Segal Consulting

Imperial County Employees' Retirement System

Governmental Accounting Standards (GAS) 67
Actuarial Valuation as of June 30, 2017

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December 8, 2017

Board of Retirement
Imperial County Employees' Retirement System
1221 West State Street
El Centro, CA 92243

Dear Board Members:

We are pleased to submit this Governmental Accounting Standards (GAS) 67 Actuarial Valuation as of June 30, 2017. It contains various information that will need to be disclosed in order to comply with GAS 67.

This report was prepared in accordance with generally accepted actuarial principles and practices at the request of the Board to assist in administering the System. The census and financial information on which our calculations were based was prepared by ICERS. 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, EA. 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 the System.

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:

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

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Purpose

This report has been prepared by Segal Consulting ("Segal") to present certain disclosure information required by Governmental Accounting Standards (GAS) 67 as of June 30, 2017. This valuation is based on:

- The benefit provisions of the Retirement System, as administered by the Board;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of June 30, 2016, provided by ICERS;
- The assets of the Plan as of June 30, 2017, provided by ICERS;
- Economic assumptions regarding future salary increases and investment earnings as of June 30, 2017; and
- Other actuarial assumptions, regarding employee terminations, retirement, death, etc., as of June 30, 2017.

General Observations on GAS 67 Actuarial Valuation

The following points should be considered when reviewing this GAS 67 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 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 ICERS uses for funding. This means that the Total Pension Liability (TPL) measure for financial reporting shown in this report is determined on generally the same basis as ICERS' 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 Fiduciary Net Position. The Plan Fiduciary Net Position is equal to the market value of assets and therefore, the NPL measure is very similar to an Unfunded Actuarial Accrued Liability (UAAL) calculated on a market value basis.

Significant Issues in Valuation Year

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

- For this report, the reporting dates for the Plan are June 30, 2017 and 2016. The NPLs measured as of June 30, 2017 and 2016 have been determined by rolling forward the results of the actuarial valuations as of June 30, 2016 and 2015, respectively. The Plan Fiduciary Net Positions were valued as of the measurement dates. In addition, any changes in actuarial assumptions or plan provisions that occurred between the valuation date and the measurement date have been reflected.
- The NPL decreased slightly from $134.2 million as of June 30, 2016 to $134.1 million as of June 30, 2017 due to the 12.3% return on the market value of assets during 2016/2017 that was more than the assumed return of 7.50% (a gain of $33.6 million) and lower than expected active salary increases during 2015/2016 (because liabilities are rolled forward from June 30, 2016 to June 30, 2017, this gain is not reflected until this valuation as of June 30, 2017). These gains were offset almost entirely by the $46.7 million loss from changes in actuarial assumptions. Changes in these values during the last two fiscal years ending June 30, 2017 and June 30, 2016 can be found in Exhibit 3.
- The discount rates originally used to determine the TPL and NPL as of June 30, 2017 and June 30, 2016 were 7.50% and 7.50%, respectively, following the same assumptions used by ICERS in the pension funding valuations as of June 30, 2016 and June 30, 2015. However, as the Board has approved a new discount rate of 7.25% (together with other new actuarial assumptions) for use in the next pension funding valuation as of June 30, 2017, we have estimated the impact of this assumption change by (1) revaluing the actuarial valuation TPL as of June 30, 2016 (before the roll forward) and (2) using this revalued TPL in rolling forward the results from June 30, 2016 to June 30, 2017. The detailed calculations used in this derivation of the TPL and NPL as of June 30, 2017 can be found in Exhibit 5 of Section 2. Various other information that is required to be disclosed can be found throughout Exhibits 1 through 4 in Section 2.
- Section 3 contains two schedules that the American Institute of Certified Public Accountants (AICPA) recommends be prepared by cost sharing pension plans. These two schedules contain summary information related to GAS 68 and are based on many of the results that will be shown in a separate GAS 68 report. The first schedule shows the method used for allocating the NPL along with the NPL amounts allocated amongst all of the employers in ICERS. The second schedule is a summary that shows the allocated NPL, deferred outflows and inflows of resources and pension expense by employer. Further information regarding GAS 68 including additional information that employers will need to disclose will be provided in a separate report that is anticipated to be completed during the first quarter of 2018.

Summary of Key Valuation Results

	2017	2016
Disclosure elements for fiscal year ending June 30:		
Service cost(1)	$25,909,942	$25,771,056
Total Pension Liability	913,174,648	833,286,055
Plan Fiduciary Net Position	779,074,836	699,069,483
Net Pension Liability	134,099,812	134,216,572
Schedule of contributions for fiscal year ending June 30:		
Actuarially determined contributions	$21,009,400	$20,506,786
Actual contributions	21,009,400	20,506,786
Contribution deficiency (excess)	0	0
Demographic data for plan year ending June 30:(2)		
Number of retired members and beneficiaries	1,121	1,078
Number of vested terminated members(3)	451	425
Number of active members	2,186	2,127
Key assumptions as of June 30:		
Investment rate of return	7.25%	7.50%
Inflation rate	3.00%	3.25%
Projected salary increases(4)	General: 4.75% to 8.25% and Safety: 4.75% to 11.50%	General: 4.75% to 7.75% and Safety: 4.75% to 11.75%

(1) *The service cost is based on the previous year's valuation, meaning the 2017 and 2016 values are based on the valuations as of June 30, 2016 and June 30, 2015, respectively. Both of the service costs have been calculated using the assumptions shown in the 2016 column as there had been no changes in the actuarial assumptions between the June 30, 2015 and 2016 valuations.*

(2) *Data as of June 30, 2016 is used in the measurement of the TPL as of June 30, 2017.*

(3) *Includes terminated members due a refund of members contributions.*

(4) *Includes inflation at 3.00% plus real across-the-board salary increases of 0.50% plus merit and promotional increases for June 30, 2017 and includes inflation at 3.25% plus real across-the-board salary increases of 0.50% plus merit and promotional increases for June 30, 2016.*

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 provisions.
- **Participant data** An actuarial valuation for a plan is based on data provided to the actuary by ICERS. 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 ICERS.
- **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 ICERS 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.

- 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 ICERS 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 ICERS, it is not a fiduciary in its capacity as actuaries and consultants with respect to ICERS.

EXHIBIT 1

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

Plan Description

Plan administration. The Imperial County Employees' Retirement Association (ICERS) was established by the County of Imperial in 1951. ICERS is administered by the Board of Retirement and governed by the County Employees' Retirement Law of 1937 (California Government Code Section 31450 et. seq). ICERS 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 Safety and General members employed by the County of Imperial. ICERS also provides retirement benefits to the employee members of the Imperial County Courts, LAFCO, and ICTC.

The management of ICERS is vested with the Imperial County Board of Retirement. The Board consists of nine members and two alternates. The County Treasurer is a member of the Board of Retirement by law. Four members are appointed by the Board of Supervisors, one of whom may be a County Supervisor. Two members are elected by the General membership; one member and one alternate are elected by the Safety membership, one member and one alternate are elected by the retired members of the System. All members of the Board of Retirement serve terms of three years except for the County Treasurer whose term runs concurrent with her term as County Treasurer.

Plan membership. At June 30, 2017, pension plan membership consisted of the following:

Retired members or beneficiaries currently receiving benefits	1,121
Vested terminated members entitled to, but not yet receiving benefits	451
Active members	2,186
Total	3,758

Note: Data as of June 30, 2017 is not used in the measurement of the TPL as of June 30, 2017.

Benefits provided. ICERS provides service retirement, disability, death and survivor benefits to eligible employees. All regular full-time employees of the County of Imperial or contracting districts who work a minimum of 30 hours per week become members of ICERS effective on the first day of the first full pay period after employment. There are separate retirement plans for General and Safety member employees. Safety membership is extended to those involved in active law enforcement, fire suppression, and certain probation officers. Any new Safety Member who becomes a member on or after January 1, 2013 is designated as PEPRA Safety and is subject to the provisions of California Public Employees' Pension Reform Act of 2013

(PEPRA), California Government Code 7522 et seq. and Assembly Bill (AB) 197. All other employees are classified as General members. New General Members employed after January 1, 2013 are designated as PEPRA General subject to the provisions of California Government Code 7522 et seq. and AB 197.

General members hired prior to January 1, 2013, 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 member with 30 years of service is eligible to retire regardless of age. General members who are first hired on or after January 1, 2013, are eligible to retire once they have attained the age of 52, and have acquired five years of retirement service credit.

Safety members hired prior to January 1, 2013, are eligible to retire once they attain the age of 60 regardless of service or at age 50 and have acquired 10 or more years of retirement service credit. A member with 20 years of service is eligible to retire regardless of age. Safety members who are first hired on or after January 1, 2013, 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.

General member benefits are calculated pursuant to the provisions of Sections 31676.11 and 31676.14 for Regular and Regular plus Supplemental Benefits, respectively. The monthly allowance is equal to 1/60th of final compensation for Regular and Regular plus Supplemental Benefits, times years of accrued retirement service credit times age factor from either Section 31676.11 (Regular Benefit) or Section 31676.14 (Regular plus Supplemental Benefit). General member benefits for those who are first hired on or after January 1, 2013, are calculated pursuant to the provision of California Government Code Section 7522.20(a). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from Section 7522.20(a).

Safety member benefits are calculated pursuant to the provisions of California Government Code Sections 31664 and 31664.1 for Regular and Regular plus Supplemental Benefits, respectively. The monthly allowance is equal to 1/50th (or 2%) of final compensation times years of accrued retirement service credit times age factor from Section 31664 (Regular Benefit) or 3% of final compensation times years of accrued retirement service credit times age factor from Section 31664.1 (Regular plus Supplemental Benefit). Safety member benefits for those who are first hired on or after January 1, 2013, are calculated pursuant to the provision of California Government Code Section 7522.25(d). The monthly allowance is equal to the final compensation multiplied by years of accrued retirement credit multiplied by the age factor from Section 7522.25(d).

For members with membership dates before January 1, 2013, the maximum monthly retirement allowance is 100% of final compensation. However, for members with membership dates on or after January 1, 2013 the maximum amount of pensionable compensation that can be taken into account for 2017 is equal to $142,530 (reference Section 7522.10). This limit is adjusted on an annual basis. Members are exempt from paying member contributions and employers are exempt from paying employer contributions on compensation in excess of the annual cap.

Final average compensation consists of the highest 12 consecutive months for a General or Safety member and the highest 36 consecutive months for a PEPRA General and PEPRA Safety member.

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 spouses 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.

ICERS provides an annual cost-of-living benefit to all retirees. The cost-of-living adjustment, based upon the Consumer Price Index for the Western Region, is capped at 2.0%.

The County of Imperial and contracting districts 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 ICERS' actuary after the completion of the annual actuarial valuation. The average employer contribution rate as of June 30, 2017 for 2016-2017 (based on the June 30, 2015 valuation) was 18.34% of compensation.

All members are required to make contributions to ICERS regardless of the retirement plan or tier in which they are included. The average member contribution rate as of June 30, 2017 for 2016-2017 (based on the June 30, 2015 valuation) was 11.61% of compensation.

EXHIBIT 2
Net Pension Liability

The components of the Net Pension Liability as follows:

	June 30, 2017	June 30, 2016
Total Pension Liability	$913,174,648	$833,286,055
Plan Fiduciary Net Position	(779,074,836)	(699,069,483)
Net Pension Liability	$134,099,812	$134,216,572
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	85.31%	83.89%

The Net Pension Liability (NPL) was measured as of June 30, 2017 and 2016. 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, 2016 and 2015, respectively.

Plan provisions. The plan provisions used in the measurement of the NPL as of June 30, 2017 and 2016 are the same as those used in the ICERS actuarial valuation as of June 30, 2017 and 2016, respectively.

Actuarial assumptions. The TPL as of June 30, 2017 was remeasured by (1) revaluing the TPL as of June 30, 2016 (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, 2017 and (2) using this revalued TPL in rolling forward the results from June 30, 2016 to June 30, 2017:

Inflation	3.00%
Salary increases	General: 4.75% to 8.25% and Safety: 4.75% to 11.50%, vary by service, including inflation
Investment rate of return	7.25%, net of pension plan investment expense, including inflation
Administrative expenses	1.80% of payroll allocated to both the employer and member based on the components of the total contribution rate (before expense) for the employer and member.
Other assumptions	See analysis of actuarial experience during the period July 1, 2013 through June 30, 2016

The TPL as of June 30, 2016 was determined by actuarial valuations as of June 30, 2015. The actuarial assumptions used were based on the results of an experience study for the period from July 1, 2010 through June 30, 2013 and they are the same assumptions used in the June 30, 2016 funding valuation for ICERS.

Inflation	3.25%
Salary increases	General: 4.75% to 7.75% 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
Administrative expenses	1.20% of payroll allocated to both the employer and member based on the components of the total contribution rate (before expense) for the employer and member.
Other assumptions	See analysis of actuarial experience during the period July 1, 2010 through June 30, 2013

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 Arithmetic Real Rate of Return
Large Cap U.S. Equity	23%	5.61%
Small Cap U.S. Equity	6%	6.37%
Developed International Equity	17%	6.96%
Emerging Markets Equity	7%	9.28%
U.S. Core Fixed Income	22%	1.06%
TIPS	5%	0.94%
Real Estate	5%	4.37%
Value Added Real Estate	5%	6.00%
Private Credit	5%	5.10%
Private Equity	5%	8.70%
Total	100%	

Discount rate: The discount rates used to measure the TPLs were 7.25% and 7.50% as of June 30, 2017 and June 30, 2016, respectively. For plan member contributions, the projection of cash flows used to determine the discount rate assumed member contributions will be made at the current contribution rate for the Regular and PEPRA benefits and that the contributions will be made at rates equal to the actuarially determined contribution rates for the Supplemental benefits. For employer contributions, the projection of cash flow used to determine the discount rate assumed employer contributions will be made at rates equal to the actuarially determined contribution rates.

For this purpose, only member and employer contributions that are intended to fund benefits of current plan members and their beneficiaries are included. Based on those assumptions, the Pension Plan 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, 2017 and June 30, 2016.

Sensitivity of the Net Pension Liability to changes in the discount rate. The following presents the NPL of ICERS as of June 30, 2017, calculated using the discount rate of 7.25%, as well as what the ICERS' 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:

	1% Decrease (6.25%)	**Current Discount (7.25%)**	**1% Increase (8.25%)**
Net Pension Liability as of June 30, 2017	$259,750,601	$134,099,812	$26,678,720

EXHIBIT 3

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

	2017	2016
Total Pension Liability		
1. Service cost	$25,909,942	$25,771,056
2. Interest	61,765,040	59,345,608
3. Change of benefit terms	0	0
4. Differences between expected and actual experience	(16,844,635)	(6,660,193)
5. Changes of assumptions	46,693,228	0
6. Benefit payments, including refunds of member contributions	(37,634,982)	(34,668,642)
7. Net change in Total Pension Liability	$79,888,593	$43,787,829
8. Total Pension Liability – beginning	833,286,055	789,498,226
9. Total Pension Liability – ending	$913,174,648	$833,286,055
Plan's Fiduciary Net Position		
10. Contributions – employer	$21,009,400	$20,506,786
11. Contributions – employee	13,299,670	12,918,809
12. Net investment income	85,772,873	1,726,183
13. Benefit payments, including refunds of member contributions	(37,634,982)	(34,668,642)
14. Administrative expense	(2,441,608)	(2,303,583)
15. Other	0	0
16. Net change in Plan's Fiduciary Net Position	$80,005,353	$(1,820,447)
17. Plan's Fiduciary Net Position – beginning	699,069,483	700,889,930
18. Plan's Fiduciary Net Position – ending	$779,074,836	$699,069,483
19. Net Pension Liability – ending (9) – (18)	$134,099,812	$134,216,572
20. Plan's Fiduciary Net Position as a percentage of the Total Pension Liability	85.31%	83.89%
21. Covered employee payroll[1]	$114,539,000	$106,520,000
22. Plan's Net Pension Liability as percentage of covered employee payroll	117.08%	126.00%

[1] *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.*

Notes to Schedule:

Benefit changes: None

EXHIBIT 4

Schedule of Employer's Contributions – Last Ten Fiscal Years ($ in millions)

Year Ended June 30	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll[1]	Contributions as a Percentage of Covered Payroll
2008	9	9	0	79[2]	11.44%
2009	11	11	0	85[2]	12.88%
2010	12	12	0	88[2]	13.56%
2011	13	13	0	94[2]	13.84%
2012	13	13	0	96[2]	13.60%
2013	16	16	0	92[2]	17.41%
2014	17	17	0	96[2]	17.68%
2015	18	18	0	102	18.06%
2016	21	21	0	107	19.25%
2017	21	21	0	115	18.34%

(1) *Covered 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.*

(2) *"Backed into" by dividing the contributions in relation to the actuarially determined contributions by the contributions as a percentage of covered employee payroll. These amounts may therefore be different from the actual payrolls of the System.*

Notes to Exhibit 4

Valuation date	Actuarially determined contribution rates are calculated as of June 30, two years prior to the end of the fiscal year in which contributions are reported
Methods and assumptions used to establish "actuarially determined contribution" rates:	
Actuarial cost method	Entry Age Actuarial Cost Method
Amortization method	Level percent of payroll for total unfunded actuarial accrued liability
Remaining amortization period	UAAL established as of June 30, 2012 is amortized over a declining period (with 16 years remaining as of the June 30, 2015 valuation which set the rates for the 2016/2017 fiscal year). Effective with the June 30, 2013 valuation, any change in UAAL that arises due to actuarial gains or losses will be amortized over a 15-year closed period. Any change in UAAL as a result of a change in actuarial assumptions or methods will be amortized over a 20-year closed period. Any change in UAAL that arises due to plan amendments will be amortized over a 15-year closed period and any change in UAAL due to temporary retirement incentive programs will be amortized over a 5-year closed period. If ICERS becomes overfunded, such surplus and any subsequent surpluses will be amortized over an open amortization period of 30 years.
Asset valuation method	The Actuarial Value of Assets is determined by recognizing any difference between the actual and the expected market return over 5 years or 10 six-month interest crediting periods. The Actuarial Value of Assets is further adjusted, if necessary, to be within 30% of the Market Value of Assets. Deferred gains and losses as of June 30, 2011 have been combined and will be recognized in equal amounts over the next nine six-month interest crediting periods from that date. The Valuation Value of Assets is the Actuarial Value of Assets reduced by the value of the non-valuation reserves. For valuation purposes, the Valuation Value of Assets is reduced by the value of the non-valuation reserves.
Actuarial assumptions:	
June 30, 2015 valuation (for year ended 2017 ADC)	
Investment rate of return	7.50%, net of pension plan investment expense, including inflation
Inflation rate	3.25%
Projected salary increases[(1)]	General: 4.75% to 7.75% and Safety: 4.75% to 11.75%, vary by service, including inflation
Cost of living adjustments	2.00% of retirement income
Other assumptions	Same as those used in the June 30, 2015 funding actuarial valuation.

(1) *Includes inflation at 3.25% plus real across-the-board salary increases of 0.50% plus merit and promotional increases.*

EXHIBIT 5

Projection of Pension Plan Fiduciary Net Position for Use in Calculation of Discount Rate as of June 30, 2017

($ 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)
2016	$699	$34	$38	$2	$86	$779
2017	779	38	42	2	56	829
2018	829	38	44	2	60	881
2019	881	39	47	2	63	934
2020	934	39	49	2	67	990
2021	990	38	52	2	71	1,045
2022	1,045	38	55	2	75	1,102
2023	1,102	38	58	2	79	1,159
2024	1,159	38	61	2	83	1,217
2025	1,217	38	65	2	87	1,275
2026	1,275	38	68	2	91	1,334
2033	1,671	26	96	1	118	1,718
2034	1,718	21	101	1	121	1,757
2035	1,757	19	106	1	124	1,793
2051	1,686	1	159	0 *	116	1,644
2052	1,644	1	159	0 *	113	1,599
2053	1,599	1	158	0 *	110	1,551
2080	488	0 *	30	0 *	34	492
2081	492	0 *	26	0 *	35	501
2082	501	0 *	22	0 *	35	515
2102	1,686	0 *	0 *	0 *	122	1,808
2103	1,808	0 *	0 *	0 *	131	1,939
2104	1,939	0 *	0 *	0 *	141	2,080
2117	4,817	0 *	0 *	0 *	349	5,167
2118	5,167					
2118	Discounted Value: 4 **					

* Less than $1 M, when rounded.

** $5,167 million when discounted with interest at the rate of 7.25% per annum has a value of $4 M as of June 30, 2016.

EXHIBIT 5 (Continued)

Projection of Pension Plan Fiduciary Net Position for Use in Calculation of Discount Rate as of June 30, 2017

($ in millions)

Notes:

(1) Amounts may not total exactly due to rounding.

(2) Amounts shown in the year beginning July 1, 2016 row are actual amounts, based on the information provided by ICERS.

(3) Years 2027-2032, 2036-2050, 2054-2079, 2083-2101, and 2105-2116 have been omitted from this table.

(4) Column (a): Except for the "discounted value" shown for 2118, all of the projected beginning Plan Fiduciary Net Position amounts shown have not 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, 2016), plus member and employer contributions to the Unfunded Actuarial Accrued Liability; plus employer and member contributions to fund each year's annual administrative expenses. 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, 2016. The projected benefit payments reflect the cost of living increase assumptions used in the June 30, 2017 valuation report.

(7) Column (d): Projected administrative expenses are assumed to be 1.80% of closed group projected payroll and 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 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, 2017 shown earlier in this report, pursuant to paragraph 44 of GASB Statement No. 67.

EXHIBIT A

Schedule of Employer Allocations as of June 30, 2017

Actual Total (Employer and Member) Contributions by Employer and Membership Class
July 1, 2016 to June 30, 2017

Employer	General	General %	Safety	Safety %	Total Contributions	Total %
COUNTY	$22,534,039	92.233%	$9,877,400	100.000%	$32,411,439	94.469%
COURTS	1,709,320	6.996%	0	0.000%	1,709,320	4.982%
ICTC	145,166	0.594%	0	0.000%	145,166	0.423%
LAFCO	43,145	0.177%	0	0.000%	43,145	0.126%
Total	$24,431,670	100.000%	$9,877,400	100.000%	$34,309,070	100.000%

Allocation of June 30, 2017 Net Pension Liability (NPL)

Employer	General	General %	Safety	Safety %	Total NPL	Total %
COUNTY	$84,891,628	92.233%	$42,059,311	100.000%	$126,950,939	94.669%
COURTS	6,439,456	6.996%	0	0.000%	6,439,456	4.802%
ICTC	546,878	0.594%	0	0.000%	546,878	0.408%
LAFCO	162,539	0.177%	0	0.000%	162,539	0.121%
Total	$92,040,501	100.000%	$42,059,311	100.000%	$134,099,812	100.000%

Notes:
Based on July 1, 2016 through June 30, 2017 contributions as provided by ICERS.

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. The Plan Fiduciary Net Position for each membership class was estimated by adjusting the Valuation Value of Assets (VVA) for each membership class by the ratio of the total ICERS Plan Ficuciary Net Position to total ICERS VVA. Based on this methodology, any non-valuation reserves (such as Reserve for Capital Assets) are allocated amongst the membership classes based on the VVA for each membership class.

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

For General, the NPL is allocated based on the actual contributions within the General membership class.
- First calculate ratio of employer's and member's contributions to the total contributions for the membership class.
- This ratio is multiplied 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.

EXHIBIT B

Schedule of Pension Amounts by Employer as of June 30, 2017

Deferred Outflows of Resources	**COUNTY GENERAL**	**COUNTY SAFETY**	**COUNTY Total**	**COURTS**
Differences Between Expected and Actual Experience	$0	$420,798	$420,798	$0
Net Excess of Projected Over Actual Earnings on Pension Plan Investments (If Any)	6,521,275	2,622,453	9,143,728	494,671
Changes of Assumptions	33,520,031	10,942,079	44,462,110	2,542,663
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	178,232	0	178,232	39,716
Total Deferred Outflows of Resources	$40,219,538	$13,985,330	$54,204,868	$3,077,050
Deferred Inflows of Resources				
Differences Between Expected and Actual Experience	$18,291,439	$5,987,018	$24,278,457	$1,387,498
Net Excess of Actual Over Projected Earnings on Pension Plan Investments (If Any)	0	0	0	0
Changes of Assumptions	0	0	0	0
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	34,222	0	34,222	239,103
Total Deferred Inflows of Resources	$18,325,661	$5,987,018	$24,312,679	$1,626,601
Net Pension Liability as of June 30, 2016	$81,444,111	$45,686,618	$127,130,729	$6,480,475
Net Pension Liability as of June 30, 2017	$84,891,628	$42,059,311	$126,950,939	$6,439,456
Proportionate Share of Allocable Plan Pension Expense	$18,776,714	$8,411,294	$27,188,008	$1,437,333
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	32,007	0	32,007	(45,309)
Total Employer Pension Expense	$18,808,721	$8,411,294	$27,220,015	$1,392,024

EXHIBIT B (Continued)

Schedule of Pension Amounts by Employer as of June 30, 2017

Deferred Outflows of Resources	ICTC	LAFCO	Total for All Employers
Differences Between Expected and Actual Experience	$0	$0	$420,798
Net Excess of Projected Over Actual Earnings on Pension Plan Investments (If Any)	42,011	12,486	9,692,896
Changes of Assumptions	215,939	64,179	47,284,891
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	37,649	25,844	281,441
Total Deferred Outflows of Resources	$295,599	$102,509	$57,680,026
Deferred Inflows of Resources			
Differences Between Expected and Actual Experience	$117,835	$35,022	$25,818,812
Net Excess of Actual Over Projected Earnings on Pension Plan Investments (If Any)	0	0	0
Changes of Assumptions	0	0	0
Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	1,591	6,525	281,441
Total Deferred Inflows of Resources	$119,426	$41,547	$26,100,253
Net Pension Liability as of June 30, 2016	$491,187	$114,181	$134,216,572
Net Pension Liability as of June 30, 2017	$546,878	$162,539	$134,099,812
Proportionate Share of Allocable Plan Pension Expense	$122,059	$36,154	$28,783,554
Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	10,215	3,087	0
Total Employer Pension Expense	$132,274	$39,241	$28,783,554

EXHIBIT B (Continued)

Schedule of Pension Amounts by Employer as of June 30, 2017

Notes:

Amounts shown in this exhibit were allocated by employer based on the Contributions Allocation Percentage calculated in Exhibit A.

Based on our understanding of the requirements under GAS 82, we have treated the employer paid member contributions that are included in item 10 on page 8 as member contributions when we develop the employer pension expense as of June 30, 2017.

In determining the pension expense:

- Any differences between projected and actual investment earnings on pension plan investments are recognized over a period of five years beginning with the year in which they occur.
- Differences between expected and actual experience are recognized over the average of the expected remaining service lives of all members that are provided with pensions through ICERS determined as of June 30, 2016 (the beginning of the measurement period ending June 30, 2017) and is 6.59 years.

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

- Calculating each active employees' 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 members.
- Dividing the sum of the above amounts by the total number of active employees, nonactive and retired members.

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