



San Diego County Employees Retirement Association (SDCERA)

Governmental Accounting Standards Board (GAS) 68

**Actuarial Valuation Based on June 30, 2016
Measurement Date for Employer Reporting
as of June 30, 2017**

This report has been prepared at the request of the Board of Retirement to assist the sponsors of the Fund in preparing their financial report for their liabilities associated with the SDCERA pension plan. 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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August 18, 2017

*Gregory J. Bych
Chief Financial Officer
San Diego County Employees Retirement Association
2275 Rio Bonito Way, Suite 200
San Diego, CA 92108-1685*

Dear Greg:

We are pleased to submit this Governmental Accounting Standards (GAS) 68 Actuarial Valuation based on June 30, 2016 measurement date for employer reporting as of June 30, 2017. It contains various information that will need to be disclosed in order for SDCERA employers to comply with GAS 68.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist the sponsors in preparing their financial report for their liabilities associated with the SDCERA pension plan. The census and financial information on which our calculations were based was provided by SDCERA. That assistance is gratefully acknowledged.

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; and changes in plan provisions or applicable law.

The actuarial calculations were completed under the supervision of Andy Yeung, ASA, MAAA, FCA, Enrolled Actuary. 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 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 expectations for SDCERA.

We look forward to reviewing this report with you and to answering any questions.

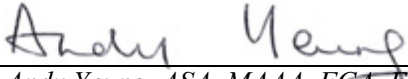
Sincerely,

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

By: 

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

AW/jl



*Andy Yeung, ASA, MAAA, FCA, EA
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SECTION 1: Valuation Summary for San Diego County Employees Retirement Association

Purpose

This report has been prepared by Segal Consulting to present certain disclosure information required by Governmental Accounting Standards (GAS) 68 for employer reporting as of June 30, 2017. The results used in preparing this GAS 68 report are comparable to those used in preparing the Governmental Accounting Standards (GAS) 67 report for the plan based on a reporting date and a measurement date as of June 30, 2016. This valuation is based on:

- The benefit provisions of SDCERA, as administered by the Board of Retirement;
- The characteristics of covered active members, terminated vested members, and retired members and beneficiaries as of June 30, 2015, provided by SDCERA;
- The market value of assets of the Plan as of June 30, 2016, provided by SDCERA;
- Economic assumptions regarding future salary increases and investment earnings as of June 30, 2016; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc., as of June 30, 2016.

General Observations on GAS 68 Actuarial Valuation

The following points should be considered when reviewing this GAS 68 report:

- The Governmental Accounting Standards Board (GASB) rules only define pension liability and expense for financial reporting purposes, and do not apply to contribution amounts for pension funding purposes. Employers and plans can still develop and adopt funding policies under current practices.
- When measuring pension liability GASB uses the same actuarial cost method (Entry Age method) and the same type of discount rate (expected return on assets) as SDCERA uses for funding. This means that with the exception of the Section 415 (m) benefits and a liability equal to the assets earmarked in the Supplemental Benefit Reserve (see discussion in the next two bullets), the Total Pension Liability (TPL) measure for financial reporting shown in this report is determined on the same basis as SDCERA's Actuarial Accrued Liability (AAL) measure for funding. We note that the same is generally true for the Normal Cost component of the annual plan cost for funding and financial reporting.
- The Net Pension Liability (NPL) is equal to the difference between the TPL and the Plan's Fiduciary Net Position. The Plan's Fiduciary Net Position is equal to the market value of assets (excluding the Health Insurance Allowance

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Reserve). With the already noted exceptions of the liability associated with the Section 415(m) benefits and the Supplemental Benefit Allowance, the NPL measure is very similar to UAAL on a market value basis.

- The NPLs measured as of June 30, 2016 and 2015 have been determined by rolling forward the TPLs as of June 30, 2015 and 2014 actuarial valuation dates, respectively. In addition, changes in actuarial assumptions that occurred between the June 30, 2015 valuation date and the June 30, 2016 measurement date have been reflected. The Plan's Fiduciary Net Position (plan assets) are valued as of the measurement dates. Consistent with the provisions of GAS 68, the assets and liabilities measured as of June 30, 2016 and 2015 are not adjusted or rolled forward to June 30, 2017 and 2016 reporting dates, respectively.

Key Findings in Valuation Year

The following key findings were the result of this actuarial valuation:

- As disclosed in our previous GAS 68 reports, the liabilities and the contribution requirements to pay off the Unfunded Actuarial Accrued Liability (UAAL) in the funding valuations were calculated after the Section 415(b) limit was applied to the retirees in pay status. This was done because the benefit amounts reported by SDCERA's pension administration system for use in the valuation include only benefits up to the Section 415(b) limit. Those calculations are consistent with the current practice that benefits in excess of the Section 415(b) limit are paid out of the employer's Section 415(m) replacement benefit program. However, for the purpose of GASB 67/68, it is our understanding that those liabilities should be included for financial reporting purposes. Accordingly, a liability of \$16.3 million as of June 30, 2016 (rolled forward from June 30, 2015) has been included in this report.
- Several years ago, the Board set aside some assets from earnings available after crediting interest to pay a discretionary Supplemental Benefit Allowance in two reserve accounts. There was \$6.1 million in those reserves as of June 30, 2016. For the purpose of this valuation, we have included a liability and an asset of the same amount in preparing this report.
- The NPL increased from \$2.808 billion as of June 30, 2015 to \$4.298 billion as of June 30, 2016 primarily due to the 0.48% return on the market value of assets for FY 2016 that was less than the assumed return of 7.50% (a loss of \$721 million) and changes in actuarial assumptions (a loss of \$788 million measured using June 30, 2015 membership data)⁽¹⁾. The loss was offset to some extent by the gains from lower than expected active salary increases and lower

⁽¹⁾ The increase in liabilities due to assumption changes when measured using June 30, 2016 membership data as used in the June 30, 2016 funding valuation was \$772 million.

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than expected retiree COLA increases for FY 2015 (because liabilities are rolled forward from June 30, 2015 to June 30, 2016, these gains are not reflected until this valuation as of June 30, 2016). Changes in these values during the last two fiscal years ending June 30, 2015 and June 30, 2014 can be found in Exhibit 5 in Section 2.

- The discount rate originally used to determine the TPL and NPL as of June 30, 2016 was 7.50% following the same assumption used by SDCERA in the pension funding valuation as of June 30, 2015. However, as the Board adopted new actuarial assumptions (which includes a new discount rate of 7.25% together with other new demographic assumptions) for use in the pension funding valuation as of June 30, 2016, we have estimated the impact of those assumption changes by (1) revaluing the TPL as of June 30, 2015 (before the roll forward) using the new actuarial assumptions and (2) using this revalued TPL in rolling forward the results from June 30, 2015 to June 30, 2016.
- The detailed calculations of the discount rate of 7.25% used in calculation of the TPL and NPL as of June 30, 2016 can be found in Appendix A of Section 3. Various other information that is required to be disclosed can be found throughout Exhibits 1 through 13 in Section 2.
- The Safety membership class has only one employer (i.e., the County), so all of the NPL for Safety as of both June 30, 2015 and June 30, 2016 are allocated to the County.

For General, the NPL (excluding liability for Section 415(m) Replacement Benefit Program) is allocated based on the actual employer contributions (excluding employer pickup of member contributions) for the Qualified Plan within the General membership class.

- Calculate ratio of employer's contributions to the total contributions for the membership class.
- Multiply this ratio by the NPL for the membership class to determine the employer's proportionate share of the NPL for the membership class.

If the employer is in several membership classes, the employer's total allocated NPL is the sum of its allocated NPL from each membership class. Proportionate share of total plan NPL is then the ratio of the employer's total allocated NPL to the total NPL of all employers.

The NPL associated with the Section 415(m) Replacement Benefit Program has been allocated according to the employer code provided for all retirees currently eligible to receive a benefit under that program.

The NPL allocation can be found in Exhibit 7 in Section 2.

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Summary of Key Valuation Results

Reporting Date for Employer under GAS 68	6/30/2017⁽¹⁾	6/30/2016⁽¹⁾
Measurement Date for Employer under GAS 68	6/30/2016	6/30/2015
Disclosure elements for fiscal year ending June 30:		
1. Service cost ⁽²⁾	\$301,125,921	\$286,961,714
2. Total Pension Liability	14,559,258,800	13,137,896,416
3. Plan fiduciary net position ⁽³⁾	10,261,267,921	10,330,329,626
4. Net Pension Liability	4,297,990,879	2,807,566,790
5. Pension expense	698,844,743	330,958,145
Schedule of contributions for fiscal year ending June 30:		
6. Actuarially determined contributions ⁽⁴⁾	\$382,424,947	\$386,040,882
7. Actual contributions ^{(4),(5)}	382,424,947	386,040,882
8. Contribution deficiency (excess) (6) – (7)	0	0
Demographic data for plan year ending June 30:⁽⁶⁾		
9. Number of retired members and beneficiaries	17,734	17,186
10. Number of vested terminated members	5,413	5,274
11. Number of active members	17,768	17,656
Key assumptions as of June 30:		
12. Investment rate of return	7.25%	7.50%
13. Inflation rate	3.00%	3.00%
14. Projected salary increases ⁽⁷⁾	General: 4.25% to 10.25% and Safety: 4.50% to 12.00%	General: 4.50% to 9.75% and Safety: 4.75% to 11.75%

⁽¹⁾ The reporting dates and measurement dates for the plan are June 30, 2016 and June 30, 2015, respectively.

⁽²⁾ Please note that service cost is always based on the previous year's assumptions, meaning the 2016 service cost and 2015 service cost are based on those assumptions shown as of June 30, 2015 (as shown above under the 6/30/2015 measurement date column) and June 30, 2014 (as shown in the table below), respectively.

Key assumptions as of June 30, 2014:

Investment rate of return	7.75%
Inflation rate	3.25%
Projected salary increases*	General: 4.75% to 10.00% and Safety: 5.00% to 12.00%

* Includes inflation at 3.25% plus real across-the-board salary increases of 0.75% plus merit and promotional increases

⁽³⁾ Net of Assets in 401(h) Reserve.

⁽⁴⁾ Based on updated total employer contribution amount provided by SDCERA after we finalized the June 30, 2016 GAS 67 report.

⁽⁵⁾ Excludes employer pickup of member contributions and proceeds from Pension Obligation Bonds.

⁽⁶⁾ Data as of June 30, 2015 is used in the measurement of the TPL as of June 30, 2016.

⁽⁷⁾ Includes inflation at 3.00% plus real across-the-board salary increases of 0.50% plus merit and promotional increases for June 30, 2016 and includes inflation at 3.00% plus real across-the-board salary increases of 0.75% plus merit and promotional increases for June 30, 2015.

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Important Information about Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – 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.

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

- **Plan of benefits** 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 (as well as the plan summary included in our funding valuation 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.
- **Assets** 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 Board to assist the sponsors of the Fund in preparing items related to the pension plan in their financial reports. Segal is not responsible for the use or misuse of its report, particularly by any other party.

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- 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 Consulting 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.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 1

General Information – “Financial Statements”, Note Disclosures and Required Supplementary Information for a Cost-Sharing Pension Plan

Plan Description

Plan administration. The San Diego County Employees Retirement Association (SDCERA) was established by the County of San Diego on July 1, 1939. SDCERA is administered by the Board of Retirement and governed by the County Employees’ Retirement Law of 1937 (California Government Code Section 31450 et. seq.) SDCERA is a cost-sharing multiple employer public employee retirement system whose main function is to provide service retirement, disability, death and survivor benefits to the General and Safety members employed by the County of San Diego. SDCERA also provides retirement benefits to the employee members of the Superior Court, San Dieguito River Valley Joint Powers Authority, Local Agency Formation Commission and San Diego County Office of Education.

The management of SDCERA is vested with the San Diego County Board of Retirement. The Board consists of nine members and two alternates made up of member-elected representatives, Board of Supervisors-appointed representatives and the County Treasurer-Tax Collector who is elected by the general public and a member of the Board of Retirement by law. All members of the Board of Retirement serve terms of three years except for the County Treasurer-Tax Collector whose term runs concurrent with his term as County Treasurer.

Plan membership. At June 30, 2016, pension plan membership consisted of the following:

Retired members or beneficiaries currently receiving benefits	17,734
Vested terminated members entitled to, but not yet receiving benefits	5,413
Active members	<u>17,768</u>
Total	40,915

Note: Data as of June 30, 2016 is not used in the measurement of the TPL as of June 30, 2016.

Benefits provided. SDCERA provides service retirement, disability, death and survivor benefits to eligible employees. All employees appointed to a permanent position and work at least half time or 20 hours weekly for the County of San Diego or the other participating agencies become members of SDCERA effective on the first day of the first full pay period after employment in a permanent position. There are separate retirement plans for General and Safety member employees. Safety membership is extended to those involved in active law enforcement or who otherwise qualify for Safety membership. Court service officers and probation officers were added to Safety membership in 1998 and 1999,

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respectively. All other employees are classified as General members. The tiers and their basic provisions are listed in the following table:

<u>Tier Name</u>	<u>Governing Code</u>	<u>Membership Effective Date</u>	<u>Basic Provisions</u>	<u>Final Average Salary Period</u>
General Tier 1	§31676.12	Before March 8, 2002 ⁽¹⁾	2.62% at 62; maximum 3% COLA	Highest 1-year
General Tier A	§31676.17	March 8, 2002 to August 27, 2009	3.0% at 60; maximum 3% COLA	Highest 1-year
General Tier B	§31676.12	August 28, 2009 to December 31, 2012	2.62% at 62; maximum 2% COLA	Highest 3-year
General Tier C	§7522.20(a)	January 1, 2013	2.5% at 67; maximum 2% COLA	Highest 3-year ⁽²⁾
Safety Tier A	§31664.1	Before August 28, 2009	3.0% at 50; maximum 3% COLA	Highest 1-year
Safety Tier B	§31664.2	August 28, 2009 to December 31, 2012	3.0% at 55; maximum 2% COLA	Highest 3-year
Safety Tier C	§7522.25(d)	January 1, 2013	2.7% at 57; maximum 2% COLA	Highest 3-year ⁽²⁾

⁽¹⁾ All General members with membership dates before March 8, 2002 who made a specific and irrevocable election to opt out of General Tier A. This also included those General Members in deferred status on March 8, 2002.

⁽²⁾ PEPRA limits the amount of compensation that can be used to calculate retirement benefit for Tier C to 100% of the 2013 Social Security taxable wage base limit for General members and 120% for Safety members. These amounts will be adjusted with price inflation starting in 2014.

Any new member who becomes a member on or after January 1, 2013 is placed into Tier C and is subject to the provisions of California Public Employees' Pension Reform Act of 2013 (PEPRA), California Government Code 7522 et seq.

General members enrolled in Tier 1, A or B are eligible to retire once they attain the age of 70 regardless of service or at age 50 (55 for Tier B) and have acquired 10 or more years of retirement service credit. A General member in Tier 1, A or

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B with 30 years of service is eligible to retire regardless of age. General members enrolled in General Tier C are eligible to retire once they have attained the age of 55⁽²⁾, and have acquired five years of retirement service credit.

Safety members enrolled in Tier A or B are eligible to retire once they attain the age of 70 regardless of service or at age 50 and have acquired 10 or more years of retirement service credit. A Safety member in Tier A or B with 20 years of service is eligible to retire regardless of age. Safety members enrolled in Safety Tier C are eligible to retire once they have attained the age of 50, and have acquired five years of retirement service credit.

The retirement benefit the member will receive is based upon age at retirement, final average compensation, years of retirement service credit and retirement plan and tier.

For members enrolled in Tier 1, A or B, the maximum monthly retirement allowance is 100% of final compensation. There is no maximum for members enrolled in Tier C.

The member may elect an unmodified retirement allowance, or choose an optional retirement allowance. The unmodified retirement allowance provides the highest monthly benefit and a 60% continuance to an eligible surviving spouse or domestic partner. An eligible surviving spouse or domestic partner is one married to or registered with the member one year prior to the effective retirement date. Certain surviving spouse or domestic partners may also be eligible if marriage or domestic partnership was at least two years prior to the date of death and the surviving spouse or domestic partner has attained age 55. There are four optional retirement allowances the member may choose. Each of the optional retirement allowances requires a reduction in the unmodified retirement allowance in order to allow the member the ability to provide certain benefits to a surviving spouse, domestic partner, or named beneficiary having an insurable interest in the life of the member.

SDCERA provides an annual cost-of-living benefit to all retirees. The cost-of-living adjustment, based upon the Consumer Price Index for the San Diego County Area (with 1982-84 as the base period), is capped at 3.0% for Tier 1 and Tier A; and capped at 2.0% for Tier B and Tier C.

The County of San Diego and the other participating agencies contribute to the retirement plan based upon actuarially determined contribution rates adopted by the Board of Retirement. Employer contribution rates are adopted annually based upon recommendations received from SDCERA's actuary after the completion of the annual actuarial valuation. The average employer contribution rate as of June 30, 2016 for FY 2016 (based on the June 30, 2014 valuation) was 33.52% (not adjusted for pick-up) of compensation.

⁽²⁾ The Board acted at the April 2017 meeting to change the age requirement from 55 to 52 starting with the results for the funding valuation as of June 30, 2016. Because liabilities in this valuation have been rolled forward from the June 30, 2015 valuation to June 30, 2016, we have not yet reflected that change in preparing this year's results.

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All members are required to make contributions to SDCERA regardless of the retirement plan or tier in which they are included. The average member contribution rate as of June 30, 2016 for FY 2016 (based on the June 30, 2014 valuation) was 11.20% (not adjusted for pick-up) of compensation.

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EXHIBIT 2

Net Pension Liability

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
The components of the Net Pension Liability are as follows:		
Total Pension Liability	\$14,559,258,800	\$13,137,896,416
Plan's Fiduciary Net Position	<u>(10,261,267,921)</u>	<u>(10,330,329,626)</u>
Net Pension Liability	\$4,297,990,879	\$2,807,566,790
Plan's Fiduciary Net Position as a percentage of the Total Pension Liability	70.48%	78.63%

The Net Pension Liability (NPL) was measured as of June 30, 2016 and 2015. The Plan Fiduciary Net Position (plan assets) was valued as of the measurement date while the Total Pension Liability (TPL) was determined based upon rolling forward the TPL from actuarial valuations as of June 30, 2015 and 2014, respectively.

Plan provisions. The plan provisions used in the measurement of the NPLs as of June 30, 2016 and 2015 are the same as those used in the SDCERA actuarial valuations as of June 30, 2016 and 2015, respectively.

Actuarial assumptions. The TPL as of June 30, 2016 was remeasured by (1) revaluing the TPL as of June 30, 2015 (before the roll forward) to include the following actuarial assumptions that the Retirement Board has adopted for use in the pension funding valuation as of June 30, 2016 and (2) using this revalued TPL in rolling forward the results from June 30, 2015 to June 30, 2016:

Inflation	3.00%
Salary increases	General: 4.25% to 10.25% and Safety: 4.50% to 12.00%, vary by service, including inflation
Investment rate of return	7.25%, net of pension plan investment expense, including inflation
Other assumptions	See analysis of actuarial experience during the period July 1, 2012 through June 30, 2015

The TPL as of June 30, 2015 was remeasured by (1) revaluing the TPL as of June 30, 2014 (before the roll forward) to include the following actuarial assumptions that the Retirement Board has adopted for use in the pension funding valuation as of June 30, 2015 and (2) using this revalued TPL in rolling forward the results from June 30, 2014 to June 30, 2015:

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EXHIBIT 2 (continued)

Net Pension Liability

Inflation	3.00%
Salary increases	General: 4.50% to 9.75% and Safety: 4.75% to 11.75%, vary by service, including inflation
Investment rate of return	7.50%, net of pension plan investment expense, including inflation
Other assumptions	Same as those used in June 30, 2015 funding valuation

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EXHIBIT 3

Target Asset Allocation

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Large Cap U.S. Equity	17.685%	5.80%
Small Cap U.S. Equity	1.965%	6.47%
Developed International Equity	16.200%	6.97%
Emerging Markets Equity	9.150%	8.93%
U.S. Core Bonds	10.000%	0.84%
High Yield Bonds	5.000%	3.47%
Global Bonds	2.000%	0.49%
Bank Loan	5.000%	2.34%
Cash & Equivalents	2.000%	-0.46%
Real Estate	4.500%	4.45%
Value Added Real Estate	4.500%	7.10%
Hedge Fund (Fund to Funds)	8.000%	4.40%
Private Real Asset	6.000%	9.00%
Private Equity	8.000%	9.00%
Total	100.000%	

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EXHIBIT 3 (continued)

Target Asset Allocation

Discount rate: The discount rates used to measure the TPL were 7.25% and 7.50% as of June 30, 2016 and June 30, 2015, respectively. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rates and that employer contributions will be made at rates equal to the actuarially determined contribution rates. For this purpose, only employer contributions that are intended to fund benefits for current plan members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future plan members and their beneficiaries, as well as projected contributions from future plan members, are not included. Based on those assumptions, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL as of both June 30, 2016 and June 30, 2015.

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EXHIBIT 4

Discount Rate Sensitivity

Sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the NPL of the SDCERA as of June 30, 2015, calculated using the discount rate of 7.25%, as well as what the SDCERA's NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) than the current rate. The determination of the NPL by employer is shown later in Exhibit 7.

Net Pension Liability	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
County of San Diego	\$5,868,690,617	\$3,992,747,772	\$2,452,882,451
Superior Court	442,463,428	301,395,361	185,595,919
San Dieguito River Valley Joint Powers Authority	3,216,461	2,186,365	1,340,830
Local Agency Formation Commission	2,444,133	1,661,381	1,018,873
San Diego County Office of Education	<u>0</u>	<u>0</u>	<u>0</u>
Total for all Employers	\$6,316,814,639	\$4,297,990,879	\$2,640,838,073

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 5

Schedule of Changes in Net Pension Liability – Last Two Fiscal Years

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Total Pension Liability		
1. Service cost	\$301,125,921	\$286,961,714
2. Interest	981,702,881	941,787,725
3. Change of benefit terms	0	0
4. Differences between expected and actual experience	(20,774,030)	(126,947,901)
5. Changes of assumptions	788,402,615	309,945,021
6. Benefit payments, including refunds of member contributions	<u>(629,095,003)</u>	<u>(592,259,145)</u>
7. Net change in Total Pension Liability	\$1,421,362,384	\$819,487,414
8. Total Pension Liability – beginning	<u>13,137,896,416</u>	<u>12,318,409,002</u>
9. Total Pension Liability – ending	<u>\$14,559,258,800</u>	<u>\$13,137,896,416</u>
Plan Fiduciary Net Position		
10. Contributions – employer ⁽¹⁾	\$382,424,947	\$386,040,882
11. Contributions – plan members	104,636,306	98,590,114
12. Contributions – employer pickup of member contributions ⁽¹⁾	23,161,173	28,730,374
13. Net investment income	63,685,950	242,575,123
14. Benefit payments, including refunds of member contributions	(629,095,003)	(592,259,145)
15. Administrative expense	(13,875,078)	(14,042,671)
16. Other	<u>0</u>	<u>0</u>
17. Net change in Plan Fiduciary Net Position	(\$69,061,705)	\$149,634,677
18. Plan Fiduciary Net Position – beginning	<u>10,330,329,626</u>	<u>10,180,694,949</u>
19. Plan Fiduciary Net Position – ending	\$10,261,267,921	\$10,330,329,626
20. Net Pension Liability – ending (9) – (18)	<u>\$4,297,990,879</u>	<u>\$2,807,566,790</u>
21. Plan Fiduciary Net Position as a percentage of the Total Pension Liability	70.48%	78.63%
22. Covered employee payroll ⁽²⁾	\$1,140,882,516	\$1,120,001,088
23. Plan Net Pension Liability as percentage of covered employee payroll	376.73%	250.68%

⁽¹⁾ Based on updated total employer contribution amount provided by SDCERA after we finalized the June 30, 2016 GAS 67 report.

⁽²⁾ Covered employee payroll represents compensation earnable and pensionable compensation. Only compensation earnable and pensionable compensation that would possibly go into the determination of retirement benefits are included.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 6

Schedule of Employer's Contributions – Last Ten Fiscal Years

Year Ended June 30	Actuarially Determined Contributions⁽¹⁾	Contributions in Relation to the Actuarially Determined Contributions⁽²⁾	Contribution Deficiency (Excess)	Covered-Employee Payroll⁽³⁾	Contributions as a Percentage of Covered Employee Payroll
2007	\$231,300,000	\$258,200,000	\$(26,900,000)	\$989,321,175	26.10%
2008	236,763,000	236,763,000	0	1,051,372,914	22.52%
2009	219,635,000	219,635,000	0	1,102,242,435	19.93%
2010	188,414,000	189,470,000	(1,056,000)	1,050,985,450	18.03%
2011	205,799,000	235,392,000	(29,593,000)	1,036,693,162	22.71%
2012	274,106,000	274,106,000	0	1,047,414,147	26.17%
2013	298,128,000	312,288,000	(14,160,000)	1,028,420,277	30.37%
2014	353,841,000	353,841,000	0	1,072,896,037	32.98%
2015	386,041,000	386,041,000	0	1,120,001,088	34.47%
2016	382,424,947	382,424,947	0	1,140,882,516	33.52%

See accompanying notes to this schedule on next page.

⁽¹⁾ All "Actuarially Determined Contributions" through June 30, 2015 were determined as the "Annual Required Contribution" under GAS 25 and 27.

⁽²⁾ Excludes employer pickup of member contributions and proceeds from Pension Obligation Bonds.

⁽³⁾ Covered employee payroll represents compensation earnable and pensionable compensation. Only compensation earnable and pensionable compensation that would possibly go into the determination of retirement benefits are included.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

Notes to Exhibit 6

Methods and assumptions used to establish “actuarially determined contribution” (ADC) rates:

Valuation date	Actuarially determined contribution rates are calculated as of June 30, one year prior to the end of the fiscal year in which contributions are reported
Actuarial cost method	Entry Age Actuarial Cost Method
Amortization method	Level percent of payroll for total unfunded actuarial accrued liability
Remaining amortization period	Prior to July 1, 2013, the Association’s UAAL was amortized over 20-year fixed (i.e. decreasing) layered amortization periods. As of July 1, 2013, 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/losses are amortized over separate decreasing 20-year periods.
Asset valuation method	Market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on market value and is recognized over a five-year period. The Actuarial Value of Assets is reduced by the value of the non-valuation reserves and designations. 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.
Actuarial assumptions:	
June 30, 2014 valuation (for year ended 2016 ADC)	
Investment rate of return	7.75%, net of pension plan investment expense, including inflation
Inflation rate	3.25%
Real across-the-board salary increases	0.75%
Projected salary increases	General: 4.75% to 10.00% and Safety: 5.00% to 12.00%, vary by service, including inflation
Cost of living adjustments	3.00% of retirement income for Tier 1 and Tier A 2.00% of retirement income for Tier B and Tier C
Other assumptions	Same as those used in the June 30, 2014 funding actuarial valuation

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 7

Determination of Proportionate Share

**Actual Employer Contributions by Employer and Membership Class into SDCERA for the Qualified Plan
July 1, 2014 to June 30, 2015**

Employer	General	General Percentage¹	Safety	Safety Percentage	Total Contributions	Total Percentage
County of San Diego	\$241,851,860	90.119%	\$117,671,134	100.000%	\$359,522,994	93.130%
Superior Court	26,210,608	9.767%	0	0.000%	26,210,608	6.790%
San Dieguito River Valley Joint Powers Authority	171,857	0.064%	0	0.000%	171,857	0.045%
Local Agency Formation Commission	135,423	0.050%	0	0.000%	135,423	0.035%
San Diego County Office of Education	<u>0</u>	<u>0.000%</u>	<u>0</u>	<u>0.000%</u>	<u>0</u>	<u>0.000%</u>
Total for all Employers	\$268,369,748	100.000%	\$117,671,134	100.000%	\$386,040,882	100.000%

**PART ONE - Allocation of June 30, 2015 Net Pension Liability (NPL)
Excluding Liability for Payments under Section 415(m) Replacement Benefit Program**

Employer	General	General Percentage¹	Safety	Safety Percentage	Total NPL	Total Percentage
County of San Diego	\$1,827,632,776	90.119%	\$765,762,187	100.000%	\$2,593,394,963	92.827%
Superior Court	198,069,042	9.767%	0	0.000%	198,069,042	7.090%
San Dieguito River Valley Joint Powers Authority	1,298,694	0.064%	0	0.000%	1,298,694	0.046%
Local Agency Formation Commission	1,023,368	0.050%	0	0.000%	1,023,368	0.037%
San Diego County Office of Education	<u>0</u>	<u>0.000%</u>	<u>0</u>	<u>0.000%</u>	<u>0</u>	<u>0.000%</u>
Total for all Employers	\$2,028,023,880	100.000%	\$765,762,187	100.000%	\$2,793,786,067	100.000%

¹ The unrounded percentages are used in the allocation of the NPL amongst the General employers.

Note: Results may not total due to rounding.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 7 (continued)

Determination of Proportionate Share

**PART TWO - Allocation of June 30, 2015 Net Pension Liability (NPL)
Attributed to Liability for Payments under Section 415(m) Replacement Benefit Program**

Employer	General		Safety		Total NPL	Total Percentage
	General	Percentage	Safety	Percentage		
County of San Diego	\$10,327,776	83.313%	\$1,384,437	100.000%	\$11,712,213	84.990%
Superior Court	2,068,510	16.687%	0	0.000%	2,068,510	15.010%
San Dieguito River Valley Joint Powers Authority	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Commission	0	0.000%	0	0.000%	0	0.000%
San Diego County Office of Education	<u>0</u>	<u>0.000%</u>	<u>0</u>	<u>0.000%</u>	<u>0</u>	<u>0.000%</u>
Total for all Employers	\$12,396,286	100.000%	\$1,384,437	100.000%	\$13,780,723	100.000%

**PART THREE - Allocation of June 30, 2015 Net Pension Liability (NPL)
Including Liability for Payments under Section 415(m) Replacement Benefit Program**

Employer	General		Safety		Total NPL	Total Percentage
	General	Percentage	Safety	Percentage		
County of San Diego	\$1,837,960,552	90.077%	\$767,146,624	100.000%	\$2,605,107,176	92.789%
Superior Court	200,137,552	9.809%	0	0.000%	200,137,552	7.129%
San Dieguito River Valley Joint Powers Authority	1,298,694	0.064%	0	0.000%	1,298,694	0.046%
Local Agency Formation Commission	1,023,368	0.050%	0	0.000%	1,023,368	0.036%
San Diego County Office of Education	<u>0</u>	<u>0.000%</u>	<u>0</u>	<u>0.000%</u>	<u>0</u>	<u>0.000%</u>
Total for all Employers	\$2,040,420,166	100.000%	\$767,146,624	100.000%	\$2,807,566,790	100.000%

Note: Results may not total due to rounding.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 7 (continued)

Determination of Proportionate Share

Notes:

Based on July 1, 2014 through June 30, 2015 employer contributions (excluding employer pickup of member contributions) as provided by SDCERA.

The Net Pension Liability (NPL) for each membership class is the Total Pension Liability (TPL) minus the Plan Fiduciary Net Position. The TPL for each membership class is obtained from internal valuation results based on actual membership data for each membership class. The Plan Fiduciary Net Position for each membership class was determined by adjusting the Valuation Value of Assets (VVA) for each membership class by the ratio of the total SDCERA Plan Fiduciary Net Position to the total SDCERA VVA.

PART ONE - Allocation of NPL (excluding Liability for Section 415(m) Replacement Benefit Program):

The Safety membership class has one employer (County), so all of the NPL for Safety is allocated to the County.

For General, the NPL (excluding Liability for Section 415(m) Replacement Benefit Program) is allocated based on the actual employer contributions (excluding employer pickup of member contributions) for the Qualified Plan within the General membership class.

- Calculate ratio of employer's contributions to the total contributions for the membership class.
- Multiply this ratio by the NPL for the membership class to determine the employer's proportionate share of the NPL for the membership class.

If the employer is in several membership classes, the employer's total allocated NPL is the sum of its allocated NPL from each membership class. Proportionate share of total plan NPL is then the ratio of the employer's total allocated NPL to the total NPL of all employers.

PART TWO - Allocation of NPL attributable to Liability for Section 415(m) Replacement Benefit Program:

- The Liability for Section 415(m) Replacement Benefit Program for each employer (County* and Superior Court) has been calculated for retirees from each specific employer.

NPL in PART THREE = NPL in PART ONE + NPL in PART TWO

** As directed by SDCERA, we have included the liability for retirees from the Office of Education with the retirees from the County.*

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 7 (continued)

Determination of Proportionate Share

**Actual Employer Contributions by Employer and Membership Class into SDCERA for the Qualified Plan
July 1, 2015 to June 30, 2016**

Employer	General	General Percentage¹	Safety	Safety Percentage	Total Contributions	Total Percentage
County of San Diego	\$239,407,781	89.826%	\$115,899,188	100.000%	\$355,306,969	92.909%
Superior Court	26,773,363	10.045%	0	0.000%	26,773,363	7.001%
San Dieguito River Valley Joint Powers Authority	195,817	0.073%	0	0.000%	195,817	0.051%
Local Agency Formation Commission	148,798	0.056%	0	0.000%	148,798	0.039%
San Diego County Office of Education	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$266,525,759	100.000%	\$115,899,188	100.000%	\$382,424,947²	100.000%

**PART ONE - Allocation of June 30, 2016 Net Pension Liability (NPL)
Excluding Liability for Payments under Section 415(m) Replacement Benefit Program**

Employer	General	General Percentage¹	Safety	Safety Percentage	Total NPL	Total Percentage
County of San Diego	\$2,673,071,059	89.826%	\$1,305,805,926	100.000%	\$3,978,876,985	92.928%
Superior Court	298,933,900	10.045%	0	0.000%	298,933,900	6.982%
San Dieguito River Valley Joint Powers Authority	2,186,365	0.073%	0	0.000%	2,186,365	0.051%
Local Agency Formation Commission	1,661,381	0.056%	0	0.000%	1,661,381	0.039%
San Diego County Office of Education	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$2,975,852,705	100.000%	\$1,305,805,926	100.000%	\$4,281,658,631	100.000%

¹ The unrounded percentages are used in the allocation of the NPL amongst the General employers.

² Based on updated total employer contribution amount provided by SDCERA after we finalized the June 30, 2016 GAS 67 report.

Note: Results may not total due to rounding.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 7 (continued)

Determination of Proportionate Share

PART TWO - Allocation of June 30, 2016 Net Pension Liability (NPL)						
Attributed to Liability for Payments under Section 415(m) Replacement Benefit Program						
Employer	General	General Percentage	Safety	Safety Percentage	Total NPL	Total Percentage
County of San Diego	\$12,121,953	83.122%	\$1,748,834	100.000%	\$13,870,787	84.929%
Superior Court	2,461,461	16.878%	0	0.000%	2,461,461	15.071%
San Dieguito River Valley Joint Powers Authority	0	0.000%	0	0.000%	0	0.000%
Local Agency Formation Commission	0	0.000%	0	0.000%	0	0.000%
San Diego County Office of Education	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$14,583,414	100.000%	\$1,748,834	100.000%	\$16,332,248	100.000%

PART THREE - Allocation of June 30, 2016 Net Pension Liability (NPL)						
Including Liability for Payments under Section 415(m) Replacement Benefit Program						
Employer	General	General Percentage	Safety	Safety Percentage	Total NPL	Total Percentage
County of San Diego	\$2,685,193,012	89.792%	\$1,307,554,760	100.000%	\$3,992,747,772	92.898%
Superior Court	301,395,361	10.079%	0	0.000%	301,395,361	7.012%
San Dieguito River Valley Joint Powers Authority	2,186,365	0.073%	0	0.000%	2,186,365	0.051%
Local Agency Formation Commission	1,661,381	0.056%	0	0.000%	1,661,381	0.039%
San Diego County Office of Education	0	0.000%	0	0.000%	0	0.000%
Total for all Employers	\$2,990,436,119	100.000%	\$1,307,554,760	100.000%	\$4,297,990,879	100.000%

Note: Results may not total due to rounding.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 7 (continued)

Determination of Proportionate Share

Notes:

Based on July 1, 2015 through June 30, 2016 employer contributions (excluding employer pickup of member contributions) as provided by SDCERA.

The Net Pension Liability (NPL) for each membership class is the Total Pension Liability (TPL) minus the Plan Fiduciary Net Position. The TPL for each membership class is obtained from internal valuation results based on actual membership data for each membership class. The Plan Fiduciary Net Position for each membership class was determined by adjusting the Valuation Value of Assets (VVA) for each membership class by the ratio of the total SDCERA Plan Fiduciary Net Position to the total SDCERA VVA.

PART ONE - Allocation of NPL (excluding Liability for Section 415(m) Replacement Benefit Program):

The Safety membership class has one employer (County), so all of the NPL for Safety is allocated to the County.

For General, the NPL (excluding Liability for Section 415(m) Replacement Benefit Program) is allocated based on the actual employer contributions (excluding employer pickup of member contributions) for the Qualified Plan within the General membership class.

- Calculate ratio of employer's contributions to the total contributions for the membership class.
- Multiply this ratio by the NPL for the membership class to determine the employer's proportionate share of the NPL for the membership class.

If the employer is in several membership classes, the employer's total allocated NPL is the sum of its allocated NPL from each membership class. Proportionate share of total plan NPL is then the ratio of the employer's total allocated NPL to the total NPL of all employers.

PART TWO - Allocation of NPL attributable to Liability for Section 415(m) Replacement Benefit Program:

- The Liability for Section 415(m) Replacement Benefit Program for each employer (County* and Superior Court) has been calculated for retirees from each specific employer.

NPL in PART THREE = NPL in PART ONE + NPL in PART TWO

** As directed by SDCERA, we have included the liability for one retiree from the Office of Education with the retirees from the County.*

For purposes of developing the above results, the reporting date for the employer under GAS 68 is June 30, 2017. The reporting date and measurement date for the plan under GAS 67 are June 30, 2016. Consistent with the provisions of GAS 68, the assets and liabilities are measured as of June 30, 2016 and are not adjusted or "rolled forward" to June 30, 2017 for employer reporting under GAS 68. Other results, such as the total deferred inflows and outflows would also be allocated based on the same proportionate shares determined above.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 7 (continued)

Determination of Proportionate Share

Notes:

Except for results associated with the liability attributable to liability for payments under Section 415(m) Replacement Benefit Program, the following items are allocated based on the corresponding proportionate share in Part One within each membership class. For the Section 415(m) Replacement Benefit Program, these items are allocated based specifically on the Section 415(m) NPL that has been calculated for retirees from each specific employer.

- 1) Net Pension Liability
- 2) Service cost
- 3) Interest on the Total Pension Liability
- 4) Expensed portion of current-period benefit changes
- 5) Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability
- 6) Expensed poerion of current-period changes of assumptions or other inputs
- 6) Member contributions
- 7) Employer pickup of member contributions
- 8) Projected earnings on plan investments
- 9) Expensed portion of current-period differences between actual and projected earnings on plan investments
- 10) Administrative expense
- 11) Recognition of beginning of year deferred outflows of resources as pension expense
- 12) Recognition of beginning of year deferred inflows of resources as pension expense

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 8

Pension Expense – Total for all Employers

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Components of Pension Expense		
1. Service cost	\$301,125,921	\$286,961,714
2. Interest on the Total Pension Liability	981,702,881	941,787,725
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(4,265,715)	(25,854,970)
6. Expensed portion of current-period changes of assumptions or other inputs	161,889,655	63,125,258
7. Member contributions	(104,636,306)	(98,590,114)
8. Employer pickup of member contributions	(23,161,173)	(28,730,374)
9. Projected earnings on plan investments	(769,796,685)	(785,402,417)
10. Expensed portion of current-period differences between projected and actual earnings on plan investments	141,222,147	108,565,459
11. Administrative expense	13,875,078	14,042,671
12. Other	0	0
13. Recognition of beginning of year deferred outflows of resources as pension expense	173,165,261	0
14. Recognition of beginning of year deferred inflows of resources as pension expense	(172,276,321)	(144,946,807)
15. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>0</u>	<u>0</u>
Pension Expense	<u>\$698,844,743</u>	<u>\$330,958,145</u>

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 8 (continued)

Pension Expense – County of San Diego

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Components of Pension Expense		
1. Service cost	\$280,212,854	\$267,365,754
2. Interest on the Total Pension Liability	910,302,554	875,010,085
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	(1,187,857)	1,584,656
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(3,931,822)	(23,133,322)
6. Expensed portion of current-period changes of assumptions or other inputs	152,417,845	58,808,109
7. Member contributions	(97,279,985)	(92,000,000)
8. Employer pickup of member contributions	(21,332,341)	(26,441,382)
9. Projected earnings on plan investments	(714,040,108)	(729,921,434)
10. Expensed portion of current-period differences between projected and actual earnings on plan investments	131,004,480	100,878,786
11. Administrative expense	12,887,844	13,074,409
12. Other	0	0
13. Recognition of beginning of year deferred outflows of resources as pension expense	160,805,113	0
14. Recognition of beginning of year deferred inflows of resources as pension expense	(158,345,688)	(134,136,225)
15. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>6,137,901</u>	<u>4,553,245</u>
Pension Expense	<u>\$657,650,790</u>	<u>\$315,642,681</u>

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 8 (continued)

Pension Expense – Superior Court

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Components of Pension Expense		
1. Service cost	\$20,647,304	\$19,368,890
2. Interest on the Total Pension Liability	70,495,049	66,005,534
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	1,127,960	(1,520,175)
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(329,361)	(2,691,107)
6. Expensed portion of current-period changes of assumptions or other inputs	9,351,753	4,267,219
7. Member contributions	(7,262,837)	(6,513,750)
8. Employer pickup of member contributions	(1,805,591)	(2,262,468)
9. Projected earnings on plan investments	(55,048,023)	(54,838,089)
10. Expensed portion of current-period differences between projected and actual earnings on plan investments	10,087,821	7,597,602
11. Administrative expense	974,688	957,042
12. Other	0	0
13. Recognition of beginning of year deferred outflows of resources as pension expense	12,203,180	0
14. Recognition of beginning of year deferred inflows of resources as pension expense	(13,755,130)	(10,685,708)
15. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>(6,077,591)</u>	<u>(4,557,416)</u>
Pension Expense	<u>\$40,609,222</u>	<u>\$15,127,574</u>

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 8 (continued)

Pension Expense – San Dieguito River Valley Joint Powers Authority

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Components of Pension Expense		
1. Service cost	\$151,010	\$126,997
2. Interest on the Total Pension Liability	514,397	431,827
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	38,175	(41,271)
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(2,575)	(17,081)
6. Expensed portion of current-period changes of assumptions or other inputs	68,219	27,925
7. Member contributions	(53,119)	(42,709)
8. Employer pickup of member contributions	(13,206)	(14,834)
9. Projected earnings on plan investments	(402,614)	(359,561)
10. Expensed portion of current-period differences between projected and actual earnings on plan investments	73,781	49,816
11. Administrative expense	7,129	6,275
12. Other	0	0
13. Recognition of beginning of year deferred outflows of resources as pension expense	89,192	0
14. Recognition of beginning of year deferred inflows of resources as pension expense	(99,724)	(69,840)
15. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>(26,611)</u>	<u>14,660</u>
Pension Expense	<u>\$344,054</u>	<u>\$112,204</u>

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 8 (continued)

Pension Expense – Local Agency Formation Commission

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Components of Pension Expense		
1. Service cost	\$114,753	\$100,073
2. Interest on the Total Pension Liability	390,881	340,279
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	21,722	(23,210)
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	(1,957)	(13,460)
6. Expensed portion of current-period changes of assumptions or other inputs	51,838	22,005
7. Member contributions	(40,365)	(33,655)
8. Employer pickup of member contributions	(10,035)	(11,690)
9. Projected earnings on plan investments	(305,940)	(283,333)
10. Expensed portion of current-period differences between projected and actual earnings on plan investments	56,065	39,255
11. Administrative expense	5,417	4,945
12. Other	0	0
13. Recognition of beginning of year deferred outflows of resources as pension expense	67,776	0
14. Recognition of beginning of year deferred inflows of resources as pension expense	(75,779)	(55,034)
15. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>(33,699)</u>	<u>(10,489)</u>
Pension Expense	<u>\$240,677</u>	<u>\$75,686</u>

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 8 (continued)

Pension Expense – San Diego County Office of Education

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Components of Pension Expense		
1. Service cost	\$0	\$0
2. Interest on the Total Pension Liability	0	0
3. Expensed portion of current-period changes in proportion and differences between employer's contributions and proportionate share of contributions	0	0
4. Expensed portion of current-period benefit changes	0	0
5. Expensed portion of current-period difference between expected and actual experience in the Total Pension Liability	0	0
6. Expensed portion of current-period changes of assumptions or other inputs	0	0
7. Member contributions	0	0
8. Employer pickup of member contributions	0	0
9. Projected earnings on plan investments	0	0
10. Expensed portion of current-period differences between projected and actual earnings on plan investments	0	0
11. Administrative expense	0	0
12. Other	0	0
13. Recognition of beginning of year deferred outflows of resources as pension expense	0	0
14. Recognition of beginning of year deferred inflows of resources as pension expense	0	0
15. Net amortization of deferred amounts from changes in proportion and differences between employer's contributions and proportionate share of contributions	<u>0</u>	<u>0</u>
Pension Expense	<u>\$0</u>	<u>\$0</u>

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 9

Deferred Outflows of Resources and Deferred Inflows of Resources – Total for all Employers

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions ⁽¹⁾	\$17,430,585	\$18,986,141
2. Changes of assumptions or other inputs	810,207,465	246,819,763
3. Net excess of projected over actual earnings on pension plan investments (if any)	681,766,385	121,033,967
4. Difference between expected and actual experience in the Total Pension Liability	<u>4,848,336</u>	<u>5,765,466</u>
5. Total Deferred Outflows of Resources	\$1,514,252,771	\$392,605,337
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions ⁽¹⁾	\$17,430,585	\$18,986,141
7. Changes of assumptions or other inputs	0	0
8. Net excess of actual over projected earnings on pension plan investments (if any)	0	0
9. Difference between expected and actual experience in the Total Pension Liability	<u>169,562,143</u>	<u>220,363,446</u>
10. Total Deferred Inflows of Resources	\$186,992,728	\$239,349,587

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GAS 68 Year Ended June 30:

2017	N/A	\$888,940
2018	\$299,735,027	888,940
2019	307,842,531	8,996,444
2020	441,327,513	142,481,426
2021	278,354,972	0
2022	0	0
Thereafter	0	0

⁽¹⁾ Calculated in accordance with Paragraphs 54 and 55 of GAS 68.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources – County of San Diego

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions ⁽¹⁾	\$12,807,193	\$18,945,094
2. Changes of assumptions or other inputs	760,616,188	229,939,709
3. Net excess of projected over actual earnings on pension plan investments (if any)	632,276,863	112,321,977
4. Difference between expected and actual experience in the Total Pension Liability	<u>4,760,527</u>	<u>5,765,466</u>
5. Total Deferred Outflows of Resources	\$1,410,460,771	\$366,972,246
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions ⁽¹⁾	\$4,597,005	\$0
7. Changes of assumptions or other inputs	0	0
8. Net excess of actual over projected earnings on pension plan investments (if any)	0	0
9. Difference between expected and actual experience in the Total Pension Liability	<u>153,612,641</u>	<u>200,017,896</u>
10. Total Deferred Inflows of Resources	\$158,209,646	\$200,017,896

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GAS 68 Year Ended June 30:

2017	N/A	\$8,555,250
2018	\$286,899,971	8,555,250
2019	293,383,301	15,058,967
2020	412,813,969	134,784,883
2021	259,153,884	0
2022	0	0
Thereafter	0	0

⁽¹⁾ Calculated in accordance with Paragraphs 54 and 55 of GAS 68.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources – Superior Court

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions ⁽¹⁾	\$4,365,207	\$0
2. Changes of assumptions or other inputs	48,962,578	16,684,828
3. Net excess of projected over actual earnings on pension plan investments (if any)	48,860,610	8,611,038
4. Difference between expected and actual experience in the Total Pension Liability	<u>87,809</u>	<u>0</u>
5. Total Deferred Outflows of Resources	\$102,276,204	\$25,295,866
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions ⁽¹⁾	\$12,627,060	\$18,704,651
7. Changes of assumptions or other inputs	0	0
8. Net excess of actual over projected earnings on pension plan investments (if any)	0	0
9. Difference between expected and actual experience in the Total Pension Liability	<u>15,750,778</u>	<u>20,114,798</u>
10. Total Deferred Inflows of Resources	\$28,377,838	\$38,819,449

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GAS 68 Year Ended June 30:

2017	N/A	\$(7,589,586)
2018	\$12,608,633	(7,589,586)
2019	14,224,660	(5,992,918)
2020	28,146,446	7,648,507
2021	18,918,627	0
2022	0	0
Thereafter	0	0

⁽¹⁾ Calculated in accordance with Paragraphs 54 and 55 of GAS 68.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources – San Dieguito River Valley Joint Powers Authority

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions ⁽¹⁾	\$174,122	\$41,047
2. Changes of assumptions or other inputs	357,239	109,187
3. Net excess of projected over actual earnings on pension plan investments (if any)	357,360	56,461
4. Difference between expected and actual experience in the Total Pension Liability	<u>0</u>	<u>0</u>
5. Total Deferred Outflows of Resources	\$888,721	\$206,695
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions ⁽¹⁾	\$120,098	\$161,369
7. Changes of assumptions or other inputs	0	0
8. Net excess of actual over projected earnings on pension plan investments (if any)	0	0
9. Difference between expected and actual experience in the Total Pension Liability	<u>112,919</u>	<u>129,056</u>
10. Total Deferred Inflows of Resources	\$233,017	\$290,425

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GAS 68 Year Ended June 30:

2017	N/A	\$(35,791)
2018	\$140,457	(35,791)
2019	142,627	(34,276)
2020	208,519	22,128
2021	164,101	0
2022	0	0
Thereafter	0	0

⁽¹⁾ Calculated in accordance with Paragraphs 54 and 55 of GAS 68.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources – Local Agency Formation Commission

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions ⁽¹⁾	\$84,063	\$0
2. Changes of assumptions or other inputs	271,460	86,039
3. Net excess of projected over actual earnings on pension plan investments (if any)	271,552	44,491
4. Difference between expected and actual experience in the Total Pension Liability	<u>0</u>	<u>0</u>
5. Total Deferred Outflows of Resources	\$627,075	\$130,530
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions ⁽¹⁾	\$86,422	\$120,121
7. Changes of assumptions or other inputs	0	0
8. Net excess of actual over projected earnings on pension plan investments (if any)	0	0
9. Difference between expected and actual experience in the Total Pension Liability	<u>85,805</u>	<u>101,696</u>
10. Total Deferred Inflows of Resources	\$172,227	\$221,817

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GAS 68 Year Ended June 30:

2017	N/A	\$(40,933)
2018	\$85,966	(40,933)
2019	91,943	(35,329)
2020	158,579	25,908
2021	118,360	0
2022	0	0
Thereafter	0	0

⁽¹⁾ Calculated in accordance with Paragraphs 54 and 55 of GAS 68.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources – San Diego County Office of Education

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Deferred Outflows of Resources		
1. Changes in proportion and differences between employer's contributions and proportionate share of contributions ⁽¹⁾	\$0	\$0
2. Changes of assumptions or other inputs	0	0
3. Net excess of projected over actual earnings on pension plan investments (if any)	0	0
4. Difference between expected and actual experience in the Total Pension Liability	<u>0</u>	<u>0</u>
5. Total Deferred Outflows of Resources	\$0	\$0
Deferred Inflows of Resources		
6. Changes in proportion and differences between employer's contributions and proportionate share of contributions ⁽¹⁾	\$0	\$0
7. Changes of assumptions or other inputs	0	0
8. Net excess of actual over projected earnings on pension plan investments (if any)	0	0
9. Difference between expected and actual experience in the Total Pension Liability	<u>0</u>	<u>0</u>
10. Total Deferred Inflows of Resources	\$0	\$0

Deferred outflows of resources and deferred inflows of resources related to pension will be recognized as follows:

Reporting Date for Employer under GAS 68 Year Ended June 30:

2017	N/A	\$0
2018	\$0	0
2019	0	0
2020	0	0
2021	0	0
2022	0	0
Thereafter	0	0

⁽¹⁾ Calculated in accordance with Paragraphs 54 and 55 of GAS 68.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 9 (continued)

Deferred Outflows of Resources and Deferred Inflows of Resources

There are changes in each employer's proportionate share of the total Net Pension Liability (NPL) during the measurement period ended June 30, 2016. The net effect of the change on the employer's proportionate share of the collective NPL and collective deferred outflows of resources and deferred inflows of resources for the current period (i.e., 2015/2016) is recognized over the average of the expected remaining service lives of all employees that are provided with pensions through SDCERA which is 4.87 years determined as of June 30, 2015 (the beginning of the measurement period ending June 30, 2016). This is described in Paragraph 33a. of GAS 68.

In addition, the difference between the actual employer contributions and the proportionate share of the employer contributions during the measurement period ended June 30, 2016 is recognized over the same period.

The net effects of the change on the employer's proportionate share of the collective NPL and collective deferred outflows of resources and deferred inflows of resources for prior periods are continued to be recognized based on the expected remaining service lives of all employees calculated as of those prior measurement dates.

The average of the expected service lives of all employees is determined by:

- Calculating each active employee's expected remaining service life as the present value of \$1 per year of future service at zero percent interest.
- Setting the remaining service life to zero for each nonactive or retired member.
- Dividing the sum of the above amounts by the total number of active employee, nonactive and retired members.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 10

Schedule of Proportionate Share of the Net Pension Liability – Total for all Employers

Reporting Date for Employer under GAS 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered-employee payroll	Proportionate share of the Net Pension Liability as a percentage of its covered-employee payroll	Plan fiduciary net position as a percentage of the Total Pension Liability
2014	100.0%	\$2,832,308,136	\$1,028,420,277	275.40%	76.18%
2015	100.0%	2,137,714,053	1,072,896,037	199.25%	82.65%
2016	100.0%	2,807,566,790	1,120,001,088	250.68%	78.63%
2017	100.0%	4,297,990,879	1,140,882,516	376.73%	70.48%

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability – County of San Diego

Reporting Date for Employer under GAS 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered-employee payroll	Proportionate share of the Net Pension Liability as a percentage of its covered-employee payroll	Plan fiduciary net position as a percentage of the Total Pension Liability⁽¹⁾
2014	91.513%	\$2,591,937,606	\$942,156,555	275.11%	76.25%
2015	92.241%	1,971,856,482	992,238,786	198.73%	82.70%
2016	92.789%	2,605,107,176	1,039,786,686	250.54%	78.65%
2017	92.898%	3,992,747,772	1,058,119,168	377.34%	70.45%

⁽¹⁾ There is a separate calculation of the Plan Fiduciary Net Position as a percentage of the Total Pension Liability for each of the General and Safety membership classes (using the assets and liabilities maintained in the valuation for the two membership classes). For the County with members in both membership classes, this percentage is calculated by using the County's proportionate share of the assets and liabilities in those classes.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability – Superior Court

Reporting Date for Employer under GAS 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered-employee payroll	Proportionate share of the Net Pension Liability as a percentage of its covered-employee payroll	Plan fiduciary net position as a percentage of the Total Pension Liability
2014	8.391%	\$237,649,347	\$85,276,900	278.68%	75.48%
2015	7.662%	163,783,996	79,623,207	205.70%	81.94%
2016	7.129%	200,137,552	79,272,513	252.47%	78.32%
2017	7.012%	301,395,361	81,683,147	368.98%	70.91%

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability – San Dieguito River Valley Joint Powers Authority

Reporting Date for Employer under GAS 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered- employee payroll	Proportionate share of the Net Pension Liability as a percentage of its covered- employee payroll	Plan fiduciary net position as a percentage of the Total Pension Liability
2014	0.053%	\$1,489,372	\$540,026	275.80%	75.48%
2015	0.055%	1,179,860	589,698	200.08%	81.94%
2016	0.046%	1,298,694	530,657	244.73%	78.32%
2017	0.051%	2,186,365	617,304	354.18%	70.91%

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability – Local Agency Formation Commission

Reporting Date for Employer under GAS 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered- employee payroll	Proportionate share of the Net Pension Liability as a percentage of its covered- employee payroll	Plan fiduciary net position as a percentage of the Total Pension Liability
2014	0.043%	\$1,231,811	\$446,796	275.70%	75.48%
2015	0.042%	893,715	444,346	201.13%	81.94%
2016	0.036%	1,023,368	411,232	248.85%	78.32%
2017	0.039%	1,661,381	462,897	358.91%	70.91%

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 10 (continued)

Schedule of Proportionate Share of the Net Pension Liability – San Diego County Office of Education

Reporting Date for Employer under GAS 68 as of June 30	Proportion of the Net Pension Liability	Proportionate share of Net Pension Liability	Covered- employee payroll	Proportionate share of the Net Pension Liability as a percentage of its covered- employee payroll	Plan fiduciary net position as a percentage of the Total Pension Liability
2014	0.000%	\$0	\$0	0%	N/A
2015	0.000%	0	0	0%	N/A
2016	0.000%	0	0	0%	N/A
2017	0.000%	0	0	0%	N/A

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 11

Schedule of Reconciliation of Net Pension Liability – Total for all Employers

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	\$2,807,566,790	\$2,137,714,053
2. Pension Expense	698,844,743	330,958,145
3. Employer Contributions	(382,424,947)	(386,040,882)
4. New Net Deferred Inflows/Outflows	1,174,893,233	579,988,667
5. Change in Allocation of Prior Deferred Inflows/Outflows	0	0
6. New Net Deferred Flows Due to Change in Proportion	0	0
7. Recognition of Prior Deferred Inflows/Outflows	(888,940)	144,946,807
8. Recognition of Prior Deferred Flows Due to Change in Proportion	<u>0</u>	<u>0</u>
9. Ending Net Pension Liability	\$4,297,990,879	\$2,807,566,790

Note: Results may not add due to rounding.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability – County of San Diego

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	\$2,605,107,176	\$1,971,856,482
2. Pension Expense	657,650,790	315,642,681
3. Employer Contributions	(355,306,969)	(359,522,994)
4. New Net Deferred Inflows/Outflows	1,098,658,824	543,003,566
5. Change in Allocation of Prior Deferred Inflows/Outflows	(167,718)	(1,651,547)
6. New Net Deferred Flows Due to Change in Proportion	(4,597,005)	6,196,008
7. Recognition of Prior Deferred Inflows/Outflows	(2,459,425)	134,136,225
8. Recognition of Prior Deferred Flows Due to Change in Proportion	<u>(6,137,901)</u>	<u>(4,553,245)</u>
9. Ending Net Pension Liability	\$3,992,747,772	\$2,605,107,176

Note: Results may not add due to rounding.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability – Superior Court

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	\$200,137,552	\$163,783,996
2. Pension Expense	40,609,222	15,127,574
3. Employer Contributions	(26,773,363)	(26,210,608)
4. New Net Deferred Inflows/Outflows	75,267,941	36,553,008
5. Change in Allocation of Prior Deferred Inflows/Outflows	159,261	1,584,344
6. New Net Deferred Flows Due to Change in Proportion	4,365,207	(5,943,886)
7. Recognition of Prior Deferred Inflows/Outflows	1,551,950	10,685,708
8. Recognition of Prior Deferred Flows Due to Change in Proportion	<u>6,077,591</u>	<u>4,557,416</u>
9. Ending Net Pension Liability	\$301,395,361	\$200,137,552

Note: Results may not add due to rounding.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability – San Dieguito River Valley Joint Powers Authority

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	\$1,298,694	\$1,179,860
2. Pension Expense	344,054	112,204
3. Employer Contributions	(195,817)	(171,857)
4. New Net Deferred Inflows/Outflows	549,166	241,663
5. Change in Allocation of Prior Deferred Inflows/Outflows	5,390	43,013
6. New Net Deferred Flows Due to Change in Proportion	147,735	(161,369)
7. Recognition of Prior Deferred Inflows/Outflows	10,532	69,840
8. Recognition of Prior Deferred Flows Due to Change in Proportion	<u>26,611</u>	<u>(14,660)</u>
9. Ending Net Pension Liability	\$2,186,365	\$1,298,694

Note: Results may not add due to rounding.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability – Local Agency Formation Commission

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	\$1,023,368	\$893,715
2. Pension Expense	240,677	75,686
3. Employer Contributions	(148,798)	(135,423)
4. New Net Deferred Inflows/Outflows	417,302	190,430
5. Change in Allocation of Prior Deferred Inflows/Outflows	3,067	24,190
6. New Net Deferred Flows Due to Change in Proportion	84,063	(90,753)
7. Recognition of Prior Deferred Inflows/Outflows	8,003	55,034
8. Recognition of Prior Deferred Flows Due to Change in Proportion	<u>33,699</u>	<u>10,489</u>
9. Ending Net Pension Liability	\$1,661,381	\$1,023,368

Note: Results may not add due to rounding.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 11 (continued)

Schedule of Reconciliation of Net Pension Liability – San Diego County Office of Education

Reporting Date for Employer under GAS 68	June 30, 2017	June 30, 2016
Measurement Date for Employer under GAS 68	June 30, 2016	June 30, 2015
Reconciliation of Net Pension Liability		
1. Beginning Net Pension Liability	\$0	\$0
2. Pension Expense	0	0
3. Employer Contributions	0	0
4. New Net Deferred Inflows/Outflows	0	0
5. Change in Allocation of Prior Deferred Inflows/Outflows	0	0
6. New Net Deferred Flows Due to Change in Proportion	0	0
7. Recognition of Prior Deferred Inflows/Outflows	0	0
8. Recognition of Prior Deferred Flows Due to Change in Proportion	<u>0</u>	<u>0</u>
9. Ending Net Pension Liability	\$0	\$0

Note: Results may not add due to rounding.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 12

Schedule of Recognition of Changes in Total Net Pension Liability

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Differences between Expected and Actual Experience on Total Pension Liability

Reporting Date for Employer under GAS 68 Year Ended June 30	Differences between Expected and Actual Experience	Recognition Period (Years)	Reporting Date for Employer under GAS 68 Year Ended June 30:						
			2015	2016	2017	2018	2019	2020	2021
2015	\$(194,580,085)	4.80	\$(40,537,518)	\$(40,537,518)	\$(40,537,518)	\$(40,537,518)	\$(32,430,013)	\$0	\$0
2016	(126,947,901)	4.91	N/A	(25,854,970)	(25,854,970)	(25,854,970)	(25,854,970)	(23,528,021)	0
2017	(20,774,030)	4.87	<u>N/A</u>	<u>N/A</u>	<u>(4,265,715)</u>	<u>(4,265,715)</u>	<u>(4,265,715)</u>	<u>(4,265,715)</u>	<u>(3,711,170)</u>
Net increase (decrease) in pension expense			\$(40,537,518)	\$(66,392,488)	\$(70,658,203)	\$(70,658,203)	\$(62,550,698)	\$(27,793,736)	\$(3,711,170)

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of Assumption Changes

Reporting Date for Employer under GAS 68 Year Ended June 30	Effects of Assumption Changes	Recognition Period (Years)	Reporting Date for Employer under GAS 68 Year Ended June 30:						
			2015	2016	2017	2018	2019	2020	2021
2015	\$0	4.80	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2016	309,945,021	4.91	N/A	63,125,258	63,125,258	63,125,258	63,125,258	57,443,989	0
2017	788,402,615	4.87	<u>N/A</u>	<u>N/A</u>	<u>161,889,655</u>	<u>161,889,655</u>	<u>161,889,655</u>	<u>161,889,655</u>	<u>140,843,995</u>
Net increase (decrease) in pension expense			\$0	\$63,125,258	\$225,014,913	\$225,014,913	\$225,014,913	\$219,333,644	\$140,843,995

As described in Exhibit 9, for the current period, the average of the expected remaining service lives of all employees that are provided with pensions through SDCERA (active and inactive employees) determined as of June 30, 2015 (the beginning of the measurement period ending June 30, 2016) is 4.87 years.

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 12 (continued)

Schedule of Recognition of Changes in Total Net Pension Liability

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Pension Plan Investments

Reporting Date for Employer under GAS 68 Year Ended June 30	Differences between Projected and Actual Earnings	Recognition Period (Years)	Reporting Date for Employer under GAS 68 Year Ended June 30:						
			2015	2016	2017	2018	2019	2020	2021
2015	\$(522,046,446)	5.00	\$(104,409,289)	\$(104,409,289)	\$(104,409,289)	\$(104,409,289)	\$(104,409,290)	\$0	\$0
2016	542,827,294	5.00	N/A	108,565,459	108,565,459	108,565,459	108,565,459	108,565,458	0
2017	706,110,735	5.00	<u>N/A</u>	<u>N/A</u>	<u>141,222,147</u>	<u>141,222,147</u>	<u>141,222,147</u>	<u>141,222,147</u>	<u>141,222,147</u>
Net increase (decrease) in pension expense			\$(104,409,289)	\$4,156,170	\$145,378,317	\$145,378,317	\$145,378,316	\$249,787,605	\$141,222,147

The differences between projected and actual earnings on pension plan investments are recognized over a five-year period per Paragraph 33b. of GAS 68.

Total Increase (Decrease) in Pension Expense

Reporting Date for Employer under GAS 68 Year Ended June 30	Total Differences	Reporting Date for Employer under GAS 68 Year Ended June 30:						
		2015	2016	2017	2018	2019	2020	2021
2015	\$(716,626,531)	\$(144,946,807)	\$(144,946,807)	\$(144,946,807)	\$(144,946,807)	\$(136,839,303)	\$0	\$0
2016	725,824,414	N/A	145,835,747	145,835,747	145,835,747	145,835,747	142,481,426	0
2017	1,473,739,320	<u>N/A</u>	<u>N/A</u>	<u>298,846,087</u>	<u>298,846,087</u>	<u>298,846,087</u>	<u>298,846,087</u>	<u>278,354,972</u>
Net increase (decrease) in pension expense		\$(144,946,807)	\$888,940	\$299,735,027	\$299,735,027	\$307,842,531	\$441,327,513	\$278,354,972

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 13

Allocation of Changes in Total Net Pension Liability

In addition to the amounts shown in Exhibit 12, there are changes in each employer's proportionate share of the total NPL during the measurement period ending on June 30, 2016. The net effect of the change on the employer's proportionate share of the collective NPL and collective deferred outflows of resources and deferred inflows of resources is also recognized over the average of the expected remaining service lives of all employees shown above. These amounts are shown below. While these amounts are different for each employer, they sum to zero over the entire SDCERA.

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer and Member Contributions for the Year Ended June 30, 2016

	Total Change to be Recognized	Recognition Period (Years)	Reporting Date for Employer under GAS 68 Year Ended June 30:					
			2017	2018	2019	2020	2021	2022
County of San Diego	\$(5,784,862)	4.87	\$(1,187,857)	\$(1,187,857)	\$(1,187,857)	\$(1,187,857)	\$(1,033,434)	\$0
Superior Court	5,493,167	4.87	1,127,960	1,127,960	1,127,960	1,127,960	981,327	0
San Dieguito River Valley Joint Powers Authority	185,910	4.87	38,175	38,175	38,175	38,175	33,210	0
Local Agency Formation Commission	105,785	4.87	21,722	21,722	21,722	21,722	18,897	0
San Diego County Office of Education	0	4.87	0	0	0	0	0	0
Total for all Employers	\$0		\$0	\$0	\$0	\$0	\$0	\$0

SECTION 2: GAS 68 Information for the San Diego County Employees Retirement Association

EXHIBIT 13 (continued)

Allocation of Changes in Total Net Pension Liability

The amounts as of June 30, 2015 are as follows:

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer and Member Contributions for the Year Ended June 30, 2015

	Total Change to be Recognized	Recognition Period (Years)	Reporting Date for Employer under GAS 68 Year Ended June 30:					2021
			2016	2017	2018	2019	2020	
County of San Diego	\$7,780,664	4.91	\$1,584,656	\$1,584,656	\$1,584,656	\$1,584,656	\$1,442,040	\$0
Superior Court	(7,464,061)	4.91	(1,520,175)	(1,520,175)	(1,520,175)	(1,520,175)	(1,383,361)	0
San Dieguito River Valley Joint Powers Authority	(202,640)	4.91	(41,271)	(41,271)	(41,271)	(41,271)	(37,556)	0
Local Agency Formation Commission	(113,963)	4.91	(23,210)	(23,210)	(23,210)	(23,210)	(21,123)	0
San Diego County Office of Education	<u>0</u>	4.91	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total for all Employers	\$0		\$0	\$0	\$0	\$0	\$0	\$0

The amounts as of June 30, 2014 are as follows:

Increase (Decrease) in Pension Expense Arising from the Recognition of the Effects of the Change in Proportion and Change in Employer and Member Contributions for the Year Ended June 30, 2014

	Total Change to be Recognized	Recognition Period (Years)	Reporting Date for Employer under GAS 68 Year Ended June 30:					2020
			2015	2016	2017	2018	2019	
County of San Diego	\$21,855,576	4.80	\$4,553,245	\$4,553,245	\$4,553,245	\$4,553,245	\$3,642,596	\$0
Superior Court	(21,875,597)	4.80	(4,557,416)	(4,557,416)	(4,557,416)	(4,557,416)	(3,645,933)	0
San Dieguito River Valley Joint Powers Authority	70,367	4.80	14,660	14,660	14,660	14,660	11,727	0
Local Agency Formation Commission	(50,346)	4.80	(10,489)	(10,489)	(10,489)	(10,489)	(8,390)	0
San Diego County Office of Education	<u>0</u>	4.80	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total for all Employers	\$0		\$0	\$0	\$0	\$0	\$0	\$0

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Actuarial Assumptions and Methods

For June 30, 2016 Measurement Date and Employer Reporting as of June 30, 2017

Rationale for Assumptions: The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the July 1, 2012 through June 30, 2015 Actuarial Experience Study dated June 2, 2016. Unless otherwise noted, all actuarial assumptions and methods shown below apply to members for all tiers.

Economic Assumptions

Net Investment Return: 7.25%; net of 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, retiree COLA increases due to CPI subject to a 3% maximum change per year for Tier 1 and Tier A, and 2% maximum change per year for Tier B and Tier C.

Payroll Growth: Inflation of 3.00% per year plus “across the board” real salary increases of 0.50% per year.

Demographic Assumptions

Post-Retirement Mortality Rates:

Healthy Retirement: For General Members and all Beneficiaries: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional scale MP2015D, set forward one year for females.

For Safety Members: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional scale MP2015D, set back two years.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Disabled Retirement: For General Members: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional scale MP2015D, set forward five years for males and four years for females.

For Safety Members: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional scale MP2015D, set forward one year.

Pre-Retirement Mortality Rates: For General and Safety Members: Headcount-Weighted RP-2014 Employee Mortality Table projected 20 years with the two-dimensional scale MP2015D times 75%. For General, all pre-retirement deaths are assumed to be non-service connected death while for Safety, all pre-retirement deaths are assumed to be service connected death.

The above mortality tables contain about a 20% 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.

Member Contribution Rates: For General Members: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional scale MP2015D, set forward one year for females weighted 30% male and 70% female.

For Safety Members: Headcount-Weighted RP-2014 Healthy Annuitant Mortality Table projected 20 years with the two-dimensional scale MP2015D, set back two years weighted 75% male and 25% female.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Termination Rates Before Retirement:

Mortality Rates:

General and Safety:

Headcount-Weighted RP-2014 Employee Mortality Table projected 20 years with the two-dimensional scale MP2015D times 75%.

Rate (%)				
Mortality				
Age	General		Safety	
	Male	Female	Male	Female
25	0.03	0.01	0.03	0.01
30	0.03	0.02	0.03	0.02
35	0.04	0.02	0.04	0.02
40	0.04	0.03	0.04	0.03
45	0.07	0.05	0.07	0.05
50	0.11	0.08	0.11	0.08
55	0.20	0.13	0.20	0.13
60	0.35	0.19	0.35	0.19
65	0.60	0.27	0.60	0.27

For General members, all pre-retirement deaths are assumed to be non-service connected. For Safety members, all pre-retirement deaths are assumed to be service connected.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Disability Rates:

Age	Rate (%)			
	Non-Service Connected Disability		Service Connected Disability	
	General	Safety	General	Safety
20	0.00	0.00	0.00	0.03
25	0.00	0.00	0.01	0.08
30	0.01	0.00	0.03	0.18
35	0.02	0.05	0.04	0.33
40	0.05	0.08	0.06	0.52
45	0.09	0.08	0.13	0.63
50	0.11	0.08	0.17	1.22
55	0.14	0.10	0.26	1.84
60	0.17	0.12	0.31	2.30
65	0.22	0.05	0.23	2.50

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Withdrawal Rates:

Years of Service	Rate (%)	
	Termination (< 5 Years of Service)*	
	General	Safety
0	11.75	9.00
1	8.50	7.00
2	7.00	4.00
3	5.75	3.00
4	5.50	2.90

* 65% of all terminating members will choose a refund of contributions and 35% will choose a deferred vested benefit.

Age	Rate (%)	
	Termination (5+ Years of Service) **	
	General	Safety
20	5.35	3.30
25	4.84	3.12
30	4.20	2.40
35	3.64	1.76
40	2.86	1.24
45	2.44	0.88
50	2.40	1.04
55	2.40	1.08
60	2.40	1.00
65	2.40	0.40

** 20% of all terminating members will choose a refund of contributions and 80% will choose a deferred vested benefit. Termination rates are zero at ages where members are expected to retire.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Age	Rates (%)					
	General			Safety		
	Tier 1 and Tier A	Tier B	Tier C	Tier A	Tier B	Tier C
45	-	-	-	2.0	2.0	-
46	-	-	-	2.0	2.0	-
47	-	-	-	2.0	2.0	-
48	-	-	-	3.0	3.0	-
49	65.0	-	-	9.0	3.5	-
50	6.0	-	-	14.0	11.0	14.0
51	4.0	-	-	12.0	11.0	9.5
52	4.0	-	-	11.0	10.0	9.5
53	5.0	-	-	15.0	11.0	9.5
54	6.0	-	-	15.0	12.0	10.5
55	10.0	5.0	4.0	15.0	19.0	16.5
56	10.0	6.0	4.5	18.0	22.0	19.0
57	10.0	7.0	5.5	18.0	20.0	20.0
58	11.0	7.0	5.5	19.0	20.0	20.0
59	15.0	7.0	5.5	20.0	20.0	22.0
60	18.0	9.0	7.0	22.0	22.0	22.0
61	20.0	13.0	10.0	25.0	25.0	25.0
62	23.0	19.0	14.0	25.0	25.0	25.0
63	24.0	19.0	15.0	25.0	25.0	25.0
64	25.0	19.0	15.0	25.0	25.0	25.0
65	31.0	30.0	26.0	50.0	50.0	50.0
66	35.0	30.0	30.0	50.0	50.0	50.0
67	33.0	30.0	30.0	50.0	50.0	50.0
68	32.0	30.0	30.0	50.0	50.0	50.0
69	31.0	30.0	30.0	50.0	50.0	50.0
70	35.0	35.0	35.0	100.0	100.0	100.0
71	35.0	35.0	35.0	100.0	100.0	100.0
72	35.0	35.0	35.0	100.0	100.0	100.0
73	35.0	35.0	35.0	100.0	100.0	100.0
74	40.0	40.0	40.0	100.0	100.0	100.0
75 and later	100.0	100.0	100.0	100.0	100.0	100.0

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Retirement Age and Benefit for Deferred Vested Members:	<u>Reciprocal and Non-reciprocal Members</u> General: Age 57 Safety: Age 51 We assume that 20% of General and 30% of Safety future deferred vested members will continue to work for a reciprocal employer. For these members, we assume 4.25% and 4.50% compensation increases per annum for General and Safety members, respectively.
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:	Male retirees are 3 years older than their spouses, and Female retirees are 2 years younger than their spouses.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Individual Salary Increases:

Annual Rate of Compensation Increase

Inflation: 3.00% per year; plus “across the board” real salary increases of 0.50% per year; plus the following merit and promotional increases:

Years of Service	General	Safety
0	6.75%	8.50%
1	5.00	6.25
2	4.50	5.00
3	3.50	4.75
4	2.50	4.50
5	1.50	2.25
6	1.40	1.60
7	1.30	1.40
8	1.20	1.20
9	1.10	1.10
10	1.00	1.00
11	0.95	1.00
12	0.90	1.00
13	0.85	1.00
14	0.80	1.00
15+	0.75	1.00

Increase in Section 7522.10 Compensation Limit:

Increase of 3.00% per year from the valuation date.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Pay for Performance and Other Premium Pays:

We have utilized the actual premium pay elements in the census data for each individual active member provided by CPAS.

Service Converted From Unused Sick Leave:

The following assumptions for service converted from unused sick leave as a percentage 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 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.

Expected Remaining Service Lines:

The average of the expected service lives of all employees is determined by:

- Calculating each active employee's expected remaining service life as the present value of \$1 per year of future service at zero percent interest.
- Setting the remaining service life to zero for each nonactive or retired member.
- Dividing the sum of the above amounts by the total number of active employee, nonactive and retired members.

Changes in Actuarial Assumptions and Methods:

The Board adopted demographic and economic assumptions as recommended by Segal in our July 1, 2012 through June 30, 2015 Actuarial Experience Study dated June 2, 2016. Previously, these assumptions were as follows:

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Changes in Actuarial Assumptions and Methods (continued)

Economic Assumptions

Net Investment Return: 7.50%; net of investment expenses.

Payroll Growth: Inflation of 3.00% per year plus “across the board” real salary increases of 0.75% per year.

Demographic Assumptions

Post-Retirement Mortality Rates:

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.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Changes in Actuarial Assumptions and Methods (continued)

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.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Changes in Actuarial Assumptions and Methods (continued)

Mortality Rates (continued):

The following are sample rates (%).

Age	Healthy Life Mortality				Disabled Life Mortality			
	General		Safety		General		Safety	
	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

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Changes in Actuarial Assumptions and Methods (continued)

Disability Rates:

Age	Rates (%)					
	Non Service Connected Disability			Service Connected Disability		
	General		Safety	General		Safety
	Male	Female		Males	Female	
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

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Changes in Actuarial Assumptions and Methods (continued)

Withdrawal Rates:

Years of Service	Rates (%)		
	Termination (<5 Years of Service) *		
	General		Safety
Male	Female		
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.

Age	Termination (5+ Years of Service) **		
	General		Safety
	Male	Female	
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.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Changes in Actuarial Assumptions and Methods (continued)

Age	Rates (%)					
	General			Safety		
	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

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Changes in Actuarial Assumptions and Methods (continued)

Retirement Age and Benefit for Deferred Vested Reciprocal Members: Reciprocal and Non-reciprocal Members

General: Age 57

Safety: Age 51

We assume that 25% of General and 30% of Safety future deferred vested members will continue to work for a reciprocal employer. For these members, we assume 4.50% and 4.75% compensation increases per annum for General and Safety members, respectively.

Age of Spouse: Females are 3 years younger than their spouses

Individual Salary Increases:

Annual Rate of Compensation Increase

Inflation: 3.00% 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

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

Changes in Actuarial Assumptions and Methods (continued)

Pay for Performance and Other Premium Pays:

All General members (members in legacy tiers and members in CalPEPRA tiers) are assumed to be eligible for an average annual pay for performance and other premium pay of 1.25%.

All Safety members (members in legacy tiers and members in CalPEPRA tiers) are assumed to be eligible for an average annual pay for performance and other premium pay of 1.25%.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

APPENDIX A

**Calculation of Discount Rate as of June 30, 2016
Projection of Pension Plan's Fiduciary Net Position (\$ in millions)**

Year Beginning July 1	Projected Beginning Plan Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Plan Fiduciary Net Position (f) = (a) + (b) - (c) - (d) + (e)
2015	\$10,330	\$510	\$629	\$14	\$64	\$10,261
2016	10,261	631	686	14	741	10,933
2017	10,933	647	726	15	789	11,628
2018	11,628	664	771	16	839	12,344
2019	12,344	687	817	17	890	13,088
2020	13,088	707	865	18	943	13,855
2021	13,855	713	915	19	997	14,631
2022	14,631	719	967	20	1,051	15,415
2023	15,415	726	1,020	21	1,106	16,206
2024	16,206	550	1,074	22	1,156	16,816
2040	22,031	109	1,829	30	1,535	21,816
2041	21,816	103	1,854	29	1,518	21,554
2042	21,554	98	1,876	29	1,498	21,246
2043	21,246	93	1,893	29	1,475	20,894
2044	20,894	89	1,904	28	1,449	20,500
2089	3,790	11	42	5	273	4,027
2090	4,027	11	32	5	291	4,292
2091	4,292	10	24	6	310	4,583
2092	4,583	10	17	6	332	4,901
2093	4,901	10	12	7	355	5,247
2121	34,649	47	0 *	47	2,512	37,161
2122	37,161					
2122 Discounted Value:		21 **				

* Less than \$1 million, when rounded.

** \$37,161 million when discounted with interest at the rate of 7.25% per annum has a value of \$21 million as of June 30, 2015.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

APPENDIX A (continued)

Calculation of Discount Rate as of June 30, 2016 Projection of Pension Plan's Fiduciary Net Position (\$ in millions)

Notes:

- (1) Amounts may not total exactly due to rounding.
 - (2) Amounts shown in the year beginning July 1, 2015 row are actual amounts, based on the unaudited financial statements provided by SDCERA.
 - (3) Years 2025-2039, 2045-2088, and 2094-2120 have been omitted from this table.
 - (4) Column (a): Except for the "discounted value" shown for 2122, none of the projected beginning Plan Fiduciary Net Position amounts shown have been adjusted for the time value of money.
 - (5) Column (b): Projected total contributions include employee and employer normal cost rates applied to closed group projected payroll (based on covered active members as of June 30, 2015), plus employer contributions to the unfunded actuarial accrued liability. Contributions are assumed to occur halfway through the year, on average.
 - (6) Column (c): Projected benefit payments have been determined in accordance with paragraph 39 of GASB Statement No. 67, and are based on the closed group of active, inactive vested, retired members, and beneficiaries as of June 30, 2015. The projected benefit payments reflect the cost of living increase assumptions used in the June 30, 2015 valuation report.
 - (7) Column (d): Projected administrative expenses are calculated as approximately 0.13% of the projected beginning Plan Fiduciary Net Position amount. The 0.13% portion was based on the actual fiscal year 2015/2016 administrative expenses as a percentage of the actual beginning Plan Fiduciary Net Position as of July 1, 2015. Administrative expenses are assumed to occur halfway through the year, on average.
 - (8) Column (e): Projected investment earnings are based on the assumed investment rate of return of 7.25% per annum.
 - (9) As illustrated in this Exhibit, the Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments for current Plan members. In other words, there is no projected "cross-over date" when projected benefits are not covered by projected assets. Therefore, the long-term expected rate of return on Plan investments of 7.25% per annum was applied to all periods of projected benefit payments to determine the Total Pension Liability as of June 30, 2016 shown earlier in this report, pursuant to paragraph 44 of GASB Statement No. 67.
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SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

APPENDIX B

GLOSSARY

Definitions of certain terms *as they are used in Statement 68*; the terms may have different meanings in other contexts.

Active employees

Individuals employed at the end of the reporting or measurement period, as applicable.

Actual contributions

Cash contributions recognized as additions to a pension plan's fiduciary net position.

Actuarial present value of projected benefit payments

Projected benefit payments discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.

Actuarial valuation

The determination, as of a point in time (the actuarial valuation date), of the service cost, Total Pension Liability, and related actuarial present value of projected benefit payments for pensions performed in conformity with Actuarial Standards of Practice unless otherwise specified by the GASB.

Actuarial valuation date

The date as of which an actuarial valuation is performed.

Actuarially determined contribution

A target or recommended contribution to a defined benefit pension plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

Ad hoc cost-of-living adjustments (ad hoc COLAs)

Cost-of-living adjustments that require a decision to grant by the authority responsible for making such decisions.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

APPENDIX B (continued)

GLOSSARY

Ad hoc postemployment benefit changes

Postemployment benefit changes that require a decision to grant by the authority responsible for making such decisions.

Automatic cost-of-living adjustments (automatic COLAs)

Cost-of-living adjustments that occur without a requirement for a decision to grant by a responsible authority, including those for which the amounts are determined by reference to a specified experience factor (such as the earnings experience of the pension plan) or to another variable (such as an increase in the consumer price index).

Closed period

A specific number of years that is counted from one date and declines to zero with the passage of time. For example, if the recognition period initially is five years on a closed basis, four years remain after the first year, three years after the second year, and so forth.

Collective deferred outflows of resources and deferred inflows of resources related to pensions

Deferred outflows of resources and deferred inflows of resources related to pensions arising from certain changes in the collective Net Pension Liability.

Collective Net Pension Liability

The Net Pension Liability for benefits provided through (1) a cost-sharing pension plan or (2) a single-employer or agent pension plan in circumstances in which there is a special funding situation.

Collective pension expense

Pension expense arising from certain changes in the collective Net Pension Liability.

Contributions

Additions to a pension plan's fiduciary net position for amounts from employers, nonemployer contributing entities (for example, state government contributions to a local government pension plan), or employees. Contributions can result from cash receipts by the pension plan or from recognition by the pension plan of a receivable from one of these sources.

Cost-of-living adjustments

Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

APPENDIX B (continued)

GLOSSARY

Cost-sharing employer

An employer whose employees are provided with pensions through a cost-sharing multiple-employer defined benefit pension plan.

Cost-sharing multiple-employer defined benefit pension plan (cost-sharing pension plan)

A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.

Covered-employee payroll

The payroll of employees that are provided with pensions through the pension plan.

Defined benefit pension plans

Pension plans that are used to provide defined benefit pensions.

Defined benefit pensions

Pensions for which the income or other benefits that the employee will receive at or after separation from employment are defined by the benefit terms. The pensions may be stated as a specified dollar amount or as an amount that is calculated based on one or more factors such as age, years of service, and compensation. (A pension that does not meet the criteria of a defined contribution pension is classified as a defined benefit pension for purposes of Statement 68.)

Defined contribution pension plans

Pension plans that are used to provide defined contribution pensions.

Defined contribution pensions

Pensions having terms that (1) provide an individual account for each employee; (2) define the contributions that an employer is required to make (or the credits that it is required to provide) to an active employee's account for periods in which that employee renders service; and (3) provide that the pensions an employee will receive will depend only on the contributions (or credits) to the employee's account, actual earnings on investments of those contributions (or credits), and the effects of forfeitures of contributions (or credits) made for other employees, as well as pension plan administrative costs, that are allocated to the employee's account.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

APPENDIX B (continued)

GLOSSARY

Discount rate

The single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the total of the following:

1. The actuarial present value of benefit payments projected to be made in future periods in which (a) the amount of the pension plan's fiduciary net position is projected (under the requirements of Statement 68) to be greater than the benefit payments that are projected to be made in that period and (b) pension plan assets up to that point are expected to be invested using a strategy to achieve the long-term expected rate of return, calculated using the long-term expected rate of return on pension plan investments.
2. The actuarial present value of projected benefit payments not included in (1), calculated using the municipal bond rate.

Entry age actuarial cost method

A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to a valuation year is called the *normal cost*. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is called the *actuarial accrued liability*.

Inactive employees

Terminated individuals that have accumulated benefits but are not yet receiving them, and retirees or their beneficiaries currently receiving benefits.

Measurement period

The period between the prior and the current measurement dates.

Multiple-employer defined benefit pension plan

A defined benefit pension plan that is used to provide pensions to the employees of more than one employer.

Net Pension Liability

The liability of employers and nonemployer contributing entities to employees for benefits provided through a defined benefit pension plan.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

APPENDIX B (continued)

GLOSSARY

Other postemployment benefits

All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment healthcare benefits, regardless of the manner in which they are provided. Other postemployment benefits do not include termination benefits.

Pension plans

Arrangements through which pensions are determined, assets dedicated for pensions are accumulated and managed, and benefits are paid as they come due.

Pensions

Retirement income and, if provided through a pension plan, postemployment benefits other than retirement income (such as death benefits, life insurance, and disability benefits). Pensions do not include postemployment healthcare benefits and termination benefits.

Plan members

Individuals that are covered under the terms of a pension plan. Plan members generally include (1) employees in active service (active plan members) and (2) terminated employees who have accumulated benefits but are not yet receiving them and retirees or their beneficiaries currently receiving benefits (inactive plan members).

Postemployment

The period after employment.

Postemployment benefit changes

Adjustments to the pension of an inactive employee.

Postemployment healthcare benefits

Medical, dental, vision, and other health-related benefits paid subsequent to the termination of employment.

Projected benefit payments

All benefits estimated to be payable through the pension plan to current active and inactive employees as a result of their past service and their expected future service.

SECTION 3: Actuarial Assumptions and Methods and Appendices for the San Diego County Employees Retirement Association

APPENDIX B (continued)

GLOSSARY

Public employee retirement system

A special-purpose government that administers one or more pension plans; also may administer other types of employee benefit plans, including postemployment healthcare plans and deferred compensation plans.

Real rate of return

The rate of return on an investment after adjustment to eliminate inflation.

Service costs

The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.

Termination benefits

Inducements offered by employers to active employees to hasten the termination of services, or payments made in consequence of the early termination of services. Termination benefits include early-retirement incentives, severance benefits, and other termination-related benefits.

Total Pension Liability

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of Statement.

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