

**San Bernardino County Employees'
Retirement Association**

A Cost Sharing Multiple-Employer
Benefit Pension Plan

Schedules of Employer Allocations
And Schedules of Pension Amounts
by Employer

As of and for the Years Ended
June 30, 2017 and 2016



Certified
Public
Accountants

This page left blank intentionally.

**San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Schedules of Employer Allocations and Schedules of Pension Amounts by Employer
As of and for the Years Ended June 30, 2017 and 2016**

Table of Contents

	Pages
Independent Auditor's Report.....	1
Schedules of Employer Allocations.....	3
Schedules of Pension Amounts by Employer.....	4
Notes to the Schedules of Employer Allocations and Schedules of Pension Amounts by Employer.....	6

This page left blank intentionally.



Independent Auditor's Report

To the Members of the
San Bernardino County Employees' Retirement Association
Board of Retirement
San Bernardino, California

We have audited the accompanying schedules of employer allocations of the San Bernardino County Employees' Retirement Association (SBCERA) Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (the Plan) as of and for the years ended June 30, 2017 and 2016, and the related notes. We have also audited the total for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense (specified column totals) included in the accompanying schedules of pension amounts by employer of the Plan as of and for the years ended June 30, 2017 and 2016, and the related notes.

Management's Responsibility for the Schedules

Management is responsible for the preparation and fair presentation of these schedules in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of the schedules that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on the schedules of employer allocations and the specified column totals included in the schedules of pension amounts by employer based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the schedules of employer allocations and specified column totals included in the schedules of pension amounts by employer are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the schedules of employer allocations and specified column totals included in the schedules of pension amounts by employer. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the schedules of employer allocations and specified column totals included in the schedules of pension amounts by employer, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the schedules of employer allocations and specified column totals included in the schedules of pension amounts by employer in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control.

Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the schedules of employer allocations and specified column totals included in the schedules of pension amounts by employer.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the schedules referred to above present fairly, in all material respects, the employer allocations and net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense for the total of all participating entities for the San Bernardino County Employees' Retirement Association Cost Sharing Multiple-Employer Defined Benefit Pension Plan as of and for the years ended June 30, 2017 and 2016, in accordance with accounting principles generally accepted in the United States of America.

Other Matter

We have audited, in accordance with auditing standards generally accepted in the United States of America, the financial statements of SBCERA as of and for the years ended June 30, 2017 and 2016, and our reports thereon, dated November 28, 2017 and November 17, 2016, expressed unmodified opinions on those financial statements.

Restriction on Use

Our report is intended solely for the information and use of the SBCERA management, the Board of Retirement, the Plan employers and their auditors and is not intended to be and should not be used by anyone other than these specified parties.

Macias Gini & O'Connell LLP

Los Angeles, California
June 11, 2018

San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Schedules of Employer Allocations
For the Years Ended June 30, 2017 and 2016

Employer	June 30, 2017¹			
	Employer Contributions	Employer Contribution Percentage	Total Allocated Net Pension Liability	Employer Proportionate Share
Barstow Fire Protection District	\$ 1,248,324	0.347%	\$ 9,958,070	0.378%
California Electronic Recording Transaction Network Authority	73,871	0.021%	507,723	0.019%
California State Association of Counties	3,461,330	0.963%	26,292,053	0.998%
City of Big Bear Lake	2,410,983	0.671%	18,653,622	0.708%
City of Chino Hills	4,383,343	1.220%	33,213,659	1.260%
County of San Bernardino	303,843,225	84.552%	2,180,860,158	82.749%
Crestline Sanitation District	298,547	0.083%	2,023,707	0.077%
Department of Water and Power of the City of Big Bear Lake	795,632	0.221%	6,020,247	0.228%
Hesperia Recreation and Park District	438,461	0.122%	3,284,987	0.125%
Inland Library System	13,209	0.004%	98,682	0.004%
Law Library for San Bernardino County	89,241	0.025%	668,517	0.025%
Local Agency Formation Commission	114,405	0.032%	864,960	0.033%
Mojave Desert Air Quality Management District	1,329,598	0.370%	10,094,423	0.383%
San Bernardino County Transportation Authority	1,964,977	0.547%	14,926,497	0.566%
South Coast Air Quality Management District	23,319,256	6.489%	214,076,570	8.123%
Superior Court of California County of San Bernardino	15,570,697	4.333%	113,960,482	4.324%
Total	\$ 359,355,096	100.000%	\$ 2,635,504,357	100.000%

Employer	6/30/2016¹			
	Employer Contributions	Employer Contribution Percentage	Total Allocated Net Pension Liability	Employer Proportionate Share
Barstow Fire Protection District	\$ 1,407,336	0.415%	\$ 12,781,554	0.518%
California Electronic Recording Transaction Network Authority	70,005	0.021%	472,814	0.019%
California State Association of Counties	3,362,895	0.991%	23,479,712	0.951%
City of Big Bear Lake	2,286,616	0.674%	17,695,050	0.717%
City of Chino Hills	4,221,573	1.243%	29,404,282	1.191%
County of San Bernardino	286,961,484	84.522%	2,051,294,555	83.108%
Crestline Sanitation District	311,859	0.092%	2,084,813	0.084%
Department of Water and Power of the City of Big Bear Lake	797,622	0.235%	5,549,574	0.225%
Hesperia Recreation and Park District	522,013	0.154%	3,595,827	0.146%
Inland Library System	13,351	0.004%	91,918	0.004%
Law Library for San Bernardino County	106,195	0.031%	733,197	0.030%
Local Agency Formation Commission	110,664	0.033%	769,173	0.031%
Mojave Desert Air Quality Management District	1,326,230	0.391%	9,252,237	0.375%
San Bernardino County Transportation Authority	1,939,956	0.571%	13,543,950	0.549%
South Coast Air Quality Management District	21,089,956	6.212%	199,589,723	8.086%
Superior Court of California County of San Bernardino	14,982,656	4.413%	97,899,581	3.966%
Total	\$ 339,510,410	100.000%	\$ 2,468,237,961	100.000%

(1) Date listed is the measurement date. See Note 2-Summary of Significant Accounting and Financial Reporting Policies for further information.

The accompanying notes are an integral part of these schedules. Results may not total due to rounding.

San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Schedules of Pension Amounts by Employer
As of and for the Years Ended June 30, 2017 and 2016

Employer	Employer Proportionate Share	Deferred Outflows of Resources				Deferred Inflows of Resources				Pension Expense	
		Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Outflows of Resources	Expected and Actual Experience	Differences Between Employer Contributions and Proportionate Share of Contributions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	Total Deferred Inflows of Resources	Proportionate Share of Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions
Barstow Fire Protection District	0.378%	\$ 9,958,070	\$ 2,544,767	\$ 2,983,907	\$ 5,890,241	\$ 1,065,309	\$ 4,600,059	\$ 5,665,369	\$ 1,401,103	\$ 32,768	\$ 1,433,871
California Electronic Recording Transaction Network Authority	0.019%	507,723	129,748	75,998	224,181	54,316	7,332	61,648	71,437	18,891	90,328
California State Association of Counties	0.998%	26,292,053	6,718,888	1,140,581	8,814,107	2,812,710	1,727,311	4,540,021	3,699,298	(157,800)	3,541,498
City of Big Bear Lake	0.708%	18,653,622	4,766,900	284,837	5,729,031	1,995,555	1,761,856	3,757,410	2,624,569	(319,447)	2,305,123
City of Chino Hills	1.260%	33,213,659	8,487,692	1,997,646	11,691,293	3,553,180	1,783,783	5,336,963	4,673,170	296,785	4,969,955
County of San Bernardino	82.749%	2,180,860,158	557,314,965	9,235,085	645,734,888	233,307,263	16,351,073	249,658,337	306,847,553	(1,127,261)	305,720,292
Crestline Sanitation District	0.077%	2,023,707	517,155	206,012	796,645	216,495	164,591	381,087	284,736	18,026	302,762
Department of Water and Power of the City of Big Bear Lake	0.228%	6,020,247	1,538,464	409,447	2,166,500	644,043	611,485	1,255,528	847,050	76,867	923,917
Hesperia Recreation and Park District	0.125%	3,284,987	839,473	531,512	1,490,259	351,426	866,775	1,218,202	462,198	69,693	531,892
Inland Library System	0.004%	98,682	25,218	157	28,958	10,557	11,262	21,819	13,885	(3,493)	10,392
Law Library for San Bernardino County	0.025%	688,517	170,838	14,926	210,038	71,518	168,135	239,652	94,061	(30,740)	63,320
Local Agency Formation Commission	0.033%	864,960	221,039	91,441	343,886	92,533	54,020	146,553	121,700	25,672	147,373
Mojave Desert Air Quality Management District	0.383%	10,094,423	2,579,612	675,970	3,622,100	1,079,896	585,658	1,665,554	1,420,288	207,565	1,627,852
San Bernardino County Transportation Authority	0.566%	14,926,497	3,814,440	1,965,124	6,321,530	1,596,829	618,485	2,215,313	2,100,162	649,136	2,749,297
South Coast Air Quality Management District	8.123%	214,076,570	54,706,880	13,868,933	76,348,727	22,901,798	16,712,262	39,614,060	30,120,625	(2,275,298)	27,845,327
Superior Court of California County of San Bernardino	4.324%	113,960,482	29,122,400	14,571,716	47,831,907	12,191,432	2,029,204	14,220,636	16,034,267	2,518,636	18,552,903
Total	100.000%	\$ 2,635,504,357	\$ 673,498,488	\$ 48,053,292	\$ 817,244,291	\$ 281,944,859	\$ 48,053,292	\$ 329,998,151	\$ 370,816,102	\$ -	\$ 370,816,102

(1) Date listed is the measurement date. See Note 2-Summary of Significant Accounting and Financial Reporting Policies for further information. The accompanying notes are an integral part of these schedules. Results may not total due to rounding.

San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Schedules of Pension Amounts by Employer (Continued)
As of and for the Years Ended June 30, 2017 and 2016

6/30/2016

Employer	Employer Proportionate Share	Net Pension Liability	Deferred Outflows of Resources				Deferred Inflows of Resources				Pension Expense		
			Net Difference Between Projected and Actual Investment Earnings on Pension Plan	Changes of Assumptions	Total Deferred Outflows of Resources	Proportionate Share of Contributions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Actual Experience	Total Deferred Inflows of Resources	Proportionate Share of Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Total Employer Pension Expense			
Baislow Fire Protection District	0.518%	\$ 12,781,554	\$ 2,768,759	\$ 882,621	\$ 7,639,732	\$ 3,988,352	\$ 7,639,732	\$ 1,935,043	\$ 2,470,784	\$ 4,405,828	\$ 1,657,007	\$ 532,922	\$ 2,189,929
California Electronic Recording Transaction Network Authority	0.019%	472,814	102,422	32,650	226,682	91,611	226,682	71,581	11,021	82,602	61,296	17,767	79,063
California State Association of Counties	0.951%	23,479,712	5,086,210	1,621,374	7,322,679	615,094	7,322,679	3,554,674	2,226,092	5,780,766	3,043,921	(297,553)	2,746,368
City of Big Bear Lake	0.717%	17,695,050	3,833,128	1,221,919	5,590,874	495,827	5,590,874	2,678,914	1,964,771	4,643,695	2,293,995	(266,621)	2,027,375
City of Chino Hills	1.191%	29,404,282	6,369,599	2,030,491	9,870,035	1,469,944	9,870,035	4,451,615	2,286,855	6,738,470	3,611,986	82,663	3,894,648
County of San Bernardino	83.108%	2,051,294,555	444,354,491	141,650,658	599,381,528	13,376,379	599,381,528	310,552,532	20,440,980	330,993,512	265,930,844	(937,156)	264,993,688
Crestline Sanitation District	0.084%	2,084,813	451,615	143,965	873,061	277,480	873,061	315,627	76,553	392,180	270,276	40,845	311,121
Department of Water and Power of the City of Big Bear Lake	0.225%	5,549,574	1,202,157	383,222	2,178,006	592,627	2,178,006	840,169	769,253	1,609,422	719,450	68,568	788,018
Hesperia Recreation and Park District	0.146%	3,595,827	778,933	248,307	1,816,110	788,870	1,816,110	544,385	595,397	1,139,782	466,165	143,733	609,897
Inland Library System	0.004%	91,918	19,911	6,347	26,259	-	26,259	13,916	14,785	28,700	11,916	(3,523)	8,393
Law Library for San Bernardino County	0.030%	733,197	158,826	50,630	235,440	25,983	235,440	111,001	115,294	226,295	95,052	(15,476)	79,576
Local Agency Formation Commission	0.031%	769,173	166,619	53,115	317,722	97,988	317,722	116,448	66,761	183,208	99,716	20,533	120,249
Mojave Desert Air Quality Management District	0.375%	9,252,237	2,004,233	638,907	3,552,493	909,353	3,552,493	1,400,728	739,150	2,139,878	1,199,465	186,972	1,386,437
San Bernardino County Transportation Authority	0.549%	13,543,950	2,933,911	935,268	6,361,563	2,492,384	6,361,563	2,050,465	803,107	2,853,572	1,755,844	599,701	2,355,545
South Coast Air Quality Management District	8.086%	199,589,723	43,235,424	13,782,524	75,026,861	18,008,913	75,026,861	30,216,574	18,036,394	48,252,968	25,874,911	(1,454,145)	24,420,766
Superior Court of California County of San Bernardino	3.966%	97,899,581	21,207,153	6,760,385	38,212,856	10,245,318	38,212,856	14,821,354	2,859,927	17,680,281	12,691,750	1,280,772	13,972,522
Total	100.000%	\$ 2,468,237,961	\$ 534,673,395	\$ 170,442,382	\$ 758,591,900	\$ 53,476,123	\$ 758,591,900	\$ 373,673,028	\$ 53,476,123	\$ 427,151,150	\$ 319,983,594	\$ -	\$ 319,983,594

(1) Date listed is the measurement date. See Note 2, Summary of Significant Accounting and Financial Reporting Policies for further information. The accompanying notes are an integral part of these schedules. Results may not total due to rounding.

San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Notes to the Schedules of Employer Allocations and
Schedules of Pension Amounts by Employer
As of and for the Years Ended June 30, 2017 and 2016

Note 1 – Plan Description

The San Bernardino County Employees' Retirement Association (SBCERA) administers the SBCERA pension plan - a cost-sharing multiple-employer defined benefit pension plan (the Plan). SBCERA provides retirement, disability, death, and survivor benefits to General and Safety (law enforcement and fire suppression) Plan members (members), who are employed by 17 active participating employers (including SBCERA), and 3 withdrawn employers. SBCERA operates under the provisions of the California County Employees Retirement Law of 1937, the California Public Employees' Pension Reform Act of 2013, and the regulations, procedures, and policies adopted by SBCERA's Board of Retirement (Board).

Fiduciary oversight of SBCERA is vested with the SBCERA Board, which consists of nine voting members, and three alternate members. Four members are appointed by the County of San Bernardino's Board of Supervisors, six members (which include two alternates) are elected by the members of SBCERA (General members elect two members, Safety members elect one member and one alternate, and retired members elect one member and one alternate), and the County of San Bernardino Treasurer is an ex-officio member who has designated one alternate. SBCERA publishes its own Comprehensive Annual Financial Report (CAFR) which is available on SBCERA's website at www.SBCERA.org.

SBCERA administers benefits for two membership classifications, General and Safety, and those benefits are tiered based upon date of SBCERA membership. Generally, those who become members prior to January 1, 2013 are Tier 1 members. All other members are Tier 2. Employees become eligible for membership on their first day of employment (when appointed to a regular position, whose service is greater than fifty percent of the full standard of hours), and members become fully vested after earning five years of service credit or attaining the age of 70. Additional information regarding SBCERA's benefits is available on SBCERA's website at www.SBCERA.org.

NOTE 2 - Summary of Significant Accounting and Financial Reporting Policies

Employers participating in SBCERA are required to report pension information in their financial statements in accordance with Governmental Accounting Standards Board (GASB) Statement No. 68 (GASB 68), *Accounting and Financial Reporting for Pensions*. The Schedules of Employer Allocations, Schedules of Pension Amounts by Employer, and the accompanying notes to these schedules (Pension Schedules) provide SBCERA participating employers with the required pension information for financial reporting.

The underlying financial information used to prepare the Pension Schedules is based on SBCERA's financial statements, which are prepared using the accrual basis of accounting, in accordance with accounting principles generally accepted in the United States of America, as applicable to governmental organizations. In doing so, SBCERA adheres to the reporting requirements established by GASB. Employer and member contributions are recognized in the period in which the contributions are due, pursuant to statutory requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Notes to the Schedules of Employer Allocations and
Schedules of Pension Amounts by Employer
As of and for the Years Ended June 30, 2017 and 2016
(Continued)

NOTE 2 - Summary of Significant Accounting and Financial Reporting Policies (Continued)

For the Pension Schedules, the net pension liability (NPL) was measured as of June 30, 2017 and 2016, for the SBCERA employer reporting dates of June 30, 2018 and 2017, respectively. The NPL was determined based upon the results of an actuarial valuation as of June 30, 2017 and 2016, respectively. Plan fiduciary net position and the total pension liability (TPL) were valued as of the measurement dates. Consistent with the provisions of GASB 68, the fiduciary net position and liabilities measured as of June 30, 2017 and 2016 are not adjusted or rolled forward to June 30, 2018 and 2017 reporting dates, respectively.

Results shown in the Pension Schedules exclude any employer contributions made after the measurement dates of June 30, 2017 and 2016, respectively.

NOTE 3 - Net Pension Liability

The components of NPL of participating employers as of June 30, 2017 and 2016 are shown as follows:

Net Pension Liability of Participating Employers

		<u>Measurement Date</u>	
		<u>June 30, 2017</u>	<u>June 30, 2016</u>
Total pension liability	(a)	\$ 11,923,945,718	\$ 10,665,211,907
Plan fiduciary net position	(b)	9,288,441,361	8,196,973,946
Net pension liability	(a-b)	<u>\$ 2,635,504,357</u>	<u>\$ 2,468,237,961</u>
Plan fiduciary net position as a percentage of the total pension liability	(b/a)	77.90%	76.86%

Actuarial Assumptions

The actuarial assumptions used to determine TPL as of June 30, 2017 and 2016, were based on the results of the June 30, 2017 and 2014 Actuarial Experience Studies (experience study), respectively, which covered the periods from July 1, 2013 through June 30, 2016 for the 2017 experience study, and from July 1, 2010 through June 30, 2013 for the 2014 experience study. They are the same assumptions used in the June 30, 2017 and 2016 actuarial valuations, respectively. Key assumptions used in the actuarial valuations are presented on the next page.

San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Notes to the Schedules of Employer Allocations and
Schedules of Pension Amounts by Employer
As of and for the Years Ended June 30, 2017 and 2016
(Continued)

NOTE 3 - Net Pension Liability (Continued)

Key Methods and Assumptions Used in Valuation of Total Pension Liability

Valuation Date	June 30, 2017	June 30, 2016
Actuarial Experience Study	3 Year Period Ending June 30, 2016	3 Year Period Ending June 30, 2013
Actuarial Assumptions:		
Discount Rate ¹	7.25%	7.50%
Inflation	3.00%	3.25%
Projected Salary Increases ²	General: 4.50% to 14.50% Safety: 4.70% to 14.50%	General: 4.60% to 13.75% Safety: 4.55% to 13.75%
Cost-of-Living Adjustments	Contingent upon consumer price index with a 2.00% maximum	Contingent upon consumer price index with a 2.00% maximum
Administrative Expenses	0.70% of payroll	0.60% of payroll

(1) Includes inflation at 3.00% and 3.25% for the valuation dated June 30, 2017 and 2016, respectively, and is net of pension plan investment expense.

(2) Includes inflation at 3.00% and 3.25% for the valuation dated June 30, 2017 and 2016, respectively, real "across the board" salary increases of 0.50%, plus merit and promotional increases. Amounts vary by service.

Mortality Rates

Mortality rates used in the actuarial valuation dated June 30, 2017 are based on the Headcount-Weighted RP 2014 Healthy Annuitant Mortality Table projected generationally using the two-dimensional mortality improvement scale MP-2016. For healthy General male members, the ages are set forward one year. No adjustment is made for healthy General female members. For all healthy and disabled Safety members, the ages are set back one year. For all General members that are disabled, the ages are set forward seven years. Beneficiaries are assumed to have the same mortality as a General member of the opposite sex who is receiving a service (non-disability) retirement.

Mortality rates used in the actuarial valuation dated June 30, 2016 are based on the RP-2000 Combined Healthy Mortality Table projected 20 years to 2020 using Projection Scale BB. For healthy General members, no adjustments are made. For healthy Safety members, the ages are set back two years for males and one year for females. For General members that are disabled, the ages are set forward seven years for males and set forward eight years for females. For Safety members that are disabled, the ages are set forward two years for males and females. Beneficiaries are assumed to have the same mortality as a General member of the opposite sex who is receiving a service (non-disability) retirement.

San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Notes to the Schedules of Employer Allocations and
Schedules of Pension Amounts by Employer
As of and for the Years Ended June 30, 2017 and 2016
(Continued)

NOTE 4 - Proportionate Share

For the year ended June 30, 2016, the County Safety, South Coast Air Quality Management District, and Superior Court actuarial cost groups (cost group) have only one active employer each, so the entire NPL for those cost groups has been allocated to those employers. For all other cost groups, the NPL is allocated based on the actual employer contributions within the cost group. For the year ended June 30, 2017, the allocation of NPL is the same except that all members in the Other Safety cost group transferred to the County Safety cost group. Therefore, the NPL for the County Safety cost group is now allocated based on the actual employer contributions within the cost group.

The steps used to determine each employer's proportionate share of pension amounts are as follows:

1. The NPL for each cost group is the TPL minus the Plan's fiduciary net position. The TPL for each cost group is determined by actuarial valuation results calculated by SBCERA's actuary, based on the actual participants in each cost group. The Plan's fiduciary net position for each cost group was estimated by adjusting the Valuation Value of Assets (VVA) for each cost group by the ratio of the total Plan fiduciary net position to total Plan VVA. Any non-valuation reserves (such as the Burial Allowance Reserve), and the Survivor Benefit reserve, are allocated amongst the cost groups based on each cost groups VVA.
2. Calculate ratio of employer's contributions to the total contributions for the cost group.
3. The ratio is then multiplied by the NPL for the cost group to determine the employer's proportionate share of the NPL for the cost group.
4. The NPL associated with SBCERA (as the employer), and any surplus or remaining unfunded liability from the withdrawn employers (after taking into account their fixed payment agreement) have been reallocated to the remaining active employers, based on each employer's NPL prior to the reallocation.
5. The total allocated NPL for each employer is the sum of items 3 and 4 above.
6. Proportionate share percentages are calculated by dividing each employer's allocated NPL in item 5 by the total NPL for the Plan.

San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Notes to the Schedules of Employer Allocations and
Schedules of Pension Amounts by Employer
As of and for the Years Ended June 30, 2017 and 2016
(Continued)

NOTE 5 - Employer Contributions

The employer contributions used for each measurement date is a component of total employer contributions presented in SBCERA's Statements of Changes in Fiduciary Net Position as follows:

Employer Contributions
(Amounts in Thousands)

	Measurement Date	
	June 30, 2017	June 30, 2016
Actuarially determined contributions	\$ 360,478	\$ 340,512
Less SBCERA's employer contributions	(1,123)	(1,002)
Actual employer contributions used as the basis for allocating employer's proportionate share by actuarial cost group	\$ 359,355	\$ 339,510

NOTE 6 - Long-Term Expected Real Rate of Return and Discount Rate

The long-term expected rate of return on 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. This information is combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, and by adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocations approved by the Board, 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 assumptions as of June 30, 2017 and 2016, are summarized in the table below.

Long-Term Expected Real Rate of Return
As of June 30, 2017 and 2016

Asset Class	Investment Classification	June 30, 2017		June 30, 2016	
		Target Allocation ¹	Long-Term Expected Real Rate of Return (Arithmetic)	Target Allocation ¹	Long-Term Expected Real Rate of Return (Arithmetic)
Large cap U.S. equity	Domestic common and preferred stock	8.00%	5.61%	5.00%	5.94%
Small cap U.S. equity	Domestic common and preferred stock	2.00%	6.37%	2.00%	6.50%
Developed international equity	Foreign common and preferred stock	6.00%	6.96%	6.00%	6.87%
Emerging market equity	Foreign common and preferred stock	6.00%	9.28%	6.00%	8.06%
U.S. core fixed income	U.S. Government and municipals/corporate bonds	2.00%	1.06%	2.00%	0.69%
High yield/credit strategies	Corporate bonds/foreign bonds	13.00%	3.65%	13.00%	3.10%
Global core fixed income	Foreign bonds	1.00%	0.07%	1.00%	0.30%
Emerging market debt	Emerging market debt	6.00%	3.85%	6.00%	4.16%
Real estate	Real estate	9.00%	4.37%	9.00%	4.96%
International credit	Foreign alternatives	11.00%	6.75%	10.00%	6.76%
Absolute return	Domestic alternatives/foreign alternatives	13.00%	3.56%	13.00%	2.88%
Other Real assets	Domestic alternatives/foreign alternatives	5.00%	6.35%	6.00%	6.85%
Long/short equity	Domestic alternatives/foreign alternatives	0.00%	0.00%	3.00%	4.86%
Private equity	Domestic alternatives/foreign alternatives	16.00%	8.47%	16.00%	9.64%
Cash and equivalents	Short-term cash investment funds	2.00%	(0.17)%	2.00%	(0.03)%
Total		100.00%		100.00%	

(1) For actuarial purposes, target allocations only change once every three years based on the triennial actuarial experience study.

San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Notes to the Schedules of Employer Allocations and
Schedules of Pension Amounts by Employer
As of and for the Years Ended June 30, 2017 and 2016
(Continued)

NOTE 6 - Long-Term Expected Real Rate of Return and Discount Rate (Continued)

Discount Rate

The discount rates used to measure the TPL were 7.25% and 7.50% for the years ended June 30, 2017 and 2016, respectively. The projection of cash flows used to determine the discount rates assumed that contributions from participating employers and active members are made at the actuarially determined contribution rates. For this purpose, only employer and member contributions that are intended to fund benefits of current members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs of future members and their beneficiaries, as well as projected contributions from future 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 of current members. Therefore, the long-term expected rate of return on Plan investments, of 7.25% and 7.50% were applied to all periods of projected benefit payments to determine the TPL as of June 30, 2017 and 2016, respectively.

The tables on the next two pages present the allocated NPL of participating employers calculated using the discount rates of 7.25% and 7.50% as of June 30, 2017 and 2016, respectively, as well as what the employers' allocated NPL would be if it were calculated using a discount rate that is 1.00% lower or 1.00% higher than the current rates.

San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Notes to the Schedules of Employer Allocations and
Schedules of Pension Amounts by Employer
As of and for the Years Ended June 30, 2017 and 2016
(Continued)

NOTE 6 - Long-Term Expected Real Rate of Return and Discount Rate (Continued)

Sensitivity of Net Pension Liability to Changes in the Discount Rate
As of June 30, 2017

Employer	Employer Proportionate Share	1% Decrease 6.25%	Current Discount Rate 7.25%	1% Increase 8.25%
Barstow Fire Protection District	0.378%	\$ 14,721,578	\$ 9,958,070	\$ 6,039,973
California Electronic Recording Transaction Network Authority	0.019%	883,790	507,723	198,400
California State Association of Counties	0.998%	38,043,918	26,292,053	16,625,869
City of Big Bear Lake	0.708%	27,250,127	18,653,622	11,582,795
City of Chino Hills	1.260%	48,097,184	33,213,659	20,971,611
County of San Bernardino	82.749%	3,589,635,684	2,180,860,158	1,022,109,306
Crestline Sanitation District	0.077%	3,543,167	2,023,707	773,916
Department of Water and Power of the City of Big Bear Lake	0.228%	8,721,925	6,020,247	3,798,054
Hesperia Recreation and Park District	0.125%	4,774,341	3,284,987	2,059,958
Inland Library System	0.004%	143,555	98,682	61,772
Law Library for San Bernardino County	0.025%	971,650	668,517	419,184
Local Agency Formation Commission	0.033%	1,253,448	864,960	545,420
Mojave Desert Air Quality Management District	0.383%	14,608,735	10,094,423	6,381,295
San Bernardino County Transportation Authority	0.566%	21,597,951	14,926,497	9,439,070
South Coast Air Quality Management District	8.123%	332,228,066	214,076,570	116,894,198
Superior Court of California County of San Bernardino	4.324%	178,170,877	113,960,482	61,145,930
Total	100.000%	\$ 4,284,645,997	\$ 2,635,504,357	\$ 1,279,046,750

Note: Results may not total due to rounding.

The NPL under the 1% decrease and 1% increase scenarios reflect an estimate of the actual proportionate share allocation that would be calculated for each employer under each scenario as follows: Total plan TPL calculated under each scenario divided by the total plan TPL based on a 7.25% discount rate, multiplied by each employer's allocated TPL based on a 7.25% discount rate less plan fiduciary net position.

San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Notes to the Schedules of Employer Allocations and
Schedules of Pension Amounts by Employer
As of and for the Years Ended June 30, 2017 and 2016
(Continued)

NOTE 6 - Long-Term Expected Real Rate of Return and Discount Rate (Continued)

Sensitivity of Net Pension Liability to Changes in the Discount Rate
As of June 30, 2016

Employer	Employer Proportionate Share	Current Discount		
		1% Decrease 6.50%	Rate 7.50%	1% Increase 8.50%
Barstow Fire Protection District	0.518%	\$ 16,943,279	\$ 12,781,554	\$ 9,332,923
California Electronic Recording Transaction Network Authority	0.019%	784,904	472,814	214,199
California State Association of Counties	0.951%	33,104,184	23,479,712	15,504,350
City of Big Bear Lake	0.717%	24,320,017	17,695,050	12,205,242
City of Chino Hills	1.191%	41,489,149	29,404,282	19,390,102
County of San Bernardino	83.108%	3,252,233,107	2,051,294,555	1,056,131,422
Crestline Sanitation District	0.084%	3,475,236	2,084,813	932,633
Department of Water and Power of the City of Big Bear Lake	0.225%	7,833,131	5,549,574	3,657,295
Hesperia Recreation and Park District	0.146%	5,091,805	3,595,827	2,356,178
Inland Library System	0.004%	130,180	91,918	60,212
Law Library for San Bernardino County	0.030%	1,037,459	733,197	481,069
Local Agency Formation Commission	0.031%	1,086,033	769,173	506,606
Mojave Desert Air Quality Management District	0.375%	13,048,162	9,252,237	6,106,727
San Bernardino County Transportation Authority	0.549%	19,096,059	13,543,950	8,943,169
South Coast Air Quality Management District	8.086%	300,963,502	199,589,723	115,585,886
Superior Court of California County of San Bernardino	3.966%	150,534,083	97,899,581	54,283,764
Total	100.000%	\$ 3,871,170,289	\$ 2,468,237,961	\$ 1,305,691,776

Note: Results may not total due to rounding.

The NPL under the 1% decrease and 1% increase scenarios reflects an estimate of the actual proportionate share allocation that would be calculated for each employer under each scenario as follows: Total plan TPL calculated under each scenario divided by the total plan TPL based on a 7.50% discount rate, multiplied by each employer's allocated TPL based on a 7.50% discount rate less plan fiduciary net position.

San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Notes to the Schedules of Employer Allocations and
Schedules of Pension Amounts by Employer
As of and for the Years Ended June 30, 2017 and 2016
(Continued)

NOTE 7 - Collective Pension Expense and Deferred Outflows/Inflows of Resources

Changes in the collective NPL are included in collective pension expense in the measurement period except as follows:

Average Expected Remaining Service Life

The average expected remaining service life of all employees that are provided with benefits through the Plan is measured as of the beginning of the measurement period as follows:

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

The average expected remaining service life is 6.20 and 6.24 years as of the measurement dates of June 30, 2017 and 2016, respectively. The amounts calculated from the items below are included in collective pension expense over the average expected remaining service life of all employees that are provided with benefits through the Plan, over a closed period, beginning in the current measurement period. The unamortized amounts not included in collective pension expense are reported as collective deferred outflows of resources or deferred inflows of resources.

1. Changes of assumptions.
2. Changes in proportion and differences between actual employer contributions and the proportionate share of employer contributions.
3. Differences between expected and actual experience.

Investment Earnings on Plan Investments

The difference between projected and actual earnings on plan investments is included in collective pension expense over a closed five-year period, beginning in the current measurement period. The unamortized amount not included in collective pension expense is reported as deferred outflows of resources or deferred inflows of resources.

San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Notes to the Schedules of Employer Allocations and
Schedules of Pension Amounts by Employer
As of and for the Years Ended June 30, 2017 and 2016
(Continued)

NOTE 8 - Collective Pension Expense

The components of collective pension expense, allocated to employers based on their proportionate share, for the years ended June 30, 2017 and 2016, are as follows:

Components of Collective Pension Expense

	Measurement Date	
	June 30, 2017	June 30, 2016
Service cost	\$ 300,779,648	\$ 295,457,529
Interest on TPL	803,777,972	770,842,231
Amortization of current period difference between expected and actual experience in the TPL	(1,715,152)	(24,277,680)
Amortization of current period changes of assumptions or other inputs	106,889,355	-
SBCERA employer contributions	(1,122,793)	(1,001,206)
Member contributions	(143,858,526)	(139,132,004)
Projected earnings on plan investments	(614,520,648)	(620,574,772)
Amortization of current period differences between actual and projected earnings on plan investments	(96,735,477)	140,120,457
Administrative expense	13,163,171	10,233,264
Amortization of prior period differences between actual and projected earnings on plan investments, expected and actual experience in the TPL, and changes of assumptions for deferred outflows	104,807,514	52,768,539
Amortization of prior period differences between actual and projected earnings on plan investments, and expected and actual experience in the TPL for deferred inflows	(100,648,961)	(164,452,764)
Total Collective Pension Expense	\$ 370,816,102	\$ 319,983,594

Note: Results may not total due to rounding.

San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Notes to the Schedules of Employer Allocations and
Schedules of Pension Amounts by Employer
As of and for the Years Ended June 30, 2017 and 2016
(Continued)

NOTE 9 - Amortization of Deferred Outflows of Resources and Deferred Inflows of Resources

The following components of outstanding deferred outflows of resources and deferred inflows of resources are amortized pursuant to GASB 68, as of June 30, 2017 and 2016 as follows:

Deferred Outflows of Resources and Deferred Inflows of Resources

	Measurement Date	
	June 30, 2017	June 30, 2016
Deferred Outflows of Resources:		
Changes of assumptions ¹	\$ 673,498,488	\$ 170,442,382
Net difference between projected and actual investment earnings on pension plan investments ²	95,692,511	534,673,395
Changes in proportion and differences between employer contributions and proportionate share of contributions ¹	48,053,292	53,476,123
Total Deferred Outflows of Resources	\$ 817,244,291	\$ 758,591,900
Deferred Inflows of Resources:		
Difference between expected and actual experience ¹	\$ 281,944,859	\$ 373,675,028
Changes in proportion and differences between employer contributions and proportionate share of contributions ¹	48,053,292	53,476,123
Total Deferred Inflows of Resources	\$ 329,998,151	\$ 427,151,150

Note: Results may not total due to rounding.

(1) Amortized over the average of the expected remaining service lives of all employees.

(2) Amortized over a closed five-year period.

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

Recognition of Deferred Outflows of Resources and Deferred Inflows of Resources

For the Reporting Date June 30:	Measurement Date	
	June 30, 2017	June 30, 2016
2018	N/A	\$ 4,158,552
2019	\$ 99,226,033	90,787,308
2020	174,384,532	165,945,806
2021	113,245,920	104,807,195
2022	(19,992,743)	(28,431,468)
2023	99,347,559	(5,826,643)
2024	21,034,840	-

Note: Results may not total due to rounding.

**San Bernardino County Employees' Retirement Association
A Cost-Sharing Multiple-Employer Defined Benefit Pension Plan
Notes to the Schedules of Employer Allocations and
Schedules of Pension Amounts by Employer
As of and for the Years Ended June 30, 2017 and 2016
(Continued)**

NOTE 10 - Additional Financial and Actuarial Information

Additional information supporting the preparation of the Pension Schedules is located in SBCERA's CAFR, which contains audited financial statements and required supplementary information, as well as information on the Plan's actuarial valuations. The CAFR and actuarial valuations are available on SBCERA's website at www.SBCERA.org, or a copy may be obtained by submitting a request to:

San Bernardino County Employees' Retirement Association
348 West Hospitality Lane, Third Floor
San Bernardino, CA 92415