

October 31, 2018

Board of Trustees
Teacher Retirement System of Texas
1000 Red River Street
Austin, TX 78701

**Subject: GASB 67 Reporting and Disclosure Information for the year ending
 August 31, 2018**

Dear Board of Trustees,

This report provides information required by the Teacher Retirement System of Texas (TRS) in connection with the Governmental Accounting Standards Board (GASB) Statement No. 67 “Financial Reporting for Pension Plans.” The information provided herein was prepared for the purpose of assisting TRS to comply with the financial reporting and disclosure requirements of GASB No. 67.

The calculation of the liability associated with the benefits described in this report was performed for the purpose of satisfying the requirements of GASB No. 67 and is not applicable for purposes of funding the plan. A calculation of the plan’s liability for other purposes may produce significantly different results. This report may be provided to parties other than TRS only in its entirety and only with the permission of TRS.

The total pension liability, net pension liability, and certain sensitivity information shown in this report are based on an actuarial valuation performed as of August 31, 2017. The total pension liability was rolled forward from the valuation date to the measurement date of August 31, 2018 using generally accepted actuarial principles. The liabilities reflect the new actuarial assumptions adopted by the Board in July of 2018. It is our opinion that the recommended assumptions are internally consistent, reasonable, and comply with the requirements under GASB No. 67. There were no significant events or changes in the benefit provisions that required an adjustment to the rolled forward liabilities.

This report is based upon information, furnished to us by TRS, which include benefit provisions, membership information, and financial data. We did not audit this data and information, but we did apply a number of tests and concluded that it was reasonable and consistent. GRS is not responsible for the accuracy or completeness of the information provided to us by TRS.

The final section of the report titled “Calculation of the Single Discount Rate” is not a required disclosure item for your financial statements. However, it is possible that your auditors will request this information which is why it is included in the report.

Certain tables included in the Required Supplementary Information should include a 10-year history of information. As provided for in GASB No. 67, this historical information is only presented for the years in which the information was measured in conformity with the requirements of GASB No. 67. The historical information in this report begins with the information presented for the fiscal year ending August 31, 2014.

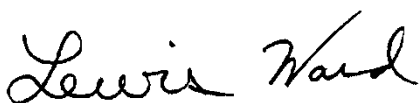
This report compliments the actuarial valuation report that was provided to TRS and should be considered together as a complete report for the plan year ending August 31, 2018. Please see the actuarial valuation report as August 31, 2017 for additional discussion of the nature of actuarial calculations and more information related to participant data, economic and demographic assumptions, and benefit provisions. Also, please see the experience study report dated July 27, 2018 which details the new actuarial assumption used in the determination of the net pension liability. The actuarial cost method used to determine the GASB No. 67 net pension liability is the Individual Entry Age Normal method as prescribed in GASB No. 67.

The projected cash flows from the employer are based on contributions for the most recent five year period, modified on consideration of subsequent events. Changes in statute in the 2013 legislative session and the subsequent follow through are indicators that the legislature is committed to an increase in funding levels for the pension funds. Considering the above events, projected employer contributions are based on current statutory funding levels.

The actuarial methods and assumptions have been selected by the Board of Trustees of the Teacher Retirement System of Texas based upon GRS analysis and recommendations. The Board of Trustees has sole authority to determine the actuarial assumptions used for the plan. The actuarial methods and assumptions are primarily based on a study of actual experience for the three year period ending August 31, 2017 and were adopted in July 2018. Post-Retirement Mortality rates for current and future retirees are prepared in accordance with the Actuarial Standards of Practice No. 35 which advises actuaries to *“adjust mortality rates to reflect mortality improvement prior to the measurement date and to include an assumption as to the expected mortality improvement after the measurement date.”* The assumption change shown in the reconciliation of this year’s Net Pension Liability (on page 8 of this report) is the reflection of the newly adopted assumptions.

To the best of our knowledge, the information contained with this report is accurate and fairly represents the actuarial position of the Teacher Retirement System of Texas. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board. Mr. Newton is a member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,



Lewis Ward
Consultant



Joe Newton, FSA, EA, MAAA
Pension Market Leader and Actuary

Summary of Population Statistics

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	407,768
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	273,028
Active Plan Members	<u>864,261</u>
Total Plan Members	1,545,057

All counts are as of the valuation date August 31, 2017

The Average Expected Remaining Service Life (AERSL) of 6.6554 is based on the membership information as of the beginning of the fiscal year. The AERSL of the active employees was 11.8980 years. This calculates to a total remaining service years of $11.8980 \times 864,261 = 10,282,977.38$ years. Divided by the total membership of 1,545,057 as of August 31, 2017 yields an AERSL of 6.6554 years.

Measurement of the Net Pension Liability

The net pension liability is measured as the total pension liability, less the amount of the pension plan's fiduciary net position. In actuarial terms, this will be the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

A single discount rate of 6.907% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.25% and a municipal bond rate of 3.69%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions, the employer contributions, and the state contributions will be made at the rates set by the legislature during the 2013 legislative session (please see the actuarial valuation report for a description of these rates). It is assumed that future non-member contributions will be 7.76% of payroll (these contributions include contributions by the State and the employers for active employees and rehired retirees). Based on these assumptions, the pension plan's fiduciary net position and future contributions were sufficient to finance the benefit payments until the year 2069. As a result, the long-term expected rate of return on pension plan investments was applied to projected benefit payments through the year 2069, and the municipal bond rate was applied to all benefit payments after that date.

The net pension liability increased significantly since the prior measurement date due to a change in the actuarial assumptions. These changes included changes to the demographic assumptions such as post-retirement mortality, termination rates and rates of retirement. The changes in the economic assumptions included changes to the long term rate of return assumption as well as to the rates of salary increase for individual participants. However, the primary reason for the increase in the net pension liability was the change in the single discount rate from 8.00% to 6.907%. Please see our experience study report dated February 5, 2018 for a complete description of the changes in the actuarial assumptions.

A brief summary of the primary assumptions used in the determination of the net pension liability is shown in the table on the following page.

Actuarial Assumptions - The total pension liability is determined by an actuarial valuation. The actuarial assumptions used to determine the total pension liability were based on the results of an experience study for the three-year period ending August 31, 2017. The active mortality rates were based on 90% of the RP-2014 Employee Mortality Tables for males and females, with full generational mortality using Scale BB. The post-retirement mortality rates for healthy lives were based on the 2018 TRS of Texas Healthy Pensioner Mortality Tables, with full generational projection using the ultimate improvement rates from the most recently published projection scale ("U-MP").

The following methods and assumptions were applied to this measurement period:

Valuation Date	August 31, 2017
Actuarial Cost Method	Individual Entry Age Normal actuarial cost method as required by GASB 67
Asset Valuation Method	Market Value
Actuarial Assumptions:	
Single Discount Rate	6.907%
Long-term Expected Return	7.25%
Municipal Bond Rate*	3.69%
Last year ending August 31 in projection period (100 years)	2116
Inflation	2.30%
Salary Increases	3.05% to 9.05% including inflation
Ad hoc post-employment benefit changes	None

* The municipal bond rate used is 3.69% as of August 2018 (i.e. the rate closest to but not later than the Measurement Date). The source for the rate is the Fixed Income Market Data/Yield Curve/Data Municipal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index."

Below is a table providing the sensitivity of the net pension liability to changes in the discount rate. In particular, the table presents the plan’s net pension liability, if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher than the single discount rate:

**Sensitivity of the Net Pension Liability
to the Single Discount Rate Assumption**

1% Decrease	Current Single Discount	1% Increase
5.907%	Rate Assumption	7.907%
6.907%		
\$83,072,220,959	\$55,042,426,960	\$32,350,646,325

Reconciliation of Fiduciary Net Position

for Year Ended August 31, 2018

	Year Ending August 31, 2018
Additions	
Contributions	
Non-Employer Contributing Entity	\$ 1,715,784,550
Employer	1,671,257,303
Employee	3,360,773,197
Other	69,208,673
Total Contributions	<u>\$ 6,817,023,723</u>
Investment Income	
Net Appreciation in Fair Value of Investments	\$ 11,760,788,989
Interest and Dividends	0
Less Investment Expense	(517,975,332)
Net Investment Income	<u>\$ 11,242,813,657</u>
Other	<u>\$ 8,108,248</u>
Total Additions	<u>\$ 18,067,945,628</u>
Deductions	
Benefit payments, including refunds of employee contributions	\$ 10,595,332,748
Pension Plan Administrative Expense	64,926,169
Other*	200,706,998
Total Deductions	<u>\$ 10,860,965,915</u>
Net Increase (Decrease) in Net Position	<u>\$ 7,206,979,713</u>
Net Position Restricted for Pensions	
Beginning of Year	<u>\$ 147,361,922,120</u>
End of Year	<u>\$ 154,568,901,833</u>

*The (\$95,543,208) prior period adjustment to the beginning of year Net Position was reflected as an "Other" deduction.

Schedules of Required Supplementary Information

Schedule of Changes in the Employer's Net Pension Liability and Related Ratios

Fiscal year ending August 31,	2018	2017	2016	2015	2014
Total Pension Liability					
Service Cost	\$ 4,654,171,138	\$ 4,489,045,421	\$ 4,392,076,679	\$ 4,225,448,833	\$ 3,965,994,265
Interest on the Total Pension Liability	14,109,276,321	13,515,485,995	12,896,571,424	12,555,645,919	11,813,445,940
Benefit Changes	0	0	0	-	-
Difference between Expected and Actual Experience	0	(969,830,844)	373,668,629	(1,588,618,832)	482,638,639
Assumption Changes	22,106,679,263	700,880,288	0	(1,474,723,994)	2,028,541,342
Benefit Payments	(10,172,997,008)	(9,775,775,472)	(9,379,122,730)	(8,935,111,459)	(8,548,642,525)
Refunds	(422,335,740)	(420,421,056)	(373,418,687)	(391,341,181)	(410,600,319)
Net Change in Total Pension Liability	\$ 30,274,793,974	\$ 7,539,384,332	\$ 7,909,775,315	4,391,299,286	9,331,377,342
Total Pension Liability - Beginning	\$ 179,336,534,819	\$ 171,797,150,487	\$ 163,887,375,172	159,496,075,886	150,164,698,544
Total Pension Liability - Ending (a)	\$ 209,611,328,793	\$ 179,336,534,819	\$ 171,797,150,487	\$ 163,887,375,172	\$ 159,496,075,886
Plan Fiduciary Net Position					
Non-Contributing Entity	\$ 1,715,784,550	\$ 1,697,962,608	\$ 1,675,631,248	1,591,482,988	1,530,623,829
Employer Contributions	1,671,257,303	1,588,309,345	1,483,389,348	\$ 1,377,972,653	\$ 984,552,391
Employee Contributions	3,360,773,197	3,242,556,261	2,943,669,320	2,576,024,311	2,357,686,000
Pension Plan Net Investment Income	11,242,813,657	17,079,807,347	9,193,280,560	(412,759,100)	19,434,430,034
Benefit Payments	(10,172,997,008)	(9,775,775,472)	(9,379,122,730)	(8,935,111,459)	(8,548,642,525)
Refunds	(422,335,740)	(420,421,056)	(373,418,687)	(391,341,181)	(410,600,319)
Pension Plan Administrative Expense	(64,926,169)	(44,189,998)	(44,402,710)	(35,556,979)	(41,904,190)
Other	(123,390,077)	(14,964,388)	(29,095,088)	(11,248,106)	84,954,006
Net Change in Plan Fiduciary Net Position	\$ 7,206,979,713	\$ 13,353,284,647	\$ 5,469,931,261	(4,240,536,873)	15,391,099,226
Plan Fiduciary Net Position - Beginning	\$ 147,361,922,120	\$ 134,008,637,473	\$ 128,538,706,212	132,779,243,085	117,388,143,859
Plan Fiduciary Net Position - Ending (b)	\$ 154,568,901,833	\$ 147,361,922,120	\$ 134,008,637,473	\$ 128,538,706,212	\$ 132,779,243,085
Net Pension Liability - Ending (a) - (b)	\$ 55,042,426,960	\$ 31,974,612,699	\$ 37,788,513,014	35,348,668,960	26,716,832,801
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	73.74 %	82.17 %	78.00 %	78.43 %	83.25 %
Covered Employee Payroll	\$ 43,646,405,156	\$ 42,111,120,273	\$ 40,742,826,333	\$ 38,448,124,045	\$ 36,654,290,800
Net Pension Liability as a Percentage of Covered Employee Payroll	126.11 %	75.93 %	92.75 %	91.94 %	72.89 %
Notes to Schedule:					
N/A					

Schedules of Required Supplementary Information

Schedule of the Net Pension Liability (Historical)

Last 10 Fiscal Years

FY Ending August 31,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2013	\$ 150,164,698,544	\$ 117,388,143,859	\$ 32,776,554,685	78.17%	\$ 35,188,983,344	93.14%
2014	159,496,075,886	132,779,243,085	26,716,832,801	83.25%	36,654,290,800	72.89%
2015	163,887,375,172	128,538,706,212	35,348,668,960	78.43%	38,448,124,045	91.94%
2016	171,797,150,487	134,008,637,473	37,788,513,014	78.00%	40,742,826,333	92.75%
2017	179,336,534,819	147,361,922,120	31,974,612,699	82.17%	42,111,120,273	75.93%
2018	209,611,328,793	154,568,901,833	55,042,426,960	73.74%	43,646,405,156	126.11%

SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Contributions

FY Ending August 31,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2014	\$ 3,177,927,012	\$ 2,515,176,220	\$662,750,792	\$ 36,654,290,800	6.86%
2015	3,171,970,234	2,969,455,641	202,514,593	38,448,124,045	7.72%
2016	3,226,831,846	3,159,020,596	67,811,250	40,742,826,333	7.75%
2017	3,343,622,950	3,286,271,953	57,350,997	42,111,120,273	7.80%
2018	3,426,242,805	3,387,041,853	39,200,952	43,646,405,156	7.76%

Notes to Schedule of Contributions

Valuation Date: August 31, 2017 (to determine contribution rate for fiscal year ending August 31, 2018).

Notes: Actuarially determined contribution rates are calculated as of August 31 preceding fiscal year. Members and employers contribute based on statutorily fixed rates.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	For funding purposes, the Ultimate Entry Age Normal actuarial cost method is used
Amortization Method	Level Percentage of Payroll, Floating
Remaining Amortization Period	33 years
Asset Valuation Method	5 Year smoothed market
Inflation	2.50%
Salary Increases	3.50% to 9.50% including inflation
Investment Rate of Return	8.00%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition. Last updated for the 2015 valuation pursuant to an experience study of the period September 1, 2010 through August 31, 2014.
Mortality	Active Mortality: 90% of the RP-2014 Employee Mortality Tables for males and females, with full generational mortality using Scale BB. Post-Retirement: The 2015 TRS of Texas Healthy Pensioner Mortality Tables, with full generational projection using Scale BB.

Other Information:

Notes There were no benefit changes during the year.

The assumptions used to determine the ADEC are those in effect for the August 31, 2017 actuarial valuation. Due to the lag between valuation date and the measurement date, they may not be the same as the assumptions used to measure the Net Pension Liability.

Calculation of the Single Discount Rate

GASB Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a municipal bond rate is required, as described in the following paragraph.

The *single discount rate* (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits) and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 7.25%; the municipal bond rate is 3.690% (based on the daily rate closest to but not later than the measurement date of the Fidelity “20-Year Municipal GO AA Index”); and the resulting single discount rate is 6.907%.

The tables in this section provide background for the development of the single discount rate.

The **Projection of Contributions** table shows the development of expected contributions in future years. Normal Cost contributions for future hires are not included (nor are their liabilities).

The **Projection of Plan Fiduciary Net Position** table shows the development of expected asset levels in future years.

The **Present Values of Projected Benefit Payments** table shows the development of the Single Discount Rate (SDR). It breaks down the benefit payments into present values for funded and unfunded portions and shows the equivalent total at the SDR.

Single Discount Rate Development

Projection of Contributions Beginning September 1, 2018

Year	Payroll for Current Employees	Payroll for Future Employees	Total Employee Payroll	Contributions from Current Employees	Employer Contributions for All Employees	Employer Normal Cost Contributions Related to Payroll of Future Employees	Total Contributions
0	\$ 40,359,526,266		\$ 43,646,405,156				\$ -
1	38,695,775,334	\$ 6,260,021,977	44,955,797,311	2,979,574,701	3,488,569,871	(226,600,238)	6,241,544,334
2	37,338,736,192	8,965,735,038	46,304,471,230	2,875,082,687	3,593,226,967	(324,464,825)	6,143,844,829
3	36,098,343,676	11,595,261,691	47,693,605,367	2,779,572,463	3,701,023,776	(419,528,359)	6,061,067,880
4	34,913,350,478	14,211,063,050	49,124,413,528	2,688,327,987	3,812,054,490	(514,396,406)	5,985,986,071
5	33,783,220,169	16,814,925,764	50,598,145,934	2,601,307,953	3,926,416,124	(607,714,919)	5,920,009,158
6	32,687,853,397	19,428,236,915	52,116,090,312	2,516,964,712	4,044,208,608	(700,336,250)	5,860,837,070
7	31,600,088,494	22,079,484,527	53,679,573,021	2,433,206,814	4,165,534,866	(793,223,881)	5,805,517,799
8	30,504,820,137	24,785,140,074	55,289,960,212	2,348,871,151	4,290,500,912	(886,895,296)	5,752,476,767
9	29,387,853,803	27,560,805,215	56,948,659,018	2,262,864,743	4,419,215,940	(981,735,408)	5,700,345,275
10	28,243,769,497	30,413,349,291	58,657,118,788	2,174,770,251	4,551,792,418	(1,077,931,216)	5,648,631,453
11	27,060,350,656	33,356,481,696	60,416,832,352	2,083,647,001	4,688,346,191	(1,176,083,036)	5,595,910,156
12	25,844,028,135	36,385,309,188	62,229,337,323	1,989,990,166	4,828,996,576	(1,275,956,767)	5,543,029,975
13	24,609,887,385	39,486,330,057	64,096,217,442	1,894,961,329	4,973,866,474	(1,377,015,510)	5,491,812,293
14	23,357,273,712	42,661,830,254	66,019,103,966	1,798,510,076	5,123,082,468	(1,479,306,950)	5,442,285,594
15	22,093,783,945	45,905,893,139	67,999,677,085	1,701,221,364	5,276,774,942	(1,582,545,576)	5,395,450,730
16	20,825,220,845	49,214,446,552	70,039,667,397	1,603,542,005	5,435,078,190	(1,686,396,527)	5,352,223,668
17	19,569,049,886	52,571,807,533	72,140,857,419	1,506,816,841	5,598,130,536	(1,790,151,401)	5,314,795,976
18	18,346,928,704	55,958,154,437	74,305,083,142	1,412,713,510	5,766,074,452	(1,892,835,236)	5,285,952,726
19	17,179,338,924	59,354,896,712	76,534,235,636	1,322,809,097	5,939,056,685	(1,993,880,497)	5,267,985,285
20	16,068,356,409	62,761,906,296	78,830,262,705	1,237,263,443	6,117,228,386	(2,093,365,279)	5,261,126,550
21	15,002,048,443	66,193,122,143	81,195,170,586	1,155,157,730	6,300,745,237	(2,191,843,478)	5,264,059,489
22	13,979,880,203	69,651,145,500	83,631,025,704	1,076,450,776	6,489,767,595	(2,289,436,866)	5,276,781,505
23	12,993,241,287	73,146,715,187	86,139,956,475	1,000,479,579	6,684,460,622	(2,386,619,546)	5,298,320,655
24	12,030,189,081	76,693,966,088	88,724,155,169	926,324,559	6,884,994,441	(2,483,972,539)	5,327,346,461
25	11,083,171,923	80,302,707,901	91,385,879,824	853,404,238	7,091,544,274	(2,581,980,209)	5,362,968,303
26	10,145,918,712	83,981,537,507	94,127,456,219	781,235,741	7,304,290,603	(2,681,090,246)	5,404,436,098
27	9,212,819,331	87,738,460,575	96,951,279,905	709,387,088	7,523,419,321	(2,781,780,059)	5,451,026,350
28	8,310,818,531	91,548,999,772	99,859,818,302	639,933,027	7,749,121,900	(2,883,452,277)	5,505,602,650
29	7,449,153,895	95,406,458,957	102,855,612,852	573,584,850	7,981,595,557	(2,986,109,987)	5,569,070,420
30	6,628,717,520	99,312,563,717	105,941,281,237	510,411,249	8,221,043,424	(3,089,939,718)	5,641,514,955
31	5,845,363,187	103,274,156,487	109,119,519,674	450,092,965	8,467,674,727	(3,195,291,954)	5,722,475,738
32	5,082,066,314	107,311,038,951	112,393,105,264	391,319,106	8,721,704,969	(3,302,995,092)	5,810,028,983
33	4,343,827,563	111,421,070,859	115,764,898,422	334,474,722	8,983,356,118	(3,413,133,730)	5,904,697,110
34	3,644,393,565	115,593,451,810	119,237,845,375	280,618,304	9,252,856,801	(3,525,548,955)	6,007,926,150
35	2,989,928,534	119,825,052,202	122,814,980,736	230,224,497	9,530,442,505	(3,640,368,181)	6,120,298,821
36	2,395,226,690	124,104,203,469	126,499,430,158	184,432,455	9,816,355,780	(3,757,514,424)	6,243,273,811
37	1,872,975,686	128,421,437,377	130,294,413,063	144,219,128	10,110,846,454	(3,877,026,874)	6,378,038,708
38	1,433,217,886	132,770,027,570	134,203,245,455	110,357,777	10,414,171,847	(3,999,186,570)	6,525,343,054
39	1,083,276,580	137,146,066,239	138,229,342,819	83,412,297	10,726,597,003	(4,124,130,972)	6,685,878,328
40	811,707,027	141,564,516,077	142,376,223,103	62,501,441	11,048,394,913	(4,252,082,395)	6,858,813,959
41	598,410,096	146,049,099,701	146,647,509,796	46,077,577	11,379,846,760	(4,383,290,251)	7,042,634,086
42	435,138,838	150,611,796,252	151,046,935,090	33,505,691	11,721,242,163	(4,517,894,233)	7,236,853,621
43	312,733,291	155,265,609,852	155,578,343,143	24,080,463	12,072,879,428	(4,656,033,297)	7,440,926,594
44	219,759,484	160,025,933,953	160,245,693,437	16,921,480	12,435,065,811	(4,797,943,050)	7,654,044,241
45	149,495,476	164,903,568,765	165,053,064,240	11,511,152	12,808,117,785	(4,943,791,869)	7,875,837,068
46	97,076,008	169,907,580,160	170,004,656,168	7,474,853	13,192,361,319	(5,093,737,455)	8,106,098,717
47	58,888,119	175,045,907,733	175,104,795,853	4,534,385	13,588,132,158	(5,247,928,640)	8,344,737,903
48	32,465,380	180,325,474,348	180,357,939,728	2,499,834	13,995,776,123	(5,406,498,735)	8,591,777,222
49	15,599,345	185,753,078,575	185,768,677,920	1,201,150	14,415,649,407	(5,569,598,308)	8,847,252,249

Single Discount Rate Development

Projection of Contributions Beginning September 1, 2018(continued)

Year	Payroll for Current Employees	Payroll for Future Employees	Total Employee Payroll	Contributions from Current Employees	Employer Contributions for All Employees	Employer Normal Cost Contributions Related to Payroll of Future Employees	Total Contributions
50	6,074,956	191,335,663,302	191,341,738,258	467,772	14,848,118,889	(5,737,393,531)	9,111,193,130
51	2,207,102	197,079,783,304	197,081,990,405	169,947	15,293,562,455	(5,910,028,045)	9,383,704,357
52	930,008	202,993,520,109	202,994,450,118	71,611	15,752,369,329	(6,087,657,253)	9,664,783,687
53	351,071	209,083,932,550	209,084,283,621	27,032	16,224,940,409	(6,270,429,612)	9,954,537,829
54	86,166	215,356,725,964	215,356,812,130	6,635	16,711,688,621	(6,458,500,935)	10,253,194,321
55	16,213	221,817,500,281	221,817,516,494	1,248	17,213,039,280	(6,652,030,089)	10,561,010,439
56	1,626	228,472,040,363	228,472,041,988	125	17,729,430,458	(6,851,184,523)	10,878,246,060
57	-	235,326,203,248	235,326,203,248	-	18,261,313,372	(7,056,140,623)	11,205,172,749
58	-	242,385,989,345	242,385,989,345	-	18,809,152,773	(7,267,088,073)	11,542,064,700
59	-	249,657,569,026	249,657,569,026	-	19,373,427,356	(7,484,231,028)	11,889,196,328
60	-	257,147,296,097	257,147,296,097	-	19,954,630,177	(7,707,787,247)	12,246,842,930
61	-	264,861,714,980	264,861,714,980	-	20,553,269,082	(7,937,985,628)	12,615,283,454
62	-	272,807,566,429	272,807,566,429	-	21,169,867,155	(8,175,064,818)	12,994,802,337
63	-	280,991,793,422	280,991,793,422	-	21,804,963,170	(8,419,269,919)	13,385,693,251
64	-	289,421,547,224	289,421,547,224	-	22,459,112,065	(8,670,849,480)	13,788,262,585
65	-	298,104,193,641	298,104,193,641	-	23,132,885,427	(8,930,052,781)	14,202,832,646
66	-	307,047,319,450	307,047,319,450	-	23,826,871,989	(9,197,129,204)	14,629,742,785
67	-	316,258,739,034	316,258,739,034	-	24,541,678,149	(9,472,330,440)	15,069,347,709
68	-	325,746,501,205	325,746,501,205	-	25,277,928,494	(9,755,913,516)	15,522,014,978
69	-	335,518,896,241	335,518,896,241	-	26,036,266,348	(10,048,140,880)	15,988,125,468
70	-	345,584,463,128	345,584,463,128	-	26,817,354,339	(10,349,279,448)	16,468,074,891
71	-	355,951,997,022	355,951,997,022	-	27,621,874,969	(10,659,598,211)	16,962,276,758
72	-	366,630,556,933	366,630,556,933	-	28,450,531,218	(10,979,367,321)	17,471,163,897
73	-	377,629,473,641	377,629,473,641	-	29,304,047,155	(11,308,859,996)	17,995,187,159
74	-	388,958,357,850	388,958,357,850	-	30,183,168,569	(11,648,353,284)	18,534,815,285
75	-	400,627,108,586	400,627,108,586	-	31,088,663,626	(11,998,129,080)	19,090,534,546
76	-	412,645,921,843	412,645,921,843	-	32,021,323,535	(12,358,475,821)	19,662,847,714
77	-	425,025,299,498	425,025,299,498	-	32,981,963,241	(12,729,689,444)	20,252,273,797
78	-	437,776,058,483	437,776,058,483	-	33,971,422,138	(13,112,074,827)	20,859,347,311
79	-	450,909,340,238	450,909,340,238	-	34,990,564,802	(13,505,947,840)	21,484,616,962
80	-	464,436,620,445	464,436,620,445	-	36,040,281,747	(13,911,635,896)	22,128,645,851
81	-	478,369,719,058	478,369,719,058	-	37,121,490,199	(14,329,478,561)	22,792,011,638
82	-	492,720,810,630	492,720,810,630	-	38,235,134,905	(14,759,828,387)	23,475,306,518
83	-	507,502,434,949	507,502,434,949	-	39,382,188,952	(15,203,050,746)	24,179,138,206
84	-	522,727,507,997	522,727,507,997	-	40,563,654,621	(15,659,523,888)	24,904,130,733
85	-	538,409,333,237	538,409,333,237	-	41,780,564,259	(16,129,639,549)	25,650,924,710
86	-	554,561,613,234	554,561,613,234	-	43,033,981,187	(16,613,803,162)	26,420,178,025
87	-	571,198,461,631	571,198,461,631	-	44,325,000,623	(17,112,434,079)	27,212,566,544
88	-	588,334,415,480	588,334,415,480	-	45,654,750,641	(17,625,965,832)	28,028,784,809
89	-	605,984,447,945	605,984,447,945	-	47,024,393,161	(18,154,846,265)	28,869,546,896
90	-	624,163,981,383	624,163,981,383	-	48,435,124,955	(18,699,537,863)	29,735,587,092
91	-	642,888,900,825	642,888,900,825	-	49,888,178,704	(19,260,518,142)	30,627,660,562
92	-	662,175,567,849	662,175,567,849	-	51,384,824,065	(19,838,279,813)	31,546,544,252
93	-	682,040,834,885	682,040,834,885	-	52,926,368,787	(20,433,331,119)	32,493,037,668
94	-	702,502,059,931	702,502,059,931	-	54,514,159,851	(21,046,196,225)	33,467,963,626
95	-	723,577,121,729	723,577,121,729	-	56,149,584,646	(21,677,415,546)	34,472,169,100
96	-	745,284,435,381	745,284,435,381	-	57,834,072,186	(22,327,546,107)	35,506,526,079
97	-	767,642,968,443	767,642,968,443	-	59,569,094,351	(22,997,161,952)	36,571,932,399
98	-	790,672,257,496	790,672,257,496	-	61,356,167,182	(23,686,854,518)	37,669,312,664
99	-	814,392,425,221	814,392,425,221	-	63,196,852,197	(24,042,853,869)	39,153,998,328

Single Discount Rate Development

PROJECTION OF PLAN FIDUCIARY NET POSITION BEGINNING SEPTEMBER 1, 2018

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 7.25%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
1	154,568,901,833	6,241,544,334	10,932,335,867	42,565,353	11,037,663,285	160,873,208,232
2	160,873,208,232	6,143,844,829	11,423,692,866	41,072,610	11,473,798,970	167,026,086,555
3	167,026,086,555	6,061,067,880	11,928,345,714	39,708,178	11,899,009,486	173,018,110,029
4	173,018,110,029	5,985,986,071	12,454,828,593	38,404,686	12,312,052,430	178,822,915,252
5	178,822,915,252	5,920,009,158	13,006,324,342	37,161,542	12,710,953,326	184,410,391,852
6	184,410,391,852	5,860,837,070	13,574,134,295	35,956,639	13,093,757,852	189,754,895,840
7	189,754,895,840	5,805,517,799	14,161,323,029	34,760,097	13,458,393,597	194,822,724,110
8	194,822,724,110	5,752,476,767	14,770,977,312	33,555,302	13,802,251,660	199,572,919,923
9	199,572,919,923	5,700,345,275	15,399,757,503	32,326,639	14,122,433,430	203,963,614,484
10	203,963,614,484	5,648,631,453	16,049,041,548	31,068,146	14,415,837,037	207,947,973,280
11	207,947,973,280	5,595,910,156	16,715,287,853	29,766,386	14,679,142,836	211,477,972,033
12	211,477,972,033	5,543,029,975	17,393,749,445	28,428,431	14,909,068,105	214,507,892,237
13	214,507,892,237	5,491,812,293	18,064,261,792	27,070,876	15,103,080,708	217,011,452,569
14	217,011,452,569	5,442,285,594	18,727,741,831	25,693,001	15,259,243,630	218,959,546,961
15	218,959,546,961	5,395,450,730	19,380,788,439	24,303,162	15,375,603,164	220,325,509,253
16	220,325,509,253	5,352,223,668	20,023,940,599	22,907,743	15,450,239,212	221,081,123,790
17	221,081,123,790	5,314,795,976	20,644,041,612	21,525,955	15,481,652,096	221,212,004,295
18	221,212,004,295	5,285,952,726	21,230,267,992	20,181,622	15,469,282,640	220,716,790,048
19	220,716,790,048	5,267,985,285	21,758,449,712	18,897,273	15,413,973,833	219,621,402,181
20	219,621,402,181	5,261,126,550	22,224,575,502	17,675,192	15,317,756,035	217,958,034,073
21	217,958,034,073	5,264,059,489	22,638,474,320	16,502,253	15,182,566,761	215,749,683,750
22	215,749,683,750	5,276,781,505	22,998,850,301	15,377,868	15,010,119,449	213,022,356,534
23	213,022,356,534	5,298,320,655	23,314,616,435	14,292,565	14,801,947,762	209,793,715,950
24	209,793,715,950	5,327,346,461	23,599,395,315	13,233,208	14,558,800,210	206,067,234,098
25	206,067,234,098	5,362,968,303	23,864,285,019	12,191,489	14,280,501,828	201,834,227,721
26	201,834,227,721	5,404,436,098	24,119,274,999	11,160,511	13,966,040,830	197,074,269,139
27	197,074,269,139	5,451,026,350	24,371,604,323	10,134,101	13,613,652,836	191,757,209,901
28	191,757,209,901	5,505,602,650	24,584,741,872	9,141,900	13,222,554,100	185,891,482,880
29	185,891,482,880	5,569,070,420	24,745,942,221	8,194,069	12,793,841,829	179,500,258,838
30	179,500,258,838	5,641,514,955	24,666,098,065	7,291,589	12,335,934,106	172,804,318,244
31	172,804,318,244	5,722,475,738	24,739,429,924	6,429,900	11,850,780,812	165,631,714,971
32	165,631,714,971	5,810,028,983	24,801,737,550	5,590,273	11,331,696,121	157,966,112,252
33	157,966,112,252	5,904,697,110	24,837,801,972	4,778,210	10,778,056,061	149,806,285,241
34	149,806,285,241	6,007,926,150	24,826,250,067	4,008,833	10,190,584,016	141,174,536,508
35	141,174,536,508	6,120,298,821	24,753,456,517	3,288,921	9,571,402,708	132,109,492,598
36	132,109,492,598	6,243,273,811	24,595,962,933	2,634,749	8,924,199,425	122,678,368,152
37	122,678,368,152	6,378,038,708	24,335,739,534	2,060,273	8,254,531,171	112,973,138,223
38	112,973,138,223	6,525,343,054	23,961,168,260	1,576,540	7,569,506,225	103,105,242,704
39	103,105,242,704	6,685,878,328	23,463,885,269	1,191,604	6,877,526,207	93,203,570,365
40	93,203,570,365	6,858,813,959	22,868,359,214	892,878	6,187,034,948	83,380,167,179
41	83,380,167,179	7,042,634,086	22,205,154,126	658,251	5,505,014,019	73,722,002,907
42	73,722,002,907	7,236,853,621	21,484,143,882	478,653	4,837,400,109	64,311,634,102
43	64,311,634,102	7,440,926,594	20,714,770,022	344,007	4,189,823,214	55,227,269,882
44	55,227,269,882	7,654,044,241	19,909,855,640	241,735	3,567,468,433	46,538,685,181
45	46,538,685,181	7,875,837,068	19,077,224,114	164,445	2,975,102,919	38,312,236,609
46	38,312,236,609	8,106,098,717	18,223,018,999	106,784	2,417,311,558	30,612,521,101
47	30,612,521,101	8,344,737,903	17,352,247,242	64,777	1,898,596,192	23,503,543,177
48	23,503,543,177	8,591,777,222	16,468,983,757	35,712	1,423,452,920	17,049,753,851
49	17,049,753,851	8,847,252,249	15,577,312,796	17,159	996,410,329	11,316,086,474

Single Discount Rate Development

Projection of Plan Fiduciary Net Position Beginning September 1, 2018 (continued)

Year	Projected Beginning Plan Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings at 8.50%	Projected Ending Plan Net Position
	(a)	(b)	(c)	(d)	(e)	(f)=(a)+(b)-(c)-(d)+(e)
50	11,316,086,474	9,111,193,130	14,681,612,221	6,682	622,021,328	6,367,682,028
51	6,367,682,028	9,383,704,357	13,785,988,839	2,428	304,866,158	2,270,261,275
52	2,270,261,275	9,664,783,687	12,896,421,359	1,023	49,496,678	-
53	-	9,954,537,829	12,017,819,857	386	-	-
54	-	10,253,194,321	11,153,541,074	95	-	-
55	-	10,561,010,439	10,306,595,738	18	-	-
56	-	10,878,246,060	9,479,872,235	2	-	-
57	-	11,205,172,749	8,675,910,888	-	-	-
58	-	11,542,064,700	7,897,076,777	-	-	-
59	-	11,889,196,328	7,145,743,613	-	-	-
60	-	12,246,842,930	6,424,326,111	-	-	-
61	-	12,615,283,454	5,735,221,444	-	-	-
62	-	12,994,802,337	5,080,823,250	-	-	-
63	-	13,385,693,251	4,463,475,410	-	-	-
64	-	13,788,262,585	3,885,407,898	-	-	-
65	-	14,202,832,646	3,348,642,737	-	-	-
66	-	14,629,742,785	2,854,826,516	-	-	-
67	-	15,069,347,709	2,405,080,645	-	-	-
68	-	15,522,014,978	1,999,914,390	-	-	-
69	-	15,988,125,468	1,639,220,570	-	-	-
70	-	16,468,074,891	1,322,339,149	-	-	-
71	-	16,962,276,758	1,048,012,463	-	-	-
72	-	17,471,163,897	814,473,266	-	-	-
73	-	17,995,187,159	619,555,112	-	-	-
74	-	18,534,815,285	460,605,808	-	-	-
75	-	19,090,534,546	334,410,563	-	-	-
76	-	19,662,847,714	237,156,144	-	-	-
77	-	20,252,273,797	164,510,140	-	-	-
78	-	20,859,347,311	111,898,134	-	-	-
79	-	21,484,616,962	74,845,195	-	-	-
80	-	22,128,645,851	49,318,041	-	-	-
81	-	22,792,011,638	32,023,915	-	-	-
82	-	23,475,306,518	20,485,582	-	-	-
83	-	24,179,138,206	12,904,571	-	-	-
84	-	24,904,130,733	8,000,384	-	-	-
85	-	25,650,924,710	4,879,089	-	-	-
86	-	26,420,178,025	2,926,043	-	-	-
87	-	27,212,566,544	1,724,955	-	-	-
88	-	28,028,784,809	999,663	-	-	-
89	-	28,869,546,896	569,616	-	-	-
90	-	29,735,587,092	319,015	-	-	-
91	-	30,627,660,562	175,575	-	-	-
92	-	31,546,544,252	94,959	-	-	-
93	-	32,493,037,668	50,385	-	-	-
94	-	33,467,963,626	26,125	-	-	-
95	-	34,472,169,100	13,169	-	-	-
96	-	35,506,526,079	6,463	-	-	-
97	-	36,571,932,399	3,217	-	-	-
98	-	37,669,312,664	1,669	-	-	-
99	-	39,153,998,328	930	-	-	-

Single Discount Rate Development

Present Values of Projected Benefits Beginning September 1, 2018

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^((a)-.5)	(g)=(e)*vf ^((a)-.5)	(h)=((c)/(1+sdr)^(a-.5)
1	\$ 154,568,901,833	\$ 10,932,335,867	\$ 10,932,335,867	\$ -	\$ 9,842,762,693	\$ -	\$ 9,890,125,469
2	160,873,208,232	11,423,692,866	11,423,692,866	-	9,589,882,061	-	9,666,915,240
3	167,026,086,555	11,928,345,714	11,928,345,714	-	9,336,619,596	-	9,441,786,307
4	173,018,110,029	12,454,828,593	12,454,828,593	-	9,089,707,353	-	9,221,557,133
5	178,822,915,252	13,006,324,342	13,006,324,342	-	8,850,532,990	-	9,007,694,391
6	184,410,391,852	13,574,134,295	13,574,134,295	-	8,612,508,945	-	8,793,540,371
7	189,754,895,840	14,161,323,029	14,161,323,029	-	8,377,685,889	-	8,581,199,655
8	194,822,724,110	14,770,977,312	14,770,977,312	-	8,147,646,419	-	8,372,322,815
9	199,572,919,923	15,399,757,503	15,399,757,503	-	7,920,261,560	-	8,164,755,299
10	203,963,614,484	16,049,041,548	16,049,041,548	-	7,696,219,444	-	7,959,228,069
11	207,947,973,280	16,715,287,853	16,715,287,853	-	7,473,858,996	-	7,754,044,070
12	211,477,972,033	17,393,749,445	17,393,749,445	-	7,251,484,936	-	7,547,448,735
13	214,507,892,237	18,064,261,792	18,064,261,792	-	7,021,932,606	-	7,331,954,100
14	217,011,452,569	18,727,741,831	18,727,741,831	-	6,787,729,885	-	7,110,129,155
15	218,959,546,961	19,380,788,439	19,380,788,439	-	6,549,577,381	-	6,882,656,158
16	220,325,509,253	20,023,940,599	20,023,940,599	-	6,309,487,498	-	6,651,609,396
17	221,081,123,790	20,644,041,612	20,644,041,612	-	6,065,155,792	-	6,414,524,564
18	221,212,004,295	21,230,267,992	21,230,267,992	-	5,815,745,730	-	6,170,463,392
19	220,716,790,048	21,758,449,712	21,758,449,712	-	5,557,514,212	-	5,915,382,190
20	219,621,402,181	22,224,575,502	22,224,575,502	-	5,292,840,503	-	5,651,723,312
21	217,958,034,073	22,638,474,320	22,638,474,320	-	5,026,957,188	-	5,385,017,632
22	215,749,683,750	22,998,850,301	22,998,850,301	-	4,761,752,924	-	5,117,273,841
23	213,022,356,534	23,314,616,435	23,314,616,435	-	4,500,820,624	-	4,852,363,905
24	209,793,715,950	23,599,395,315	23,599,395,315	-	4,247,828,792	-	4,594,291,223
25	206,067,234,098	23,864,285,019	23,864,285,019	-	4,005,135,887	-	4,345,688,870
26	201,834,227,721	24,119,274,999	24,119,274,999	-	3,774,294,433	-	4,108,345,966
27	197,074,269,139	24,371,604,323	24,371,604,323	-	3,555,972,102	-	3,883,107,691
28	191,757,209,901	24,584,741,872	24,584,741,872	-	3,344,587,623	-	3,663,983,642
29	185,891,482,880	24,745,942,221	24,745,942,221	-	3,138,944,372	-	3,449,724,594
30	179,500,258,838	24,666,098,065	24,666,098,065	-	2,917,311,323	-	3,216,425,089
31	172,804,318,244	24,739,429,924	24,739,429,924	-	2,728,190,617	-	3,017,555,261
32	165,631,714,971	24,801,737,550	24,801,737,550	-	2,550,174,094	-	2,829,698,788
33	157,966,112,252	24,837,801,972	24,837,801,972	-	2,381,242,261	-	2,650,719,777
34	149,806,285,241	24,826,250,067	24,826,250,067	-	2,219,239,869	-	2,478,302,647
35	141,174,536,508	24,753,456,517	24,753,456,517	-	2,063,154,118	-	2,311,381,450
36	132,109,492,598	24,595,962,933	24,595,962,933	-	1,911,447,388	-	2,148,286,300
37	122,678,368,152	24,335,739,534	24,335,739,534	-	1,763,379,414	-	1,988,224,561
38	112,973,138,223	23,961,168,260	23,961,168,260	-	1,618,869,742	-	1,831,139,503
39	103,105,242,704	23,463,885,269	23,463,885,269	-	1,478,109,276	-	1,677,281,382
40	93,203,570,365	22,868,359,214	22,868,359,214	-	1,343,211,251	-	1,529,091,811
41	83,380,167,179	22,205,154,126	22,205,154,126	-	1,216,090,250	-	1,388,816,622
42	73,722,002,907	21,484,143,882	21,484,143,882	-	1,097,066,026	-	1,256,902,885
43	64,311,634,102	20,714,770,022	20,714,770,022	-	986,273,874	-	1,133,590,881
44	55,227,269,882	19,909,855,640	19,909,855,640	-	883,869,653	-	1,019,147,153
45	46,538,685,181	19,077,224,114	19,077,224,114	-	789,656,097	-	913,432,634
46	38,312,236,609	18,223,018,999	18,223,018,999	-	703,308,455	-	816,157,971
47	30,612,521,101	17,352,247,242	17,352,247,242	-	624,430,253	-	726,946,053
48	23,503,543,177	16,468,983,757	16,468,983,757	-	552,583,241	-	645,365,602
49	17,049,753,851	15,577,312,796	15,577,312,796	-	487,333,367	-	570,984,226

Single Discount Rate Development

PVs of Projected Benefits Beginning September 1, 2018 (continued)

Year	Projected Beginning Plan Net Position	Projected Benefit Payments	Funded Portion of Benefit Payments	Unfunded Portion of Benefit Payments	Present Value of Funded Benefit Payments using Expected Return Rate (v)	Present Value of Unfunded Benefit Payments using Municipal Bond Rate (vf)	Present Value of Benefit Payments using Single Discount Rate (sdr)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*v^((a)-.5)	(g)=(e)*vf^((a)-.5)	(h)=((c)/(1+sdr)^(a-.5))
50	\$ 11,316,086,474	\$ 14,681,612,221	\$ 14,681,612,221	\$ -	\$ 428,262,508	\$ -	\$ 503,382,224
51	6,367,682,028	13,785,988,839	13,785,988,839	-	374,953,083	-	442,134,705
52	2,270,261,275	12,896,421,359	2,351,118,353	10,545,303,006	59,623,326	1,573,523,209	386,881,938
53	-	12,017,819,857	-	12,017,819,857	-	1,729,429,669	337,230,998
54	-	11,153,541,074	-	11,153,541,074	-	1,547,936,397	292,756,890
55	-	10,306,595,738	-	10,306,595,738	-	1,379,490,482	253,047,559
56	-	9,479,872,235	-	9,479,872,235	-	1,223,683,421	217,711,792
57	-	8,675,910,888	-	8,675,910,888	-	1,080,052,335	186,374,765
58	-	7,897,076,777	-	7,897,076,777	-	948,111,040	158,683,197
59	-	7,145,743,613	-	7,145,743,613	-	827,376,913	134,308,831
60	-	6,424,326,111	-	6,424,326,111	-	717,375,718	112,947,670
61	-	5,735,221,444	-	5,735,221,444	-	617,635,729	94,317,536
62	-	5,080,823,250	-	5,080,823,250	-	527,690,690	78,157,183
63	-	4,463,475,410	-	4,463,475,410	-	447,076,268	64,224,468
64	-	3,885,407,898	-	3,885,407,898	-	375,325,624	52,294,564
65	-	3,348,642,737	-	3,348,642,737	-	311,963,323	42,158,126
66	-	2,854,826,516	-	2,854,826,516	-	256,494,212	33,618,998
67	-	2,405,080,645	-	2,405,080,645	-	208,396,594	26,492,762
68	-	1,999,914,390	-	1,999,914,390	-	167,122,723	20,606,373
69	-	1,639,220,570	-	1,639,220,570	-	132,106,632	15,798,655
70	-	1,322,339,149	-	1,322,339,149	-	102,776,354	11,921,149
71	-	1,048,012,463	-	1,048,012,463	-	78,556,101	8,837,599
72	-	814,473,266	-	814,473,266	-	58,878,052	6,424,469
73	-	619,555,112	-	619,555,112	-	43,193,627	4,571,228
74	-	460,605,808	-	460,605,808	-	30,969,362	3,178,886
75	-	334,410,563	-	334,410,563	-	21,684,328	2,158,828
76	-	237,156,144	-	237,156,144	-	14,830,763	1,432,072
77	-	164,510,140	-	164,510,140	-	9,921,673	929,214
78	-	111,898,134	-	111,898,134	-	6,508,459	591,206
79	-	74,845,195	-	74,845,195	-	4,198,386	369,890
80	-	49,318,041	-	49,318,041	-	2,668,010	227,985
81	-	32,023,915	-	32,023,915	-	1,670,780	138,474
82	-	20,485,582	-	20,485,582	-	1,030,757	82,858
83	-	12,904,571	-	12,904,571	-	626,202	48,823
84	-	8,000,384	-	8,000,384	-	374,408	28,313
85	-	4,879,089	-	4,879,089	-	220,209	16,151
86	-	2,926,043	-	2,926,043	-	127,362	9,060
87	-	1,724,955	-	1,724,955	-	72,410	4,996
88	-	999,663	-	999,663	-	40,471	2,708
89	-	569,616	-	569,616	-	22,240	1,443
90	-	319,015	-	319,015	-	12,012	756
91	-	175,575	-	175,575	-	6,376	389
92	-	94,959	-	94,959	-	3,326	197
93	-	50,385	-	50,385	-	1,702	98
94	-	26,125	-	26,125	-	851	47
95	-	13,169	-	13,169	-	414	22
96	-	6,463	-	6,463	-	196	10
97	-	3,217	-	3,217	-	94	5
98	-	1,669	-	1,669	-	47	2
99	-	930	-	930	-	25	1
Totals					\$ 219,123,227,917	\$ 14,449,185,974	\$ 233,572,413,891