$ 3,155	16.32%	17.53%
December 31, 2019	0.04%	$ 519	$ 3,098	16.75%	17.09%

Note: Information is not available prior to 2018. In future reports, additional years will be added until 10 years of historical data are presented.

Note: Information presented in this schedule has been determined as of the City's measurement date (December 31 of the year prior to the most recent fiscal year) of the collective net pension liability in accordance with Governmental Accounting Standards Board Statement No. 75.

Required Supplementary Information
Schedule of City Contributions - PERA HCTF OPEB
December 31, 2019 (dollars in thousands)

	Statutorily Required Contributions	Contributions in Relation to Statutorily Required Contribution	Contribution Deficiency (Excess)	City's Covered Payroll	Contributions as a % of Covered Payroll
PERA OPEB					
December 31, 2018	$ 34	$ 34	$ -	$ 3,098	1.10%
December 31, 2019	35	35	-	3,098	1.13%

Note: Information is not available prior to 2018. In future reports, additional years will be added until 10 years of historical data are presented.

Note: Information presented in this schedule has been determined as of the City's most recent fiscal year end (December 31) in accordance with Governmental Accounting Standards Board Statement No. 75.

Note: There were no benefit changes during the year.

Required Supplementary Information
Schedule of Changes in the City's Net OPEB Liability - Police Retiree Health Fund

December 31, 2019 (dollars in thousands)

	2018			2019		
PRHF	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
Balances as of January 1	$ 11,394	$ 3,079	**$ 8,315**	$ 11,971	$ 3,874	**$ 8,097**
Changes for the year:						
Service cost	358	-	**358**	372	-	**372**
Interest	691	-	**691**	727	-	**727**
Benefit changes	-	-	**-**	-	-	**-**
Differences between expected and actual experience	-	-	**-**	(1,302)	-	**(1,302)**
Transition to Entry Age Normal	-	-	**-**	4,214	-	**4,214**
Changes of assumptions	-	-	**-**	(446)	-	**(446)**
Benefit payments	(472)	-	**(472)**	-	-	**-**
Employee contributions	-	805	**(805)**	-	955	**(955)**
Employer contributions	-	463	**(463)**	-	(196)	**196**
Net investment income	-	(473)	**473**	-	(446)	**446**
Benefit payments	-	-	**-**	-	-	**-**
Administrative expense		-	**-**	-	-	**-**
Total Net Changes	**$ 577**	**$ 795**	**$ (218)**	**$ 3,565**	**$ 313**	**$ 3,252**
Balances as of December 31	**$ 11,971**	**$ 3,874**	**$ 8,097**	**$ 15,536**	**$ 4,187**	**$ 11,349**
Plan Fiduciary Net Position as a Percentage of Total Pension Liability			**32.36%**			**26.95%**
Covered-employee payroll			**n/a**			**n/a**
Net OPEB liability as a percentage of covered-employee payroll			**0.00%**			**0.00%**

Note: Information presented in this schedule has been determined as of the City's measurement date (December 31 of the year prior to the most recent fiscal year) of the collective net pension liability in accordance with Governmental Accounting Standards Board Statement No. 75.

Required Supplementary Information
Schedule of City Contributions - Police Retiree Health Fund

December 31, 2019 (dollars in thousands)

	Statutorily Required Contributions	Contributions in Relation to Statutorily Required Contribution	Contribution Deficiency (Excess)	City's Covered Payroll	Contributions as a % of Covered Payroll
Police Retiree Health Fund					
December 31, 2018	$ 955	$ 955	$ -	n/a	0.00%
December 31, 2019	1,078	1,078	-	n/a	0.00%

Note: Information is not available prior to 2018. In future reports, additional years will be added until 10 years of historical data are presented.

Note: Information presented in this schedule has been determined as of the City's most recent fiscal year end (December 31) in accordance with Governmental Accounting Standards Board Statement No. 75.

Note: There were no benefit changes during the year.

Note: Changes of assumptions. The discount rate used to measure the total OPEB liability decreased from 6.00% to 4.65%.

Required Supplementary Information
Schedule of Changes in the City's OPEB Liability - Fire and Police Implicit Rate Subsidy

December 31, 2019 (dollars in thousands)

	Total OPEB Liability	
FPPA Implicit Rate Subsidy	**2018**	**2019**
Balances as of January 1	$ 40,128	$ 42,326
Changes for the year:		
Service cost	1,851	2,010
Interest	1,550	1,542
Benefit changes	-	-
Differences between expected and actual experience	-	630
Transition to Entry Age Normal	-	-
Changes of assumptions	768	1,857
Benefit payments	(1,971)	(2,085)
Employee contributions	-	-
Employer contributions	-	-
Net investment income	-	-
Benefit payments	-	-
Administrative expense	-	-
Total Net Changes	**$ 2,198**	**$ 3,954**
Balances as of December 31	**$ 42,326**	**$ 46,280**
Covered-employee payroll	**$ 200,006**	**$ 214,697**
OPEB liability as a percentage of covered-employee payroll	**21.16%**	**21.56%**

Note: Information is not available prior to 2018. In future reports additional years will be added until 10 years of historical are presented.

Note: Information presented in this schedule has been determined as of the City's measurement date (December 31 of the year prior to the most recent fiscal year) of the collective net pension liability in accordance with Governmental Accounting Standards Board Statement No. 75.

Note: Changes of assumptions. The discount rate used to measure the total OPEB liability decreased from 6.00% to 4.65%.