

San Diego City Employees' Retirement System

City of San Diego

Actuarial Valuation Report as of June 30, 2015

Produced by Cheiron

February 2016

TABLE OF CONTENTS

<i>Section</i>	<i>Page</i>
Letter of Transmittal	i
Section I Board Summary	1
Section II Assets	11
Section III Liabilities	16
Section IV Contributions.....	22
Section V Comprehensive Annual Financial Report Information.....	26
 <i>Appendices</i>	
Appendix A Membership Information	28
Appendix B Actuarial Assumptions and Methods	44
Appendix C Summary of Plan Provisions.....	55
Appendix D Glossary of Terms.....	67

February 26, 2016

Board of Administration
 San Diego City Employees' Retirement System
 401 West A Street, Suite 400
 San Diego, California 92101

Re: City of San Diego June 30, 2015 Actuarial Valuation

Dear Members of the Board:

At your request, we have performed the June 30, 2015 Actuarial Valuation of the San Diego City Employees' Retirement System (SDCERS). The valuation results with respect to the City of San Diego (City) are contained in this valuation report. The table below presents the key results of the valuation for the City.

Table I-1				
SDCERS - City of San Diego				
Valuation as of:	June 30, 2015		June 30, 2014	
Unfunded Actuarial Liability (in millions)	\$	2,001.7	\$	2,030.1
Funding Ratio		75.6%		74.2%
City Contribution Rate		61.98%		60.12%
	Fiscal Year 2017		Fiscal Year 2016	
Actuarially Determined Contribution (in millions)				
-if paid at the beginning of the year	\$	261.1	\$	254.9
-if paid throughout the year	\$	270.2	\$	263.9

- Unfunded Actuarial Liability (UAL):** The City's UAL has decreased by \$28.4 million, compared to an expected decline of \$198.3 million. The largest factors impacting the change in the UAL were the net impact of reducing the discount rate and wage inflation assumptions by 0.125% (increase of \$95.8 million), and the return on the market value of assets being less than expected.
- Funding Ratio:** The ratio of the System's actuarial value of assets to its actuarial liabilities improved by 1.4%, from 74.2% to 75.6%. On a market value of assets basis, the funding ratio declined from 80.1% to 77.8%.
- Contributions (ADC):** The City's actuarially determined contribution (ADC) increased by \$6.2 million, compared to an expected decrease of \$6.8 million. This increase was largely attributable to the reduction in the discount rate and wage inflation assumptions (\$6.8 million) and the return on the market value of assets being less than expected (\$5.4 million). Also, and as expected, the phase-in of an additional one-third of the administrative expense assumption added \$4.3 million to the ADC.

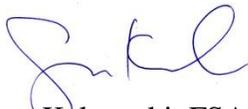
More details on plan experience for previous plan years and projections into the future can be found in the valuation report. This valuation was prepared using census data and financial information as of the valuation date, June 30, 2015. Changes in membership and investment experience following that date are not reflected in this report.

In preparing our report, we relied on information (some oral and some written) supplied by SDCERS' staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice Number 23.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

Finally, this report was prepared exclusively for the San Diego City Employees' Retirement System for the purpose described herein and for the use by the plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

Sincerely,
Cheiron



Gene Kalwarski, FSA, EA, MAAA
Principal Consulting Actuary



David Holland, FSA, EA, MAAA
Consulting Actuary

cc: Alice Alsberghe, ASA, MAAA

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION I - BOARD SUMMARY

The primary purpose of the actuarial valuation is to disclose, as of the valuation date, on the following:

- The financial condition of the SDCERS-City of San Diego Defined Benefit Plan,
- Past and expected trends in the financial condition of SDCERS-City of San Diego,
- The City's Actuarially Determined Contribution for Fiscal Year 2017, and
- Information required for the Comprehensive Annual Financial Report (CAFR).

In this section, we present a summary of the principal valuation results. This summary includes the basis upon which the June 30, 2015 valuation was completed and an examination of the current financial condition of SDCERS-City of San Diego. In addition, we present a review of the key historical trends followed by the projected financial outlook for SDCERS-City of San Diego.

A. Valuation Basis

In November 2015, the SDCERS Board voted to reduce the discount rate and wage inflation assumptions by 0.125% from 7.25% to 7.125% and 3.3% to 3.175%, respectively. These assumption changes have been reflected in this report, including adjustments to the employee contribution rates as required under San Diego City Charter Section 143 ("substantially equal"). The Board also voted to reduce both assumptions by an additional 0.125% in the next valuation.

The June 30, 2015 valuation reflects the second year of the three-year phase-in of expected administrative expenses (\$12.8 million, increasing by 2.5% per year). The development of this component of the ADC is shown in Table IV-1. All other assumptions and methods are the same as the prior valuation. More details can be found in Appendix B.

Effective with the prior valuation, disclosures required by the Governmental Accounting Standards Board (67 and 68, previously 25 and 27) have been removed from the actuarial valuation report. GASB disclosures are now presented in a stand-alone report, which was issued in November 2015.

SDCERS was closed to new City employees (except for Police) effective July 20, 2012, as a result of Proposition B. The non-Police portion of the UAL as of June 30, 2012 is being amortized in level dollar amounts over a closed 15-year period. Subsequent gains and losses are being amortized over new 15-year periods in accordance with the System's funding policy, also in level dollar amounts. The portion of the UAL associated with the Police Plan will continue to be amortized in layers as a level percentage of pay. More detail on the amortization of the UAL can be found in Appendix B Section B.

Throughout this report there will be references to "Old Plan," "2009 Plan," "2011 Plan," "2012 Plan," "2012 No COL Plan," and "Prop B Plan" which distinguishes each membership category's various benefit tiers according to their effective dates. More details on the plan provisions for all tiers can be found in Appendix C.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION I - BOARD SUMMARY

B. Current Financial Condition of SDCERS-City of San Diego

The following discussion summarizes the key results of the June 30, 2015 valuation and how they compare to the results from the June 30, 2014 valuation.

1. City Membership

Table I-2 shows that total membership in SDCERS-City of San Diego remained steady, with an increase of 0.2% from 2014 to 2015. However, there was movement from active and terminated vested to retiree status, with a 3.6% increase in retirees and decreases of 3.2% and 0.4% for active and terminated vested members, respectively. There was very little change in expected active member payroll, but the average pay per active member increased by 3.4%, in part due to the lack of non-Police new hires entering the Plan at lower pay levels. The closure of the Plan to non-Police new hires is expected to result in continued decreases in active member counts and total payroll.

Note: The payroll figures shown below are the expected amounts for the fiscal year beginning July 1, 2015. The figures shown in Appendix A are the actual pensionable compensation for the fiscal year ending June 30, 2015.

Table I-2				
SDCERS - City of San Diego - Membership Total				
Valuation as of:	June 30, 2015	June 30, 2014	% Change	
Active Counts	7,038	7,272	-3.2%	
Terminated Vested	2,907	2,920	-0.4%	
Disabled	1,190	1,197	-0.6%	
Retirees	6,648	6,414	3.6%	
Beneficiaries	1,265	1,211	4.5%	
Total City Members	19,048	19,014	0.2%	
Active Member Payroll	\$ 480,662,378	\$ 480,535,973	0.0%	
Average Pay per Active Member	\$ 68,295	\$ 66,080	3.4%	
Benefits in Pay Status	\$ 419,209,660	\$ 398,603,106	5.2%	
Average Benefit	\$ 46,052	\$ 45,183	1.9%	

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION I - BOARD SUMMARY

2. City Assets and Liabilities

Table I-3 presents a comparison between the June 30, 2015 and June 30, 2014 SDCERS-City of San Diego assets, liabilities, unfunded actuarial liability, and funding ratios.

The key results shown in Table I-3 indicate that due to the total actuarial liability increase of 4.4% and the actuarial value of assets increase of 6.4%, the funding ratio increased from 74.2% as of June 30, 2014 to 75.6% as of June 30, 2015. SDCERS employs a commonly used actuarial smoothing method on the market value that dampens market volatility, so the actuarial value of assets increased more than the market value (1.5%). Had the funding ratio been measured on a market value of assets basis, the ratio would be 77.8% as of June 30, 2015.

Section II-C provides additional information explaining the development of the actuarial value of assets.

Table I-3					
SDCERS - City of San Diego - Assets & Liabilities					
Entry Age Normal (EAN) Liabilities	June 30, 2015		June 30, 2014		% Change
Actives	\$	2,348,027,257	\$	2,275,740,035	3.2%
Terminated Vested		278,422,504		278,692,976	-0.1%
Disabled		473,590,631		460,414,291	2.9%
Retirees		4,879,583,609		4,644,460,467	5.1%
Beneficiaries		<u>226,328,553</u>		<u>199,395,610</u>	<u>13.5%</u>
Total Actuarial (EAN) Liability	\$	8,205,952,554	\$	7,858,703,379	4.4%
Actuarial Value Assets	\$	6,204,243,990	\$	5,828,593,547	6.4%
Unfunded Actuarial Liability-Actuarial Value	\$	2,001,708,564	\$	2,030,109,833	-1.4%
Funding Ratio-Actuarial Value		75.6%		74.2%	1.4%
Market Value Assets	\$	6,387,828,761	\$	6,292,855,000	1.5%
Unfunded Actuarial Liability-Market Value	\$	1,818,123,793	\$	1,565,848,379	16.1%
Funding Ratio-Market Value		77.8%		80.1%	-2.3%

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION I - BOARD SUMMARY

3. Components of UAL Change between June 30, 2014 and June 30, 2015

The unfunded actuarial liability (UAL) for SDCERS-City of San Diego decreased by \$28.4 million; from \$2,030.1 million to \$2,001.7 million. Table I-4 below presents the specific components of the change in the UAL.

The Plan's UAL was expected to decline by \$198.3 million. The smaller than expected decrease in the UAL was mostly driven by the net impact of reducing the discount rate and wage inflation assumptions (\$95.8 million) and the return on the market value of assets being less than expected (\$51.4 million). There was also a loss of \$25.7 million on the actuarial liabilities, with the largest source being mortality (members living longer than expected).

Table I-4	
SDCERS - City of San Diego-Change in UAL	
(In Millions)	
1. UAL at June 30, 2014	\$ 2,030.1
2. Expected change in UAL ¹	(198.3)
3. Investment experience loss	
a. Anticipated loss/(gain)	(111.9)
b. Actual loss/(gain)	(60.5)
c. Difference (b - a)	51.4
4. Liability experience loss	25.7
5. Reduction in discount rate and wage inflation assumptions	95.8
6. Administrative expense	N/A
7. Employee contributions paid greater than expected	(3.2)
8. Other misc (includes purchased service)	0.2
9. Total change in UAL: sum of 2 through 8	(28.4)
10. UAL at June 30, 2015: 1 + 9	\$ 2,001.7

¹ Includes projected phase-in of asset gains or losses.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION I - BOARD SUMMARY

4. City Contributions (ADC)

The City's actuarially determined contribution (ADC) for FY 2017 increased by \$6.2 million; from \$254.9 million to \$261.1 million. The ADC was expected to decrease by \$6.8 million to \$248.1 million, assuming continued phase-in of investment experience from prior years, so the ADC of \$261.1 million is \$13.0 million more than expected.

The three largest factors causing the ADC to be greater than expected were the investment losses on the market value of assets, which increased the ADC by \$5.4 million, the liability experience loss, which increased the ADC by \$2.1 million, and the net impact of reducing the discount rate and wage inflation assumptions, which increased the ADC by \$6.8 million. FY 2017 is the second year of the three-year phase-in of assumed administrative expenses, which are \$12.8 million and assumed to grow at 2.5% per year. The recognition of an additional one-third of the administrative expense assumption increased the ADC by \$4.3 million. For FY 2018 and for all fiscal years following, 100% of the expected administrative expenses will be added to the ADC.

Table I-5 below presents the specific components of the change in the ADC. In Section IV we provide more detail on the development of this contribution.

Table I-5	
SDCERS - City of San Diego-Change in ADC	
(In Millions)	
1. ADC at June 30, 2014	\$ 254.9
2. Expected change in ADC ¹	(6.8)
3. Investment experience loss	
a. Anticipated increase/(decrease)	(11.7)
b. Actual increase/(decrease)	(6.3)
c. Difference (b - a)	5.4
4. Liability experience loss	2.1
5. Reduction in discount rate and wage inflation assumptions	6.8
6. Employee contributions paid greater than expected	(0.3)
7. Other misc (includes purchased service)	(0.9)
8. Total change in ADC: sum of 2 through 7	6.2
9. ADC at June 30, 2015: 1 + 8	\$ 261.1

¹ Includes projected phase-in of asset gains or losses and phase-in of an additional one-third of the administrative expense assumption.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

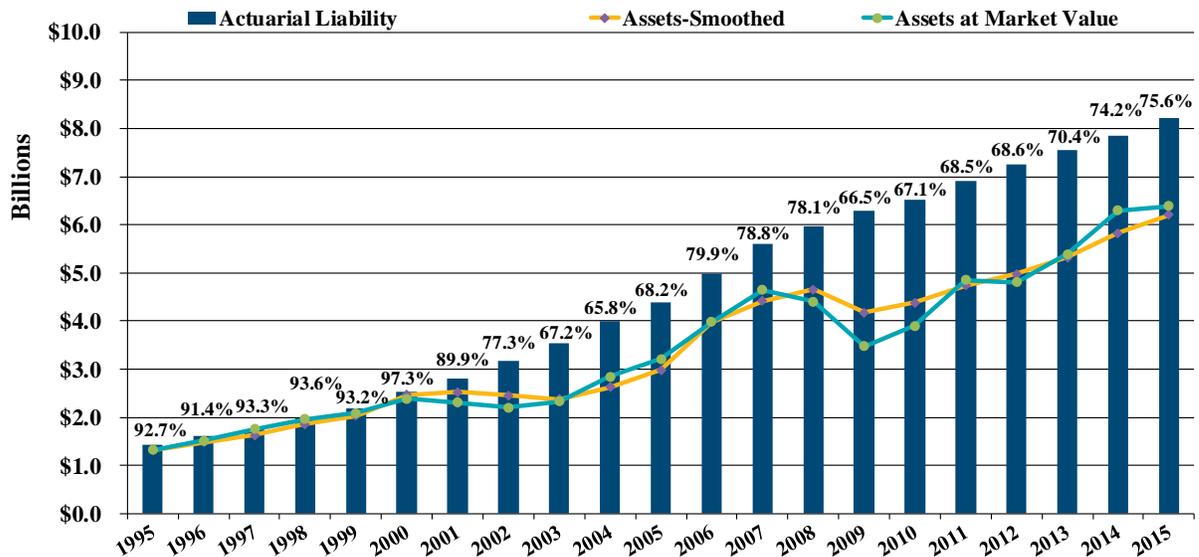
SECTION I - BOARD SUMMARY

C. Historical Trends for SDCERS-City of San Diego

Despite the primary focus given each year on the most recently computed unfunded actuarial liability (UAL), funding ratio, and City contribution (ADC), it is important to remember that each valuation is merely a snapshot of the long-term progress of a pension plan. It is more important to judge a current year's valuation results relative to historical trends, and trends expected into the future.

In the chart below, we present the historical trends of the market value and smoothed assets compared to actuarial liabilities and SDCERS-City of San Diego funding ratios since 1995.

SDCERS-City of San Diego Assets and Liabilities 1995-2015



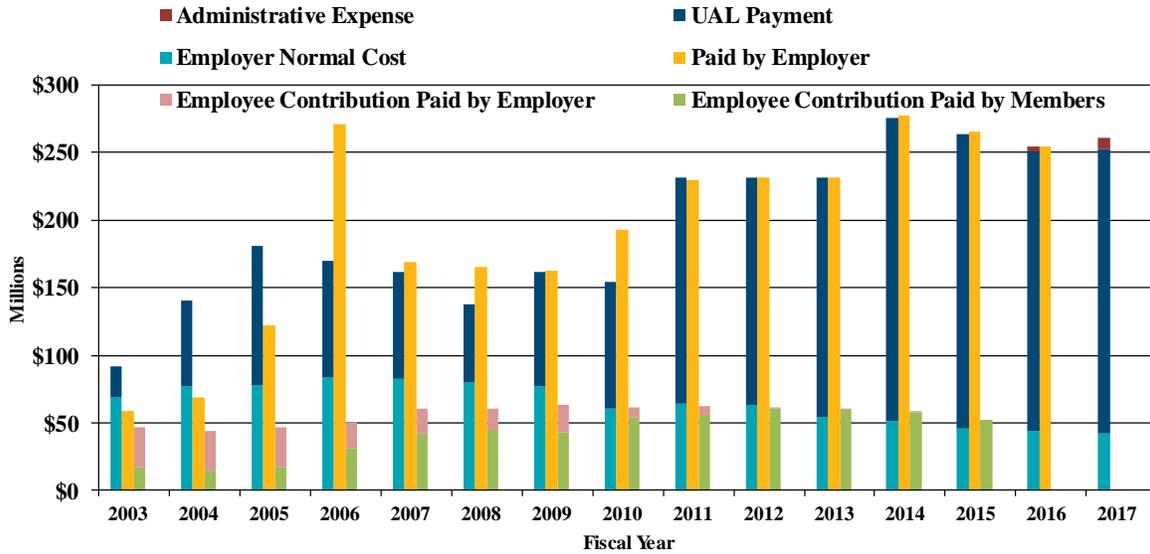
From a low of 65.8% in 2004, the funding ratio improved significantly over the next several years primarily due to strong investment performance. In 2009, the funding ratio declined significantly due to investment losses but has since been increasing steadily each year. As mentioned earlier, the funding ratios represent the ratio of the smoothed (actuarial) assets over the actuarial liabilities. If the market value of assets were used instead, the funding ratio as of June 30, 2015 would be 77.8%.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION I - BOARD SUMMARY

In the next chart below, we present the historical trends for the SDCERS-City of San Diego contributions: actual contributions made by the City and by the Members, and the actuarially computed contributions (previously the GASB ARC, but now referred to as the ADC).

SDCERS-City of San Diego City and Member Contribution Rates FY 2003-2017



This chart compares the actual contributions made by the City (gold bars) to the actuarially determined contributions (ADC). The ADC is broken out by component - Employer Normal Cost plus UAL payment, plus administrative expense. The contributions paid by the City are based on the Board’s adopted funding practice of Normal Cost plus amortization of the various UAL components, including the requirement beginning in FY 2009 that there is no negative amortization and the requirement beginning in FY 2016 to fund the administrative expenses. The FY 2017 ADC reflects the second year of the three-year phase-in of the administrative expense assumption. The chart indicates that the City has been consistently paying at or above the ADC since FY 2006.

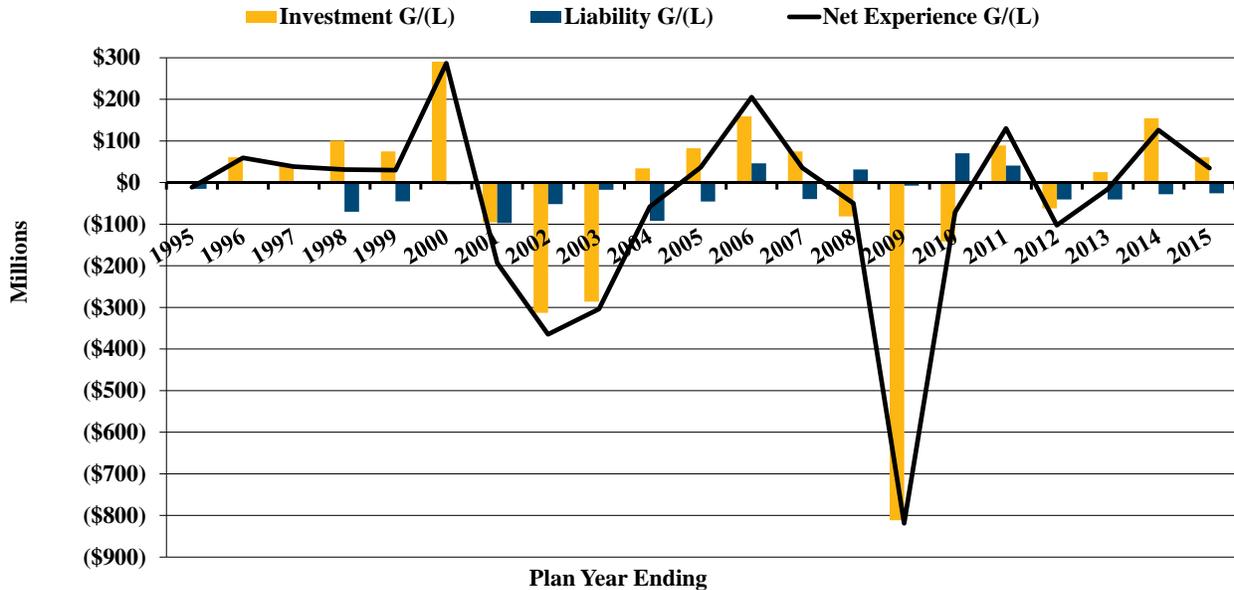
Employee contributions paid by the City and the Members are also shown in this chart. In the earlier years a substantial portion of employee contributions were “offset” (paid for) by the City, but such offsets have disappeared almost completely in recent years with no such offsets in the last two years.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION I - BOARD SUMMARY

The chart below for SDCERS-City of San Diego presents the pattern of annual experience gains and losses, broken into the investment and liability components. The chart does not include any changes in SDCERS' assets and liabilities attributable to changes in actuarial methods, procedures, or assumptions, or to changes in plan benefits.

SDCERS-City of San Diego Historical Gain/(Loss) 1995-2015



The key insights from this chart are:

- The System experienced significant investment losses (gold bars) in 2002 and 2003, which were offset by investment gains from 2004 to 2007. However, the investment losses from 2008 through 2010 more than offset those gains.
- The investment loss in 2009 was by far the most significant gain or loss during the period shown.
- From 1995 to 2005 there was a pattern of liability losses. Since 2006 the liability experience has been more varied (small gains and small losses) each year; however, there have been losses in each of the past four years. The sources of these gains and losses will be explored in our next formal experience study, scheduled for 2016.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

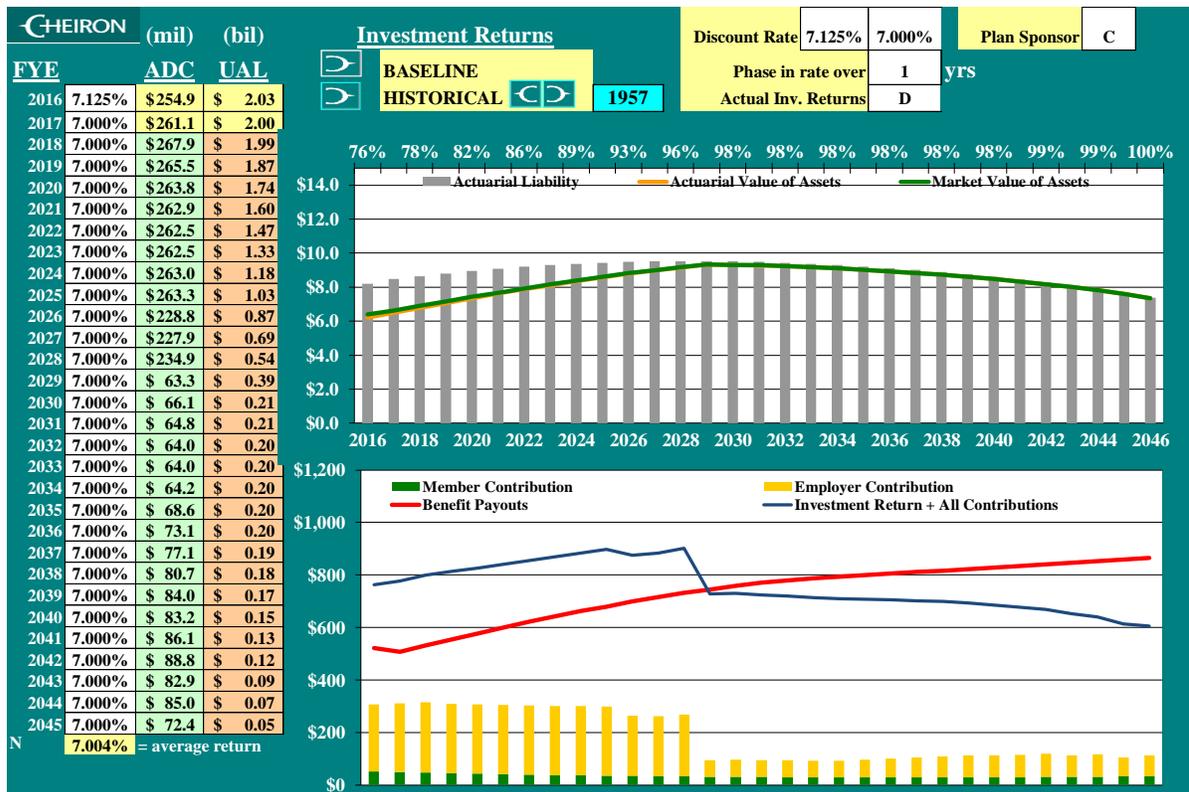
SECTION I - BOARD SUMMARY

D. Projected Financial Trends

Our analysis of SDCERS-City of San Diego projected financial trends is a very important part of this valuation. These projections based on the June 30, 2015 valuation results are presented in terms of benefit security (assets over liabilities) and the City's expected cost progression.

In the chart that follows, we project the SDCERS-City of San Diego assets and liabilities and the City's contributions. These projections assume a 7.125% investment return and discount rate for the coming year and 7.00% thereafter, as well as all experience conforming to the Plan's assumptions. The upper chart compares the assets (green and yellow lines) and liabilities (gray bars) and the lower chart shows contributions in dollars (employer contributions in yellow bars and member contributions in green bars). The left side of the exhibit shows the returns assumed each year followed by the annual ADC and UAL in dollar amounts.

SDCERS-City of San Diego Projections FY 2016-2046 (earnings as assumed)



Based on assuming 7.125% (FY 2016) and 7.00% (FY 2017 and thereafter) earnings, the City's funded status (percentages at the top of the upper graph) is ultimately projected to reach 100% by the end of the period. The Plan's assets and liabilities peak around 2029, and then begin to decline. This is primarily due to the closure of the non-Police portion of the Plan to new hires. The City's ADC is projected to gradually decrease from approximately

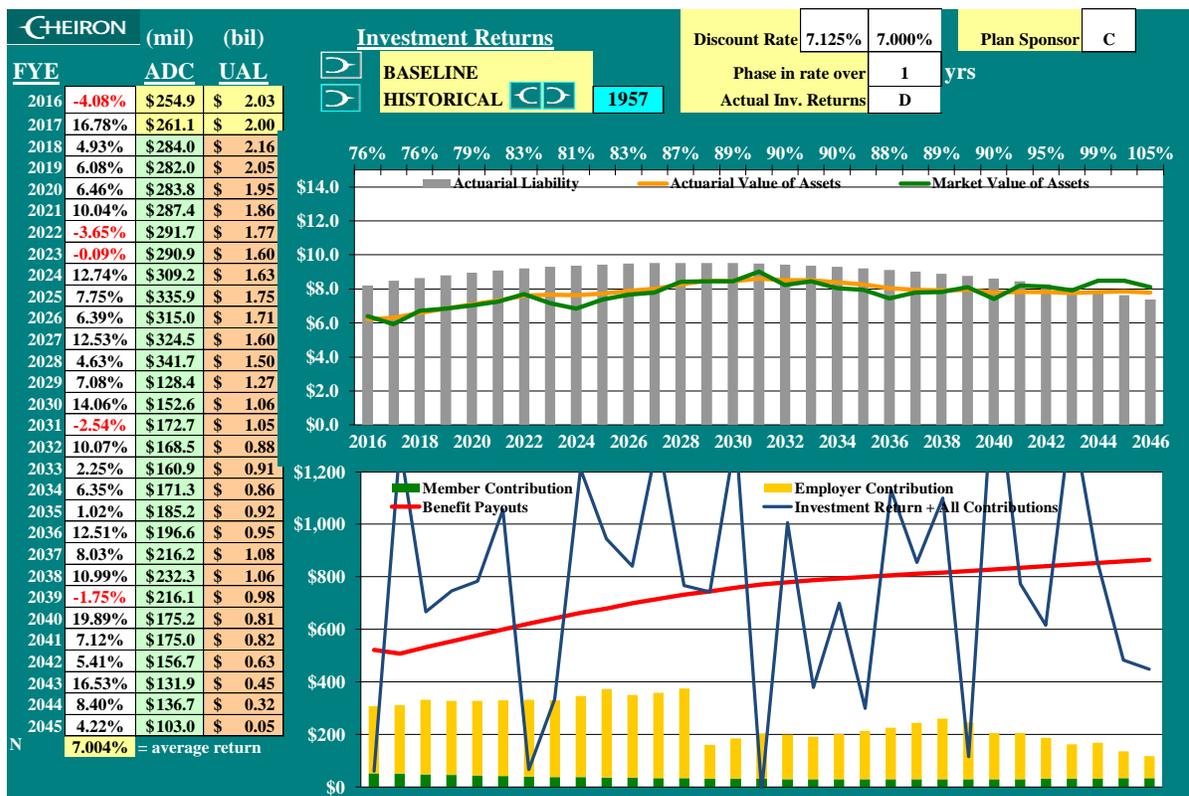
**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION I - BOARD SUMMARY

\$268 million in FY 2018 to \$235 million in FY 2028. The projected contributions for the remainder of the period are significantly lower as several of the largest UAL layers drop off and the Plan approaches full funding.

However, it is very important to note that these projections, while valid as baseline projections, **are not going to occur** as experience never conforms exactly to assumptions from year to year. As a result, we present the following additional stress testing projection based on assuming varying returns in the future, which are approximately 7.00% on average (reflecting the assumption of 7.125% for FY 2017 and 7.00% thereafter).

SDCERS-City of San Diego Projections FY 2016-2046 (earnings which vary by year)



With varying annual earnings that average over the period to approximately 7.00%, one can see the volatility in the funding ratios in the top chart and the employer contributions in the bottom chart. Note that this chart reflects an illustrative scenario and is not intended to reflect future expectations.

This last chart demonstrates the risks faced by SDCERS measured in terms of funding ratios and contributions. Whether the System is fully funded or poorly funded, subsequent returns can quickly alter the financial position of the Plan dramatically. It is impossible to judge the financial soundness of a System with a single year point measurement. What is more important to consider is the System's level of conservatism in funding the Plan, and the discipline and ability of the plan sponsor to consistently contribute the ADC as determined by the plan actuary.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION II - ASSETS

Like other public pension plans, SDCERS uses two different asset measurements that are presented in this section: the market value and the actuarial value of assets. The market value of assets represents, as of the valuation date, the value of the assets if they were liquidated on that date. The actuarial value of assets is a value that smooths annual investment performance over multiple years to reduce the impact of annual investment volatility on employer contributions. The actuarial value of assets is used in determining SDCERS' contributions for the three participating employer plans.

Each employer receives a separate actuarial valuation report and cost determination. However, the assets of all employer plans are pooled for investment purposes. The apportionment of the assets among the employer plans directly impacts each employer's costs. Therefore, in the interest of ensuring transparency, this section discloses information on the total assets of SDCERS-All Employers. In addition, a brief explanation of how those assets are apportioned to the City of San Diego, the San Diego Unified Port District, and the San Diego County Regional Airport Authority is included.

On the following pages, detailed information is presented on SDCERS-All Employers assets, including:

- A. Disclosure of the June 30, 2015 total SDCERS market value of assets, by asset class;
- B. Market value of assets by Plan Sponsor;
- C. Development of the actuarial value of assets; and
- D. Disclosure of the investment performance for the year.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION II - ASSETS

A. Disclosure of Market Value of Assets

The market value of assets represents a “snap-shot” value as of June 30, 2015, the last day of the fiscal year, which provides the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with swings in the investment markets. Because these fluctuations would cause volatility in employer contributions, an actuarial value of assets is developed. Table II-1 below discloses the market value by asset class of SDCERS – All Employers’ gross assets on June 30, 2015.

Table II-1	
SDCERS – All Employers	
Summary of Reported Market Value of Total Defined Benefit Plan Assets	
Cash	\$ 269,892,705
US Stocks	1,671,938,013
International Stocks	1,535,907,192
Private Equity	748,336,408
Bonds	2,084,307,097
Real Estate	753,721,388
Receivables	154,852,003
Miscellaneous	226,276,016
Accounts Payable	<u>(548,804,287)</u>
Market Value of Assets – June 30, 2015	\$ 6,896,426,535

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION II - ASSETS

B. Market Value of Assets by Plan Sponsor

As of July 1, 2007, the City, Unified Port District, and Airport Authority Plans were separated into independent, qualified, single-employer, governmental defined benefit plans and trusts. The assets of the three separate plans and trusts are pooled in the SDCERS Group Trust, which was established as of July 1, 2007. SDCERS invests and administers the Group Trust as a common investment fund and accounts separately for the proportional interest of each plan and trust that participates in the Group Trust. Cash flow activity for each plan is recorded directly to that plan, with investment activity and other cash flow activity not specific to any one plan being allocated based upon each plan's respective share of the Group Trust's total assets, with time-weighted adjustments for the plan-specific cash flows. Administrative expenses are allocated based on the proportion of participants of a participating trust to the number of total participants of all participating trusts on the first day of the plan year. Table II-2 below discloses the market value and actuarial value of assets by plan.

Table II-2			
Summary of Market and Actuarial Assets for Each Employer Group as of June 30, 2015			
	<u>Market Value</u> Total Net Assets June 30, 2014	<u>Market Value</u> Total Net Assets June 30, 2015	<u>Actuarial Value</u> Total Assets June 30, 2015
City of San Diego	\$ 6,292,855,000	\$ 6,387,828,761	\$ 6,204,243,990
Unified Port District	362,246,000	370,053,588	357,599,720
Airport Authority	<u>130,228,000</u>	<u>138,544,185</u>	<u>135,858,959</u>
Total-SDCERS	\$ 6,785,329,000	\$ 6,896,426,535	\$ 6,697,702,669

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION II - ASSETS

C. Actuarial Value of Assets

To determine on-going funding requirements, most pension funds utilize an actuarial value of assets. Unlike the market value of assets, the actuarial value of assets represents an asset value based on averaging or smoothing year-to-year market value returns for purposes of reducing the resulting volatility on contributions.

The actuarial value of assets is equal to 100% of the expected actuarial value of assets as of June 30, 2015 plus 25% of the difference between the current actual market value of assets and the expected actuarial value of assets. (See Appendix B, Section B-2 for further explanation of the asset valuation method). In no event will the actuarial value of assets ever be less than 80% of the market value of assets nor greater than 120% of the market value of assets.

Table II-3 SDCERS - City of San Diego Development of Actuarial Value of Assets at June 30, 2015 Expected Value of Assets Method	
1. Actuarial Value of Assets at June 30, 2014	\$ 5,828,593,547
2. Amount in (1) with interest at 7.25% to June 30, 2015	6,251,166,579
3. Employer and Member contributions for the Plan Year ended June 30, 2015	327,103,313
4. Disbursements from Trust excluding investment expenses, June 30, 2014 through June 30, 2015	439,782,350
5. Interest on cash flows to June 30, 2015 at 7.25% per year	<u>4,561,525</u>
6. Expected Actuarial Value of Assets at June 30, 2015 = (2) + (3) – (4) + (5)	6,143,049,066
7. Actual Market Value of Assets at June 30, 2015	<u>6,387,828,761</u>
8. Excess of (7) over (6)	244,779,695
9. Preliminary Actuarial Value of Assets at June 30, 2015 = (6) + 25% of (8)	\$ 6,204,243,990
10. 80% Minimum Corridor on the Actuarial Value of Assets = 80% of (7)	5,110,263,009
11. 120% Maximum Corridor on the Actuarial Value of Assets = 120% of (7)	7,665,394,513
12. Final Actuarial Value of Assets at June 30, 2015 = (9), but no less than (10) and no more than (11)	\$ 6,204,243,990

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION II - ASSETS

D. Investment Performance

The return on the market value of assets, as reported by SDCERS' investment consultant Aon Hewitt Investment Consulting, was 3.3%. The return in FY 2014 was 16.8%.

On an actuarial (smoothed) value of assets basis, the return for FY 2015 was 8.46%. This return produced for SDCERS-All Employers an overall investment gain of \$65.5 million for the year ending June 30, 2015. (Note: this reported gain is different than the investment gain of \$60.5 million reported in Table I-4 of this report. \$60.5 million is the gain only for SDCERS-City).

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION III - LIABILITIES

In this section, we present detailed information on liabilities for SDCERS-City of San Diego, including:

- Disclosure of liabilities at June 30, 2014 and June 30, 2015, and
- Statement of changes in the unfunded actuarial liabilities during the year.

A. Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the purpose for which the figures are ultimately used. Note that these liabilities are not applicable for settlement purposes, including the purchase of annuities and the payment of lump sums.

- **Present Value of Future Benefits:** Used for measuring all future SDCERS obligations, represents the amount of money needed today to fully fund all benefits of SDCERS, both earned as of the valuation date and those to be earned in the future by current plan members, under the current plan provisions.
- **Actuarial Liability-Entry Age Normal (EAN):** Used for determining employer contributions. This liability is calculated taking the present value of all future benefits and subtracting the present value of future member contributions and future employer normal costs as determined under the EAN actuarial funding method. It represents the portion of the present value of future benefits attributed to service prior to the valuation date by the Entry Age Normal method.
- **Present Value of Accrued Benefits:** This liability represents the present value of future benefits payable to all plan participants if the plan were terminated as of the valuation date, and future accruals and contributions stopped.

Table III-1, on the following page, discloses the first two of these liabilities for the current and prior year valuations. Tables III-2 through III-4 break down these liabilities by tier. Subtracting the actuarial value of assets from the actuarial liability results in a net surplus or an unfunded actuarial liability (UAL). Table III-5 discloses the third of these liabilities, present value of accrued benefits, for the current and prior year valuations.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION III - LIABILITIES

Table III-1				
SDCERS - City of San Diego - Total				
Valuation as of:	June 30, 2015		June 30, 2014	
Present Value of Future Benefits				
Actives	\$	3,001,212,643	\$	2,928,505,089
Terminated Vested		278,422,504		278,692,976
Disabled		473,590,631		460,414,291
Retirees		4,879,583,609		4,644,460,467
Beneficiaries		226,328,553		199,395,610
Total City	\$	8,859,137,940	\$	8,511,468,433
Actuarial Liability - EAN				
Total Present Value of Future Benefits	\$	8,859,137,940	\$	8,511,468,433
Present Value of Future Normal Costs				
Employer Portion		307,471,358		315,320,118
Employee Portion		345,714,028		337,444,935
Actuarial Liability - EAN	\$	8,205,952,554	\$	7,858,703,380
Actuarial Value of Assets	\$	6,204,243,990	\$	5,828,593,547
Unfunded EAN Actuarial Liability	\$	2,001,708,564	\$	2,030,109,833

Table III-2 shows the actuarial liability as of June 30, 2015 for General and Elected Members of SDCERS-City of San Diego.

Table III-2				
SDCERS - City of San Diego - General & Elected as of June 30, 2015				
	Total	General-Old	General-2009	Elected
Present Value of Future Benefits				
Actives	\$ 1,674,419,579	\$ 1,605,257,501	\$ 67,257,866	\$ 1,904,212
Terminated Vested	215,271,143	213,147,085	1,661,254	462,804
Disabled	93,168,818	93,168,818	-	-
Retirees	2,465,769,978	2,457,461,276	-	8,308,702
Beneficiaries	92,429,238	91,743,758	-	685,480
Total City General & Elected	\$ 4,541,058,756	\$ 4,460,778,438	\$ 68,919,120	\$ 11,361,198
Actuarial Liability - EAN				
Actives	\$ 1,372,136,392	\$ 1,350,684,689	\$ 20,213,286	\$ 1,238,417
Terminated Vested	215,271,143	213,147,085	1,661,254	462,804
Disabled	93,168,818	93,168,818	-	-
Retirees	2,465,769,978	2,457,461,276	-	8,308,702
Beneficiaries	92,429,238	91,743,758	-	685,480
Total City General & Elected	\$ 4,238,775,569	\$ 4,206,205,626	\$ 21,874,540	\$ 10,695,403

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION III - LIABILITIES

Table III-3 shows the actuarial liability as of June 30, 2015 for Police Members of SDCERS-City of San Diego.

Table III-3						
SDCERS - City of San Diego - Police as of June 30, 2015						
	Total	Police-Old	Police-2009	Police-2012	Police-2012 No COL	Police-Prop B
Present Value of Future Benefits						
Actives	\$ 897,686,664	\$ 798,605,912	\$ 35,378,012	\$ 9,539,410	\$ 20,197,233	\$ 33,966,097
Terminated Vested	56,986,038	56,321,850	405,208	52,406	189,126	17,448
Disabled	259,731,107	259,731,107	-	-	-	-
Retirees	1,527,621,980	1,527,621,980	-	-	-	-
Beneficiaries	92,812,068	92,812,068	-	-	-	-
Total City Safety	\$ 2,834,837,857	\$ 2,735,092,917	\$ 35,783,220	\$ 9,591,816	\$ 20,386,359	\$ 33,983,545
Actuarial Liability - EAN						
Actives	\$ 644,786,974	\$ 627,559,352	\$ 11,198,903	\$ 2,014,101	\$ 3,015,640	\$ 998,978
Terminated Vested	56,986,038	56,321,850	405,208	52,406	189,126	17,448
Disabled	259,731,107	259,731,107	-	-	-	-
Retirees	1,527,621,980	1,527,621,980	-	-	-	-
Beneficiaries	92,812,068	92,812,068	-	-	-	-
Total City Safety	\$ 2,581,938,166	\$ 2,564,046,357	\$ 11,604,111	\$ 2,066,507	\$ 3,204,766	\$ 1,016,426

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION III - LIABILITIES

Table III-4 shows the actuarial liability as of June 30, 2015 for Fire and Lifeguard Members of SDCERS-City of San Diego.

Table III-4					
SDCERS - City of San Diego - Fire and Lifeguard as of June 30, 2015					
	Total	Fire-Old	Fire-2012	Lifeguard	Lifeguard-2011
Present Value of Future Benefits					
Actives	\$ 429,106,402	\$ 384,050,915	\$ 548,870	\$ 44,346,124	\$ 160,494
Terminated Vested	6,165,324	5,348,381	11,140	805,804	-
Disabled	120,690,706	107,688,016	-	13,002,690	-
Retirees	886,191,650	832,130,384	-	54,061,266	-
Beneficiaries	41,087,247	39,419,264	-	1,667,983	-
Total City Safety	\$ 1,483,241,329	\$ 1,368,636,959	\$ 560,009	\$ 113,883,867	\$ 160,494
Actuarial Liability - EAN					
Actives	\$ 331,103,892	\$ 297,702,521	\$ 54,403	\$ 33,346,275	\$ 692
Terminated Vested	6,165,324	5,348,381	11,140	805,804	-
Disabled	120,690,706	107,688,016	-	13,002,690	-
Retirees	886,191,650	832,130,384	-	54,061,266	-
Beneficiaries	41,087,247	39,419,264	-	1,667,983	-
Total City Safety	\$ 1,385,238,819	\$ 1,282,288,566	\$ 65,543	\$ 102,884,018	\$ 692

Table III-5 shows the present value of accrued benefits as of June 30, 2015 for all Members of SDCERS-City of San Diego.

Table III-5				
SDCERS - City of San Diego - Present Value of Accrued Benefits				
	Valuation as of:	June 30, 2015	June 30, 2014	% Change
Present Value of Accrued Benefits				
1. Present Value of Benefits Accrued and Vested to Date				
a. Members Currently Receiving Payments		\$ 5,579,502,793	\$ 5,304,270,368	5.2%
b. Vested Terminated and Inactive Members		278,422,504	278,692,976	-0.1%
c. Active Members		<u>1,924,990,039</u>	<u>1,854,591,733</u>	<u>3.8%</u>
d. Total PVAB		\$ 7,782,915,336	\$ 7,437,555,076	4.6%
2. Assets at Market Value		\$ 6,387,828,761	\$ 6,292,855,000	1.5%
3. Unfunded Present Value of Accrued Benefits, But Not Less Than Zero		\$ 1,395,086,574	\$ 1,144,700,076	
4. Ratio of Assets to Value of Benefits (2)/(1)(d)		82.08%	84.61%	-2.5%

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION III - LIABILITIES

B. Changes in Unfunded Actuarial Liabilities

The UAL of any retirement plan is expected to change at each subsequent valuation for a variety of reasons. In each valuation, we report on those elements of change in the UAL that have particular significance or could potentially affect the long-term financial outlook of a retirement plan. Below we present key changes in liabilities since the last valuation.

Table III-6		
Development of 2015 Experience Gain/(Loss) SDCERS - City of San Diego		
(In Millions)		
1. Unfunded Actuarial Liability at June 30, 2014	\$	2,030.1
2. Beginning of year Unfunded Actuarial Liability payment		(217.8)
3. Interest accrued ((1+2) x 7.25%)		<u>131.4</u>
4. Expected Unfunded Actuarial Liability at June 30, 2015 (1+2+3)		1,943.7
5. Actual Unfunded Liability at June 30, 2015		2,001.7
6. Difference: (4 - 5)		(58.0)
7. Portion of difference (6) due to actuarial assumption or method changes		(95.8)
8. Portion of difference (6) due to plan changes		-
9. Portion of difference (6) due to contributions greater than expected		3.2
10. Portion of difference (6) due to net experience Gain/(Loss)		34.6
a) portion of (10) due to investment experience	\$	60.5
b) portion of (10) due to liability experience	\$	(25.7)
c) portion of (10) due to service purchases	\$	(0.2)

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION III - LIABILITIES

Table III-7 shows the history of past experience gains and losses.

Table III-7			
Experience Gain/(Loss) - Historical SDCERS - City of San Diego ¹			
Valuation		Beginning-of-Year	Gain/(Loss)
Date	Gain/(Loss)	Actuarial Liabilities	% of Liability
6/30/1992	\$ 57,952,320	\$ 1,006,299,729	5.8%
6/30/1993	(42,605,778)	1,057,238,917	(4.0)
6/30/1994	(6,744,850)	1,220,830,059	(0.6)
6/30/1995	(11,370,990)	1,338,279,541	(0.8)
6/30/1996	59,592,960	1,476,710,662	4.0
6/30/1997	38,473,993	1,682,604,532	2.3
6/30/1998	31,086,010	1,822,432,018	1.7
6/30/1999 ¹	29,750,299	1,979,668,038	1.5
6/30/2000	286,639,160	2,181,547,453	13.1
6/30/2001	(193,168,984)	2,528,773,900	(7.6)
6/30/2002	(364,815,155)	2,809,537,745	(13.0)
6/30/2003	(303,699,305)	3,168,921,175	(9.6)
6/30/2004	(58,123,874)	3,532,625,521	(1.6)
6/30/2005	36,775,882	3,997,328,084	0.9
6/30/2006	205,249,486	4,377,092,948	4.7
6/30/2007	35,189,811	4,982,699,455	0.7
6/30/2008	(49,930,537)	5,597,652,861	(0.9)
6/30/2009	(818,906,079)	5,963,549,545	(13.7)
6/30/2010	(71,030,037)	6,281,636,108	(1.1)
6/30/2011	130,020,025	6,527,223,751	2.0
6/30/2012	(102,581,872)	6,917,175,002	(1.5)
6/30/2013	(16,759,103)	7,261,730,655	(0.2)
6/30/2014	126,171,209	7,555,526,738	1.7
6/30/2015	34,597,899	7,858,703,380	0.4

¹ Beginning with the June 30, 1999 valuation, experience is City only. The prior years include all employers.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION IV - CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to achieve and maintain an appropriate funded status of a plan. Typically, the actuarial process will use an actuarial funding method that attempts to create a pattern of contributions that is both stable and predictable.

The actuarial funding methodology employed is the Entry Age Normal (EAN) actuarial funding method. Under the funding method, there are three components to the total contribution: the normal cost, an amortization payment on the unfunded actuarial liability, and the expected administrative expenses. The normal cost for an individual employee is the ratio of their present value of future benefits to present value of future salaries at entry age, multiplied by their valuation salary. The gross normal cost rate for each sub-group is determined by dividing the sum of the individual normal costs by the total valuation salary for that sub-group. The gross normal cost rate is then reduced by the average employee contribution rate to determine the employer normal cost rate. Finally, the employer normal cost rate for each sub-group is multiplied by that group's projected FY 2017 payroll to determine the normal cost component of the FY 2017 ADC.

The EAN actuarial liability is the Plan's total present value of future benefits minus the total present value of future normal costs. The difference between the EAN actuarial liability and the actuarial value of assets is the unfunded actuarial liability. The UAL for FY 2017 is to be amortized over several different periods. Table IV-2 shows the outstanding balance, the FY 2017 payment and the remaining amortization period for each of these components. If necessary, there is an additional UAL cost component to ensure that there is no negative amortization in any year.

Beginning with the June 30, 2012 valuation, the non-Police portion of the UAL has been amortized in level dollar amounts, due to the closure of that portion of the plan to new hires. The portion of the UAL associated with the open Police Plan continues to be amortized as a level percentage of pay.

In January 2015 the Board voted to account for expected administrative expenses explicitly in the actuarially determined contribution (ADC). The administrative expense component is \$8.5 million for FY 2017, reflecting the second year of a three-year phase-in of the administrative expense assumption (\$12.8 million annually, increasing by 2.5% per year). For FY 2018 and all fiscal years following, 100% of the expected administrative expenses will be added to the ADC.

Table IV-1 on the following page shows how the City's contribution rate for SDCERS for FY 2017 is developed.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION IV - CONTRIBUTIONS

**Table IV-1
SDCERS - City of San Diego
Development of the City's Contribution as of June 30, 2015 for FY 2017
(dollars in millions)**

	WEIGHTED	Non-Safety			
	TOTAL CITY	Weighted Total	General Old Plan	General 2009 Plan	Elected
1. Total Normal Cost Rate as of June 30, 2015	21.02%	17.18%	17.45%	15.09%	35.08%
2. Member Contribution Rate as of June 30, 2015	11.20%	<u>9.24%</u>	<u>9.49%</u>	<u>7.46%</u>	<u>9.05%</u>
3. Employer Normal Cost Rate as of June 30, 2015 (1-2)	9.82%	7.94%	7.96%	7.63%	26.03%
4. Actuarial Liability	\$ 8,206.0	\$ 4,238.8	\$ 4,206.2	\$ 21.9	\$ 10.7
5. Actuarial Assets	\$ 6,204.2	\$ 3,217.3	\$ 3,192.5	\$ 16.6	\$ 8.1
6. Total Unfunded Actuarial Liability (UAL) (4-5) ¹	\$ 2,001.7	\$ 1,021.5	\$ 1,013.7	\$ 5.3	\$ 2.6
7. Preliminary FY17 UAL amortization ¹	\$ 210.6	\$ 111.6	\$ 110.8	\$ 0.6	\$ 0.3
8. <u>Negative Amortization Test for FY17</u>					
a. Total UAL on 6/30/15 less FY16 UAL payment	\$ 1,795.2	\$ 916.1	\$ 909.1	\$ 4.7	\$ 2.3
b. Interest on 8a. To 6/30/16	\$ 127.9	\$ 65.3	\$ 64.8	\$ 0.3	\$ 0.2
c. Preliminary FY17 UAL amortization (line 7)	\$ 210.6	\$ 111.6	\$ 110.8	\$ 0.6	\$ 0.3
d. Negative interest (8b - 8c, not less than zero)	-	-	-	-	-
9. Total FY17 UAL payment on 7/01/16 (8c + 8d)	\$ 210.6	\$ 111.6	\$ 110.8	\$ 0.6	\$ 0.3
10. Total FY17 UAL payment throughout year	\$ 217.9	\$ 115.6	\$ 114.7	\$ 0.6	\$ 0.3
11. Total Expected Payroll for FY17	\$ 436.0	\$ 256.6	\$ 223.2	\$ 33.1	\$ 0.3
12. FY17 Normal Cost paid throughout the year	\$ 43.4	\$ 20.4	\$ 17.8	\$ 2.5	\$ 0.1
13. FY17 Normal Cost paid at start of year	\$ 42.0	\$ 19.7	\$ 17.2	\$ 2.4	\$ 0.1
14. Administrative Expenses paid throughout the year ²	\$ 8.8	\$ 4.6	\$ 4.5	\$ 0.1	\$ 0.0
15. Determination of FY17 ADC %					
a. Employer Normal Cost Rate (12 divided by 11)	9.96%	7.94%	7.96%	7.63%	26.03%
b. UAL Rate (line 10 divided by line 11)	49.99%	45.03%	51.38%	1.80%	86.83%
c. Admin Expense Rate (line 14 divided by line 11)	2.03%	<u>1.79%</u>	<u>2.01%</u>	<u>0.32%</u>	<u>3.82%</u>
d. Total employer ADC % (15a + 15b + 15c)	61.98%	54.76%	61.34%	9.75%	116.68%
16. Determination of FY17 ADC dollars					
a. FY17 ADC if paid throughout year	\$ 270.2	\$ 140.5	\$ 136.9	\$ 3.2	\$ 0.4
b. FY17 ADC if paid at beginning of year	\$ 261.1	\$ 135.8	\$ 132.3	\$ 3.1	\$ 0.4

¹ See Table IV-2 for components of these amounts.

² Administrative Expenses are to be phased-in over three years.

Note: Numbers may not add due to rounding.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION IV - CONTRIBUTIONS

Table IV-1 (cont.) SDCERS - City of San Diego Development of the City's Contribution as of June 30, 2015 for FY 2017 (dollars in millions)										
	Safety									
	Weighted Total	Police Old	Police 2009	Police 2012	Police 2012 No COL	Police Prop B	Fire Old	Fire 2012	Lifeguard Old	Lifeguard 2011
1. Total Normal Cost Rate as of June 30, 2015	27.08%	27.31%	26.21%	25.86%	25.08%	24.67%	27.52%	28.89%	28.32%	27.76%
2. Member Contribution Rate as of June 30, 2015	<u>14.29%</u>	<u>14.68%</u>	<u>13.61%</u>	<u>13.46%</u>	<u>11.24%</u>	<u>11.12%</u>	<u>14.77%</u>	<u>14.73%</u>	<u>14.77%</u>	<u>14.25%</u>
3. Employer Normal Cost Rate as of June 30, 2015 (1-2)	12.79%	12.63%	12.60%	12.40%	13.84%	13.55%	12.75%	14.16%	13.55%	13.51%
4. Actuarial Liability	\$ 3,967.2	\$ 2,564.0	\$ 11.6	\$ 2.1	\$ 3.2	\$ 1.0	\$ 1,282.3	\$ 0.1	\$ 102.9	\$ 0.0
5. Actuarial Assets	\$ 2,987.0	\$ 1,921.8	\$ 8.7	\$ 1.5	\$ 2.4	\$ 0.8	\$ 973.8	\$ 0.0	\$ 78.0	\$ 0.0
6. Total Unfunded Actuarial Liability (UAL) (4-5) ¹	\$ 980.2	\$ 642.3	\$ 2.9	\$ 0.5	\$ 0.8	\$ 0.3	\$ 308.5	\$ 0.0	\$ 24.9	\$ 0.0
7. Preliminary FY17 UAL amortization ¹	\$ 98.9	\$ 62.0	\$ 0.3	\$ 0.1	\$ 0.1	\$ 0.0	\$ 33.7	\$ 0.0	\$ 2.7	\$ 0.0
8. <u>Negative Amortization Test for FY17</u>										
a. Total UAL on 6/30/15 less FY16 UAL payment	\$ 879.1	\$ 576.0	\$ 2.6	\$ 0.5	\$ 0.7	\$ 0.2	\$ 276.7	\$ 0.0	\$ 22.3	\$ 0.0
b. Interest on 8a. To 6/30/16	\$ 62.6	\$ 41.0	\$ 0.2	\$ 0.0	\$ 0.1	\$ 0.0	\$ 19.7	\$ 0.0	\$ 1.6	\$ 0.0
c. Preliminary FY17 UAL amortization (line 7)	\$ 98.9	\$ 62.0	\$ 0.3	\$ 0.1	\$ 0.1	\$ 0.0	\$ 33.7	\$ 0.0	\$ 2.7	\$ 0.0
d. Negative interest (8b - 8c, not less than zero)	-	-	-	-	-	-	-	-	-	-
9. Total FY17 UAL payment on 7/01/16 (8c + 8d)	\$ 98.9	\$ 62.0	\$ 0.3	\$ 0.1	\$ 0.1	\$ 0.0	\$ 33.7	\$ 0.0	\$ 2.7	\$ 0.0
10. Total FY17 UAL payment throughout year	\$ 102.4	\$ 64.2	\$ 0.3	\$ 0.1	\$ 0.1	\$ 0.0	\$ 34.9	\$ 0.0	\$ 2.8	\$ 0.0
11. Total Expected Payroll for FY17	\$ 179.4	\$ 87.8	\$ 8.4	\$ 2.6	\$ 6.1	\$ 25.7	\$ 43.4	\$ 0.2	\$ 5.3	\$ 0.1
12. FY17 Normal Cost paid throughout the year	\$ 23.1	\$ 11.1	\$ 1.1	\$ 0.3	\$ 0.8	\$ 3.5	\$ 5.5	\$ 0.0	\$ 0.7	\$ 0.0
13. FY17 Normal Cost paid at start of year	\$ 22.3	\$ 10.7	\$ 1.0	\$ 0.3	\$ 0.8	\$ 3.4	\$ 5.3	\$ 0.0	\$ 0.7	\$ 0.0
14. Administrative Expenses paid throughout the year ²	\$ 4.2	\$ 2.5	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.1	\$ 1.4	\$ 0.0	\$ 0.1	\$ 0.0
15. Determination of FY17 ADC %										
a. Employer Normal Cost Rate (12 divided by 11)	12.85%	12.63%	12.60%	12.40%	13.84%	13.55%	12.75%	14.16%	13.55%	13.51%
b. UAL Rate (line 10 divided by line 11)	57.07%	73.17%	3.46%	1.98%	1.33%	0.10%	80.49%	1.11%	53.61%	0.04%
c. Admin Expense Rate (line 14 divided by line 11)	<u>2.37%</u>	<u>2.90%</u>	<u>0.54%</u>	<u>0.49%</u>	<u>0.51%</u>	<u>0.46%</u>	<u>3.15%</u>	<u>0.52%</u>	<u>2.27%</u>	<u>0.46%</u>
d. Total employer ADC % (15a + 15b + 15c)	72.29%	88.69%	16.60%	14.86%	15.68%	14.11%	96.40%	15.78%	69.44%	14.01%
16. Determination of FY17 ADC dollars										
a. FY17 ADC if paid throughout year	\$ 129.7	\$ 77.9	\$ 1.4	\$ 0.4	\$ 0.9	\$ 3.6	\$ 41.8	\$ 0.0	\$ 3.6	\$ 0.0
b. FY17 ADC if paid at beginning of year	\$ 125.3	\$ 75.2	\$ 1.4	\$ 0.4	\$ 0.9	\$ 3.5	\$ 40.4	\$ 0.0	\$ 3.5	\$ 0.0

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION IV - CONTRIBUTIONS

Table IV-2 shows information on each layer of the June 30, 2015 UAL.

Table IV-2 SDCERS - City of San Diego Schedule of Amortization Bases as of July 1, 2015 Used in Development of the City's Contribution for FY 2017							
Type of Base	Date	Initial Amount	Initial	July 1, 2015	Outstanding	Remaining	Amortization
			Amortization	Outstanding	Balance for FY	Amortization	Payment for FY
	Established		Years	Balance	2017 (BOY) ¹	Years	2017 (BOY) ²
1. June 30, 2007 UAL	7/1/2007	\$ 1,184,242,049	20	\$ 348,957,584	\$ 338,156,842	12	\$ 34,358,218
2. Assumption Change	7/1/2008	83,787,434	30	30,792,387	30,939,973	23	1,971,828
3. Experience Loss	7/1/2008	13,564,981	15	3,774,135	3,523,505	8	500,477
4. Experience Loss	7/1/2009	810,661,179	15	236,970,629	223,973,306	9	28,785,767
5. Experience Loss	7/1/2010	25,942,732	15	7,888,748	7,530,503	10	886,588
6. Experience Gain ³	7/1/2010	(50,000,000)	14	(13,604,606)	(12,858,423)	9	(1,652,606)
7. Experience Gain	7/1/2011	(141,139,563)	15	(44,281,193)	(42,617,586)	11	(4,642,130)
8. Assumption Change	7/1/2011	188,313,322	30	66,150,513	66,766,160	26	3,948,499
9. Experience Loss	7/1/2012	36,799,824	15	37,905,174	36,731,954	12	3,732,128
10. Method Change	7/1/2012	2,465,954	30	2,726,582	2,755,431	27	159,405
11. Non-Police UAL ⁴	7/1/2012	1,564,122,860	15	1,423,010,922	1,351,916,580	12	159,948,341
12. Experience Loss	7/1/2013	25,877,674	15	26,846,778	25,816,851	13	2,758,554
13. Salary Freeze	7/1/2013	(194,945,486)	15	(202,041,607)	(194,095,296)	13	(20,905,729)
14. Assumption Change	7/1/2013	146,882,570	30	157,221,130	156,602,913	28	11,035,360
15. Experience Gain	7/1/2014	(129,251,561)	15	(138,622,299)	(134,144,271)	14	(13,486,892)
16. Experience Gain	7/1/2015	(37,814,454)	15	(37,814,454)	(40,508,733)	15	(3,928,206)
17. Assumption Change	7/1/2015	95,828,141	30	<u>95,828,141</u>	<u>102,655,896</u>	30	<u>7,095,474</u>
TOTAL				\$ 2,001,708,564	\$ 1,923,145,604		\$ 210,565,076

¹ July 1, 2015 outstanding balance adjusted to the FY2017 beginning of year (BOY), July 1, 2016.

² For bases established 7/1/2013 and after, payment reflects level percent of pay amortization for Police portion and level dollar amortization for non-Police portion.

³ Reduction in UAL from anticipated impact of PSC correction as of the June 30, 2010 valuation.

⁴ Entire non-Police UAL as of June 30, 2012. Other pre-2013 bases reflect amounts attributable to Police.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION V - COMPREHENSIVE ANNUAL FINANCIAL REPORT INFORMATION

Effective with the June 30, 2014 valuation, GASB disclosures (67 and 68, previously 25 and 27) were removed from the actuarial valuation report. GASB disclosures are now presented in a stand-alone report, which was issued in November 2015. A number of exhibits have been removed from this section as a result.

Tables V-1 and V-2 are exhibits required for the System’s Comprehensive Annual Financial Report (CAFR). The Government Finance Officers Association (GFOA) recommends showing at least 6 years of experience in each of these exhibits in the CAFR. Table V-1 presents an analysis of financial experience for the valuation year, and Table V-2 presents the Solvency Test which shows the portion of actuarial liability covered by assets.

Table V-1 SDCERS - City of San Diego ANALYSIS OF FINANCIAL EXPERIENCE Gain and Loss in Actuarial Liability During Years Ended June 30 Resulting from Differences Between Assumed Experience and Actual Experience	
Type of Activity	<i>Gain (or Loss) for Year ending June 30, 2015</i>
Investment Income	\$ 60,483,393
Combined Liability Experience	<u>(25,677,899)</u>
Gain (or Loss) During Year from Financial Experience	\$ 34,805,494
Non-Recurring Gain (or Loss) Items (e.g., Contributions, Assumption Changes)	<u>(92,819,181)</u>
Composite Gain (or Loss) During Year	\$ (58,013,687)

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

SECTION V - COMPREHENSIVE ANNUAL FINANCIAL REPORT INFORMATION

**Table V-2
SDCERS - City of San Diego
SOLVENCY TEST
Actuarial Liabilities For
(\$ in thousands)**

Valuation Date June 30,	(A)	(B)	(C)	Reported Assets ¹	Portion of Actuarial Liabilities Covered by Reported Assets		
	Active Member Contributions	Retirees And Beneficiaries	Remaining Active Members' Liabilities		(A)	(B)	(C)
2015 ⁸	\$ 779,487	\$ 5,579,503	\$ 1,846,962	\$ 6,204,244	100%	97.23%	0.00%
2014	741,628	5,304,270	1,812,805	5,828,594	100	95.90	0.00
2013 ⁷	709,796	4,975,550	1,870,181	5,317,778	100	92.61	0.00
2012	662,488	4,625,110	1,974,133	4,982,442	100	93.40	0.00
2011 ⁶	627,447	4,344,218	1,945,510	4,739,399	100	94.65	0.00
2010	584,296	3,912,113	2,030,816	4,382,047	100	97.08	0.00
2009	535,797	3,673,185	2,072,655	4,175,229	100	99.08	0.00
2008 ⁵	522,966	3,286,668	2,153,916	4,662,346	100	100	39.50
2007 ⁴	482,526	3,101,594	2,013,532	4,413,311	100	100	41.19
2006 ³	456,562	2,822,203	1,703,935	3,981,932	100	100	41.27
2005	457,550	2,183,263	1,736,279	2,983,080	100	100	19.71
2004	414,986 ²	1,946,660	1,635,681	2,628,680	100	100	16.33

¹ Actuarial Value of Assets.

² Estimated.

³ Reflects contingent liabilities (Corbett pre-July 1, 2000 and 13th check), DROP reserves, supplemental COLA reserves, and IRC section 415 limits.

⁴ The actuarial liability on June 30, 2007 and after is based on the entry age actuarial funding method. All prior years are based on the projected unit credit actuarial funding method.

⁵ Reflects revised actuarial and economic assumptions.

⁶ Reflects revised actuarial and economic assumptions.

⁷ Reflects revised actuarial and economic assumptions.

⁸ Reflects revised actuarial and economic assumptions.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

**Table A-1
Reconciliation of Member Data
Total SDCERS - City of San Diego**

	<u>Active</u>	<u>Terminated Vested</u>	<u>Terminated Non-Vested</u>	<u>Disabled</u>	<u>Retired</u>	<u>Beneficiaries</u>	<u>DROP</u>	<u>Totals</u>
Participants as of 7/1/2014	7,272	780	2,140	1,197	5,338	1,211	1,076	19,014
New Entrants	209	0	0	0	0	0	0	209
Returned to Work	36	(16)	(20)	0	0	0	0	0
Vested Terminations	(45)	49	(4)	0	0	0	0	0
Non-Vested Terminations	(88)	0	88	0	0	0	0	0
Retirements	(53)	(59)	(6)	0	307	0	(189)	0
DROP	(241)	0	0	0	0	0	241	0
Disabilities	(4)	(2)	(1)	22	(10)	0	(5)	0
New Continuants	0	0	0	0	(1)	122	(2)	119
New Dissolutions ¹	0	0	0	0	9	0	13	22
Benefits Ceased ²	(7)	(5)	(10)	(22)	(101)	(49)	(3)	(197)
Lump Sum Cashout	(7)	0	0	0	(4)	0	0	(11)
Transferred Out	(6)	(1)	(1)	0	0	0	0	(8)
Miscellaneous Adjustments	(28)	(2)	(23)	(7)	(21)	(19)	0	(100)
Participants as of 7/1/2015	7,038	744	2,163	1,190	5,517	1,265	1,131	19,048

¹ Includes participants who may have previously had a frozen benefit and retired from a different plan.

² Includes deaths and benefits that were terminated or suspended.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

**Table A-2
Reconciliation of Member Data
City General**

	<u>Active</u>	<u>Terminated Vested</u>	<u>Terminated Non-Vested</u>	<u>Disabled</u>	<u>Retired</u>	<u>Beneficiaries</u>	<u>DROP</u>	<u>Totals</u>
Participants as of 7/1/2014	5,115	637	1,724	413	3,620	702	629	12,840
New Entrants	60							60
Returned to Work	34	(16)	(18)					0
Vested Terminations	(41)	45	(4)					0
Non-Vested Terminations	(64)		64					0
Retirements	(42)	(46)	(6)		205		(111)	0
DROP	(174)						174	0
Disabilities	(1)	(1)	(1)	8	(2)		(3)	0
New Continuants						62		62
New Dissolutions ¹				0	5		8	13
Benefits Ceased ²	(6)	(5)	(1)	(8)	(78)	(33)	(1)	(132)
Lump Sum Cashout	(3)	0	0		(3)			(6)
Transferred Out	(5)	(1)	(1)					(7)
Miscellaneous Adjustments	(13)	(2)	(32)	(3)	(16)	(12)	0	(78)
Participants as of 7/1/2015	4,860	611	1,725	410	3,731	719	696	12,752

¹ Includes participants who may have previously had a frozen benefit and retired from a different plan.

² Includes deaths and benefits that were terminated or suspended.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

**Table A-3
Reconciliation of Member Data
City Safety**

	<u>Active</u>	<u>Terminated Vested</u>	<u>Terminated Non-Vested</u>	<u>Disabled</u>	<u>Retired</u>	<u>Beneficiaries</u>	<u>DROP</u>	<u>Totals</u>
Participants as of 7/1/2014	2,157	143	416	784	1,718	509	447	6,174
New Entrants	149							149
Returned to Work	2		(2)					0
Vested Terminations	(4)	4						0
Non-Vested Terminations	(24)		24					0
Retirements	(11)	(13)			102		(78)	0
DROP	(67)						67	0
Disabilities	(3)	(1)		14	(8)		(2)	0
New Continuants					(1)	60	(2)	57
New Dissolutions ¹					4		5	9
Benefits Ceased ²	(1)		(9)	(14)	(23)	(16)	(2)	(65)
Lump Sum Cashout	(4)	0	0		(1)			(5)
Transferred Out	(1)							(1)
Miscellaneous Adjustments	(15)	0	9	(4)	(5)	(7)	0	(22)
Participants as of 7/1/2015	2,178	133	438	780	1,786	546	435	6,296

¹ Includes participants who may have previously had a frozen benefit and retired from a different plan.

² Includes deaths and benefits that were terminated or suspended.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

Table A-4				
SDCERS - City of San Diego				
Active Member Data				
	<u>June 30, 2015</u>		<u>June 30, 2014</u>	<u>% Change</u>
<u>Total</u>				
Count	7,038		7,272	-3.2%
Average Current Age	44.9		44.7	0.5%
Average Service	13.7		13.4	2.0%
Average Pensionable Earnings	\$ 68,295	\$	66,080	3.4%
Annual Pensionable Earnings	\$ 480,662,378	\$	480,535,972	0.0%
Average Valuation Compensation ¹	\$ 68,295	\$	66,080	3.4%
Annual Valuation Compensation ¹	\$ 480,662,378	\$	480,535,972	0.0%
Purchased	13.0		12.7	2.5%
Members with Paid Purchased Service	1,368		1,485	-7.9%
Members with Any Purchased Service	1,414		1,539	-8.1%
Amount of Paid Purchased Service	4,670		5,086	-8.2%
Amount of Total Purchased Service	5,005		5,475	-8.6%
<u>General</u>				
Count	4,860		5,115	-5.0%
Average Current Age	47.2		46.7	1.1%
Average Service	14.4		13.9	3.6%
Average Pensionable Earnings	\$ 60,692	\$	58,701	3.4%
Annual Pensionable Earnings	\$ 294,962,501	\$	300,257,118	-1.8%
Average Valuation Compensation ¹	\$ 60,692	\$	58,701	3.4%
Annual Valuation Compensation ¹	\$ 294,962,501	\$	300,257,118	-1.8%
Purchased	13.6		13.0	4.6%
Members with Paid Purchased Service	1,055		1,168	-9.7%
Members with Any Purchased Service	1,066		1,180	-9.7%
Amount of Paid Purchased Service	3,863		4,312	-10.4%
Amount of Total Purchased Service	3,973		4,437	-10.5%
<u>Safety</u>				
Count	2,178		2,157	1.0%
Average Current Age	39.7		39.9	-0.5%
Average Service	12.1		12.3	-1.6%
Average Pensionable Earnings	\$ 85,262	\$	83,579	2.0%
Annual Pensionable Earnings	\$ 185,699,878	\$	180,278,854	3.0%
Average Valuation Compensation ¹	\$ 85,262	\$	83,579	2.0%
Annual Valuation Compensation ¹	\$ 185,699,878	\$	180,278,854	3.0%
Service Without Permissive Service				
Purchased	11.7		11.8	-0.8%
Members with Paid Purchased Service	313		317	-1.3%
Members with Any Purchased Service	348		359	-3.1%
Amount of Paid Purchased Service	807		773	4.4%
Amount of Total Purchased Service	1,032		1,038	-0.7%

¹ The definition of valuation compensation differs from the definition of pensionable earnings due to IRS 401(a).

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

Table A-5 SDCERS - City of San Diego Non-Active Participant Data						
	Count			Average Age		
	June 30, 2015	June 30, 2014	%Change	June 30, 2015	June 30, 2014	%Change
Total						
Retired	6,648	6,414	3.6%	65.8	65.6	0.3%
Disabled	1,190	1,197	-0.6%	65.9	65.4	0.8%
Beneficiaries	<u>1,265</u>	<u>1,211</u>	<u>4.5%</u>	<u>73.8</u>	<u>74.2</u>	<u>-0.5%</u>
Payee Total	9,103	8,822	3.2%	66.9	66.7	0.3%
DROP Participants	1,131	1,076	5.1%	57.2	56.8	0.7%
Deferred Vested ¹	2,907	2,920	-0.4%	47.1	46.7	0.9%
Vested < 10 yrs svc	2,163	2,140	1.1%			
General						
Retired	4,427	4,249	4.2%	67.3	67.2	0.1%
Disabled	410	413	-0.7%	64.6	64.0	0.9%
Beneficiaries	<u>719</u>	<u>702</u>	<u>2.4%</u>	<u>75.9</u>	<u>76.2</u>	<u>-0.4%</u>
Payee Total	5,556	5,364	3.6%	68.2	68.1	0.1%
DROP Participants	696	629	10.7%	59.3	59.0	0.5%
Deferred Vested ¹	2,336	2,361	-1.1%	48.4	47.9	1.0%
Vested < 10 yrs svc	1,725	1,724	0.1%			
Safety						
Retired	2,221	2,165	2.6%	62.7	62.4	0.5%
Disabled	780	784	-0.5%	66.6	66.2	0.6%
Beneficiaries	<u>546</u>	<u>509</u>	<u>7.3%</u>	<u>70.9</u>	<u>71.3</u>	<u>-0.6%</u>
Payee Total	3,547	3,458	2.6%	64.8	64.6	0.3%
DROP Participants	435	447	-2.7%	54.0	53.8	0.4%
Deferred Vested ¹	571	559	2.1%	41.7	41.4	0.7%
Vested < 10 yrs svc	438	416	5.3%			

¹ Includes all Participants having a contribution balance still on account with SDCERS.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

Table A-6 SDCERS - City of San Diego Non-Active Participant Data						
	Total Annual Benefit			Average Annual Benefit		
	June 30, 2015	June 30, 2014	%Change	June 30, 2015	June 30, 2014	%Change
Total						
Retired	\$ 355,083,956	\$ 337,838,017	5.1%	\$ 53,412	\$ 52,672	1.4%
Disabled	40,946,485	39,993,657	2.4%	34,409	33,412	3.0%
Beneficiaries	<u>23,179,220</u>	<u>20,771,433</u>	<u>11.6%</u>	<u>18,323</u>	<u>17,152</u>	<u>6.8%</u>
Payee Total	\$ 419,209,660	\$ 398,603,107	5.2%	\$ 46,052	\$ 45,183	1.9%
DROP Participants	\$ 63,035,156	\$ 60,831,857	3.6%	\$ 55,734	\$ 56,535	-1.4%
Deferred Vested ¹	\$ 137,649,546	\$ 133,420,493	3.2%	\$ 47,351	\$ 45,692	3.6%
General						
Retired	\$ 191,716,762	\$ 180,895,525	6.0%	\$ 43,306	\$ 42,574	1.7%
Disabled	8,166,760	8,015,783	1.9%	19,919	19,409	2.6%
Beneficiaries	<u>10,187,710</u>	<u>9,542,816</u>	<u>6.8%</u>	<u>14,169</u>	<u>13,594</u>	<u>4.2%</u>
Payee Total	\$ 210,071,232	\$ 198,454,124	5.9%	\$ 37,810	\$ 36,997	2.2%
DROP Participants	\$ 28,839,776	\$ 25,922,297	11.3%	\$ 41,436	\$ 41,212	0.5%
Deferred Vested ¹	\$ 111,930,123	\$ 108,773,185	2.9%	\$ 47,915	\$ 46,071	4.0%
Safety						
Retired	\$ 163,367,194	\$ 156,942,492	4.1%	\$ 73,556	\$ 72,491	1.5%
Disabled	32,779,725	31,977,874	2.5%	42,025	40,788	3.0%
Beneficiaries	<u>12,991,510</u>	<u>11,228,616</u>	<u>15.7%</u>	<u>23,794</u>	<u>22,060</u>	<u>7.9%</u>
Payee Total	\$ 209,138,429	\$ 200,148,982	4.5%	\$ 58,962	\$ 57,880	1.9%
DROP Participants	\$ 34,195,380	\$ 34,909,560	-2.0%	\$ 78,610	\$ 78,097	0.7%
Deferred Vested ¹	\$ 25,719,422	\$ 24,647,309	4.3%	\$ 45,043	\$ 44,092	2.2%

¹ Includes all Participants having a contribution balance still on account with SDCERS. Annual benefit for deferred vested Participants is the total contribution balance on account as of June 30, 2015.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

Table A-7 SDCERS - City of San Diego Distribution of Active Members (Excludes DROP Participants) as of June 30, 2015 Total City											
Age	Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 25	31	41	-	-	-	-	-	-	-	-	72
25 to 29	96	246	116	-	-	-	-	-	-	-	458
30 to 34	46	210	437	92	2	-	-	-	-	-	787
35 to 39	13	146	353	299	87	5	-	-	-	-	903
40 to 44	15	93	197	315	318	93	4	-	-	-	1,035
45 to 49	9	72	159	271	391	343	186	11	-	-	1,442
50 to 54	6	53	118	200	294	281	329	107	15	1	1,404
55 to 59	5	44	73	124	190	78	70	29	3	-	616
60 to 64	1	23	62	61	65	23	5	6	-	-	246
65 to 69	-	9	27	7	8	2	1	1	-	1	56
70 and up	-	5	7	4	1	-	1	-	-	1	19
Total Count	222	942	1,549	1,373	1,356	825	596	154	18	3	7,038

Table A-8 SDCERS - City of San Diego Distribution of Active Members (Excludes DROP Participants) as of June 30, 2015 Total City											
Age	Average Salary Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 25	\$ 56,299	\$ 47,076	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 51,047
25 to 29	52,365	57,522	72,777	-	-	-	-	-	-	-	60,305
30 to 34	50,828	61,474	73,028	68,906	66,608	-	-	-	-	-	68,149
35 to 39	63,977	62,927	71,684	73,703	80,359	56,714	-	-	-	-	71,579
40 to 44	43,584	60,804	68,220	73,531	80,605	74,956	68,642	-	-	-	73,225
45 to 49	29,327	53,850	66,700	63,439	72,747	80,315	79,725	76,952	-	-	71,849
50 to 54	33,863	53,265	60,619	58,549	68,104	70,982	75,093	69,619	71,858	81,259	67,786
55 to 59	25,175	56,761	62,692	50,869	58,609	68,187	70,026	74,236	60,550	-	60,387
60 to 64	12,633	50,905	67,875	55,079	61,095	66,922	70,353	57,274	-	-	60,802
65 to 69	-	46,858	67,083	58,124	54,078	63,302	45,779	65,748	-	75,607	60,468
70 and up	-	67,061	47,667	46,969	17,426	-	67,004	-	-	49,777	52,161
Avg. Salary	\$ 50,457	\$ 58,342	\$ 69,585	\$ 66,062	\$ 71,372	\$ 74,828	\$ 75,798	\$ 70,506	\$ 69,973	\$ 68,881	\$ 68,295

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

Table A-9 SDCERS - City of San Diego Distribution of Active Members (Excludes DROP Participants) as of June 30, 2015 General											
Age	Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 25	2	27	-	-	-	-	-	-	-	-	29
25 to 29	16	137	42	-	-	-	-	-	-	-	195
30 to 34	13	129	184	46	2	-	-	-	-	-	374
35 to 39	3	113	190	158	45	5	-	-	-	-	514
40 to 44	10	78	136	195	168	60	4	-	-	-	651
45 to 49	9	68	133	205	258	185	108	9	-	-	975
50 to 54	5	52	106	179	242	233	271	106	15	1	1,210
55 to 59	5	44	71	119	183	77	64	28	3	-	594
60 to 64	1	22	62	61	65	22	4	6	-	-	243
65 to 69	-	9	27	7	8	2	1	1	-	1	56
70 and up	-	5	7	4	1	-	1	-	-	1	19
Total Count	64	684	958	974	972	584	453	150	18	3	4,860

Table A-10 SDCERS - City of San Diego Distribution of Active Members (Excludes DROP Participants) as of June 30, 2015 General											
Age	Average Salary Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 25	\$ 47,610	\$ 38,621	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 39,241
25 to 29	35,640	48,706	53,815	-	-	-	-	-	-	-	48,734
30 to 34	38,788	56,266	57,848	51,016	66,608	-	-	-	-	-	55,846
35 to 39	76,491	60,750	62,034	60,700	69,672	56,714	-	-	-	-	62,043
40 to 44	41,300	58,528	60,537	63,497	69,254	63,570	68,642	-	-	-	63,466
45 to 49	29,327	52,525	63,613	56,332	62,786	64,608	65,807	69,141	-	-	61,256
50 to 54	29,902	52,819	58,064	55,406	63,143	65,421	67,888	68,754	71,858	81,259	63,088
55 to 59	25,175	56,761	61,749	49,299	57,488	67,090	67,492	74,230	60,550	-	59,158
60 to 64	12,633	46,803	67,875	55,079	61,095	66,167	67,213	57,274	-	-	60,287
65 to 69	-	46,858	67,083	58,124	54,078	63,302	45,779	65,748	-	75,607	60,468
70 and up	-	67,061	47,667	46,969	17,426	-	67,004	-	-	49,777	52,161
Avg. Salary	\$ 36,939	\$ 54,103	\$ 60,831	\$ 57,090	\$ 63,091	\$ 65,139	\$ 67,286	\$ 69,320	\$ 69,973	\$ 68,881	\$ 60,692



**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

Table A-11 SDCERS - City of San Diego Distribution of Active Members (Excludes DROP Participants) as of June 30, 2015 Safety											
Age	Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 25	29	14	-	-	-	-	-	-	-	-	43
25 to 29	80	109	74	-	-	-	-	-	-	-	263
30 to 34	33	81	253	46	-	-	-	-	-	-	413
35 to 39	10	33	163	141	42	-	-	-	-	-	389
40 to 44	5	15	61	120	150	33	-	-	-	-	384
45 to 49	-	4	26	66	133	158	78	2	-	-	467
50 to 54	1	1	12	21	52	48	58	1	-	-	194
55 to 59	-	-	2	5	7	1	6	1	-	-	22
60 to 64	-	1	-	-	-	1	1	-	-	-	3
65 to 69	-	-	-	-	-	-	-	-	-	-	-
70 and up	-	-	-	-	-	-	-	-	-	-	-
Total Count	158	258	591	399	384	241	143	4	-	-	2,178

Table A-12 SDCERS - City of San Diego Distribution of Active Members (Excludes DROP Participants) as of June 30, 2015 Safety											
Age	Average Salary Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	
Under 25	\$ 56,899	\$ 63,382	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 59,009
25 to 29	55,710	68,602	83,540	-	-	-	-	-	-	-	68,884
30 to 34	55,571	69,769	84,068	86,796	-	-	-	-	-	-	79,290
35 to 39	60,222	70,383	82,933	88,274	91,809	-	-	-	-	-	84,179
40 to 44	48,151	72,642	85,349	89,837	93,319	95,659	-	-	-	-	89,770
45 to 49	-	76,379	82,493	85,517	92,068	98,706	98,997	112,102	-	-	93,964
50 to 54	53,670	76,423	83,189	85,341	91,195	97,977	108,758	161,372	-	-	97,087
55 to 59	-	-	96,190	88,221	87,928	152,679	97,058	74,386	-	-	93,563
60 to 64	-	141,166	-	-	-	83,549	82,912	-	-	-	102,542
65 to 69	-	-	-	-	-	-	-	-	-	-	-
70 and up	-	-	-	-	-	-	-	-	-	-	-
Avg. Salary	\$ 55,933	\$ 69,580	\$ 83,775	\$ 87,963	\$ 92,335	\$ 98,305	\$ 102,762	\$ 114,991	\$ -	\$ -	\$ 85,262

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

Table A-13 SDCERS - City of San Diego Retirees (Includes DROP Participants), Disabled, and Beneficiaries Tabulated by Attained Age/Benefit Effective Date Total City											
Plan Year	Age										Total
	Under 50	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 and up	
pre-1996	9	23	59	75	150	147	264	260	251	147	1,385
1996	3	6	11	11	9	24	23	23	7	3	120
1997	7	7	9	8	31	94	42	31	7	6	242
1998	3	7	11	5	35	93	54	13	10	4	235
1999	2	13	5	10	65	104	43	17	8	4	271
2000	3	12	8	6	84	77	40	9	9	5	253
2001	6	9	9	37	122	72	41	10	8	6	320
2002	2	7	6	32	100	34	19	12	4	4	220
2003	2	3	6	68	239	96	35	16	4	6	475
2004	6	3	9	74	168	65	28	6	6	11	376
2005	3	7	7	123	221	77	21	4	4	5	472
2006	15	4	94	181	80	41	12	8	9	3	447
2007	6	4	83	204	60	49	13	7	12	9	447
2008	7	5	81	190	73	29	10	8	7	5	415
2009	7	18	174	248	82	27	10	12	8	3	589
2010	8	7	125	189	57	10	7	12	9	7	431
2011	9	98	189	88	57	13	3	3	5	2	467
2012	4	109	216	61	65	15	5	7	5	2	489
2013	14	95	195	75	38	5	8	5	4	8	447
2014	7	122	215	99	30	22	15	9	10	4	533
2015	12	103	204	79	29	11	15	6	7	3	469
Total	135	662	1,716	1,863	1,795	1,105	708	478	394	247	9,103

Surviving spouses benefit effective date no longer based on participant's original date of retirement.

Average Age at Retirement/Disability 55.5
Average Current Age 66.9
Average Annual Pension \$ 46,052



**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

Table A-14 SDCERS - City of San Diego Retirees (Includes DROP Participants), Disabled, and Beneficiaries Tabulated by Attained Age/Benefit Effective Date General											
Plan Year	Age										Total
	Under 50	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 and up	
pre-1996	2	9	16	22	35	29	80	136	182	121	632
1996	2	2	1	7	3	9	17	18	5	2	66
1997	4	2	4	4	7	19	24	27	7	5	103
1998	2	3	6	3	8	40	47	13	9	3	134
1999	1	3	1	6	5	59	39	16	7	2	139
2000	3	5	5	5	10	57	39	8	7	2	141
2001	1	5	4	13	40	61	39	10	4	6	183
2002	1	2	4	3	44	27	18	12	4	4	119
2003	1	3	3	7	179	84	34	14	4	4	333
2004	2	1	6	10	136	57	23	5	5	6	251
2005	1	4	3	6	190	69	19	4	2	5	303
2006	11	2	12	135	71	40	10	7	5	2	295
2007	4	2	10	169	51	44	10	5	7	6	308
2008	3	3	3	160	69	26	8	6	4	2	284
2009	2	6	18	216	79	22	7	9	6	2	367
2010	3	4	12	170	54	6	4	8	9	2	272
2011	2	15	153	74	51	8	3	2	4	2	314
2012	2	10	180	53	62	12	5	4	3	2	333
2013	7	9	167	69	33	5	6	4	2	5	307
2014	-	14	188	90	21	15	9	4	5	2	348
2015	5	13	184	71	23	7	10	3	6	2	324
Total	59	117	980	1,293	1,171	696	451	315	287	187	5,556

Surviving spouses benefit effective date no longer based on participant's original date of retirement.

Average Age at Retirement/Disability	58.0
Average Current Age	68.2
Average Annual Pension	\$ 37,810

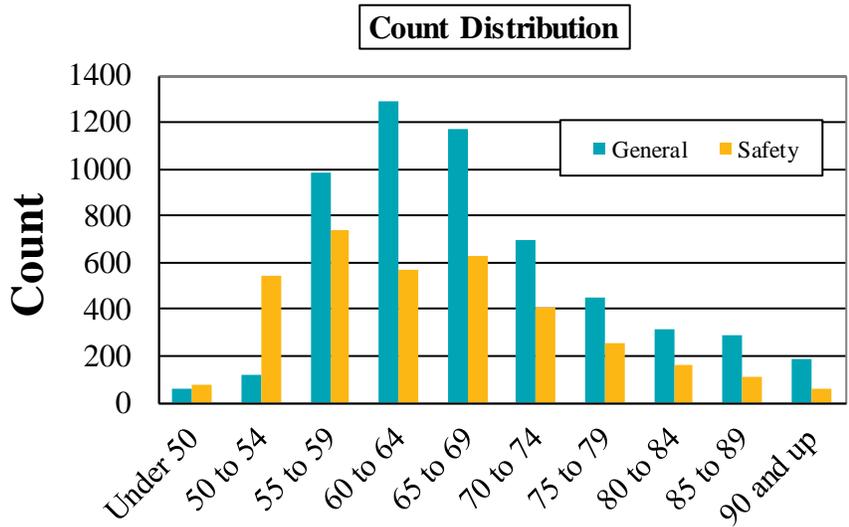


**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

**Table A-16
SDCERS - City of San Diego
Distribution of Retirees, Disabilitants,
Beneficiaries and Survivors
as of June 30, 2015**

<u>Age</u>	<u>Count</u>		<u>Total</u>
	<u>General</u>	<u>Safety</u>	
Under 50	59	76	135
50 to 54	117	545	662
55 to 59	980	736	1,716
60 to 64	1,293	570	1,863
65 to 69	1,171	624	1,795
70 to 74	696	409	1,105
75 to 79	451	257	708
80 to 84	315	163	478
85 to 89	287	107	394
90 and up	187	60	247
Total	5,556	3,547	9,103

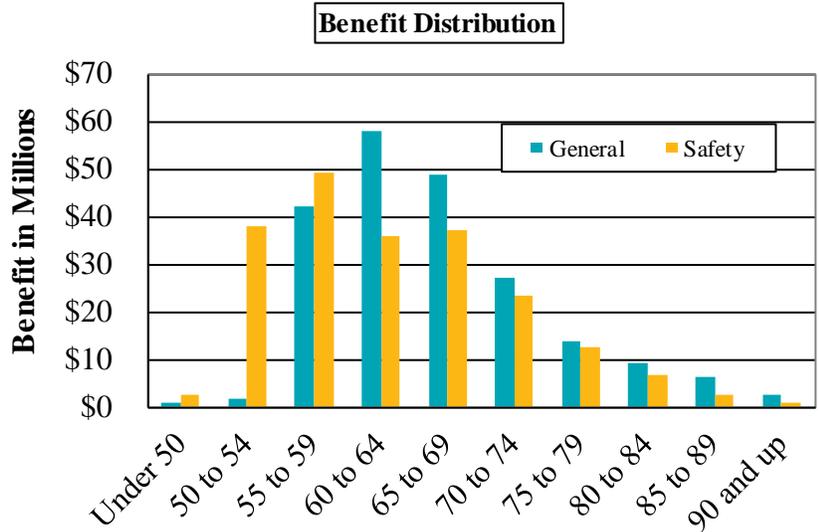


**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

**Table A-17
SDCERS - City of San Diego
Distribution of Retirees, Disabilitants,
Beneficiaries and Survivors
as of June 30, 2015**

<u>Age</u>	<u>Annual Benefit</u>		<u>Total</u>
	<u>General</u>	<u>Safety</u>	
Under 50	1,007,211	2,644,100	3,651,311
50 to 54	1,598,848	38,117,317	39,716,165
55 to 59	42,095,931	49,196,689	91,292,620
60 to 64	57,957,992	35,758,069	93,716,061
65 to 69	48,917,898	37,184,496	86,102,394
70 to 74	26,988,470	23,365,324	50,353,795
75 to 79	13,957,755	12,667,478	26,625,233
80 to 84	9,057,443	6,613,136	15,670,579
85 to 89	6,052,589	2,597,367	8,649,956
<u>90 and up</u>	<u>2,437,094</u>	<u>994,453</u>	<u>3,431,547</u>
Total	210,071,232	209,138,429	419,209,660



APPENDIX A - MEMBERSHIP INFORMATION

Data Assumptions and Practices

In preparing our data, we relied on information supplied by the SDCERS staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. Our methodology for obtaining the data used for the valuation is based upon the following assumptions and practices:

- Service for Actives and Inactives was calculated using “SDCERS Srv Credit” which is benefited service credit. An adjusted date of hire is retroactively calculated from the valuation date. Purchased Service that has been paid for is included in the SDCERS Srv Credit field. Purchased Service that has been contracted for, but not paid as of the valuation date is assumed to be paid in full, and this service will be reflected in the projected benefit.
- Valuation Salary will be the maximum of “Current Annual Pensionable Salary,” “1 Yr Prior Fiscal Year Pensionable Salary,” “2 Yr Prior Fiscal Year Pensionable Salary,” “3 Yr Prior Fiscal Year Pensionable Salary,” “4 Yr Prior Fiscal Year Pensionable Salary,” or an annualized “Last Pay Period Sum Pensionable Salary”.
- New hires with a “Date of Entry” after 6/30/2014 had their “Current Annual Pensionable Salary” annualized based on accrued service to date.
- Actives with an “Employment Type” of Half Time or $\frac{3}{4}$ Time had their “Current Annual Pensionable Salary” annualized to a full year.
- “Contrib Rate” was updated to reflect the new contribution rates for active employees. If the “Contrib Rate” was not provided, the prior year contribution for the member was used to update and reflect the new rate.
- For accounts having duplicate records in the Actives and Inactives by Social Security Number, the information from the latest payroll date is regarded as most up to date. The other record is treated as out of date and invalid.
- For duplicate records (based on SSN and Benefit Type) in the payee file, records having the same plan and same benefit type but different benefit amounts, we have added those benefit amounts together.
- Records on the provided “Member” file are considered to be Active if they have no “Date of Death,” no “Date of Separation,” do not have a retiree record and they received pay in the last pay period (Last Pay Period = 26 or 27) of the current FY.
- Records on the “Member” file are considered to be Inactive if they do not have a “Date of Death,” do not have a retiree record, and either have a “Date of Separation” or have a “Last Pay Period” earlier than the last pay period of the current FY.
- For Inactives, the supplemental file “HighestFiscalYearPensionableSalary_DFRD and INAC Members_20150828_Final.xlsx” was used for the “Average Compensation.” If a participant

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX A - MEMBERSHIP INFORMATION

was not provided in the supplemental file, “Average Compensation” will be the maximum of the annualized pay over the prior year and the last four fiscal years’ pensionable salaries.

- We assume that any active member found in the inactive data last year has returned to work and should be valued as active.
- Records on the “Payee” file are considered in pay status if their benefit is not suspended.
- Pension Benefit for retirees for each plan was calculated by summing “Monthly Pension,” “Monthly Annuity,” “COLA Annuity,” “Surviving Spouse Annuity,” and “COLA Pension” and subtracting “DRO Reduction Amt.” The “DRO Reduction Amt” field is mainly for Qualified Domestic Relations Order purposes. The “13th Check Supplement” field is added as an annual benefit and the “Corbett Supplement” is annualized for new retirees in the City only. It is assumed the payment is annual for retirees already in pay status prior to this valuation.
- Members retiring since the prior valuation date and not having a “13th Check Supplement Amount” will have their projected “13th Check Supplement Amount” calculated assuming \$30 multiplied by the “13th Check Supplement Years.”
- Payees’ “Cola Pension” and “Star Cola Pension” do not include a COLA as of July 1, 2015. These COLA increases were provided in the supplemental file “Taxable COLA_FY2015_20150825b_Final Sent to Cheiron.xlsx.”
- Members may retire and receive benefits from multiple Plans (e.g., a City Police Officer could have also worked for the Airport Authority); we will value each Member’s blended benefit individually. This will result in the counts being slightly higher than actual counts due to people having more than one benefit payable from multiple plans.
- We assume any retiree found in last year’s “Payee” file and not in this year’s file has died without a beneficiary and should be removed from the valuation data.
- We assume all deceased retirees with payments continuing to a beneficiary have already been accounted for in the “Payee” file.
- We exclude any payee receiving \$0.00 from a blended benefit plan.
- The Final 415 Regulations were used to calculate the present value of Member benefits over the Internal Revenue Service Code 415 Benefit Limits.

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

The SDCERS Board has the authority to select economic and demographic assumptions for the Plan. The assumptions used in this report reflect the results of a full experience study performed by Cheiron covering the period July 1, 2007 through June 30, 2010, as well as an economic experience study performed by Cheiron and presented to the SDCERS Board in November 2015.

1. Investment Return Assumption

SDCERS' assets are assumed to earn 7.125% net of investment expenses. This assumption is scheduled to decline to 7.00% for the 2016 valuation.

2. Inflation Rate

An inflation assumption of 3.175% compounded annually is used for projecting the total annual payroll growth for amortization of the non-Police UAL. This assumption is scheduled to decline to 3.05% for the 2016 valuation.

3. Administrative Expense Assumption

Administrative expenses are assumed to be \$12.8 million for FY 2017, increasing by 2.50% annually. Of this amount, two-thirds, or \$8.5 million, has been included in the FY 2017 ADC. For FY 2018 and for all fiscal years following, 100% of the expected administrative expenses will be added to the ADC.

4. Interest Credited to Member Contributions

7.125%, compounded annually.

5. Salary Increase Rate

Inflation component: 3.175% (following assumed freezes in FYs 2017-2018. Freezes had also been assumed for FYs 2013-2016).

The additional merit component:

Table B-1		
Years of Service at Valuation Date	<u>General</u>	<u>Safety</u>
0	5.00%	8.00%
1	4.00%	7.00%
2	3.00%	6.00%
3	2.00%	3.50%
4	1.00%	2.00%
5+	0.50%	0.50%

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

6. Cost-of-Living Increase in Benefits

Assumed to be 2% per annum, compounded annually.

There is a closed group of Special Safety Officers for whom we assume an annual adjustment equal to inflation (3.175% per year).

7. COL Annuity Benefit

For active Members, the COL annuity benefit is valued by adding to the liabilities one-sixth of accumulated member contribution accounts and using load factors for future member contributions. The load varies by Plan as follows:

General	Elected	Police	Fire	Lifeguard
2.19%	2.5%	3.51%	3.69%	3.58%

Members under the Police 2012 No COL Plan and Police Prop B Plan do not receive a COL annuity benefit.

For terminated vested participants, one-sixth of the accumulated member contribution accounts are recognized as a liability for the COL annuity.

8. Member Refunds

All or part of the employee contribution rate is subject to potential “offset” by the employer. That “offset” and the related accumulated interest are not to be refunded to employees at termination. However, such offsets are not directly reflected in either the employee contributions or related refund calculations.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

9. Rates of Termination

Table B-2 SDCERS - City of San Diego Rates of Termination		
<u>Service</u>	<u>General</u>	<u>Safety</u>
0	11.00%	8.80%
1	10.00	7.72
2	9.00	6.62
3	8.00	5.53
4	7.00	4.41
5	6.00	3.31
6	5.00	3.16
7	5.00	3.09
8	4.00	3.01
9	3.50	2.94
10	3.50	2.89
11	3.50	2.77
12	3.25	2.70
13	3.25	2.63
14	3.25	2.58
15	3.25	2.52
16	3.25	2.46
17	3.25	2.41
18	3.25	2.38
19	3.25	2.37
20	3.25	2.35
21	3.25	2.34
22+	3.25	2.33

20% of terminating employees, with 10+ years of service at termination, are assumed to subsequently work for a reciprocal employer and receive 3.675% pay increases per year.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

10. Rates of Disability

Table B-3 SDCERS - City of San Diego Rates of Disability at Selected Ages		
<u>Age</u>	<u>General</u>	<u>Safety</u>
20	0.02%	0.25%
25	0.03	0.25
30	0.04	0.25
35	0.06	0.35
40	0.08	0.45
45	0.12	0.55
50	0.20	0.65
55	0.35	0.75
60	0.45	--

60% of the General disabilities and 80% of the Safety disabilities are assumed to be industrial disability retirements. Non-industrial disability retirement is subject to a 10-year service requirement.

11. Rates of Mortality for Active Lives

To reflect improvements in mortality since the date of the tables, the mortality tables have been modified to reflect actual experience through June 30, 2010 and include a projection to 2013.

All active Members follow the RP2000 Combined Healthy table (male and female) projected to 2013.

Table B-4 SDCERS - City of San Diego Rates of Mortality for Active Lives at Selected Ages		
<u>Age</u>	<u>General and Safety</u>	
	<u>Male</u>	<u>Female</u>
20	0.03%	0.02%
25	0.03	0.02
30	0.04	0.02
35	0.07	0.04
40	0.10	0.06
45	0.13	0.09
50	0.17	0.13
55	0.28	0.25
60	0.55	0.47
65	1.06	0.91
70	1.83	1.57

50% of active member deaths are assumed to be industrial deaths for Safety Members and all active member deaths are assumed to be non-industrial deaths for other members.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

12. Rates of Mortality for Retired Healthy Lives

To reflect improvements in mortality since the date of the tables, the mortality tables have been modified to reflect actual experience through June 30, 2010. No modifications have been made to project future mortality improvements. In the next experience study we will examine the mortality experience and consider the projection of future improvement.

All retired healthy Members use the RP2000 Combined Healthy table (male and female). Safety female Members use the RP2000 Combined Healthy female table, set forward one year.

Table B-5				
SDCERS - City of San Diego				
Rates of Mortality for Retired Healthy Lives at Selected Ages				
	General		Safety	
<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
40	0.11%	0.07%	0.11%	0.08%
45	0.15	0.11	0.15	0.12
50	0.21	0.17	0.21	0.19
55	0.36	0.27	0.36	0.31
60	0.67	0.51	0.67	0.58
65	1.27	0.97	1.27	1.10
70	2.22	1.67	2.22	1.86
75	3.78	2.81	3.78	3.10
80	6.44	4.59	6.44	5.08
85	11.08	7.74	11.08	8.64
90	18.34	13.17	18.34	14.46

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

13. Rates of Mortality for Retired Disabled Lives

To reflect improvements in mortality since the date of the tables, the mortality tables have been modified to reflect actual experience through June 30, 2010. No modifications have been made to project future mortality improvements. In the next experience study we will examine the mortality experience and consider the projection of future improvement.

The mortality tables used for disabled retirees are variations of the CALPERS Disability Tables (male and female):

Table B-6				
SDCERS - City of San Diego				
Rates of Mortality for Disabled Lives at Selected Ages				
<u>Age</u>	<u>General</u>		<u>Safety</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
40	1.45%	0.67%	0.19%	0.20%
45	1.65	0.99	0.25	0.26
50	1.63	1.25	0.44	0.36
55	1.86	1.58	0.56	0.55
60	2.19	1.63	0.78	0.80
65	2.99	1.97	1.39	1.18
70	3.76	3.02	2.24	1.72
75	5.42	3.92	3.59	2.67
80	7.90	5.56	6.93	4.53
85	12.48	9.58	11.80	8.02

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

14. Rates of Retirement

Rates of Retirement for City General and City Safety are shown in the two tables below. Retirement rates include both service retirements and entry into DROP.

Table B-7 SDCERS - City of San Diego Rates of Retirement by Age and Service				
<u>Service</u>	<u>General - Old Plan</u>		<u>Safety - Old Plan</u>	
	<u>Prior to age 62</u>	<u>Age 62 or greater</u>	<u>Prior to age 55</u>	<u>Age 55 or greater</u>
10	--	60.0%	--	40.0%
11	--	45.0	--	40.0
12	--	45.0	--	40.0
13	--	45.0	--	40.0
14	--	45.0	--	40.0
15	--	40.0	--	31.5
16	--	40.0	--	31.5
17	--	40.0	--	31.5
18	--	40.0	--	31.5
19	--	40.0	--	31.5
20	50.0	55.0	35.0	50.0
21	35.0	35.0	20.0	25.0
22	37.5	35.0	25.0	30.0
23	40.0	35.0	30.0	35.0
24	42.5	35.0	35.0	40.0
25	45.0	45.0	40.0	45.0
26	47.5	45.0	45.0	50.0
27	50.0	45.0	50.0	55.0
28	52.5	45.0	55.0	60.0
29	55.0	45.0	60.0	65.0
30	57.5	50.0	100.0	100.0
31	60.0	50.0	100.0	100.0
32	60.0	55.0	100.0	100.0
33	60.0	55.0	100.0	100.0
34	60.0	55.0	100.0	100.0
35+	100.0	100.0	100.0	100.0

Table B-8 SDCERS - City of San Diego Rates of Retirement by Age for All New Tiers		
<u>Age</u>	<u>General</u>	<u>Safety</u>
50	--	10.0%
51	--	10.0
52	--	10.0
53	--	10.0
54	--	20.0
55	3.0%	40.0
56	3.0	40.0
57	3.0	40.0
58	5.0	50.0
59	5.0	80.0
60	10.0	85.0
61	15.0	90.0
62	20.0	100.0
63	30.0	100.0
64	40.0	100.0
65	50.0	100.0
66	50.0	100.0
67	50.0	100.0
68	50.0	100.0
69	50.0	100.0
70	100.0	100.0

In addition, if a Police-2009 Plan, a Police-2012 Plan, a Police-2012 No COL Plan, a Police-Prop B, a Lifeguard-2011 Plan or a Fire-2012 Plan Member has both attained age 55 and completed at least 30 years of service, 100% retirement is assumed.

For vested deferred participants, we assume that retirement will occur provided they have at least 10 years of service on the later of attained age or:

General Members: Earlier of age 62 or age 55 and 20+ years of service.

Safety Members: Earlier of age 55 or age 50 and 20+ years of service.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

Rates of Retirement for Elected Officials are based on age and are shown in the table below.

Table B-9 SDCERS - City of San Diego Rates of Retirement at Selected Ages	
<u>Age</u>	<u>Elected Officials</u>
50	--
51	--
52	--
53	15%
54	1
55	5
56	3
57	4
58	5
59	6
60	60
61	25
62	37
63	23
64	34
65	68
66	69
67	74
68	80
69	90
70	100

For vested deferred Elected Officials, we assume that retirement will occur provided they have at least four years of service on the later of attained age or the earlier of age 55 or age 53 and at least eight years of service.

If the inactive participant is not vested, the liability is the participant's contributions with interest.

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

15. Family Composition Assumptions

80% of men and 55% of women were assumed married at retirement. A female spouse is assumed to be three-years younger than her male spouse.

16. Member Contributions for Spousal Continuance

All active Members contribute towards a 50% survivor continuance. However, Members who are unmarried at retirement may either be refunded that specific part of their contributions, or they may leave such contributions on account and receive an incremental benefit that is the actuarial equivalent of such contributions.

17. Deferred Member Benefit

The benefit was estimated based on information provided by SDCERS staff. The data used to value the estimated deferred benefit were date of birth, date of hire, date of termination, and last pay. Based on the data provided, service credit, highest average salary, and deferred retirement age were estimated. The estimates were used to compute the retirement benefit, upon which the liabilities are based. For those participants without sufficient data or service, accumulated participant contribution balances, with interest, were used as the actuarial accrued liability.

18. DROP Account Balances

For DROP participants still working, the liability for the account balances in the asset information received from SDCERS staff was adjusted to assume average commencement in 2 ½ years and an interest crediting rate of 1.7%. Thereafter, it was assumed the account balance would be converted to an annuity at an interest rate of 3.0% over an average period of 10 years. The 10-year period was selected to average among the available DROP payment elections, including a lump sum, life expectancy, and 20 years. The liability for pre-2006 DROP account balances still left on account was valued assuming they would be paid out until age 70 ½, with an interest crediting rate of 1.7%. The liability for the remaining account balances was adjusted based on the DROP annuity rate in effect at the Member's benefit effective date.

These adjustments are applied to the DROP account balance values provided in the financial statements. The account balance liability is allocated to each individual Tier (e.g., General) based on the total amount of the DROP account balances for that Tier in the valuation data.

19. Other

The contribution requirements and benefit values of a plan are calculated by applying actuarial assumptions to the benefit provisions and Member information, using the actuarial funding methods described in the following section.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

Actual experience of SDCERS will not coincide exactly with assumed experience, regardless of the choice of the assumptions, the skill of the actuary or the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments to the computed contribution rate. From time to time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends, but not random year-to-year fluctuations.

20. Changes Since Last Valuation

In November 2015, the SDCERS Board voted to reduce the discount rate and wage inflation assumptions by 0.125% from 7.25% to 7.125% and 3.3% to 3.175%, respectively. These assumption changes have been reflected in this report, including adjustments to the employee contribution rates as required under San Diego City Charter Section 143 (“substantially equal”). The Board also voted to reduce both assumptions by an additional 0.125% in the next valuation.

In January 2015, the Board voted to account for expected administrative expenses explicitly in the actuarially determined contribution (ADC) with a three-year phase in. This being the second year of the phase in, the portion of the assumed administrative expenses included in the ADC was adjusted from one-third to two-thirds.

The DROP interest crediting and annuity rates used to value the liability for account balances were decreased from 1.8% to 1.7% and from 3.6% to 3.0%, respectively, to reflect the Board’s adoption of these rates at its November 2015 meeting.

APPENDIX B - ACTUARIAL ASSUMPTIONS AND METHODS

B. Actuarial Methods

1. Actuarial Funding Method

The Entry Age Normal funding method was used for active employees, whereby the normal cost rate is computed as the average level annual percent of pay required to fund the retirement benefits for all Members between their dates of hire and assumed dates of retirement. The EAN actuarial liability is the difference between the plan's total present value of future benefits and the present value of future normal costs, calculated for each sub-group (e.g., General). The unfunded actuarial liability is the difference between the actuarial liability and the actuarial value of assets, and is allocated to each sub-group based on its liability.

The unfunded actuarial liability is amortized by annual payments. For the non-Police portion of the Plan, the UAL payments are determined as level dollar amounts. For the Police portion of the Plan, the payments are determined as a level percentage of pay, assuming payroll increases of 3.175% per year. The UAL is amortized over various closed periods. The UAL as of June 30, 2007 is amortized over 20 years. Subsequent gains and losses are amortized over 15 years, changes in assumptions over 30 years, and changes in benefits over five years. The non-Police portion of the UAL as of June 30, 2012 is amortized over 15 years. Funding surplus, if any, is amortized over 30 years. Finally, if necessary, there is an additional UAL cost component to ensure that there is no negative amortization in any year.

2. Asset Valuation Method

For the purposes of determining the City of San Diego's actuarially determined contribution to SDCERS, we use a smoothed actuarial value of assets. The asset smoothing method dampens the volatility in asset values that could occur because of the fluctuations in market conditions. Use of an asset smoothing method is consistent with the long-term nature of the actuarial valuation process. Assets are assumed to be used exclusively for the provision of retirement benefits and expenses.

The actuarial value of assets is equal to 100% of the *expected actuarial value of assets*¹ plus 25% of the difference between the current market value of assets and the expected actuarial value of assets. In no event will the actuarial value of assets ever be less than 80% of the market value of assets nor greater than 120% of the market value of assets.

3. Changes Since Last Valuation

None

¹ The expected actuarial value of assets is equal to the prior year's actuarial value of assets increased with actual contributions made, decreased with actual disbursements made, all items (prior assets, contributions and disbursements) further adjusted with expected investment returns for the year.

APPENDIX C - SUMMARY OF PLAN PROVISIONS

1. Membership Requirement

Membership is mandatory from the first day of employment with the City, for all full, three-quarter, and half-time classified employees initially hired between July 1, 1991 and July 19, 2012 and for any unclassified employees initially hired between August 11, 1993 and July 19, 2012 (§24.0104).*

Membership is mandatory from the first day of employment for Police Recruits hired between July 1, 1991 and June 30, 2014 and for all sworn Police Officers initially hired on or after July 1, 1991 (City Charter §140).

As a result of Proposition B, new employees (other than sworn Police) initially hired on or after July 20, 2012 will not participate in SDCERS.

2. Monthly Salary Base for Benefits

General and Safety Old Plan Members:

Highest consecutive 12-month average in any qualified employment with a California governmental jurisdiction (§ 24.0103), subject to a 10% increase for those who joined the system before July 1, 2002, if the General or Safety Member elects such increase in lieu of an increased benefit formula (§24.0402 and §24.0403).

General-2009 Plan Members:

Average of highest three years in any qualified employment with a California governmental jurisdiction (§ 24.0103).

Police-2009 Plan Members:

Highest consecutive 12-month average in any qualified employment with a California governmental jurisdiction (§ 24.0103).

Lifeguard-2011 Plan, Fire-2012 Plan, Police-2012 Plan, Police-2012 No COL Plan, and Police-Prop B Plan Members:

Average of highest three years in any qualified employment with a California governmental jurisdiction (§ 24.0103).

* All “§” references are to the City of San Diego Municipal Code.

APPENDIX C - SUMMARY OF PLAN PROVISIONS

3. Service Retirement

Eligibility

General Members:

Age 62 with 10 years of service, or age 55 with 20 years of service (§ 141 of City Charter).

Safety Members (includes Fire, Lifeguard, and Police):

Age 55 with 10 years of service, or age 50 with 20 years of service (§ 141 of City Charter).

Elected Officers:

Age 55 with 4 years of service. Eligible to retire at any age with 8 years of service, however, benefit is reduced by 2% per year for each year under age 55 (§ 24.1705).

Benefit

The basic formula used to calculate monthly retirement allowances for all membership categories is: Retirement Factor X Final Average Compensation X Years of Service Credit.

General Members:

For General-Old Plan Members, choice of factors in place on June 30, 2000 (Option 1), or factors effective as of July 1, 2000 (Option 2), or factors in effect as of July 1, 2002 (Option 3), with a benefit cap of 90% of Final Average Compensation unless an exception to the 90% cap applies (§ 24.0402).

For General-2009 Plan Members, factors shown in Table C-1 (§ 24.0402.1).

There is an additional amount equal to the annuitized Member COL Annuity contributions at retirement date.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX C - SUMMARY OF PLAN PROVISIONS

General Member Service Retirement Accrual Factors

Table C-1				
SDCERS - City of San Diego				
General Member Service Retirement Accrual Factors				
Retirement	Hired Before July 1, 2009			Hired on or After
<u>Age</u>	<u>Option 1</u>	<u>Option 2</u>	<u>Option 3</u>	<u>July 1, 2009</u>
55	2.00%	2.25%	2.50%	1.00%
56	2.00%	2.25%	2.50%	1.25%
57	2.00%	2.25%	2.50%	1.65%
58	2.00%	2.25%	2.50%	1.758%
59	2.08%	2.25%	2.50%	1.874%
60	2.16%	2.30%	2.55%	2.00%
61	2.24%	2.35%	2.60%	2.12%
62	2.31%	2.40%	2.65%	2.24%
63	2.39%	2.45%	2.70%	2.36%
64	2.47%	2.50%	2.75%	2.46%
65 and up	2.55%	2.55%	2.80%	2.60%

Elected Officers:

The retirement factor for Elected Officers is 3.5% (§ 24.1706). A 2% annual reduction factor applies to benefits for Members retiring prior to age 55 (§ 24.1705).

Safety Members:

For all Safety-Old Plan Members, choice of factors in place on June 30, 2000 (Option 1), or factors effective as of July 1, 2000 (Option 2), with a benefit cap of 90% of Final Average Compensation unless an exception to the 90% cap applies (§ 24.0403).

For Police-2009 Plan, Lifeguard-2011 Plan, Fire-2012 Plan, Police-2012 Plan, Police-2012 No COL Plan, and Police-Prop B Plan Members, formula shown in Table C-2 (§ 24.0403).

There is an additional amount equal to the annuitized Member COL Annuity contributions at retirement date, with the exception of Police-2012 No COL Plan and Police-Prop B Plan Members.

SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015

APPENDIX C - SUMMARY OF PLAN PROVISIONS

Safety Member Service Retirement Accrual Factors

Table C-2				
SDCERS - City of San Diego				
Safety Member Service Retirement Accrual Factors				
Retirement	Police & Fire	Lifeguard	Safety	Police-2009 Lifeguard-2011 Fire-2012 Police-2012 Police Prop B
<u>Age</u>	<u>Option 1</u>	<u>Option 1</u>	<u>Option 2</u>	
50	2.50%	2.20%	3.00%	2.50%
51	2.60%	2.32%	3.00%	2.60%
52	2.70%	2.44%	3.00%	2.70%
53	2.80%	2.57%	3.00%	2.80%
54	2.90%	2.72%	3.00%	2.90%
55 and up	2.99%	2.77%	3.00%	3.00%

For vested Members who terminate City employment, different retirement accrual factors may apply depending on which options were available at the time of termination.

For Members of the General-2009 Plan who terminate City employment, the accrual factors are those shown in Tables C-1. For Members of the Police-2009 Plan, Lifeguard-2011 Plan, Fire-2012 Plan, Police-2012 Plan, Police-2012 No COL Plan, and Police-Prop B Plan who terminate City employment, the accrual factors are those shown in Table C-2. For General-Old Plan and Safety-Old Plan Members, the accrual factors are as shown in Tables C-3 and C-4:

GENERAL:

Table C-3	
SDCERS - City of San Diego	
<u>For Vested Members who terminated--</u>	<u>--the accrual factors are--</u>
Prior to January 1, 1997	See Table C-5
January 1, 1997 - June 30, 2000	Option 1 without 10% increase in Final Average Compensation
July 1, 2000 - June 30, 2002	Option 1 with 10% increase in Final Average Compensation; or Option 2
July 1, 2002 - Present	Option 3

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX C - SUMMARY OF PLAN PROVISIONS

SAFETY:

Table C-4 SDCERS - City of San Diego	
<u>For Vested Members who terminated--</u>	<u>--the accrual factors are--</u>
Prior to January 1, 1997	See Table C-5
January 1, 1997 - June 30, 2000	Option 1 without 10% increase in Final Average Compensation
July 1, 2000 - Present	Option 1 with 10% increase in Final Average Compensation; or Option 2

Table C-5 SDCERS - City of San Diego Pre-1997 Member Service Retirement Accrual Factors				
	General	Safety		
<u>Age</u>		<u>Police</u>	<u>Fire</u>	<u>Lifeguard</u>
50	--	2.50%	2.20%	2.00%
51	--	2.54%	2.32%	2.10%
52	--	2.58%	2.44%	2.22%
53	--	2.62%	2.57%	2.34%
54	--	2.66%	2.72%	2.47%
55	1.48%	2.70%	2.77%	2.62%
56	1.55%	2.77%	2.77%	2.62%
57	1.63%	2.77%	2.77%	2.62%
58	1.72%	2.77%	2.77%	2.62%
59	1.81%	2.77%	2.77%	2.62%
60	1.92%	2.77%	2.77%	2.62%
61	1.99%	2.77%	2.77%	2.62%
62	2.09%	2.77%	2.77%	2.62%
63	2.20%	2.77%	2.77%	2.62%
64	2.31%	2.77%	2.77%	2.62%
65 and up	2.43%	2.77%	2.77%	2.62%

Maximum Benefit

General-Old Plan Members: 90% of Final Average compensation if Option 3 is chosen, unless an exception to the 90% cap applies.

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX C - SUMMARY OF PLAN PROVISIONS

General-2009 Plan Members: 80% of Final Average compensation.

Safety-Old Plan Members: 90% of Final Average Compensation.

Police-2009 Plan, Lifeguard-2011 Plan, Fire-2012 Plan, Police-2012 Plan and Police-2012 No COL Plan Members: 90% of Final Average compensation.

Police-Prop B Plan Members: 80% of Final Average compensation.

Elected Officers: None.

Unmodified Form of Payment

Monthly payments continued for the life of the Member, with 50% continuance to the eligible spouse upon Member's death. If there is no eligible spouse, the Member may receive either a lump sum payment equal to the accumulated surviving spouse contributions or an actuarially equivalent annuity (§ 24.0601).

Note: City employees withdrew from Social Security effective January 1, 1982. We assume that all future benefits for active Members will be determined on a non-integrated basis.

Note: Effective July 1, 1991, service credit earned under the 1981 Pension System will be considered equivalent to SDCERS service for the purpose of benefit calculations (i.e., the above formulas will apply to 1981 Pension System service) (§ 24.1102, 24.0210, 24.0310).

4. Non-Industrial Disability

Eligibility

Ten years of service (Charter §141).

Benefit

General Members:

Greater of 1.5% per year of service, one-third of final compensation, or the earned service retirement benefit (§24.0502, §24.0505).

Safety Members:

Greater of 1.8% per year of service, one-third of final compensation, or the earned service retirement benefit (§24.0502, §24.0504).

Elected Officers:

Earned service retirement benefit (§24.1707).

APPENDIX C - SUMMARY OF PLAN PROVISIONS

5. Industrial Disability

Eligibility

No age or service requirement (§24.0501).

Benefit

General Members:

Greater of one-half of final compensation, or the earned service retirement benefit if eligible. (§24.0502, §24.0505).

Safety Members:

Greater of one-half of final compensation, or the earned service retirement benefit if eligible. (§24.0502, §24.0503).

Elected Officers:

Earned service retirement benefit (§24.1707).

6. Non-Industrial Active Death Before Eligible to Retire

Refund of employee contributions with interest, plus one month's salary for each completed year of service, to a maximum of six months' salary (§24.0702).

7. Non-Industrial Active Death After Eligible to Retire for Service

50% of earned benefit payable to surviving eligible spouse, domestic partner, or dependent child under 18 years of age (§24.0704).

8. Industrial Active Death

50% of the final average compensation preceding death, payable to eligible spouse, domestic partner, or dependent child under 18 years of age (§24.0705).

9. Death After Retirement

Continuance to surviving beneficiary depending on benefit selection made at retirement (§24.0601).

\$2,000 payable in lump sum to the beneficiary or the estate of the retiree. (§24.0710).

APPENDIX C - SUMMARY OF PLAN PROVISIONS

10. Withdrawal Benefits (§24.0206, §24.0306)

Pre-12/8/76 Hires

If contributions left on deposit, entitled to earned benefits, commencing any time after eligible to retire.

Post-12/7/76 Hires

Less than ten years of service:

Refund of accumulated employee contributions with interest, or may keep deposits in the System and earn additional interest and use service with a reciprocal system to establish eligibility for earned benefits upon concurrent retirement from reciprocal system (§24.0206, 24.0306, 24.1005).

Ten or more years of service:

If contributions left on deposit, entitled to earned benefits commencing any time after eligible to retire (§24.0206, 24.0306)

11. Post-retirement Cost-of-Living Adjustment Benefit

General and Safety Members:

Based on changes in Consumer Price Index, to a maximum of 2% per year (§24.1505).

12. COL Annuity

Actuarial equivalent of accumulated contributions in cost-of-living annuity account at time of retirement (§24.0103).

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX C - SUMMARY OF PLAN PROVISIONS

13. Member Contributions

Member contributions vary by age at time of entrance into SDCERS (§24.0201, §24.0301), and were recalculated following the experience study in 2011 based on the then current actuarial assumptions, in accordance with the requirement in San Diego City Charter Section 143 for “substantially equal” employer and employee contributions. Member contributions were later adjusted in 2013 for assumption changes at the time and now adjusted in 2015 based on the most recent changes to the actuarial assumptions as listed in Appendix B of this report. Table C-6 and Table C-7 contain the contribution rates by Plan.

Table C-6					
SDCERS - City of San Diego					
General Member Contribution Rates					
Entry Age	GENERAL		Entry Age	GENERAL	
	Hired Before 7/1/2009	Hired On or After 7/1/2009		Hired Before 7/1/2009	Hired On or After 7/1/2009
20	7.59%	3.92%	40	10.17	8.45
21	7.69	4.13	41	10.20	8.63
22	7.87	4.34	42	10.25	8.81
23	8.07	4.56	43	10.46	9.01
24	8.28	4.79	44	10.66	9.22
25	8.50	5.01	45	10.85	9.43
26	8.71	5.25	46	11.03	9.62
27	8.92	5.48	47	11.20	9.81
28	9.12	5.73	48	11.38	9.98
29	9.32	5.98	49	11.53	10.14
30	9.51	6.23	50	11.65	10.29
31	9.68	6.49	51	11.72	10.42
32	9.86	6.75	52	11.82	10.51
33	10.00	6.99	53	11.63	10.54
34	10.13	7.26	54	11.40	10.52
35	10.37	7.51	55	11.08	10.36
36	10.28	7.74	56	10.76	10.05
37	10.20	7.92	57	10.46	9.77
38	10.14	8.10	58	10.46	9.77
39	10.14	8.28	59	10.46	9.77

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX C - SUMMARY OF PLAN PROVISIONS

Table C-7
SDCERS - City of San Diego
Safety Member Contribution Rates

Entrv Age	FIRE		LIFEGUARD		POLICE				
	Hired Before 1/1/2012	Hired On or After 1/1/2012	Hired Before 7/1/2011	Hired On or After 7/1/2011	Hired Before 7/1/2009	Hired On or After 7/1/2009 and Before 1/1/2012	Hired On or After 1/1/2012 and and Before 8/2/2012	Hired On or After 8/2/2012 and and Before 7/1/2013	Hired On or After 7/1/2013
20	13.00%	10.65%	12.90%	10.62%	13.00%	10.78%	10.55%	8.85%	7.98%
21	13.12	11.10	13.03	11.06	13.12	11.24	10.99	9.22	8.39
22	13.35	11.55	13.25	11.51	13.35	11.71	11.44	9.61	8.81
23	13.65	12.02	13.49	11.98	13.65	12.19	11.91	10.00	9.26
24	13.95	12.49	13.74	12.46	13.95	12.67	12.38	10.39	9.73
25	14.25	12.99	13.99	12.95	14.25	13.18	12.87	10.80	10.21
26	14.53	13.29	14.21	13.25	14.53	13.49	13.16	11.05	10.44
27	14.79	13.43	14.41	13.39	14.79	13.63	13.30	11.16	10.74
28	15.04	13.62	14.59	13.58	15.04	13.83	13.49	11.32	11.09
29	15.26	13.83	14.71	13.79	15.26	14.05	13.70	11.50	11.43
30	15.59	14.07	15.04	14.03	15.59	14.30	13.94	11.70	11.74
31	15.64	14.31	14.95	14.27	15.64	14.56	14.18	11.90	12.02
32	15.75	14.58	14.88	14.53	15.75	14.82	14.44	12.12	12.28
33	15.91	14.84	14.84	14.79	15.91	15.09	14.70	12.34	12.52
34	16.02	15.09	14.82	15.04	16.02	15.35	14.95	12.55	12.76
35	16.20	15.27	14.95	15.22	16.20	15.54	15.13	12.70	12.92
36	16.45	15.59	15.18	15.54	16.45	15.87	15.45	12.97	13.19
37	16.72	15.90	15.42	15.85	16.72	16.20	15.76	13.23	13.48
38	16.99	16.21	15.67	16.16	16.99	16.51	16.05	13.48	13.74
39	17.26	16.50	15.92	16.45	17.26	16.81	16.34	13.72	14.01
40	17.51	16.77	16.16	16.72	17.51	17.10	16.61	13.94	14.25
41	17.90	17.02	16.53	16.97	17.90	17.36	16.86	14.15	14.47
42	18.23	17.25	16.83	17.20	18.23	17.60	17.09	14.34	14.68
43	18.50	17.44	17.07	17.39	18.50	17.81	17.28	14.50	14.86
44	18.69	17.58	17.26	17.53	18.69	17.96	17.42	14.62	15.00
45	18.82	17.66	17.37	17.61	18.82	18.06	17.50	14.69	15.08
46	18.36	17.34	16.94	17.29	18.36	17.73	17.18	14.42	14.81
47	18.03	17.18	16.64	17.13	18.03	17.57	17.02	14.29	14.67
48	17.67	17.07	16.31	17.02	17.67	17.45	16.91	14.19	14.58
49	17.28	16.95	15.95	16.90	17.28	17.34	16.79	14.09	14.47

**SDCERS-CITY OF SAN DIEGO
ACTUARIAL VALUATION AS OF JUNE 30, 2015**

APPENDIX C - SUMMARY OF PLAN PROVISIONS

The employee contribution rates are the sum of four components, three of which are specified in the Municipal Code: a cost-of-living rate (§24.1506(a)), a surviving spouse rate (§24.0601), and, other than Police hired on or after August 2, 2012, a COL Annuity rate (§24.1506(b)). The fourth component is the “substantially equal” rate as defined in San Diego City Charter Section 143, which is 50% of the normal cost of accrued service retirement allowances, payable either immediately or deferred until a later age, when a member leaves employment via termination, disability, or service retirement. Since the cost-of-living rate funds the Member’s portion of the post-retirement cost-of-living benefit, the surviving spouse rate funds the Member’s portion of surviving spouse allowances, and the COL Annuity rate funds the COL Annuity, these benefits are not included in the calculation of the “substantially equal” rate.

All benefits not included in the components described above are paid for entirely by the City. Those benefits paid for entirely by the City include the refund of Member contributions for non-vested terminations, the portion of the disability allowance in excess of the earned service retirement (if any), the 13th check benefit, the pre-retirement death benefit for non-vested Members, the pre-retirement industrial death benefit, and the post-retirement \$2,000 lump sum benefit.

The assumptions used to develop the rates were the same as those used in this valuation, except that mortality tables for General Members were blended 50/50 between male and female rates, mortality tables for Safety Members were blended 90/10 between male and female rates, and mortality table for beneficiaries of Safety Members were blended 10/90 between male and female rates.

Elected Officers (General) contribute 9.05% of total salary, regardless of entry age (§24.1704).

14. Internal Revenue Code Limitation

Benefits provided by SDCERS’ Trust Fund are subject to the limitations set forth in Section 415 of the Internal Revenue Code in accordance with the “grandfather” election in Section 415(b)(10) of the Code (§24.1004).

As of the June 30, 2006 valuation, active participants’ benefit payments were limited by Section 415 of the Internal Revenue Code. As of the June 30, 2007 valuation, all benefit payments were limited by Section 415 of the Internal Revenue Code.

15. Deferred Retirement Option Plan

Effective April 1, 1997, a deferred retirement option plan (DROP) was created and offered to Members as an alternative method of benefit accrual. Members eligible for service retirement are eligible to participate in DROP, but only those hired before July 1, 2005 may enter the program (§24.1402.1).

APPENDIX C - SUMMARY OF PLAN PROVISIONS

A participant in DROP may leave DROP at any time before the end of his or her designated DROP participation period by voluntarily leaving City employment. (§24.1403) The maximum DROP participation period is 60 months, with certain exception for Firefighters. (§24.1402)

A DROP participation account is a nominal account established with the Retirement System, which is credited with the following amounts (§24.1404):

- The Member's monthly service retirement allowance, credited monthly, calculated at the date of DROP entry and increased each year by a cost-of-living adjustment.
- The Member's supplemental 13th check benefit, if applicable, credited annually.
- 3.05% of base compensation, payable by the City and credited bi-weekly.
- 3.05% of base compensation, payable by the Member and credited bi-weekly.
- Interest credited to the DROP account, as determined by the Board.

When a Member leaves DROP and City employment, they begin to collect their monthly service retirement allowance, their supplemental 13th check benefit (if applicable), and the amounts credited to their DROP participation account, payable as a single lump sum distribution, as a 240-month annuity with equal payments, or any other form approved by the Board and subject to applicable provisions of the Internal Revenue Code (§24.1407).

DROP is not intended to jeopardize the tax-qualified status of the retirement system under the rules and regulations of the Internal Revenue Service. Benefits provided under this division are subject to the limitations of Section 415 of the Internal Revenue Code relating to the amount of benefits that can be paid.

16. Blended Benefit with Participating Agencies

Members may retire and receive benefits from multiple Plans (e.g., a City Police Officer could have also worked for the Airport Authority).

17. Changes since Last Valuation

This is the first valuation that includes Members of the Lifeguard – 2011 Plan. The provisions for this Plan are described in this section.

Note: The summary of major plan provisions is designed to outline principal plan benefits. If the SDCERS staff should find the plan summary not in accordance with the actual provisions, the actuary should immediately be alerted so the proper provisions are valued.

APPENDIX D - GLOSSARY OF TERMS

1. Actuarial Liability

The Actuarial Liability is the difference between the present value of all future system benefits and the present value of total future normal costs. This is also referred to by some actuaries as the “accrued liability” or “actuarial accrued liability.”

2. Actuarial Assumptions

Estimates of future experience with respect to rates of mortality, disability, turnover, retirement rate or rates of investment income and salary increases. Actuarial assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

3. Accrued Service

Service credited under the System which was rendered before the date of the actuarial valuation.

4. Actuarial Equivalent

A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.

5. Actuarial Cost Method

A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of a retirement system benefit between future normal cost and actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”

6. Actuarial Gain/(Loss)

The difference between actual experience and actuarial assumption anticipated experience during the period between two actuarial valuation dates.

7. Actuarial Present Value

The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment.

APPENDIX D - GLOSSARY OF TERMS

8. Actuarially Determined Contribution (ADC)

Contribution determined each year based on the SDCERS Board's adopted funding policy. The term also exists in GASB 67 and 68 as a contribution determined by the actuary in accordance with Actuarial Standards of Practice, but no further guidance is provided.

9. Amortization

Paying off an interest-discounted amount with periodic payments of interest and principal—as opposed to paying off with a lump sum payment.

10. Normal Cost

The actuarial present value of retirement system benefits allocated to the current year by the actuarial funding method.

11. Set Back/Set Forward

Set back is a period of years that a standard published table (i.e., mortality) is referenced backwards in age. For instance, if the set back period is two years and the participant's age is currently 40, then the table value for age 38 is used from the standard published table. It is the opposite for set forward. A system would use set backs or set forwards to compensate for mortality experience in their work force.

12. Unfunded Actuarial Liability (UAL)

The difference between actuarial liability and the actuarial value of assets.

Most retirement systems have unfunded actuarial liability. They arise each time new benefits are added and each time an actuarial loss is realized.

The existence of unfunded actuarial liability is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial liability does not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liability, and the trend in its amount (after due allowance for devaluation of the dollar).