Sonoma County Board of Supervisors

Ad Hoc Committee on Pension Reform

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Table of Contents

1 Executive Summary 3

2 Background and Overview Information 5

2.1 Background/History 5

2.1.1 Genesis of the County's Pension Reform Effort Starting in 2010 5

2.1.2 Independent Citizen's Advisory Committee on Pension Matters (2015-16) 5

2.1.3 Formation and Charter of New Pension Ad Hoc Committee 6

2.2 Pensions in California – Legal Landscape 8

2.2.1 County Employees Retirement Law of 1937 Act CERL 8

2.2.2 Public Employees' Pension Reform Act ("PEPRA") 8

2.2.3 Pension Reform Legal Constraints / Recent Cases 9

3 Pension Ad Hoc Committee Policy Recommendations 12

3.1 Prepayment of Retirement System Unfunded Liability 12

3.1.1 Overview 12

3.1.2 What is Unfunded Liability? 12

3.1.3 Layered UAAL and Maximizing Prepayments 13

3.1.4 Results of Actuarial Analysis 13

3.1.5 Policy Recommendation 15

3.2 Early Payment of Pension Obligation Bonds 16

3.2.1 Overview of Pension Obligation Bonds 16

3.2.2 Discussion and Analysis 17

3.2.3 Policy Recommendation 17

3.3 Unfunded Liability Cost Sharing with Employees 18

3.3.1 Overview 18

3.3.2 Current Employee UAAL Cost Sharing Arrangement 18

3.3.3 Discussion and Analysis 19

3.3.4 Policy Recommendation 23

3.4 Lower Defined-Benefit "Hybrid" Retirement Plan Implementation 24

3.4.1 Overview 24

3.4.2 Legal Considerations and Constraints 24

3.4.3 Cost Impact of Implementing Lower Retirement Formulas....25
3.4.4 Employee Recruitment and Retention....28
3.4.5 Policy Recommendation....29
4 Conclusion....30

List of Appendices

Appendix A: County Responses to the 2016 Report Recommendations of the Independent Citizen's Advisory Committee on Pension Matters

Appendix B: Pension Reform Ad Hoc Committee Charter

Appendix C: Independent Citizen's Pension Committee Charter

Appendix D: "What do you know about pensions?" Informational Handout

Appendix E: Sonoma County Amicus Brief Joining the League of California Cities

Appendix F: Segal Consulting Projections – Accelerated UAAL Payment Scenarios

Appendix G: UAAL Prepayment Breakeven Analysis

Appendix H: Sonoma County Pension Obligation Bond Payment Schedule

Appendix I: KNN Public Finance Make-Whole Call Analysis for Sonoma County 2010 Pension Bond

Appendix J: Segal Consulting Projections – Extension of Employees' UAAL Contributions

Appendix K: Segal Consulting Projections – Implementation of Lower General Retirement Formula

Appendix L: Segal Consulting Projections – Implementation of Basic Safety Formula

Appendix M: Segal Consulting Projections – Implementation of Safety Option One Formula

Appendix N: Pension Reform Workforce Impact Case Studies

1 Executive Summary

Public Sector pension reform is complex and has major implications for local residents, taxpayers, County employees, retirees, and the County as a major employer. The Sonoma County Board of Supervisors ("Board") has established a long term goal of creating a fair, equitable, and sustainable pension system; and has implemented every measure readily available to avert pension cost increases while balancing the need to attract and retain talented workforce focused on providing superior public services to enrich Sonoma County residents' quality of life. Board efforts thus far include enhanced transparency as Sonoma County, to our knowledge, is the only county in California that has established a committee composed of citizens to provide input.

In 2011, the Board of Supervisors endorsed the three major pension reform goals recommended by the original Ad Hoc Committee on Pension Reform ("Pension Ad Hoc"): contain pension costs, maintain labor market competitiveness and workforce stability, and improve accountability and transparency. The Board at that time decided to take action to address growing pension costs rather than await for the state to take action.

Subsequently, the Board created the Independent Citizen's Advisory Committee on Pension Matters in 2015 to assess the County's progress to date, and propose additional recommendations for further pension reform efforts. The Citizen's Committee's report, published in July 2016, included many new recommendations for the Board to consider, and it also reaffirmed many of the key strategies from the original 2011 Pension Ad Hoc Committee report.

In November 2016, the Board of Supervisors reactivated the Pension Ad Hoc Committee and appointed Supervisors Shirlee Zane and David Rabbitt to lead the next phase of reform efforts. In accordance with its charter, the reactivated Pension Ad Hoc worked on directly addressing several key cost containment strategies found in both the original 2011 Pension Ad Hoc report and the 2016 Citizen's Committee report.

This report specifically contains the Pension Ad Hoc's review of four different cost containment strategies. The Pension Ad Hoc's recommendations on each of the cost containment strategies are summarized in **Table 1** and discussed in greater detail throughout the report:

Table 1: Summary of Pension Ad Hoc's Policy Recommendations

Cost Containment Strategies	Policy Recommendations
Accelerated payments towards the Retirement System's Unfunded Actuarial Accrued Liability (UAAL).	Implement a structured approach for making recurring accelerated UAAL payments annually, financed with a baseline employer contribution equal to 0.5% of pensionable payroll, and supplemented by ad hoc prepayments approved by the Board during annual Budget Hearings, and potentially financed by available year-end funds.
Early Payment of Pension Obligation Bonds.	No viable option exists for early payment of the County's 2003 and 2010 Pension Obligation Bonds without incurring substantial pre-payment costs as established by the bonds' covenants. The 20-year bonds will be paid off in 2023 and 2030, respectively.
Long term sharing of unfunded liability costs between employer and employees.	In accordance with State bargaining laws, engage and negotiate with labor representatives to develop and implement a new, ongoing arrangement for sharing unfunded liability costs with employees.
Implement a hybrid retirement plan with a market competitive defined-benefit formula.	Due to current legal limitations, support legislative changes that would allow implementation of a lower defined-benefit hybrid plan which may appeal to new employee groups' interests.

In addition to researching the above cost containment options, this report also provides status updates and addresses several other items found in the Pension Ad Hoc Committee's charter:

- Responses to all recommendations proposed in the July 2016 report of the Independent Citizen's Advisory Committee on Pension Matters;
- Establishment of a new Independent Citizen's Pension Committee in 2017;
- Ongoing efforts to creating community-focused resources, including more robust annual reports, to provide transparency to the public surrounding pension matters;
- Revisiting the County's 10% of total compensation cost containment target; and
- Update on legal developments relevant to pension reform.

Sonoma County will continue to face many challenges on the road to pension reform, and it will not be easy. Despite the challenges ahead, the County must continue to move forward and take incremental steps now to ease the financial burden in the future.

2 Background and Overview Information

2.1 Background/History

2.1.1 Genesis of the County's Pension Reform Effort Starting in 2010

The Sonoma County Board of Supervisors ("Board") has adopted Pension Reform as one of its key priorities, with a goal of ensuring a fair, equitable, and sustainable pension system for taxpayers and employees alike. The Board formed the original Ad Hoc Committee on Pension Reform ("Pension Ad Hoc") in February 2011 to address increased pension costs experienced throughout the prior decade, which included significant below market returns as a result of the 2008 Great Recession. Supervisors Shirlee Zane and David Rabbitt were appointed to the Ad-Hoc committee. The 2011 Pension Ad Hoc analyzed the County's pension issues and developed a comprehensive report to communicate policy recommendations and define the County's over-arching pension reform goals and strategies. The Board of Supervisors received the original Pension Ad Hoc Committee's report in November 2011 and adopted the goals and strategies therein, including: cost containment; maintaining workforce competitiveness and stability; and improving accountability and transparency.

2.1.2 Independent Citizen's Advisory Committee on Pension Matters (2015-16)

Under the goal of improving accountability, the 2011 Pension Ad Hoc Report recommended establishing an Independent Citizen's Committee to monitor, guide, and drive reform efforts. To that end, in September 2015, the Board of Supervisors established the Independent Citizen's Advisory Committee on Pension Matters ("Citizen's Committee") in September 2015, and charged it with evaluating the County's efforts to date and also proposing new reform strategies and approaches. The Citizen's Committee completed its work in July 2016 with submission of its final report, which assessed the County's pension reform progress since 2012 and communicated a number of findings and recommendations. The Citizen's Committee's report also added suggestions for further definition, tracking, measurement, and reporting efforts on some of the Board's existing pension reform strategies. The Committee's full report can be viewed and downloaded via the County's website: http://sonomacounty.ca.gov/Independent-Citizens-Pension-Committee/. Following receipt of this report, the Board re-established the Pension Ad Hoc, and appointed Supervisors Rabbitt and Zane as co-chairs to lead the next phase of reform efforts. The Pension Ad Hoc worked with County staff to develop responses to the Committee's recommendations, which are presented in the **Appendix A** matrix.

2.1.3 Formation and Charter of New Pension Ad Hoc Committee

The Board-approved charter for the Pension Ad Hoc Committee, included as **Appendix B** to this report, includes the following high level scope of work: (1) define a plan for the next phase of reform efforts; (2) continue the County's work on existing reform goals and strategies related to cost containment and transparency; and (3) address several key recommendations cited in the July 2016 committee report.

This report addresses the following deliverables identified in the charter:

1) Monitor legal developments that impact local pension systems. **(Section 2.2)**

2) Recommend approaches for reducing the County's Unfunded Actuarial Accrued Liability (UAAL) associated with pension costs, i.e., advanced payments towards UAAL and/or sharing the UAAL pension cost burden between employer and employees. **(Sections 3.1, 3.2 & 3.3)**

3) Assess the feasibility of, and possible approaches for, creating a hybrid retirement model that consists of defined-benefit and defined-contribution plan components. **(Section 3.4)**

4) Respond to recommendations in the July 2016 report of the Independent Citizen's Advisory Committee on Pension Matters. **(Section 2.1.2)**

In addition to the aforementioned deliverables, the Pension Ad Hoc's charter also includes the following scope items that have been, or will be, addressed outside of this report:

Develop a scope and charter for a new Independent Citizen's Pension Committee.
In April 2017, the Board of Supervisors approved the Pension Ad Hoc's recommendation to create a new, ongoing Independent Citizen's Pension Committee to advise the Board, represent the best interests of the entire community in a non-partisan manner, and to help improve communication between the County and local residents on pension issues. The scope of the new committee is intended to improve accountability and transparency of the County's pension reporting, and provide a way for the County to engage citizens in an advisory role to inform pension reform strategies.

The new Independent Citizen's Pension Committee is charged with analyzing County and Sonoma County Employees' Retirement Association ("SCERA") publications to identify key trends and issues, and with researching innovative pension reform strategies to contain costs being pursued in other local or state jurisdictions that could be pursued by the County. The seven committee members were formally appointed on September 12, 2017. Refer to **Appendix C** for the committee's full charter. The committee's website is routinely updated with meeting agendas and materials to help members of the public stay informed regarding their activities: http://sonomacounty.ca.gov/Independent-Citizens-Pension-Committee/.

Create community-focused resources, including more robust annual reports, to provide transparency to the public surrounding pension matters.

The County launched a new Pension Reform website in 2017 to provide a central location for members of the public to review prior pension-related reports, read current news, and access links to pension information resources: http://sonomacounty.ca.gov/CAO/Pension-Reform/. The County also created a new 2-page pension fact sheet, titled "What do you know about Pensions?", to communicate facts and figures pertinent to Sonoma County's pension costs and benefits in a format that is readable and accessible. The pension fact sheet is included as **Appendix D** to this report, and can also be downloaded from the County's new Pension Reform website linked above. The County Administrator's Office and SCERA are jointly working on a comprehensive report on pensions to be presented to the Board of Supervisors in the December 2018, and annually thereafter.

Revisit the County's 10% of total compensation cost containment target.

In 2011, the Board of Supervisors set an aspirational goal for reducing pension-related costs—which includes County retirement contributions and Pension Obligation Bond debt service—to 10% of total salary and benefit expenditures within 10 years, by Fiscal Year 2020-21. On January 27, 2015, County Administrator staff presented an updated pension cost projection to the Board, based upon the latest actuarial information (from December 31, 2013) available at that point in time. The January 2015 projection chart showed an updated forecast indicating that the County was on track to attain a ratio of 11.4% by FY 2023-2024. In June 2016, County staff presented an updated forecast, based on SCERA's 2015 actuarial valuation data and future scheduled Pension Obligation Bond debt services payments, showing the 10% target is not expected to be achieved until FY 2030-31. Compared to the January 2015 report, there were several primary causes for the 10% target being pushed out to FY 2030-31: actuarial assumption changes; actual investment returns lower than the assumed discount rate; and lowering of the assumed discount rate from 7.50% to 7.25%. The various updates to the year in which the 10% target will be achieved demonstrate the difficulty of identifying the year in which it will be attained. The target will continue to be updated based on the annual actuary valuations, which contain fixed point in time data, and annual pension obligation bond payments. Although the year when attainment of the 10% cost target is unpredictable, it is important to note that the County is on a more sustainable path than the pre-2012 cost growth trajectory.

The County's past pension cost projections were intended to serve as illustrations, not predictions, of what might occur if all actuarial economic and non-economic assumptions at a given point in time were realized over a 20-year timespan. The projections by nature do not account for potential future impacts caused by changes to the assumed discount rate, favorable or unfavorable actual investment returns, interest rate fluctuations, member demographic experience, and changes to actuarial assumptions such as mortality tables and other factors. If any of these factors change in

the future based on actual experience, they could have favorable or unfavorable impacts; therefore, it is reasonable to assume the estimated timeframe for achieving the 10% target will continue to shift. The County will continue to report on progress towards the 10% cost containment target. The first report is planned for December 2018. The County will develop a pension cost dashboard to track measures, such as costs as a percentage of revenue and/or pensionable payroll, which were recommended by the Independent Citizen's Advisory Committee on Pension Matters.

2.2 Pensions in California – Legal Landscape

Changes to the legal landscape have occurred since the 2011 Pension Ad Hoc Committee was formed, including the 2012 adoption of the Public Employee Pension Reform Act of 2013 ("PEPRA") and more recently case law decisions on vested rights.

2.2.1 County Employees Retirement Law of 1937 Act CERL

The County of Sonoma is one of 20 counties in the State of California covered by the County Employees Retirement Law of 1937 (also known as "CERL" or "37 Act"), as contained in Government Code Title 3, Division 4, Part 3, Articles 1 through 18. This is a statutory system that is separate and distinct from the California Public Employees' Retirement System (CalPERS), which is governed under a different section of the Government Code.

2.2.2 Public Employees' Pension Reform Act ("PEPRA")

The California Public Employees' Pension Reform Act (also known as "PEPRA") was signed by Governor Brown in 2012 and went into effect on January 1, 2013 (AB 340 and AB 197). PEPRA applies to all public retirement systems. Among other things, PEPRA made several changes to the pension benefits for new employees hired on or after the effective date, including setting new maximum benefits, adopting a lower-cost pension formula for safety and non-safety employees with requirements to work longer in order to reach full retirement age and a cap on the amount of compensation used to calculate a pension. PEPRA also reformed pension spiking, required a three-year averaging of final compensation for new employees, removed certain elements of pay from being counted in the retirement calculation, and provided counties with new authority to negotiate cost sharing agreements with current employees.

PEPRA provides that beginning in 2018 an employer may require employees to eventually pay 50 percent of the total annual normal cost which is to be raised at no more than 14 percent above the

applicable normal rate of contribution of general members, and no more than 33 percent above the applicable normal rate of contribution of county peace officers (with normal cost determined based on the employee's age of entry into the system). PEPRA does not require an employer to implement this change, but the employer may do so once it has completed the good faith bargaining process as required by law, including any impasse procedures requiring mediation and fact finding (See Government Code § 31631.5). During the 2016 round of bargaining, the County reached agreement with labor groups on normal cost sharing arrangements for Plan A Legacy employees with all bargaining units. In an effort to achieve 50/50 sharing of normal cost by 2018, the cost sharing arrangements called for incrementally increasing employees' contributions towards normal cost at the start of each fiscal year. The incremental increases brought the cost sharing to 2/3 of the way to the full 50/50 sharing goal by 7/1/2017 for general plan members and a 2.8% fixed percentage contribution for safety members. Achieving the remaining approximately 1/3 (full 50/50 sharing) would be contingent on future rounds of labor negotiations. Given that the October 2017 catastrophic Wildfires focused the county on recovery efforts and created fiscal uncertainty regarding available ongoing revenues, the Board provided authority to negotiate one year labor contract extensions with limited objectives given the short extension. The County did not include the last 1/3 needed to reach the full 50/50 sharing goal in the extensions. The County will consider revisiting the remaining 1/3 adjustment in future negotiations.

2.2.3 Pension Reform Legal Constraints / Recent Cases

The "California Rule" and Vested Rights

Pension reform hurdles include the vested rights doctrine. The California Supreme Court, in a unanimous 7-0 decision in *Retired Employees Association of Orange County, Inc. v. County of Orange* (2011) 52 Cal.4th 1171, a health and welfare benefits case, reaffirmed the vested rights doctrine stemming from a series of cases out of the City of Long Beach in the 1940s and 50s. The "California Rule," which guarantees government workers the pension that was in place on the day they were hired, has been a long standing precedent which has its roots in the Contracts Clause of the United States Constitution (Article I, Section 10) and the California Constitution (Article I, Section 9). Subsequently, the 2015 decision in Deputy *Sheriff's Association of San Diego v. County of San Diego* (2015) 233 Cal.App.4th 573, has held that pension rights do not vest, however, until an employee begins work. Additionally, recent appellate court decisions have potentially opened the door for certain prospective revisions; however, those court decisions have been appealed to the California Supreme Court.

Cases Currently Under Review by the California Supreme Court

The first case now under consideration by the California Supreme Court is the 2016 case of *Marin Assn. of Pub. Employees v. Marin County Employees' Ret. Assn.* 2 Cal.App.5th 674. Following the Legislature's

enactment of PEPRA, the Board of Directors for the Marin County Employees' Retirement Association ("MCERA") adopted a policy prospectively limiting the types of pay and benefits included in its definition of "compensation earnable" for purposes of calculating retirement benefits. MCERA enacted the policy to comply with Gov. Code 31461, which excludes specific items from the calculation of retirement income with the aim of curtailing pension spiking. "Pension spiking" refers to measures available to employees to boost compensation, which may result in larger ongoing pension payments. Shortly after this change, employees and recognized employee organizations brought suit alleging that the now excluded payments had been factors in determining the wage and benefits packages approved through collective bargaining and impaired members' vested right. The Court rejected this argument, noting "while a public employee does have a 'vested right' to a pension, that right is only to a 'reasonable' pension — **not an immutable entitlement to the most optimal formula of calculating the pension**. And the Legislature may, prior to the employee's retirement, alter the formula, thereby reducing the anticipated pension. So long as the Legislature's modifications do not deprive the employee of a 'reasonable' pension, there is no constitutional violation." (Id. at 680.) To meet a "reasonableness" test, alterations of employees' pension rights must bear some material relation to the theory of a pension system and its successful operation (Id at 701, 707). In addition, changes in a pension plan which result in disadvantage to employees should, but are not required to, be accompanied by comparable new advantage (Id at 699.).

In *Cal Fire Local 2881 v. Public Employment Relations Board* ("PERB"), another 2016 case, 7 Cal.App.5th 115, the Court of Appeal held that vested rights were not violated despite PEPRA's elimination of certain eligible employees to previously purchase service credit or "air time." Specifically, Government Code § 20909 previously provided eligible public employees the option to purchase up to five years of non-qualifying service credit, or "airtime," which provided an increase in pension benefits paid during retirement. The airtime service credit option was eliminated with the enactment of PEPRA, although eligible members had a short window to purchase credit between PEPRA's enactment on October 2012 through December 31, 2012. In this case, a group of firefighters were eligible to but did not purchase airtime service credit. They filed a writ of mandate alleging they had a vested contractual right to purchase the airtime credit. The Court determined that the wording of the law and legislative history did not show that the purchase of airtime was a vested contractual right. While the firefighters were able to point to a California Public Employees' Retirement System ("CalPERS") publication saying the employees had a vested right to the provisions to the retirement law in existence during employment, that did not change the fact that California law gives the government the ability to make "reasonable modifications and changes in the pension system" prior to their retirement. (Id. at 127-28.) The Court defers to legal authority, and not CalPERS, when there is a conflict between the two. Therefore, neither CalPERS nor PEPRA violated an alleged vested right, nor did the firefighters show they lost their right to a reasonable pension just because the airtime service credit was eliminated.

Both cases have been accepted for review by the California Supreme Court, and the *Cal Fire* case has been fully briefed with the Supreme Court, including Governor Brown's Answer Brief on the Merits contending that the option to purchase "airtime" was not a vested right, that even if it were a vested right, withdrawing the option is consistent with the Contracts Clause and needed to serve important public purposes and that no offset to employees is required (notwithstanding the California rule). Extensive amicus support has been filed on both sides. The Application of the County of Sonoma/County of Solano to file an amicus brief joining in the briefing filed by the League of California Cities in support of modifying the California rule was granted on March 2, 2018 **(Appendix E)**.

The Marin County case is likely to move more slowly, because the state Supreme Court is awaiting further decision on another case brought by employees in Contra Costa, Alameda, and Merced counties. In the Alameda County case, *Deputy Sheriff's Association v. Alameda County Employees' Retirement Association (2018) 19 Cal.App.5th 61*, the Court of Appeal affirmed in part, and reversed in part, the trial judge's ruling. In a lengthy decision, the Court of Appeal held, among other things, that Retirement boards are bound by the Post-Ventura Settlement Agreements and declined to follow the vested rights ruling in the Marin case. Instead, the Court held that applying detrimental changes to the pension benefits of Legacy Members is only justified by compelling evidence that the required changes manifest a material relation to the successful operation of the pension system, which must be analyzed on an individualized basis. Thus, the Alameda case has been remanded back to the trial court to review the individualized analysis for each of the three retirement systems.

Another noteworthy case issued by the Supreme Court on August 02, 2018 is Boling v. Public Employment Relations Board (SC S232034). In its review of a challenge to a citizens initiative petition by a Labor Union, the Court held that the San Diego Mayor's official pursuit of pension reform as a matter of policy to eliminate pensions for future employees triggered the meet and confer requirements in the facts of that case.

Sonoma County Lawsuit

Locally, a lawsuit was filed in 2017 seeking to challenge Sonoma County's pension benefit enhancements enacted in 2002 based on a procedural deficiency. That lawsuit did not survive the initial pleading phase due to the 15-year lapse of time since its adoption in 2003 under the statute of limitations. Even if the lawsuit had been timely, the enhancements had been the subject of actuarial reports and at least 6 public hearings. It is unknown whether an appeal will be filed. A second lawsuit challenging the County's retention of a law firm to defend the first suit and the process related thereto is still pending.

3 Pension Ad Hoc Committee Policy Recommendations

In accordance with its charter, the Pension Ad Hoc analyzed the following four options for reducing the County's Unfunded Actuarial Accrued Liability ("UAAL") and overall pension-related costs: (1) advanced payments towards the pension system's UAAL; (2) early payment of Pension Obligation Bond debt; (3) long term sharing of the pension system's UAAL cost burden between employer and employees; and (4) feasibility of implementing a hybrid retirement plan with lower defined-benefit tiers.

3.1 Prepayment of Retirement System Unfunded Liability

3.1.1 Overview

In January 2015, the Sonoma County Board of Supervisors approved a one-time advanced payment of $3.5 million towards unfunded pension liabilities, which was estimated to avoid $3.0 million in future financing costs based on the prevailing discount rate. Recognizing the prudence of paying more now to avoid future costs, the Pension Ad Hoc sought to develop a more systematic approach for prepaying UAAL on a recurring annual basis, including how best to apply the prepayments in order to maximize their benefit.

3.1.2 What is Unfunded Liability?

The Sonoma County Employees' Retirement Association's ("SCERA") unfunded liability is calculated on an annual basis by a third party professional actuary, currently Segal Consulting. The Unfunded Actuarial Accrued Liability ("UAAL") is calculated as the amount by which future obligations to pay members' benefits exceeds the present value of SCERA's available fund assets. The SCERA pension system pays for retirees' pension benefits through a combination of employer and employee contributions, plus investment income earned on those contributions. The employer and employee contribution rates are set as part of the annual actuarial valuation performed by SCERA's actuary. The contribution rates are adjusted annually based on an analysis of the estimated costs to meet all future retiree benefit obligations based on current economic (i.e., wage inflation and assumed investment returns) and non-economic (i.e., member demographic and mortality rate) assumptions. New unfunded liabilities are created each year whenever actual experience differs from these actuarial assumptions. For example, actual investment returns falling short of the assumed discount rate of 7.25% in a given year would result in an actuarial "loss", and in would turn create new unfunded liabilities for the retirement system if they were not offset by other experience gains. Actuarial gains experienced by the

retirement plan each year, such as an additional UAAL payment by the County, are also factored into each annual valuation and help offset actuarial losses.

All employers participating in the SCERA pension plan—County of Sonoma, Superior Court, and Valley of the Moon Fire District— are responsible for paying their respective share of the pension system's unfunded actuarial liability, which is amortized over a fixed 20-year period from the year created. As of Segal's December 31, 2016 Actuarial Valuation, SCERA's overall UAAL was $408.2 million; of this total, $373.7 million can be attributed to the County of Sonoma as the largest employer participating in the pension plan.[1] SCERA's recent annual actuarial valuations, including the referenced 2016 valuation, are available to the public on its website: http://scretire.org/Financial/Actuarial-Reports/.

3.1.3 Layered UAAL and Maximizing Prepayments

The County's total unfunded liability of $373.7 million is comprised of several individual layers created each year, and amortized over a fixed 20-year period from the date created. As of the 2016 Actuarial Valuation, the shortest layer of UAAL was created in 2007 and will be paid off in 2027, while the longest loss layer was created in 2016 and will be fully paid in 2036. Each individual layer of UAAL is analogous to a 20-year fixed mortgage loan. Every year, on the loss layers, employers pay the annual amount of the principal, plus any accrued interest that compounds at the assumed discount rate (currently 7.25%), in accordance with an amortization schedule. Accelerated UAAL prepayments could be applied to the outstanding principal amount, which in turn reduces the amount of future interest to be paid, similar to the effect of prepaying a fixed rate home mortgage. Because the UAAL interest compounds over time at the assumed discount rate, prepaying the principal of the longest UAAL layers achieves the greatest interest savings.

3.1.4 Results of Actuarial Analysis

The Ad-Hoc engaged SCERA's actuary, Segal Consulting ("Segal"), to help estimate the long-term cost savings if the County were to prepay $3.0 million towards UAAL on a recurring annual basis over the next 20 years. The $3.0 million amount was chosen for modeling purposes only, since it was a round number close to the January 2015 payment amount of $3.5 million, and because it is slightly less than 1% of the County's pensionable wages per the 2016 Segal Valuation.

At the County's request, Segal created three different hypothetical scenarios to demonstrate the relative costs savings of applying $3.0 million annual prepayments in various ways: prorated evenly across all outstanding UAAL layers; applied to the shortest outstanding layers; or applied to the longest

[1] Sonoma County Employees' Retirement Association Actuarial Valuation as of December 31, 2016.

outstanding layers. Segal's full analysis is included as **Appendix F** to this report, and summarized in **Table 2** below.

Table 2: Accelerated UAAL Prepayment Scenarios ($ in millions)

Accelerated UAAL Prepayment Scenarios	Years to Retire Current UAAL	UAAL Principal Based on 2016 Actuary	Interest (7.25%)	Total UAAL Cost Based on 2016 Actuary	Est. Savings over 20 Yrs.
Baseline: No Prepayments	20	$ 373.7	$ 240.5	$ 614.2	n/a
Scenario 1: $3M Annually Applied to All Layers	17	$ 373.7	$ 227.5	$ 601.2	$ 13.0
Scenario 2: $3M Annually Applied to Shortest Layers	17	$ 373.7	$ 232.0	$ 605.7	$ 8.5
Scenario 3: $3M Annually Applied to Longest Layers	15	$ 373.7	$ 221.7	$ 595.4	$ 18.8

Segal's analysis confirms that applying accelerated UAAL prepayments to the longest outstanding layers of UAAL, or Scenario 3 in the table, yields the highest cost savings of approximately $18.8 million over time. Segal's modeling assumed a fixed 20-year period and did not factor in future actuarial gains or losses, so it is **only an approximation, not a guarantee**, of future savings amounts; however, the conclusion still holds with regard to the optimal approach for applying prepayments.

Once the Pension Ad Hoc confirmed the optimal approach of applying prepayments to the longest UAAL layers, it then analyzed Segal's data for that scenario to determine the "breakeven" point when overall estimated cost savings from reduced interest payments would surpass cumulative annual principal prepayments. Based on the Breakeven Analysis provided as **Appendix G**, it would take approximately 15 years for the County to realize total savings that exceed the cumulative $42 million of UAAL paid in annual $3.0 million installments over a 14-year period. The County would still achieve savings each year before this breakeven point, starting small in the first year and gradually increasing over time, plus it would pay off the UAAL in 15 years instead of 20 years. Prepaying UAAL in annual increments is a long-term strategy that will ultimately help reduce pension costs, but it is not an instant fix and will require a long term view and approach that assumes the discretionary County funds needed for the annual payment will not be redirected to new or other priorities.

3.1.5 Policy Recommendation

The Pension Ad Hoc Committee recommends implementing an ongoing, structured approach for prepaying unfunded pension liabilities on an annual basis, and subsequently applying those prepayments to the longest outstanding layers of UAAL to maximize long term interest savings. The Pension Ad Hoc proposes a dual approach for financing the annual prepayments.

In order to provide a baseline prepayment contribution each year, the County would budget and collect an additional, fixed 0.5% of pensionable payroll above and beyond the required employer contribution rate. Per the 2016 SCERA Actuarial Valuation, the County's annual pensionable payroll was $338.2 million; therefore, contributing an additional 0.5% of payroll would finance a fixed UAAL prepayment of approximately $1.7 million annually, which would scale the dollar amount with annual changes in pensionable payroll. If this approach were ultimately endorsed by the Board of Supervisors, the County Administrator's Office would present a Financial Policy to the Board for approval to memorialize the arrangement, and upon approval would subsequently program the additional 0.5% in a future fiscal year's Recommended Budget. Due to timing of the FY 2018-19 budget development budget cycle, the earliest this could be implemented would be Fiscal Year 2019-20. The Board of Supervisors would have the option to amend this Financial Policy in future years to increase the 0.5% baseline contribution, depending on the County's fiscal outlook.

The second part of the dual financing approach entails ad hoc lump sum contributions that would need to be authorized by the Board of Supervisors during annual Budget Hearing deliberations. These one-time lump sum prepayments would be financed by available fiscal year-end savings identified in future years. During annual Budget Hearings, the Board of Supervisors would determine whether an optional prepayment should be made, and decide how much to contribute should year-end funds be available.

The Pension Ad Hoc settled on the 0.5% of pensionable payroll fixed prepayment amount because this long term strategy will require a stable funding source (not solely reliant on one-time revenues or savings), without creating a large cost burden that diverts resources from other high priority programs and services. With regard to the ad hoc discretionary contribution component, because it will be handled during Budget Hearings, the Board will have the opportunity to consider its merits against other County priorities in an open and transparent forum. The Pension Ad Hoc believes this balanced approach would allow the County to make progress towards its long term goal of reducing unfunded pension liabilities, while doing so in a fiscally prudent manner.

3.2 Early Payment of Pension Obligation Bonds

3.2.1 Overview of Pension Obligation Bonds

Pension Obligation Bonds ("POB") are issued by a government entity to help pay its obligations to the pension system in which its employees are members. In addition to paying its proportional share of the pension system's Unfunded Actuarial Accrued Liability, the County also pays for unfunded pension liabilities indirectly via its debt service on several outstanding Pension Obligation Bonds, which were issued in the past to refinance UAAL obligations to SCERA. The bonds were issued by the County on three separate occasions—1993, 2003, and 2010—when the interest rate difference, or spread, between SCERA's assumed discount rate and the bond market, afforded an opportunity for significant savings over the 20-year payment period used both by the system and the bond market. The following **Table 3** summarizes the County's Pension Obligation Bond issuances as of 12/31/2017:

Table 3: Summary of Pension Obligation Bonds ($ in millions)

	Pension Bond Information			Total Debt Issuance			
Debt Issuance	**True Interest Cost**	**Term (Yrs.)**	**Final Maturity**	**Principal**	**Interest**	**Total**	**Principal Balance as of 12/31/17**
Series 1993	6.72%	20	2013	$ 97.4	$ 96.1	$ 193.5	$ 0
Series 2003A	4.80%	20	2023	$ 210.2	$ 135.9	$ 346.1	$ 97.1
Series 2003B	5.18%	20	2023	$ 21.0	$ 20.9	$ 41.9	$ 21.0
Series 2010A	5.90%	20	2030	$ 289.3	$ 242.9	$ 532.2	$ 261.8
Grand Total				**$ 617.9**	**$ 495.8**	**$ 1,113.7**	**$ 379.9**

The County pays principal and interest to bondholders in accordance with the respective 20-year payment schedules for each issuance; the master schedule for all three pension bonds is included as **Appendix H** to this report. The 1993 Pension Obligation Bond was fully paid in 2013. According to the schedule, the total annual debt service in Fiscal Year 2018-19 is $48.5 million. The County's total annual debt service costs are set to increase approximately $2 million per year and peak in FY 2022-23 at $56.4 million. After final payment of the 2003A and 2003B Series in FY 2022-23, debt service costs for the remaining 2010 issuance will range between $31.3 million - $41.0 million until fully paid in FY 2029-30. The County has no current plans to issue additional Pension Obligation Bonds.

3.2.2 Discussion and Analysis

The Pension Ad Hoc collaborated with the County's Auditor-Controller-Treasurer-Tax Collector ("ACTTC") staff to explore the feasibility of paying the County's Pension Obligation Bonds earlier than the established schedules. The 1993 POB was paid in 2013 and did not factor into the analysis.

The 2003 Pension Obligation Bond is non-callable, which means it cannot be redeemed early by the issuer (the County) except with the payment of a penalty. One possible strategy would be to offer to pay a premium to the existing bond holders, known as a "tender offer". If the bond holders were to accept the tender offer, the County would need to issue a new Pension Obligation Bond, which would need to have interest rate savings great enough to cover the cost of the tender offer premium and to pay off the old bonds, and also save debt services costs. The viability of this strategy would depend on several factors, and contingent on bondholders' willingness to relinquish their bonds for a premium, and will be periodically re-evaluated by staff in the future.

The County's 2010A POB security includes a "Make Whole" call provision, which allows the borrower (the County) to pay off the remaining debt early; however, the borrower is required to make a lump sum premium payment to bondholders based upon an already agreed upon formula. The formula also requires the issuer to pay the bondholders future interest payments, which severely limits the potential to create any savings as a result of the call. The "Make Whole" analysis provided by KNN Public Finance, included as **Appendix I**, shows that the cost of this option would require the County to pay a premium of 22.9%, equal to $59.9 million, to bondholders on top of paying outstanding principal and future interest payments. The "Make Whole" call provision negates any potential savings the County might achieve by paying off this POB issuance early.

3.2.3 <u>Policy Recommendation</u>

Based on the above analysis, the Pension Ad Hoc cannot recommend any viable unfunded liability cost reduction options with respect to early payment of the County's outstanding Pension Obligation Bonds. As previously noted, the County's Pension Obligation Bonds were originally issued as a UAAL cost reduction measure; therefore, they were not designed to create future flexibility for an early payoff or other strategy. Both the 2003 and 2010 bonds were issued at advantageous interest rates for the purpose of maximizing pension liability savings at the time of issuance.

3.3 Unfunded Liability Cost Sharing with Employees

3.3.1 Overview

One of the cost containment strategies recommended in the November 2011 report of the Ad Hoc Committee on Pension Reform called for equal sharing of costs and risks, associated with market investment losses, other experience losses, and actuarial assumption changes, between the County and its employees. The July 2016 report of the Independent Citizens Advisory Committee on Pension Matters also reiterated this same recommendation. As described in Section 3.1.2 of this report, adverse actuarial assumption changes, other experience losses, and investment return shortfalls result in new Unfunded Actuarial Accrued Liability for the pension system, which is ultimately borne by the employer in the form of increased annual rates of contributions, thereby resulting in increased operational county costs. Currently, all Sonoma County employees share part of this cost burden by paying supplemental contributions towards unfunded liability, which helps defray costs that the County would otherwise be obligated to pay. However, employees' supplemental contributions are scheduled to end in years 2023-2024 as documented in current labor agreements. This section presents conceptual long-term cost sharing arrangements and discusses their respective pros and cons with respect to sharing of risk and impact on employees. Ultimately, implementing any sort of long-term cost sharing arrangement with employees would be subject to future labor negotiations.

3.3.2 Current Employee UAAL Cost Sharing Arrangement

Starting in Fiscal Year 2003-04, the County negotiated with General and Safety employee groups to have all County employees contribute supplemental contributions toward the pension system's unfunded actuarial accrued liability over a set 20-year period, ending in Fiscal Year 2023-24. Currently, all County employees pay supplemental contributions towards UAAL as a fixed percentage of their pensionable payroll. **Table 4** below presents the supplemental contributions paid by employees, as of the 2016 SCERA Actuarial Valuation, relative to the total annual UAAL contribution paid by the County as employer:

Table 4: 2016 Annual UAAL Contributions ($ in millions)

		Employee UAAL Contribution		Employer UAAL Contribution		Total 2016 UAAL Cost	
Retirement Plan Tier	**2016 Payroll**	**% of Payroll**	**Amount**	**% of Payroll**	**Amount**	**% of Payroll**	**Amount**
Plan A (Legacy) - Gen.	$192.5	3.03%	$5.8	6.52%	$12.6	9.55%	$18.4
Plan A (Legacy) - Safety	$56.4	3.00%	$1.7	10.49%	$5.9	13.49%	$7.6
Plan B (PEPRA) – Gen.	$78.9	3.03%	$2.4	6.52%	$5.1	9.55%	$7.5
Plan B (PEPRA) - Safety	$10.4	3.00%	$0.3	10.49%	$1.1	13.49%	$1.4
Total	**$338.2**		**$10.2**		**$24.7**		**$34.9**
% Share of Total UAAL			*29%*		*71%*		*100%*

Employees' supplemental contributions towards UAAL equate to $10.2 million, or 29%, of the overall annual UAAL cost of $34.9 million in 2016. The County as employer picks up the remaining 71% of the cost burden. It is important to note that the supplemental employee contribution rates will remain a fixed percentage of payroll. On the other hand, the County's employer UAAL rate, and thus its contribution amount, will be subject to more volatility in the future, because it will continue to be reassessed each year as part of the retirement system's recurring actuarial valuations. Under the current cost sharing arrangement, upon expiration of the employees' supplemental contributions in FY 2023-24, the approximately $10.2 million annually, adjusted for future inflation, would shift back to the County as an employer cost.

3.3.3 Discussion and Analysis

PEPRA provides that beginning in 2018 an employer may require employees to eventually pay 50 percent of the total annual normal cost which is to be raised at no more than 14 percent above the applicable normal rate of contribution of general members and no more than 33 percent above the applicable normal rate of contribution of county peace officers (with normal cost determined based on the employee's age of entry into the system). PEPRA does not require an employer to implement this change but the employer may do so once the employer has completed the good faith bargaining process as required by law, including any impasse procedures requiring mediation and fact finding (See Government Code section 31631.5).

The Pension Ad Hoc first looked at the current pension contribution rates paid by Sonoma County's employees, including supplemental cost sharing contributions, compared to employees in other counties. The County's Human Resources Department surveyed 12 other local government agencies to obtain comparative data for employer and employee pension rates: City of Santa Rosa, Alameda County, Contra Costa County, Marin County, Mendocino County, Monterey County, Napa County, Sacramento

County, San Luis Obispo County, San Mateo County, Santa Cruz County, and Solano County. The results of the survey showed that Sonoma County's employees on average contribute between 10.43% - 14.87% of their wages towards their pensions, presented by retirement tier in **Table 5** below:

Table 5: Employee Pension Contributions (Sonoma vs. Other Agencies)

Sonoma County Employee Rate Components	**Plan A (Legacy) General**	**Plan A (Legacy) Safety**	**Plan B (PEPRA) General**	**Plan B (PEPRA) Safety**
Normal Cost (Average)	8.90%	9.07%	7.42%	11.54%
UAAL Cost Share	3.03%	3.00%	3.03%	3.00%
Normal Cost Share towards 50/50[2]	1.15%	2.80%	0%	0%
Sonoma's Total Employee Rate	**13.08%**	**14.87%**	**10.45%**	**14.54%**
Multi-Agency Employee Rate Comparison (13 Agencies)				
Average Rate	10.37%	15.26%	7.95%	12.99%
Lowest Rate	7.00%	10.00%	6.25%	10.58%
Highest Rate	16.06%	21.45%	10.45%	19.24%
Sonoma County's Relative Rank (1 lowest rate - 13 highest rate)	**11**	**6**	**13**	**12**

One important consideration when reviewing the above comparison data is that all 13 agencies (including Sonoma County) have different retirement plan benefits and circumstances. The benefit formulas differ across the board; 6 of the 13 agencies have automatic retiree Cost of Living Adjustments built into rates (Sonoma only has an ad hoc retiree COLA); and 6 of 13 have some form of cost sharing arrangement for all employees like Sonoma County, while another 4 have cost sharing for safety members only. As noted above, Sonoma County's Plan A employees pay increased normal cost contributions towards 50:50 sharing with the County, and all County employees contribute supplemental UAAL cost sharing amounts. Of the 20 California counties covered by the County Employees Retirement Law of 1937, only four counties have employees contributing extra amounts towards UAAL, and six counties have made progress towards legacy employees' 50:50 sharing of normal cost. Aside from Sonoma County, only San Mateo County currently has employees contributing towards both unfunded liability and 50:50 sharing of normal cost. Comparing retirement benefits across agencies needs to be considered through the lens of employees not only paying different amounts, but also receiving varying levels of retirement benefits relative to what they are paying. In addition, the other retirement plans have differing investment allocations and actuarial funding policies. With

[2] In 2016, the County reached agreement with labor groups on normal cost sharing arrangements for Plan A employees with all bargaining units to incrementally increase employees' contributions towards normal cost at the start of each fiscal year. The incremental increases brought the cost sharing to 2/3 of the way to the full 50/50 sharing goal by 7/1/2017.

respect to the actual cost burden on employees, as noted in **Table 5**, Sonoma County's General Tier employees—both Legacy and PEPRA—pay the highest, or close to the highest, contributions relative to their peers in other agencies. Looking at Safety employees, Sonoma County's PEPRA Safety employees pay the 2nd highest contribution rates compared to peers, while Legacy Safety employees fare better, ranking towards the middle of sample group. Per **Table 6** below, as of the 2016 SCERA Valuation, the General plan employees and PEPRA safety employees—who pay relatively high contribution rates, as noted above—comprised a large majority, nearly 86%, of active members. Also, the population of Plan B PEPRA General and Safety Tier employees—who make up 30% of active members and currently pay the highest contribution rates relative to peers in this sample group—will continue to grow each year, because all new employees hired after January 1, 2013 (without reciprocity) fall under PEPRA.

Table 6: Active SCERA Membership as of 2016 Valuation

Members	General	Safety	Total
Plan A Legacy	2,289	571	2,860
Plan B PEPRA	1,122	130	1,252
Total Count	**3,411**	**701**	**4,112**
Plan A Legacy	56%	14%	70%
Plan B PEPRA	27%	3%	30%
% Total	**83%**	**17%**	**100%**

The Pension Ad Hoc acknowledges that the optimal solution for the County's finances would entail employees picking up a larger share of the unfunded liability cost burden; however, a drastic shifting of the UAAL costs to employees would have negative take home pay ramifications for current and prospective employees and the County's ability to recruit and retain employees.

The impacts of the sunset date of the existing 3.00%/3.03% contribution in 2023-2024 are concerning. The Pension Ad Hoc acknowledges that working collaboratively with labor organizations will be critical to finding a long-term solution. The respective merits of three potential cost sharing concepts are presented below for illustrative purposes only and to stimulate discussions around this topic.

Option 1 - Extend Employees' Existing 3.00%/3.00 Supplemental Contributions

This approach would allow the County to achieve long term savings through cost sharing, while at the same time not over-burdening employees by maintaining their current "status quo" supplemental contribution rates. The Pension Ad Hoc worked with Segal Consulting to estimate the long-term cost savings of the supplemental contribution extension. Segal's full analysis is included as **Appendix J** to this report. If employees continued their supplemental contributions, Segal estimates the County' would avoid operational cost increases of $7.6 million of UAAL costs in 2024 (prorated for a partial year). Starting in 2025, over a full 12-month period, the County would avoid $13.2 million of UAAL costs; thereafter, the County would avoid incrementally higher cost growth of between 3% - 4% annually due

to assumed inflation and wage increases. In total, over a 10-year span from 2023 to 2032, the projected avoidance of increased costs could be nearly $120.7 million.

Table 7: County Cost Increase Avoidance from Extending Employee's UAAL Contributions

Year	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Est. Annual Increased Operational Cost	$1.2	$7.6	$13.2	$13.7	$14.2	$14.7	$15.3	$15.8	$16.4	$8.6	$120.7
% of Annual Employer Contribution	1.6%	9.2%	14.7%	15.0%	15.2%	15.4%	15.9%	17.1%	18.7%	12.3%	

Segal's cost projection shows a tapering of the County's cost avoidance starting in 2033; however, that is due to the current 20-year amortization schedule for the retirement systems existing UAAL layers. Essentially, Segal's model assumes the UAAL as of the 2016 valuation will be fully paid off by 2033, which leaves no UAAL costs to shift to the County and thus little savings. Despite Segal's modelling assumptions, it is reasonable to assume the retirement system will experience future actuarial losses resulting in additional unfunded liabilities being created in the intervening years between 2018 and 2033, which means the County would continue to benefit from the extended employee contributions beyond 2033. One potential drawback of this approach long term is that, while the employees are sharing UAAL costs, they are not sharing the risk. If the existing rates were to be extended, employees would continue to pay a fixed rate over time, which means their sharing of the risk would be uneven depending on a given year's actuarial valuation results. As noted in the preceding **Table 4**, as of the 2016 actuarial valuation, employees' supplemental contributions covered 29% of the total annual UAAL cost based on the fixed 3.00%/3.03% rate. On the other hand, the County is responsible for covering all remaining UAAL costs (and thus the risk) above this amount, so its employer rate for UAAL would continue to be more volatile depending on annual valuation results.

Option 2 – Implement a New Fixed Supplemental Contribution Rate

A slightly different long term cost sharing approach for unfunded liabilities would involve adjusting the existing supplemental contribution percent of payroll from 3.00%/3.03% to a different factor after the current 2023-2024 sunset date. There are many permutations as to what the ongoing contribution rate could ultimately be set at long term, so no costing scenarios have been performed; however, Segal's modelling of the 3.00%/3.03% contribution extensions provides a rough order of magnitude to approximate future cost avoidance for the County. In order to successfully implement this option, the County would need to engage with its employees and their labor representatives to agree upon the optimal supplemental contribution rate that balances the interests of all parties involved. From the employer perspective, this approach shares the same downside as the option of extending the existing contributions with respect to lopsided sharing of overall risk, but it is still a viable long term solution.

Option 3 – Fixed Sharing Ratio between Employer and Employees

Finally, as a third alternative for cost sharing, employees could pay a fixed sharing ratio of the County's annual unfunded liability cost, which would be recalculated and adjusted each year as part of the retirement system's annual actuarial valuations. This approach would entail establishing a fixed ratio for this ongoing sharing of annual unfunded liability costs between employer and employee. As previously mentioned, employees' supplemental contributions as of the 2016 valuation covered 29% of the total annual UAAL cost, which is equivalent to 71%/29% sharing ratio, between employer and employees, respectively. Under the current arrangement, this sharing ratio changes every year depending upon annual retirement system valuation results, because the employee amount is fixed, while the employer amount flexes up or down to cover the remaining unfunded liability costs. Implementing a fixed sharing ratio approach would rectify this disparity, because both employer and employee contributions towards UAAL would adjust each year in unison, either up or down, depending upon the total unfunded liability costs to be paid. From an employer perspective, this is the most optimal approach for achieving both cost and risk sharing with employees. The largest drawback to this approach would be for employees. Under this type of arrangement, employees would benefit in the good years by paying less, but they would also assume a greater share of risk, which introduces more volatility with respect to their annual contribution amounts and take home pay.

It is important to reiterate that the aforementioned options are presented for illustrative purposes only; the County would be legally required to bargain and reach agreement with employee labor representatives in order to implement any sort of long-term cost sharing arrangement.

3.3.4 Policy Recommendation

The County needs to engage and work with employees to find the optimal long-term solution that meets the interests and needs of all impacted parties. The Pension Ad Hoc recommends keeping employee cost sharing of UAAL as an on-going long-term priority and working with labor through negotiations to continue making progress; and ensuring any future agreements do not negatively impact pension reform goals and still position the County to have total compensation market competiveness and workforce stability. The County is legally required to negotiate and reach agreement with all 11 labor groups representing active employees in order to increase or extend negotiated employee contributions, and it should work towards this objective during future labor negotiations. There are many different ways for implementing a cost sharing arrangement between employer and employee, so the County must be open to exploring and considering a variety of options in the future as it bargains with its employee labor representatives.

3.4 Lower Defined-Benefit "Hybrid" Retirement Plan Implementation

3.4.1 Overview

As part of its charter, the Pension Ad Hoc assessed the feasibility of creating a new "hybrid" retirement plan for new employees, which would consist of a lower defined-benefit formula (compared to current PEPRA plans), supplemented by a defined-contribution plan. The Pension Ad Hoc considered several factors in its analysis: legal constraints; potential cost avoidance from implementing lower defined-benefit retirement tiers; and potential impact on prospective employee recruitment and retention. Sonoma County's employees currently fall under two different retirement tiers: (1) Legacy Plan A employees hired before January 1, 2013, and those hired after the cutoff date who were active members of another qualifying retirement system without a break in service of more than six months; and (2) PEPRA Plan B employees hired after January 1, 2013 who were not members of any other retirement system. The Pension Ad Hoc worked under the key assumption that any new, lower defined-benefit hybrid plan would become a third retirement tier, and thus would only apply to new employees and *not* modify existing Legacy or PEPRA employees' benefits in any way.

3.4.2 Legal Considerations and Constraints

Under the Public Employees' Pension Reform Act, it is unclear whether Sonoma County would be legally permitted to implement a new retirement formula that does not conform to PEPRA, because the County did not have a lower benefit formula in place *before* the statewide PEPRA implementation date of January 1, 2013. Per Government Code § 7522.02(d):

> "If a public employer, before January 1, 2013, offers a defined benefit pension plan that provides a defined benefit formula with a lower benefit factor at normal retirement age and results in a lower normal cost than the defined benefit formula required by this article, that employer may continue to offer that defined benefit formula instead of the defined benefit formula required by this article, and shall not be subject to the requirements of Section 7522.10 for pensionable compensation subject to that formula. However, if the employer adopts a new defined benefit formula on or after January 1, 2013, that formula must conform to the requirements of this article or must be determined and certified by the retirement system's chief actuary and the retirement board to have no greater risk and no greater cost to the employer than the defined benefit formula required by this article and must be approved by the Legislature. New members of the defined benefit plan may only participate in the lower cost defined benefit formula that was in place before January 1, 2013, or a defined benefit formula that conforms to the requirements of this article or is approved by the Legislature as provided in this subdivision."

Government Code § 7522.02(d) establishes the criteria that qualifying employers (i.e., employers with lower benefits formulas in place prior to PEPRA) must meet in order to implement new benefit formulas, such as actuarial certification of lower risk and cost and obtaining approval from the California State Legislature. In 2015, the City of San Juan Capistrano, part of the Orange County Employees' Retirement System ("OCERS"), implemented a new Plan W, a hybrid plan for its general members with a defined-benefit formula of 1.62% @ age 65 and a defined-contribution component. After satisfying the requirements in GC § 7522.02(d), the California State Legislature passed Assembly Bill 284 on July 13, 2015 adopting the new hybrid plan option. OCERS was able to take these steps to adopt the new plan for the City of San Juan Capistrano because it had previously adopted the 1.62% @ age 65 formula for its County of Orange plan participants *prior* to the January 1, 2013 PEPRA cutoff date, so it clearly met the qualifying employer criteria. Sonoma County did not have lower benefit tiers in place prior to PEPRA; therefore, it is operating under a different set of circumstances and may not have the same flexibility as OCERS and the City of San Juan Capistrano with respect to adopting lower benefit formulas needed for a hybrid plan feasible.

Government Code § 7522.25(f) contains a limited exception that may allow Sonoma County to adopt a lower benefit formula for new members in the safety classification. Under PEPRA, employers with the Safety Option Two formula (2.7% @ age 57), such as Sonoma County, may agree in a memorandum of understanding with represented safety employees to implement either the lower Safety Option One (2.5% @ age 57) or Basic Safety formula (2.0% at age 57). If negotiated, the new formula would apply only to employees hired after the date of implementation. Based on the prevailing interpretation of the Government Code, other than the limited exception for safety members describe above, Sonoma County likely has no statutory basis for adopting lower benefit formulas—barring changes to existing State law—which hinders its ability to implement a hybrid retirement plan.

3.4.3 Cost Impact of Implementing Lower Retirement Formulas

SCERA's actuary, Segal Consulting, helped estimate the potential cost impact of adopting lower retirement formulas. For General members, the Pension Ad Hoc asked Segal to estimate the cost of adopting a lower retirement formula available to employers under the County Employees Retirement Law ("CERL"), prior to implementation of PEPRA in 2013. For Safety members, Segal analyzed the cost impact of implementing either the "Basic Safety Plan" or "Safety Option Plan One" formulas in PEPRA. Furthermore, the Pension Ad Hoc asked Segal to provide cost scenarios for the proposed lower General and Safety tiers both with and without an automatic 2.0% annual cost of living adjustment ("COLA") for retirees. **Table 8** summarizes the current retirement formulas for General and Safety members in the SCERA's legacy and PEPRA plans, compared to the proposed lower benefit formulas analyzed by Segal on behalf of the Pension Ad Hoc:

Table 8: County Retirement Plan Formulas

Retirement Tier	General	Safety	Retiree COLA
Plan A – Legacy	3.0% @ age 60	3.0% @ age 50	Ad Hoc
Plan B – PEPRA	2.5% @ age 67	2.7% @ age 57 (Option Two)	Ad Hoc
Proposed Hybrid Plan Formulas	1.62% @ 65 (CERL)	2.5% @ age 57 (Option One) or 2.0% @ age 57 (Basic)	None or 2% annually

As directed by the Pension Ad Hoc, Segal assumed the following in its cost projection modelling:

- SCERA's 2016 Actuarial Valuation contains the status quo baseline economic and non-economic assumptions, such as 7.25% discount rate and membership demographics.
- Hybrid plan benefit formulas would only apply to new employees.
- Assume employees' supplemental contributions towards unfunded liability (as covered in Section 3.3 of this report) will expire 6/30/2023 for General members and 6/30/2024 for Safety members, in order to isolate the cost impacts of the two reform strategies being researched by the Pension Ad Hoc.
- Exclude Superior Court and Valley of the Moon members from the analysis to only factor impacts to the County of Sonoma.
- Analyze the cost impact over a 20-year period.

The results of Segal's cost projections, which are included as **Appendices K, L, and M** to this report, are summarized in the following **Table 9**, which presents the annual impact for each hypothetical benefit formula scenario, as well as the total cumulative cost impact over a 20-year period, through 2037.

Table 9: Estimated Cost Reduction of Lower Benefit Tiers ($ in millions)

Scenario	Assumptions	20-Year Cumulative Cost Reduction	Avg. Annual Employer Cost Reduction	Avg. Annual Reduction as % of Total Employer Contribution
Lower General Tier with 0% COLA - New Employees Only **(Appendix K)**	Implement Lower General Plan Retirement Formula for New Employees 1.62% @ 65 years (GC §31676.01 CERL) with 0% annual retiree Cost of Living Adjustments.	$123.7	$5.9	7.9%
Lower General Tier with 2% COLA - New Employees Only **(Appendix K)**	Implement Lower General Plan Retirement Formula for New Employees 1.62% @ 65 years (GC §31676.01 CERL) with 2% annual retiree Cost of Living Adjustments.	$40.0	$1.9	2.5%
Basic Safety Tier with 0% COLA - New Employees Only **(Appendix L)**	Implement Lower "Basic Safety" Retirement Formula for New Employees 2.0% @ 57 years (GC §7522.25b PEPRA) with 0% annual retiree Cost of Living Adjustments.	$23.0	$1.1	1.5%

Scenario	Assumptions	20-Year Cumulative Cost Reduction	Avg. Annual Employer Cost Reduction	Avg. Annual Reduction as % of Total Employer Contribution
Basic Safety Tier with 2% COLA - New Employees Only **(Appendix L)**	Implement Lower "Basic Safety" Retirement Formula for New Employees 2.0% @ 57 years (GC §7522.25b PEPRA) with 2% annual retiree Cost of Living Adjustments.	$(5.2)	$(0.2)	-0.3%
"Safety Option One" Tier with 0% COLA - New Employees Only **(Appendix M)**	Implement Lower "Safety Option One" Retirement Formula for New Employees 2.5% @ 57 years (GC §7522.25c PEPRA) with 0% annual retiree Cost of Living Adjustments.	$5.6	$0.3	0.4%
"Safety Option One" Tier with 2% COLA - New Employees Only **(Appendix M)**	Implement Lower "Safety Option One" Retirement Formula for New Employees 2.5% @ 57 years (GC §7522.25c PEPRA) with 2% annual retiree Cost of Living Adjustments.	$(28.0)	$(1.3)	-1.8%

Based upon the results of Segal's analysis, it would not be possible to implement either the PEPRA Basic or Safety Option One formulas in conjunction with a 2% automatic retiree COLA. Even if Sonoma County could navigate through the legal hurdles discussed in subsection 3.4.2 of this report, and in conjunction with adopting a new COLA benefit structure, these plans would not result in a lower cost or risk than the current PEPRA plan. As a result, they do not meet criteria set forth in Government Code § 7522.02(d) and could not be certified by SCERA's actuary. Implementing a lower General tier with a 2% retiree COLA would potentially reduce costs by $1.9 million annually. However, the Pension Ad Hoc cannot endorse this option. As discussed, the implementation of the lower PEPRA safety tiers with a 2% retiree COLA is not feasible; therefore, granting a 2% COLA to General members, but not Safety members, would result in a lack of parity between the two groups.

Implementing either the PEPRA Basic Safety or Safety Option One formula without a retiree COLA would potentially reduce costs by $5.6 million or $23.0 million, respectively, over a 20-year period. Likewise, adopting the 1.62% @ age 65 CERL formula for General members would result in projected cost avoidance of $123.7 million over 20 years. Looking at both General and Safety hybrid plans in aggregate, the combined cost avoidance would average $6.2 million to $7.0 million annually, depending on whether the Basic Safety Option or Safety Option One formulas were chosen. Given the desire to create a hybrid plan, the reduced future cost from these lower defined-benefit formulas may provide capacity to finance a baseline contribution or match for employees in a defined-contribution plan. Although the anticipated released funding capacity may be used to contribute to employees' defined-contribution plans would partially negate the reduced cost benefit to the County in any given year; it

would provide long term relief, because risks associated with investment losses would shift from the employer to individual employees under a defined-contribution arrangement.

3.4.4 Employee Recruitment and Retention

To evaluate potential impacts on recruitment and retention as a result of implementing pension plans with lower benefit formulas, Sonoma County Human Resources reviewed the experiences at three cities— San Jose, San Diego, and San Juan Capistrano—and at the University of California (UC) where retirement benefits were lowered for new hires. The experiences at all agencies, with the exception of San Juan Capistrano, have included strong labor opposition. Agencies that have adopted defined contribution plans for new employees without offering an option to elect a defined benefit plan have experienced recruitment difficulties and increased turnover.

In all cases except San Juan Capistrano, the changes were opposed by labor unions resulting in lengthy legal challenges in San Jose and San Diego. At the UC, three of the eight unions representing approximately 44,000 of UC's 92,390 non-academic staff remain opposed to the new retirement benefit option and have not reached agreement on new contracts.

The pension changes at San Juan Capistrano and the UC offer a choice for new employees between a defined benefit retirement plan or either a hybrid or a defined contribution plan. Recruitment and turnover information was not available for the UC, however San Juan Capistrano reported no impact on recruitment and turnover as a result of these changes. San Juan Capistrano has had very few new employees elect the lower tier while the UC has seen approximately one-third of new hires elect the lower benefit.

San Jose experienced significant recruitment and turnover challenges with the initial pension reform changes passed by voters in 2012, particularly with police, until an agreement could be reached with labor and a revised ballot measure was passed in 2016. Refer to **Appendix N** for additional information about the experiences of each of these employers.

3.4.5 Policy Recommendation

Back in 2011, the Pension Ad Hoc recommended pursuing a lower defined-benefit hybrid plan as a key cost containment strategy. Subsequently, the Independent Citizen's Advisory Committee on Pension Matters also endorsed this recommendation to implement a hybrid plan in its July 2016 report, positing that it would be the most effective option for the County to contain its long-term pension costs. The Pension Ad Hoc has now explored this option in greater depth, and believes it would create both opportunities and challenges. The projections developed by Segal Consulting show that implementing lower defined-benefit formulas for new employees would avoid pension costs long term, with the downside being it would take several years, even decades, to realize any substantial cost reductions.

The County's current Legislative Platform supports sponsoring legislation to further clarify PEPRA and allow all employers to implement defined-benefit plans with lower benefit formulas than PEPRA for active and new employees. Given the current legal uncertainty faced by the County with regard to its ability to adopt lower defined-benefit formulas under PEPRA, this language should remain in the Legislative Platform for the foreseeable future. Looking beyond the cost avoidance options and legal obstacles, the potential adverse impact on employee recruitment and retention cannot be ignored. Adopting a new hybrid plan would create another new retirement tier, in addition to the two existing tiers, causing further stratification of benefits amongst County employees. In the wake of their respective pension reform efforts, the recent experiences of other government employers highlights some of the challenges Sonoma County may face with respect to labor opposition and employee recruitment and retention. All jurisdictions are different and there is no guarantee that Sonoma County would face similar challenges, but any major reduction to pension benefits could result in unintended consequences

Sonoma County's pension reform goals call for both containing costs and maintaining workforce competitiveness and stability. If the County were to successfully navigate legal obstacles and implement a hybrid plan before its peers, it runs a risk of hindering one pension reform goal in pursuit of another. The Pension Ad Hoc recommends holding off on actively pursuing the lower defined-benefit hybrid plan at this juncture, yet keeping it as a long term pension reform goal. The County should revisit this strategy in the future if legislative or legal developments galvanize pension reform efforts at the statewide level, and enable more counties and cities to adopt lower retirement benefit formulas.

4 Conclusion

The Pension Ad Hoc's policy recommendations found in this report are presented to the full Board of Supervisors for their review and consideration. This report explores many different options for reducing the County's unfunded pension liabilities, and it is intended to both inform and guide the next phase of local pension reform efforts. All of the options and approaches researched in this report have unique pros and cons, and there is no easy fix nor panacea that will solve the challenges faced by our County with respect to reducing current and future pension-related costs. As noted throughout this report, the County must bargain with employee labor representatives in order to implement many of the potential approaches for reducing the County's pension costs over the long-term, such as UAAL cost sharing or implementing different retirement tiers for new employees. This fact cannot be ignored, and it will have a very real impact on the County's ability to successfully navigate through the challenges ahead and effectively implement the needed pension reform measures. Ultimately, the County as employer shares a common goal with its employees to ensure a sustainable pension system well into the future, and it must continue to actively work towards this goal.

Appendix A
Pension Ad Hoc's Response to 2016 Citizen's Committee Report Recommendations

GOAL 1 - Contain Costs: *Reduce the Coun y's pension cos s down o 10% of To al Compensa ion in 10 years.*

Nov 2011 Pension Ad Hoc Strategies	July 2016 Citizen Committee Recommendations	Pension Ad Hoc Response/Staff Assessment
A. E tabli h a new retirement formula( ) (Tier) for new employee .	R1 - Extend exi ting employee 3.00%/3.03% upplemental payment toward UAAL.	Addre ed in Section 3.3 of the Pen ion Ad Hoc' September 2018 Report.
	R2 - Enroll new Plan A reciprocal afety employee with Plan B benefit formula .	Per Liebert Ca idy Whitmore' May 19, 2016 Opinion Letter prepared for the Citizen' Committee, it i uncertain whether thi could be implemented: "The CERL give countie the ability to terminate optional benefit and return to the default benefit…PEPRA create a conflict becau e it provide that later hired legacy member mu t receive the ame "retirement plan" that wa in place on December 31, 2012. It i unclear if thi uper ede the County's ability to eliminate the optional benefit for legacy member who lateral to the County."
	R3 - E tabli h a Tier hybrid plan for new employee .	Addre ed a a policy recommendation in Section 3.4 of the Pen ion Ad Hoc' Report.
B. Eliminate compen ation practice which can lead to piking for all employee including e tabli hing maximum pen ion cap, and later target retirement age.	R1 - Adopt a policy that preclude compen ation action that have a primary purpo e to enhance pen ion benefit .	The 2011 Pen ion Ad Hoc Report included the goal of reducing allowed pen ionable income. SCERA determine which element of compen ation are allowable ba ed on their interpretation of tate law. The County mu t con ider many variable , factor , and competing need during labor negotiation and i required by law to negotiate in good faith. In tead of adopting a formal policy, the Pen ion Ad Hoc recommend incorporating thi prohibition into the County's over-arching labor negotiation trategy. Thi would entail taff obtaining Board of Supervi or ' approval to de ignate the prohibition of pen ion compen ation enhancement action a a top priority item prior to commencing each future round of labor negotiation .
	R2 - The County hould track and monitor labor agreement to en ure that new compen ation doe not adver ely impact co t containment goal .	Variou provi ion of the California Government Code require certain di clo ure before the Board can adopt change in alarie or benefit , with additional di clo ure required for change in pen ion and other po t-employment benefit . Any change in alarie and benefit mu t be adopted at a public meeting of the Board (Cal Gov't

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Nov 2011 Pension Ad Hoc Strategies	July 2016 Citizen Committee Recommendations	Pension Ad Hoc Response/Staff Assessment
		Code §23026). Notice of the con ideration of uch increa e mu t be provided prior to the meeting and hall include "an explanation of the financial impact that the propo ed benefit change or alary increa e will have on the funding tatu of the county employee ' retirement y tem." (Cal Gov't Code §31515.5). In addition, when con idering change in retirement benefit or other po temployment benefit , the Board " hall ecure the ervice of an actuary to provide a tatement of the actuarial impact upon future annual co t , including normal co t and any additional accrued liability, before authorizing change in public retirement plan benefit or other po temployment benefit ." (Cal Gov't Code §7507). When there are change in retirement benefit or other po temployment benefit , the tatement of actuarial Revi ion No. 20151201-1 impact hall be provided by an enrolled actuary and hall be made public at a meeting at lea t two week before the adoption of the increa e in benefit . (Cal Gov't Code §31516). The "7507" report are made available to the public a part of the agenda item material pre ented to the Board when they con ider approving ucce or labor agreement . Updating the pen ion co t containment target projection will be done on a recurring annual ba i during June budget hearing , ba ed on the late t actuarial valuation of the retirement y tem.
	R3 - Pur ue a cap on pen ionable compen ation that i the lower of ba e alary or the Social Security cap.	Thi recommendation i con i tent with the 2011 Pension Ad Hoc report, which called for e tabli hing a pen ion cap equal to 100% of ba e alary (Page 19). Under PEPRA, SCERA Plan B member ' pen ionable compen ation u ed to calculate retirement benefit i already limited to the lower of 100% of their pen ionable compen ation or the Social Security earning cap ($128,400 in 2018); therefore, no further action i required for thi group. For Plan A member , CERL limit maximum retirement benefit to 100% of final average compen ation. The Social Security earning cap doe not apply to thi group. There i currently no mechani m to reduce the

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Nov 2011 Pension Ad Hoc Strategies	July 2016 Citizen Committee Recommendations	Pension Ad Hoc Response/Staff Assessment
		cap for Plan A member , and it cannot be done through bargaining a that would be an impairment of ve ted right .
	R4 - If a defined contribution plan for higher-salaried Plan B employee affected by the Social Security cap doe not exi t, con ider a program out ide the defined benefit plan to upport recruitment and retention effort .	All active employee (excluding extra-help) eligible under Federal law are able to participate in the County' voluntary 457 Deferred Compen ation defined contribution plan admini tered by Nationwide. Employer-paid contribution into employee ' Deferred Compen ation plan i currently limited to elect bargaining unit per their re pective executed labor agreement .
C. Share equal ri k between the County and with all employee for market inve tment lo e and increa ed co t due to change in actuarial a umption on the retirement y tem.	R1 - The County hould adopt a policy again t paying for any portion of pen ion co t that repre ent the employee's hare.	The County mu t con ider many factor and competing need during labor negotiation and bargain in good faith. In lieu of adopting a policy, taff hould obtain Board of Supervi or ' approval to de ignate the prohibition of paying any hare of employee ' normal co t a a top priority item prior to commencing each future round of labor negotiation .
	R2 - Achieve 50/50 normal co t haring with Plan A employee a permitted by PEPRA through negotiation with employee without delay.	During the 2016 round of bargaining, the County reached agreement with labor group on normal co t haring arrangement for Tier 1/Plan A employee with all bargaining unit . In an effort to achieve 50/50 haring of normal co t by 2018, the co t haring arrangement called for incrementally increa ing employee ' contribution toward normal co t at the tart of each fi cal year. The incremental increa e brought the co t haring to 2/3 of the way to the full 50/50 haring goal by 7/1/2017. Achieving the remaining 1/3 (full 50/50 haring) would be contingent on future round of labor negotiation .
	R3 - Within the next year, e timate employee contribution and other off et and compare them to the e timated additional $200 million of UAAL created in the early 2000 . If thi conclude that employee contribution will not meet the	In conjunction with it policy recommendation to pur ue long-term UAAL co t haring with employee (Addre ed in Section 3.3 of thi report), the Pen ion Ad Hoc recommend County taff complete thi analy i in the next few year to inform future labor negotiation . The County will require profe ional actuarial upport to accompli h thi ta k due to the level of complexity and modeling involved.

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Nov 2011 Pension Ad Hoc Strategies	July 2016 Citizen Committee Recommendations	Pension Ad Hoc Response/Staff Assessment
	expected co t for the retroactive benefit , the County hould negotiate an exten ion and/or increa e to the employee 3% upplemental payment .	
	R4 - Within the next year, formulate a methodology to hare actuarial gain and lo e . Take the nece ary action to implement UAAL co t haring.	Addre ed in Section 3.3 of the Pen ion Ad Hoc' Report.
	R5 - For new employee , we recommend the County pur ue a Tier 3 hybrid plan, and in the interim, pur ue ever higher employee contribution a po ibly the only reform tool available, ab ent enabling legi lation at the tate level.	Addre ed in Section 3.4 of the Pen ion Ad Hoc' Report.
D. Strengthen fi cal management action including e tabli hment and adherence to a County Debt Policy and upporting a lower Di count Rate.	R1 - The total pen ion-related debt and the co t burden a ociated with repaying that debt hould be fully and clearly reported. Wherever reporting of pen ion-related debt occur , it hould include both POBs and UAAL. The primary co t containment metric will include normal co t , UAAL amortization, and POB debt ervice.	Thi recommendation ha already been addre ed tarting with CAO taff' June 2016 pen ion update report to the Board of Supervi or . Staff hould continue to refine and improve the content of the pen ion update report to en ure the information i under tandable by member of the public. The primary co t containment metric u ed in the pa t, pen ion co t a a % of total payroll, already include normal co t , UAAL amortization, and POB debt ervice .
	R2 - Refine the Debt Management Policy a it relate to POBs to et a maximum amount of POBs a a percentage of overall pen ion-related liability (POBs + UAAL) that would not exceed ome level.	The County' e tabli hed Debt Management Policy tate that debt ervice for POBs hould not exceed 5% - 7% of total County expenditure , without con ideration of UAAL. U ing the metric propo ed by the Committee to et a limit ba ed on the % of POB / (POB + UAAL) would not offer tangible benefit . The UAAL component i volatile and ubject to large annual fluctuation . If the County' UAAL were reduced, which i a po itive cenario, it would actually increa e the likelihood of exceeding a % limit u ing the Committee' propo ed ratio, becau e it would hrink the denominator. On the other hand, increa ing UAAL--which i not a

Appendix A
Pension Ad Hoc's Response to 2016 Citizen's Committee Report Recommendations

GOAL 1 - Contain Costs: *Reduce the Coun y's pension cos s down o 10% of To al Compensa ion in 10 years.*

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		de irable cenario--would actually increa e the likelihood of the County falling below the target, becau e of a growing denominator.
	R3 - Whenever there i a propo al to pay down the UAAL with County upplemental payment , the alternative u e of fund hould be con idered. The e alternative hould be highlighted and eparately di cu ed during the annual budgeting proce .	Addre ed in Section 3.1 of the Pen ion Ad Hoc' Report.
	R4 - It i e ential to under tanding the funding tatu to include the impact of the POB debt in any calculation of the funded ratio. Both the County and SCERA hould find a way to be con i tent in reporting thi metric, which meet the criteria of accuracy, clarity, and con i tency.	The County of Sonoma Auditor-Controller-Trea urer-Tax Collector's office publi he an annual Citizen's Report ummarizing the financial information for the public. In the publi hed FY 2016-17 Citizen's Report (http://www. onoma-county.org/auditor/citizen .htm), ACTTC pre ented the pen ion y tem's funding ratio both with and without factoring in Pen ion Obligation Bond . It hould be noted that Pen ion Obligation Bond are a County liability, not a SCERA liability; therefore, SCERA and it actuary hould continue to report the retirement plan' funded ratio u ing their exi ting methodology.
	R5 - The County hould adopt a policy regarding the granting of pen ion COLAs that prohibit any pen ion COLAs when any UAAL or POBs are out tanding.	SCERA ha an exi ting policy in place that allows it Board to approve Ad-Hoc COLAs for certain retiree if the plan' re erve target are achieved. Ad-Hoc COLAs approved by the SCERA Board mu t in turn be adopted by the County' Board of Supervi or . Prohibiting retiree COLAs until all out tanding POBs and UAAL liabilitie are extingui hed may be too draconian. In practice, the Citizen Committee' recommendation would eliminate any po ibility of retiree receiving a COLA until the final POB payment in 2030 at the earlie t. Even after POBs are paid off, it i rea onable to a ume the SCERA plan will retain ome amount of UAAL year-over-year due to plan experience change and inve tment volatility. Any retiree COLA policy pre ented to the Board for con ideration need to propo e rea onable criteria and limitation to be fair to retiree , while al o po itioning the County to achieve it pen ion co t containment goal .

Appendix A
Pension Ad Hoc's Response to 2016 Citizen's Committee Report Recommendations

GOAL 2 - Maintain Market Competitiveness and Workforce Stability*: At rac and re ain he highes quali y employees.*

Nov 2011 Pension Ad Hoc Strategies	July 2016 Citizen Committee Recommendations	Pension Ad Hoc Response/Staff Assessment
A. Benchmark the County's total alary and benefit package to 95% of average of comparable market or better.	R1 - Obtain and u e compen ation data about private ector job , whenever tho e job are not unique to government. Con ider including compen ation information from comparable tate and federal job.	County HR ha e tabli hed a regular proce for benchmarking the County' compen ation package again t comparable local government entitie . Comparable agencie are urveyed at the out et of each recurring labor negotiation cycle. Human Re ource hould explore the fea ibility of expanding the next benchmarking urvey of total compen ation to al o include State and Federal employer in the region. AB 646 require compari on with public ector agencie for the purpo e of fact finding, therefore, the u e of private ector data i not recommended.
	R2 - Recognize the real objective of attracting and retaining qualified employee and not be di tracted by the compen ation benchmark.	The Pen ion Ad Hoc agree with thi overall entiment, but recognize the need to continue the practice of benchmarking compen ation.
	R3 - Place more empha i on vacancy rate and attrition, to a e labor market competivene .	The County's Human Re ource taff hould continue to analyze workforce recruitment, vacancy, and attrition data to a e the County' overall labor market competitivene .
B. Provide guidance to employee that encourage retirement planning and embrace three element : County Pen ion, Social Security and individual aving .	R1 - The County hould not pur ue the creation of upplemental retirement income program for employee ve ted in the current pen ion plan.	The Citizen Committee' recommendation i incon i tent with prior action taken by the County. In July 2014, the County e tabli hed it Incentive Retirement Saving Plan (ISRP) for employee covered by the alary re olution. Under the plan, the County contribute a flat amount and a match into participating employee ' deferred compen ation account . Staff recommend keeping the ISRP in place, a it afford maximum flexibility for employee . Thi option i valuable for employee who might benefit from accumulating a et in a defined contribution account to meet their retirement goal . Al o, the County' ability to compen ate employee via contribution to their deferred compen ation plan remain one of the few option available that provide value to employee , without increa ing the County' future pen ion or Other Po t Employment Benefit (OPEB) liabilitie .

Appendix A
Pension Ad Hoc's Response to 2016 Citizen's Committee Report Recommendations

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	R2 - As part of employee retirement educational program , County need to communicate that employee are re pon ible for their own retirement and not the County.	Thi recommendation i con i tent with the 2011 Pension Ad Hoc report, and al o a primary rea on why the County implanted it Incentive Retirement Saving Plan for employee . Addre ing thi recommendation doe not require any new action by the County, other than continuing to convey thi me age a part of future employee retirement education effort .
	R3 - Adopt the guideline for pen ion plu Social Security benefit of 75% to 85% of final income for full-career employee . U e thi guideline in labor negotiation and retirement planning communication with employee .	Thi i a complicated i ue and difficult to enforce. Depending on age, year of ervice, and retirement plan type/tier, ome employee will receive retirement benefit (pen ion plu Social Security) above the 75% - 85% target, while other will receive le . If the County were to adopt thi a a guideline or policy, and found that the majority of full-time career employee were on target to receive retirement income above the 75% - 85% thre hold, it could not unilaterally reduce their ve ted accrued benefit or change their retirement formula without higher level State legi lative intervention. Individual employee will al o receive differing Social Security benefit depending on their own unique circum tance .
C. E tabli h a compen ation philo ophy that upport the County's Strategic Goal and Objective on workforce development.	R1 - E tabli h a clear and conci e compen ation philo ophy tatement, uch a "E tabli h the level of compen ation that i adequate to attract and retain qualified employee ."	The County' exi ting Compen ation Philo ophy include guiding principle to facilitate deci ion-making and create a framework for con i tency acro the organization. The Compen ation Philo ophy i ba ed on many factor including the County's Strategic Plan objective and value . The philo ophy i reviewed with the Board prior to the tart of each labor negotiation cycle for any recommended change to addre recruitment and retention challenge , ba ed on the pattern of recruitment and retention data, to en ure the County maintain market competitivene . County taff believe the Compen ation Philo ophy document i adequate for it intended purpo e, but will revi it the document to con ider recommending adding an over-arching compen ation philo ophy tatement in the beginning "Overview" ection of the document.

Appendix A

Pension Ad Hoc's Response to 2016 Citizen's Committee Report Recommendations

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Nov 2011 Pension Ad Hoc Strategies	July 2016 Citizen Committee Recommendations	Pension Ad Hoc Response/Staff Assessment
	R2 - Collect data on the number of application received for open job vacancie and mea ure employee turnover rate , to determine if the County i experiencing ucce ful recruitment effort and maintaining a low turnover rate for exi ting employee .	Prior to the la t round of bargaining, HR produced a Recruitment and Turnover Report which included data on eparation and hiring. HR hould continue to conduct a review of recruitment and retention data in conjunction with future labor trategy development.
	R3 - Conduct exit interviews to provide more in ight on the factor contributing to turnover including compen ation level of competitive employer . Thi effort hould be centralized in the HR department to en ure independent and objective re pon e .	Exit interviews are conducted in the department . HR will provide be t practice guideline for the department to u e for exit interviews to better tandardize thi proce . Centralizing exit interviews in Human Re ource i not fea ible with current workload and level of re ource .

Appendix A
Pension Ad Hoc's Response to 2016 Citizen's Committee Report Recommendations

GOAL 3 - Improve Accountability and Transparency: *Increased public engagemen , unders anding and par icipa ion in decision-making process wi h policy makers.*

Nov 2011 Pension Ad Hoc Strategies	July 2016 Citizen Committee Recommendations	Pension Ad Hoc Response/Staff Assessment
A. Seek legi lative change to give the Board of Supervi or authority to add four (4) new public member to the Sonoma County Employee Retirement As ociation Board who would not be former, current, or contract County employee .	R1 - Place low priority on increa ing the ize of the SCERA Board, becau e it appear to offer only mall gain in improving pen ion y tem tran parency and public accountability.	The County' prior 2016-17 Legi lative Platform upported adding 4 new BOS appointee to the SCERA Board; however, thi language ha been removed in the County's current FY 2017-18 Legi lative Platform. Additionally, changing the compo ition of the Retirement Board may need to be ent to the electorate in Sonoma County for ratification, if a bill were to be ucce fully run through the tate legi lature, per State Con titution Article XVI, Sec. 17, paragraph (f).
	R2 - An annual State of the Retirement Sy tem report hould be prepared by County taff with the participation of public repre entative , preferably member of a continuing independent citizen advi ory committee. The report hould ummarize the tatu and progre of reform initiative and offer new finding and recommendation to achieve additional pen ion reform action . The annual report hould al o be ubmitted to and reviewed by a citizen advi ory committee on pen ion before ubmi ion to the Board of Supervi or .	As noted in Section 2.1 of the Pen ion Ad Hoc's report, the County Admini trator's Office and SCERA are jointly working on a comprehen ive report on pen ion to be pre ented to the Board of Supervi or in December 2018, and annually thereafter.

Appendix A
Pension Ad Hoc's Response to 2016 Citizen's Committee Report Recommendations

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B. Explore e tabli hment of an Independent Citizen Committee to monitor, guide and drive ongoing reform effort .	R1 - E tabli h an ongoing citizen advi ory committee to provide tran parency and accountability; dutie would include: a. Provide independent advice to the BOS on pen ion and financial matter pertaining to employee pen ion and retirement obligation . b. Review SCERA's annual report and attending SCERA meeting . c. Monitor and evaluate pen ion co t . d. Review and comment on County preparation and communication of the annual report, before it i completed and pre ented to the BOS. The advi ory committee hould have the following tructure: a. Sub tantial continuity in the member hip of the committee, to be t achieve effectivene and efficiency. b. Five to even member who have an aptitude for dealing with complex financial information. c. Member hould not be affiliated with the SCERA pen ion y tem. d. Member hould be able to meet monthly and a needed. e. Budget and pen ion ubject expert from CAO, HR, and ACTTC taff hould be available for meeting and admini trative and analytical upport. Staff would not direct the committee's work.	As noted in Section 2.1 of the Pen ion Ad Hoc's September 2018 report the new, ongoing Independent Citizen's Pen ion Committee charter wa approved by the Board of Supervi or back in April 2017. The new Independent Citizen's Pen ion Committee i charged with analyzing County and Sonoma County Employee ' Retirement As ociation ("SCERA") publication to identify key trend and i ue , and with re earching innovative pen ion reform trategie to contain co t being pur ued in other local or tate juri diction that could be pur ued by the County. The even committee member were formally appointed on September 12, 2017, and they convened their fir t recurring monthly meeting in January 2018.

Appendix A
Pension Ad Hoc's Response to 2016 Citizen's Committee Report Recommendations

GOAL 3 - Improve Accountability and Transparency: *Increased public engagemen , unders anding and par icipa ion in decision-making process wi h policy makers.*

Nov 2011 Pension Ad Hoc Strategies	July 2016 Citizen Committee Recommendations	Pension Ad Hoc Response/Staff Assessment
C. Improve Public Reporting	R1 - Produce an annual pen ion review report in an ea y-to-under tand format that i acce ible to the public; including: a. Total annual pen ion co t a a percent of pen ionable payroll. b. Total exce pen ion co t above a defined u tainable level. c. The funded ratio of the plan.	As noted in Section 2.1 of the Pen ion Ad Hoc's September 2018 report, the County Admini trator's Office and SCERA are jointly working on a comprehen ive report on pen ion to be pre ented to the Board of Supervi or in December 2018, and annually thereafter.
	R2 - The County and SCERA hould coordinate their key mea ure of co t and clearly document any difference .	Staff agree with thi recommendation. The bigge t challenge to overcome are: 1) reconciling the different fi cal year cycle ; 2) SCERA' u e of e timated pen ionable payroll ver u actual payroll in actuarial valuation ; 3) recognizing that SCERA doe not report on POBs, and 4) en uring that important metric are reported by SCERA at the employer level (i.e., County, Court, and Valley of the Moon) to en ure ea y reconciliation with County-specific reporting.
	R3 - Data u ed to prepare County report hould be clearly upported, traceable to ource document , and reported con i tently from year to year. Projection of future year co t , liabilitie , and funded ratio need to be ba ed on ound a umption , clearly explained, adequately documented, and prepared con i tently with SCERA' projection . Projection hould include en itivity analy i to illu trate variation in outcome .	Staff concur with thi recommendation and will improve effort to properly document data in future report .
	R4 - Report hould be po ted on the Citizen Advi ory Committee web ite, a a ection in the County's Comprehen ive	Pa t and future report will be po ted on the County's new pen ion reform web ite: http:// onomacounty.ca.gov/CAO/Pen ion-Reform/

Appendix A

Pension Ad Hoc's Response to 2016 Citizen's Committee Report Recommendations

GOAL 3 - Improve Accountability and Transparency: *Increased public engagemen , unders anding and par icipa ion in decision-making process wi h policy makers.*

Nov 2011 Pension Ad Hoc Strategies	July 2016 Citizen Committee Recommendations	Pension Ad Hoc Response/Staff Assessment
	Annual Financial Report (CAFR) and/or a part of the exi ting County of Sonoma Citizen ' Report.	
	R5 - Thi proce hould be a central and con olidated re pon ibility within the County.	The annual pen ion report development will be led by CAO taff, with upport from ACTTC, SCERA, and Human Re ource .

Appendix B
County of Sonoma
2016-17 Pension Reform Ad Hoc Committee
Charter/Scope of Work

I. Background

Th Board of Sup rvisors ("Board") form d th original P nsion Ad Hoc Committ ("Ad Hoc") in F bruary 2011. Sup rvisors David Rabbitt and Shirl Zan s rv d as Co-Chairs. Th 2011 P nsion Ad Hoc analyz d th County's p nsion issu s and d v lop d a compreh nsiv r port to articulat th County's p nsion reform goals. Th r port highlight d s v ral policy goals and strat gi s to reduc Sonoma County's p nsion costs and nsure a fair, quitabl , and sustainabl p nsion syst m. Th Board rec iv d its report in Nov mb r 2011 and adopt d th goals and strat gi s th r in, including: cost containm nt; maintaining mark t comp titiv n ss and workforc stability; and improving accountability and transparency. County staff subs qu ntly work d on impl m nting th strat gi s, and th Board rec iv d a progress report on January 27, 2015 of significant accomplishm nts achi v d. Th Board creat d th Ind p nd nt Citiz n's Advisory Committ on P nsion Matt rs to r vi w progress to dat , h lp d v lop mat rials to mor asily xplain th p nsion syst m and proc ss to th g n ral public, and offer any additional recomm ndations for furth r p nsion reform fforts. On July 12, 2016, th Board rec iv d th committ 's r port, and staff b gan formulating a plan for th n xt phas of p nsion reform. On Nov mb r 15, 2016, th Board creat d a n w P nsion Ad Hoc Committ to guid th County's strat gy for impl m nting th n xt phas of reforms.

II. Committee Duration

Th P nsion Ad Hoc Committ will b conv n d for a limit d t rm through D c mb r 31, 2017, unl ss xt nd d by th Board of Sup rvisors.

III. Committee Members

On Nov mb r 15, 2016, th Board Chair appoint d two co-chairs to l ad th committ : David Rabbitt, S cond District Sup rvisor, and Shirl Zan , Third District Sup rvisor.

IV. County Department, Other Agency, and Consulting Resources

Th following County staff will support th work of th P nsion Ad Hoc Committ :

- Sh ryl Bratton, County Administrator;
- Christina Riv ra, Assistant County Administrator;
- R b cca Wachsb rg, D puty County Administrator; and
- Nikolas Kl in, Administrativ Analyst.

As-n d d subj ct matt r support may also b provid d by staff from Human R sourc s, Auditor-Controll r-Tr asurer-Tax Coll ctor, County Couns l, and th Sonoma County Employ s' R tir m nt Association. Possibl support from outsid consultants or contractors (i. ., analytical, actuarial, or l gal s rvic s) may also b utiliz d.

Appendix B
County of Sonoma
2016-17 Pension Reform Ad Hoc Committee
Charter/Scope of Work

V. Scope of Effort and Deliverables

Th P nsion Ad Hoc Committ will guid th n xt phas of th County's p nsion reform fforts by accomplishing th following obj ctiv s, which will b address d in a final report to th full Board of Sup rvisors with a targ t compl tion dat of D c mb r 2017:

1) P nsion R form Work Plan: Creat a n w work plan for impl m nting th Board's current high priority p nsion reform goals and addressing th recomm ndations of th original Citiz n's Committ . Th work plan should id ntify: future action st ps, staff resourc s required, contract resourc s r quired, d sir d outcom s, d liv rabl s, limitations and constraints, and targ t compl tion dat s.
Deliverable: R comm nd d Work Plan incorporat d into th Committ 's final r port and approv d by th full Board of Sup rvisors.
Target Completion Date: D c mb r 2017

   a. R comm nd n w approach s for paying unfund d liability costs and improving quity: R comm nd approach s for reducing th County's Unfund d Actuarial Accru d Liability (UAAL) associat d with p nsion costs, i. ., advanc d paym nts towards UAAL and/or sharing th UAAL p nsion cost burd n b tw n mploy r and mploy s. Propos d mploy cost sharing arrang m nts should also tak into consid ration xisting in quiti s caus d by diff rent retir m nt ti rs and th retir m nt syst m's current cost of living adjustm nts (COLA) policy.
Deliverable: R comm ndations will b incorporat d into th final report.

   b. "Hybrid" Plan F asibility Analysis: In addition to oth r cost containm nt fforts, th P nsion Ad Hoc Committ 's Nov mb r 2011 report and th Citiz n Committ 's July 2016 report both r comm nd d th County pursu a n w r tirem nt b n fit ti r built upon a hybrid mod l, which would combin d fin d b n fit and d fin d contribution plans. Th P nsion Ad Hoc will work with staff to ass ss th f asibility of, and possibl approach s for, creating a hybrid retir m nt plan mod l with or without nabling l gislation.
Deliverable: Th P nsion Ad Hoc's final report will includ a feasibility analysis for impl m nting a hybrid plan, and a recomm nd d strat gy for th County to pursu .

   c. D v lop a Communications Program for P nsion Information: D v lop a n w communications program to h lp achi v th goal of improving accountability and transparency. Th communications program would includ thre main compon nts:
      i. An informational handout to communicat p rtin nt information about Sonoma County's p nsion syst m to b updat d annually th r aft r by County staff. Th handout would us facts and figures to address common misconc ptions regarding th p nsion syst m, how it works, and its impact. Th docum nt should xplain conc pts cl arly and b asily und rstood by m mb rs of th public.
      Target Completion: May 2017.

      ii. Improv upon past staff p nsion reports by d v loping a compreh nsiv annual "Stat of th R tirem nt Syst m" report that is informativ , und rstandabl ,

consist nt, and acc ssibl to m mb rs of th public. This report is anticipat d to b a joint ffort with th Sonoma County Employ s' R tirem nt Association.
Target Completion: S pt mb r 2017.

iii. R comm nd d updat s to th County w bsit to communicat p rtin nt information and data relat d to p nsions. Th cont nt would b g ar d towards m mb rs of th g n ral public.
Target Completion: D c mb r 2017 as part of th P nsion Ad Hoc's r port.

d. Monitor L gal D v lopm nts: Monitor and provid r comm ndations on l gal d v lopm nts that impact local p nsion syst ms. Work may ntail r vi wing th status and outcom s of applicabl stat or f d ral court cas s that may provid opportuniti s for furth r p nsion reform.
Deliverable: R comm ndations and/or analysis of l gal d v lopm nts will b incorporat d into th Committ 's final report.

2) Establish a N w Ind p nd nt Citiz n's P nsion Committ : D v lop a r comm nd d scop and chart r for a n w citiz n's committ . Th chart r should address th scop of work, m mb rship param t rs, t rms, and staff support. Id ntify and nominat appoint s to th committ .
Deliverable 1: Ind p nd nt Citiz n's P nsion Committ stablish d and chart r approv d by th full Board of Sup rvisors.
Target Completion Date: April 25, 2017
Deliverable 2: Board approval of Committ appoint s.
Target Completion Date: Jun /July 2017

3) Cost Containm nt Targ t: Th 2011 P nsion Ad Hoc's r port stablish d a cost containm nt goal of reducing th County's annual p nsion costs to 10% of total comp nsation within 10 y ars. Giv n actual xp ri nc ov r th past few y ars, and r comm ndations by th Citiz n's Committ to reconsid r us of this targ t ratio, th P nsion Ad Hoc will revisit th valu and us of this cost containm nt goal. Th P nsion Ad Hoc will d v lop a recomm ndation to ith r reaffirm th original 10% in 10 y ars targ t or add n w cost containm nt m asures.
Deliverable: Th r comm ndation will b includ d in th P nsion Ad Hoc report.
Target Completion Date: D c mb r 2017

VI. Stakeholders

- Board of Sup rvisors
- All County citiz ns
- County mploy s, mploy groups, and retire s participating in th p nsion syst m
- Sonoma County Employ s' R tir m nt Association
- Ind p nd nt Citiz n's P nsion Committ

Appendix C
Independent Citizen's Pension Committee Charter

I. Background

In November 2011, the Sonoma County Board of Supervisors ("Board") approved several policy goals and strategies to reduce Sonoma County's pension system costs and ensure a fair, equitable, and sustainable local pension system. The Board approved three over-arching goals for pension reform: contain costs; maintain market competitiveness and workforce stability; and improve accountability and transparency. Under the goal of improving transparency, one of the strategies called for establishing an Independent Citizen's Committee to review and propose policy changes to control pension costs. To that end, in September 2015, the Board established the former Independent Citizen's Advisory Committee on Pension Matters, and appointed seven members.

The Board established the original committee for a limited duration of nine months and charged it with producing a written report to address three specific areas: (1) evaluating the County's progress towards achieving its stated pension reform goals; (2) developing a brief summary of the County's pension system and the roles and responsibilities of governing bodies; and (3) proposing new pension reform recommendations for the Board's consideration. The committee's final report communicated its members' findings and recommendations culminating from their effort to study, analyze, and evaluate the County's pension reform efforts since 2012. The original committee's work concluded on July 12, 2016 with submission of its final report. This charter outlines the scope and requirements for a new citizen's committee, hereafter referred to as the Independent Citizen's Pension Committee ("Committee").

II. Mission Statement

The mission of the Independent Citizen's Pension Committee is to represent the best interests of the entire community in a non-partisan manner, while acting as a bridge for communication between the County and local residents on matters pertaining to the County's pension costs and reform efforts.

III. Membership

a. Appointments: The Committee shall consist of seven members appointed by majority vote of the Board of Supervisors, and nominated as follows:

   i. The initial seven appointees shall be nominated by the co-chairs of the 2016-17 Pension Ad Hoc after conducting an open application process in compliance with the Maddy Act.

   ii. Future Committee vacancies will be posted on the County's Boards, Commissions, Committees & Task Forces list to comply with the Maddy Act, and interested individuals may submit an application for consideration. Applications will initially be reviewed by County Administrator staff for completeness and verification of the applicant's eligibility. Applications will be forwarded to the presiding Chair and Vice Chair of the Board of Supervisors for review and possible interviews. Upon conclusion of the application process, member nominations will be presented to the full Board of Supervisors for approval.

b. Membership Requirements

Members shall meet the following criteria:

- Resident of Sonoma County;
- Possess an aptitude for dealing with complex financial information; and
- ot affiliated with, participating in, nor a beneficiary of, the Sonoma County Employees' Retirement Association ("SCERA") pension system.

c. Member Terms

The seven members appointed to the Committee will initially serve staggered terms of either two or three years. As the terms of the initial members expire, all new members will be appointed (or incumbents re-appointed) to a standard two-year term. All members shall serve at the pleasure of the Board of Supervisors and may be removed from office at any time by the Board.

- **Staggered Terms for Initial Members**: Three of the seven initial appointees, chosen at random, will serve an extended three-year term; the remaining four initial appointees will serve a standard two-year term.

- **Standard Terms:** All members will hold office for a term of two-years, or until their successor is appointed. Individual members will not be subject to term limits; however, they must be reappointed by the Board upon expiration of their current term in order to continue serving on the committee.

d. Replacements: In event of the death, resignation, or inability of any member of the Committee to serve, such condition shall be brought to the attention of the Board of Supervisors for appointment of a replacement. "Inability to serve" shall be determined by a majority vote of the Committee. If any member misses two consecutive regular meetings without a valid reason, the Board of Supervisors, through the County Administrator's Office, shall be notified and requested to appoint a replacement. The replacement would finish the remaining term of the individual removed from the committee, and would not serve a full two-year term.

e. Compensation: Members of the Committee shall serve without compensation.

IV. Committee Duration

The Independent Citizen's Pension Committee will be convened as an ongoing committee without a specified end date, unless terminated by majority vote of the Board of Supervisors.

V. Scope of Effort and Deliverables

The following scope for the Independent Citizen's Pension Committee is intended to improve accountability and transparency of the County's pension reporting, and provide a way for the County to engage citizens in the process of developing and refining its pension reform strategies:

1) Review and Provide Feedback on the County's "State of the Retirement System" Report: County staff will work with SCERA to improve upon past pension reports and develop a comprehensive annual "State of the Retirement System" report that is informative, understandable, and accessible to members of the public. The State of the Retirement System report will be published annually during the second quarter of each fiscal year (October – December). Staff will provide an advanced copy of the report to the Committee prior to publication. Committee members will have the opportunity to review and evaluate the report's contents for accuracy and clarity, ask questions of staff, and provide feedback or suggestions for additional content and copy edits to improve readability and transparency.

2) Review Relevant County and SCERA Reports and Materials: When the following recurring reports and documents are published and made available for review by the general public, they will concurrently be provided to committee members for informational purposes:
    - County's Comprehensive Annual Financial Report (CAFR);
    - County's Annual Fiscal Year Recommended and Adopted Budget Books;
    - County's Annual Fiscal Year Citizen's Report;
    - County's Annual State and Federal Legislative Platform;
    - County's executed labor agreements and Govt. Code 31515.5 disclosure documents;
    - SCERA's Annual Actuarial Valuation of the Retirement System;
    - SCERA's Comprehensive Annual Financial Report; and
    - SCERA's Popular Annual Financial Report.

3) Annual Presentation to the Board of Supervisors: The Committee shall present an annual update to the Board of Supervisors during the months of April or May. This deliverable would take the form of a short board report and presentation, and would not be a formal, comprehensive written report. The timing of the Board update is intended to give the committee sufficient time to review relevant County reports, while also minimizing disruption caused by potential turnover of committee members every other summer due to term expirations. The committee's annual Board updates shall cover the following topics:

    1. Meetings conducted, presentations received, workgroups formed, and other relevant activities of the committee;
    2. Independent analysis of trends and key takeaways observed in the State of the Retirement System report and other County and SCERA publications;
    3. Innovative pension reform strategies to contain costs being pursued in other local or state jurisdictions that could be applicable to the County;
    4. Synopsis of relevant news articles, academic studies, publications, legislative developments, or other items of interest pertaining to pension plans and reform efforts; and

5. Additional recommendations, from a citizen's perspective, that could help the County further improve its pension reporting and ultimately the public's understanding of the pension system.

Consistent with the mission of the Committee and its status as an advisory body, the information communicated in its annual update shall be fair, constructive, and objective. Any and all pension reform strategies developed through the efforts of the Committee shall be advisory only to the Board of Supervisors. Following the Committee's annual updates, the Board would not be obligated to pursue any policy changes. Further, to the extent the Board of Supervisors authorizes the delivery of pension reform strategies developed through this effort, the implementation of such strategies will be subject to State law and the County's labor relations policies and procedures. In this regard, the Committee will have no authority or involvement in the applicable labor relations process.

VI. Committee Support and Resources

The Independent Citizen's Pension Committee will receive administrative meeting support from the County Administrator's Office, with as-needed analytical support provided by subject matter experts from departments, such as: the County Administrator's Office, Human Resources, Auditor-Controller-Treasurer-Tax Collector, County Counsel, and the Sonoma County Employees' Retirement Association. County staff will not be allowed to direct the committee's work in any way, because it reports directly to the Board of Supervisors in an advisory capacity. Given the committee's scope (refer to Section V. above), it is not expected to utilize services from outside consultants or contractors (i.e., analytical, actuarial, or legal).

The County will create a dedicated webpage for the committee to post relevant information, such as: meeting calendar, charter, bylaws, contact information, meeting agendas, approved meeting minutes, annual reports to the Board, membership rosters, and other Maddy book information.

VII. Spending Authority and Travel

The Committee will not be granted authority to expend County funds, nor will it have authority to enter into any contracts or agreements for goods or services. o travel is authorized under the scope of work; therefore, committee members will not reimbursed for travel costs.

VIII. Committee Rules and Procedures

a. Bylaws: Shortly after the initial meeting of the ICPC, its members must draft and approve the committee's bylaws. Upon committee approval, the bylaws must be submitted to the Board of Supervisors for approval. Future amendments or revisions to the bylaws must also be approved by both the committee and the Board of Supervisors.

b. Records Retention Schedule: The committee must adhere to the County Clerk of the Board's Document Retention Schedule for Advisory Board Files in compliance with the requirements set forth in County of Sonoma Administrative Policy 6-1: Policy for Records Retention, Storage

& Destruction. The records retention schedule defines the Committee's retention, storage, and disposition of records, in accordance with administrative, legal, audit, and historical requirements.

c. Brown Act: All meetings and all deliberations of the ICPC shall be open to the public and shall be governed by the Ralph M. Brown Act (Government Code Section 54950, *et seq*.).

d. Quorum and Recommendations: Four of seven committee Members must be present at any given meeting to constitute a quorum. o action or advisory recommendation of the ICPC shall be valid unless a majority of all the members concur.

e. Voting: Each member of the ICPC shall be entitled to one vote. A member may abstain from voting in cases of conflict of interest, in which case he or she shall state what the conflict is and recuse themselves from discussion of the item. o proxies shall be permitted. All votes shall be public and properly recorded.

f. Conduct of Meetings: Meetings of the committee shall be conducted in an orderly fashion. The Committee may refer to "Robert's Rules of Order" for assistance in developing procedures to ensure orderly conduct.

g. Presiding Officer: The chair, or the vice chair in the chair's absence, shall preside over all meetings of the ICPC. In the case of absence of both the chair and the vice-chair, the chair pro tem shall preside.

h. Agendas: The chair shall be responsible for setting the agenda of each meeting of the ICPC. The County Administrator shall assign staff to attend, as needed. County Administrator staff shall post the agenda for each meeting of the ICPC at the Board of Supervisors office at least 72 hours in advance of the meeting per Brown Act requirements.

i. Meeting Minutes: The minutes of each meeting of the ICPC shall include a copy of the agenda, the official public record of the meeting, and shall indicate any actions taken by the committee.

j. Meeting Frequency: It is anticipated that the ICPC will convene between six (6) to nine (9) meetings per year. The ICPC may form individual workgroups comprised of a subset of members (less than a quorum) to accomplish specific tasks. The smaller workgroups would not be subject to Brown Act requirements and may meet more frequently.

k. Meeting Location: All meetings and deliberations of the full ICPC shall be held in a County building easily accessible to the public. This requirement does not apply to smaller workgroups meetings of less than a quorum.

l. Ethics: Committee members are expected to adhere to high ethical standards in the conduct of their duties. Such conduct requires that Committee members: be independent, impartial and fair in their judgment and actions; comply with both the letter and the spirit of laws and

policies affecting operations of the Committee; and conduct public deliberations and processes openly in an atmosphere of respect and civility.

m. Representation of the Committee: Committee members would not be authorized to represent, speak, or act on behalf of the Committee as a whole unless so authorized by the Committee.

n. Conflicts of Interest: Committee members are prohibited from using their official positions to influence decisions in which they have a financial interest, or an organizational responsibility, or where they have a personal relationship that would constitute a conflict of interest. Committee members should avoid taking any action that could be construed, or create the appearance of, using public office for personal gain, including use of the title of Committee Member or other County resources to obtain or promote personal interests and/or businesses.

IX. Stakeholders

- Board of Supervisors
- All County residents
- County employees, employee labor groups, and retirees participating in the pension system
- Sonoma County Employees' Retirement Association

WHAT DO YOU KNOW ABOUT PENSIONS?

Q: WHAT IS A PENSION?

A: A pension is a regular payment made during a person's retirement from an investment fund that the person and their employer contributed to during the time he or she was working. Sonoma County's pension system is a defined benefit plan, which means each employee gets a fixed, pre-determined benefit upon retirement based on factors such as years of service, retirement age, and salary.

Q: WHO MANAGES SONOMA COUNTY PENSIONS?

A: Like one-third of other counties in California, Sonoma County Employees' Retirement Association (SCERA) operates a local pension system, and is governed by a nine-member Board that includes members of the public, active and retired Sonoma County employees who are plan members, and the publicly elected County Treasurer. SCERA is not a part of CalPERS, which is the state's retirement system

Q: HOW DO EMPLOYEE PENSIONS GET FUNDED?

A: Public pension systems like SCERA have three main funding sources: employee contributions, employer contributions, and investment returns. It is a common misunderstanding that the County pays the bulk of pension expenses. In fact, the largest funding source consistently is investment returns.

contributions + investments = benefits + expenses

EVERY PENSION DOLLAR IS:

61¢ INVESTMENT INCOME

25¢ EMPLOYER CONTRIBUTIONS

14¢ EMPLOYEE CONTRIBUTIONS

AVERAGE 30 YEAR INVESTMENT RETURN FOR SCERA IS **8.7%**

THE AVERAGE EMPLOYEE CONTRIBUTES **OVER 22%** OF THEIR SALARY TOWARDS THEIR RETIREMENT*

More than 75% of retirement benefits are received by Sonoma County residents, with every $1 of pension benefit leading to $2.36 in economic impact. That is a **$20M BOOST TO THE LOCAL ECONOMY** each month.

*Including retirement, social security, and deferred compensation contributions

(*continues on back*)

(*continued from front*)

Q: HOW MUCH DOES THE COUNTY PAY FOR PENSIONS ANNUALLY?

A: In Fiscal Year 2015-16, the county's annual pension costs totaled $107.6M, which included $61.8M to fund the pension system, $42.2M for pension bond payments, and a $3.5M additional payment towards unfunded liability.

Q: HOW CAN THE PENSION SYSTEM BE CHANGED?

A: It is commonly assumed that the Board of Supervisors has the ability to reform the pension system on their own. The reality is that there are a number of federal, state, and local laws and rules that restrict the Board's options. Lowering benefits or adjusting how risk is shared between employer and employee, can only be achieved through changes to state legislation.

PENSION SYSTEM QUICK FACTS

# of retirees	4,812
Average retirement benefit (Average of 17 years of service)	$32,961 per year
Average % employees contribute	11.67% of wages
Average employee contribution	$10,107 per year
% of retirees receiving less than $50K/year	over 80%

ITEMS THAT DO NOT INCREASE PENSION BENEFITS:

- ✓ Overtime
- ✓ Bonuses or any one-time payments
- ✓ Unused vacation
- ✓ County Paid Deferred Compensation
- ✓ On-Call or Standby Premiums

Achievements to reduce pension liability over the past five years include:

- **DECREASED TOTAL UNFUNDED PENSION LIABILITY** BY NEARLY $180M, OR ROUGHLY 20%, OVER THE PAST 5 YEARS
- **ELIMINATED PENSION "SPIKING" PRACTICES** TO PREVENT INFLATED RETIREMENT BENEFITS
- **INCREASED EMPLOYEE CONTRIBUTIONS** TOWARD PENSIONS AND OTHER RETIREMENT SAVINGS PROGRAMS
- **INCREASED ACCOUNTABILITY** AND TRANSPARENCY WITH MORE REPORTING AND A PERMANENT INDEPENDENT CITIZENS PENSION COMMITTEE

Learn more: sonomacounty.ca.gov/pensions or (707) 565-2231

No. S239958

IN THE SUPREME COURT

OF THE STATE OF CALIFORNIA

CAL FIRE LOCAL, 2881 (formerly known as CDF Firefighters), et al.

Petitioners and Appellants,

v.

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM (CalPERS),

Defendant and Respondent,

And

THE STATE OF CALIFORNIA,

Intervener and Respondent.

On Review from the Court of Appeal, First Appellate District, Division 3,

Civil No. A142793

After an Appeal from the Superior Court for the State of California, County of Alameda,

Case Number RG12661622, Hon. Evelio Grillo, Presiding Judge

APPLICATION OF
THE COUNTY OF SONOMA AND THE COUNTY OF SOLANO TO JOIN BRIEF AS AMICUS CURIAE

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To the Honorable Chief Justice:

The Counties of Sonoma and Solano (Sonoma and Solano) respectfully request that the Supreme Court permit Sonoma and Solano Counties to join in the brief of amicus curiae submitted in the above-entitled action by the League of California Cities pursuant to Rule 8.520(f) of the California Rules of court. This application is timely made within 30 days after the filing of the reply brief on the merits and is therefore timely pursuant to Rule 8.520(f)(2). This joinder application is being made on the following grounds:

1. Applicants Sonoma and Solano are both Northern California Counties and political subdivisions of the State of California.
2. Applicants believe that the decision in the above-entitled appeal will have a substantial impact on counties in the same manner as it impacts cities, which is described in the League brief.
3. Applicants believe that there is a need for additional argument by Sonoma and Solano on the points raised in Respondent's Opening Brief as explained in the Application submitted to this Court by the League below, as follows:
4. <u>Sonoma County</u>:
   (a) Sonoma County's pension system is a defined benefit plan established in 1946 under the County Employees Retirement Law of 1937 ("CERL"). Benefits are set by the Board of Supervisors with the plan administered by the Sonoma County Employees' Retirement Association ("SCERA").
   (b) The SCERA Pension Plan is a qualified defined benefit plan funded by three sources: the employee, the employer, and investment earnings of the retirement fund. As of the December 31, 2015 valuation (which sets the contribution rates effective July 1, 2017 through June 30, 2018) the average employee rate is 11.72% and the average employer rate is 20.38%, with investment income covering close to 60% of the benefits and all of the investment/administrative expenses paid by SCERA.

(c) SCERA is presently 85.5% funded on a valuation value and 86% funded on a market value basis. This is a reduction since 1996 when the plan was 100% funded and when there was no unfunded actuarial accrued liability (UAAL). For 2016, Sonoma County has a UAAL of four hundred and eight million, two hundred twenty-seven thousand dollars ($408,227,000).

(d) Pension costs have increased dramatically and, as trending, are not sustainable. In the 10 years preceding 2017, County contributions to SCERA have escalated from almost 32 million dollars to over 57 million dollars causing the Sonoma County Board of Supervisors to embark on an effort to address the growing cost impact of employee pensions. Tools to address employer obligations are insufficient. To be effective in addressing pension fiscal impacts and maintaining appropriate levels of public services, counties need more flexibility to define, and work with employees, to determine sustainable prospective benefit levels. Further, in 2015 the Board of Supervisors formed an expert Ad Hoc Independent Citizens' Advisory Group on Pension Reform. One key recommendation of the Advisory Group was identifying a sustainable level of pension cost to reduce costs, free resources and reduce risks.

(e) The percentage of total salaries and benefits paid toward pension costs has risen from 11.88% in Fiscal Year 07/08 to 17.46% in Fiscal Year 16/17.

(f) A key component of the ongoing pension reform efforts is a reexamination of the law governing the modification of pension benefits known as the "California Rule," and the flexibility to enact changes on a going forward basis, under a clear set of standards, in order to ensure the health and sustainability of the pension system.

5. Solano County:

(a) Solano County provides employees retirement benefits offered through the California Public Employees' Retirement System (CalPERS). Retirement benefits are provided under three tiers through one of two plans: safety plans for county sheriff officers and peace officers, and "miscellaneous" plan for all non-safety employees.

(b) County sheriff officers' safety benefits are provided to deputy sheriffs, and higher ranks, for employees hired before January 17, 2011, a 3% at age 50 retirement formula; for employees hired after January 17, 2011, a 3% at age 55 formula; and for new members as of January 1, 2013, a 2.7% at age 57 formula as established under the California Public Employees' Pension Reform Act of 2013 (PEPRA or the Pension Reform Act; Gov. Code, § 7522 et seq.)

(c) County peace officers' safety benefits are provided to other safety employees, such as correctional officers or probation officers, for employees hired before May 4, 2012, a 2% at age 50 formula; for employees hired after May 4, 2012, a 2% at age 55 formula; and for new members as of January 1, 2013, a 2% at age 62 formula under PEPRA.

(d) Non-safety employees receive retirement benefits under a miscellaneous formula for employees hired before May 4, 2012, a 2.7% at age 55 formula; for employees hired after May 4, 2012, a 2% at age 60 formula; and for new members as of January 1, 2013, a 2% at age 62 formula under PEPRA. The Miscellaneous Employer Retirement Rate is projected to increase from 15.20% in FY2012/13 to 31.1% in FY2022/23.

(e) The safety plan is presently 70.5% funded and for 2016, the County's Unfunded Accrued Liability (UAL) is $130,762,088. The Safety Employer Rate is projected to increase from 19.3% in FY 2012/13 to 41.6% in FY

2022/23. The miscellaneous plan is presently 71.0% funded and for 2016, the County's UAL is $414,506.778. The Miscellaneous Employer Retirement Rate is projected to increase from 15.20% in FY 2012/13 to 31.1% in FY 2022/23. CalPERS approved lowering the investment return discount rate assumption from 7.5% to 7.0 % over a phased in 5-year period. The total costs as a result of these changes are estimated to significantly increase the County's retirement costs from $39.706 million in FY 2015/16 to a projected $86.186 million in FY 2022/23.

(f) Although the number of County employees have remained essentially stable from 3,092 in FY2007/08 to 3,068 in FY2017/18, the benefits costs have increased 70% from $76,496,569 to $130,197,943, and the total salary and benefits increased 43% from $258,502,880 to $369,788,109.

(g) To address this daunting fiscal condition, the Board of Supervisors adopted an aggressive pension policy program, which includes the funding of a pension reserve, with a present balance at $16.1 million, and the establishment of a 115 (P) trust fund, with a present balance of $20.3 million.

(h) Unless the counties retain the ability to address these escalating costs, they face the unconscionable choice of sacrificing services to the public for providing retirement benefits to the employees.

6. For both counties, public pensions under CERL and PERS have garnered widespread interest and generated significant debate among policy leaders as to rising pension costs and the long-term sustainability of pension benefits and has highlighted that there is a need for statewide reform to provide a measure of local flexibility to ensure that the public retirement systems are sound and fiscally responsible.

7. **Applicants believe that the legal issues involved in the appeal are a matter of public interest, extending beyond the interests of the parties to the underlying action.**

WHEREAS, the County of Sonoma and the County of Solano request leave to join as amicus curiae in the brief submitted by the League in the above-entitled case.

Dated: February 20, 2018

Respectfully submitted,

COUNTY OF SONOMA

Bruce D. Goldstein, County Counsel
SBN 135970

COUNTY OF SOLANO

Dennis Bunting, County Counsel
SBN 55499

Segal Consulting

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Andy Yeung ASA, MAAA, FCA, EA
Vice President & Actuary
ayeung@segalco.com

August 20, 2018

Ms. Julie Wyne
Retirement Administrator
Sonoma County Employees' Retirement Association
433 Aviation Boulevard, Suite 100
Santa Rosa, CA 94503-1069

Re: Sonoma County Employees' Retirement Association (SCERA)
Accelerated County Unfunded Actuarial Accrued Liability Payments

Dear Julie:

As requested by the County, enclosed please find the amortization schedules for the County's Unfunded Actuarial Accrued Liability (UAAL) as of December 31, 2016 before and after considering accelerated payments.

There are four schedules based on various prepayment assumptions, as detailed below. For each schedule, we have separately shown the UAAL for General County Members (schedules ending with "-A") and Safety County Members (schedules ending with "-B"), as well as a total schedule for County General and Safety Members combined (schedules ending with "-C").

Schedule #1: Baseline amortization schedule and assuming no prepayments.

Schedule #2: Prepayments of $3 million are assumed to be made at the beginning of each year effective January 1, 2018 and applied on a prorated basis among all outstanding General and Safety UAAL amortization layers.

Schedule #3: Prepayments of $3 million are assumed to be made at the beginning of each year effective January 1, 2018 and applied to the shortest outstanding UAAL amortization layer.

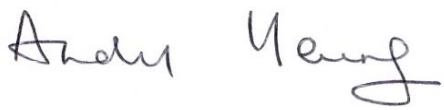
Schedule #4: Prepayments of $3 million are assumed to be made at the beginning of each year effective January 1, 2018 and applied to the longest outstanding UAAL amortization layer.

Each 20-year schedule details, by year, the Beginning UAAL Balance, Prepayment Amount (if any), Annual Payment, Interest Paid, Principal Paid, and End of Year Balance.

You will note that, assuming no prepayments, towards the end of the amortization periods the net amortization amounts either stop before the full 20 years (as in Schedule 1-A) or else become volatile, including going negative (as in Schedules 1-B and 1-C). This is an aspect of layered amortization, sometimes called "tail volatility", and occurs when the various charge and credit amortization layers are fully amortized at different times. In practice this unusual cost pattern is either masked by new layers that arise in future valuations, or else is addressed directly by the Board (as advised by the actuary) by combining some of the charge and credit layers. We can discuss this further with you and your Board. For now, we would also note that under any of the Prepayment scenarios the UAAL is fully funded before the tail volatility emerges.

Please let us know if you have any questions.

Sincerely,



Andy Yeung

EK/bqb
Enclosures

cc: Nikolas Klein

Sonoma County Employees' Retirement Association
Unfunded Actuarial Accrued Liability Amortization Schedule

Schedule 1 - A
Assuming No Prepayments
General County Members
(Based on December 31, 2016 Valuation)

Annual Interest Rate: 7.25%

Annual Payroll Inflation: 3.50%

Year	Beginning of Year Balance	Annual Payment	Interest Paid	Principal Paid	End of Year Balance
1	$ 275,973,000	$ 25,776,502	$ 19,166,312	$ 6,610,190	$ 269,362,810
2	269,362,810	26,678,725	18,657,657	8,021,068	261,341,742
3	261,341,742	27,612,448	18,045,608	9,566,840	251,774,902
4	251,774,902	28,578,954	17,320,523	11,258,431	240,516,471
5	240,516,471	29,579,264	16,471,673	13,107,591	227,408,880
6	227,408,880	30,614,332	15,487,366	15,126,966	212,281,914
7	212,281,914	31,685,956	14,355,788	17,330,168	194,951,746
8	194,951,746	32,794,984	13,063,157	19,731,827	175,219,919
9	175,219,919	33,942,778	11,595,091	22,347,687	152,872,232
10	152,872,232	35,130,710	9,936,025	25,194,685	127,677,547
11	127,677,547	36,360,362	8,069,336	28,291,026	99,386,521
12	99,386,521	35,294,611	6,052,990	29,241,621	70,144,900
13	70,144,900	29,620,495	4,118,259	25,502,236	44,642,664
14	44,642,664	28,263,674	2,313,717	25,949,957	18,692,707
15	18,692,707	16,935,619	802,226	16,133,393	2,559,314
16	2,559,314	2,658,068	98,754	2,559,314	-
17	-	-	-	-	-
18	-	-	-	-	-
19	-	-	-	-	-
20	-	-	-	-	-
Total		$ 451,527,482	$ 175,554,482	$ 275,973,000	

Note: Results may be slightly off due to rounding

Note that annual payments include UAAL contributions from both the employer and the employees.

Sonoma County Employees' Retirement Association
Unfunded Actuarial Accrued Liability Amortization Schedule

Schedule 1 - B
Assuming No Prepayments
Safety County Members
(Based on December 31, 2016 Valuation)

Annual Interest Rate: 7.25%

Annual Payroll Inflation: 3.50%

Year	Beginning of Year Balance	Annual Payment	Interest Paid	Principal Paid	End of Year Balance
1	$ 97,701,000	$ 8,968,968	$ 6,790,443	$ 2,178,525	$ 95,522,475
2	95,522,475	9,282,886	6,622,255	2,660,631	92,861,844
3	92,861,844	9,607,799	6,418,760	3,189,039	89,672,805
4	89,672,805	9,944,066	6,176,569	3,767,497	85,905,308
5	85,905,308	10,292,143	5,892,097	4,400,046	81,505,262
6	81,505,262	10,652,289	5,561,254	5,091,035	76,414,227
7	76,414,227	11,025,165	5,180,021	5,845,144	70,569,083
8	70,569,083	11,411,059	4,743,662	6,667,397	63,901,686
9	63,901,686	11,810,424	4,247,215	7,563,209	56,338,477
10	56,338,477	12,223,777	3,685,370	8,538,407	47,800,070
11	47,800,070	12,651,627	3,052,382	9,599,245	38,200,825
12	38,200,825	12,479,903	2,362,044	10,117,859	28,082,966
13	28,082,966	10,814,403	1,682,874	9,131,529	18,951,437
14	18,951,437	9,709,336	1,056,951	8,652,385	10,299,052
15	10,299,052	5,851,664	555,599	5,296,065	5,002,987
16	5,002,987	2,513,926	280,626	2,233,300	2,769,687
17	2,769,687	(766,768)	225,832	(992,600)	3,762,287
18	3,762,287	63,934	270,684	(206,750)	3,969,037
19	3,969,037	3,829,084	162,720	3,666,364	302,673
20	302,673	314,352	11,679	302,673	-
Total		$ 162,680,037	$ 64,979,037	$ 97,701,000	

Note: Results may be slightly off due to rounding

Note that annual payments include UAAL contributions from both the employer and the employees.

Sonoma County Employees' Retirement Association
Unfunded Actuarial Accrued Liability Amortization Schedule

Schedule 1 - C
Assuming No Prepayments
County General and Safety Members Combined
(Based on December 31, 2016 Valuation)

Annual Interest Rate: 7.25%

Annual Payroll Inflation: 3.50%

Year	Beginning of Year Balance	Annual Payment	Interest Paid	Principal Paid	End of Year Balance
1	$ 373,674,000	$ 34,745,470	$ 25,956,755	$ 8,788,715	$ 364,885,285
2	364,885,285	35,961,611	25,279,912	10,681,699	354,203,586
3	354,203,586	37,220,247	24,464,368	12,755,879	341,447,707
4	341,447,707	38,523,020	23,497,092	15,025,928	326,421,779
5	326,421,779	39,871,407	22,363,770	17,507,637	308,914,142
6	308,914,142	41,266,621	21,048,620	20,218,001	288,696,141
7	288,696,141	42,711,121	19,535,809	23,175,312	265,520,829
8	265,520,829	44,206,043	17,806,819	26,399,224	239,121,605
9	239,121,605	45,753,202	15,842,306	29,910,896	209,210,709
10	209,210,709	47,354,487	13,621,395	33,733,092	175,477,617
11	175,477,617	49,011,989	11,121,718	37,890,271	137,587,346
12	137,587,346	47,774,514	8,415,034	39,359,480	98,227,866
13	98,227,866	40,434,898	5,801,133	34,633,765	63,594,101
14	63,594,101	37,973,010	3,370,668	34,602,342	28,991,759
15	28,991,759	22,787,283	1,357,825	21,429,458	7,562,301
16	7,562,301	5,171,994	379,380	4,792,614	2,769,687
17	2,769,687	(766,768)	225,832	(992,600)	3,762,287
18	3,762,287	63,934	270,684	(206,750)	3,969,037
19	3,969,037	3,829,084	162,720	3,666,364	302,673
20	302,673	314,352	11,679	302,673	-
Total		$ 614,207,519	$ 240,533,519	$ 373,674,000	

Note: Results may be slightly off due to rounding

Note that annual payments include UAAL contributions from both the employer and the employees.

Sonoma County Employees' Retirement Association
Unfunded Actuarial Accrued Liability Amortization Schedule

Schedule 2 - A
Assuming $3 Million Prepayments Prorated Among All Outstanding UAAL Amortization Layers
General County Members
(Based on December 31, 2016 Valuation)
Annual Interest Rate: 7.25%
Annual Payroll Inflation: 3.50%

Year	Beginning of Year Balance	Prepayment Amount	Beginning of Year Balance After Prepayment	Annual Payment	Interest Paid	Principal Paid	End of Year Balance
1	$ 275,973,000	$ -	$ 275,973,000	$ 25,776,502	$ 19,166,312	$ 6,610,190	$ 269,362,810
2	269,362,810	2,214,637	267,148,173	26,459,380	18,504,260	7,955,120	259,193,053
3	259,193,053	2,213,488	256,979,565	27,151,556	17,744,400	9,407,156	247,572,409
4	247,572,409	2,212,124	245,360,285	27,850,832	16,879,238	10,971,594	234,388,691
5	234,388,691	2,210,482	232,178,209	28,553,804	15,900,628	12,653,176	219,525,033
6	219,525,033	2,208,467	217,316,566	29,255,679	14,800,041	14,455,638	202,860,928
7	202,860,928	2,205,938	200,654,990	29,950,480	13,569,508	16,380,972	184,274,018
8	184,274,018	2,202,672	182,071,346	30,628,228	12,200,079	18,428,149	163,643,197
9	163,643,197	2,198,295	161,444,902	31,274,344	10,683,533	20,590,811	140,854,091
10	140,854,091	2,192,128	138,661,963	31,865,129	9,012,422	22,852,707	115,809,256
11	115,809,256	2,182,801	113,626,455	32,358,858	7,181,299	25,177,559	88,448,896
12	88,448,896	2,167,057	86,281,839	30,640,817	5,254,872	25,385,945	60,895,894
13	60,895,894	2,142,312	58,753,582	24,810,220	3,449,470	21,360,750	37,392,832
14	37,392,832	2,105,981	35,286,851	22,340,425	1,828,829	20,511,596	14,775,255
15	14,775,255	1,934,278	12,840,977	11,633,942	551,089	11,082,853	1,758,124
16	1,758,124	1,015,292	742,832	771,495	28,663	742,832	-
17	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-
Total		$ 31,405,950		$ 411,321,691	$ 166,754,641	$ 244,567,050	

Note: Results may be slightly off due to rounding

Note that annual payments include UAAL contributions from both the employer and the employees.

Sonoma County Employees' Retirement Association
Unfunded Actuarial Accrued Liability Amortization Schedule

Schedule 2 - B
Assuming $3 Million Prepayments Prorated Among All Outstanding UAAL Amortization Layers
Safety County Members
(Based on December 31, 2016 Valuation)
Annual Interest Rate: 7.25%
Annual Payroll Inflation: 3.50%

Year	Beginning of Year Balance	Prepayment Amount	Beginning of Year Balance After Prepayment	Annual Payment	Interest Paid	Principal Paid	End of Year Balance
1	$ 97,701,000	$ -	$ 97,701,000	$ 8,968,968	$ 6,790,443	$ 2,178,525	$ 95,522,475
2	95,522,475	785,363	94,737,112	9,206,564	6,567,808	2,638,756	92,098,356
3	92,098,356	786,512	91,311,844	9,447,429	6,311,621	3,135,808	88,176,036
4	88,176,036	787,876	87,388,160	9,690,714	6,019,206	3,671,508	83,716,652
5	83,716,652	789,518	82,927,134	9,935,336	5,687,828	4,247,508	78,679,626
6	78,679,626	791,533	77,888,093	10,179,546	5,314,449	4,865,097	73,022,996
7	73,022,996	794,062	72,228,934	10,421,308	4,896,310	5,524,998	66,703,936
8	66,703,936	797,328	65,906,608	10,657,135	4,430,251	6,226,884	59,679,724
9	59,679,724	801,705	58,878,019	10,881,941	3,913,315	6,968,626	51,909,393
10	51,909,393	807,872	51,101,521	11,087,514	3,342,796	7,744,718	43,356,803
11	43,356,803	817,199	42,539,604	11,259,295	2,716,460	8,542,835	33,996,769
12	33,996,769	832,943	33,163,826	10,834,355	2,050,593	8,783,762	24,380,064
13	24,380,064	857,688	23,522,376	9,058,174	1,409,577	7,648,597	15,873,779
14	15,873,779	894,019	14,979,760	7,674,538	835,444	6,839,094	8,140,666
15	8,140,666	1,065,722	7,074,944	4,019,807	381,670	3,638,137	3,436,807
16	3,436,807	1,984,708	1,452,099	729,659	81,452	648,207	803,892
17	803,892	803,892	-	-	-	-	-
18	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-
Total		$ 14,397,942		$ 144,052,283	$ 60,749,225	$ 83,303,058	

Note: Results may be slightly off due to rounding

Note that annual payments include UAAL contributions from both the employer and the employees.

Sonoma County Employees' Retirement Association
Unfunded Actuarial Accrued Liability Amortization Schedule

Schedule 2 - C

Assuming $3 Million Prepayments Prorated Among All Outstanding UAAL Amortization Layers

County General and Safety Members Combined

(Based on December 31, 2016 Valuation)

Annual Interest Rate: 7.25%

Annual Payroll Inflation: 3.50%

Year	Beginning of Year Balance	Prepayment Amount	Beginning of Year Balance After Prepayment	Annual Payment	Interest Paid	Principal Paid	End of Year Balance
1	$ 373,674,000	$ -	$ 373,674,000	$ 34,745,470	$ 25,956,755	$ 8,788,715	$ 364,885,285
2	364,885,285	3,000,000	361,885,285	35,665,944	25,072,068	10,593,876	351,291,409
3	351,291,409	3,000,000	348,291,409	36,598,985	24,056,021	12,542,964	335,748,445
4	335,748,445	3,000,000	332,748,445	37,541,546	22,898,444	14,643,102	318,105,343
5	318,105,343	3,000,000	315,105,343	38,489,140	21,588,456	16,900,684	298,204,659
6	298,204,659	3,000,000	295,204,659	39,435,225	20,114,490	19,320,735	275,883,924
7	275,883,924	3,000,000	272,883,924	40,371,788	18,465,818	21,905,970	250,977,954
8	250,977,954	3,000,000	247,977,954	41,285,363	16,630,330	24,655,033	223,322,921
9	223,322,921	3,000,000	220,322,921	42,156,285	14,596,848	27,559,437	192,763,484
10	192,763,484	3,000,000	189,763,484	42,952,643	12,355,218	30,597,425	159,166,059
11	159,166,059	3,000,000	156,166,059	43,618,153	9,897,759	33,720,394	122,445,665
12	122,445,665	3,000,000	119,445,665	41,475,172	7,305,465	34,169,707	85,275,958
13	85,275,958	3,000,000	82,275,958	33,868,394	4,859,047	29,009,347	53,266,611
14	53,266,611	3,000,000	50,266,611	30,014,963	2,664,273	27,350,690	22,915,921
15	22,915,921	3,000,000	19,915,921	15,653,749	932,759	14,720,990	5,194,931
16	5,194,931	3,000,000	2,194,931	1,501,154	110,115	1,391,039	803,892
17	803,892	803,892	-	-	-	-	-
18	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-
Total		$ 45,803,892		$ 555,373,974	$ 227,503,866	$ 327,870,108	

Note: Results may be slightly off due to rounding

Note that annual payments include UAAL contributions from both the employer and the employees.

Sonoma County Employees' Retirement Association
Unfunded Actuarial Accrued Liability Amortization Schedule

Schedule 3 - A

Assuming $3 Million Prepayments Applied to the Shortest Outstanding UAAL Amortization Layer

General County Members

(Based on December 31, 2016 Valuation)

Annual Interest Rate: 7.25%

Annual Payroll Inflation: 3.50%

Year	Beginning of Year Balance	Prepayment Amount	Beginning of Year Balance After Prepayment	Annual Payment	Interest Paid	Principal Paid	End of Year Balance
1	$ 275,973,000	$ -	$ 275,973,000	$ 25,776,502	$ 19,166,312	$ 6,610,190	$ 269,362,810
2	269,362,810	2,375,658	266,987,152	26,390,644	18,494,830	7,895,814	259,091,338
3	259,091,338	2,375,658	256,715,680	26,999,523	17,730,232	9,269,291	247,446,389
4	247,446,389	2,375,658	245,070,731	27,596,404	16,866,552	10,729,852	234,340,879
5	234,340,879	2,375,658	231,965,221	28,171,130	15,897,692	12,273,438	219,691,783
6	219,691,783	2,375,008	217,316,775	28,708,845	14,817,902	13,890,943	203,425,832
7	203,425,832	2,300,149	201,125,683	29,279,390	13,625,549	15,653,841	185,471,842
8	185,471,842	2,300,149	183,171,693	29,791,807	12,307,171	17,484,636	165,687,057
9	165,687,057	2,300,149	163,386,908	30,205,012	10,859,252	19,345,760	144,041,148
10	144,041,148	2,300,149	141,740,999	30,437,314	9,282,266	21,155,048	120,585,951
11	120,585,951	2,300,149	118,285,802	30,286,988	7,586,749	22,700,239	95,585,563
12	95,585,563	2,300,149	93,285,414	28,958,088	5,817,574	23,140,514	70,144,900
13	70,144,900	1,852,059	68,292,841	27,696,972	4,046,795	23,650,177	44,642,664
14	44,642,664	2,237,503	42,405,161	25,939,834	2,227,380	23,712,454	18,692,707
15	18,692,707	2,248,080	16,444,627	14,600,794	715,481	13,885,313	2,559,314
16	2,559,314	2,456,560	102,754	106,719	3,965	102,754	-
17	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-
Total		$ 34,472,737		$ 410,945,966	$ 169,445,703	$ 241,500,263	

Note: Results may be slightly off due to rounding

Note that annual payments include UAAL contributions from both the employer and the employees.

Sonoma County Employees' Retirement Association
Unfunded Actuarial Accrued Liability Amortization Schedule

Schedule 3 - B

Assuming $3 Million Prepayments Applied to the Shortest Outstanding UAAL Amortization Layer

Safety County Members

(Based on December 31, 2016 Valuation)

Annual Interest Rate: 7.25%

Annual Payroll Inflation: 3.50%

Year	Beginning of Year Balance	Prepayment Amount	Beginning of Year Balance After Prepayment	Annual Payment	Interest Paid	Principal Paid	End of Year Balance
1	$ 97,701,000	$ -	$ 97,701,000	$ 8,968,968	$ 6,790,443	$ 2,178,525	$ 95,522,475
2	95,522,475	624,342	94,898,133	9,207,176	6,579,463	2,627,713	92,270,420
3	92,270,420	624,342	91,646,078	9,446,718	6,335,877	3,110,841	88,535,237
4	88,535,237	624,342	87,910,895	9,685,844	6,057,262	3,628,582	84,282,313
5	84,282,313	624,342	83,657,971	9,922,074	5,741,251	4,180,823	79,477,148
6	79,477,148	624,992	78,852,156	10,151,377	5,385,260	4,766,117	74,086,039
7	74,086,039	699,851	73,386,188	10,374,553	4,981,735	5,392,818	67,993,370
8	67,993,370	699,851	67,293,519	10,581,777	4,533,264	6,048,513	61,245,006
9	61,245,006	699,851	60,545,155	10,760,589	4,038,148	6,722,441	53,822,714
10	53,822,714	699,851	53,122,863	10,886,239	3,495,912	7,390,327	45,732,536
11	45,732,536	699,851	45,032,685	10,897,379	2,909,028	7,988,351	37,044,334
12	37,044,334	699,851	36,344,483	10,551,933	2,290,416	8,261,517	28,082,966
13	28,082,966	1,147,941	26,935,025	9,622,167	1,638,579	7,983,588	18,951,437
14	18,951,437	762,497	18,188,940	8,917,418	1,027,530	7,889,888	10,299,052
15	10,299,052	751,920	9,547,132	5,070,731	526,586	4,544,145	5,002,987
16	5,002,987	543,440	4,459,547	1,949,517	259,657	1,689,860	2,769,687
17	2,769,687	2,769,687	-	-	-	-	-
18	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-
Total		$ 13,296,950		$ 146,994,460	$ 62,590,410	$ 84,404,050	

Note: Results may be slightly off due to rounding

Note that annual payments include UAAL contributions from both the employer and the employees.

Sonoma County Employees' Retirement Association
Unfunded Actuarial Accrued Liability Amortization Schedule

Schedule 3 - C

Assuming $3 Million Prepayments Applied to the Shortest Outstanding UAAL Amortization Layer

County General and Safety Members Combined

(Based on December 31, 2016 Valuation)

Annual Interest Rate: 7.25%

Annual Payroll Inflation: 3.50%

Year	Beginning of Year Balance	Prepayment Amount	Beginning of Year Balance After Prepayment	Annual Payment	Interest Paid	Principal Paid	End of Year Balance
1	$ 373,674,000	$ -	$ 373,674,000	$ 34,745,470	$ 25,956,755	$ 8,788,715	$ 364,885,285
2	364,885,285	3,000,000	361,885,285	35,597,820	25,074,293	10,523,527	351,361,758
3	351,361,758	3,000,000	348,361,758	36,446,241	24,066,109	12,380,132	335,981,626
4	335,981,626	3,000,000	332,981,626	37,282,248	22,923,814	14,358,434	318,623,192
5	318,623,192	3,000,000	315,623,192	38,093,204	21,638,943	16,454,261	299,168,931
6	299,168,931	3,000,000	296,168,931	38,860,222	20,203,162	18,657,060	277,511,871
7	277,511,871	3,000,000	274,511,871	39,653,943	18,607,284	21,046,659	253,465,212
8	253,465,212	3,000,000	250,465,212	40,373,584	16,840,435	23,533,149	226,932,063
9	226,932,063	3,000,000	223,932,063	40,965,601	14,897,400	26,068,201	197,863,862
10	197,863,862	3,000,000	194,863,862	41,323,553	12,778,178	28,545,375	166,318,487
11	166,318,487	3,000,000	163,318,487	41,184,367	10,495,777	30,688,590	132,629,897
12	132,629,897	3,000,000	129,629,897	39,510,021	8,107,990	31,402,031	98,227,866
13	98,227,866	3,000,000	95,227,866	37,319,139	5,685,374	31,633,765	63,594,101
14	63,594,101	3,000,000	60,594,101	34,857,252	3,254,910	31,602,342	28,991,759
15	28,991,759	3,000,000	25,991,759	19,671,525	1,242,067	18,429,458	7,562,301
16	7,562,301	3,000,000	4,562,301	2,056,236	263,622	1,792,614	2,769,687
17	2,769,687	2,769,687	-	-	-	-	-
18	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-
Total		$ 47,769,687		$ 557,940,426	$ 232,036,113	$ 325,904,313	

Note: Results may be slightly off due to rounding

Note that annual payments include UAAL contributions from both the employer and the employees.

Sonoma County Employees' Retirement Association
Unfunded Actuarial Accrued Liability Amortization Schedule

Schedule 4 - A
Assuming $3 Million Prepayments Applied to the Longest Outstanding UAAL Amortization Layer
General County Members
(Based on December 31, 2016 Valuation)
Annual Interest Rate: 7.25%
Annual Payroll Inflation: 3.50%

Year	Beginning of Year Balance	Prepayment Amount	Beginning of Year Balance After Prepayment	Annual Payment	Interest Paid	Principal Paid	End of Year Balance
1	$ 275,973,000	$ -	$ 275,973,000	$ 25,776,502	$ 19,166,312	$ 6,610,190	$ 269,362,810
2	269,362,810	2,283,139	267,079,671	26,510,027	18,497,639	8,012,388	259,067,283
3	259,067,283	2,283,139	256,784,144	27,262,575	17,726,608	9,535,967	247,248,177
4	247,248,177	2,283,139	244,965,038	28,034,192	16,844,595	11,189,597	233,775,441
5	233,775,441	1,925,337	231,850,104	28,848,092	15,867,239	12,980,853	218,869,251
6	218,869,251	1,848,471	217,020,780	29,686,512	14,764,525	14,921,987	202,098,793
7	202,098,793	1,848,471	200,250,322	30,544,446	13,520,777	17,023,669	183,226,653
8	183,226,653	1,848,471	181,378,182	31,420,395	12,123,952	19,296,443	162,081,739
9	162,081,739	1,848,471	160,233,268	32,312,879	10,561,780	21,751,099	138,482,169
10	138,482,169	1,848,471	136,633,698	33,219,616	8,821,139	24,398,477	112,235,221
11	112,235,221	1,848,471	110,386,750	34,137,465	6,888,338	27,249,127	83,137,623
12	83,137,623	1,848,471	81,289,152	32,723,003	4,824,898	27,898,105	53,391,047
13	53,391,047	1,848,471	51,542,576	26,654,501	2,866,447	23,788,054	27,754,522
14	27,754,522	1,848,471	25,906,051	24,844,763	1,066,948	23,777,815	2,128,236
15	2,128,236	1,848,471	279,765	290,560	10,795	279,765	-
16	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-
Total		$ 27,259,467		$ 412,265,528	$ 163,551,994	$ 248,713,533	

Note: Results may be slightly off due to rounding

Note that annual payments include UAAL contributions from both the employer and the employees.

Sonoma County Employees' Retirement Association
Unfunded Actuarial Accrued Liability Amortization Schedule

Schedule 4 - B

Assuming $3 Million Prepayments Applied to the Longest Outstanding UAAL Amortization Layer

Safety County Members

(Based on December 31, 2016 Valuation)

Annual Interest Rate: 7.25%

Annual Payroll Inflation: 3.50%

Year	Beginning of Year Balance	Prepayment Amount	Beginning of Year Balance After Prepayment	Annual Payment	Interest Paid	Principal Paid	End of Year Balance
1	$ 97,701,000	$ -	$ 97,701,000	$ 8,968,968	$ 6,790,443	$ 2,178,525	$ 95,522,475
2	95,522,475	716,861	94,805,614	9,229,918	6,572,012	2,657,906	92,147,708
3	92,147,708	716,861	91,430,847	9,497,946	6,318,600	3,179,346	88,251,501
4	88,251,501	716,861	87,534,640	9,773,021	6,027,137	3,745,884	83,788,756
5	83,788,756	1,074,663	82,714,093	10,021,297	5,669,578	4,351,719	78,362,374
6	78,362,374	1,151,529	77,210,845	10,265,403	5,262,543	5,002,860	72,207,985
7	72,207,985	1,151,529	71,056,456	10,511,843	4,808,346	5,703,497	65,352,959
8	65,352,959	1,151,529	64,201,430	10,759,465	4,303,283	6,456,182	57,745,248
9	57,745,248	1,151,529	56,593,719	11,006,946	3,743,624	7,263,322	49,330,397
10	49,330,397	1,151,529	48,178,868	11,252,539	3,125,514	8,127,025	40,051,843
11	40,051,843	1,151,529	38,900,314	11,493,822	2,444,955	9,048,867	29,851,447
12	29,851,447	1,151,529	28,699,918	11,112,810	1,717,867	9,394,943	19,304,975
13	19,304,975	1,151,529	18,153,446	9,209,843	1,015,381	8,194,462	9,958,984
14	9,958,984	1,151,529	8,807,455	7,831,136	382,839	7,448,297	1,359,158
15	1,359,158	1,151,529	207,629	215,641	8,012	207,629	-
16	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-
Total		$ 14,740,533		$ 141,150,598	$ 58,190,131	$ 82,960,467	

Note: Results may be slightly off due to rounding

Note that annual payments include UAAL contributions from both the employer and the employees.

Sonoma County Employees' Retirement Association
Unfunded Actuarial Accrued Liability Amortization Schedule

Schedule 4 - C

Assuming $3 Million Prepayments Applied to the Longest Outstanding UAAL Amortization Layer

County General and Safety Members Combined

(Based on December 31, 2016 Valuation)

Annual Interest Rate: 7.25%

Annual Payroll Inflation: 3.50%

Year	Beginning of Year Balance	Prepayment Amount	Beginning of Year Balance After Prepayment	Annual Payment	Interest Paid	Principal Paid	End of Year Balance
1	$ 373,674,000	$ -	$ 373,674,000	$ 34,745,470	$ 25,956,755	$ 8,788,715	$ 364,885,285
2	364,885,285	3,000,000	361,885,285	35,739,945	25,069,651	10,670,294	351,214,991
3	351,214,991	3,000,000	348,214,991	36,760,521	24,045,208	12,715,313	335,499,678
4	335,499,678	3,000,000	332,499,678	37,807,213	22,871,732	14,935,481	317,564,197
5	317,564,197	3,000,000	314,564,197	38,869,389	21,536,817	17,332,572	297,231,625
6	297,231,625	3,000,000	294,231,625	39,951,915	20,027,068	19,924,847	274,306,778
7	274,306,778	3,000,000	271,306,778	41,056,289	18,329,123	22,727,166	248,579,612
8	248,579,612	3,000,000	245,579,612	42,179,860	16,427,235	25,752,625	219,826,987
9	219,826,987	3,000,000	216,826,987	43,319,825	14,305,404	29,014,421	187,812,566
10	187,812,566	3,000,000	184,812,566	44,472,155	11,946,653	32,525,502	152,287,064
11	152,287,064	3,000,000	149,287,064	45,631,287	9,333,293	36,297,994	112,989,070
12	112,989,070	3,000,000	109,989,070	43,835,813	6,542,765	37,293,048	72,696,022
13	72,696,022	3,000,000	69,696,022	35,864,344	3,881,828	31,982,516	37,713,506
14	37,713,506	3,000,000	34,713,506	32,675,899	1,449,787	31,226,112	3,487,394
15	3,487,394	3,000,000	487,394	506,201	18,807	487,394	-
16	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-
Total		$ 42,000,000		$ 553,416,126	$ 221,742,126	$ 331,674,000	

Note: Results may be slightly off due to rounding

Note that annual payments include UAAL contributions from both the employer and the employees.

Appendix G

County of Sonoma - UAAL Prepayment Breakeven Analysis

	UAAL Principal			UAAL Interest							
Year	Status Quo Principal	$3M Annual UAAL Prepay Longest Layer Principal	Annual Principal Savingsx	Status Quo Interest	$3M Annual UAAL Prepay Longest Layer Interest	Annual Interest Savings	Annual Savings	Cumulative Savings	Annual UAAL Prepay Cost	Cumulative UAAL Prepay Cost	Breakeven (Cost) / Savings
1	8,788,715	8,788,715		25,956,755	25,956,755						
2	10,681,699	10,670,294	11,405	25,279,912	25,069,651	210,261	221,666	221,666	(3,000,000)	(3,000,000)	(2,778,334)
3	12,755,879	12,715,313	40,566	24,464,368	24,045,208	419,160	459,726	681,392	(3,000,000)	(6,000,000)	(5,318,608)
4	15,025,928	14,935,481	90,447	23,497,092	22,871,732	625,360	715,807	1,397,199	(3,000,000)	(9,000,000)	(7,602,801)
5	17,507,637	17,332,572	175,065	22,363,770	21,536,817	826,953	1,002,018	2,399,217	(3,000,000)	(12,000,000)	(9,600,783)
6	20,218,001	19,924,847	293,154	21,048,620	20,027,068	1,021,552	1,314,706	3,713,923	(3,000,000)	(15,000,000)	(11,286,077)
7	23,175,312	22,727,166	448,146	19,535,809	18,329,123	1,206,686	1,654,832	5,368,755	(3,000,000)	(18,000,000)	(12,631,245)
8	26,399,224	25,752,625	646,599	17,806,819	16,427,235	1,379,584	2,026,183	7,394,938	(3,000,000)	(21,000,000)	(13,605,062)
9	29,910,896	29,014,421	896,475	15,842,306	14,305,404	1,536,902	2,433,377	9,828,315	(3,000,000)	(24,000,000)	(14,171,685)
10	33,733,092	32,525,502	1,207,590	13,621,395	11,946,653	1,674,742	2,882,332	12,710,647	(3,000,000)	(27,000,000)	(14,289,353)
11	37,890,271	36,297,994	1,592,277	11,121,718	9,333,293	1,788,425	3,380,702	16,091,349	(3,000,000)	(30,000,000)	(13,908,651)
12	39,359,480	37,293,048	2,066,432	8,415,034	6,542,765	1,872,269	3,938,701	20,030,050	(3,000,000)	(33,000,000)	(12,969,950)
13	34,633,765	31,982,516	2,651,249	5,801,133	3,881,828	1,919,305	4,570,554	24,600,604	(3,000,000)	(36,000,000)	(11,399,396)
14	34,602,342	31,226,112	3,376,230	3,370,668	1,449,787	1,920,881	5,297,111	29,897,715	(3,000,000)	(39,000,000)	(9,102,285)
15	21,429,458	487,394	20,942,064	1,357,825	18,807	1,339,018	22,281,082	52,178,797	(3,000,000)	(42,000,000)	10,178,797
16	4,792,614		4,792,614	379,380		379,380	5,171,994	57,350,791		(42,000,000)	15,350,791
17	(992,600)		(992,600)	225,832		225,832	(766,768)	56,584,023		(42,000,000)	14,584,023
18	(206,750)		(206,750)	270,684		270,684	63,934	56,647,957		(42,000,000)	14,647,957
19	3,666,364		3,666,364	162,720		162,720	3,829,084	60,477,041		(42,000,000)	18,477,041
20	302,673		302,673	11,679		11,679	314,352	60,791,393		(42,000,000)	18,791,393
Total	**373,674,000**	**331,674,000**	**42,000,000**	**240,533,519**	**221,742,126**	**18,791,393**	**60,791,393**		**(42,000,000)**		

**All data presented above from Segal's UAAL prepayment scenarios (Appendix E).*

Appendix H

Sonoma County Pension Obligation Bond Payment Schedule

Fiscal Year	1993 Principal	1993 Interest	1993 Total	2003A Principal	2003A Interest	2003A Total	2003B Principal	2003B Interest	2003B Total	2010 Principal	2010 Interest	2010 Total	Grand Total
1994	-	4,219,588	4,219,588	-	-	-	-	-	-	-	-	-	4,219,588
1995	-	6,329,381	6,329,381	-	-	-	-	-	-	-	-	-	6,329,381
1996	70,000	6,329,381	6,599,381	-	-	-	-	-	-	-	-	-	6,599,381
1997	600,000	6,316,691	6,916,691	-	-	-	-	-	-	-	-	-	6,916,691
1998	960,000	6,286,691	7,246,691	-	-	-	-	-	-	-	-	-	7,246,691
1999	1,360,000	6,236,291	7,596,291	-	-	-	-	-	-	-	-	-	7,596,291
000	1,800,000	6,162,851	7,962,851	-	-	-	-	-	-	-	-	-	7,962,851
001	,285,000	6,062,051	8,347,051	-	-	-	-	-	-	-	-	-	8,347,051
002	,825,000	5,930,664	8,755,664	-	-	-	-	-	-	-	-	-	8,755,664
003	3,415,000	5,763,989	9,178,989	-	-	-	-	-	-	-	-	-	9,178,989
004	4,065,000	5,557,381	9,62 ,381	-	9,646,318	9,646,318	-	985,600	985,600	-	-	-	0,254,299
005	4,805,000	5,288,075	10,093,075	1,690,000	9,553,499	11,243,499	-	1,075,200	1,075,200	-	-	-	,411,774
006	5,615,000	4,969,744	10,584,744	,375,000	9,517,245	11,892,245	-	1,075,200	1,075,200	-	-	-	3,552,189
007	6,500,000	4,597,750	11,097,750	3,110,000	9,456,303	12,566,303	-	1,075,200	1,075,200	-	-	-	4,739,253
008	7,475,000	4,167,125	11,642,125	3,910,000	9,362,603	13,272,603	-	1,075,200	1,075,200	-	-	-	5,989,928
009	8,535,000	3,671,906	12,206,906	4,780,000	9,2 9,254	14,009,254	-	1,075,200	1,075,200	-	-	-	7,291,360
010	9,700,000	3,106,463	12,806,463	5,730,000	9,051,830	14,781,830	-	1,075,200	1,075,200	-	-	-	8,663,492
011	10,970,000	,463,838	13,433,838	6,760,000	8,824,077	15,584,077	-	1,075,200	1,075,200	,945,000	12,260,098	15,205,098	45,298,212
012	12,355,000	1,737,075	14,092,075	7,880,000	8,538,319	16,418,319	-	1,075,200	1,075,200	-	16,341,349	16,341,349	47,926,943
013	13,865,000	918,556	14,783,556	9,100,000	8,188,770	17,288,770	-	1,075,200	1,075,200	-	16,341,349	16,341,349	49,488,875
014	-	-	-	10,430,000	7,771,406	18,201,406	-	1,075,200	1,075,200	,660,000	16,313,180	18,973,180	38,249,785
015	-	-	-	11,865,000	7,282,786	19,147,786	-	1,075,200	1,075,200	3,735,000	16,237,314	19,972,314	40,195,300
016	-	-	-	13,420,000	6,716,014	0,136,014	-	1,075,200	1,075,200	4,895,000	16,118,543	1,013,543	42,2 4,756
017	-	-	-	15,105,000	6,062,370	1,167,370	-	1,075,200	1,075,200	5,960,000	15,943,048	1,903,048	44,145,618
018	-	-	-	16,925,000	5,318,337	,243,337	-	1,075,200	1,075,200	7,335,000	15,699,117	3,034,117	46,352,654
019	-	-	-	18,915,000	4,444,489	3,359,489	-	1,075,200	1,075,200	8,640,000	15,374,753	4,014,753	48,449,442
020	-	-	-	1,100,000	3,430,109	4,530,109	-	1,075,200	1,075,200	9,855,000	14,894,250	4,749,250	50,354,559
021	-	-	-	3,450,000	,300,766	5,750,766	-	1,075,200	1,075,200	11,275,000	14,260,350	5,535,350	52,361,316
02	-	-	-	5,970,000	1,047,969	7,017,969	-	1,075,200	1,075,200	12,840,000	13,536,900	6,376,900	54,470,069
023	-	-	-	7,685,000	194,815	7,879,815	1,000,000	537,600	1,537,600	14,250,000	12,724,200	6,974,200	56,391,615
024	-	-	-	-	-	-	-	-	-	1,065,000	11,664,750	32,729,750	32,729,750
025	-	-	-	-	-	-	-	-	-	3,935,000	10,314,750	34,249,750	34,249,750
026	-	-	-	-	-	-	-	-	-	7,045,000	8,785,350	35,830,350	35,830,350
027	-	-	-	-	-	-	-	-	-	30,420,000	7,061,400	37,481,400	37,481,400
028	-	-	-	-	-	-	-	-	-	34,075,000	5,126,550	39,201,550	39,201,550
029	-	-	-	-	-	-	-	-	-	38,030,000	,963,400	40,993,400	40,993,400
030	-	-	-	-	-	-	-	-	-	30,375,000	911,250	31,286,250	31,286,250
Total	**97,400,000**	**96,115,491**	**193,515,491**	**210,200,000**	**135,937,276**	**346,137,276**	**21,000,000**	**20,876,800**	**41,876,800**	**289,335,000**	**242,871,900**	**532,206,900**	**1,113,736,468**

Sonoma County

Make-Whole Call Analysis for County of Sonoma Taxable Pension Obligation Bonds, Series 2010A

Column:	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
		Existing Series 2010A POB Debt Service																
	Payment Period	Principal[1]	Coupon Rate	2018 Maturity Interest	2019 Sink Fnd Interest	2020 Sink Fnd Interest	2021 Sink Fnd Interest	2022 Sink Fnd Interest	2023 Maturity Interest	2024 Maturity Interest	2025 Maturity Interest	2026 Maturity Interest	2027 Maturity Interest	2028 Maturity Interest	2029 Maturity Interest	Total Interest	Accrued Interest	Remaining Pmts Less Acc. Int.
	12/1/2017																	
	6/1/2018	0.00		184,852.80	295,650.00	338,250.00	385,200.00	427,500.00	631,950.00	718,050.00	811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	7,779,802.80	0.00	7,779,802.80
	12/1/2018	8,640,000.00	4.279%	184,852.80	295,650.00	338,250.00	385,200.00	427,500.00	631,950.00	718,050.00	811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	7,779,802.80		16,419,802.80
	6/1/2019	0.00			295,650.00	338,250.00	385,200.00	427,500.00	631,950.00	718,050.00	811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	7,594,950.00		7,594,950.00
	12/1/2019	9,855,000.00	6.000%		295,650.00	338,250.00	385,200.00	427,500.00	631,950.00	718,050.00	811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	7,594,950.00		17,449,950.00
	6/1/2020	0.00				338,250.00	385,200.00	427,500.00	631,950.00	718,050.00	811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	7,299,300.00		7,299,300.00
	12/1/2020	11,275,000.00	6.000%			338,250.00	385,200.00	427,500.00	631,950.00	718,050.00	811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	7,299,300.00		18,574,300.00
	6/1/2021	0.00					385,200.00	427,500.00	631,950.00	718,050.00	811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	6,961,050.00		6,961,050.00
	12/1/2021	12,840,000.00	6.000%				385,200.00	427,500.00	631,950.00	718,050.00	811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	6,961,050.00		19,801,050.00
	6/1/2022	0.00						427,500.00	631,950.00	718,050.00	811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	6,575,850.00		6,575,850.00
	12/1/2022	14,250,000.00	6.000%					427,500.00	631,950.00	718,050.00	811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	6,575,850.00		20,825,850.00
	6/1/2023	0.00							631,950.00	718,050.00	811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	6,148,350.00		6,148,350.00
	12/1/2023	21,065,000.00	6.000%						631,950.00	718,050.00	811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	6,148,350.00		27,213,350.00
	6/1/2024	0.00								718,050.00	811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	5,516,400.00		5,516,400.00
	12/1/2024	23,935,000.00	6.000%							718,050.00	811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	5,516,400.00		29,451,400.00
	6/1/2025	0.00									811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	4,798,350.00		4,798,350.00
	12/1/2025	27,045,000.00	6.000%								811,350.00	912,600.00	1,022,250.00	1,140,900.00	911,250.00	4,798,350.00		31,843,350.00
	6/1/2026	0.00										912,600.00	1,022,250.00	1,140,900.00	911,250.00	3,987,000.00		3,987,000.00
	12/1/2026	30,420,000.00	6.000%									912,600.00	1,022,250.00	1,140,900.00	911,250.00	3,987,000.00		34,407,000.00
	6/1/2027	0.00											1,022,250.00	1,140,900.00	911,250.00	3,074,400.00		3,074,400.00
	12/1/2027	34,075,000.00	6.000%										1,022,250.00	1,140,900.00	911,250.00	3,074,400.00		37,149,400.00
	6/1/2028	0.00												1,140,900.00	911,250.00	2,052,150.00		2,052,150.00
	12/1/2028	38,030,000.00	6.000%											1,140,900.00	911,250.00	2,052,150.00		40,082,150.00
	6/1/2029	0.00													911,250.00	911,250.00		911,250.00
	12/1/2029	30,375,000.00	6.000%												911,250.00	911,250.00		31,286,250.00
Total:		$261,805,000.00														$125,397,705.60		$387,202,705.60

Calculation of Make-Whole Call

(1.) Remaining Outstanding Principal as of 12/1/2017:	$261,805,000
(2.) Sum of Present Values of Scheduled Payments:	$321,736,037
Greater of (1.) or (2.) above):[4]	$321,736,037
Accrued Interest:	$0
Make Whole Price:	**$321,736,037**
Effective Make Whole Call Premium ($):	$59,931,037
Effective Make Whole Call Premium (%):	22.9%
Escrow Cost Defeasance to Maturity (Cash):[5]	$387,202,706
Cost of Cash Defeasance over Make Whole Call:	$65,466,669
Escrow Cost Defeasance to Maturity (SLGS):[6]	$333,559,963
Cost of SLGS Defeasance over Make Whole Call:	$11,823,926

1. Principal due 2019-2029 are sinking fund payments for the 2029 term bond.
2. Assumes call date of: 12/1/2017
3. Constant maturity treasury yields as of October 4, 2017.
4. Make whole price subject to change, based on changes in the constant maturity United States Treasury securities.
5. Calculated as sum of total outstanding principal and interest (column B + column P).
6.Based upon SLGS rates as of October 4, 2017.

Sonoma County

Make-Whole Call Analysis for County of Sonoma Taxable Pension Obligation Bonds, Series 2010A

S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL
							Present Value Calculation												
Payment Period	**Term (Years)[2]**	**Remaining Yrs to Maturity**	**Benchmark Treasury**	**Treasury Yield[3]**	**Plus 40 bps Spread**	**Principal Present Value**	**2018 Int PV**	**2019 Int PV**	**2020 Int PV**	**2021 Int PV**	**2022 Int PV**	**2023 Int PV**	**2024 Int PV**	**2025 Int PV**	**2026 Int PV**	**2027 Int PV**	**2028 Int PV**	**2029 Int PV**	**Total PV**
12/1/2017																			
6/1/2018	0.50	0.50	1-year	1.31%	1.71%	0.00	183,285.71	291,654.34	333,678.60	379,994.08	421,722.40	623,409.29	708,345.66	800,384.73	900,266.35	1,008,434.45	1,125,480.91	898,934.60	7,675,591.12
12/1/2018	1.00	1.00	1-year	1.31%	1.71%	8,494,129.44	181,731.90	287,712.67	329,168.99	374,858.52	416,022.89	614,984.01	698,772.48	789,567.65	888,099.39	994,805.61	1,110,270.21	886,785.63	16,066,909.40
6/1/2019	1.50	12.00	10-year	2.34%	2.74%	0.00		283,824.28	324,720.32	369,792.36	410,400.40	606,672.60	689,328.68	778,896.77	876,096.86	981,360.97	1,095,265.08	874,800.86	7,291,159.18
12/1/2019	2.00	12.00	10-year	2.34%	2.74%	9,332,947.93		279,988.44	320,331.77	364,794.68	404,853.91	598,473.51	680,012.51	768,370.10	864,256.55	968,098.02	1,080,462.74	862,978.06	16,525,568.20
6/1/2020	2.50	12.00	10-year	2.34%	2.74%	0.00			316,002.54	359,864.53	399,382.37	590,385.23	670,822.24	757,985.69	852,576.25	955,014.33	1,065,860.45	851,315.05	6,819,208.68
12/1/2020	3.00	12.00	10-year	2.34%	2.74%	10,391,060.46			311,731.81	355,001.02	393,984.78	582,406.27	661,756.18	747,741.63	841,053.82	942,107.45	1,051,455.51	839,809.65	17,118,108.58
6/1/2021	3.50	12.00	10-year	2.34%	2.74%	0.00				350,203.23	388,660.13	574,535.14	652,812.65	737,636.02	829,687.10	929,375.02	1,037,245.25	828,459.75	6,328,614.29
12/1/2021	4.00	12.00	10-year	2.34%	2.74%	11,515,676.38				345,470.29	383,407.45	566,770.38	643,989.99	727,666.98	818,474.01	916,814.66	1,023,227.04	817,263.25	17,758,760.43
6/1/2022	4.50	12.00	10-year	2.34%	2.74%	0.00					378,225.76	559,110.57	635,286.56	717,832.67	807,412.46	904,424.05	1,009,398.28	806,218.06	5,817,908.41
12/1/2022	5.00	12.00	10-year	2.34%	2.74%	12,437,136.46					373,114.09	551,554.27	626,700.76	708,131.27	796,500.40	892,200.89	995,756.42	795,322.15	18,176,416.72
6/1/2023	5.50	12.00	10-year	2.34%	2.74%	0.00						544,100.10	618,231.00	698,560.99	785,735.82	880,142.94	982,298.92	784,573.49	5,293,643.26
12/1/2023	6.00	12.00	10-year	2.34%	2.74%	17,891,555.73						536,746.67	609,875.70	689,120.04	775,116.72	868,247.94	969,023.31	773,970.10	23,113,656.21
6/1/2024	6.50	12.00	10-year	2.34%	2.74%	0.00							601,633.32	679,806.69	764,641.14	856,513.70	955,927.10	763,510.01	4,622,031.97
12/1/2024	7.00	12.00	10-year	2.34%	2.74%	19,783,411.33							593,502.34	670,619.21	754,307.13	844,938.05	943,007.90	753,191.29	24,342,977.25
6/1/2025	7.50	12.00	10-year	2.34%	2.74%	0.00								661,555.89	744,112.79	833,518.84	930,263.29	743,012.03	3,912,462.84
12/1/2025	8.00	12.00	10-year	2.34%	2.74%	21,753,835.59								652,615.07	734,056.22	822,253.96	917,690.92	732,970.33	25,613,422.09
6/1/2026	8.50	12.00	10-year	2.34%	2.74%	0.00									724,135.56	811,141.33	905,288.47	723,064.35	3,163,629.71
12/1/2026	9.00	12.00	10-year	2.34%	2.74%	23,811,632.59									714,348.98	800,178.88	893,053.64	713,292.25	26,932,506.33
6/1/2027	9.50	12.00	10-year	2.34%	2.74%	0.00										789,364.58	880,984.15	703,652.21	2,374,000.95
12/1/2027	10.00	12.00	10-year	2.34%	2.74%	25,956,548.01										778,696.44	869,077.79	694,142.46	28,298,464.70
6/1/2028	10.50	12.00	10-year	2.34%	2.74%	0.00											857,332.33	684,761.23	1,542,093.57
12/1/2028	11.00	12.00	10-year	2.34%	2.74%	28,191,520.66											845,745.62	675,506.79	29,712,773.07
6/1/2029	11.50	12.00	10-year	2.34%	2.74%	0.00												666,377.42	666,377.42
12/1/2029	12.00	12.00	10-year	2.34%	2.74%	21,912,381.01												657,371.43	22,569,752.44
																			$321,736,036.82

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August 17, 2018

Ms. Julie Wyne
Retirement Administrator
Sonoma County Employees' Retirement Association
433 Aviation Boulevard, Suite 100
Santa Rosa, CA 94503-1069

Re: Sonoma County Employees' Retirement Association (SCERA)
Illustrations of the Employer Contribution Rates, Employee Contribution Rates and UAAL for County Members Only

Dear Julie:

Enclosed please find two scenarios of valuation projections for the County members only. Each scenario shows our projections of the employer aggregate contribution rates and amounts, average employee contribution rates and amounts, and Unfunded Actuarial Accrued Liabilities (UAAL) from December 31, 2016 to December 31, 2035. These results have been prepared using the results from the December 31, 2016 valuation.

Each scenario assumes a baseline market return of 7.25% for all years, starting with 2017. The scenarios are as follows:

- Scenario A: Baseline projection assumes employees' existing supplemental contributions of 3.00% for Safety and 3.03% for General towards the UAAL will end on June 30, 2023 for Safety Members and June 30, 2024 for General Members. ("With Employee UAAL Contribution Sunset")

- Scenario B: Assumes employees' existing supplemental contributions of 3.00% for Safety and 3.03% for General towards the UAAL will continue indefinitely. ("Without Employee UAAL Contribution Sunset")

Results

As of December 31, 2016, the total UAAL for SCERA calculated using the Actuarial Value of Assets was $408 million. A portion of this amount was allocated to each employer as shown on pages 68-72 of our December 31, 2016 valuation. The UAAL for the County was determined by adding up the amortization layers applicable to the County only; that amount was $374 million.

Note that the primary purpose for preparing this illustration is to reflect future changes in the employer contribution rates due to: (1) the deferred recognition of investment gains (or losses), (2) the contribution rate impact due to the 18-month delay between the date of the valuation and the date of the rate implementation, (3) the lower normal cost under the CalPEPRA benefit plans and (4) the impact with and without the sunsets[1] of the additional 3.03% and 3.00% member contributions from General County and Safety County members, respectively.

As of December 31, 2016, there were $15.7 million in total net deferred investment gains (which was calculated as the difference between the Market Value of Assets and Actuarial Value of Assets), of which an estimated $14.9 million in net deferred investment gains would be allocated to the County based on projected payroll as estimated in our December 31, 2016 valuation report for calendar year 2017. In this letter, we have projected the change in the employer's contribution rate in the next several years as those net deferred investment gains are recognized as part of the Board's asset smoothing method, assuming again that the Association earns an annual return of 7.25% on a market value basis beginning with January 1, 2017. This is similar to the Baseline or Scenario #2 in our illustrations dated April 24, 2017 prepared for all the employers at SCERA.

Due to a reduction in the level of benefits, the employer's normal costs under the CalPEPRA plans are lower than those under the Legacy plans. The future employer aggregate normal cost rates calculated to include both the Legacy and the CalPEPRA plans are projected to decrease as members in the Legacy plans are gradually replaced by members in the CalPEPRA plans. In addition to the CalPEPRA members reported in the December 31, 2016 valuation, we have estimated the potential employer normal cost savings by assuming that the payroll for the CalPEPRA plans can be modeled as follows: (1) projecting the total $338,195,000 December 31, 2016 combined County General and Safety payroll using the 3.5% annual increase used in the valuation to predict annual wage growth for amortizing the UAAL and (2) subtracting the projected closed group payroll for the County Legacy plans according to the assumptions used in the December 31, 2016 valuation to anticipate termination, retirement (both service and disability) and other exits from active employment.

Since we completed the last valuation as of December 31, 2015, active members represented by some of the bargaining groups have agreed to pay additional employee normal cost contributions that are above those determined under the 1937 Act CERL, as permitted under CalPEPRA. As the specific amount of those higher contributions (some of which have been paid starting in the 2016/2017 fiscal year) are dependent on the specific bargaining agreements, we have continued to include only the minimum member contribution rates in these illustrations. (This is consistent with the assumption we used in preparing our earlier illustration dated April 24, 2017.)

As a result of CalPEPRA, the employer is required to continue to contribute the normal cost even after the Association is expected to be over 100% funded, at least until the funded percentage exceeds 120%. This is shown in the projections where the contributions are equal to the normal

---

[1] As directed by SCERA, in Scenario A we have used a sunset date of June 30, 2024 for General County members and have used a sunset date of June 30, 2023 for Safety County members to estimate the actual sunset date, which is the last pay period in June 2023.

cost once the Association is expected to be over 100% funded. This statutory requirement overrides the Association's funding policy provision that would amortize surplus over a 30-year period. Furthermore, based on the request from the County, we have also assumed that the 3.03%/3.00% member contributions would continue to be paid by the employees even after SCERA would be over 100% funded.

Also, there was an increase in the employer rate for the December 31, 2015 valuation[2] as a result of the assumption changes adopted by the Board. According to the Association's Actuarial Funding Policy that was last reviewed on June 18, 2015, a change greater than 2.00% of payroll due to assumption changes should be phased-in over a period of two years. Since this phase-in adjustment is made by the staff, the rates shown in the projection have not been adjusted for the phase-in.

Other Considerations

Projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as estimates of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance, and the regulatory environment.

The projections are based on the actuarial assumptions and census data used in our December 31, 2016 valuation report for the Association. Future experience is expected to follow all of the assumptions, except as noted above. This study was prepared under the supervision of Andy Yeung, ASA, MAAA, FCA, EA.

Please let us know if you have any questions.

Sincerely,

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

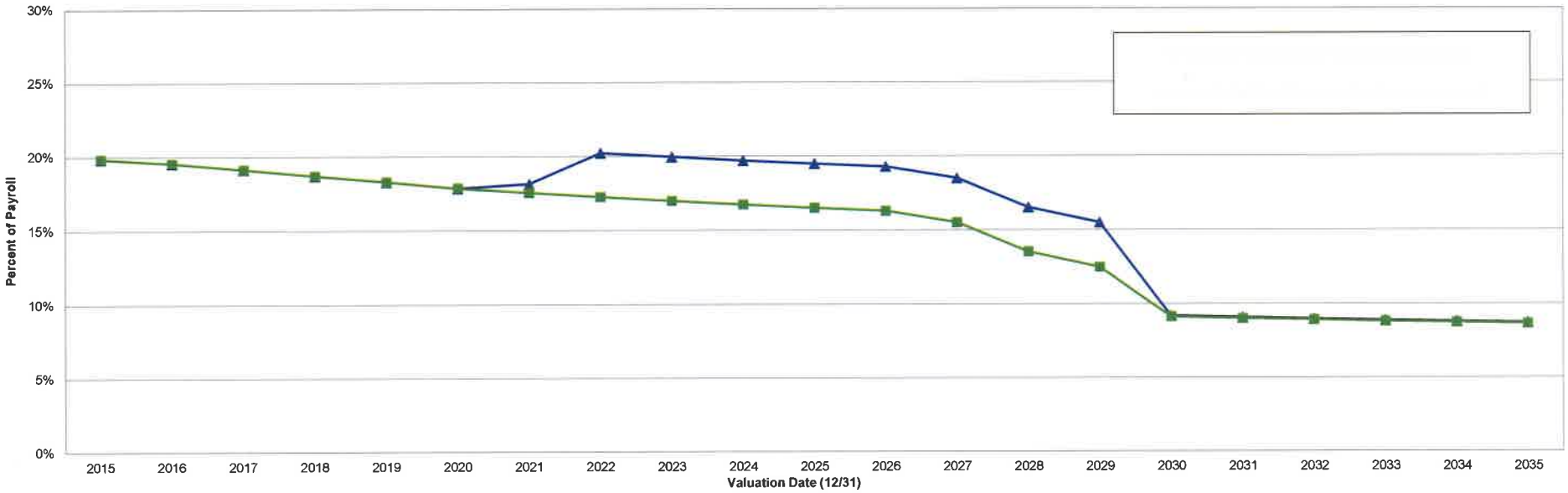
Andy Yeung, ASA, MAAA, FCA, EA
Vice President and Actuary

EK/gxk
Enclosures

[2] The employer rate approved in the December 31, 2015 valuation will be implemented in fiscal year 2017/2018.

Exhibit 1: Projected Employer Rates

(Before Reflecting Phase-in of the Contribution Rate Impact of the Assumption Changes from the December 31, 2015 valuation or Additional Employee Normal Cost Contributions)



Based on 12/31/2016 Projection

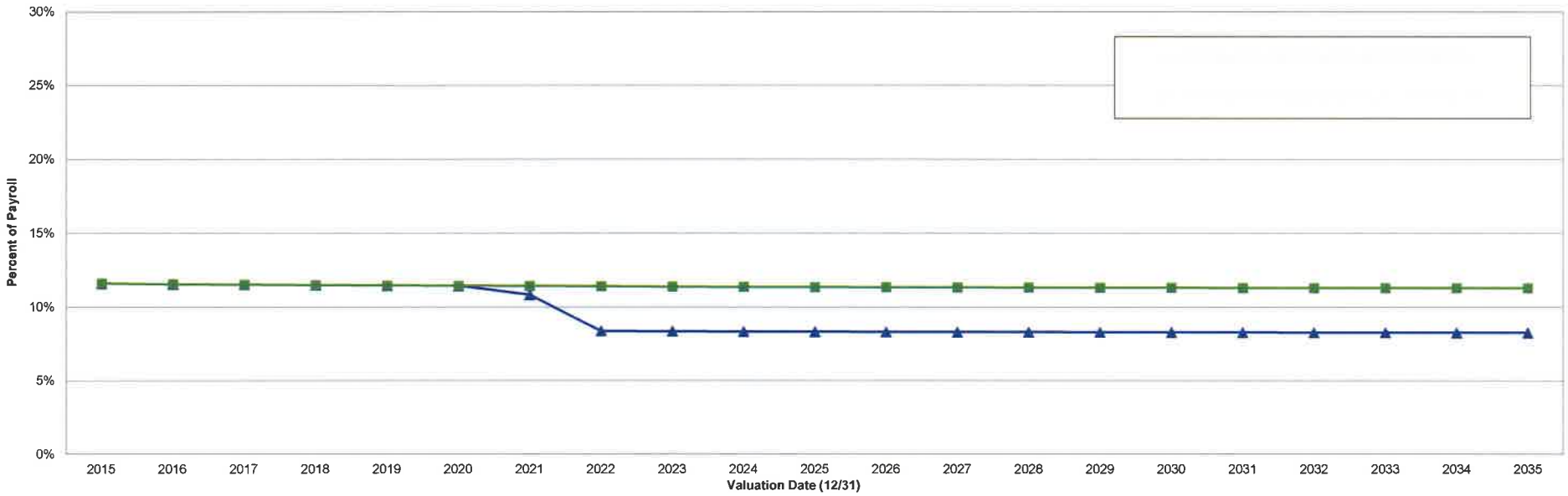
Valuation Date (12/31)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Scenario A: With Employee UAAL Contributions Sunset	19.8%	19.6%	19.1%	18.7%	18.3%	17.9%	18.1%	20.2%	20.0%	19.7%	19.5%	19.3%	18.5%	16.5%	15.5%	9.2%	9.1%	9.0%	8.9%	8.8%	8.7%
Scenario B: Without Employee UAAL Contributions Sunset	19.8%	19.6%	19.1%	18.7%	18.3%	17.9%	17.6%	17.3%	17.0%	16.7%	16.5%	16.3%	15.5%	13.5%	12.5%	9.1%	9.0%	8.9%	8.8%	8.7%	8.7%

Employer Contribution Amounts* for Plan Year Ending (12/31)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Scenario A: With Employee UAAL Contributions Sunset	$ 65.1	$ 68.9	$ 70.0	$ 70.9	$ 71.7	$ 72.6	$ 74.8	$ 82.5	$ 89.5	$ 91.4	$ 93.5	$ 95.7	$ 96.5	$ 92.6	$ 87.6	$ 69.8	$ 53.5	$ 54.7	$ 55.9	$ 57.3	$ 58.8
Scenario B: Without Employee UAAL Contributions Sunset	$ 65.1	$ 68.9	$ 70.0	$ 70.9	$ 71.7	$ 72.6	$ 73.6	$ 74.9	$ 76.3	$ 77.7	$ 79.3	$ 81.0	$ 81.2	$ 76.8	$ 71.2	$ 61.2	$ 53.2	$ 54.4	$ 55.7	$ 57.0	$ 58.5

* Dollars are shown in millions. The contribution amounts reflect the 18-month delay between rate calculation and rate implementation. We have also used projected payrolls for the corresponding calendar years.

Exhibit 2: Projected Employee Rates

(Before Reflecting Additional Employee Normal Cost Contributions)



Based on 12/31/2016 Projection

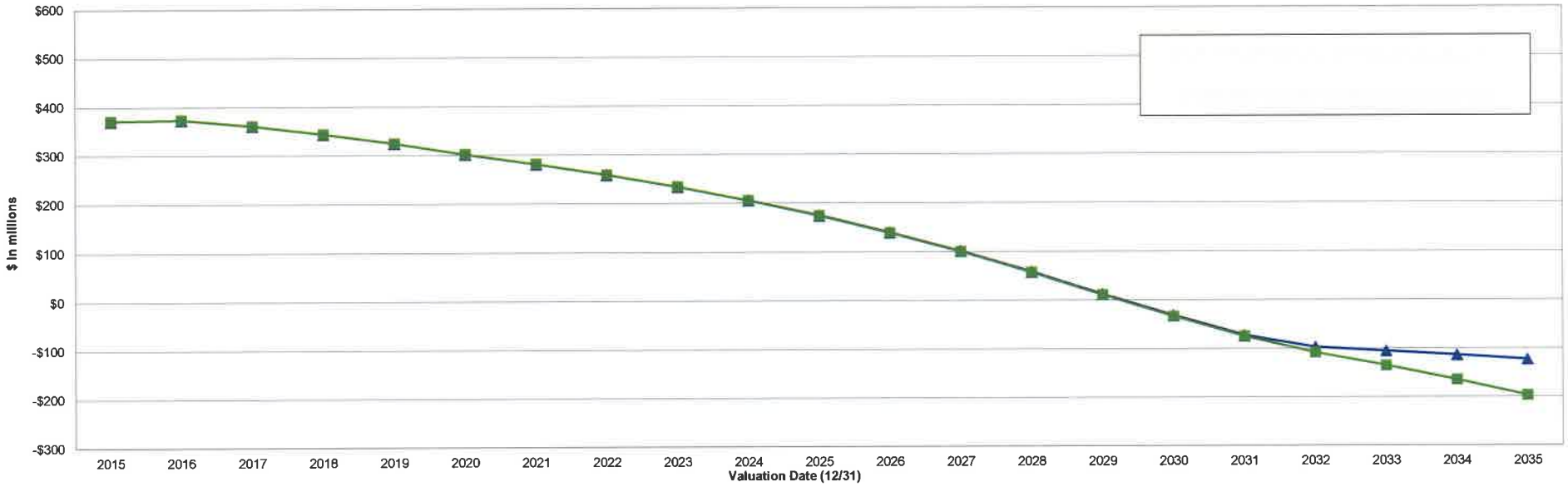
Valuation Date (12/31)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Scenario A: With Employee UAAL Contributions Sunset	11.6%	11.5%	11.5%	11.5%	11.5%	11.4%	10.8%	8.4%	8.4%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%
Scenario B: Without Employee UAAL Contributions Sunset	11.6%	11.5%	11.5%	11.5%	11.5%	11.4%	11.4%	11.4%	11.4%	11.4%	11.4%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%	11.3%

Employee Contribution Amounts* for Plan Year Ending (12/31)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Scenario A: With Employee UAAL Contributions Sunset	$ 39.5	$ 40.5	$ 41.8	$ 43.1	$ 44.5	$ 46.0	$ 46.3	$ 41.3	$ 37.3	$ 38.5	$ 39.8	$ 41.1	$ 42.5	$ 44.0	$ 45.5	$ 47.0	$ 48.6	$ 50.3	$ 52.0	$ 53.8	$ 55.7
Scenario B: Without Employee UAAL Contributions Sunset	$ 39.5	$ 40.5	$ 41.8	$ 43.1	$ 44.5	$ 46.0	$ 47.5	$ 49.1	$ 50.7	$ 52.4	$ 54.2	$ 56.0	$ 57.9	$ 59.9	$ 61.9	$ 64.1	$ 66.3	$ 68.6	$ 71.0	$ 73.4	$ 76.0

* Dollars are shown in millions. The contribution amounts reflect the 18-month delay between rate calculation and rate implementation. We have also used projected payrolls for the corresponding calendar years.

Exhibit 3: Projected UAAL

(Dollar Amounts in Millions)



Based on 12/31/2016 Projection

Valuation Date (12/31)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Scenario A: With Employee UAAL Contributions Sunset	$ 371	$ 374	$ 361	$ 344	$ 324	$ 301	$ 281	$ 259	$ 234	$ 206	$ 175	$ 140	$ 101	$ 58	$ 12	$ (32)	$ (73)	$ (97)	$ (105)	$ (114)	$ (123)
Scenario B: Without Employee UAAL Contributions Sunset	$ 371	$ 374	$ 361	$ 344	$ 324	$ 301	$ 281	$ 259	$ 234	$ 206	$ 174	$ 139	$ 100	$ 57	$ 11	$ (33)	$ (75)	$ (108)	$ (135)	$ (165)	$ (197)

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August 17, 2018

Ms. Julie Wyne
Retirement Administrator
Sonoma County Employees' Retirement Association
433 Aviation Boulevard, Suite 100
Santa Rosa, CA 94503-1069

Re: Sonoma County Employees' Retirement Association (SCERA)
Illustrations of the Employer Contribution Rates, Employee Contribution Rates and UAAL for County Members Only Under Proposed Lower General Tier

Dear Julie:

Enclosed please find three scenarios of valuation projections for the County members only. Each scenario shows our projections of the employer aggregate contribution rates and amounts, average employee contribution rates and amounts, and Unfunded Actuarial Accrued Liabilities (UAAL) from December 31, 2016 to December 31, 2035. These results have been prepared using the results from the December 31, 2016 valuation.

Each scenario assumes a baseline market return of 7.25% for all years, starting with 2017. The scenarios are as follows:

- Scenario A: Baseline projection based on plan provisions[1] in effect for the December 31, 2016 valuation.
- Scenario B: Assumes implementation of a new General Plan per Government Code §31676.01 with 0% cost-of-living-adjustment, effective January 1, 2017. All members who entered the Association prior to January 1, 2017 would continue to be enrolled in General Plan A or Plan B.
- Scenario C: Assumes implementation of a new General Plan per Government Code §31676.01 with 2% cost-of-living-adjustment, effective January 1, 2017. All members who entered the Association prior to January 1, 2017 would continue to be enrolled in General Plan A or Plan B.

[1] These include enrollment of Legacy members in General Plan A and CalPEPRA members in General Plan B.

Results

As of December 31, 2016, the total UAAL for SCERA calculated using the Actuarial Value of Assets was $408 million. A portion of this amount was allocated to each employer as shown on pages 68-72 of our December 31, 2016 valuation report. The UAAL for the County was determined by adding up the amortization layers applicable to the County only; that amount was $374 million for General and Safety combined.

Note that the primary purpose for preparing this illustration is to reflect future changes in the employer contribution rates due to: (1) the difference between enrolling new members who enter the Association on or after January 1, 2017 in the current General Plan B versus enrolling them under the new proposed General Plans pursuant to §31676.01, either with or without an annual cost-of-living-adjustment for employees retiring in the future under those Plans, (2) the deferred recognition of investment gains (or losses), (3) the contribution rate impact due to the 18-month delay between the date of the valuation and the date of the rate implementation, and (4) the impact with the sunsets[2] of the additional 3.03% and 3.00% member contributions from General County and Safety County members, respectively.

Difference in Cost of Enrolling New Members in Proposed Plans

The comparison of normal costs for enrolling future General County members under the current Plan B versus the new proposed General Plans in Scenario B and Scenario C as of the December 31, 2016 valuation can be illustrated as follows:

	Scenario A: Current General Plan B	**Scenario B:** §31676.01 with 0% COLA	**Scenario C:** §31676.01 with 2% COLA
Employer Normal Cost Rate	7.42%	5.47%	6.56%
UAAL Rate	6.52%	6.52%	6.52%
Total Employer Rate	13.94%	11.99%	13.08%
Employee Normal Cost Rate	7.42%	5.47%	6.56%

Deferred recognition of Investment Gains (or Losses)

As of December 31, 2016, there were $15.7 million in total net deferred investment gains (which was calculated as the difference between the Market Value of Assets and Actuarial Value of Assets), of which an estimated $14.9 million in net deferred investment gains would be allocated to the County based on projected payroll as estimated in our December 31, 2016 valuation report for calendar year 2017 for General and Safety combined. In this letter, we have projected the change in the employer's contribution rate in the next several years as those net deferred investment gains are recognized as part of the Board's asset smoothing method, assuming again

[2] As directed by SCERA, we have used a sunset date of June 30, 2024 for General County members and have used a sunset date of June 30, 2023 for Safety County members to estimate the actual sunset date, which is the last pay period in June 2023.

that the Association earns an annual return of 7.25% on a market value basis beginning with January 1, 2017. This is similar to the Baseline or Scenario #2 in our illustrations dated April 24, 2017 prepared for all the employers at SCERA.

Projection of Combined County General and Safety Contribution Rates and Savings in County General Only Rates

In Exhibit 1, we have provided the projected employer rates and dollar amounts for the County General and Safety combined. In addition, we have included the reduction in the projected employer rate for the County General only under each of the proposed Scenarios B and C. We have provided similar information in Exhibit 2 for the projected aggregate employee rates and dollar amounts. When reviewing the results in Exhibit 2, it should be pointed out that only individual members enrolled in the proposed General Plans would see a reduction in their employee rates when compared to the current General Plan B. This is the case even though we have expressed the contribution rate as a percentage of the total County General and Safety payroll and the "savings" as a percentage of County General only payroll. Exhibit 3 shows the projected unfunded actuarial accrued liability under each of the three Scenarios for the County General and Safety combined.

Due to a reduction in the level of benefits, the employer's normal costs under the current General Plan B and proposed General Plans for enrolling new members on or after January 1, 2017 are lower than those under the Legacy plans. The future employer aggregate normal cost rates calculated to include both the Legacy and the current General Plan B and proposed General Plans under Scenario B and Scenario C are projected to decrease as members in the Legacy plans are gradually replaced by members in the those plans. In addition to the CalPEPRA members reported in the December 31, 2016 valuation, we have estimated the potential employer normal cost savings by assuming that the payroll for the future new members enrolled after January 1, 2017 can be modeled as follows: (1) projecting the total $338,195,000 December 31, 2016 combined County General and Safety payroll using the 3.5% annual increase used in the valuation to predict annual wage growth for amortizing the UAAL and (2) subtracting the projected closed group payroll for the County Legacy plans according to the assumptions used in the December 31, 2016 valuation to anticipate termination, retirement (both service and disability) and other exits from active employment.

Since we completed the last two valuations as of December 31, 2015 and 2016, active members represented by some of the bargaining groups have agreed to pay additional employee normal cost contributions that are above those determined under the 1937 Act CERL, as permitted under CalPEPRA. As the specific amount of those higher contributions (some of which have been paid starting in the 2016/2017 fiscal year) are dependent on the specific bargaining agreements, we have continued to include only the minimum member contribution rates in these illustrations. (This is consistent with the assumption we used in preparing our earlier illustration dated April 24, 2017.)

As a result of CalPEPRA, the employer is required to continue to contribute the normal cost even after the Association is expected to be over 100% funded, at least until the funded percentage exceeds 120%. This is shown in the projections where the contributions are equal to the normal cost once the Association is expected to be over 100% funded. This statutory requirement

overrides the Association's funding policy provision that would amortize surplus over a 30-year period.

Also, there was an increase in the employer rate for the December 31, 2015 valuation[3] as a result of the assumption changes adopted by the Board. According to the Association's Actuarial Funding Policy that was last reviewed on June 18, 2015, a change greater than 2.00% of payroll due to assumption changes should be phased-in over a period of two years. Since this phase-in adjustment is made by the staff, the rates shown in the projection have not been adjusted for the phase-in.

Other Considerations

It should be noted that, under CalPEPRA before the County approves the Plan of benefits under Scenario B or Scenario C, the actuary has to determine and certify that the adoption of the new Plan of benefits would result in neither greater risk nor greater cost to the County.

While CalPEPRA does not define what would constitute "no greater risk," we have assumed that since the proposed benefit formulas under Scenario B and Scenario C provide a lower benefit factor at all retirement ages and since the lower contributions collected to pay benefits would be invested in the same manner as the current contributions for Plan B, so would be subject to the same level of investment risks, we do not believe that the proposed benefit formulas would expose the County to any "greater risk" than the current Plan B. Since there is a reduction in the employer's contribution rate requirement under both Scenarios, it is our understanding that the proposed benefit formulas have no greater cost to the County.

Projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as estimates of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance, and the regulatory environment.

The projections are based on the actuarial assumptions and census data used in our December 31, 2016 valuation report for the Association. The assumed retirement rates for members enrolled in the proposed General Plans in Scenario B and Scenario C can be found in Exhibit 4 of this letter. Future experience is expected to follow all of the assumptions, except as noted above. This study was prepared under the supervision of Andy Yeung, ASA, MAAA, FCA, EA.

[3] The employer rate approved in the December 31, 2015 valuation will be implemented in fiscal year 2017/2018.

Please let us know if you have any questions.

Sincerely,

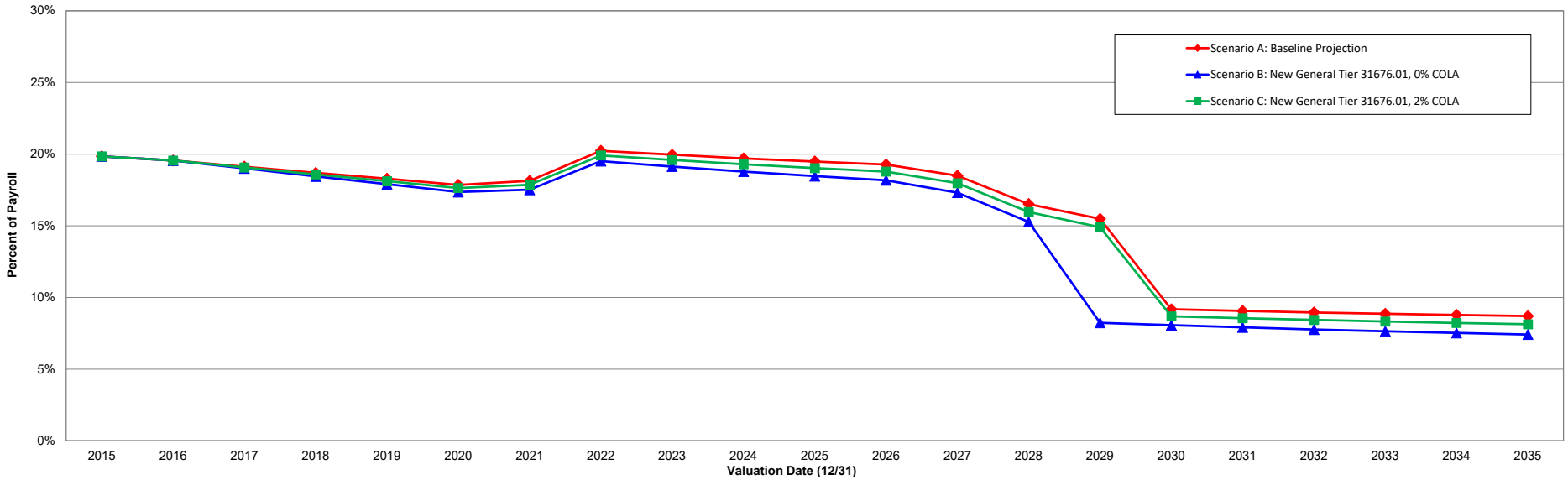
Paul Angelo, FSA, MAAA, FCA, EA
Senior Vice President and Actuary

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

EK/bbf
Enclosures

Exhibit 1: Projected Employer Rates

(Before Reflecting Phase-in of the Contribution Rate Impact of the Assumption Changes from the December 31, 2015 valuation or Additional Employee Normal Cost Contributions)



County General and Safety Combined

Based on 12/31/2016 Projection

Valuation Date (12/31)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Scenario A: Baseline Projection	19.8%	19.6%	19.1%	18.7%	18.3%	17.9%	18.1%	20.2%	20.0%	19.7%	19.5%	19.3%	18.5%	16.5%	15.5%	9.2%	9.1%	9.0%	8.9%	8.8%	8.7%
Scenario B: New General Tier 31676.01, 0% COLA	19.8%	19.6%	19.0%	18.4%	17.9%	17.4%	17.5%	19.5%	19.1%	18.8%	18.5%	18.2%	17.3%	15.3%	8.2%	8.1%	7.9%	7.8%	7.6%	7.5%	7.4%
Scenario C: New General Tier 31676.01, 2% COLA	19.8%	19.6%	19.1%	18.6%	18.1%	17.6%	17.9%	19.9%	19.6%	19.3%	19.0%	18.8%	18.0%	16.0%	14.9%	8.7%	8.6%	8.4%	8.3%	8.2%	8.1%

Employer Contribution Amounts* for Plan Year Ending (12/31)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Scenario A: Baseline Projection	$ 65.1	$ 68.9	$ 70.0	$ 70.9	$ 71.7	$ 72.6	$ 74.8	$ 82.5	$ 89.5	$ 91.4	$ 93.5	$ 95.7	$ 96.5	$ 92.6	$ 87.6	$ 69.8	$ 53.5	$ 54.7	$ 55.9	$ 57.3	$ 58.8
Scenario B: New General Tier 31676.01, 0% COLA	$ 65.1	$ 68.9	$ 69.8	$ 70.2	$ 70.5	$ 70.8	$ 72.5	$ 79.6	$ 86.0	$ 87.4	$ 88.8	$ 90.4	$ 90.7	$ 86.2	$ 64.3	$ 46.1	$ 46.8	$ 47.6	$ 48.4	$ 49.3	$ 50.2
Scenario C: New General Tier 31676.01, 2% COLA	$ 65.1	$ 68.9	$ 70.0	$ 70.6	$ 71.2	$ 71.8	$ 73.8	$ 81.3	$ 88.0	$ 89.6	$ 91.4	$ 93.3	$ 93.9	$ 89.7	$ 84.5	$ 66.8	$ 50.5	$ 51.5	$ 52.6	$ 53.8	$ 55.0

County General Only

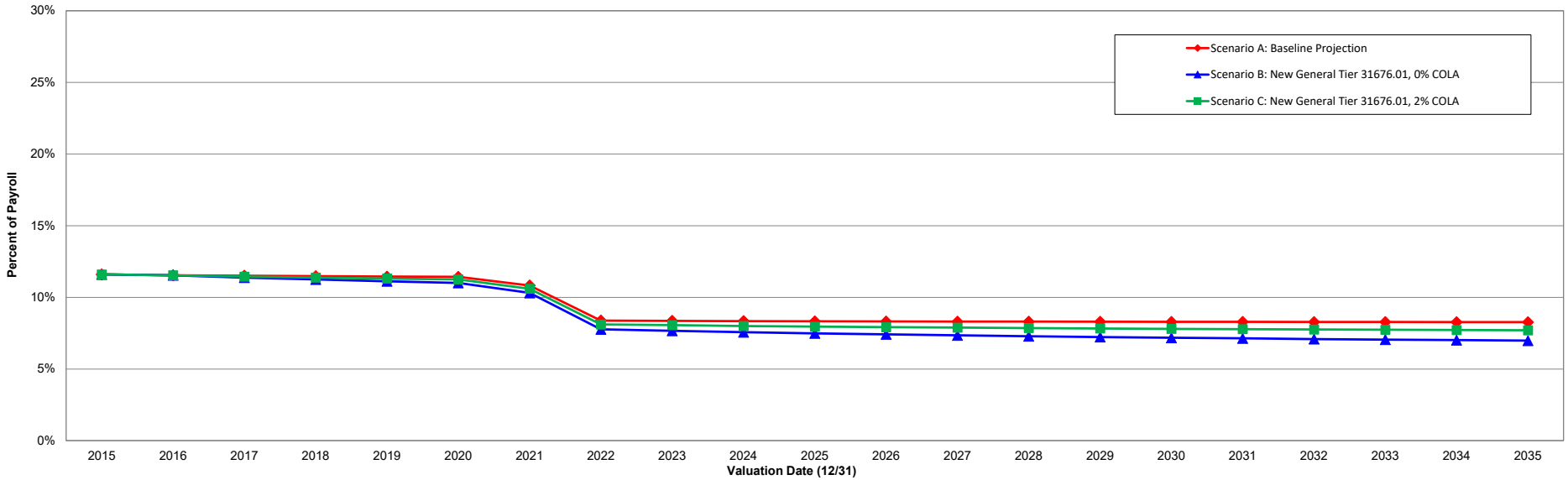
Based on 12/31/2016 Projection

Reduction in General Only Employer Rates* for Plan Year Ending (12/31)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Scenario B: New General Tier 31676.01, 0% COLA	0.0%	0.0%	0.1%	0.2%	0.4%	0.5%	0.7%	0.8%	1.0%	1.1%	1.2%	1.3%	1.4%	1.5%	5.3%	5.2%	1.4%	1.5%	1.5%	1.5%	1.6%
Scenario C: New General Tier 31676.01, 2% COLA	0.0%	0.0%	0.0%	0.1%	0.2%	0.2%	0.3%	0.4%	0.4%	0.5%	0.5%	0.6%	0.6%	0.7%	0.7%	0.7%	0.6%	0.6%	0.7%	0.7%	0.7%

* Dollars are shown in millions. These contribution amounts and rates reflect the 18-month delay between rate calculation and rate implementation. We have also used projected payrolls for the corresponding calendar years.

Exhibit 2: Projected Employee Rates

(Before Reflecting Additional Employee Normal Cost Contributions)



County General and Safety Combined

Based on 12/31/2016 Projection

Valuation Date (12/31)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Scenario A: Baseline Projection	11.6%	11.5%	11.5%	11.5%	11.5%	11.4%	10.8%	8.4%	8.4%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%
Scenario B: New General Tier 31676.01, 0% COLA	11.6%	11.5%	11.4%	11.3%	11.1%	11.0%	10.3%	7.8%	7.7%	7.6%	7.5%	7.4%	7.4%	7.3%	7.2%	7.2%	7.1%	7.1%	7.1%	7.0%	7.0%
Scenario C: New General Tier 31676.01, 2% COLA	11.6%	11.5%	11.5%	11.4%	11.3%	11.3%	10.6%	8.1%	8.1%	8.0%	8.0%	7.9%	7.9%	7.9%	7.8%	7.8%	7.8%	7.8%	7.7%	7.7%	7.7%

Employee Contribution Amounts* for Plan Year Ending (12/31)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Scenario A: Baseline Projection	$ 39.5	$ 40.5	$ 41.8	$ 43.1	$ 44.5	$ 46.0	$ 46.3	$ 41.3	$ 37.3	$ 38.5	$ 39.8	$ 41.1	$ 42.5	$ 44.0	$ 45.5	$ 47.0	$ 48.6	$ 50.3	$ 52.0	$ 53.8	$ 55.7
Scenario B: New General Tier 31676.01, 0% COLA	$ 39.5	$ 40.5	$ 41.5	$ 42.4	$ 43.4	$ 44.4	$ 44.3	$ 38.9	$ 34.4	$ 35.1	$ 35.9	$ 36.8	$ 37.7	$ 38.7	$ 39.7	$ 40.8	$ 42.0	$ 43.2	$ 44.4	$ 45.7	$ 47.1
Scenario C: New General Tier 31676.01, 2% COLA	$ 39.5	$ 40.5	$ 41.6	$ 42.8	$ 44.0	$ 45.3	$ 45.4	$ 40.3	$ 36.0	$ 37.0	$ 38.1	$ 39.2	$ 40.4	$ 41.7	$ 42.9	$ 44.3	$ 45.7	$ 47.2	$ 48.7	$ 50.3	$ 51.9

County General Only

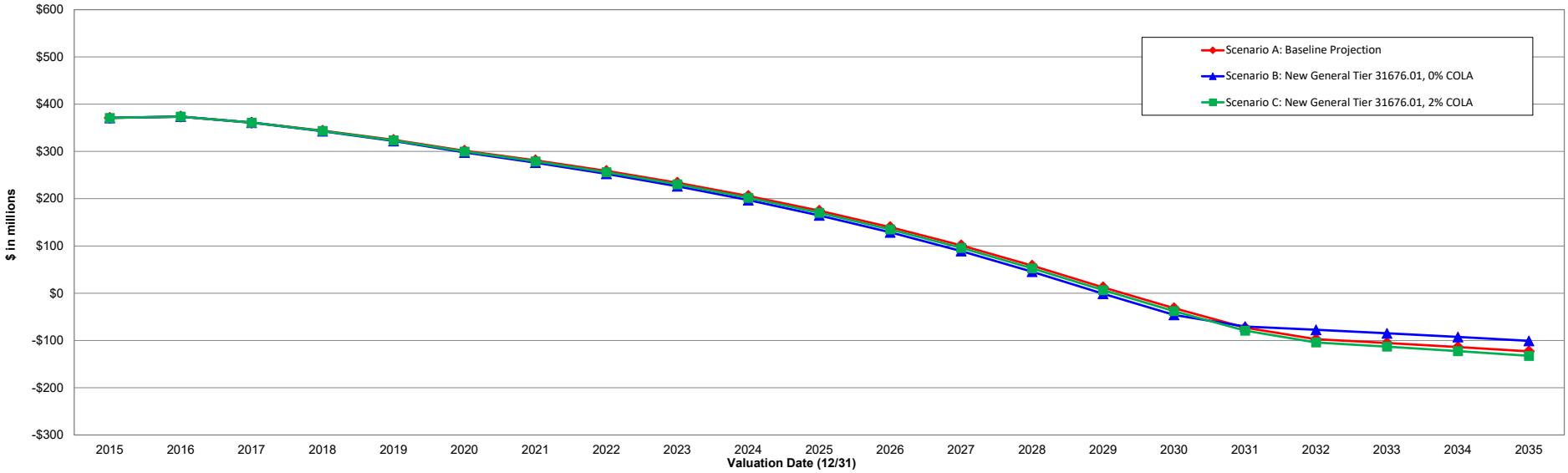
Based on 12/31/2016 Projection

Reduction in General Only Employee Rates* for Plan Year Ending (12/31)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Scenario B: New General Tier 31676.01, 0% COLA	0.0%	0.0%	0.1%	0.2%	0.3%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.1%	1.2%	1.2%	1.3%	1.4%	1.4%	1.5%	1.5%	1.5%	1.6%
Scenario C: New General Tier 31676.01, 2% COLA	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.3%	0.3%	0.4%	0.4%	0.4%	0.5%	0.5%	0.5%	0.6%	0.6%	0.6%	0.6%	0.7%	0.7%	0.7%

* Dollars are shown in millions. These contribution amounts and rates reflect the 18-month delay between rate calculation and rate implementation. We have also used projected payrolls for the corresponding calendar years.

Exhibit 3: Projected UAAL

(Dollar Amounts in Millions)



County General and Safety Combined

County General and Safety Combined

Valuation Date (12/31)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Scenario A: Baseline Projection	$ 371	$ 374	$ 361	$ 344	$ 324	$ 301	$ 281	$ 259	$ 234	$ 206	$ 175	$ 140	$ 101	$ 58	$ 12	$ (32)	$ (73)	$ (97)	$ (105)	$ (114)	$ (123)
Scenario B: New General Tier 31676.01, 0% COLA	$ 371	$ 374	$ 361	$ 343	$ 322	$ 298	$ 276	$ 253	$ 226	$ 197	$ 165	$ 129	$ 89	$ 45	$ (1)	$ (46)	$ (71)	$ (77)	$ (85)	$ (93)	$ (101)
Scenario C: New General Tier 31676.01, 2% COLA	$ 371	$ 374	$ 361	$ 343	$ 323	$ 300	$ 279	$ 256	$ 230	$ 202	$ 170	$ 135	$ 96	$ 53	$ 6	$ (38)	$ (79)	$ (104)	$ (113)	$ (122)	$ (133)

Exhibit 4: Assumed Retirement Rates

Age	Current General Plan B	Proposed General Plans under Scenario B and Scenario C
50	0.00	2.50
51	0.00	2.50
52	4.00	2.50
53	1.50	3.00
54	2.50	3.50
55	2.50	3.75
56	4.50	3.75
57	5.50	3.75
58	6.50	4.00
59	7.50	5.00
60	8.50	6.00
61	9.50	6.00
62	14.50	10.00
63	16.50	12.00
64	19.00	15.00
65	24.00	20.00
66	20.00	25.00
67	20.00	25.00
68	20.00	25.00
69	20.00	25.00
70	100.00	100.00

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August 17, 2018

Ms. Julie Wyne
Retirement Administrator
Sonoma County Employees' Retirement Association
433 Aviation Boulevard, Suite 100
Santa Rosa, CA 94503-1069

Re: Sonoma County Employees' Retirement Association (SCERA)
Illustrations of the Employer Contribution Rates, Employee Contribution Rates and UAAL for County Members Only Under Proposed Safety Tier Under §7522.25(b) "Basic Safety Plan"

Dear Julie:

Enclosed please find three scenarios of valuation projections for the County members only. Each scenario shows our projections of the employer aggregate contribution rates and amounts, average employee contribution rates and amounts, and Unfunded Actuarial Accrued Liabilities (UAAL) from December 31, 2016 to December 31, 2035. These results have been prepared using the results from the December 31, 2016 valuation.

Each scenario assumes a baseline market return of 7.25% for all years, starting with 2017. The scenarios are as follows:

- Scenario A: Baseline projection based on plan provisions[1] in effect for the December 31, 2016 valuation.
- Scenario B: Assumes implementation of a new Safety Plan per Government Code §7522.25(b) with 0% cost-of-living-adjustment, effective January 1, 2017. All members who entered the Association prior to January 1, 2017 would continue to be enrolled in Safety Plan A or Plan B.
- Scenario C: Assumes implementation of a new Safety Plan per Government Code §7522.25(b) with 2% cost-of-living-adjustment, effective January 1, 2017. All members who entered the Association prior to January 1, 2017 would continue to be enrolled in Safety Plan A or Plan B.

The benefit that is provided under Safety Plan B is referred to as "Safety Option Plan Two" under CalPEPRA. The benefit as outlined in §7522.25(b) is referred to as "Basic Safety Plan" under CalPEPRA.

[1] These include enrollment of Legacy members in Safety Plan A and CalPEPRA members in Safety Plan B.

Results

As of December 31, 2016, the total UAAL for SCERA calculated using the Actuarial Value of Assets was $408 million. A portion of this amount was allocated to each employer as shown on pages 68-72 of our December 31, 2016 valuation report. The UAAL for the County was determined by adding up the amortization layers applicable to the County only; that amount was $374 million for General and Safety combined.

Note that the primary purpose for preparing this illustration is to reflect future changes in the employer contribution rates due to: (1) the difference between enrolling new members who enter the Association on or after January 1, 2017 in the current Safety Plan B versus enrolling them under the new proposed Safety Plans pursuant to Basic Safety Plan (§7522.25(b)), either with or without an annual cost-of-living-adjustment for employees retiring in the future under those Plans, (2) the deferred recognition of investment gains (or losses), (3) the contribution rate impact due to the 18-month delay between the date of the valuation and the date of the rate implementation, and (4) the impact with the sunsets[2] of the additional 3.03% and 3.00% member contributions from General County and Safety County members, respectively.

Difference in Cost of Enrolling New Members in Proposed Plans

The comparison of normal costs for enrolling future Safety County members under the current Plan B versus the new proposed Safety Plans in Scenario B and Scenario C as of the December 31, 2016 valuation can be illustrated as follows:

	Scenario A: Current Safety Plan B	**Scenario B:** §7522.25(b) with 0% COLA	**Scenario C:** §7522.25(b) with 2% COLA
Employer Normal Cost Rate	11.54%	9.61%	12.00%
UAAL Rate	10.49%	10.49%	10.49%
Total Employer Rate	22.03%	20.10%	22.49%
Employee Normal Cost Rate	11.54%	9.61%	12.00%

It is our understanding that under §7522.25(f), an employer and employees may agree in a Memorandum of Understanding to offer Basic Safety Plan (§7522.25(b)) in lieu of Safety Option Plan Two (Plan B) provided that the conditions included in that subsection are satisfied.

As indicated by the employer and the employee normal cost rates provided above, the benefits provided under Scenario B would require a lower cost compared to the current Plan B while the benefits provided under Scenario C would require a somewhat higher cost.

[2] As directed by SCERA, we have used a sunset date of June 30, 2024 for General County members and have used a sunset date of June 30, 2023 for Safety County members to estimate the actual sunset date, which is the last pay period in June 2023.

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As of December 31, 2016, there were $15.7 million in total net deferred investment gains (which was calculated as the difference between the Market Value of Assets and Actuarial Value of Assets), of which an estimated $14.9 million in net deferred investment gains would be allocated to the County based on projected payroll as estimated in our December 31, 2016 valuation report for calendar year 2017 for General and Safety combined. In this letter, we have projected the change in the employer's contribution rate in the next several years as those net deferred investment gains are recognized as part of the Board's asset smoothing method, assuming again that the Association earns an annual return of 7.25% on a market value basis beginning with January 1, 2017. This is similar to the Baseline or Scenario #2 in our illustrations dated April 24, 2017 prepared for all the employers at SCERA.

Projection of Combined County General and Safety Contribution Rates and Change in County Safety Only Rates

In Exhibit 1, we have provided the projected employer rates and dollar amounts for the County General and Safety combined. In addition, we have included the change in the projected employer rate for the County Safety only under each of the proposed Scenarios B and C. We have provided similar information in Exhibit 2 for the projected aggregate employee rates and dollar amounts. When reviewing the results in Exhibit 2, it should be pointed out that only individual members enrolled in the proposed Safety Plans would see a change in their employee rates when compared to the current Safety Plan B. This is the case even though we have expressed the contribution rate as a percentage of the total County General and Safety payroll. However, the change in the rates is expressed as a percentage of County Safety only payroll. Exhibit 3 shows the projected unfunded actuarial accrued liability under each of the three Scenarios for the County General and Safety combined.

The future employer aggregate normal cost rates calculated to include both the Legacy and the current Safety Plan B and proposed Safety Plans under Scenario B and Scenario C are projected to decrease as members in the Legacy plans are gradually replaced by members in those plans. In addition to the CalPEPRA members reported in the December 31, 2016 valuation, we have estimated the potential change in employer normal cost by assuming that the payroll for the future new members enrolled after January 1, 2017 can be modeled as follows: (1) projecting the total $338,195,000 December 31, 2016 combined County General and Safety payroll using the 3.5% annual increase used in the valuation to predict annual wage growth for amortizing the UAAL and (2) subtracting the projected closed group payroll for the County Legacy plans according to the assumptions used in the December 31, 2016 valuation to anticipate termination, retirement (both service and disability) and other exits from active employment.

Since we completed the last two valuations as of December 31, 2015 and 2016, active members represented by some of the bargaining groups have agreed to pay additional employee normal cost contributions that are above those determined under the 1937 Act CERL, as permitted under CalPEPRA. As the specific amount of those higher contributions (some of which have been paid starting in the 2016/2017 fiscal year) are dependent on the specific bargaining agreements, we have continued to include only the minimum member contribution rates in these illustrations.

(This is consistent with the assumption we used in preparing our earlier illustration dated April 24, 2017.)

As a result of CalPEPRA, the employer is required to continue to contribute the normal cost even after the Association is expected to be over 100% funded, at least until the funded percentage exceeds 120%. This is shown in the projections where the contributions are equal to the normal cost once the Association is expected to be over 100% funded. This statutory requirement overrides the Association's funding policy provision that would amortize surplus over a 30-year period.

Also, there was an increase in the employer rate for the December 31, 2015 valuation[3] as a result of the assumption changes adopted by the Board. According to the Association's Actuarial Funding Policy that was last reviewed on June 18, 2015, a change greater than 2.00% of payroll due to assumption changes should be phased-in over a period of two years. Since this phase-in adjustment is made by the staff, the rates shown in the projection have not been adjusted for the phase-in.

Other Considerations

As discussed earlier in this letter, the proposed Safety Plan under Scenario B provides a reduction in the employer's contribution rate requirement when compared to the current Safety Plan B. However, the proposed Safety Plan under Scenario C does not present a reduction in the employer's contribution rate. Should the County wish to pursue the Safety Plan under Scenario C, we suggest the County consult with legal counsel on whether adoption of Basic Safety Plan, which is one of the formulas under CalPEPRA, and a 2% COLA benefit, which is not provided to the existing Safety Plans A and B members but is nonetheless a 1937 CERL optional plan feature that has not been eliminated by CalPEPRA, would satisfy the requirements of CalPEPRA.

Projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as estimates of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance, and the regulatory environment.

The projections are based on the actuarial assumptions and census data used in our December 31, 2016 valuation report for the Association. The assumed retirement rates for members enrolled in the proposed Safety Plans in Scenario B and Scenario C can be found in Exhibit 4 of this letter. Future experience is expected to follow all of the assumptions, except as noted above. This study was prepared under the supervision of Andy Yeung, ASA, MAAA, FCA, EA.

---

[3] The employer rate approved in the December 31, 2015 valuation will be implemented in fiscal year 2017/2018.

Please let us know if you have any questions.

Sincerely,

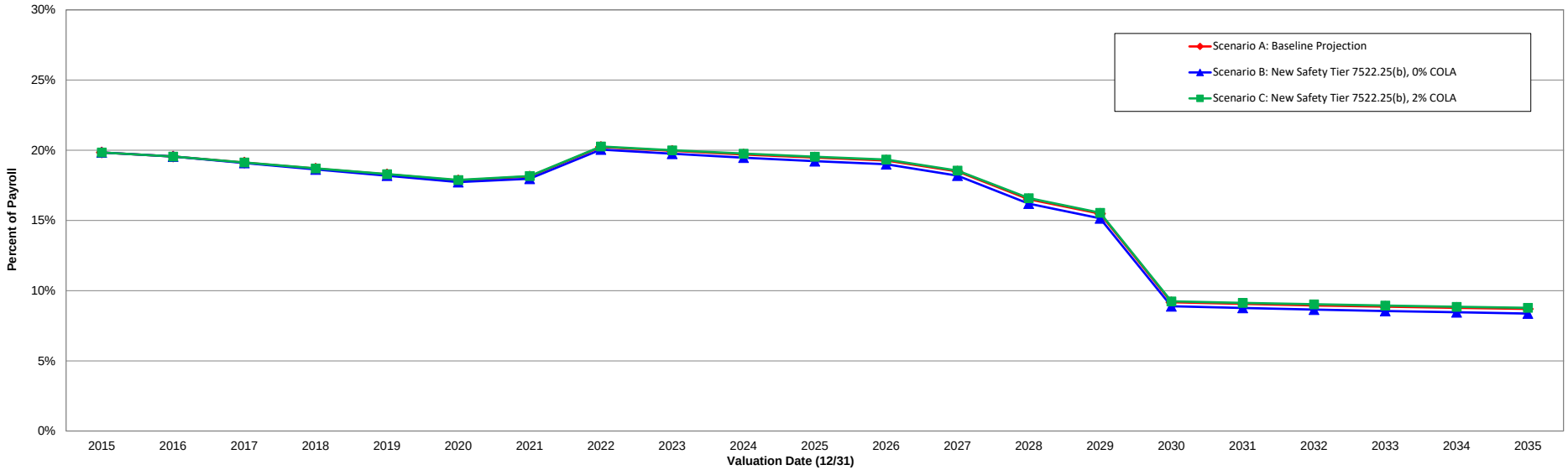
Paul Angelo, FSA, MAAA, FCA, EA
Senior Vice President and Actuary

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

EK/hy
Enclosures

Exhibit 1: Projected Employer Rates

(Before Reflecting Phase-in of the Contribution Rate Impact of the Assumption Changes from the December 31, 2015 valuation or Additional Employee Normal Cost Contributions)



County General and Safety Combined

Based on 12/31/2016 Projection

Valuation Date (12/31)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Scenario A: Baseline Projection	19.8%	19.6%	19.1%	18.7%	18.3%	17.9%	18.1%	20.2%	20.0%	19.7%	19.5%	19.3%	18.5%	16.5%	15.5%	9.2%	9.1%	9.0%	8.9%	8.8%	8.7%
Scenario B: New Safety Tier 7522.25(b), 0% COLA	19.8%	19.6%	19.1%	18.6%	18.2%	17.7%	18.0%	20.1%	19.8%	19.5%	19.2%	19.0%	18.2%	16.2%	15.2%	8.9%	8.8%	8.7%	8.6%	8.5%	8.4%
Scenario C: New Safety Tier 7522.25(b), 2% COLA	19.8%	19.6%	19.1%	18.7%	18.3%	17.9%	18.2%	20.3%	20.0%	19.8%	19.5%	19.3%	18.6%	16.6%	15.6%	9.2%	9.1%	9.0%	8.9%	8.9%	8.8%

Employer Contribution Amounts* for Plan Year Ending (12/31)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Scenario A: Baseline Projection	$ 65.1	$ 68.9	$ 70.0	$ 70.9	$ 71.7	$ 72.6	$ 74.8	$ 82.5	$ 89.5	$ 91.4	$ 93.5	$ 95.7	$ 96.5	$ 92.6	$ 87.6	$ 69.8	$ 53.5	$ 54.7	$ 55.9	$ 57.3	$ 58.8
Scenario B: New Safety Tier 7522.25(b), 0% COLA	$ 65.1	$ 68.9	$ 70.0	$ 70.7	$ 71.4	$ 72.1	$ 74.2	$ 81.8	$ 88.6	$ 90.4	$ 92.3	$ 94.4	$ 95.0	$ 90.9	$ 85.8	$ 68.1	$ 51.8	$ 52.9	$ 54.0	$ 55.3	$ 56.6
Scenario C: New Safety Tier 7522.25(b), 2% COLA	$ 65.1	$ 68.9	$ 70.1	$ 70.9	$ 71.8	$ 72.7	$ 74.9	$ 82.7	$ 89.7	$ 91.6	$ 93.7	$ 96.0	$ 96.8	$ 92.9	$ 88.0	$ 70.2	$ 53.9	$ 55.1	$ 56.4	$ 57.8	$ 59.3

County Safety Only

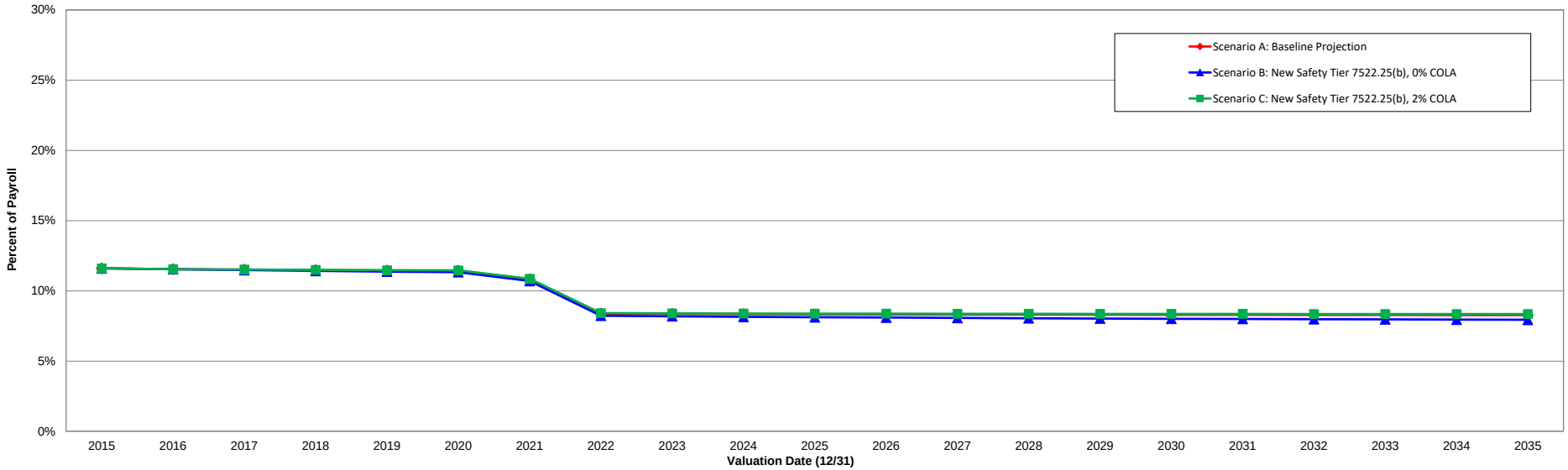
Based on 12/31/2016 Projection

Reduction/(Increase) in Safety Only Employer Rates* for Plan Year Ending (12/31)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Scenario B: New Safety Tier 7522.25(b), 0% COLA	0.0%	0.0%	0.1%	0.2%	0.4%	0.5%	0.7%	0.9%	1.0%	1.1%	1.2%	1.3%	1.4%	1.5%	1.6%	1.5%	1.4%	1.5%	1.5%	1.6%	1.6%
Scenario C: New Safety Tier 7522.25(b), 2% COLA	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	-0.2%	-0.2%	-0.2%	-0.3%	-0.3%	-0.3%	-0.3%	-0.4%	-0.4%	-0.4%	-0.4%	-0.4%	-0.4%	-0.4%	-0.4%

* Dollars are shown in millions. These contribution amounts and rates reflect the 18-month delay between rate calculation and rate implementation. We have also used projected payrolls for the corresponding calendar years.

Exhibit 2: Projected Employee Rates

(Before Reflecting Additional Employee Normal Cost Contributions)



County General and Safety Combined

Based on 12/31/2016 Projection

Valuation Date (12/31)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Scenario A: Baseline Projection	11.6%	11.5%	11.5%	11.5%	11.5%	11.4%	10.8%	8.4%	8.4%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%
Scenario B: New Safety Tier 7522.25(b), 0% COLA	11.6%	11.5%	11.5%	11.4%	11.4%	11.3%	10.7%	8.2%	8.2%	8.2%	8.1%	8.1%	8.1%	8.1%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	7.9%
Scenario C: New Safety Tier 7522.25(b), 2% COLA	11.6%	11.5%	11.5%	11.5%	11.5%	11.5%	10.9%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%

Employee Contribution Amounts* for Plan Year Ending (12/31)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Scenario A: Baseline Projection	$ 39.5	$ 40.5	$ 41.8	$ 43.1	$ 44.5	$ 46.0	$ 46.3	$ 41.3	$ 37.3	$ 38.5	$ 39.8	$ 41.1	$ 42.5	$ 44.0	$ 45.5	$ 47.0	$ 48.6	$ 50.3	$ 52.0	$ 53.8	$ 55.7
Scenario B: New Safety Tier 7522.25(b), 0% COLA	$ 39.5	$ 40.5	$ 41.7	$ 42.9	$ 44.2	$ 45.6	$ 45.8	$ 40.7	$ 36.6	$ 37.7	$ 38.8	$ 40.0	$ 41.3	$ 42.6	$ 44.0	$ 45.4	$ 46.9	$ 48.5	$ 50.1	$ 51.8	$ 53.5
Scenario C: New Safety Tier 7522.25(b), 2% COLA	$ 39.5	$ 40.5	$ 41.8	$ 43.1	$ 44.6	$ 46.1	$ 46.4	$ 41.5	$ 37.5	$ 38.7	$ 40.0	$ 41.4	$ 42.8	$ 44.3	$ 45.8	$ 47.4	$ 49.0	$ 50.7	$ 52.5	$ 54.3	$ 56.2

County Safety Only

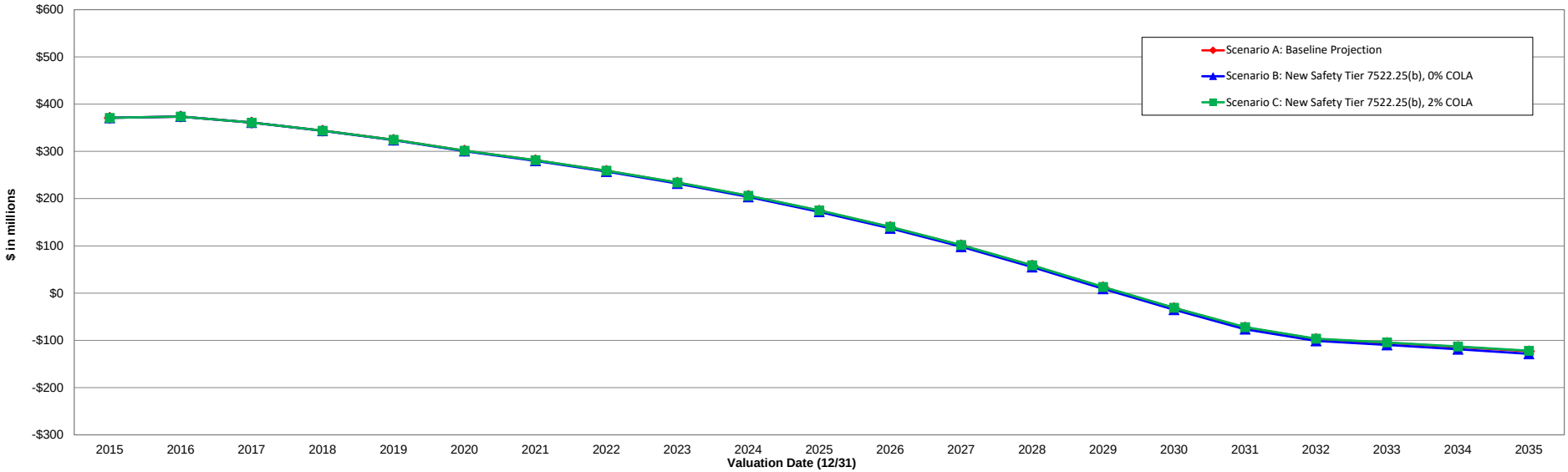
Based on 12/31/2016 Projection

Reduction/(Increase) in Safety Only Employee Rates* for Plan Year Ending (12/31)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Scenario B: New Safety Tier 7522.25(b), 0% COLA	0.0%	0.0%	0.1%	0.2%	0.4%	0.5%	0.6%	0.7%	0.8%	0.9%	1.0%	1.1%	1.2%	1.3%	1.3%	1.4%	1.4%	1.5%	1.5%	1.6%	1.6%
Scenario C: New Safety Tier 7522.25(b), 2% COLA	0.0%	0.0%	0.0%	-0.1%	-0.1%	-0.1%	-0.2%	-0.2%	-0.2%	-0.2%	-0.3%	-0.3%	-0.3%	-0.3%	-0.3%	-0.3%	-0.4%	-0.4%	-0.4%	-0.4%	-0.4%

* Dollars are shown in millions. These contribution amounts and rates reflect the 18-month delay between rate calculation and rate implementation. We have also used projected payrolls for the corresponding calendar years.

Exhibit 3: Projected UAAL

(Dollar Amounts in Millions)



County General and Safety Combined

County General and Safety Combined

Valuation Date (12/31)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Scenario A: Baseline Projection	$ 371	$ 374	$ 361	$ 344	$ 324	$ 301	$ 281	$ 259	$ 234	$ 206	$ 175	$ 140	$ 101	$ 58	$ 12	$ (32)	$ (73)	$ (97)	$ (105)	$ (114)	$ (123)
Scenario B: New Safety Tier 7522.25(b), 0% COLA	$ 371	$ 374	$ 361	$ 344	$ 324	$ 301	$ 280	$ 257	$ 232	$ 204	$ 172	$ 137	$ 98	$ 55	$ 9	$ (35)	$ (76)	$ (101)	$ (110)	$ (119)	$ (129)
Scenario C: New Safety Tier 7522.25(b), 2% COLA	$ 371	$ 374	$ 361	$ 344	$ 325	$ 302	$ 281	$ 259	$ 234	$ 206	$ 175	$ 140	$ 102	$ 59	$ 13	$ (31)	$ (72)	$ (96)	$ (104)	$ (113)	$ (122)

Exhibit 4: Assumed Retirement Rates

Age	Current Safety Plan B	Proposed Safety Plans under Scenario B and Scenario C
50	4.00	3.00
51	5.00	3.50
52	6.00	4.00
53	6.00	4.50
54	8.00	6.00
55	20.00	15.00
56	15.00	12.00
57	15.00	12.00
58	20.00	15.00
59	20.00	15.00
60	100.00	100.00

Segal Consulting

100 Montgomery Street Suite 500 San Francisco, CA 94104-4308
T 415.263.8283 www.segalco.com

August 17, 2018

Ms. Julie Wyne
Retirement Administrator
Sonoma County Employees' Retirement Association
433 Aviation Boulevard, Suite 100
Santa Rosa, CA 94503-1069

Re: Sonoma County Employees' Retirement Association (SCERA)
Illustrations of the Employer Contribution Rates, Employee Contribution Rates and UAAL for County Members Only Under Proposed Safety Tier Under §7522.25(c) "Safety Option One"

Dear Julie:

Enclosed please find three scenarios of valuation projections for the County members only. Each scenario shows our projections of the employer aggregate contribution rates and amounts, average employee contribution rates and amounts, and Unfunded Actuarial Accrued Liabilities (UAAL) from December 31, 2016 to December 31, 2035. These results have been prepared using the results from the December 31, 2016 valuation.

Each scenario assumes a baseline market return of 7.25% for all years, starting with 2017. The scenarios are as follows:

- Scenario A: Baseline projection based on plan provisions[1] in effect for the December 31, 2016 valuation.
- Scenario B: Assumes implementation of a new Safety Plan per Government Code §7522.25(c) with 0% cost-of-living-adjustment, effective January 1, 2017. All members who entered the Association prior to January 1, 2017 would continue to be enrolled in Safety Plan A or Plan B.
- Scenario C: Assumes implementation of a new Safety Plan per Government Code §7522.25(c) with 2% cost-of-living-adjustment, effective January 1, 2017. All members who entered the Association prior to January 1, 2017 would continue to be enrolled in Safety Plan A or Plan B.

The benefit that is provided under Safety Plan B is referred to as "Safety Option Plan Two" under CalPEPRA. The benefit as outlined in §7522.25(c) is referred to as "Safety Option Plan One" under CalPEPRA.

[1] These include enrollment of Legacy members in Safety Plan A and CalPEPRA members in Safety Plan B.

Results

As of December 31, 2016, the total UAAL for SCERA calculated using the Actuarial Value of Assets was $408 million. A portion of this amount was allocated to each employer as shown on pages 68-72 of our December 31, 2016 valuation report. The UAAL for the County was determined by adding up the amortization layers applicable to the County only; that amount was $374 million for General and Safety combined.

Note that the primary purpose for preparing this illustration is to reflect future changes in the employer contribution rates due to: (1) the difference between enrolling new members who enter the Association on or after January 1, 2017 in the current Safety Plan B versus enrolling them under the new proposed Safety Plans pursuant to Safety Option Plan One (§7522.25(c)), either with or without an annual cost-of-living-adjustment for employees retiring in the future under those Plans, (2) the deferred recognition of investment gains (or losses), (3) the contribution rate impact due to the 18-month delay between the date of the valuation and the date of the rate implementation, and (4) the impact with the sunsets[2] of the additional 3.03% and 3.00% member contributions from General County and Safety County members, respectively.

Difference in Cost of Enrolling New Members in Proposed Plans

The comparison of normal costs for enrolling future Safety County members under the current Plan B versus the new proposed Safety Plans in Scenario B and Scenario C as of the December 31, 2016 valuation can be illustrated as follows:

	Scenario A: Current Safety Plan B	**Scenario B:** §7522.25(c) with 0% COLA	**Scenario C:** §7522.25(c) with 2% COLA
Employer Normal Cost Rate	11.54%	11.07%	13.93%
UAAL Rate	10.49%	10.49%	10.49%
Total Employer Rate	22.03%	21.56%	24.42%
Employee Normal Cost Rate	11.54%	11.07%	13.93%

It is our understanding that under §7522.25(f), an employer and employees may agree in a Memorandum of Understanding to offer Safety Option Plan One (§7522.25(c)) in lieu of Safety Option Plan Two (Plan B) provided that the conditions included in that subsection are satisfied.

As indicated by the employer and the employee normal cost rates provided above, the benefits provided under Scenario B would require a lower cost compared to the current Plan B while the benefits provided under Scenario C would require a higher cost.

[2] As directed by SCERA, we have used a sunset date of June 30, 2024 for General County members and have used a sunset date of June 30, 2023 for Safety County members to estimate the actual sunset date, which is the last pay period in June 2023.

Furthermore, we note that the total employer and employee normal cost rate of 27.86% under Scenario C is higher than the total employer and employee normal cost rate if the County were to cover the new employees under the current Safety Plan A (which provides benefits of 3.0% at 50 with 0% COLA).

Deferred recognition of Investment Gains (or Losses)

As of December 31, 2016, there were $15.7 million in total net deferred investment gains (which was calculated as the difference between the Market Value of Assets and Actuarial Value of Assets), of which an estimated $14.9 million in net deferred investment gains would be allocated to the County based on projected payroll as estimated in our December 31, 2016 valuation report for calendar year 2017 for General and Safety combined. In this letter, we have projected the change in the employer's contribution rate in the next several years as those net deferred investment gains are recognized as part of the Board's asset smoothing method, assuming again that the Association earns an annual return of 7.25% on a market value basis beginning with January 1, 2017. This is similar to the Baseline or Scenario #2 in our illustrations dated April 24, 2017 prepared for all the employers at SCERA.

Projection of Combined County General and Safety Contribution Rates and Change in County Safety Only Rates

In Exhibit 1, we have provided the projected employer rates and dollar amounts for the County General and Safety combined. In addition, we have included the change in the projected employer rate for the County Safety only under each of the proposed Scenarios B and C. We have provided similar information in Exhibit 2 for the projected aggregate employee rates and dollar amounts. When reviewing the results in Exhibit 2, it should be pointed out that only individual members enrolled in the proposed Safety Plans would see a change in their employee rates when compared to the current Safety Plan B. This is the case even though we have expressed the contribution rate as a percentage of the total County General and Safety payroll. However, the change in the rates is expressed as a percentage of County Safety only payroll. Exhibit 3 shows the projected Unfunded Actuarial Accrued Liability under each of the three Scenarios for the County General and Safety combined.

The future employer aggregate normal cost rates calculated to include both the Legacy and the current Safety Plan B and proposed Safety Plans under Scenario B and Scenario C are projected to decrease for the current Safety Plan B and Scenario B and increase for Scenario C as members in the Legacy plans are gradually replaced by members in those plans. In addition to the CalPEPRA members reported in the December 31, 2016 valuation, we have estimated the potential change in employer normal cost by assuming that the payroll for the future new members enrolled after January 1, 2017 can be modeled as follows: (1) projecting the total $338,195,000 December 31, 2016 combined County General and Safety payroll using the 3.5% annual increase used in the valuation to predict annual wage growth for amortizing the UAAL and (2) subtracting the projected closed group payroll for the County Legacy plans according to the assumptions used in the December 31, 2016 valuation to anticipate termination, retirement (both service and disability) and other exits from active employment.

Since we completed the last two valuations as of December 31, 2015 and 2016, active members represented by some of the bargaining groups have agreed to pay additional employee normal cost contributions that are above those determined under the 1937 Act CERL, as permitted under CalPEPRA. As the specific amount of those higher contributions (some of which have been paid starting in the 2016/2017 fiscal year) are dependent on the specific bargaining agreements, we have continued to include only the minimum member contribution rates in these illustrations. (This is consistent with the assumption we used in preparing our earlier illustration dated April 24, 2017.)

As a result of CalPEPRA, the employer is required to continue to contribute the normal cost even after the Association is expected to be over 100% funded, at least until the funded percentage exceeds 120%. This is shown in the projections where the contributions are equal to the normal cost once the Association is expected to be over 100% funded. This statutory requirement overrides the Association's funding policy provision that would amortize surplus over a 30-year period.

Also, there was an increase in the employer rate for the December 31, 2015 valuation[3] as a result of the assumption changes adopted by the Board. According to the Association's Actuarial Funding Policy that was last reviewed on June 18, 2015, a change greater than 2.00% of payroll due to assumption changes should be phased-in over a period of two years. Since this phase-in adjustment is made by the staff, the rates shown in the projection have <u>not</u> been adjusted for the phase-in.

Other Considerations

As discussed earlier in this letter, the proposed Safety Plan under Scenario B provides a reduction in the employer's contribution rate requirement when compared to the current Safety Plan B. However, the proposed Safety Plan under Scenario C does not present a reduction in the employer's contribution rate, and furthermore the total normal cost of this option would be greater than the total normal cost under the Legacy Safety Plan A. Should the County wish to pursue the Safety Plan under Scenario C, we suggest the County consult with legal counsel on whether adoption of Safety Option Plan One, which is one of the formulas under CalPEPRA, and a 2% COLA benefit, which is not provided to the existing Safety Plans A and B members but is nonetheless a 1937 CERL optional plan feature that has not been eliminated by CalPEPRA, would satisfy the requirements of CalPEPRA.

Projections, by their nature, are not a guarantee of future results. The modeling projections are intended to serve as estimates of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used. Actual experience may differ due to such variables as demographic experience, the economy, stock market performance, and the regulatory environment.

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[3] The employer rate approved in the December 31, 2015 valuation will be implemented in fiscal year 2017/2018.

The projections are based on the actuarial assumptions and census data used in our December 31, 2016 valuation report for the Association. The assumed retirement rates for members enrolled in the proposed Safety Plans in Scenario B and Scenario C can be found in Exhibit 4 of this letter. Future experience is expected to follow all of the assumptions, except as noted above. This study was prepared under the supervision of Andy Yeung, ASA, MAAA, FCA, EA.

Please let us know if you have any questions.

Sincerely,

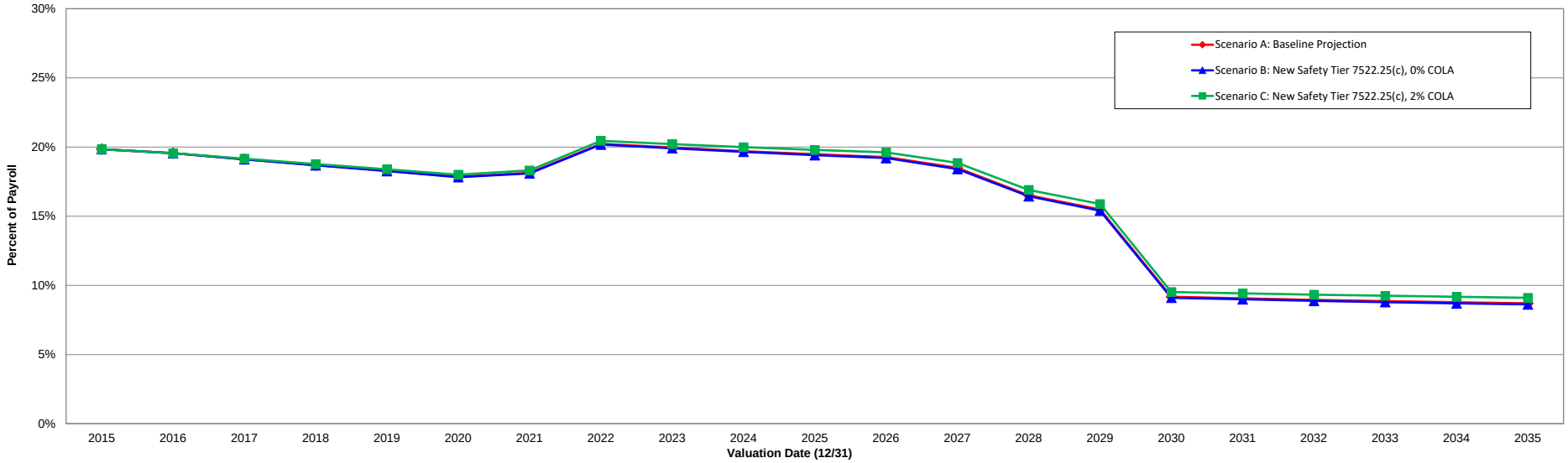
Paul Angelo, FSA, MAAA, FCA, EA
Senior Vice President and Actuary

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

EK/hy
Enclosures

Exhibit 1: Projected Employer Rates

(Before Reflecting Phase-in of the Contribution Rate Impact of the Assumption Changes from the December 31, 2015 valuation or Additional Employee Normal Cost Contributions)



County General and Safety Combined

Based on 12/31/2016 Projection

Valuation Date (12/31)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Scenario A: Baseline Projection	19.8%	19.6%	19.1%	18.7%	18.3%	17.9%	18.1%	20.2%	20.0%	19.7%	19.5%	19.3%	18.5%	16.5%	15.5%	9.2%	9.1%	9.0%	8.9%	8.8%	8.7%
Scenario B: New Safety Tier 7522.25(c), 0% COLA	19.8%	19.6%	19.1%	18.7%	18.3%	17.8%	18.1%	20.2%	19.9%	19.7%	19.4%	19.2%	18.4%	16.4%	15.4%	9.1%	9.0%	8.9%	8.8%	8.7%	8.6%
Scenario C: New Safety Tier 7522.25(c), 2% COLA	19.8%	19.6%	19.2%	18.8%	18.4%	18.0%	18.3%	20.5%	20.2%	20.0%	19.8%	19.6%	18.9%	16.9%	15.9%	9.5%	9.4%	9.3%	9.3%	9.2%	9.1%

Employer Contribution Amounts* for Plan Year Ending (12/31)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Scenario A: Baseline Projection	$ 65.1	$ 68.9	$ 70.0	$ 70.9	$ 71.7	$ 72.6	$ 74.8	$ 82.5	$ 89.5	$ 91.4	$ 93.5	$ 95.7	$ 96.5	$ 92.6	$ 87.6	$ 69.8	$ 53.5	$ 54.7	$ 55.9	$ 57.3	$ 58.8
Scenario B: New Safety Tier 7522.25(c), 0% COLA	$ 65.1	$ 68.9	$ 70.0	$ 70.8	$ 71.7	$ 72.5	$ 74.6	$ 82.3	$ 89.3	$ 91.2	$ 93.2	$ 95.3	$ 96.1	$ 92.2	$ 87.2	$ 69.4	$ 53.0	$ 54.2	$ 55.5	$ 56.9	$ 58.3
Scenario C: New Safety Tier 7522.25(c), 2% COLA	$ 65.1	$ 68.9	$ 70.1	$ 71.1	$ 72.1	$ 73.1	$ 75.5	$ 83.4	$ 90.5	$ 92.6	$ 94.9	$ 97.3	$ 98.3	$ 94.5	$ 89.7	$ 72.0	$ 55.5	$ 56.9	$ 58.4	$ 59.9	$ 61.5

County Safety Only

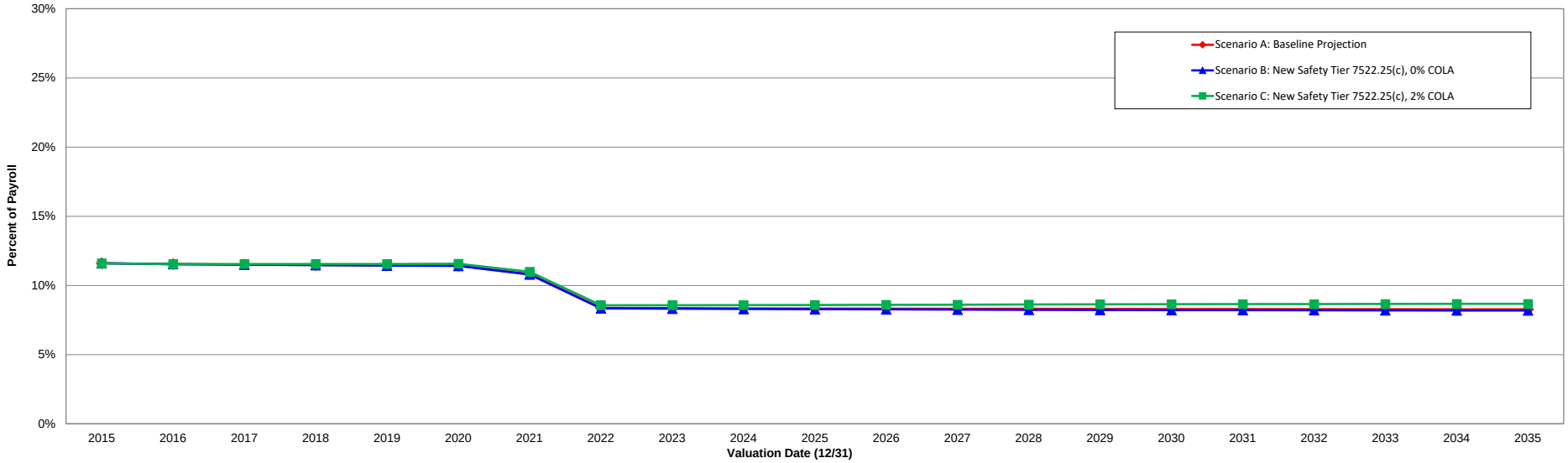
Based on 12/31/2016 Projection

Reduction/(Increase) in Safety Only Employer Rates* for Plan Year Ending (12/31)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Scenario B: New Safety Tier 7522.25(c), 0% COLA	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.3%	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Scenario C: New Safety Tier 7522.25(c), 2% COLA	0.0%	0.0%	-0.1%	-0.3%	-0.5%	-0.7%	-0.8%	-1.0%	-1.2%	-1.4%	-1.5%	-1.6%	-1.8%	-1.9%	-2.0%	-1.9%	-1.8%	-1.9%	-1.9%	-2.0%	-2.0%

* Dollars are shown in millions. These contribution amounts and rates reflect the 18-month delay between rate calculation and rate implementation. We have also used projected payrolls for the corresponding calendar years.

Exhibit 2: Projected Employee Rates

(Before Reflecting Additional Employee Normal Cost Contributions)



County General and Safety Combined

Based on 12/31/2016 Projection

Valuation Date (12/31)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Scenario A: Baseline Projection	11.6%	11.5%	11.5%	11.5%	11.5%	11.4%	10.8%	8.4%	8.4%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%
Scenario B: New Safety Tier 7522.25(c), 0% COLA	11.6%	11.5%	11.5%	11.5%	11.4%	11.4%	10.8%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%	8.2%
Scenario C: New Safety Tier 7522.25(c), 2% COLA	11.6%	11.5%	11.6%	11.6%	11.6%	11.6%	11.0%	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%	8.6%	8.7%	8.7%	8.7%	8.7%	8.7%

Employee Contribution Amounts* for Plan Year Ending (12/31)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Scenario A: Baseline Projection	$ 39.5	$ 40.5	$ 41.8	$ 43.1	$ 44.5	$ 46.0	$ 46.3	$ 41.3	$ 37.3	$ 38.5	$ 39.8	$ 41.1	$ 42.5	$ 44.0	$ 45.5	$ 47.0	$ 48.6	$ 50.3	$ 52.0	$ 53.8	$ 55.7
Scenario B: New Safety Tier 7522.25(c), 0% COLA	$ 39.5	$ 40.5	$ 41.7	$ 43.1	$ 44.4	$ 45.9	$ 46.1	$ 41.2	$ 37.1	$ 38.3	$ 39.5	$ 40.9	$ 42.2	$ 43.6	$ 45.1	$ 46.6	$ 48.2	$ 49.9	$ 51.5	$ 53.3	$ 55.1
Scenario C: New Safety Tier 7522.25(c), 2% COLA	$ 39.5	$ 40.5	$ 41.8	$ 43.3	$ 44.8	$ 46.4	$ 46.9	$ 42.1	$ 38.2	$ 39.5	$ 41.0	$ 42.4	$ 44.0	$ 45.6	$ 47.2	$ 48.9	$ 50.7	$ 52.5	$ 54.4	$ 56.3	$ 58.3

County Safety Only

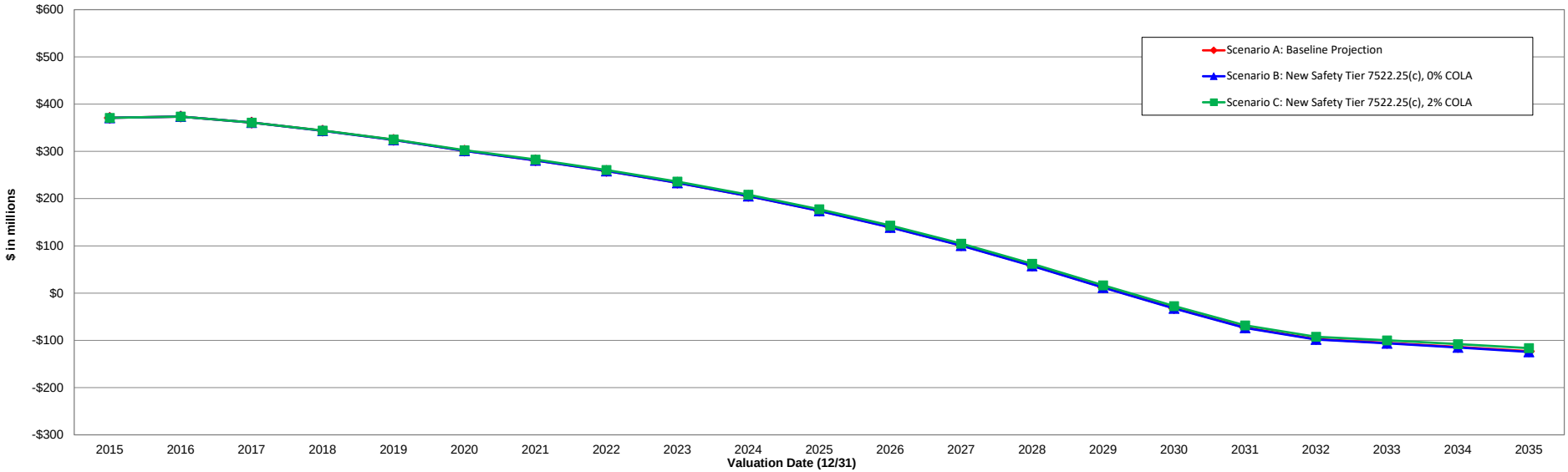
Based on 12/31/2016 Projection

Reduction/(Increase) in Safety Only Employee Rates* for Plan Year Ending (12/31)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
Scenario B: New Safety Tier 7522.25(c), 0% COLA	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Scenario C: New Safety Tier 7522.25(c), 2% COLA	0.0%	0.0%	-0.1%	-0.3%	-0.4%	-0.6%	-0.8%	-0.9%	-1.0%	-1.1%	-1.3%	-1.4%	-1.5%	-1.5%	-1.6%	-1.7%	-1.8%	-1.8%	-1.9%	-2.0%	-2.0%

* Dollars are shown in millions. These contribution amounts and rates reflect the 18-month delay between rate calculation and rate implementation. We have also used projected payrolls for the corresponding calendar years.

Exhibit 3: Projected UAAL

(Dollar Amounts in Millions)



County General and Safety Combined

County General and Safety Combined

Valuation Date (12/31)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Scenario A: Baseline Projection	$ 371	$ 374	$ 361	$ 344	$ 324	$ 301	$ 281	$ 259	$ 234	$ 206	$ 175	$ 140	$ 101	$ 58	$ 12	$ (32)	$ (73)	$ (97)	$ (105)	$ (114)	$ (123)
Scenario B: New Safety Tier 7522.25(c), 0% COLA	$ 371	$ 374	$ 361	$ 344	$ 324	$ 301	$ 281	$ 258	$ 233	$ 205	$ 174	$ 139	$ 100	$ 58	$ 12	$ (32)	$ (74)	$ (98)	$ (106)	$ (115)	$ (124)
Scenario C: New Safety Tier 7522.25(c), 2% COLA	$ 371	$ 374	$ 361	$ 344	$ 325	$ 302	$ 283	$ 261	$ 236	$ 208	$ 178	$ 143	$ 105	$ 62	$ 17	$ (27)	$ (68)	$ (92)	$ (100)	$ (108)	$ (116)

Exhibit 4: Assumed Retirement Rates

Age	Current Safety Plan B	Proposed Safety Plans under Scenario B and Scenario C
50	4.00	4.00
51	5.00	5.00
52	6.00	5.75
53	6.00	5.75
54	8.00	7.50
55	20.00	18.00
56	15.00	14.00
57	15.00	14.00
58	20.00	18.00
59	20.00	18.00
60	100.00	100.00

Appendix N

Lower Retirement Benefit Recruitment and Retention Impact Case Studies

City of San Jose

In an attempt to address pension debt, voters and the City of San Jose passed set of sweeping pension reforms in 2012. The public employee unions took legal action in response and legal battle ensued. The courts overturned several provisions of the me sure deeming some provisions unconstitutional because provisions altered benefits for current employees. In 2015 the City and unions agreed on compromise resolution resulting in Measure F, which was approved by the voters in November 2016.

Measure B was estimated to s ve the City $3 billion over 30 years due in part to significant cuts to retiree health benefits, the pension's cost of living adjustments, and the "bonus check" which was distributed when the funds performed greater than planned. The following summarized the key changes as result of Me sure B:

- Provided all new hires with hybrid plan consisting of Social Security and defined benefit plan (with City cost not to exceed 50% of plan) or defined contribution plan (with City cost not to exceed 9%).
- Added new lower tier option for current employees of 2% @ 62 with final verage salary based on highest 3 years, and reduced COLAs applicable to future years.
- Employees who did not opt in to the lower level of benefits would h ve compensation adjustment through additional retirement contributions up to max of 16% in addition to cost sharing of normal cost.
- The cost of living adjustments for any defined benefit plan were limited to CPI and capped at 1.5% per year.
- Required existing and new employees to contribution at least 50% of the cost of retiree healthcare including norm l cost and unfunded liabilities.

Recruitment and Turnover Impacts

Not long after Measure B was passed in 2012, reports stated significant recruitment and retention problems throughout the organization, particularly with police officers. Me sure B also occurred on the heels of other significant reductions in compensation as result of the great recession, including 10%, across the board reduction in salaries and other compensation reductions to address the city's structural deficit. Staff contacted the Human Resources Department for the City of San Jose and discussed the City's experience with recruitment difficulties, overtime, and use of sick time. San Jose shared the following regarding recruitment and retention difficulties:

- Vacancy and turnover rates increased from single digits to 14% after the passage of Measure B. Out of an employee population of 6500, Human Resources went from filling several hundred vacancies to 1000 positions every year.
- Since other agencies were not reducing benefits in similar manner, San Jose became the place other agencies would go to recruit and there was little incentive for employees to stay.
- Since 2008, sworn vacancies in the Police Department have increased tenfold – from 22 vacancies in 2008 to 218 v cancies in 2015. During th t time, authorized sworn police positions in the City decreased from 1,394 in FY 2008-09 to 1,109 in FY 15-16. This constitutes rise in the v cancy rate from under 2 percent to nearly 20 percent.

- August, 2016, City Council adopted resolution and memorandum for an emergency declaration under the MMBA based on the unprecedented low staffing levels in the patrol division of the police department allowing for an immediate reassignment of officers from other assignments to patrol

County of Sonom Human Resources staff also received the following tables are from the report to the Mayor and City Council on September 27, 2016 titled, "San Jose Police Department Sworn Staffing and Discussion of Options to Address the Unprecedented Low Sworn staffing Levels in the Patrol Division"

Table below illustrates staffing levels:

Actual Sworn St ffing Levels Three Ye r Comp rison			
	As of 9/11/14	As of 9/10/15	As of 9/15/16
Authorized Sworn Staffing	**1,109**	**1,109**	**1,109**
Less Sworn Vacancies	**(103)**	**(171)**	**(197)**
Net Sworn Staffing	1,006	938	912
Less Recruits/ Field Training	**62**	**52**	**31**
Street-Re dy Sworn	944	886	881
Less Disability/Modified Duty/Leave of Absence	**66**	**45**	**75**
Actu l Full Duty	878	841	806

Since January 2012, there h ve been 205 retirements nd 306 resign tions/other separations offset by 26 rehires/reinst tements over the period, resulting in net tot l ttrition of 485 sworn st ff members.

Table 2: Police Department Historical Sworn Attrition

Historical Sworn Attrition 2012-2016						
	2012	**2013**	**2014**	**2015**	**2016***	**Total**
Retirements	37	35	42	64	27	205
Resign tion-Training	1	34	32	19	7	93
Resign tions	68	49	40	36	7	200
Other Sep rations	2	1	3	5	2	13
Sub Total	108	119	117	124	43	511
Rehire / Reinst tements	-9	-6	-5	-4	-2	-26
Total Attrition	99	113	112	120	41	485

September 22, 2016

Overtime

Another impact of the pension changes and staffing crisis was the need to rely on overtime. The Office of the City Auditor recently completed an audit titled: Police Overtime, the San Jose Police Department

Appendix N

Lower Retirement Benefit Recruitment and Retention Impact Case Studies

Relied on Overtime to Patrol the City Due to Unprecedented Vacancies. The report states the Police Department's overtime expenditures have more than tripled in the past seven years. The verage overtime worked by sworn personnel has doubled from 225 hours of overtime in calendar year 2008 to 450 hours in 2015. In comparison, in FY 2015-16, sworn personnel in Los Angeles and San Francisco worked about 100 hours of city overtime or less.

Sick Leave

Sworn staff used to be able to sell ccrued sick leave back to the City upon retirement. However, the current Memorandum of Agreement limits sick le ve payouts to sick le ve accrued before July 2013. These changes may have resulted in sworn employees having less of an incentive to ccrue sick leave. In addition, fatigue due to high overtime use may also increase the mount of sick leave that sworn employees take.

With increases in officer workload, changes in the sick le ve p yout policy, and reduced ability to take vacation time, sick le ve usage has incre sed signific ntly. The pattern of usage (heavier on weekends and during the summer months) indicates the potential use of sick le ve to take time off in lieu of vacation or comp time.

Measure F

In November, 2015, the City and its Federated barg ining units reached an Alternative Pension Reform Settlement Framework Agreement ("Framework"). The Framework replaces the Measure B Tier 2 with new Tier 2, creates Medical Panel in lieu of the Board of Administration to determine all disability applications and makes several other changes to the Plan. The Framework anticipated that formal repeal of Measure B and its enabling ordinances would be ccomplished through another measure, Measure F. The voters approved Measure F on November 8, 2016.

As noted in the charts that the City of San Jose provided above, the rate of separations decreased in 2016. This could be explained by the collaborative process San Jose entered with the unions which resulted in Measure F being placed on the ballot in November, 2016 and passed by voters. Measure F reversed most of the pension benefit reductions included in Measure B. Measure F resulted in the following pension changes and benefits:

- Retirement benefits for Tier 2 members would be improved to levels similar to other Bay Are agencies as well as providing that the costs of the benefit are shared 50/50 between the City and employees in specified increments.
- The defined benefit retiree healthcare plan that established levels of healthcare benefits would be closed to new members.
- Tier 1 Employees who return after leaving the City would be Tier 1 Employees.
- The pre-Measure B definition of disability would be reinstated.
- An independent medical panel would be created to determine eligibility for dis bility retirements.
- Addition of Guaranteed Purchasing Power benefit to protect retirees against inflation.
- Both City and employees would be required to make the full annual required pl n contributions calculated by the Retirement Board.
- Voter approval would be required for any future enh ncements to defined retirement benefits.

- Retroactive benefit enhancements would be prohibited.

After the passage of Measure F, the city began the meet and confer process to implement the changes. Measure F has resulted in the need to amend ordinances and add new chapters to the San Jose Municipal Code. The changes have resulted in administrative costs and complexity for the Federated City Employees' Retirement System s result of the addition of 4 retirement tiers and changes to the process for determin tion of disability retirements. The last part of Measure F was the implementation of new defined contribution health reimbursement rrangement plan for retiree healthcare expenses. This was implemented in March 2018.

With the implementation of Me sure F, and addition l negoti ted improvements in the police bargaining agreements, the city has seen an improvement in police academy enrollments.

City of San Diego

In 2012, San Diego voters pproved Prop B. Highlights include:

- Limit worker's base compensation used to calculate the employee's pension benefits to Fiscal Year 2011 levels until 6/30/18
- Provide all new hires (except sworn police officers) with defined contribution plan(401K) in place of defined benefit plan
- Provide contributions for employees particip ting in the new defined contribution plan:
    - The City's maximum contribution for general employees would be 9.2% of salary.
    - The maximum contribution for public safety officers would be 11% of salary.
- Eliminate pension benefits for City officers or employees convicted of felony related to their employment, to the extent allowed by law.

Prop B w s estim ted to s ve the City $963 million in salary freeze s vings and another $56 million in pension benefit costs (both over 30 years). Local unions appealed to PERB s ying the measure was illegal because the Mayor of the city had l rge roll in drafting and supporting the proposition, which should have triggered meet and confer obligations with the Unions.

In 2015 PERB ruled that the M yor using his position in office to advance the measure meant he w s not acting as private citizen nd should have met & conferred with the Unions. PERB's ordered remedy was to provide retro ctive pensions to employees hired since Prop B was approved. If this remedy were to ultimately be implemented, it would cost the City millions.

The City subsequently appealed the decision and the appeals court ruled in favor of the City in April 2016.

PERB is now representing the unions' interest in an appeal to the Californi Supreme Court. The Supreme Court has agreed to hear the case, and the hearing is anticipated to take place in early 2019.

Recruitment and Turnover Impacts

San Diego did not implement pension changes for police officers. As result, and due to significant negotiated salary increases (30% increases over 5 years), they h ve not experienced recruitment and turnover difficulties for police officers. The city reported that after the implementation of the defined contribution retirement pl n, between 2011 and 2013 they experienced 53% reduction in qualified candidates for firefighter recruitments. While there were no reports vailable, according to the Human Resources cont cts, since the pension reform changes, the city h s experienced difficulty recruiting for positions across the board. Many departments have relaxed or lowered minimum requirements in order to be able to fill positions. The quality of applic nts and the number of applications per vacancy has decreased. For firefighter positions, turnover has increased due to new hires coming to the city for training and then moving to higher p ying agencies. They also loose many employees to San Diego County since the county p ys as much s 20% more in salary and offers defined benefit retirement plan.

San Diego does not participate in Social Security. Without Social Security, employees are left with virtually no retirement pl n other than the defined contribution plan. This is lower benefit than is offered at many priv te employers. An employer with 401 K that does not participate in Social Security is most likely to attract employees who are early in their careers and don't plan to st y with the city long term, or employees with no other options. They can get training and experience in their field and take their 401K with them to their next employer.

San Juan Capistrano

San Juan Capistrano is part of the Orange County Employees Retirement System. In 2015, the City implemented Plan W. Plan W was negotiated with the Management & Professional Employees Association and Cl ssified Employees Association only.

The agreement allows new employees to elect either:

- Plan W, hybrid plan with defined benefit of 1.62% @ 65 benefit formul and defined contribution component
- Plan U, defined benefit plan that aligns with the PEPRA formul of 2.5% @ 67

The City had to s tisfy three requirements in order to implement this new plan post-PEPRA:

1. Actuarial valu tion determination that Plan W's formul has "no gre ter risk and no greater cost to the employer than the defined benefit formul required by PEPRA".
2. The Board of Retirement determination and certific tion that Plan W's formul has "no greater risk and no gre ter cost to the employer than the defined benefit formul required by PEPRA".
3. Plan W must be approved by the legislature.

After the first two requirements were s tisfied, the legislature passed Assembly Bill 284 on July 13, 2015 adopting the new hybrid plan option.

Recruitment and Turnover Impacts

The city has total of 95 employees. Since the plan has been vailable, the city has hired 40 employees and one has elected the hybrid plan. The Human Resources Director reports no impact on recruitment and turnover.

University of California

The University of Californi Retirement System (UCRS) oversees the University of Californi Retirement Plan (UCRP), defined-benefit retirement plan divided into four "tiers": the UCRP 1976 Tier; the UCRP 2013 Tier; the Modified UCRP 2013 tier; and the UCRP 2016 Tier. Eligibility for e ch tier is fixed to employee hire dates. Also, in the case of the UCRP 2013 Tier and Modified UCRP 2013 Tier, eligibility is further determined by collective bargaining unit.

UCRP 2016 Tier

In 2016 the UC Board of Regents approved new retirement program for future UC employees. UC developed the new retirement program to comply with 2015 Budget Agreement between the UC and the State of California. Per the budget agreement, the University of Californi receives nearly $1 billion in annual revenue and one-time funding over several years in exchange for tying pensionable earnings for new employees to the State of California's PEPRA cap on pensionable earnings. UC contributes 14% of UCRP 2016 Tier member payroll to UCRP, of which 6% goes toward UCRP's unfunded liability.

Under the UCRP 2016 Tier, UC employees hired on or after July 1 2016, into career position lasting one year or longer receive choice between two retirement options:

- Option 1 – Pension + 401(k) – style supplement ("Pension Choice"): the UCRP 2013 Tier pension is capped at the PEPRA sal ry limit – currently set t $121,388.00 for Social Security Members and $145,666.00 for Non Social Security Members - plus supplemental 401(k)-style benefit for eligible employee pay up to the Internal Revenue Service limit (currently set t $275,000.00 for 2018/2019) for Design ted Faculty earnings, and eligible staff earnings above the PEPRA cap.
    - UCRP member contribution rate to UCRP Pension Pl n: 7.0%
    - UCRP member contribution rate to 401(k) supplement: 7% pre-tax up to IRS maximum of $275,000.00 for 2018/2019.
    - UC contribution to 401(k)-style supplement for Designated Faculty pay up to the IRS limit (currently set at $275,000.00): 5%.
    - UC contribution to 401(k)-style supplement for eligible staff and other academic appointees on eligible pay above the PEPRA Cap ($118,775.00): 3%.

- Option 2 – 401(k) style benefit ("Savings Choice"): A stand-alone 401(k)-style option with benefits-eligible employee pay up to the Internal Revenue Service limit.
    - Savings Choice participant contribution rate: 7% of annual eligible pay, pre-tax, up to IRS maximum of $275,000.00 in 2018/2019.
    - UC Contribution rate: 8% of eligible pay, pre-t x, up to the IRS maximum of $275,000.00 in 2018/2019.
    - UC's Employer contribution to the 401(k)-style plan vests one year after participating employees become eligible to participate in the pl n.

Employees in the UCRP 2016 Tier must choose one option within the initial 90-day enrollment period – otherwise they are enrolled in Option 1 by default.

As of June 30, 2017, the distribution of UCRP 2016 Tier members' retirement benefit elections are as follows:

- 31% of UCRP 2016 Tier Members actively elected Option 1 ("Pension Choice");
- 34% of UCRP 2016 Tier Members defaulted into Option 1 ("Pension Choice");
- 35% of UCRP 2016 Tier Members elected Option 2 ("S vings Choice").

Subject to IRS approval, employees who initially choose Option 2 m y h ve one-time opportunity to switch to Option 1 fter period of time equivalent to the longer of:) five (5) years after date of hire; or b) for ladder-rank faculty, one year after the tenure decision; for lecturers or senior lecturers one year after the decision on security of employment; and for eligible Unit 18 non-Senate faculty as per their collective bargaining agreement.

UCRP 2016 Tier and Organized Labor

The UCRP 2016 Tier and the "S vings Choice" option has been met with fierce resistance from organized labor. As of March 29, 2018, the following bargaining units are out of contract, remain in "status quo," and do not participate in the "S vings Choice" option:

- Health Care Professionals (University Professional and Technical Employees – UPTE)
- Registered Nurses (Californi Nurses Association - CNA)
- Patient Care Technical (American Federation of State, County and Municipal Employees – AFSCME)
- Research Support Professionals (UPTE)
- Service (AFSCME)
- Technical (UPTE)

AFSCME, in particular, has mounted an extensive public-relations c mpaign decrying the "S vings Choice" option and presenting the option as chief obstacle in reaching negoti ted agreement. From Organized Labor's perspective the "Savings Choice" option is the beginning of the end of the UCRP defined-benefit plan and represents shift of risk and liability from the UC to its employees.

Recruitment and Turnover Impacts

The County of Sonom h s been unable to ascertain the recruitment and turnover impacts of the UCRP 2016 tier t this time. However, the 35% take-up rate for the "S vings Choice" plan among eligible UCRP 2016 tier members suggests that the "Savings Choice" option is an attractive choice for new UC employees. Anecdotal evidence suggests th t UC's recruitment challenges are the result of adopting the PEPRA cap and not the "S vings Choice" option.

UC has made strong effort to mitigate the recruitment challenges ssociated with adopting the PEPRA cap by offering the supplemental 401(k) style benefit to eligible faculty members, and eligible staff whose earnings exceed the $121,388.00 limit.