San Diego County Employees Retirement Association

Actuarial Valuation and Review As of June 30, 2015



This report has been prepared at the request of the Board of Retirement to assist in administering the Fund. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Retirement and may only be provided to other parties in its entirety. The measurements shown in this actuarial valuation may not be applicable for other purposes.

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★ Segal Consulting

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November 23, 2015

Board of Retirement San Diego County Employees Retirement Association 2275 Rio Bonito Way, Suite 200 San Diego, CA 92108-1685

Dear Board Members:

We are pleased to submit this Actuarial Valuation and Review as of June 30, 2015. It summarizes the actuarial data used in the valuation and establishes the funding requirements for fiscal 2016-2017.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the Plan. The census information and the financial information was provided by SDCERA. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of Andy Yeung, ASA, MAAA, Enrolled Actuary.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in plan provisions or applicable law.

We are members of the American Academy of Actuaries and we meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. To the best of our knowledge, the information supplied in the actuarial valuation is complete and accurate. Further, in our opinion, the assumptions as approved by the Board are reasonably related to the experience of and the expectations for the Plan.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

Bv:

Paul Angelo, FSA, MAAA, FCA, EA Senior Vice President and Actuary

By:

Andy Yeung, ASA, MAAA, FCA, EA Vice President and Actuary

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SECTION 1

★ Segal Consulting

SECTION 2

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Purpose

This report has been prepared by Segal Consulting (Segal) to present a valuation of the San Diego County Employees Retirement Association (SDCERA or Association) as of June 30, 2015. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- > The benefit provisions of the Association, as administered by the Board of Retirement;
- The characteristics of covered active members, deferred terminated members, retired members and beneficiaries as of June 30, 2015, provided by SDCERA;
- > The assets of the Plan as of June 30, 2015, provided by SDCERA;
- > Economic assumptions regarding future salary increases and investment earnings; and
- > Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

One of the general goals of an actuarial valuation is to establish contributions that fully fund the Association's liabilities, and that, as a percentage of payroll, remain as level as possible for each generation of active members. Annual actuarial valuations measure the progress toward this goal, as well as test the adequacy of the contribution rates.

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions to evaluate the Association's assets, liabilities and future contribution requirements. Our calculations are based upon member data and financial information provided to us by SDCERA's staff. This information has not been audited by us, but it has been reviewed and found to be reasonably consistent, both internally and with prior year's information.

The contribution requirements are determined as a percentage of payroll. The Association's employer rates provide for both Normal Cost and a contribution to amortize any unfunded or overfunded actuarial accrued liabilities. Effective with the June 30, 2004 valuation, the Association's Unfunded Actuarial Accrued Liability (UAAL) has been amortized using 20-year fixed (i.e., decreasing) layered amortization periods. The 20-year period was last reaffirmed when the Board reviewed its actuarial funding policy in 2013.

As a result of the review in 2013, effective with the June 30, 2013 valuation, any change in the UAAL that arises due to plan amendments is amortized over separate 15-year decreasing amortization periods. Also, any change in the UAAL that arises due to retirement incentives is amortized over separate decreasing amortization periods of up to 5 years.

	SECTION 1: Valuation Summary for the San Diego County Employees Retirement Association
	The per pay period contribution rates calculated in this report may be adopted by the Board for the fiscal year that extends from July 1, 2016 through June 30, 2017.
	Significant Findings in This Valuation
	The following key findings were the result of this actuarial valuation:
Reference: Pg. 49	The results of this valuation reflect changes in the economic assumptions as recommended by Segal and adopted by the Board for the June 30, 2015 valuation. These assumption changes which included a reduction in the annual rates of (a) investment return from 7.75% to 7.50%, (b) price inflation from 3.25% to 3.00% and (c) wage inflation from 4.00% to 3.75% were documented in our letter dated August 26, 2015 to the Association and are also outlined in Section 4 Exhibit II of this report. These assumption changes resulted in an increase in the average employer rate of 2.33% of payroll and an increase in the average members rate of 0.42% of payroll.
	The next experience analysis for the full review of the economic and non-economic assumptions will be performed in early 2016, and the assumptions adopted by the Board at that time will be used in setting the contribution rates in the June 30, 2016 valuation. That analysis will include the investment earnings assumption, which includes a real return component based on the final asset allocation recently adopted by the Board.
Reference: Pg. 38	The results of this valuation reflect demographic data reported using the Association's CPAS pension administration system. As part of the transition to CPAS, the Association performed additional verifications to the data maintained in the prior pension administration system. As a result of those verifications, there were data enhancements made which include but are not limited to (a) reclassifying ex-spouses previously reported as retirees to beneficiaries, (b) reporting ex-spouse benefits separately from the benefits paid to the retired members, (c) removing retirees who should have been reported as deceased during 2013-2014 fiscal year, (d) revising the form of payment for certain retirees indicating what benefit is paid only for the lifetime of the retiree versus benefits with an automatic continuance to a spouse/domestic partner and (e) reclassifying some members among the General and Safety membership groups and/or tiers. See Exhibit C in Section 3 for further details.
Reference: Pg.22	> The valuation value of assets and the actuarial accrued liabilities are used to calculate the employer's contribution rates. The ratio of the valuation value of assets to actuarial accrued liabilities decreased from 80.9% to 80.5%. On a market value
Pg.43	of assets basis the funded ratio decreased from 83.3% to 78.6%. The Association's Unfunded Actuarial Accrued Liability (UAAL) increased from \$2.32 billion as of June 30, 2014 to \$2.54 billion as of June 30, 2015. The increases in the UAAL are due to changes in actuarial assumptions, greater number of retirements and other experience losses. The increases are offset somewhat by a higher than expected return on the valuation value of assets after "smoothing", lower than expected

	salary increases and lower than expected cost-of-living increases in the benefits for retirees and beneficiaries. A complete reconciliation of the Association's UAAL is provided in Section 3, Exhibit H.
Reference: Pg. 19	The average employer contribution rate calculated in this valuation has increased from 34.73% of payroll to 36.84% of payroll. The increases are also due to changes in actuarial assumptions, greater number of retirements and other experience losses. A complete reconciliation of the Association's average employer rate is provided in Section 2, Subsection D, Chart 15.
Reference: Pg. 16	Separate employer contribution rates are shown in Section 2, Subsection D, Chart 14 for non-Tier C members and Tier C members.
Reference: Pg. 20	> The average member rate calculated in this valuation increased from 11.35% of payroll to 11.73% of payroll primarily due to changes in actuarial assumptions and offset somewhat by a change in the membership demographics. A reconciliation of the Association's average member rate is provided in Section 2, Subsection D, Chart 16.
Reference: Pg. 6	As indicated in Section 2, Subsection B, Chart 7 of this report, the total unrecognized investment loss as of June 30, 2015 was \$249.4 million (versus an unrecognized gain of \$285.5 million in the June 30, 2014 valuation). This investment loss will be recognized in the determination of the actuarial value of assets for funding purposes over the next few years, to the extent it is not offset by recognition of investment gains derived from future experience. This implies that earning the assumed rate of investment return of 7.50% per year (net of expenses) on a market value basis will result in investment losses on the actuarial value of assets in the next few years. Therefore, if the actual net market return is equal to the assumed 7.50% rate and all other actuarial assumptions are met, the contribution requirements would increase in each of the next few years as those losses are recognized.
	The unrecognized investment losses represent 2.4% of the market value of assets as of June 30, 2015 (versus 2.8% unrecognized investment gains as of June 30, 2014). Unless offset by future investment gains or other favorable experience, the recognition of the \$249.4 million market losses is expected to have an impact on the Association's future funded ratio and the average employer contributions. This potential impact may be illustrated as follows:
	• If the deferred losses were recognized immediately in the valuation value of assets, the funded percentage would decrease from 80.5% to 78.6%.
	For comparison purposes, if all the deferred gains in the June 30, 2014 valuation had been recognized immediately in the June 30, 2014 valuation, the funded percentage would have increased from 80.9% to 83.3%.
	• If the deferred losses were recognized immediately in the valuation value of assets, the average employer contribution rate would increase from 36.84% of payroll to 38.37% of payroll.

For comparison purposes, if all the deferred gains in the June 30, 2014 valuation had been recognized immediately in the June 30, 2014 valuation, the average employer contribution rate would have decreased from 35.00% to 33.19%.

> The actuarial valuation report as of June 30, 2015 is based on financial and demographic information as of that date. Changes subsequent to that date are not reflected and will affect the actuarial cost of the plan.

Impact of Future Experience on Contribution Rates

Future contribution requirements may differ from those determined in the valuation because of:

- > differences between actual experience and anticipated experience;
- > changes in actuarial assumptions or methods;
- > changes in statutory provisions; and
- > differences between the contribution rates determined by the valuation and those adopted by the Board.

Summary of Key Valuation Results (Dollar amount) 30, 2015	June	e 30, 2014	
Employer Contribution Rates: ⁽¹⁾	Estimated			Estimated	
ι v	Total Rate	Annual Amount ⁽²⁾	Total Rate	Annual Amount ⁽²	
General, other than Tier C	35.07%	\$265,646	33.05%	\$250,322	
General Tier C (CalPEPRA)	28.96%	34.849	26.91%	32,382	
General Combined	34.24%	300,495	32.21%	282,704	
Safety, other than Tier C	45.72%	115,941	43.36%	109,965	
Safety Tier C (CalPEPRA)	38.02%	12,173	35.66%	11,418	
Safety Combined	44.85%	128,114	42.50%	121,383	
All Categories combined	36.84%	\$428,609	34.73%	\$404,087	
Average Member Contribution Rates: ⁽¹⁾		Estimated		Estimated	
	Total Rate	Annual Amount ⁽²⁾	Total Rate	Annual Amount ⁽²	
General Tier 1	10.70%	\$228	10.19%	\$217	
General Tier A	11.80%	77,877	11.45%	75,567	
General Tier B	8.98%	8,558	8.71%	8,301	
General Tier C	8.03%	9,663	7.74%	9,314	
Safety Tier A	14.41%	31,718	13.88%	30,551	
Safety Tier B	11.94%	4,000	11.46%	3,839	
Safety Tier C	13.81%	4,422	13.22%	4,233	
All Categories combined	11.73%	\$136,466	11.35%	\$132,022	
Funded Status:					
Actuarial accrued liability (AAL)	\$13	3,080,080	\$12	2,141,149	
Valuation value of assets (VVA)	10,535,337		9,824,431		
Market value of assets (MVA), net of non-valuation reserves	10,285,947		10,109,908		
Unfunded actuarial accrued liability on VVA basis	2,544,743		2,316,718		
Unfunded actuarial accrued liability on MVA basis	2,794,133		2,031,241		
Funded ratio on VVA basis (VVA/AAL)	80.5%		80.9%		
Funded ratio on MVA basis (MVA/AAL)	78.6%		83.3%		
Key Assumptions:					
Interest rate		7.50%		7.75%	
Inflation rate		3.00%		3.25%	
Across the board inflation	0.75%			0.75%	

SECTION 1: Valuation Summary for the San Diego County Employees Retirement Association

⁽¹⁾ Before reflection of any member rate that may be "picked-up" by the employer.
 ⁽²⁾ Based on June 30, 2015 projected annual compensation.

	June 30, 2015	June 30, 2014	Percentage Change
Active Members:			
Number of members	17,656	17,466	1.1%
Average age	44.7	44.8	N/A
Average service	11.2	11.2	N/A
Projected total compensation	\$1,163,362,748	\$1,122,864,480	3.6%
Average projected compensation	\$65,891	\$64,289	2.5%
Retired Member and Beneficiaries:			
Number of members:			
Service retired	13,447	13,182	2.0%
Disability retired	1,673	1,666	0.4%
Beneficiaries	2,066 ⁽¹⁾	1,525	35.5%
Total	17,186	16,373	5.0%
Average age	69.1	69.1	N/A
Average monthly benefit	\$2,905	\$2,859	1.6%
Deferred Terminated Members:			
Number of deferred terminated members ⁽²⁾	5,274	5,091	3.6%
Average age	46.2	46.4	N/A
Summary of Financial Data (dollar amounts in thousands):			
Market value of assets	\$10,336,900	\$10,185,438	1.5%
Return on market value of assets	2.25%	13.39%	N/A
Actuarial value of assets	\$10,586,290	\$9,899,962	6.9%
Return on actuarial value of assets	7.74%	8.10%	N/A
Valuation value of assets ⁽³⁾	\$10,535,337	\$9,824,431	7.2%
Return on valuation value of assets	7.91%	7.77%	N/A

(1) Benefits for 237 ex-spouses were previously reported on a combined basis with the benefits paid by the Association to the retired members in the old pension administration system. Benefits for these ex-spouses are now reported separately in the new administration system. In addition, 203 ex-spouses/alternate payees were reclassified from retirees to beneficiaries.

⁽²⁾ Includes members who choose to leave contributions on deposit with less than five years of service.

⁽³⁾ Excludes non-valuation reserves such as Supplemental Benefit Reserve, 401(h) Reserve and Contingency Reserve.

Important Information about Actuarial Valuations

In order to prepare an actuarial valuation, Segal relies on a number of input items. These include:

- > <u>Plan of benefits.</u> Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan description in this report to confirm that Segal has correctly interpreted the plan of benefits.
- Participant data. An actuarial valuation for a plan is based on data provided to the actuary by SDCERA. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- > <u>Assets.</u> This valuation is based on the market value of assets as of the valuation date, as provided by SDCERA.
- Actuarial assumptions. In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- > The valuation is prepared at the request of the SDCERA Board of Retirement. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- > An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

- > If the Association is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.

As Segal has no discretionary authority with respect to the management or assets of SDCERA, it is not a fiduciary in its capacity as actuaries and consultants with respect to SDCERA.



A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, deferred terminated members, retired members and beneficiaries. This section presents a summary of significant statistical data on these member groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, and C.

A historical perspective of how the member population has changed over the past ten valuations can be seen in this chart.

CHART 1

Member Population: 2006 – 2015

As of June 30	Active Members	Deferred Terminated Members	Retired Members and Beneficiaries	Ratio of Non-Actives to Actives
2006	17,451	4,687	12,049	0.96
2007	17,733	4,908	12,504	0.98
2008	18,041	5,147	12,991	1.01
2009	17,699	5,238	13,453	1.06
2010	16,981	5,254	13,922	1.13
2011	16,523	5,125	14,496	1.19
2012	16,457	5,039	15,166	1.23
2013	16,891	5,000	15,820	1.23
2014	17,466	5,091	16,373	1.23
2015	17,656	5,274	17,186	1.27

Active Members

Plan costs are affected by the age, years of service and compensation of active members. In this year's valuation, there were 17,656 active members with an average age of 44.7, average years of service of 11.2 years and average projected compensation of \$65,891. The 17,466 active members in the prior valuation had an average age of 44.8, average service of 11.2 years and average projected compensation of \$64,289.

Deferred Terminated Members

In this year's valuation, there were 5,274 members with a vested right to a deferred or immediate vested benefit, including those entitled to a return of their member contributions versus 5,091 in the prior valuation.

These graphs show a distribution of active members by age and by years of service.

CHART 2

Distribution of Active Members by Age as of June 30, 2015

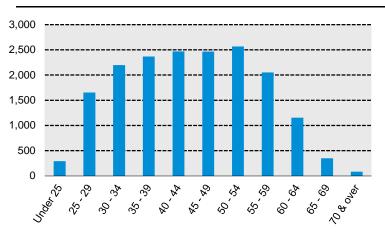
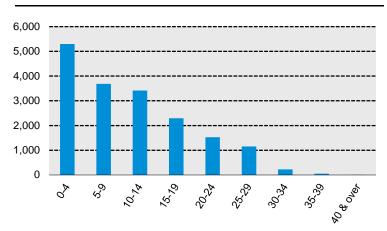


CHART 3

Distribution of Active Members by Years of Service as of June 30, 2015



Retired Members and Beneficiaries

As of June 30, 2015, 15,120 retired members and 2,066 beneficiaries were receiving total monthly benefits of \$49,924,059. For comparison, in the previous valuation, there were 14,848 retired members and 1,525 beneficiaries receiving monthly benefits of \$46,814,071.

These graphs show a distribution of the current retired members based on their monthly amount and age, by type of pension.

CHART 4

Distribution of Retired Members by Type and by Monthly Amount as of June 30, 2015

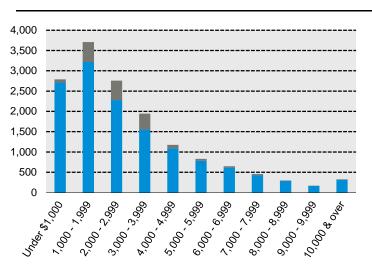
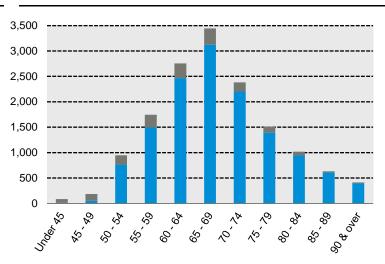


CHART 5

Distribution of Retired Members by Type and by Age as of June 30, 2015





Service

B. FINANCIAL INFORMATION

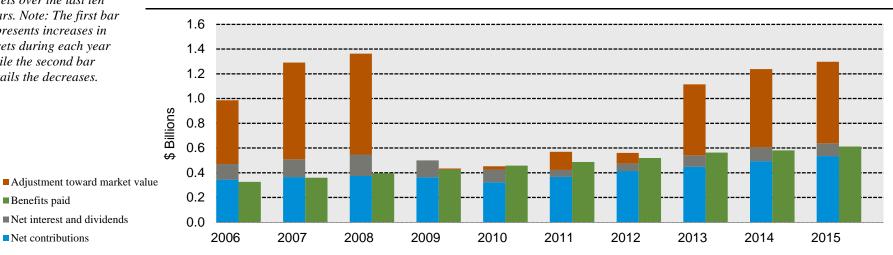
Retirement plan funding anticipates that, over the long term, both contributions and net investment earnings (less investment fees and administrative expenses) will be needed to cover benefit payments.

Retirement plan assets change as a result of the net impact of these income and expense components. The adjustment toward market value shown in the chart is the "non-cash" earnings on investments implicitly included in the actuarial value of assets. Additional financial information, including a summary of these transactions for the valuation year, is presented in Section 3, Exhibits D, E and F.

CHART 6

The chart depicts the components of changes in the actuarial value of assets over the last ten years. Note: The first bar represents increases in assets during each year while the second bar details the decreases.

Comparison of Increases and Decreases in the Actuarial Value of Assets for Years Ended June 30, 2006 - 2015



Benefits paid

Net contributions

Actuarial and Valuation Value of Assets

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Board of Retirement has approved an asset valuation method that gradually adjusts to market value. Under this method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value.

The determination of the actuarial and valuation value of assets is provided on the following page.

The chart shows the determination of the actuarial and valuation value of assets as of the valuation date.

CHART 7

	Six Month From	Period To	Total Actual Market Return (net)	Expected Market Return (net)	Investment Gain (Loss)	Deferred Factor	Deferred Return
6	5/2012 Combined n	et deferred loss*			(\$170,571,295)	0.3333	(\$56,857,098
	7/2012	12/2012	\$595,958,895	\$329,280,436	266,678,459	0.4	106,671,38
	1/2013	6/2013	62,787,174	350,146,351	(287,359,177)	0.5	(143,679,589
	7/2013	12/2013	529,642,752	350,592,044	179,050,708	0.6	107,430,42
	1/2014	6/2014	678,501,180	369,454,642	309,046,538	0.7	216,332,57
	7/2014	12/2014	119,504,895	394,295,090	(274,790,196)	0.8	(219,832,156
	1/2015	6/2015	109,066,220	397,349,983	(288,283,763)	0.9	(259,455,387
. Тс	otal Deferred Return	1					(\$249,389,844
Ne	et Market Value of	Assets					\$10,336,899,78
a.	Actuarial Value	of Assets (Item 2 – I	(tem 1)				\$10,586,289,62
b.	Ratio of Actuaria	al Value of Assets to	Net Market Value of Ass	ets (Item 3a / Item 2)			102.49
. No	on-valuation reserve	es					
a.	Supplemental Be	enefit Reserve					\$18,147,49
b.	401(h) Reserve						6,570,15
c.	Disability Suppl	emental Benefit Res	erve				4,412,72
d.	Contingency Rea	serve					21,822,52
e.	Undistributed Re	eserve					
f.	Subtotal						\$50,952,90
. Va	aluation Value of A	ssets (Item 3a – Iten	n 4f)				\$10,535,336,72
. Aı	mount of Deferred l	Returns to be recogn	ized in the following valua	ations:			
a.	June 30, 2016						(\$57,036,218
b.	June 30, 2017						(38,083,852
c.	June 30, 2018						(43,731,260
d.	June 30, 2019						(81,710,138
e.	June 30, 2020						(28,828,375
	Subtotal						(\$249,389,844

CHART 8

Allocation of Valuation Value of Assets as of June 30, 2015

The allocation of the valuation reserves between General and Safety is provided below:

		General	Safety	Total
1.	Beginning of Year Asset Allocation	\$7,027,780,202	\$2,796,651,093	\$9,824,431,295
2.	Percentage of Total Employee Contributions Excluding Pickups	67.65%	32.35%	100.00%
3.	Employee Contributions *	\$66,694,116	\$31,895,998	\$98,590,114
4.	Employer Contributions Including Pickups *	\$292,218,654	\$122,552,602	\$414,771,256
5.	Annual Allowances for Retired Members (From Last Year's Valuation Report)	\$418,805,880	\$142,932,468	\$561,738,348
6.1.	Benefit Payments Allocated in Proportion to (5)	\$428,258,483	\$146,158,507	\$574,416,990
6.2.	Refunds, Allocated in Proportion to (2)	\$1,742,295	\$833,159	\$2,575,454
7.	Subtotal = (1) + (3) + (4) - (6.1) - (6.2)	\$6,956,692,194	\$2,804,108,027	\$9,760,800,221
8.	Total Valuation Value of Assets			\$10,535,336,727
9.	Residual to Allocate = $(8) - (7)$			\$774,536,506
10.	Allocate Residual in Proportion to (7)	\$552,025,648	\$222,510,858	\$774,536,506
11.	End of Year Asset Allocation $= (7) + (10)$	\$7,508,717,842	\$3,026,618,885	\$10,535,336,727

* Breakdown between General and Safety was provided by SDCERA.

Note: Results may not add due to rounding.

The market value, actuarial value, and valuation value of assets are representations of SDCERA's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets, but with less volatility. The valuation value of assets is the actuarial value, excluding any non-valuation reserves. The valuation value is significant because SDCERA's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

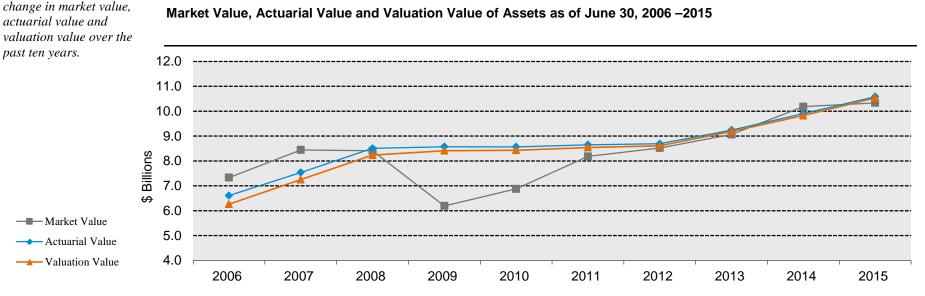


CHART 9

This chart shows the

C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions. For contribution requirements to remain stable, assumptions should approximate experience. If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total experience gain was \$40.0 million, a gain of \$15.6 million from investments and a gain of \$24.4 million from all other sources. The gain from all other sources was 0.2% of the actuarial accrued liability. A discussion of the major components of the actuarial experience is on the following pages.

This chart provides a summary of the actuarial experience during the past year.

CHART 10

Actuarial Experience for Year Ended June 30, 2015

1.	Net gain from investments on valuation value of assets ⁽¹⁾	\$15,609,000
2.	Net gain from other experience ⁽²⁾	24,392,000
3.	Net experience gain: $(1) + (2)$	\$40,001,000

⁽¹⁾ Details in Chart 11

⁽²⁾ See Section 3, Exhibit H. Does not include the effect of plan or assumption changes, if any.

Investment Rate of Return

A major component of projected asset growth is the assumed rate of return. The assumed return should represent the expected long-term rate of return, based on SDCERA's investment policy. For valuation purposes, the assumed rate of return on the valuation value of assets used was 7.75% for the 2104/2015 plan year (based on the June 30, 2014 actuarial valuation). The actual rate of return on a valuation basis for the 2014/2015 plan year was 7.91%.

Since the actual return for the year was greater than the assumed return, SDCERA experienced an actuarial gain on the valuation value of assets during the year ended June 30, 2015 with regard to its investments.

CHART 11

Investment Experience for Year Ended June 30, 2015 – Valuation, Actuarial and Market Value of Assets

This chart shows the gain due to investment experience.

	Valuation Value	Actuarial Value	Market Value
1. Actual return	\$774,537,000	\$763,461,000	\$228,595,000
2. Average value of assets	9,792,616,000	9,861,395,000	10,146,871,000
3. Actual rate of return: $(1) \div (2)$	7.91%	7.74%	2.25%
4. Assumed rate of return	7.75%	7.75%	7.75%
5. Expected return: (2) x (4)	758,928,000	764,258,000	786,383,000
6. Actuarial gain/(loss): $(1) - (5)$	<u>\$15,609,000</u>	<u>(\$797,000)</u>	<u>(\$557,788,000)</u>

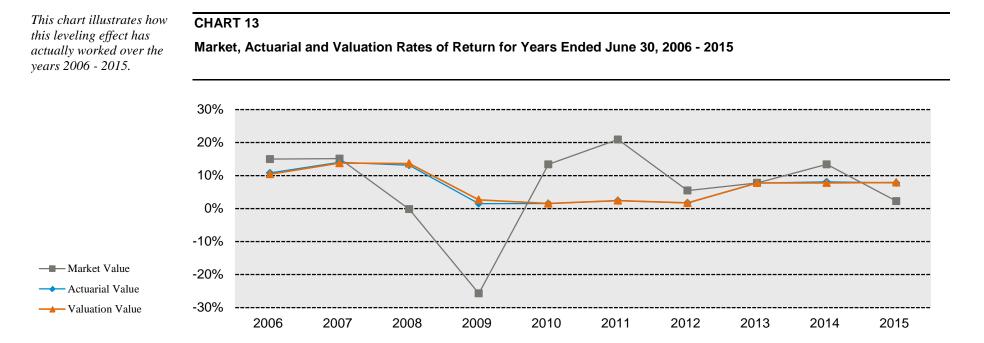
Because actuarial planning is long term, it is useful to see how the assumed investment rate of return has followed actual experience over time. The chart below shows the rate of return on a valuation, actuarial, and market basis for the last ten years.

CHART 12

Investment Return – Valuation Value, Actuarial Value and Market Value: 2006 – 2015 (Dollar amount in thousands)

						Market Value nvestment Return	
Year Ended June 30	Amount	Percent	Amount	Percent	Amount	Percen	
2006	\$588,807	10.43%	\$642,588	10.79%	\$954,171	14.98%	
2007	866,669	13.78%	926,575	14.02%	1,108,996	15.12%	
2008	989,464	13.65%	988,906	13.14%	-15,355	-0.18%	
2009	217,866	2.65%	128,063	1.51%	-2,153,974	-25.71%	
2010	127,686	1.53%	129,275	1.52%	820,376	13.39%	
2011	202,986	2.42%	203,518	2.39%	1,425,637	20.91%	
2012	146,477	1.72%	146,380	1.70%	443,667	5.46%	
2013	665,804	7.77%	666,122	7.72%	658,746	7.78%	
2014	711,249	7.77%	744,721	8.10%	1,208,144	13.39%	
2015	774,537	7.91%	763,461	7.74%	228,595	2.25%	
Average Last 10 Years		6.87%		6.76%		5.90%	
Average Last 5 Years		5.48%		5.49%		9.77%	

Subsection B described the actuarial asset valuation method that gradually takes into account fluctuations in the market value rate of return. The effect of this is to stabilize the actuarial rate of return, which contributes to leveling pension plan costs.



Other Experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation.

These include:

- > the extent of turnover among the participants,
- > retirement experience (earlier or later than expected),
- > mortality (more or fewer deaths than expected),

- > the number of disability retirements,
- > salary increases different than assumed, and
- data adjustments for retiree benefits and active pay for performance.

The net gain from this other experience for the year ended June 30, 2015 amounted to \$24.4 million, which was 0.2% of the actuarial accrued liability. See Exhibit H for a detailed development of the Unfunded Actuarial Accrued Liability.

D. EMPLOYER AND MEMBER CONTRIBUTIONS

Employer contributions consist of two components:

Normal Cost	The annual contribution rate that, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement-related benefits. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution rate is expressed as a level percentage of the member's compensation.
Contribution to the Unfunded Actuarial Accrued Liability (UAAL)	The annual contribution rate that, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earning rate. The contribution (or rate credit in the case of a negative unfunded actuarial accrued liability) is calculated to remain as a level percentage of future active member payroll (including payroll for new members as they enter the Association) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments (credits) are scheduled to increase at the annual rate of 3.75%. (i.e., 3.00% inflation plus 0.75% across-the-board salary increase).
	With the June 30, 2004 valuation, the Association's UAAL has been amortized over 20-year fixed (i.e. decreasing) layered amortization periods. Effective with the June 30, 2013 valuation, any new UAAL resulting from plan amendments is amortized over separate decreasing 15-year periods; early retirement incentive programs (ERIPs) are amortized over separate decreasing periods of up to 5 years; assumption and method changes are amortized over separate decreasing 20-year periods; and experience gains or losses are amortized over separate decreasing 20-year periods.
	The recommended employer contributions are provided on Charts 14a and 14b.
	Employer Normal Cost and UAAL contribution rates are calculated assuming payments made at the end of every pay period.

Member Contributions:

Non- Tier C Members	Articles 6 and 6.8 of the 1937 Act define the methodology to be used in the calculation of member basic contribution rates for non-Tier C General members and Safety members, respectively. The basic contribution rate is determined so that the accumulation of a member's basic contributions made in a given year until a certain age will be sufficient to fund an annuity at that age that is equal to 1/100 of Final Average Compensation for General Tier 1, General Tier A and Safety Tier A. A Three-Year Final Average Compensation is used for General Tier 1, General Tier B and Safety Tier B. That age is 60 for General Tier 1 and Tier B members, 55 for General Tier A members and 50 for Safety Tier A and Tier B members. It is assumed that contributions, members pay one-half of the total normal cost necessary to fund their cost-of-living benefits. Accumulation includes semi-annual crediting of interest at half of the assumed investment earning rate. The member contribution rates are provided in Appendix A. Please note that the member rates provided in the report are the full rate before reflecting any employer pickup.
Tier C Members	Pursuant to Section 7522.30(a) of the Government Code, Tier C members are required to contribute at least 50% of the Normal Cost rate. We further understand that different rules may have to be applied for collectively bargained employees, non-represented, managerial or other supervisory employees (reference Section 7522.30(e)). In preparing the Normal Cost rates in this report, we have assumed that exactly 50% of the Normal Cost would be paid by the Tier C members and we have not taken into account the requirements of Section 7522.30(e).
	The member contribution rates are provided in Appendix A.

CHART 14a

Recommended Employer Contribution Rates (Dollar Amounts in Thousands)

	June 30, 2015 A	ctuarial Valuation	June 30, 2014	Actuarial Valuation
		Estimated Annual		Estimated Annual
General Members other than Tier C	Rate	Amount*	Rate	Amount*
Normal Cost **	14.14%	\$107,121	13.88%	\$105,128
UAAL **	<u>20.93%</u>	158,525	<u>19.17%</u>	145,194
Total Contribution	35.07%	\$265,646	33.05%	\$250,322
General Tier C Members (CalPEPRA)				
Normal Cost **	8.03%	\$9,663	7.74%	\$9,314
UAAL **	<u>20.93%</u>	25,186	<u>19.17%</u>	23,068
Total Contribution	28.96%	\$34,849	26.91%	\$32,382
Total General Members				
Normal Cost **	13.31%	\$116,784	13.04%	\$114,442
UAAL **	<u>20.93%</u>	183,711	<u>19.17%</u>	168,262
Total Contribution	34.24%	\$300,495	32.21%	\$282,704

* Amounts are in thousands and are based on June 30, 2015 projected annual payroll (also in thousands):

General Tier 1	\$2,129
General Tier A	659,973
General Tier B	95,302
General Tier C	120,335
General Subtotal	\$877,739

** A breakdown of the employer's total Normal Cost and UAAL to fund for each type of benefit is provided in Chart 14b.

CHART 14a (continued)

Recommended Employer Contribution Rates (Dollar Amounts in Thousands)

	June 30, 2015 A	ctuarial Valuation	June 30, 2014	Actuarial Valuation	
		Estimated Annual		Estimated Annual	
Safety Members other than Tier C	Rate	Amount*	Rate	Amount*	
Normal Cost **	21.51%	\$54,542	20.92%	\$53,055	
UAAL **	24.21%	61,399	22.44%	<u>56,910</u>	
Total Contribution	45.72%	\$115,941	43.36%	\$109,965	
Safety Tier C Members (CalPEPRA)					
Normal Cost **	13.81%	\$4,422	13.22%	\$4,233	
UAAL **	24.21%	7,751	22.44%	7,185	
Total Contribution	38.02%	\$12,173	35.66%	\$11,418	
Total Safety Members					
Normal Cost **	20.64%	\$58,964	20.06%	\$57,288	
UAAL **	24.21%	69,150	22.44%	64,095	
Total Contribution	44.85%	\$128,114	42.50%	\$121,383	
All Categories Combined					
Normal Cost **	15.11%	\$175,748	14.76%	\$171,730	
UAAL **	21.73%	252,861	19.97%	232,357	
Total Contribution	36.84%	\$428,609	34.73%	\$404,087	
* Amounts are in thousands and are based on Ju	ne 30, 2015 projected an	nnual payroll (also in thou	sands):		
Safety Tier A	\$220,110				
Safety Tier B	33,497				
Safety Tier C	<u>32,017</u>				

	\$1,152,252
General & Safety Subtotal	\$1,163,363

Safety Subtotal

** A breakdown of the employer's total Normal Cost and UAAL to fund for each type of benefit is provided in Chart 14b.

\$285,624

CHART 14b

Breakdown of the Employer's Normal Cost and UAAL Contributions to Fund for Each Type of Benefit (% of Payroll)

	Elements of Normal Cost			
Normal Cost	General	Safety	Overall	
Service Retirement*	8.47%	9.91%	8.82%	
Vested Termination and Refunds	2.77%	2.69%	2.75%	
Non Service and Service Connected Disability	1.67%	7.19%	3.03%	
Non Service and Service Connected Death	0.40%	0.85%	0.51%	
Total Employer Normal Cost	13.31%	20.64%	15.11%	
Total Employee Normal Cost*	10.97%	14.05%	11.73%	
Employer Plus Employee Normal Cost	24.28%	34.69%	26.84%	

* Assuming that employee normal cost is only used to fund service retirement benefit.

	Ele	ements of UAAL ³	**
Unfunded Actuarial Accrued Liability**	General	Safety	Overall
Service Retirement	20.03%	21.34%	20.36%
Vested Termination and Refunds	0.08%	0.10%	0.08%
Non Service and Service Connected Disability	0.60%	2.49%	1.06%
Non Service and Service Connected Death	0.22%	0.28%	0.23%
Total Employer Unfunded Actuarial Accrued Liability	20.93%	24.21%	21.73%

** Assuming that the liability for all inactive members is fully funded.

The contribution rates as of June 30, 2015 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation. They include all changes affecting future costs, adopted benefit changes, actuarial gains and losses and changes in the actuarial assumptions.

Reconciliation of Recommended Contribution

The chart below details the changes in the recommended employer contribution from the prior valuation to the current year's valuation.

CHART 15

contribution from the prior valuation to the amount determined in this valuation.

The chart reconciles the

Reconciliation of Recommended Employer Contribution from June 30, 2014 to June 30, 2015 (Dollar Amounts in Thousands)

	Contribution Rate	Estimated Annua Dollar Cost ⁽¹⁾
Recommended Average Employer Contribution Rate as of June 30, 2014, Before Reflecting Any Employer Pickups	34.73%	\$404,087
Effect of investment gain ⁽²⁾	-0.10%	-1,163
Effect of difference between actual and expected contributions ⁽³⁾	0.05%	582
Effect of difference in actual versus expected total and individual salary increases	-0.30%	-3,475
Effect of difference in actual versus expected cost-of-living benefit increases for retirees and beneficiaries	-0.28%	-3,257
Effect of higher number of retirement than expected	0.29%	3,374
Effect of other actuarial gains or losses ⁽⁴⁾	0.12%	1,355
Effect of actuarial assumption changes	2.33%	27,106
Fotal Change	<u>2.11%</u>	<u>\$24,522</u>
Recommended Average Employer Contribution Rate as of June 30, 2015, Before Reflecting Any Employer Pickups	36.84%	\$428,609

⁽¹⁾ Based on June 30, 2015 projected annual payroll of \$1,163,362,748.

⁽²⁾ Return on valuation value of assets was 7.91% and greater than the 7.75% assumed in the June 30, 2014 valuation.

(3) Contribution loss offset somewhat by the contribution gain from one-year delay in implementing lower contribution rates recommended in June 30, 2014 valuation.

⁽⁴⁾ Includes cost impact from data clean up as part of the transition to the CPAS pension administration system.

The member contribution rates as of June 30, 2015 are based on all of the data described in the previous sections, the actuarial assumptions described in Section 4, and the Plan provisions adopted at the time of preparation of the Actuarial Valuation.

Reconciliation of Recommended Contribution Rate

The chart below details the changes in the average member contribution rate from the prior valuation to the current year's valuation.

The chart reconciles the member contribution from the prior valuation to the amount determined in this valuation.

CHART 16

Reconciliation of Recommended Member Contribution from June 30, 2014 to June 30, 2015 (Dollar Amounts in Thousands)

	Contribution Rate	Estimated Annual Dollar Cost ⁽¹⁾
Recommended Average Member Contribution Rate as of June 30, 2014, Before Reflecting Any Employer Pickups	11.35%	\$132,022
Effect of change in demographics of members	-0.04%	-442
Effect of actuarial assumption changes	0.42%	<u>4,886</u>
Total Change	0.38%	<u>\$4,444</u>
Recommended Average Member Contribution Rate as of June 30, 2015, Before Reflecting Any Employer Pickups	11.73%	\$136,466

⁽¹⁾ Based on June 30, 2015 projected annual payroll of \$1,163,362,748.

E. FUNDED RATIO

A commonly reported piece of information regarding the Plan's financial status is the funded ratio. These ratios compare the actuarial value of assets and market value of assets to the actuarial accrued liabilities of the Plan as calculated. High ratios indicate a well-funded plan with assets sufficient to cover the plan's actuarial accrued liabilities. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other factors. The chart below depicts a history of the funded ratio for this plan. Chart 18 on the next page shows the Plan's schedule of funding progress for the last ten years.

The funded status measures shown in this valuation are appropriate for assessing the need for or amount of future contributions. However, they are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations. As the chart below shows, the measures are different depending on whether the valuation or market value of assets is used.

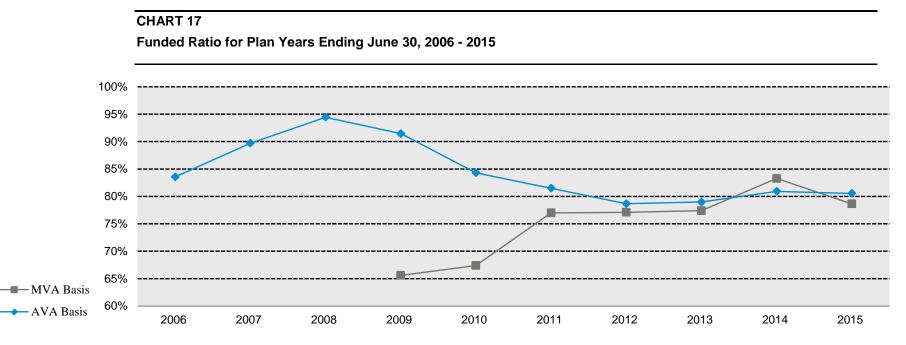


CHART 18

Schedule of Funding Progress

Actuarial Valuation Date	Valuation Value of Assets ⁽¹⁾ (a)	Actuarial Accrued Liability (AAL) ⁽²⁾ (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b) - (a)] / (c)
06/30/2006	\$6,263,019,000	\$7,495,294,000	\$1,232,275,000	83.56%	\$979,368,000	125.82%
06/30/2007	7,250,404,000	8,082,517,000	832,113,000	89.70%	1,062,396,000	78.32%
06/30/2008	8,236,926,000	8,722,294,000	485,368,000	94.44%	1,135,432,000	42.75%
06/30/2009	8,413,065,000	9,198,636,000	785,571,000	91.46%	1,129,171,000	69.57%
06/30/2010	8,433,310,000	9,999,161,000	1,565,851,000	84.34%	1,095,582,000	142.92%
06/30/2011	8,542,291,000	10,482,657,000	1,940,366,000	81.49%	1,090,413,000	177.95%
06/30/2012	8,607,483,000	10,943,172,000	2,335,689,000	78.66%	1,052,366,000	221.95%
06/30/2013	9,186,032,000	11,631,237,000	2,445,205,000	78.98%	1,067,792,000	229.00%
06/30/2014	9,824,431,000	12,141,149,000	2,316,718,000	80.92%	1,122,864,000	206.32%
06/30/2015	10,535,337,000	13,080,080,000	2,544,743,000	80.54%	1,163,363,000	218.74%

⁽¹⁾ Excludes assets for Supplemental Benefit and Health Benefit Reserves. Excludes assets for STAR COLA on June 30, 2006.

⁽²⁾ Excludes liabilities held for Supplemental Benefit and Health Benefit Reserves. Excludes liabilities for STAR COLA on June 30, 2006.

F. VOLATILITY RATIOS

Retirement plans are subject to volatility in the level of required contributions. This volatility tends to increase as retirement plans become more mature.

The Asset Volatility Ratio (AVR), which is equal to the market value of assets divided by total payroll, provides an indication of the potential contribution volatility for any given level of investment volatility. A higher AVR indicates that the plan is subject to a greater level of contribution volatility. This is a current measure since it is based on the current level of assets.

For SDCERA, the current AVR is about 8.9. This means that a 1% asset gain/(loss) (relative to the assumed investment return) translates to about 8.9% of one-year's payroll. Since SDCERA amortizes actuarial gains and losses over a period of 20 years, there would be a 0.6% of payroll decrease/(increase) in the required contribution for each 1% asset gain/(loss).

The Liability Volatility Ratio (LVR), which is equal to the Actuarial Accrued Liability divided by payroll, provides an indication of the longer-term potential for contribution volatility for any given level of investment volatility. This is because, over an extended period of time, the plan's assets should track the plan's liabilities. For example, if a plan is 50% funded on a market value basis, the liability volatility ratio would be double the asset volatility ratio and the plan sponsor should expect contribution volatility to increase over time as the plan becomes better funded.

The LVR also indicates how volatile contributions will be in response to changes in the Actuarial Accrued Liability due to actual experience or to changes in actuarial assumptions.

For SDCERA, the current LVR is about 11.2. This is about 26% higher than the AVR. Therefore, we would expect that contribution volatility will increase over the long-term.

This chart shows how the asset and liability volatility ratios have varied over time.

CHART 19

Volatility Ratios for Years Ended June 30, 2008 – 2015

	Asset Volatility Ratios			Liability Volatility Ratios		
Year Ended June 30	General	Safety	Total	General	Safety	Total
2008	6.9	9.2	7.4	7.1	9.6	7.7
2009	5.1	6.8	5.5	7.6	10.2	8.1
2010	5.8	7.8	6.3	8.4	11.6	9.1
2011	7.0	9.3	7.5	8.9	12.1	9.6
2012	7.5	10.0	8.1	9.7	12.9	10.4
2013	8.0	10.2	8.5	10.3	12.9	10.9
2014	8.6	10.7	9.1	10.2	12.6	10.8
2015	8.4	10.4	8.9	10.7	13.0	11.2

SECTION 3: Supplemental Information for the San Diego County Employees Retirement Association

EXHIBIT A				
Table of Plan Coverage				
i. General Tier 1				
	Year End	Year Ended June 30		
Category	2015	2014	Change Fro Prior Year	
Active members in valuation				
Number	34	29	17.2%	
Average age	52.4	52.3	N/A	
Average service	13.1	13.7	N/A	
Projected total compensation	\$2,128,506	\$1,810,672	17.6%	
Projected average compensation	\$62,603	\$62,437	0.3%	
Account balances	\$1,092,201	\$968,297	12.8%	
Total active vested members	32	29	10.3%	
Deferred terminated members	1,480	1,573	-5.9%	
Retired members				
Number in pay status	3,914	4,062	-3.6%	
Average age	74.5	74.5	N/A	
Average monthly benefit	\$1,887	\$1,918	-1.6%	
Disabled members				
Number in pay status	190	202	-5.9%	
Average age	74.6	74.4	N/A	
Average monthly benefit	\$2,222	\$2,175	2.2%	
Beneficiaries				
Number in pay status	1035	908	14.0%	
Average age	80.7	81.4	N/A	
Average monthly benefit	\$1,686	\$1,644	2.6%	

EXHIBIT A				
Table of Plan Coverage				
ii. General Tier A				
	Year End	Year Ended June 30		
Category	2015	2014	Change Fron Prior Year	
Active members in valuation				
Number	9,683	10,330	-6.3%	
Average age	49.4	48.9	N/A	
Average service	15.1	14.4	N/A	
Projected total compensation	\$659,972,929	\$681,981,670	-3.2%	
Projected average compensation	\$68,158	\$66,020	3.2%	
Account balances	\$462,884,341	\$416,475,372	11.1%	
Total active vested members	9,621	10,192	-5.6%	
Deferred terminated members	2,458	2,473	-0.6%	
Retired members ⁽¹⁾				
Number in pay status	7,807	7,437	5.0%	
Average age	67.6	67.3	N/A	
Average monthly benefit	\$3,201	\$3,098	3.3%	
Disabled members ⁽¹⁾				
Number in pay status	766	755	1.5%	
Average age	63.1	62.6	N/A	
Average monthly benefit	\$2,072	\$2,008	3.2%	
Beneficiaries ⁽¹⁾				
Number in pay status	699	438	59.6%	
Average age	67.8	69.4	N/A	
Average monthly benefit	\$1,414	\$1,379	2.5%	

(1) This includes members from General Tier 2 and General Tier A.

EXHIBIT A			
Table of Plan Coverage			
iii. General Tier B			
	Year End	led June 30	
Category	2015	2014	Change From Prior Year
Active members in valuation			
Number	1,678	1,766	-5.0%
Average age	39.5	38.2	N/A
Average service	3.4	2.5	N/A
Projected total compensation	\$95,302,012	\$93,241,622	2.2%
Projected average compensation	\$56,795	\$52,798	7.6%
Account balances	\$20,757,513	\$14,820,417	40.1%
Total active vested members	105	14	650.0%
Deferred terminated members	370	277	33.6%
Retired members			
Number in pay status	11	9	22.2%
Average age	61.4	60.7	N/A
Average monthly benefit	\$1,919	\$1,956	-1.9%
Disabled members			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Beneficiaries			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A

iv. General Tier C			
	Year End	ed June 30	
Category	2015	2014	Change From Prior Year
Active members in valuation			
Number	2,635	1,770	48.9%
Average age	36.1	35.0	N/A
Average service	1.2	0.7	N/A
Projected total pensionable compensation	\$120,335,396	\$74,913,850	60.6%
Projected average pensionable compensation	\$45,668	\$42,324	7.9%
Account balances	\$9,941,348	\$3,474,134	186.2%
Total active vested members	2	2	0.0%
Deferred terminated members	352	159	121.4%
Retired members			
Number in pay status	1	0	N/A
Average age	62.6	N/A	N/A
Average monthly benefit	\$270	N/A	N/A
Disabled members			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Beneficiaries			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A

EXHIBIT A

EXHIBIT A			
Table of Plan Coverage			
v. Safety Tier A			
	Year End	ded June 30	
Category	2015	2014	Change From Prior Year
Active members in valuation			
Number	2,570	2,710	-5.2%
Average age	44.4	43.8	N/A
Average service	15.5	14.9	N/A
Projected total compensation	\$220,109,501	\$222,650,495	-1.1%
Projected average compensation	\$85,646	\$82,159	4.2%
Account balances	\$164,322,969	\$139,328,119	17.9%
Total active vested members	2,557	2,700	-5.3%
Deferred terminated members	531	556	-4.5%
Retired members ⁽¹⁾			
Number in pay status	1,714	1,672	2.5%
Average age	63.7	63.4	N/A
Average monthly benefit	\$5,339	\$5,150	3.7%
Disabled members ⁽¹⁾			
Number in pay status	716	709	1.0%
Average age	60.5	59.9	N/A
Average monthly benefit	\$3,885	\$3,820	1.7%
Beneficiaries ⁽¹⁾			
Number in pay status	332	179	85.5%
Average age	65.5	71.3	N/A
Average monthly benefit	\$2,558	\$3,283	-22.1%

⁽¹⁾ This includes members from Safety Tier 1, Safety Tier 2 and Safety Tier A.

SECTION 3:	Supplemental Information for the	San Diego County Employees Retirement Association
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EXHIBIT A			
Table of Plan Coverage			
vi. Safety Tier B			
	Year End	led June 30	
Category	2015	2014	Change Fron Prior Year
Active members in valuation			
Number	495	489	1.2%
Average age	33.8	32.7	N/A
Average service	3.6	2.8	N/A
Projected total compensation	\$33,497,259	\$29,781,431	12.5%
Projected average compensation	\$67,671	\$60,903	11.1%
Account balances	\$7,233,839	\$4,166,512	73.6%
Total active vested members	52	20	160.0%
Deferred terminated members	56	46	21.7%
Retired members			
Number in pay status	0	2	-100.0%
Average age	N/A	53.9	N/A
Average monthly benefit	N/A	\$2,101	N/A
Disabled members			
Number in pay status	1	0	N/A
Average age	29.4	N/A	N/A
Average monthly benefit	\$2,568	N/A	N/A
Beneficiaries			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A

EXHIBIT A			
Table of Plan Coverage			
ii. Safety Tier C			
	Year End	led June 30	
Category	2015	2014	Change From Prior Year
Active members in valuation			
Number	561	372	50.8%
Average age	31.2	30.3	N/A
Average service	1.4	0.8	N/A
Projected total pensionable compensation	\$32,017,145	\$18,484,741	73.2%
Projected average pensionable compensation	\$57,072	\$49,690	14.9%
Account balances	\$4,805,506	\$1,561,556	207.7%
Total active vested members	0	0	N/A
Deferred terminated members	27	7	285.7%
Retired members			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Disabled members			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A
Beneficiaries			
Number in pay status	0	0	N/A
Average age	N/A	N/A	N/A
Average monthly benefit	N/A	N/A	N/A

Members in Active Service and Projected Average Compensation as of June 30, 2015 By Age and Years of Service

i. General Tier 1

Years of Service										
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25										
25 - 29										
30 - 34	1			1						
	\$50,033			\$50,033						
35 - 39	1			1						
	84,639			84,639						
40 - 44	9	1		5	3					
	77,006	\$25,231		74,667	\$98,163					
45 - 49	4	1	1	1	1					
	74,502	69,857	\$31,818	150,999	45,334					
50 - 54	5		1	3		1				
	59,366		48,273	66,174		\$50,033				
55 - 59	2		1	1						
	49,561		49,089	50,033						
60 - 64	11			7	4					
	53,639			58,235	45,597					
65 - 69	1		1							
	16,788		16,788							
70 & over										
Total	34	2	4	19	8	1				
	\$62,603	\$47,544	\$36,492	\$69,221	\$65,276	\$50,033				

Members in Active Service and Projected Average Compensation as of June 30, 2015 By Age and Years of Service

ii. General Tier A

					Years of	Service				
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25										
25 - 29	73	1	70	2						
	\$48,257	\$38,748	\$47,970	\$63,088						
30 - 34	646	11	503	132						-
	61,138	52,837	61,456	60,619						
35 - 39	1,224	11	581	548	82	2				-
	68,484	56,476	68,907	67,981	\$70,246	\$77,463				-
40 - 44	1,378	14	426	574	310	53	1			-
	69,635	56,512	66,309	69,836	74,033	71,972	\$67,862			-
45 - 49	1,535	7	356	426	352	275	115	4		-
	70,404	39,324	63,887	69,840	76,991	73,325	67,487	\$68,049		-
50 - 54	1,838	7	321	433	335	345	331	56	10	-
	69,513	64,576	63,070	62,041	69,165	74,878	80,170	70,242	\$73,056	-
55 - 59	1,636	3	278	387	304	264	297	84	19	-
	68,683	25,586	59,499	61,845	66,825	72,526	81,579	83,019	60,511	-
60 - 64	961	8	184	250	208	128	131	39	10	2
	66,211	42,655	60,300	64,198	67,970	64,069	74,859	82,292	62,577	\$54,102
65 - 69	311	1	79	81	56	42	38	8	6	-
	64,144	31,324	62,648	60,734	60,592	63,583	82,941	59,022	60,188	-
70 & over	81	1	10	24	13	15	8	3	6	1
	66,619	20,725	66,295	55,001	57,613	68,717	87,370	114,183	82,848	74,127
Total	9,683	64	2,808	2,857	1,660	1,124	921	194	51	4
	\$68,158	\$50,464	\$63,672	\$65,911	\$70,829	\$72,078	\$78,449	\$78,368	\$65,966	\$59,108

Members in Active Service and Projected Average Compensation as of June 30, 2015 By Age and Years of Service

iii. General Tier B

Years of Service										
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	10	10								
	\$40,509	\$40,509								
25 - 29	307	297	10							
	50,229	49,772	\$63,809							
30 - 34	400	376	24							
	57,770	56,952	70,589							
35 - 39	306	289	17							
	57,578	57,484	59,171							
40 - 44	196	181	14		1					
	58,258	57,657	67,483		\$37,932					
45 - 49	149	138	10	1						
	61,457	60,574	75,036	\$47,544						
50 - 54	131	123	7	1						
	58,790	58,027	49,067	220,728						
55 - 59	116	107	9							
	57,464	56,645	67,204							
60 - 64	47	40	7							
	58,590	56,704	69,367							
65 - 69	13	12	1							
	72,402	74,221	50,569							
70 & over	3	3								
	37,167	37,167								
Total	1,678	1,576	99	2	1					
	\$56,795	\$56,141	\$65,835	\$134,136	\$37,932					

Members in Active Service and Projected Average Compensation as of June 30, 2015 By Age and Years of Service

iii. General Tier C

Years of Service										
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & over
Under 25	163	163								
	\$35,887	\$35,887								
25 - 29	779	779								
	43,948	43,948								
30 - 34	583	583								
	46,407	46,407								
35 - 39	358	358								
	48,499	48,499								
40 - 44	245	245								
	46,081	46,081								
45 - 49	164	164								
	48,215	48,215								
50 - 54	161	160	1							
	46,441	46,525	\$32,998							
55 - 59	111	111								
	46,231	46,231								
60 - 64	57	57								
	54,537	54,537								
65 - 69	13	13								
	67,637	67,637								
70 & over	1	1								
	38,748	38,748								
Total	2,635	2,634	1							
	\$45,668	\$45,673	\$32,998							

Members in Active Service and Projected Average Compensation as of June 30, 2015 By Age and Years of Service

iv. Safety Tier A

	Years of Service										
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & over		
Under 25											
25 - 29	67		67								
	\$73,414		\$73,414								
30 - 34	319	3	255	60	1						
	78,077	\$55,168	77,348	\$81,986	\$98,090						
35 - 39	399	1	167	160	71						
	79,639	62,141	78,571	78,515	84,930						
40 - 44	571	2	103	135	254	76	1				
	82,908	65,863	75,459	76,077	86,001	\$95,344	\$75,568				
45 - 49	582	4	65	79	169	179	86				
	91,071	77,675	83,425	81,752	85,920	97,022	103,768				
50 - 54	392	2	37	56	71	111	100	15			
	93,755	91,537	90,077	79,470	86,506	95,151	103,256	\$117,086			
55 – 59	155	1	17	31	39	25	36	6			
	87,523	105,066	87,032	71,000	83,792	90,187	99,576	112,193			
60 - 64	73		14	9	18	11	9	9	3		
	91,402		92,575	79,781	85,302	88,760	96,310	110,196	\$95,967		
65 - 69	11		1	4	4	1	1				
	97,625		68,501	112,929	89,184	127,155	69,771				
70 & over	1					1					
	100,712					100,712					
Total	2,570	13	726	534	627	404	233	30	3		
	\$85,646	\$73,708	\$78,699	\$78,711	\$85,797	\$95,628	\$102,345	\$114,040	\$95,967		

Members in Active Service and Projected Average Compensation as of June 30, 2015 By Age and Years of Service

v.	Safety	Tier	В
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Years of Service									
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & over
Under 25	18	18						-	
	\$59,372	\$59,372						-	
25 - 29	188	177	11					-	
	63,056	62,704	\$68,719					-	
30 - 34	147	130	15	2				-	
	64,551	64,318	67,974	\$54,013				-	
35 - 39	46	39	5	2				-	
	71,321	72,928	65,356	54,895				-	
40 - 44	37	27	8	1		1		-	
	76,290	78,162	71,599	69,771		\$69,771		-	
45 - 49	22	17	4	1				-	
	78,387	81,603	66,871	69,771				-	
50 - 54	18	17	1					-	
	84,507	85,448	68,501					-	
55 - 59	15	15						-	
	93,895	93,895						-	
60 - 64	4	3	1					-	
	81,862	87,402	65,242					-	
65 - 69								-	
								-	
70 & over								-	
								-	
Total	495	443	45	6		1		-	
	\$67,671	\$67,706	\$68,363	\$59,560		\$69,771		-	

EXHIBIT B

Members in Active Service and Projected Average Compensation as of June 30, 2015 By Age and Years of Service

v.	Safety	Tier	С
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	Years of Service								
Age	Total	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35 & over
Under 25	102	102						-	
	\$51,921	\$51,921						-	
25 - 29	241	241						-	
	53,913	53,913						-	
30 - 34	101	101						-	
	54,580	54,580						-	
35 - 39	35	35						-	
	56,381	56,381						-	
40 - 44	32	32						-	
	56,586	56,586						-	
45 - 49	11	11						-	
	56,264	56,264						-	
50 - 54	21	21						-	
	92,317	92,317						-	
55 - 59	16	16						-	
	107,468	107,468						-	
60 - 64	2	2						-	
	77,154	77,154						-	
65 - 69								-	
								-	
70 & over								-	
								-	
Total	561	561						-	
	\$57,072	\$57,072						-	

EXHIBIT C

	Active Members	Deferred Terminated Members	Disabled Pensioners	Retired Members	Beneficiaries	Total
Number as of June 30, 2014	17,466	5,091	1,666	13,182	1,525	38,930
CPAS data clean up						
(a) Split benefits ⁽¹⁾	N/A	N/A	N/A	N/A	237	237
(b) Status reclassification ⁽²⁾	N/A	N/A	-9	-194	203	0
(c) Deceased retirees ⁽³⁾	N/A	N/A	-3	-37	N/A	-40
New members	1,349	126	N/A	N/A	N/A	1,475
Terminations – with vested rights	-473	473	0	0	0	0
Contribution refunds	-123	-107	N/A	N/A	N/A	-230
Retirements	-572	-225	-2	799	N/A	0
New disabilities	-39	-3	50	-8	N/A	0
Return to work	57	-56	0	-1	N/A	0
Died with or without beneficiary	-9	-9	-29	-302	88	-261
Data adjustments	0	16	0	8	13	5
Number as of June 30, 2015	17,656	5,274	1,673	13,447	2,066	40,116

Reconciliation of Member Data – June 30, 2014 to June 30, 2015

⁽¹⁾ Benefits for 237 ex-spouses were previously reported on a combined basis with the benefits paid by the Association to the retired members in the prior pension administration system. Benefits for these ex-spouses are now reported separately in CPAS.

⁽²⁾ 203 ex-spouses/alternate payees previously reported as retirees are reclassified as beneficiaries in CPAS.

⁽³⁾ These retirees should have been reported as deceased during 2013-2014 fiscal year.

EXHIBIT D

Summary Statement of Income and Expenses on an Actuarial Value Basis

	Year Ended June 30, 2015			lune 30, 2014
Contribution income:				
Employer contributions	\$435,881,967		\$414,906,155	
Employee contributions	<u>98,590,114</u>		78,920,054	
Net contribution income		\$534,472,081		\$493,826,209
Investment income:				
Interest, dividends and other income	\$230,838,740		\$230,496,400	
Recognition of capital appreciation	658,892,579		631,192,520	
Less investment fees and administrative expenses	-126,270,214		-116,968,314	
Net investment income		763,461,105		744,720,606
Total income available for benefits		\$1,297,933,186		\$1,238,546,815
Less benefit payments:				
Service retirement and disability benefits	-\$573,201,987		-\$542,208,387	
Death benefits	-1,215,003		-1,523,157	
Health benefits	-19,346,241		-19,974,887	
Supplemental retirement benefits	-15,266,701		-14,283,023	
Member refunds	-2,575,454		-2,736,221	
Net benefit payments		-\$611,605,386		-\$580,725,675
Change in assets held for future benefits		\$686,327,800		\$657,821,140

Note: Results may not add due to rounding.

EXHIBIT E

Summary Statement of Plan Assets

	Year Ended	June 30, 2015	Year Ended June 30, 2014		
Cash equivalents		\$4,743,035,073		\$3,482,716,183	
Accounts receivable:					
Contributions	\$5,219,643		\$5,788,083		
Accrued interest and dividends	17,302,139		19,643,475		
Settlement of securities sold	11,277,652		431,287,239		
Total accounts receivable		33,799,435		456,718,947	
Investments:					
Domestic equity securities	\$391,552,873		\$339,212,428		
International equity securities	337,678,647		426,291,447		
Bonds	1,357,653,001		1,885,418,467		
Securities lending collateral	84,964,034		85,247,752		
Real Estate	981,936,541		978,905,823		
Hedge Funds	245,647,530		488,091,717		
Private Equity	588,934,481		502,499,236		
Other investments	1,695,616,374		<u>1,647,312,746</u>		
Total investments at market value		5,683,983,481		6,352,979,616	
Total assets		\$10,460,817,989		\$10,292,414,746	
Less accounts payable:					
Securities lending & settlement of securities purchased	-\$97,352,894		-\$93,495,997		
Professional service	-15,290,867		-9,684,757		
Cash in transit	-207,160		-282,384		
Others	-11,067,285		<u>-3,513,510</u>		
Total accounts payable		-\$123,918,206		-\$106,976,648	
Net assets at market value		<u>\$10,336,899,783</u>		<u>\$10,185,438,098</u>	
Net assets at actuarial value		<u>\$10,586,289,627</u>		<u>\$9,899,961,827</u>	
Net assets at valuation value		\$10,535,336,727		<u>\$9,824,431,295</u>	

Note: Results may not add due to rounding.

EXHIBIT F

Actuarial Balance Sheet

An overview of the Plan's funding is given by an Actuarial Balance Sheet. In this approach, we first determine the amount and timing of all future payments that are anticipated to be made by the Plan for current participants. We then discount these payments at the valuation interest rate to the date of the valuation, thereby determining their present value. We refer to this present value as the "liability" of the Plan. Second, we determine how this liability will be met. These actuarial "assets" include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future recommended employer normal cost contributions, and the present value of future recommended employer amortization payments.

Actuarial Balance Sheet (Dollar Amounts in Thousands)

As	ssets	General	Safety	Total
1	Total valuation assets	\$7,508,718	\$3,026,619	\$10,535,337
2	Present value of future contributions by members	716,766	330,454	1,047,220
3	Present value of future employer contributions for:			
	a Entry age normal cost	857,663	467,361	1,325,024
	b Unfunded actuarial accrued liability	1,848,765	695,978	2,544,743
4	Total current and future assets	\$10,931,912	\$4,520,412	\$15,452,324
Li	abilities			
5	Present value of benefits for retirees and beneficiaries	\$5,362,678	\$2,130,937	\$7,493,615
6	Present value of benefits for deferred terminated members	335,378	71,567	406,945
7	Present value of benefits for active members	5,233,856	2,317,908	7,551,764
8	Total liabilities	\$10,931,912	\$4,520,412	\$15,452,324

EXHIBIT G

Summary of Reported Reserve Information as of June 30, 2015

Reserves (Dollar Amounts in Thousands)				
Member contributions ⁽¹⁾	\$758,538			
County contributions ⁽¹⁾	1,880,794			
Retired member reserve ⁽¹⁾	7,159,251			
Transition reserves ⁽¹⁾	736,754			
Total valuation reserve ⁽¹⁾	\$10,535,337			
Supplemental benefit, disability supplemental benefit and 401(h) health reserves ⁽²⁾	29,130			
Undistributed reserve ⁽²⁾	0			
Contingency reserve ⁽²⁾	21,823			
Total reserves	\$10,586,290			
Net deferred gains (losses) ⁽²⁾	(249,390)			
Net market value	\$10,336,900			

⁽¹⁾ Included in development of valuation value of assets.

⁽²⁾ Excluded in development of valuation value of assets.

EXHIBIT H

Development of Unfunded Actuarial Accrued Liability for Year Ended June 30, 2015

		(Amoun	ts in Thousands)
1.	Unfunded Actuarial Accrued Liability as of June 30, 2014		\$2,316,718
2.	Normal Cost		297,874
3.	Expected employer and member contributions		-521,987
4.	Interest		171,745
5.	Expected Unfunded Actuarial Accrued Liability		\$2,264,350
6.	Changes due to:		
	(a) Investment return greater than expected	-\$15,609	
	(b) Actual contributions less than expected ⁽¹⁾	8,960	
	(c) Lower than expected salary increase	-56,977	
	(d) Lower than expected cost-of-living increase in benefits for retirees and beneficiaries	-44,946	
	(e) Greater number of retirements than expected	47,909	
	(f) Other experience gains or losses ⁽²⁾	20,662	
	(g) Changes in actuarial assumptions	320,394	
	(h) Total changes		<u>\$280,393</u>
7.	Unfunded Actuarial Accrued Liability as of June 30, 2015		\$2,544,743

⁽¹⁾ Contribution loss offset somewhat by the contribution gain from one-year delay in implementing lower contribution rates recommended in June 30, 2014 valuation.

⁽²⁾ Includes cost impact from data clean up as part of transition to the CPAS pension administration system.

Note: Net gain from other non-investment experience of 24.4 million (as shown on page 9) is equal to: 6(b) + 6(c) + 6(d) + 6(e) + 6(f).

EXHIBIT I

Section 415 Limitations

Section 415 of the Internal Revenue Code (IRC) specifies the maximum benefits that may be paid to an individual from a defined benefit plan and the maximum amounts that may be allocated each year to an individual's account in a defined contribution plan.

A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for noncompliance is disqualification: active participants could be taxed on their vested benefits and the IRS may seek to tax the income earned on the plan's assets.

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar amount indexed for inflation. The amount of that limit is \$210,000 for 2015. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must be adjusted based on each participant's circumstances for such things as age at retirement, form of benefits chosen and after-tax contributions.

Section 415(b) limit has been applied to the benefit data for members in pay status provided by SDCERA for valuation purposes.

For non-PEPRA members, benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

Legal Counsel's review and interpretation of the law and regulations should be sought on any questions in this regard.

Contributions rates determined in this valuation have not been reduced for the Section 415 limitations for members in active and deferred statuses, so actual limitations will result in gains as they occur.

EXHIBIT J

Definitions of Pension Terms

The following list defines certain technical terms for the convenience of the reader: **Assumptions or Actuarial Assumptions:** The estimates on which the cost of the Plan is calculated including: Investment return — the rate of investment yield that the Plan will earn over (a) the long-term future; (b) Mortality rates — the death rates of employees and pensioners; life expectancy is based on these rates; <u>Retirement rates</u> — the rate or probability of retirement at a given age; and (c) Turnover rates — the rates at which employees of various ages are expected (d) to leave employment for reasons other than death, disability, or retirement. Normal Cost: The amount of contributions required to fund the level cost, as a percentage of payroll, allocated to the current year of service. **Actuarial Accrued Liability** For Actives: The equivalent of the accumulated normal costs allocated to the years before the valuation date. Actuarial Accrued Liability For Pensioners: The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits. Unfunded Actuarial Accrued Liability: The extent to which the actuarial accrued liability of the Plan exceeds (or is exceeded by) the assets of the Plan. There are many approaches to recognizing the unfunded or overfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

Amortization of the Unfunded (Overfunded) Actuarial Accrued Liability:	Payments made over a period of years equal in value to the Plan's unfunded or overfunded actuarial accrued liability.
Investment Return:	The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the market gains and losses to avoid significant swings in the value of assets from one year to the next.

EXHIBIT I

Summary of Actuarial Valuation Results

	Retired members as of the valuation date (including 2,066 beneficiaries in pay status)		17,186
2.	Members inactive during year ended June 30, 2015 with vested rights*		5,274
3.	Members active during the year ended June 30, 2015		17,656
Гhe	e actuarial factors as of the valuation date are as follows (amounts in thousands)	:	
l.	Normal cost		\$312,214
	Present value of future benefits		15,452,324
	Present value of future normal costs		2,372,244
•	Actuarial accrued liability		13,080,080
	Retired members and beneficiaries	\$7,493,615	
	Inactive members with vested rights*	406,945	
	Active members	5,179,520	
	Valuation value of assets		10,535,337
5 .	Unfunded actuarial accrued liability		\$2,544,743

* Includes terminated members due a refund of member contributions.

EXHIBIT I (continued)

Summary of Actuarial Valuation Results (Dollar Amounts in Thousands)

yroll
%
<u>%</u>
%
<u>%</u>
%
<u>%</u> % %

* Based on June 30, 2015 projected annual compensation.

EXHIBIT II

Actuarial Assumptions and Actuarial Cost Method

Rationale for Assumptions:	The information and analysis used in selecting each demographic (non-economic) assumption that has a significant effect on this actuarial valuation is shown in the July 1, 2009 through June 30, 2012 Actuarial Experience Study dated April 9, 2013. The information and analysis used in selecting the economic assumption is shown in our report dated August 26, 2015. These assumptions have been adopted by the Board.
Post-Retirement Mortality Rate	28:
Healthy Retirement:	For General: RP-2000 Combined Healthy Mortality Table projected with Scale AA to 2016 with a two-year age setback for Males and a one-year age setback for Females.
	For Safety: RP-2000 Combined Healthy Mortality Table projected with Scale AA to 2016 with a one-year age setback for Males and no age setback for Females.
Disabled Retirement:	For General: RP-2000 Combined Healthy Mortality Table projected with Scale AA to 2016 with a three-year age set forward.
	For Safety: RP-2000 Combined Healthy Mortality Table projected with Scale AA to 2016 with a three-year age set forward.
	The above mortality tables contain about a 10% margin, based on actual to expected deaths, as a provision appropriate to reasonably anticipate future mortality improvement, based on a review of mortality experience as of the measurement date.

Employee Contribution Rates:	For General – RP-2000 Combined Healthy Mortality Table projected with Scale AA to 2016 for Males with a two-year age setback weighted 30% and RP-2000 Combined Healthy Mortality Table projected with Scale AA to 2016 for Females with a one-year age setback weighted 70%.
	For Safety – RP-2000 Combined Healthy Mortality Table projected with Scale AA to 2016 for Males with a one-year age setback weighted 75% and RP-2000 Combined Healthy Mortality Table projected with Scale AA to 2016 for Females with no age set back weighted 25%.

Termination Rates Before Retirement:

Mortality Rates:	For General – Same as Post-Retirement Healthy Mortality Rates for retired General members (i.e., RP-2000 Combined Healthy Mortality Table projected with Scale AA to 2016 with a two-year age setback for Males and a one-year age setback for Females).
	For Safety – Same as Post-Retirement Healthy Mortality Rates for retired Safety members (i.e., RP-2000 Combined Healthy Mortality Table projected with Scale AA to 2016 with a one-year age setback for Males and no age setback for Females).
	For General members, 100% of pre-retirement deaths are assumed to be non-service connected deaths.
	For Safety members, 100% of pre-retirement deaths are assumed to be service connected deaths.

Mortality Rates (continued):

Healthy Life Mortality					Disabled Li	fe Mortality		
	Ger	neral	Sa	fety	Ge	neral	Sa	fety
Age	Male	Female	Male	Female	Male	Female	Male	Female
25	0.03	0.02	0.03	0.02	0.04	0.02	0.04	0.02
30	0.04	0.02	0.04	0.02	0.06	0.03	0.06	0.03
35	0.06	0.04	0.06	0.04	0.09	0.05	0.09	0.05
40	0.09	0.05	0.09	0.06	0.11	0.07	0.11	0.07
45	0.11	0.08	0.12	0.09	0.14	0.11	0.14	0.11
50	0.14	0.12	0.15	0.13	0.21	0.17	0.21	0.17
55	0.21	0.21	0.23	0.24	0.41	0.35	0.41	0.35
60	0.41	0.41	0.46	0.47	0.80	0.71	0.80	0.71
65	0.80	0.80	0.90	0.90	1.43	1.24	1.43	1.24
70	1.43	1.37	1.58	1.55	2.39	2.12	2.39	2.12

The following are sample rates (%).

Disability Rates:

	Non So	mias Connected	Rates (%)	Somi	an Connected Di	aability
		ervice Connected	Disability		ce Connected Di	sadinty
Age	Male	Female	Safety	Males	Female	Safety
20	0.00	0.00	0.00	0.01	0.00	0.03
25	0.00	0.00	0.00	0.01	0.01	0.08
30	0.01	0.01	0.00	0.01	0.03	0.19
35	0.02	0.02	0.02	0.03	0.06	0.49
40	0.04	0.06	0.06	0.06	0.09	0.65
45	0.06	0.10	0.07	0.16	0.14	0.65
50	0.10	0.14	0.07	0.23	0.17	1.22
55	0.18	0.17	0.07	0.28	0.25	1.96
60	0.22	0.22	0.07	0.33	0.30	2.26
65	0.22	0.25	0.03	0.20	0.18	2.72

Withdrawal Rates:

	Rates (%)				
	,	Termination (<5 Yea	ars of Service) *		
	Gei	neral			
Years of Service	Male	Female	Safety		
0	13.50	14.50	11.50		
1	8.25	9.25	8.00		
2	5.70	6.50	4.00		
3	4.30	6.00	3.00		
4	4.05	5.50	2.75		

* 60% of all terminating members will choose a refund of contributions and 40% will choose a deferred vested benefit.

	ſ	Fermination (5+ Years	of Service) **	
	Ger	neral		-
Age	Male	Female	Safety	
20	5.46	5.43	3.71	-
25	4.56	5.23	3.19	
30	4.08	4.64	2.62	
35	3.54	3.79	2.00	
40	2.69	2.88	1.35	
45	2.31	2.35	1.08	
50	2.42	2.25	1.00	
55	2.50	2.25	1.22	
60	2.50	2.25	1.58	
65	2.50	2.25	0.68	

** 15% of all terminating members will choose a refund of contributions and 85% will choose a deferred vested benefit. Termination rates are zero at ages where members are expected to retire.

Retirement Rates:			Rates	(%)		
		General			Safety	
Age	Tier 1 and Tier A	Tier B	Tier C	Tier A	Tier B	Tier C
48	-	-	-	4.0	3.0	-
49	55.0	-	-	8.0	3.5	-
50	7.0	-	-	14.0	11.0	14.0
51	5.0	-	-	12.0	11.0	9.5
52	5.0	-	-	12.0	11.0	9.5
53	5.0	-	-	15.0	11.0	9.5
54	6.0	-	-	15.0	12.0	10.5
55	11.0	5.5	4.0	16.0	19.0	16.5
56	11.0	6.5	4.5	18.0	22.0	19.0
57	11.0	7.5	5.5	20.0	20.0	20.0
58	12.0	7.5	5.5	21.0	21.0	21.0
59	15.0	7.5	5.5	22.0	22.0	22.0
60	20.0	10.0	7.5	25.0	25.0	25.0
61	20.0	13.0	10.0	30.0	30.0	30.0
62	24.0	19.0	14.0	30.0	30.0	30.0
63	25.0	19.0	15.0	30.0	30.0	30.0
64	28.0	19.0	16.0	30.0	30.0	30.0
65	31.0	30.0	26.0	60.0	60.0	60.0
66	31.0	30.0	30.0	60.0	60.0	60.0
67	31.0	30.0	30.0	60.0	60.0	60.0
68	35.0	30.0	30.0	60.0	60.0	60.0
69	37.0	30.0	30.0	60.0	60.0	60.0
70	50.0	50.0	50.0	100.0	100.0	100.0
71	50.0	50.0	50.0	100.0	100.0	100.0
72	50.0	50.0	50.0	100.0	100.0	100.0
73	50.0	50.0	50.0	100.0	100.0	100.0
74	50.0	50.0	50.0	100.0	100.0	100.0
75 and later	100.0	100.0	100.0	100.0	100.0	100.0

Retirement Age and Benefit	Reciprocal and Non-reciprocal Members
for Deferred Vested Reciprocal Members:	General: Age 57
	Safety: Age 51
	25% of General and 30% of Safety future deferred vested members are assumed to be reciprocal. For reciprocal members, we assume 4.50% compensation increases per annum for General members and 4.75% compensation increases per annum for Safety members.
Future Benefit Accruals:	1.0 year of service per year.
Unknown Data for Members:	Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.
Definition of Active Members:	First day of pay period following employment.
Percent Married:	75% of male members and 55% of female members are assumed to be married at retirement or pre-retirement death.
Age of Spouse:	Females are 3 years younger than their spouses
Net Investment Return:	7.50%, net of administration and investment expenses.
Employee Contribution	
Crediting Rate:	One-half of the net investment return credited semi-annually.
Consumer Price Index:	Increase of 3.00% per year. Benefit increases due to CPI subject to 3.0% maximum for General Tier 1, General Tier A and Safety Tier A. Benefit increases due to CPI subject to 2.0% maximum for General Tier B, Safety Tier B, General Tier C and Safety Tier C.

	Ann	ual Rate of Compensation	on Increase
		• •	Board" salary increases d Longevity as follows:
	Years from		~ ~
	Hire Date	General	Safety
	0	6.00%	8.00%
	1	4.50	5.75
	2	4.00	5.00
	3	3.00	4.75
	4	2.25	4.25
	5+	0.75	1.00
Increase in Section 7522.10 Compensation Limit:	Increase of 3.00% pe	er year from the valuatio	on date.
Pay for Performance and Other Premium Pays:		igible for an average and	ers and members in CalPEPRA tiers nual pay for performance and other
		le for an average annual	s and members in CalPEPRA tiers) pay for performance and other

Service Converted From Unused Sick Leave:	The following assumptions for service converted from unused sick leave as apercentage of service at retirement are used:General:2.00%Safety:2.25%
	Pursuant to Section 31641.02, the cost of this benefit for Non-Tier C members will be charged only to employers and will not affect member contribution rates.
Actuarial Value of Assets:	The actuarial value of assets is determined by recognizing any difference between actual and expected market return over 10 six-month interest crediting periods. Deferred gains and losses as of June 30, 2012 have been combined and will be recognized in equal amounts over a period of four and a half years from that date.
Valuation Value of Assets:	The actuarial value of assets reduced by the following reserves: (1) 401(h) Health Benefit Reserve; (2) Undistributed Reserve; (3) Contingency Reserve; (4) Supplemental Benefit Reserve; and (5) Disability Supplemental Benefit Reserve.
Actuarial Cost Method:	Entry Age Actuarial Cost Method. Entry Age is the age at the member's hire date. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are based on costs allocated as a level percentage of compensation.
Amortization Policy:	The UAAL, (i.e., the difference between the Actuarial Accrued Liability and the Valuation Value of Assets), as of June 30, 2012 shall continue to be amortized over separate 20-year period amortization layers based on the valuations during which each separate layer was previously established.
	Any new UAAL as a result of assumption changes, method changes and actuarial gains or losses identified in the annual valuation as of June 30, 2013 and later will be amortized over a period of 20 years.
	Any new UAAL as a result of plan amendments will be amortized over a period of 15 years.
	Any new UAAL as a result of Golden Handshakes or Early Retirement Incentive Programs (ERIP) will be amortized over a period of up to 5 years.

SECTION 4: Reporting Information for the San Diego County Employees Retirement Association

	The UAAL shall be amortized over "closed" amortization periods so that the amortization period for each layer decreases by one year with each actuarial valuation.
	The UAAL shall be amortized as a level percentage of payroll so that the amortization amount in each year during the amortization period shall be expected to be a level percentage of covered payroll, taking into consideration the current assumption for general payroll increase.
	If the AAL is overfunded (i.e., the Valuation Value of Assets exceeds 120% of the Actuarial Accrued Liability so that there is a surplus), such surplus and any subsequent surpluses will be amortized over an "open" amortization period of 30 years. Any prior UAAL amortization layers will be considered fully amortized, and any subsequent UAAL, will be amortized over 20 years as the first of a new series of amortization layers.
Changes in Actuarial Assumptions and Methods:	The Board adopted economic assumption changes as recommended by Segal in our letter dated August 26, 2015. Previously, these assumptions were as follows:
Benefit for Deferred Vested Reciprocal Members:	Reciprocal Members
	For reciprocal members, we assume 4.75% compensation increases per annum for General members and 5.00% compensation increases per annum for Safety members.
Net Investment Return:	7.75%, net of administration and investment expenses.
Consumer Price Index:	Increase of 3.25% per year. Benefit increases due to CPI subject to 3.0% maximum for General Tier 1, General Tier A and Safety Tier A. Benefit increases due to CPI subject to 2.0% maximum for General Tier B, Safety Tier B, General Tier C and Safety Tier C.

Changes in Actuarial Assumptions and Methods (continued)

Salary Scale:

Annual Rate of Compensation Increase

Inflation: 3.25% per year; plus "Across the Board" salary increases of 0.75% per year; plus Merit and Longevity as follows:

Years from		
Hire Date	General	Safety
0	6.00%	8.00%
1	4.50	5.75
2	4.00	5.00
3	3.00	4.75
4	2.25	4.25
5+	0.75	1.00

Increase in Section 7522.10 Compensation Limit: Increase of 3.25% per year from the valuation date.

★ Segal Consulting

EXHIBIT III

Summary of Plan Provisions

This exhibit summarizes the major provisions of the SDCERA included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Aembership Eligibility:	All permanent employees of the County of San Diego or contracting district, scheduled to work 20 or more hours weekly, are eligible, subject to classification below:
General Tier 1	All General members with membership dates before March 8, 2002 who made a specific and irrevocable election to opt out of Tier A. This also included those Genera Members in deferred status on March 8, 2002.
General Tier A	All General members with membership dates or continuing employment on or after March 8, 2002 and before August 28, 2009, except as noted above.
General Tier B	All General members with membership dates on or after August 28, 2009 and before January 1, 2013.
General Tier C	All General members with membership dates on or after January 1, 2013.
Safety Tier A	All Safety members with membership dates before August 28, 2009.
Safety Tier B	All Safety members with membership dates on or after August 28, 2009 and before January 1, 2013.
Safety Tier C	All Safety members with membership dates on or after January 1, 2013.
inal Average Compensation for enefit Determination:	
General Tier 1, General Tier A	

and Safety Tier A Highest consecutive 26 bi-weekly pay periods of compensation earnable (§31462.1) (FAC).

SECTION 4:	Reporting Information for the San Diego County Employees Retirement Association
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General Tier B and Safety Tier B	Three-year average of highest consecutive 78 bi-weekly pay periods of compensation earnable (§31462)(F3AC).
General Tier C and Safety Tier C	Highest consecutive thirty-six months of pensionable compensation (§7522.32) (FAS3).
Compensation Limit:	
General Tier C and Safety Tier C	Pensionable Compensation is limited to \$117,020 for 2015 (\$140,424, if not enrolled in Social Security). The limit is indexed for inflation on an annual basis.
Service:	Years of service (Yrs).
Service Retirement Eligibility:	
General Tier 1 and Tier A	Age 50 with 10 years of service credit, or age 70 regardless of service credit, or after 30 years of service credit, regardless of age (§31672).
General Tier B	Age 55 with 10 years of service credit, or age 70 regardless of service credit, or after 30 years of service credit, regardless of age (§31672).
General Tier C	Age 55 with 5 years of service credit (§7522.20(a)) or age 70 regardless of service credit (§31672.3).
Safety Tier A and Tier B	Age 50 with 10 years of service credit, or age 70 regardless of service credit, or after 20 years of service credit, regardless of age (§31663.25).
Safety Tier C	Age 50 with 5 years of service credit (§7522.25(a)) or age 70 regardless of service credit (§31672.3).

cht Formula.		
	Retirement Age	Benefit Formula
General Tier 1 (§31676.12)	50	(1.34%xFAC - 1/3x1.34%x\$350 x 12) x Yrs
	55	(1.77%xFAC – 1/3x1.77%x\$350 x 12) x Yrs
	60	(2.34%xFAC - 1/3x2.34%x\$350 x 12) x Yrs
	62	(2.62%xFAC - 1/3x2.62%x\$350 x 12) x Yrs
	65 or later	(2.62%xFAC - 1/3x2.62%x\$350 x 12) x Yrs
	Retirement Age	Benefit Formula
General Tier A (§31676.17)	50	(2.00%xFAC - 1/3x2.00%x\$350 x 12) x Yrs
	55	(2.50%xFAC - 1/3x2.50%x\$350 x 12) x Yrs
	60	(3.00%xFAC - 1/3x3.00%x\$350 x 12) x Yrs
	62	(3.00%xFAC - 1/3x3.00%x\$350 x 12) x Yrs
	65 or later	(3.00%xFAC - 1/3x3.00%x\$350 x 12) x Yrs
	Retirement Age	Benefit Formula
General Tier B (§31676.12)	50	(1.34%xF3AC - 1/3x1.34%x\$350 x 12) x Yrs
	55	(1.77% xF3AC - 1/3x1.77% x\$350 x 12) x Yrs
	60	(2.34% xF3AC - 1/3x2.34% x\$350 x 12) x Yrs
	62	(2.62% xF3AC - 1/3x2.62% x\$350 x 12) x Yrs
	65 or later	(2.62% xF3AC - 1/3x2.62% x\$350 x 12) x Yrs
	Retirement Age	Benefit Formula
General Tier C (§7522.20(a))	55	1.30% x FAS3 x Yrs
	60	1.80% x FAS3 x Yrs
	62	2.00% x FAS3 x Yrs
	65	2.30% x FAS3 x Yrs
	67 or later	2.50% x FAS3 x Yrs

Benefit Formula:

	Retirement Age	Benefit Formula		
Safety Tier A (Non-Integrated) (§31664	4.1) 50	(3.00% x FAC x Yrs)		
	55	(3.00% x FAC x Yrs)		
	60 or later	(3.00% x FAC x Yrs)		
	Retirement Age	Benefit Formula		
Safety Tier B (Non-Integrated) (§31664	4.2) 50	(2.29% x F3AC x Yrs)		
	55	(3.00% x F3AC x Yrs)		
	60 or later	(3.00% x F3AC x Yrs)		
	Retirement Age	Benefit Formula		
<i>Safety Tier C (§7522.25(d))</i>	50	2.00% x FAS3 x Yrs		
	55	2.50% x FAS3 x Yrs		
	57 or later	2.70% x FAS3 x Yrs		
Maximum Benefit:				
Non-Tier C 100	% of Final Average Compensation	(\$31676.12, \$31676.17, \$31664.1, \$31664.2)		
<i>Tier C</i> Nor	ne			
Non Service Connected Disability:				
General Members				
<i>Eligibility</i> Five	e years of service (§31720).			
exce the	eed one-third of Final Average Con	per year of service. If the benefit does not npensation, the service is projected to 62, and ne-third of Final Average Compensation		
Safety Members				
<i>Eligibility</i> Five	e years of service (§31720).			
	<i>t Formula</i> 1.8% of Final Average Compensation per year of service. If the benefit does no exceed one-third of Final Average Compensation, the service is projected to 55			

the total benefit cannot be more than one-third of Final Average Compensation
(§31727.2).

Service Connected Disability:	
All Members	
Eligibility	No age or service requirements (§31720).
Benefit Formula	50% of the Final Average Compensation or 100% of Service Retirement benefit, if larger (§31727.4).
Pre-Retirement Death:	
Non Service Connected (Not V	Vested) Before Eligible to Retire
Eligibility	None.
Benefit	Refund of employee contributions with interest, plus one month's eligible compensation for each year of service to a maximum of six month's compensation (§31781).
	OR
Non Service Connected (Veste	(d)
Eligibility	Five years of service.
Benefit	60% of the greater of Service Retirement or Non Service Connected Disability Retirement benefit payable to surviving eligible spouse or eligible children (§31765.1, §31781.1), in lieu of above. Alternatively, the spouse may choose a combined benefit of:
	• A lump sum payment of up to 6 month's compensation (see above), and
	• A monthly (60%) benefit reduced by actuarial equivalent of the lump sum payment (§31781.3).
Service Connected Death	50% of the Final Average Compensation or 100% of Service Retirement benefit, if greater, payable to spouse or minor children (§31787). In addition, safety members are entitled to benefits under Sections 31787.5 and 31787.6.

Death After Retirement:	
All Members	
Service or Non Service Connected Disability Retirement	Unless another option was selected at retirement, 60% of member's unmodified allowance continued to eligible spouse (§31760.1) and \$3,500 lump sum benefit payable to member's beneficiary (§31789.3). An eligible spouse is a surviving spous who was married to the member at least one year prior to the day of retirement (§31760.1), or at least two years prior to the date of death, having attained age 55 on or prior to the date of death (§31760.2).
Service Connected Disability Retirement	Unless another option was selected at retirement, 100% of member's unmodified allowance continued to eligible spouse (§31786).
Withdrawal Benefits:	
Less than Five Years of SDCERA/ Reciprocal Service Credit	Refund of accumulated employee contributions with interest or entitled to earned benefits commencing at anytime after eligible to retire (§31628, §31629.5).
Five or More Years of SDCERA/ Reciprocal Service Credit	If accumulated employee contributions left on deposit, eligible for retirement benefit at any time after meeting eligibility criteria to retire (§31700).
Post-retirement Cost-of-Living Benefits:	
General Tier 1, General Tier A and Safety Tier A	Future changes based on changes to the Consumer Price Index for the San Diego area to a maximum of 3% per year, excess "banked" (§31870.1).
General Tier B, Safety Tier B, General Tier C and Safety Tier C	Future changes based on changes to the Consumer Price Index for the San Diego area to a maximum of 2% per year, excess "banked" (§31870).
County Contributions:	Effective with the June 30, 2004 actuarial valuation, the amortization period for Unfunded Actuarial Accrued Liability was changed to a 20-year fixed (decreasing) layered amortization period.

Supplemental Benefit Allowance and Health Insurance Allowance:	The Association provides a supplemental benefit allowance and a health insurance allowance for eligible retirees. These benefits have been excluded from this valuation.
Member Contributions:	Please refer to Appendix A for the specific rates.
General Tier 1	
Basic	Provide for an average annuity at age 60 equal to 1/100 of FAC (§31621.2).
Cost-of-Living	Provide for one-half of future Cost-of-Living costs.
General Tier A	
Basic	Provide for an average annuity at age 55 equal to 1/100 of FAC (§31621.8).
Cost-of-Living	Provide for one-half of future Cost-of-Living costs.
General Tier B	
Basic	Provide for an average annuity at age 60 equal to 1/100 of F3AC (§31621.2).
Cost-of-Living	Provide for one-half of future Cost-of-Living costs.
General Tier C	Provide for 50% of total Normal Cost Rate.
Safety Tier A	
Basic	Provide for an average annuity at age 50 equal to 1/100 of FAC (§31639.25).
Cost-of-Living	Provide for one-half of future Cost-of-Living costs.
Safety Tier B	
Basic	Provide for an average annuity at age 50 equal to 1/100 of F3AC (§31639.25).
Cost-of-Living	Provide for one-half of future Cost-of-Living costs.
Safety Tier C	Provide for 50% of total Normal Cost Rate.

Other Inf	formation:	General and Safety Non-Tier C members with 30 or more years of qualifying service credit are exempt from paying member contributions (§31625.2 and §31625.3).
Plan Cha	nges:	There have been no changes in plan provisions since the previous actuarial valuation.
NOTE:	of the actuarial valua	r plan provisions is designed to outline principal plan benefits as interpreted for purposes tion. If the Association should find the plan summary not in accordance with the actual fation should alert the actuary so they can both be sure the proper provisions are valued.

Appendix A

Member Contribution Rates

Comparison of Member Rate at Entry Age 35 for General and Entry Age 30 for Safety Members.

	June 30, 2015			Jı	une 30, 2014		
General	Basic	COLA	Total	Basic	COLA	Total	Increase/Decrease in Rate
Tier 1 ⁽¹⁾	7.59%	2.77%	10.36%	7.43%	2.51%	9.94%	0.42%
Tier A ⁽¹⁾	8.77%	3.70%	12.47%	8.57%	3.43%	12.00%	0.47%
Tier B ⁽¹⁾	7.27%	1.54%	8.81%	7.10%	1.47%	8.57%	0.24%
Tier C	N/A	N/A	8.03%	N/A	N/A	7.74%	0.29%

	Ju	une 30, 2015	5	Jı	une 30, 2014	Ļ	
Safety	Basic	COLA	Total	Basic	COLA	Total	Increase/Decrease in Rate
Tier A	9.41%	5.39%	14.80%	9.18%	5.06%	14.24%	0.56%
Tier B	8.99%	2.65%	11.64%	8.75%	2.48%	11.23%	0.41%
Tier C	N/A	N/A	13.81%	N/A	N/A	13.22%	0.59%

⁽¹⁾ *Rates shown are for salaries in excess of \$350 per month.*

Appendix A

Member Contribution Rates

i. General Tier 1 Members' Contribution Rates from the June 30, 2015 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

	Basic		CC	DLA	То	otal
Entry Age	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
15	3.68%	5.52%	1.34%	2.01%	5.02%	7.53%
16	3.68%	5.52%	1.34%	2.01%	5.02%	7.53%
17	3.75%	5.62%	1.37%	2.05%	5.12%	7.67%
18	3.81%	5.72%	1.39%	2.09%	5.20%	7.81%
19	3.88%	5.82%	1.41%	2.12%	5.29%	7.94%
20	3.95%	5.92%	1.44%	2.16%	5.39%	8.08%
21	4.01%	6.02%	1.47%	2.20%	5.48%	8.22%
22	4.08%	6.12%	1.49%	2.23%	5.57%	8.35%
23	4.15%	6.22%	1.51%	2.27%	5.66%	8.49%
24	4.22%	6.33%	1.54%	2.31%	5.76%	8.64%
25	4.29%	6.43%	1.57%	2.35%	5.86%	8.78%
26	4.36%	6.54%	1.59%	2.39%	5.95%	8.93%
27	4.43%	6.65%	1.62%	2.43%	6.05%	9.08%
28	4.51%	6.76%	1.65%	2.47%	6.16%	9.23%
29	4.59%	6.88%	1.67%	2.51%	6.26%	9.39%
30	4.66%	6.99%	1.70%	2.55%	6.36%	9.54%
31	4.74%	7.11%	1.73%	2.59%	6.47%	9.70%
32	4.81%	7.22%	1.75%	2.63%	6.56%	9.85%
33	4.89%	7.34%	1.79%	2.68%	6.68%	10.02%
34	4.98%	7.47%	1.81%	2.72%	6.79%	10.19%
35	5.06%	7.59%	1.85%	2.77%	6.91%	10.36%
36	5.14%	7.71%	1.87%	2.81%	7.01%	10.52%
37	5.23%	7.84%	1.91%	2.86%	7.14%	10.70%
38	5.31%	7.97%	1.94%	2.91%	7.25%	10.88%
39	5.40%	8.10%	1.97%	2.95%	7.37%	11.05%

Calculated Under Adopted Assumptions

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		Basic	CC	DLA	Total		
Entry Age	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350	
40	5.49%	8.23%	2.00%	3.00%	7.49%	11.23%	
41	5.58%	8.37%	2.03%	3.05%	7.61%	11.42%	
42	5.67%	8.51%	2.07%	3.10%	7.74%	11.61%	
43	5.77%	8.65%	2.10%	3.15%	7.87%	11.80%	
44	5.86%	8.79%	2.14%	3.21%	8.00%	12.00%	
45	5.96%	8.94%	2.17%	3.26%	8.13%	12.20%	
46	6.06%	9.09%	2.21%	3.32%	8.27%	12.41%	
47	6.16%	9.24%	2.25%	3.37%	8.41%	12.61%	
48	6.27%	9.40%	2.29%	3.43%	8.56%	12.83%	
49	6.38%	9.57%	2.33%	3.49%	8.71%	13.06%	
50	6.49%	9.74%	2.37%	3.55%	8.86%	13.29%	
51	6.62%	9.93%	2.41%	3.62%	9.03%	13.55%	
52	6.75%	10.12%	2.46%	3.69%	9.21%	13.81%	
53	6.89%	10.34%	2.51%	3.77%	9.40%	14.11%	
54	7.05%	10.58%	2.57%	3.86%	9.62%	14.44%	
55	7.14%	10.71%	2.61%	3.91%	9.75%	14.62%	
56	7.19%	10.79%	2.63%	3.94%	9.82%	14.73%	
57	7.20%	10.80%	2.63%	3.94%	9.83%	14.74%	
58	7.19%	10.79%	2.63%	3.94%	9.82%	14.73%	
59 & Over	7.12%	10.68%	2.59%	3.89%	9.71%	14.57%	
Interest:		7.50%					
Inflation:		3.00%					
Across the board sala	ry increase:	0.75%					
COLA:		3.00%					
COLA Loading Facto Mortality:	or:	36.47% RP-2000 Combined Health year for females, weighted			e AA, set back two year	s for males and one	
Salary Increase:		5 Year Select and Ultimate	e Salary Increase Assur	nptions (see EXHIBIT I	[)		
Note:		These rates are determined	-	-			

i. General Tier 1 Members' Contribution Rates from the June 30, 2015 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

SECTION 4: Reporting Information for the San Diego County Employees Retirement Association

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	E	Basic		COLA		Total		
Entry Age	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350		
15	4.27%	6.41%	1.80%	2.70%	6.07%	9.11%		
16	4.27%	6.41%	1.80%	2.70%	6.07%	9.11%		
17	4.35%	6.52%	1.83%	2.75%	6.18%	9.27%		
18	4.42%	6.63%	1.87%	2.80%	6.29%	9.43%		
19	4.49%	6.74%	1.89%	2.84%	6.38%	9.58%		
20	4.57%	6.85%	1.93%	2.89%	6.50%	9.74%		
21	4.65%	6.97%	1.96%	2.94%	6.61%	9.91%		
22	4.72%	7.08%	1.99%	2.99%	6.71%	10.07%		
23	4.80%	7.20%	2.03%	3.04%	6.83%	10.24%		
24	4.88%	7.32%	2.06%	3.09%	6.94%	10.41%		
25	4.97%	7.45%	2.09%	3.14%	7.06%	10.59%		
26	5.05%	7.57%	2.13%	3.19%	7.18%	10.76%		
27	5.13%	7.69%	2.16%	3.24%	7.29%	10.93%		
28	5.21%	7.82%	2.20%	3.30%	7.41%	11.12%		
29	5.30%	7.95%	2.23%	3.35%	7.53%	11.30%		
30	5.39%	8.08%	2.27%	3.41%	7.66%	11.49%		
31	5.47%	8.21%	2.31%	3.46%	7.78%	11.67%		
32	5.57%	8.35%	2.35%	3.52%	7.92%	11.87%		
33	5.66%	8.49%	2.39%	3.58%	8.05%	12.07%		
34	5.75%	8.63%	2.43%	3.64%	8.18%	12.27%		
35	5.85%	8.77%	2.47%	3.70%	8.32%	12.47%		
36	5.94%	8.91%	2.51%	3.76%	8.45%	12.67%		
37	6.04%	9.06%	2.55%	3.82%	8.59%	12.88%		
38	6.14%	9.21%	2.59%	3.88%	8.73%	13.09%		
39	6.24%	9.36%	2.63%	3.95%	8.87%	13.31%		
40	6.35%	9.52%	2.68%	4.02%	9.03%	13.54%		
41	6.45%	9.68%	2.72%	4.08%	9.17%	13.76%		
42	6.56%	9.84%	2.77%	4.15%	9.33%	13.99%		
43	6.68%	10.02%	2.82%	4.23%	9.50%	14.25%		

ii. General Tier A Members' Contribution Rates from the June 30, 2015 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Calculated Under Adopted Assumptions								
Basic		CC	DLA	Total				
First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350			
6.79%	10.19%	2.87%	4.30%	9.66%	14.49%			
6.92%	10.38%	2.92%	4.38%	9.84%	14.76%			
7.05%	10.57%	2.97%	4.46%	10.02%	15.03%			
7.19%	10.78%	3.03%	4.55%	10.22%	15.33%			
7.34%	11.01%	3.09%	4.64%	10.43%	15.65%			
7.51%	11.26%	3.17%	4.75%	10.68%	16.01%			
7.60%	11.40%	3.21%	4.81%	10.81%	16.21%			
7.66%	11.49%	3.23%	4.85%	10.89%	16.34%			
7.67%	11.50%	3.23%	4.85%	10.90%	16.35%			
7.66%	11.49%	3.23%	4.85%	10.89%	16.34%			
7.58%	11.37%	3.20%	4.80%	10.78%	16.17%			
	7.50%							
	3.00%							
ry increase:	0.75%							
-	3.00%							
ling Factor: 42.18% RP-2000 Combined Healthy Mortality Table Projected to 2016 with Scale AA, set back two years for males and o year for females, weighted 30% Male and 70% Female.								
	5 Year Select and Ultimat	e Salary Increase Assur	nptions (see EXHIBIT I	I)				
	These rates are determined	d before any pickups by	the employer.					
	\$350 6.79% 6.92% 7.05% 7.19% 7.34% 7.51% 7.60% 7.66% 7.66% 7.66% 7.58%	First \$350 Over \$350 6.79% 10.19% 6.92% 10.38% 7.05% 10.57% 7.19% 10.78% 7.34% 11.01% 7.51% 11.26% 7.60% 11.40% 7.66% 11.49% 7.66% 11.49% 7.50% 3.00% ry increase: 0.75% 3.00% 3.00% or: 42.18% RP-2000 Combined Healt year for females, weighted 5 Year Select and Ultimat	Basic CC First \$350 Over \$350 First \$350 6.79% 10.19% 2.87% 6.92% 10.38% 2.92% 7.05% 10.57% 2.97% 7.19% 10.78% 3.03% 7.34% 11.01% 3.09% 7.51% 11.26% 3.17% 7.60% 11.40% 3.21% 7.66% 11.49% 3.23% 7.66% 11.49% 3.23% 7.50% 3.00% 3.00% ry increase: 0.75% 3.00% or: 42.18% RP-2000 Combined Healthy Mortality Table Projyear for females, weighted 30% Male and 70% Female	Basic COLA First \$350 Over \$350 First \$350 Over \$350 6.79% 10.19% 2.87% 4.30% 6.92% 10.38% 2.92% 4.38% 7.05% 10.57% 2.97% 4.46% 7.19% 10.78% 3.03% 4.55% 7.34% 11.01% 3.09% 4.64% 7.51% 11.26% 3.17% 4.75% 7.60% 11.40% 3.21% 4.81% 7.66% 11.49% 3.23% 4.85% 7.66% 11.49% 3.23% 4.85% 7.66% 11.49% 3.23% 4.85% 7.50% 3.00% 4.80% 7.50% 3.00% 7.50% 3.00% 4.80% 7.50% 3.00% 4.80% 7.50% 3.00% 7.50% 3.00% 4.80% 7.50% 3.00% 4.80% 7.50% 3.00% 4.81% 4.80% 7.50% 3.00% 7.50% <t< td=""><td>Basic COLA To First \$350 Over \$350 First \$350 Over \$350 First \$350 6.79% 10.19% 2.87% 4.30% 9.66% 6.92% 10.38% 2.92% 4.38% 9.84% 7.05% 10.57% 2.97% 4.46% 10.02% 7.19% 10.78% 3.03% 4.55% 10.22% 7.34% 11.01% 3.09% 4.64% 10.43% 7.51% 11.26% 3.17% 4.75% 10.68% 7.66% 11.49% 3.23% 4.81% 10.81% 7.66% 11.49% 3.23% 4.85% 10.90% 7.66% 11.49% 3.23% 4.85% 10.89% 7.56% 11.37% 3.20% 4.80% 10.78% 7.50% 3.00% 7.50% 3.00% 10.78% 7.50% 3.00% 5.23% 4.80% 10.78% 7.50% 3.00% 5.23% 5.2016 with Scale AA, set back two year year for females, weighted 30% Male and 70% F</td></t<>	Basic COLA To First \$350 Over \$350 First \$350 Over \$350 First \$350 6.79% 10.19% 2.87% 4.30% 9.66% 6.92% 10.38% 2.92% 4.38% 9.84% 7.05% 10.57% 2.97% 4.46% 10.02% 7.19% 10.78% 3.03% 4.55% 10.22% 7.34% 11.01% 3.09% 4.64% 10.43% 7.51% 11.26% 3.17% 4.75% 10.68% 7.66% 11.49% 3.23% 4.81% 10.81% 7.66% 11.49% 3.23% 4.85% 10.90% 7.66% 11.49% 3.23% 4.85% 10.89% 7.56% 11.37% 3.20% 4.80% 10.78% 7.50% 3.00% 7.50% 3.00% 10.78% 7.50% 3.00% 5.23% 4.80% 10.78% 7.50% 3.00% 5.23% 5.2016 with Scale AA, set back two year year for females, weighted 30% Male and 70% F			

ii. General Tier A Members' Contribution Rates from the June 30, 2015 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

SECTION 4: Reporting Information for the San Diego County Employees Retirement Association

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	E	Basic	CC	DLA	Total	
Entry Age	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350
15	3.53%	5.29%	0.75%	1.12%	4.28%	6.41%
16	3.53%	5.29%	0.75%	1.12%	4.28%	6.41%
17	3.59%	5.38%	0.76%	1.14%	4.35%	6.52%
18	3.65%	5.47%	0.77%	1.16%	4.42%	6.63%
19	3.71%	5.57%	0.79%	1.18%	4.50%	6.75%
20	3.77%	5.66%	0.80%	1.20%	4.57%	6.86%
21	3.84%	5.76%	0.81%	1.22%	4.65%	6.98%
22	3.91%	5.86%	0.83%	1.24%	4.74%	7.10%
23	3.97%	5.96%	0.84%	1.26%	4.81%	7.22%
24	4.04%	6.06%	0.85%	1.28%	4.89%	7.34%
25	4.11%	6.16%	0.87%	1.30%	4.98%	7.46%
26	4.17%	6.26%	0.88%	1.32%	5.05%	7.58%
27	4.25%	6.37%	0.90%	1.35%	5.15%	7.72%
28	4.32%	6.48%	0.91%	1.37%	5.23%	7.85%
29	4.39%	6.58%	0.93%	1.39%	5.32%	7.97%
30	4.46%	6.69%	0.94%	1.41%	5.40%	8.10%
31	4.54%	6.81%	0.96%	1.44%	5.50%	8.25%
32	4.61%	6.92%	0.97%	1.46%	5.58%	8.38%
33	4.69%	7.03%	0.99%	1.49%	5.68%	8.52%
34	4.77%	7.15%	1.01%	1.51%	5.78%	8.66%
35	4.85%	7.27%	1.03%	1.54%	5.88%	8.81%
36	4.93%	7.39%	1.04%	1.56%	5.97%	8.95%
37	5.01%	7.51%	1.06%	1.59%	6.07%	9.10%
38	5.09%	7.63%	1.07%	1.61%	6.16%	9.24%
39	5.17%	7.76%	1.09%	1.64%	6.26%	9.40%
40	5.25%	7.88%	1.11%	1.67%	6.36%	9.55%
41	5.34%	8.01%	1.13%	1.69%	6.47%	9.70%
42	5.43%	8.15%	1.15%	1.72%	6.58%	9.87%

iii. General Tier B Members' Contribution Rates from the June 30, 2015 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

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		Basic	CC	DLA	Total				
Entry Age	First \$350	Over \$350	First \$350	Over \$350	First \$350	Over \$350			
43	5.52%	8.28%	1.17%	1.75%	6.69%	10.03%			
44	5.61%	8.42%	1.19%	1.78%	6.80%	10.20%			
45	5.71%	8.56%	1.21%	1.81%	6.92%	10.37%			
46	5.80%	8.70%	1.23%	1.84%	7.03%	10.54%			
47	5.90%	8.85%	1.25%	1.87%	7.15%	10.72%			
48	6.00%	9.00%	1.27%	1.90%	7.27%	10.90%			
49	6.11%	9.16%	1.29%	1.94%	7.40%	11.10%			
50	6.22%	9.33%	1.31%	1.97%	7.53%	11.30%			
51	6.34%	9.51%	1.34%	2.01%	7.68%	11.52%			
52	6.46%	9.69%	1.37%	2.05%	7.83%	11.74%			
53	6.57%	9.85%	1.39%	2.08%	7.96%	11.93%			
54	6.65%	9.97%	1.41%	2.11%	8.06%	12.08%			
55	6.67%	10.01%	1.41%	2.12%	8.08%	12.13%			
56	6.68%	10.02%	1.41%	2.12%	8.09%	12.14%			
57	6.64%	9.96%	1.40%	2.10%	8.04%	12.06%			
58	6.87%	10.31%	1.45%	2.18%	8.32%	12.49%			
59 & Over	7.12%	10.68%	1.51%	2.26%	8.63%	12.94%			
Interest:		7.50%							
Inflation:		3.00%							
Across the board salary increase:		0.75%							
COLA:		2.00%							
COLA Loading Facto Mortality:	or:	21.13% RP-2000 Combined Healt year for females, weighted			e AA, set back two year	s for males and one			
Salary Increase:		•			I)				
Note:			e: 5 Year Select and Ultimate Salary Increase Assumptions (see EXHIBIT II) These rates are determined before any pickups by the employer.						

iii. General Tier B Members' Contribution Rates from the June 30, 2015 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

iv. General Tier C Members' Contribution Rates from the June 30, 2015 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Calculated Under Adopted Assumptions				
	Total			
All General Tier C members	8.03%			

The General Tier C member contribution rate is 50% of the Normal Cost rate.

Note: It is our understanding that in the determination of pension benefits under the Tier C formulas, the compensation that can be taken into account for 2015 is equal to \$117,020. (For an employer that is not enrolled in Social Security, the maximum amount is \$140,424 or 120% of \$117,020). (reference Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2015. (reference Section 7522.10(d))

Entry Age	Basic	COLA	Total
15	8.21%	4.70%	12.91%
16	8.21%	4.70%	12.91%
17	8.21%	4.70%	12.91%
18	8.21%	4.70%	12.91%
19	8.21%	4.70%	12.91%
20	8.21%	4.70%	12.91%
21	8.21%	4.70%	12.91%
22	8.34%	4.78%	13.12%
23	8.46%	4.84%	13.30%
24	8.59%	4.92%	13.51%
25	8.72%	4.99%	13.71%
26	8.86%	5.07%	13.93%
27	8.99%	5.15%	14.14%
28	9.13%	5.23%	14.36%
29	9.27%	5.31%	14.58%
30	9.41%	5.39%	14.80%
31	9.56%	5.47%	15.03%
32	9.71%	5.56%	15.27%
33	9.86%	5.65%	15.51%
34	10.01%	5.73%	15.74%
35	10.18%	5.83%	16.01%
36	10.34%	5.92%	16.26%
37	10.51%	6.02%	16.53%
38	10.69%	6.12%	16.81%
39	10.88%	6.23%	17.11%
40	11.08%	6.34%	17.42%
41	11.30%	6.47%	17.77%
42	11.54%	6.61%	18.15%
43	11.81%	6.76%	18.57%
44	12.12%	6.94%	19.06%
45	12.13%	6.95%	19.08%

v. Safety Tier A Members' Contribution Rates from the June 30, 2015 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

 \star Segal Consulting

	Ca	alculated Under Ac	lopted Assumptions			
Entry	Age	Basic	COLA	Total		
46		12.11%	6.93%	19.04%		
47		12.08%	6.92%	19.00%		
48		12.01%	6.88%	18.89%		
49 & C	ver	11.78%	6.75%	18.53%		
Interest: Inflation: Across the board salary increase: COLA: COLA Loading Factor: Mortality:	 7.50% 3.00% 0.75% 3.00% 57.26% RP-2000 Combined Healthy Mortality Table Projected to 2016 with Scale AA, set back one year for males and age setback for females, weighted 75% Male and 25% Female. 					
Salary Increase:	5 Year Select and Ultimate Salary Increase Assumptions (see EXHIBIT II)					
Note:	These rates an	re determined before any p	ickups by the employer.			

v. Safety Tier A Members' Contribution Rates from the June 30, 2015 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Entry Age	Basic	COLA	Total
15	7.84%	2.31%	10.15%
16	7.84%	2.31%	10.15%
17	7.84%	2.31%	10.15%
18	7.84%	2.31%	10.15%
19	7.84%	2.31%	10.15%
20	7.84%	2.31%	10.15%
21	7.84%	2.31%	10.15%
22	7.96%	2.34%	10.30%
23	8.08%	2.38%	10.46%
24	8.21%	2.42%	10.63%
25	8.33%	2.45%	10.78%
26	8.46%	2.49%	10.95%
27	8.59%	2.53%	11.12%
28	8.72%	2.57%	11.29%
29	8.85%	2.61%	11.46%
30	8.99%	2.65%	11.64%
31	9.13%	2.69%	11.82%
32	9.27%	2.73%	12.00%
33	9.42%	2.77%	12.19%
34	9.57%	2.82%	12.39%
35	9.72%	2.86%	12.58%
36	9.88%	2.91%	12.79%
37	10.04%	2.96%	13.00%
38	10.22%	3.01%	13.23%
39	10.40%	3.06%	13.46%
40	10.59%	3.12%	13.71%
41	10.80%	3.18%	13.98%
42	11.02%	3.24%	14.26%
43	11.17%	3.29%	14.46%
44	11.23%	3.31%	14.54%
45	11.20%	3.30%	14.50%

vi. Safety Tier B Members' Contribution Rates from the June 30, 2015 Actuarial Valuation

Reporting Information for the San Diego County Employees Retirement Association

(Expressed as a Percentage of Monthly Payroll)

SECTION 4:

	С	alculated Under Ac	opted Assumptions				
Entry	Age	Basic	COLA	Total			
46		11.14%	3.28%	14.42%			
47		11.00%	3.24%	14.24%			
48		11.38%	3.35%	14.73%			
49 & C	ver	11.78%	3.47%	15.25%			
Interest: Inflation: Across the board salary increase: COLA: COLA Loading Factor: Mortality:	 7.50% 3.00% 0.75% 2.00% 29.44% RP-2000 Combined Healthy Mortality Table Projected to 2016 with Scale AA, set back one year for males and age setback for females, weighted 75% Male and 25% Female. 						
Salary Increase:	5 Year Selec	5 Year Select and Ultimate Salary Increase Assumptions (see EXHIBIT II)					
Note:	These rates a	re determined before any p	ickups by the employer.				

vi. Safety Tier B Members' Contribution Rates from the June 30, 2015 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

vii. Safety Tier C Members' Contribution Rates from the June 30, 2015 Actuarial Valuation (Expressed as a Percentage of Monthly Payroll)

Calculated Under Adopted Assumptions			
	Total		
All Safety Tier C members	13.81%		

The Safety Tier C member contribution rate is 50% of the Normal Cost rate.

Note: It is our understanding that in the determination of pension benefits under the Tier C formulas, the compensation that can be taken into account for 2015 is equal to \$117,020. (For an employer that is not enrolled in Social Security, the maximum amount is \$140,424 or 120% of \$117,020). (reference Section 7522.10). These amounts should be adjusted for changes to the Consumer Price Index for All Urban Consumers after 2015. (reference Section 7522.10(d))

Appendix B

Unfunded Actuarial Accrued Liability (UAAL) Amortization Schedule as of June 30, 2015

	Date Established	Description	Initial Amount	Outstanding Balance	Years Remaining	Payment
General	June 30, 2004	Reamortize UAAL	\$898,323,000	\$762,808,000	9	\$101,163,000
	June 30, 2005	Actuarial loss	128,924,000	114,812,000	10	13,935,000
	June 30, 2006	Actuarial gain	(122,837,000)	(113,421,000)	11	(12,725,000)
	June 30, 2007	Actuarial gain	(319,377,000)	(303,262,000)	12	(31,709,000)
	June 30, 2008	Actuarial gain	(252,322,000)	(244,710,000)	13	(24,010,000)
	June 30, 2009	Actuarial loss	229,764,000	226,271,000	14	20,955,000
	June 30, 2010	Actuarial loss	275,738,000	274,360,000	15	24,103,000
	June 30, 2010	Assumption change	273,446,000	272,081,000	15	23,902,000
	June 30, 2011	Actuarial loss	272,855,000	273,357,000	16	22,880,000
	June 30, 2012	Actuarial loss	331,062,000	332,682,000	17	26,631,000
	June 30, 2012	Assumption change	(23,270,000)	(23,384,000)	17	(1,871,000)
	June 30, 2013	Actuarial gain	(111,526,000)	(112,035,000)	18	(8,606,000)
	June 30, 2013	Assumption change	284,375,000	285,674,000	18	21,944,000
	June 30, 2014	Actuarial gain	(92,909,000)	(93,246,000)	19	(6,894,000)
	June 30, 2015	Actuarial gain	(25,009,000)	(25,009,000)	20	(1,784,000)
	June 30, 2015	Assumption change	221,787,000	221,787,000	20	15,824,000
Subtotal				\$1,848,765,000		\$183,738,000

Appendix B

Unfunded Actuarial Accrued Liability (UAAL) Amortization Schedule as of June 30, 2015 (continued)

Date Established	Description	Initial Amount	Outstanding Balance	Years Remaining	Payment
June 30, 2004	Reamortize UAAL	\$304,408,000	\$258,486,000	9	\$34,280,000
June 30, 2005	Actuarial loss	40,271,000	35,862,000	10	4,353,000
June 30, 2006	Actuarial gain	(29,564,000)	(27,298,000)	11	(3,063,000)
June 30, 2007	Actuarial gain	(81,955,000)	(77,821,000)	12	(8,137,000)
June 30, 2008	Actuarial gain	(88,653,000)	(85,978,000)	13	(8,436,000)
June 30, 2009	Actuarial loss	82,198,000	80,948,000	14	7,497,000
June 30, 2010	Actuarial loss	103,299,000	102,783,000	15	9,030,000
June 30, 2010	Assumption change	140,579,000	139,878,000	15	12,288,000
June 30, 2011	Actuarial loss	114,781,000	114,993,000	16	9,625,000
June 30, 2012	Actuarial loss	98,453,000	98,936,000	17	7,920,000
June 30, 2012	Assumption change	6,803,000	6,836,000	17	547,000
June 30, 2013	Actuarial gain	(18,694,000)	(18,779,000)	18	(1,443,000)
June 30, 2013	Assumption change	(20,621,000)	(20,716,000)	18	(1,591,000)
June 30, 2014	Actuarial loss	4,218,000	4,233,000	19	313,000
June 30, 2015	Actuarial gain	(14,992,000)	(14,992,000)	20	(1,070,000)
June 30, 2015	Assumption change	98,607,000	98,607,000	20	7,036,000
			\$695,978,000		\$69,149,000

Safety

Subtotal

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Appendix B

Unfunded Actuarial Accrued Liability (UAAL) Amortization Schedule as of June 30, 2015 (continued)

	Date Established	Description	Initial Amount	Outstanding Balance	Years Remaining	Payment
General and Safety	June 30, 2004	Reamortize UAAL	\$1,202,731,000	\$1,021,294,000	9	\$135,443,000
	June 30, 2005	Actuarial loss	169,195,000	150,674,000	10	18,288,000
	June 30, 2006	Actuarial gain	(152,401,000)	(140,719,000)	11	(15,788,000)
	June 30, 2007	Actuarial gain	(401,332,000)	(381,083,000)	12	(39,846,000)
	June 30, 2008	Actuarial gain	(340,974,000)	(330,688,000)	13	(32,446,000)
	June 30, 2009	Actuarial loss	311,963,000	307,219,000	14	28,452,000
	June 30, 2010	Actuarial loss	379,037,000	377,143,000	15	33,133,000
	June 30, 2010	Assumption change	414,025,000	411,959,000	15	36,190,000
	June 30, 2011	Actuarial loss	387,636,000	388,350,000	16	32,505,000
	June 30, 2012	Actuarial loss	429,515,000	431,618,000	17	34,551,000
	June 30, 2012	Assumption change	(16,467,000)	(16,548,000)	17	(1,324,000)
	June 30, 2013	Actuarial gain	(130,220,000)	(130,814,000)	18	(10,049,000)
	June 30, 2013	Assumption change	263,754,000	264,958,000	18	20,353,000
	June 30, 2014	Actuarial gain	(88,691,000)	(89,013,000)	19	(6,581,000)
	June 30, 2015	Actuarial gain	(40,001,000)	(40,001,000)	20	(2,854,000)
	June 30, 2015	Assumption change	320,394,000	320,394,000	20	22,860,000
Grand Total				\$2,544,743,000		\$252,887,000

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