CITIZENS FOR SUSTAINABLE PENSION PLANS

A Non-Partisan Group of Marin Residents

Pension Roulette, Part 2 "Do You Feel Lucky?"

Special District Supplement to:

A Comparative Analysis of the Pension and Retiree

Benefits of Marin County and its Municipalities

Presented By
Citizens for Sustainable Pension Plans
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Executive Summary

The 2013/2014 Marin County Civil Grand Jury, in its report What Are Special Districts and Why Do They Matter?, released on May 29, 2014, brought special districts to the attention of Marin's taxpayers. The Grand Jury report noted that we spend \$160 million annually to finance our special districts and we don't seem to know much about them. Citizens for Sustainable Pension Plans (CSPP), took a focused look at the retirement benefits of Marin County and its Municipalities in late 2013. With another \$160 million of taxpayer money in play, CSPP decided to investigate the retirement plans of a small, selected group of special districts to determine whether the same problems that permeated the retirement plans of the County and the Municipalities similarly impact the special districts. Further, CSPP was alarmed by the recent and planned toll increases of the Golden Gate Bridge and, for that reason, the Golden Gate Bridge Highway & Transportation District (GGB) was included among the special districts that were considered.

As is the case for the County and its Municipalities, the pension plans for the special districts of Marin rely upon superior investment performance to provide promised benefits for plan members at sustainable cost levels. Over the past decade, CalPERS (the California Public Employees' Retirement System) and MCERA (Marin County Employees' Retirement Association) – the two systems that administer the pensions of Marin's public employees – have failed to produce the investment returns needed to keep pension costs at those levels. The costs have regularly increased to their nowcurrent, excessive levels. Unless these systems can produce better investment performance, much better than recent performance, pension costs will continue to rise. This leads CSPP to ask the pension question that our policymakers have failed to ask..."Do You Feel Lucky?" Our policymakers have consistently acted as though the answer to this question was a resounding "yes," while, in point of fact, the answer has been a distinct "no." The problem for the citizens of Marin is that the answer has to be "yes," else we can expect more and more and more Service Insolvency (the continued erosion of services accompanied by continuous requests for higher taxes, fees and assessments). Get ready for it!

Here are the report highlights of "Do You Feel Lucky," presented in comparison and contrast with the conclusions of Pension Roulette.

 Pension Roulette established that the pension plans for the County and its Municipalities are exorbitant. This Supplement, while based upon a limited number of Districts, has established that the pension plans for the Districts are also exorbitant, for many Districts more exorbitant than those plans for the County and its Municipalities (pages 8-9).

- As was found in Pension Roulette for the County and its Municipalities, the pension plans for the Districts are materially underfunded (pages 12-14).
- Pension Roulette established the retiree debt of the County and its Municipalities was substantial, \$1.2 billion to \$2.3 billion, depending upon the investment return assumption. The Supplement, while based upon a limited number of Districts, suggests that there is substantial additional debt from the Districts' plans (pages 14-17).
- Pension Roulette showed that if Retiree Spending were at a high level of Government Activities Spending, then the governments had to find money and that, in fact, a significant percentage of the County's Municipalities were indeed seeking a tax increase. We called this measure Service Insolvency. The Supplement shows that the measures of Service Insolvency is, for some Districts, worse than for the County and its Municipalities (pages 19-20).
- The recent and planned toll increases for the Golden Gate Bridge Highway & Transportation District (GGB) have been estimated to produce \$138 million of additional revenue for the GGB in the next five years. This amount contrasts to approximately \$274 million in Retiree Debt for GGB (see Appendix). So, the additional revenue should cover about half of a type of debt that should have been paid for in the past, not in the future. With retiree spending for the Golden Gate Bridge 16% of its total spend, could the Golden Gate Bridge do without its toll increases if it didn't need to spend the 16% on retiree spending?

Introduction

While the Grand Jury report implored Marin's taxpayers to pay attention to its special districts, there has been one extremely visible example of increased costs that a special district passed through to its users. Over the past few months, we've read about the threat of increased tolls to the Golden Gate Bridge (GGB). Then we've read that the toll increases were no longer a threat; they were real as the GGB board of directors voted to increase tolls by \$2 over the next 5 years, with the first \$1 increase effective on April 7. These toll increases are projected to raise \$138 million over the next five years. This shows that residents of the County of Marin do not simply pay taxes and fees to the County and their Municipality. Additionally residents pay, through assessment, fees, tolls, fares, and other taxes, to special districts providing services to residents of the County.

This prompted the CSPP to wonder whether there was some link between the costs and obligations of GGB and this toll increase. Was the toll increase an example of "Service Insolvency" that was identified in Pension Roulette? This would indeed be the case if GGB's retirement plan was substantially under-funded (i.e., GGB had substantial unfunded retirement liabilities). For, if so, the additional revenue raised by the toll increases could be thought of as being used to pay off the unfunded liability... conversely, no unfunded liabilities might very well require no (or materially lower) toll increases.

Based upon the prompting of the GGB toll increases, the issue to be discussed in this Supplement is whether the pensions and retirement plans of these other districts create similar costs and obligations as those of the County and its Municipalities and, if so, is there a similar risk of "Service Insolvency" from those districts. While the list of other districts is sufficiently large to make the study of each entity impractical, the CSPP has selected a number of districts for examination in this report.

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¹ The website Marin.org provides a list of the types of districts that provide government services: Community Service Districts, County Service Areas, Fire Protection Districts, Fire/Emergency/Law Enforcement Services, Public Utility Districts, Sanitary & Sanitation Districts, Water Districts, and Other Districts. The marin.org website lists 71 districts. The list includes many of the fire and safety departments included in Pension Roulette, but does not include school districts and special districts that operate above the county level.

These are the Districts reviewed:

- Marin Municipal Water District (MMWD)
- North Marin Water District (NMWD)
- Novato Fire Protection District (NFPD)
- Marinwood Community Services District (MCSD)
- Golden Gate Bridge Highway & Transportation District (GGB) ²

In the financial analysis of the pension and retirement plans in Pension Roulette, certain financial indicators (e.g., Pension Benefit Richness and Retiree Debt Per Household) were viewed by combining the obligations for an individual taxpayer who lived in an unincorporated part of the County or in a particular Municipality. This was practical because there is the County and only eleven Municipalities. This supplement will not use that approach because there are literally hundreds of possible combinations of districts which could pertain to individual taxpayers in Marin. Rather, readers of this Supplement are asked to imagine the additional obligation of the taxpayer created by whatever combination of special districts would apply to the taxpayer.

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² Golden Gate Bridge Highway & Transportation District is a special district of the State of California, covering six counties, including Marin. Since Marin residents pay tolls and fares, this district was included but its financial results will be allocated, to the extent possible, to Marin residents.

Report Objectives, Framework and Data Sources

This report has two overarching objectives and is divided into two parts:

PART ONE:

To establish the values and costs of pension benefits for the Districts, to compare those costs and values to the costs and values of an "average" private sector pension plan.

PART TWO:

To measure and compare the financial stress on the Districts caused by retiree benefits. As with the comparison of costs and values, this measurement and comparison is done with respect to the corresponding measures for the County and its Municipalities. Additionally, comparison is made with the retirement plans of the Town of Danville, one of the few government entities in California that maintains sustainable retiree benefit plans.

Report Framework and Data Sources

To measure the costs of public pensions, this report uses the same analytical framework as used in Pension Roulette, derived from the 2004-05 Grand Jury Report. This allows for direct comparability between pension costs in 2003 and 2014. The pension plan data applicable to the plans of districts under consideration in the Supplement are taken from official and reliable public sources. Specifically, we used the annual actuarial reports from the Marin County Employees' Retirement Association (MCERA) and the California Public Employees' Retirement System (CalPERS) for the fiscal year ending June 30, 2012.³

To define and measure the financial stress caused by retiree benefits we developed objective and sound financial stress indicators, and then collected the following official and public information from the Districts:

- 1. The value of unfunded pension liabilities
- 2. The outstanding amount owed on any pension obligation bonds (POB)
- 3. The value of unfunded retiree health liabilities

³ The employee pension plan of Novato Fire Protection District is managed by MCERA. The plans of all other Districts are managed by CalPERS, although GGB sponsors additional pension plans that are not managed by CalPERS. The June 30, 2012 actuarial reports are the latest available from CalPERS. We use the June 30, 2012 MCERA actuarial report for the sake of comparability. The actuarial reports used for Pension Roulette were for the fiscal year ending June 30, 2011, one year earlier. These earlier reports were the latest available at the time of publication of Pension Roulette.

PART ONE – The Value and Cost of Pension Benefits

Part One of this Supplement repeats the methodology of Pension Roulette to understand the true costs of the pension and retirement benefits provided to the special districts under consideration. This information is critical to understanding the extent by which these districts add to the costs of the similar plans provided by the County and its Municipalities.

How the Value of Pensions Are Measured – Benefit Richness

The central idea in the 2004-2005 Civil Grand Jury report was that pension benefits were unnecessarily generous and were causing "extreme stress" on local government finances. In this report we use the term "Benefit Richness" to describe the value of pension benefits.

To measure Benefit Richness, the Grand Jury Report described four parameters, which together define public and private sector defined benefit pension plans. These four parameters are:

- 1. Benefit Factor A percentage that is multiplied by years of employee service.
- 2. Retirement Age The age when an employee retires at full benefits.
- 3. Final Salary Years The number of years of salary that are averaged to determine a final salary figure to use in a pension calculation.
- 4. Cost of Living Adjustment (COLA) The annual percentage pension increase.

Calculating Public Sector Defined Benefit Pensions

To use the standard formula for calculating an annual pension using these four parameters, the Benefit Factor is multiplied by the employee's years of service, and then this figure is multiplied by the final average salary. This annual pension is paid at the plan's retirement age and then the pension receives a COLA each year.

Calculating Private Sector Defined Benefit Pensions

The Grand Jury consulted with pension actuaries and developed a model of an "average" or "typical" private sector defined benefit pension plan. Employees enrolled in these plans are usually also enrolled in Social Security. In terms of the four pension parameters above this "average" private sector plan is defined as:

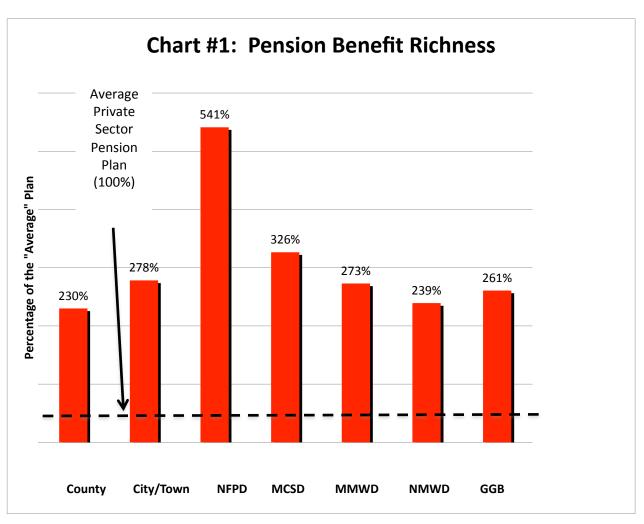
- 1. Benefit Factor = 2.1% (including Social Security)
- 2. Retirement Age = 63
- 3. Final Salary Years = 5 (Average of last five years of salary)
- 4. Cost of Living Adjustment (COLA) = 0%

Comparison of Public and Private Defined Benefit Plans

Public sector Defined Benefit pensions are characterized by the same four factors used to define the "average" private sector plan. To the extent that the factors for the public sector plans are more/less generous than the factors for the "average" private sector plan, the public sector plans will be more/less valuable. Pension Roulette determined that Public sector Defined Benefit pensions are typically more valuable than the "average" private sector Defined Benefit pension.

The Supplement's analysis has determined that the Defined Benefit pensions for the special districts under consideration are also more valuable than the "average" private sector Defined Benefit pension, more so than for the County and its Municipalities, which were the focus of Pension Roulette.

In evaluating the plans of the County's Municipalities, the average values of the plans of the eleven towns and cities were used. These values, with the values for the County, were obtained from Pension Roulette. Chart 1 shows that pension benefits offered by the districts are at least twice as valuable as an "average" private plan.



Part Two — Measuring, Rating and Comparing Financial Stress

In this part of the report, using the same methodology as was used in Pension Roulette, we define five indicators of financial stress caused by pensions and other retiree benefits. We will use these five indicators to compare the Districts to the County, to the average of the Municipalities, and also to the Town of Danville. Danville is used as a benchmark because it has similar demographics to towns in Marin County and has a sustainable public employee pension plan.

As a point of reference and to illustrate the financial stress created by a sustainable plan, it is instructive to re-state the description of the Danville plans⁴. Danville's pension benefit is a *defined contribution* plan through which the Town contributes for each employee 10% of pay and a 100% matching of employee contributions up to 5% of pay. Most employees make at least a 5% contribution, so the Town's effective pension contribution is about 15% of payroll. Danville's employees are not enrolled in Social Security.

Danville has a retiree medical benefit (OPEB), but pays almost nothing toward it. The Town used to be enrolled in a CalPERS retiree health plan but later dropped out. There are a few retirees who still receive this benefit but only until they reach the age of Medicare eligibility. Consequently, today Danville is paying on average only \$16 per month per retiree for medical benefits...practically zero.

Because Danville has no defined benefit pension and a very inexpensive OPEB plan, it has no pension or OPEB debt. A further consequence is that no portion of its current year spending is dedicated to servicing pension or OPEB debt.

Danville contracts out for its police and fire services. The Town contracts with the Contra Costa County Sheriff's Department for police services and with the San Ramon Valley Fire Protection District for fire services. The police and fire personnel serving Danville have pensions through their employers but Danville does not directly contribute to their pension or OPEB benefits.

Danville has no difficulty in recruiting and retaining good miscellaneous employees. This is attributed to attractive salaries, benefits that are perceived to be good, a good work environment, and an excellent and experienced Town Manager. The miscellaneous employees of Danville have chosen not to unionize. Most of Danville's employees come from the private sector where it is unlikely that they have experience with defined benefit pensions.

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⁴ This is repeated from Pension Roulette.

⁵ Per conversations by authors of Pension Roulette with Denise Phoenix (Danville HR Manager) and with Candace Andersen (former Danville Mayor and now a Contra Costa County Supervisor).

Danville is a successful Bay Area town that does not offer a defined benefit pension or other significant post-employment benefits (OPEB) to its employees. This shows that it is possible for our local governments to provide a retirement benefit plan that can attract and retain good employees without causing financial stress.

Five Indicators of Financial Stress

We are now ready to explain the five indicators of financial stress that we will apply to the Districts:

- 1. Earned Retiree Benefits Funding Ratio The sum of the present values of pension and OPEB benefits earned to date by employees plus Pension Obligation Bonds, divided by dedicated assets. Following CalPERS, the present value of pension benefits is calculated in three ways: with 7.5%, 4.82%, and 2.98% assumed rates of return
- 2. Retiree Debt (\$ amount) For pensions, the difference between the present value of earned pension benefits and the Market Value of pension plan assets. The present values are calculated with a 7.5%, 4.82%, and 2.98% discount rates. For Pension Obligation Bonds, the outstanding balances on such bonds. For OPEB, the difference between the present value of earned benefits and the value of dedicated assets
- 3. Employer Contribution for Current Year Service (% of payroll) The employer's annual contribution for the present value of benefits earned in the current year by the employees. This amount is divided by the corresponding payroll and, thus, is expressed as a percent of payroll
- 4. Employer Contribution for Past Service (% of payroll) The sum of the Employer's annual contribution to service Retiree Debt plus OPEB pay-as-you-go cash payments. This amount is divided by the corresponding payroll and thus is expressed as a percent of payroll
- Retiree Spending (\$ amount) The Employer's total spending on Retiree benefits including contributions for Current Year Service and Past Service. This amount is expressed as an absolute dollar amount

Indicator 1: Earned Retiree Benefits

We focus first on Earned Retiree Benefits. The present value⁶ of pension and OPEB benefits earned by employees to date represents a measure of the value of benefits that have been earned in the past. Presumably, those benefits should have been funded through past employer and employee contributions and investment earnings. However, there are a number of situations that can create a shortfall: benefit improvements that are funded over a number of years such that the funding is not yet completed, investment earnings shortfalls, and other actuarial losses (i.e., experience of the plan that differ from expected with accompanying higher-than-expected utilization of benefits and asset drain). For mature plans, such as those of the plans of the Districts (and similarly for the County and its Municipalities), the shortfalls should not be substantial because benefit improvements should have had sufficient time to be substantially paid off and both investment earnings shortfalls and other actuarial losses should, on average, be offset by investment earnings gains and actuarial gains.

In its actuarial reports for June 30, 2012 CalPERS, which manages the pension funds of most districts in Marin (as well as most municipalities), reported pension liabilities based on a 7.5%, a 4.82%, and a 2.98%⁷ discount rate assumption.⁸ The Novato Fire Protection District (NFPD) pension is managed by the Marin County Employee Retirement Association (MCERA) and MCERA reports its pension liabilities using only a 7.5% discount rate assumption. In this report we have estimated the NFPD pension liabilities (as well as those of other MCERA managed plans) assuming both a 4.82% and a 2.98% discount rate assumption.⁹

Chart #2 shows the "Earned Retiree Benefits Funding Ratio" (assets/liabilities) for the Districts, as well as for Danville, Marin County and the city/town averages for purpose of

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⁶ Present Value is a standard financial tool for calculating the value in the present of a series of future cash flows which have a known potential for earning investment income.

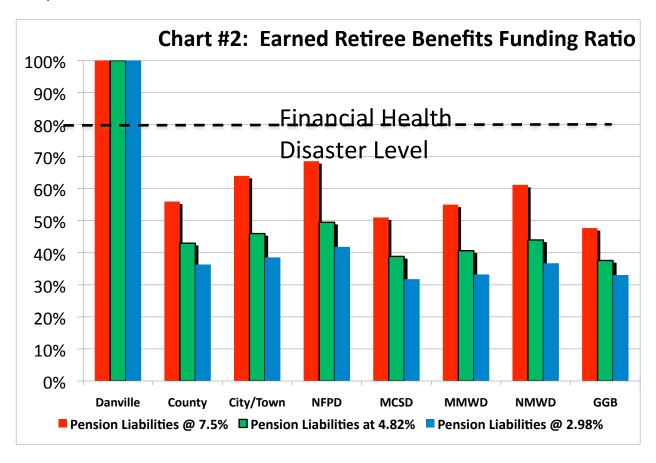
⁷ The 12-year average yield, through FYE 2011, of the CalPERS plans has been approximately 4.8%.

⁸ CalPERS calls the latter a "Hypothetical Termination Liability" [HTL]. The HTL is a recalculation of the PV of earned pension benefits using a 2.98% discount rate <u>and</u> adding a 7% contingency factor for "unforeseen improvements in mortality" (retirees living longer and collecting more pension.) The HTL is the price at which any client government can terminate its pension plan and leave with CalPERS the responsibility for paying the earned pensions of its employees.

⁹ For the Municipalities that are CalPERS clients the ratio of pension liabilities calculated with a 2.98% compared to 7.5% discount rate is about 1.74. We have used this 1.74 factor in adjusting the numbers for the County and San Rafael. When Pension Roulette was published, the HTL was calculated using a 4.82% discount rate.

comparison. Earned pension benefits are calculated three ways: with a 7.5% discount rate assumption (plausible but optimistic in today's economy), a 4.82% discount rate assumption (plausible but conservative), and a 2.98% discount rate (consistent with the conservative rate that CalPERS would assume for an employer terminating its pension with CalPERS).

One measure of the health of a pension plan is its funding ratio. Conventional wisdom suggests that a funding ratio of 80% the lower bound for a healthy plan. However, the conventional pension funding ratio ignores the additional and real costs of Pension Obligation Bonds (POBs), Side Fund debt owed to CalPERS and Other Post Retirement Benefit (OPEB) liabilities, which can be as large, or larger, than pension liabilities. Our report considers all pension and other liabilities pertaining to retiree benefits for a comprehensive and more accurate indicator of financial health.



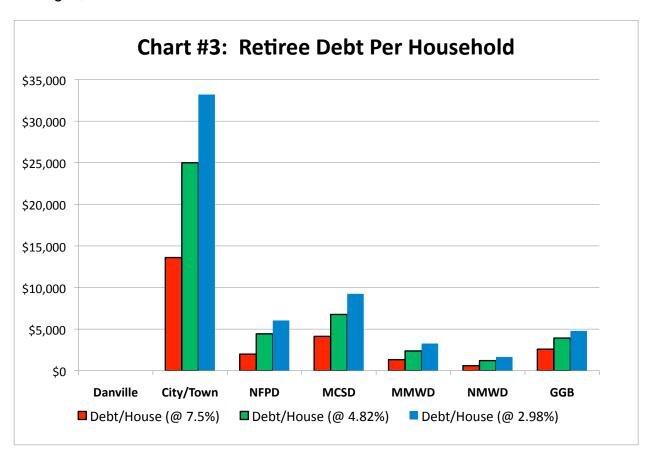
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¹⁰ An 80% funding ratio is the signal for private sector pension plans that funding must be increased. If a private sector plan falls short of this level, then the plan sponsor must make adjustments to bring the funding ratio up to 80%. In the public sector, where plans are generally mature (i.e., they have been in place for a long time and benefit improvements should have been substantially funded), it can be argued that a funding ratio much higher than 80% is appropriate.

Pension Roulette, which focused on the County and its Municipalities, noted that the results were alarming. It noted that neither the County nor any of its Municipalities reached the 80% funding threshold. The results are similarly alarming for the Districts. None of the Districts' plans reach the 80% threshold, and, when using the more conservative 4.82% or 2.98% investment return assumptions, none even achieves a 50% funding ratio. At funding ratios as low as these, a government risks a financial "death spiral" if downturns in financial markets, poor investment returns or actuarial errors further increase debt levels beyond the point of serviceability. At this point, a government is bankrupt.

Indicator 2: Retiree Debt

Next we focus on Retiree Debt, which is comprehensively defined to include all of the debt associated with retiree benefits: unfunded pension liabilities, Pension Obligation Bonds (POBs), Side Fund debt and unfunded OPEB. Chart #3 shows Retiree Debt per Household¹¹ for each District and compares the Districts to each other, to the city/town averages, and to Danville.



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¹¹ GGB maintains a single-employer pension plan that is not managed by CalPERS. The GGB financial statements did not provide information allowing calculation of any unfunded liability for that plan. Therefore, those liabilities are omitted from the Retiree Debt results.

In Pension Roulette, we have reported the combined liabilities of the county and the towns. But every household in Marin is responsible not only for their town's retirement liabilities and the County's debt, but also for the other debts of the districts that provide services (water, sewer, mosquito abatement, etc.). The average debt per Marin household (County and Towns only) is about \$13,774 using a 7.5% discount rate, \$25,271 using a 4.82% discount rate, and \$33,200 using a 2.98% discount rate. The additional amounts for Districts cannot reasonably be determined on an individual basis in that there are hundreds of combinations of County/Municipality/District(s) in Marin. Consequently, the best this Supplement can do is give the reader a notion of how much greater the debt would be if the debt associated with the Districts were included. This is illustrated through the table below.

The table provides the actual debt for the Districts, based on both a 7.5% return on pension investments, a more conservative 4.82% return, and the current CalPERS Hypothetical Termination Liability assumption of 2.98%. Additionally, the County Retiree debt amount, with and without the city/town averages, are shown.

			Table 8	3: Retiree D	ebt Per Hou	sehold	
If you li	ve in>	City/Town Average	Novato Fire	Marinwood CSD	MMWD	North Marin Water	GGB
And if pension	Town Retiree Debt	\$5,159					
liabilities are discounted @	County Retiree Debt	\$8,181					
7.5% then	Total Retiree Debt per household	\$ 13,340	\$1,992	\$4,129	\$1,330	\$606	\$2,591
Or if pension	Town Retiree Debt	\$10,550					
liabilities are discounted @	County Retiree Debt	\$14,186					
4.82% then	Total Retiree Debt per household	\$ 24,736	\$4,433	\$6,765	\$2,376	\$1,216	\$3,923
Or if pension	Town Retiree Debt	\$14,421					
liabilities are discounted	County Retiree Debt	\$18,515					
@2.98% then	Total Retiree Debt per household	\$ 32,936	\$6,041	\$9,241	\$3,266	\$1,645	\$4,786

To get an understanding of how this would apply to the situation of an individual taxpayer:

- If an individual lives in a city or town, start with the amount of Town Retiree Debt in the column marked City/Town Average (\$5,159 at the 7.5% return on investment, \$10,550 at the 4.82% return on investment, or \$14,421 at the 2.98% return on investment). Then add the County Retiree debt (\$8,181 at the 7.5% return on investment, \$14,186 at the 4.82% return on investment, or \$18,515 at the 2.98% return on investment). Next, consider the five columns applicable to the Districts. The debt figures range from \$606 to \$4,129 at the 7.5% return on investment, from \$1,216 to \$6,765 at the 4.82% return on investment, and from \$1,645 to \$9,241 at the 2.98% return on investment. Use these amounts as a basis for estimating how much more would be added for the individual, recognizing that the individual's actual situation will depend upon how many Districts which pertain to the individual.
- If the individual does not live in a city or town, start with the County Retiree debt for the Total Retiree debt (\$8,181 at the 7.5% return on investment, \$14,186 at the 4.82% return on investment, or \$18,515 at the 2.98% return on investment). Next, consider the five columns applicable to the Districts. The debt figures range from \$606 to \$4,129 at the 7.5% return on investment, from \$1,216 to \$6,765 at the 4.82% return on investment, and from \$1,645 to \$9,241 at the 2.98% return on investment. Use these amounts as a basis for estimating how much would be added for the individual, recognizing that the individual's actual situation will depend upon how many Districts which pertain to the individual.

The totals obtained using the above methods will likely underestimate the total retiree debt amount as they do not include other districts, particularly school districts, to which the individual pays taxes.

Chart #4 on the following page is another view of Retiree Debt but this time viewed as a percentage of an entity's Total Debt.

Retiree Debt is a financial obligation for past services. It is the cost of obligations for services rendered in the past that should have been paid for in the past but were not. To require current and future residents to pay for public services provided in the past is not only unfair, it clearly demonstrates that a benefit plan is broken and needs to be repaired or replaced.

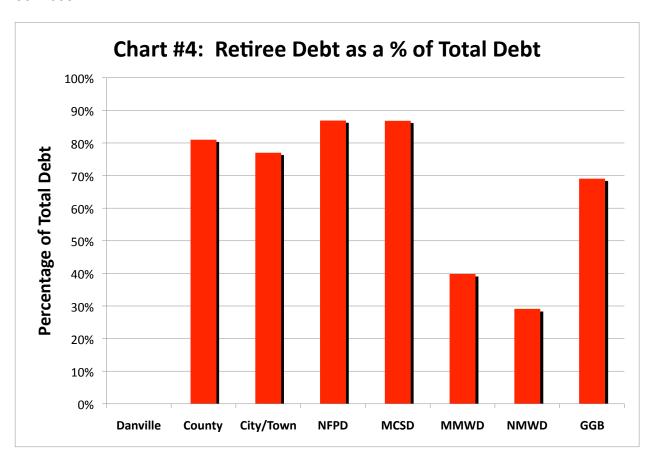
"Retiree Debt as a percentage of Total Debt" measures how much of a community's existing debt—being serviced by current residents—is comprised of debt for past services rendered to past residents. This debt is a measure of social inequity.¹²

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¹² Total Debt is defined as Retiree Debt plus Non-Retiree Debt. The latter equals Total Liabilities (for governmental activities from the Statement of Net Assets) less any retiree debt reported on the Statement of Net Assets (i.e. pension obligation bonds and the part of OPEB unfunded liability called "Net OPEB Obligations".)

Pension Roulette demonstrated the troubling fact that the County and its cities and towns are constrained by a substantial level of Retiree Debt, over 80% for the County and averaging about 75% for the cities and towns. The Supplement shows that this is true as well for the Districts, where the level of Retiree Debt ranges from a low of about 30% to a high of about 85%.

There are two aspects to this indicator: constraint and fairness. A high ratio of Retiree Debt to Total Debt will be constraining for some entities with high levels of overall debt. These entities already owe so much money they can't borrow any more. Other entities with low overall debt levels will not be constrained from borrowing more but it will still be unfair to current residents if they are required to pay for debt incurred for past employee services.



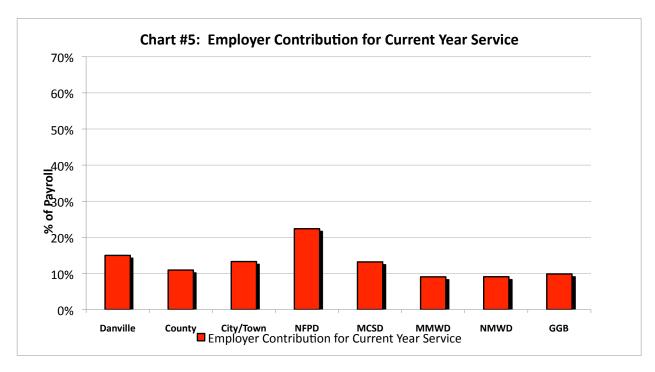
Indicators 3 and 4: Employer Contributions

The next indicator, Indicator 3, is the amount of Employer Contributions for Current Year Service compared to the Employer Contribution for Past Service. The former measures the employer's (local government's) annual pension contribution for the value of pension benefits earned in the current year by employees, expressed as a percentage of payroll.¹³

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¹³ In actuarial terms, this is the pension "Normal Cost"

Chart #5 compares Employer Contribution for Current Year Service for the County, the city/town average, and Danville, in addition to the Districts. Pension Roulette noted that there is very little variation between the County and its cities and towns. Those values range from 10% to17% of payroll and there was no significant difference between the town of Danville and the Marin towns. The differences in levels of Employer Contribution for Current Year Service are much greater for the Districts. They range from a low of about 9% for MMWD and North Marin Water to a high of about 22% for Novato Fire. Still, the Districts' levels of Employer Contribution for Current Year Service are not hugely variable, typically no more than +/-7% from the 15% level of Danville.

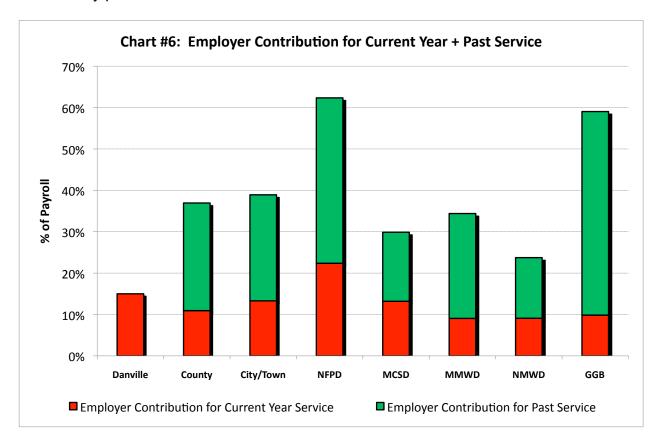


Indicator 4 shows up on Chart #6 "Employer Contribution for Current Year plus Past Service" and is an extension of Chart #5. It compares the same employer contribution for Current Year Service, and then adds the contribution for Past Service. Danville's contribution level remains unchanged at 15% of payroll. Since Danville has no Retiree Debt and no OPEB expense, its contribution for Past Service is nil. Pension Roulette noted that total contributions, including the Past Service contribution, were extremely variable ranging from lows in the 17-19% level (for Tiburon and Belvedere) to an astonishing 64% for San Rafael, with an average at about 30%. Total contributions for the Districts are similarly extremely variable. They range from a low of about 23% for North Marin Water to highs of 59% for GGB.

It is inefficient when an entity pays a much higher portion of payroll for benefits than corresponding entities competing in the same labor market. And it is unfair when a large

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part of the public payroll paid by current residents is dedicated to paying for services received by past residents.

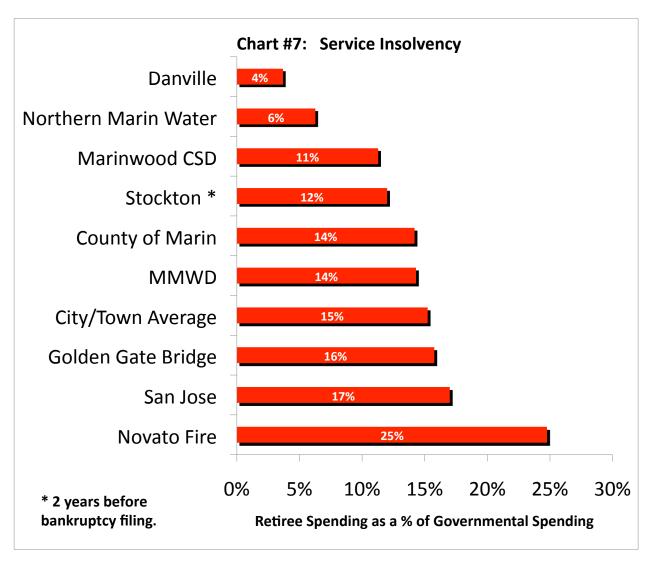


Indicator 5: Retiree Spending as a Percentage of Governmental Activities Spending

Pension Roulette noted that pensions and retiree benefits are complex subjects that are difficult to understand. In Pension Roulette, and in this Supplement, we relied on public information to define and measure the subject from different perspectives. We've looked at funding ratios, debt per household, debt as a portion of total debt and retiree spending as a percent of payroll. But too little funding or too much debt or too large a portion of payroll are finally just indicators and predictors of the real problem: too much of our government revenues are spent on retiree benefits leaving too little to be spent on everything else. "Service Insolvency" is the condition of a government that does not have sufficient money available to provide the basic services for which that government was created. A high level of retiree spending is a predictor of Service Insolvency. So the big question for residents of Marin is "What level of retiree spending causes Service Insolvency?"

Chart #7 answers that question. This chart ranks the Town of Danville, the County, the city/town average and the Districts based on the percentage of governmental activities spending that is dedicated to retiree benefits. The difference between best and worst is staggering. The Town of Danville dedicates just 4% of governmental spending to retiree benefits while Novato Fire spends an astonishing 25%.

In addition to Danville, Chart #7 includes two additional benchmark towns: Stockton and San Jose. The City of Stockton had a 12% retiree spending rate two years prior to its bankruptcy filing (in June 2012). So, a 12% retiree spending rate may not be comfortable or sustainable if a town faces unexpected financial challenges. The City of San Jose is famously at the forefront of pension reform. In 2012, 70% of its voters approved a referendum for pension reform intended to stop the rapid growth of retiree spending which was crowding out basic government services. But this new pension reform law is tied up in litigation and not yet implemented. San Jose's retiree spending increased to 17% in the fiscal year ending June 30, 2012.



Here's where we get back to the question that prompted this Supplement to Pension Roulette: Was the (Golden Gate Bridge) toll increase an example of "Service Insolvency" that was identified in Pension Roulette? We will answer our question with a another question: With retiree spending for the Golden Gate Bridge 16% of its total spend, could the Golden Gate Bridge do without its toll increases if it didn't need to spend the 16% on retiree spending?

Concluding Statement and Call to Action

CSPP has long asserted that the reforms being undertaken in both our County and towns are neither meaningful nor sufficient. This report validates our opinion.

The Town of Danville, in Contra Costa County, has shown that it is possible to attract and retain qualified employees and to provide a high level of local government services without incurring the excessive expense, debt and risk of traditional public sector pension plans.

What is the next step? In Marin County, this is virtually the billion dollar question. To answer it, each and every resident needs to thoughtfully consider the following questions:

- Are our elected officials the "right people" at this time to deal with the crises and work to resolve them with meaningful pension reform?
- Do the challengers who wish to be elected in upcoming races have the courage and ability to work for change?
- Are we willing to push this debt onto the shoulders of our children and grandchildren in order to pay for services we receive today at the possible expense of future services for their generation?
- Do our elected officials today deserve our support when they ask for increases in taxes on November's ballot, or is it time to send them a strong message that more taxes will not be forthcoming unless and until meaningful reform is adopted?
- Are we willing, as residents and taxpayers, to take the time from our busy lives to fully understand this pension crisis and hold people accountable for making the difficult changes necessary to preserve our way of life for future generations?

CSPP has given much time and consideration to possible solutions to this problem. Before addressing solutions, however, we felt that it was necessary to fully outline the problems facing our County and each of our hometowns. We have put months into this study, making sure our assertions are correct and verifiable.

It is our hope that both residents and our elected officials will acknowledge and accept the gravity of the situation, will agree on the same set of facts as outlined in this study, and will work together to implement solutions. It can be done – but it will require fortitude and willing participants.

APPENDIX

Present Value of Pension Benefits Eamed (@ 7.5% Discount Rate) Present Value of Pension Benefits Eamed (@ 4.2% Discount Rate) Present Value of Pension Benefits Eamed (@ 2.98% Discount Rate) Pension Obligation Bonds (balance owed) Persent Value of OPEB Benefits Eamed Market Value of Assets (for pensions) Market Value of Assets (for pensions) Market Value of Assets (for OPEB) Market Value of Assets (for OPEB) Market Value of Assets (for OPEB) Non-Retiree Debt (pension at 7.5% discount rate) (Note 2) Retiree Debt (pension at 7.5% discount rate) (Note 2) Retiree Debt (pension at 7.5% discount rate) (Note 2) Retiree Debt (pension at 7.5% discount rate) (Note 2) Retiree Debt (pension at 7.5% lote 4) Pop Debt (Service Cost (Note 4) Pop Bobet Service Cost (Note 4) Payroll Retiree Debt Per Outribution for Past Service (Note 6) Retiree Spending (Note 7) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt at More Total Debt (pension @ 7.5% discount) Retiree Debt at More Total Debt (pension @ 7.5% discount) Retiree Debt at More Total Debt (pension @ 7.5% discount) Retiree Debt at More Total Debt (pension @ 7.5% discount) Retiree Debt at More Total Debt (pension @ 7.5% discount) Retiree Debt at More Total Debt (pension @ 7.5% discount)			۵	Danville	County	City/Town Average	Novato Fire		Marinwood	MMWD		Northern	ဇ	Golden Gate
Present Value of Pension Benefits Earned (@ 75% Discount Rate) Present Value of Pension Benefits Earned (@ 42% Discount Rate) Present Value of Pension Benefits Earned (@ 42% Discount Rate) Present Value of Pension Benefits Earned (@ 2.98% Discount Rate) Pension Obligation Bonds (balance owed) Present Value of Assets (for pensions) Market Value of Assets (for DeEB) Non-Retiree Debt (pension at 7.5% discount rate) (Note 2) Retiree Debt (pension at 7.5% (Note 3) Retiree Debt (pension at 7.5%) (Note 3) Household Count (Note 8) POB Debt Service Cost (Note 4) OPEB Actual Employer Contribution for Current Year of Service (Note 5) Employer Contribution for Past Service (Note 6) Retiree Spending (Note 7) Payroll Governmental Activities Spending (Note 8) Earned Retiree Benefits Funding Ratio (pension @ 2.98% Discount) Earned Retiree Benefits Funding Ratio (pension @ 2.98% discount) Retiree Debt Per Household (pension @ 2.98% discount) Retiree Debt at 4% of Total Debt (pension @ 2.98% discount) Retiree Debt at 8% of Total Debt (pension @ 2.98% discount) Retiree Debt at 8% of Total Debt (pension @ 2.98% discount) Retiree Debt at 8% of Total Debt (pension @ 2.98% discount) Retiree Debt at 8% of Total Debt (pension @ 2.98% discount) Employer Contribution for Dest Reservice (% of Payroll) Employer Contribution for Dest Service (% of Payroll)					(Note A)	(Note A)			8			Marin Water		Bridge
Present Value of Pension Benefits Earned (@ 4.82% Discount Rate) Present Value of Pension Benefits Earned (@ 2.98% Discount Rate) Present Value of Assets (for pension Benefits Earned (@ 2.98% Discount Rate) Present Value of Assets (for pensions) Market Value of Assets (for pensions) Market Value of Assets (for OPEB) Mon-Retiree Debt (pension at 7.5% disoucnt rate) (Note 2) Retiree Debt (pension at 7.5% disoucnt rate) (Note 2) Retiree Debt (pension at 7.5%) (Note 3) Household Count (Note 8) POB Debt Service Cost (Note 8) POB Debt Service Cost (Note 8) POB Debt Service Cost (Note 4) OPEB Actual Employer Contribution for Current Year of Service (Note 5) Employer Contribution for Past Service (Note 6) Retiree Spending (Note 7) Payroll Governmental Activities Spending (Note 7) Payroll Earned Retiree Benefits Funding Ratio (pension @ 2.98% Discount) Earned Retiree Debt Per Household (pension @ 2.98% discount)		Present Value of Pension Benefits Earned (@ 7.5% Discount Rate)	ş		\$ 1,436,008,295	\$ 88,568,725	\$ 143,051,034	034 \$	11,767,452	\$ 180,9	180,984,198	\$ 34,616,392	s.	327,124,698
Present Value of Pension Benefits Earned (@ 2.28% Discount Rate) Pension Obligation Bonds (balance owed) Present Value of Assets (for pensions) Market Value of Assets (for pensions) Market Value of Assets (for pensions) Market Value of Assets (for OPEB) Mon-Retiree Debt (pension at 7.5% discount rate) (Note 2) Retiree Debt (pension at 7.28% discount rate) (Note 2) Retiree Debt (pension at 7.28% discount rate) (Note 2) Retiree Debt (pension at 7.28%) (Note 3) Household Count (Note 8) POB Debt Service Cost (Note 4) OPEB Actual Employer Contribution for Current Year of Service (Note 5) Employer Contribution for Past Service (Note 6) Retiree Spending (Note 7) Payroll Governmental Activities Spending (Note 8) Employer Contribution for Spension @ 2.28% Discount) Earned Retiree Benefits Funding Ratio (pension @ 2.28% Discount) Earned Retiree Debt Per Household (pension @ 2.28% discount)	ш	Present Value of Pension Benefits Earned (@ 4.82% Discount Rate)	s		\$ 2,053,491,862	\$ 126,716,750	\$ 204,562,979	\$ 626	16,827,456	·s	258,807,403	\$ 49,501,441	s,	467,788,318
Pension Obligation Bonds (balance owed) Present Value of OPEB Benefits Eamed Market Value of Assets (for pensions) Market Value of Assets (for OPEB) Non-Retiree Debt (persion at 7.5% disoucnt rate) (Note 2) Retiree Debt (pension at 4.82% disoucnt rate) (Note 2) Retiree Debt (pension at 4.82% disoucnt rate) (Note 2) Retiree Debt (pension at 4.82% disoucnt rate) (Note 2) Total Debt (pension at 7.8%) (Note 3) POB Debt Service Cost (Note 4) OPEB Actual Employer Contribution for Past Service (Note 6) Employer Contribution for Past Service (Note 6) Retiree Spending (Note 7) Payroll Governmental Activities Spending (Note 8) Eamed Retiree Benefits Funding Ratio (pension @ 2.98% Discount) Eamed Retiree Debt Per Household (pension @ 2.98% discount)	~	Present Value of Pension Benefits Earned (@ 2.98% Discount Rate)	Ş		\$ 2,498,654,433	\$ 154,109,582	\$ 245,082,039	33 \$	21,581,732	ş	325,080,099	\$ 59,976,710	s.	558,985,670
Present Value of OPEB Benefits Eamed Market Value of Assets for pensions) Market Value of Assets for pensions) Market Value of Assets for pensions at 5.3% disouort rate) (Note 2) Retiree Debt (pension at 7.3% disouort rate) (Note 2) Retiree Debt (pension at 7.3% disouort rate) (Note 2) Total Debt (pension at 7.3% disouort rate) (Note 2) Total Debt (pension at 7.3%) (Note 3) Household Count (Note 8) POB Debt's service Cost (Note 4) OPEB Actual Employer Contribution Made Employer Contribution for Past Service (Note 6) Retiree Spending (Note 7) Payroll Governmental Activities Spending (Note 8) Eamed Retiree Benefits Funding Ratio (pension @ 2.3% Discount) Eamed Retiree Debt Per Household (pension @ 2.3% discount) Retiree Debt Per Household (pension @ 2.9% discount)	0	Pension Obligation Bonds (balance owed)	\$		\$ 110,185,000	\$ 2,999,300	\$	\$ -		\$. \$	ş	
Market Value of Assets (for pensions) Market Value of Assets (for OPEB) Non-Retiree Debt (pension at 7.5% disoucnt rate) (Note 2) Retiree Debt (pension at 7.5% disoucnt rate) (Note 2) Retiree Debt (pension at 7.5% disoucnt rate) (Note 2) Retiree Debt (pension at 7.5%) (Note 3) Household Count (Note B) ODEB Actual Employer Contribution Made Employer Contribution for Current Year of Service (Note 5) Retiree Spending (Note 7) Retiree Spending (Note 7) Retiree Spending (Note 7) Retiree Benefits Funding Ratio (pension @ 7.5% Discount) Earned Retiree Benefits Funding Ratio (pension @ 2.98% Discount) Earned Retiree Benefits Funding Ratio (pension @ 2.98% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount)	Σ	Present Value of OPEB Benefits Earned	\$		\$ 382,720,000	\$ 8,996,140	\$ 16,751,185	185 \$	4,422,797	\$ 38,9	38,989,000	\$ 3,470,834	ş	196,051,000
Market Value of Assets (for OPEB) Non-Retiree Debt (pension at 7.5% disoucnt rate) (Note 2) Retiree Debt (pension at 7.5% disoucnt rate) (Note 2) Retiree Debt (pension at 4.8.0% disoucnt rate) (Note 2) Retiree Debt (pension at 4.8.0% disoucnt rate) (Note 2) Total Debt (pension at 7.5%) (Note 3) Household Count (Note B) ODEB Actual Employer Contribution Made Employer Contribution for Current Year of Service (Note 5) Retiree Spending (Note 7) Retiree Spending (Note 7) Retiree Benefits Funding Ratio (pension @ 7.5% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.5% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.3% discount) Retiree Debt Per Household (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount)		Market Value of Assets (for pensions)	s.		\$ 1,087,619,409	\$ 62,738,931	\$ 109,600,000	\$ 000	8,261,763	\$ 116,3	116,327,726	\$ 23,311,646	s.	224,423,546
Non-Retiree Debt (Note 1) Retiree Debt (pension at 7.3% disournt rate) (Note 2) Retiree Debt (pension at 4.87% disournt rate) (Note 2) Retiree Debt (pension at 4.87% disournt rate) (Note 2) Total Debt (pension at 7.5%) (Note 3) Household Count (Note 8) POB Debt Service Cost (Note 8) OPEB Actual Employer Contribution Made Employer Contribution for Current Year of Service (Note 5) Retiree Spending (Note 7) Retiree Spending (Note 7) Retiree Debt Per Household (pension @ 7.3% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.3% Discount) Earned Retiree Benefits Funding Ratio (pension @ 2.93% discount) Retiree Debt Per Household (pension @ 2.93% discount) Retiree Debt Per Household (pension @ 2.93% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount) Retiree Debt at % of Total Debt (pension @ 7.3% discount)	۵	Market Value of Assets (for OPEB)	ş		. \$	\$ 1,319,791	ş	٠,		\$ 4,7	4,725,000		s,	25,217,000
Retiree Debt (pension at 7.3% disoucnt rate) (Note 2) Retiree Debt (pension at 4.8.2% disoucnt rate) (Note 2) Retiree Debt (pension at 4.8.2% disoucnt rate) (Note 2) Total Debt (pension at 7.5%) (Note 3) Household Count (Note 8) POB Debt Service Cost (Note 8) OPEB Actual Employer Contribution Made Employer Contribution for Current Year of Service (Note 5) Employer Contribution for Current Year of Service (Note 5) Retiree Spending (Note 7) Payroll Governmental Activities Spending (Note 8) Earned Retiree Benefits Funding Ratio (pension @ 7.5% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.3% discount) Retiree Debt Per Household (pension @ 2.98% discount) Retiree Debt Per Household (pension @ 2.98% discount) Retiree Debt at % of Total Debt (pension @ 2.98% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount)	_	Non-Retiree Debt (Note 1)	s,	15,161,791	\$ 199,963,448	\$ 10,777,469	\$ 7,584,947	347 \$	1,205,689	٠.	149,507,755	\$ 35,969,493	Ϋ́	122,587,000
Retiree Debt (pension at 4.82% disount rate) (Note 2) Retiree Debt (pension at 7.36% disount rate) (Note 2) Total Debt (pension at 7.36% disount rate) (Note 2) Household Count (Note 8) POB Debt Service Cost (Note 4) OPEB Actual Employer Contribution Made Employer Contribution for Past Service (Note 6) Retiree Spending (Note 7) Retiree Spending (Note 7) Payroll Governmental Activities Spending (Note 8) Earned Retiree Benefits Funding Ratio (pension @ 7.5% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt Aff % of Total Debt (pension @ 7.5% discount) Retiree Debt Aff % of Total Debt (pension @ 7.5% discount) Retiree Debt Aff % of Total Debt (pension @ 7.5% discount) Retiree Debt Aff % of Total Debt (pension @ 7.5% discount) Retiree Debt Aff % of Total Debt (pension @ 7.5% discount) Retiree Debt Aff % of Total Debt (pension @ 7.5% discount) Retiree Debt Aff % of Total Debt (pension @ 7.5% discount) Retiree Debt Aff % of Total Debt (pension @ 7.5% discount) Retiree Debt Aff % of Total Debt (pension @ 7.5% discount) Retiree Debt Aff % of Total Debt (pension @ 7.5% discount) Retiree Debt Aff % of Total Debt (pension @ 7.5% discount) Retiree Debt Aff % of Total Debt (pension @ 7.5% discount) Retiree Debt Aff % of Total Debt (pension @ 7.5% discount) Retiree Debt Aff % of Total Debt (pension @ 7.5% discount)	8	Retiree Debt (pension at 7.5% disoucnt rate) (Note 2)	\$		\$ 841,293,886	\$ 36,505,444	\$ 50,202,219	\$ 617	7,928,486	ş,	98,920,472	\$ 14,775,580	ş	273,535,152
Retiree Debt (pension at 7.38% disount rate) (Note 2) Total Debt (pension at 7.38% livote 3) Household Count (Note B) POB Debt Service Cost (Note 4) OPEB Actual Employer Contribution Made Employer Contribution for Past Service (Note 5) Employer Contribution for Past Service (Note 6) Retiree Spending (Note 7) Payroll Governmental Activities Spending (Note 8) Earned Retiree Benefits Funding Ratio (pension @ 7.5% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt Activities (Portion @ 2.9% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount)	_	Retiree Debt (pension at 4.82% disoucnt rate) (Note 2)	ş		\$ 1,458,777,453	\$ 74,653,469	\$ 111,714,164 \$	164 \$	12,988,490	₹5.	176,743,677	\$ 29,660,629	₹S.	414,198,772
Total Debt (pension at 7.5%) (Note 3) Household Count (Note B) POB Debt Service Cost (Note 4) OPEB Actual Employer Contribution Made Employer Contribution for Past Service (Note 5) Employer Contribution for Past Service (Note 6) Retiree Spending (Note 7) Payroll Governmental Activities Spending (Note 8) Earned Retiree Benefits Funding Ratio (pension @ 7.5% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.5% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt As % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount)	_	Retiree Debt (pension at 2.98% disoucnt rate) (Note 2)	ş		\$ 1,903,940,024 \$	\$ 102,046,300 \$	\$ 152,233,224 \$	224 \$	17,742,766	٠,	243,016,373 \$	\$ 40,135,898	٠,	505,396,124
Household Count (Note 8) POB Debt Service Cost (Note 4) OPEB Actual Employer Contribution Made Employer Contribution for Current Year of Service (Note 5) Employer Contribution for Past Service (Note 6) Retiree Spending (Note 7) Payroll Governmental Activities Spending (Note 8) Earned Retiree Benefits Funding Ratio (pension @ 7.5% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.5% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount)	ပ	Total Debt (pension at 7.5%) (Note 3)	\$	15,161,791	15,161,791 \$ 1,041,257,334	\$ 47,282,913 \$	\$ 57,787,166	166 \$	9,134,175 \$		248,428,227 \$	\$ 50,745,073	Ϋ́	396,122,152
OPB Debt Service Cost (Note 4) OPEB Actual Employer Contribution Made Employer Contribution for Current Year of Service (Note 5) Employer Contribution for Past Service (Note 6) Retiree Spending (Note 7) Payroll Governmental Activities Spending (Note 8) Earned Retiree Benefits Funding Ratio (pension @ 7.5% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.5% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount)		Household Count (Note B)		15,175	102,832	2/0/2		25,200	1,920		74,400	24,400		105,588
OPEB Actual Employer Contribution Made Employer Contribution for Current Year of Service (Note 5) Employer Contribution for Current Year of Service (Note 6) Retiree Spending (Note 7) Payroll Governmental Activities Spending (Note 8) Earned Retiree Benefits Funding Ratio (pension @ 7.5% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.29% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.29% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt Per Household (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount) Retiree Debt at % of Total Debt (pension @ 7.5% discount)	S	POB Debt Service Cost (Note 4)	\$		\$ 7,136,499	\$ 193,540	\$	٠		ş			ş	
Employer Contribution for Current Year of Service (Note 5) Employer Contribution for Past Service (Note 6) Retiree Spending (Note 7) Payroll Governmental Activities Spending (Note 8) Earned Retiree Benefits Funding Ratio (pension @ 7.5% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.2% Discount) Earned Retiree Benefits Funding Ratio (pension @ 7.2% discount) Retiree Debt Per Household (pension @ 7.5% discount)	0	OPEB Actual Employer Contribution Made	\$		\$ 11,812,000 \$	\$ 415,291 \$	\$ 1,248,545	545 \$	108,300 \$		3,167,000 \$	\$ 160,725	ş	15,405,000
0 2 %	_	Employer Contribution for Current Year of Service (Note 5)	ş	1,115,150	\$ 19,188,425 \$	\$ 1,206,432 \$	\$ 2,089,593	593 \$	228,843 \$		2,137,690 \$	\$ 393,758	ş	4,019,761
	~	Employer Contribution for Past Service (Note 6)	\$		\$ 46,243,381 \$	\$ 2,325,006 \$	\$ 3,730,783	783 \$	289,324 \$		5,978,799 \$	\$ 635,015	\$	20,056,797
	ပ	Retiree Spending (Note 7)	\$	1,115,150	\$ 65,431,806 \$	\$ 3,531,438	\$ 5,820,376	376 \$	518,167	\$	8,116,489 \$	\$ 1,028,773	Ş	24,076,558
	ш	Payroll	\$	7,434,332 \$	\$ 175,396,940	\$ 9,073,683	\$ 9,336,248	248 \$	1,734,044	Ş	23,597,433 \$	\$ 4,332,723	ş	40,780,785
	S	Governmental Activities Spending (Note 8)	\$	30,231,028	\$ 461,103,484	\$ 23,177,446	\$ 23,503,892	892 \$	4,592,674	ş	56,744,298	\$ 16,405,522	₹.	152,715,000
		Earned Retiree Benefits Funding Ratio (pension @ 7.5% Discount)		100%	26%	64%		%69	21%		22%	91%		48%
	U	Earned Retiree Benefits Funding Ratio (pension @ 4.82% Discount)		100%	43%	46%		20%	39%		41%	44%		38%
	ಠ	Earned Retiree Benefits Funding Ratio (pension @ 2.98% Discount)		100%	36%	39%		42%	32%		33%	37%		33%
	_	Retiree Debt Per Household (pension @ 7.5% discount)	Ş		\$ 8,181	\$ 5,159	\$	\$ 766'1	4,129	ş	1,330	909 \$	ş	2,591
	Ü	Retiree Debt Per Household (pension @ 4.82% discount)	\$		\$ 14,186	\$ 10,550	\$	4,433 \$	6,765	\$	2,376	\$ 1,216	ş	3,923
	_	Retiree Debt Per Household (pension @ 2.98% discount)	ş		\$ 18,515	\$ 14,421	\$	6,041 \$	9,241	ş	3,266	\$ 1,645	ş	4,786
	_	Retiree Debt at % of Total Debt (pension @ 7.5% discount)		%0	81%	77%		87%	87%		40%	29%		69%
	Α 0	Employer Contribution for Current Year Service (% of Payroll)		15%	11%	13%		77%	13%		%6	%6		10%
	Z	Employer Contribution for Past Service (% of Payroll)		0%	26%	26%		40%	17%		25%	15%		49%
	~	Retiree Spending at % of Governmental Activities Spending		4%	14%	15%		72%	11%		14%	%9		16%

Footnotes to Appendix:

Note 1: Non-Retiree Debt = Total Liabilities – (Net OPEB Obligations + POB Debt). (Total Liabilities and Net OPEB Obligations taken from Statement of Net Assets.)

Note 2: Retiree Debt = OPEB Unfunded Accrued Liability + POB Debt + Pension Unfunded Accrued Liability. (Pension Unfunded Accrued Liability calculated at either 7.5%, 4.82% or 2.98% discount rate).

Note 3: Total Debt = Non-Retiree Debt + Retiree Debt (at 7.5% discount rate).

Note 4: POB Debt Service Cost = POB Interest Expense + Repayment of Principal (for one year).

Note 5: Employer Contribution for Current Year Service = Pension "Normal Cost." This is the annual contribution that an employer would make to a pension plan to completely fund the plan if all assumptions proved correct.

Note 6: Employer Contribution for Past Service = (Employer Contributions to amortize Pension Unfunded Accrued Liabilities) + (POB Debt Service Costs) + (OPEB Actual Employer Contributions).

Note 7: Retiree Spending = (Employer Contribution for Current Year Service) + (Employer Contribution for Past Service).

Note 8: From Statement of Activities.

Note A: County and City/Town averages are taken from Pension Roulette. The pension numbers are typically one year earlier than the corresponding numbers for the districts. The pension numbers for the County and City/Town averages were compiled from actuarial valuations performed as of June 30, 2011, while the pension numbers for the districts were compiled from actuarial valuations performed as of June 30, 2012.

The June 30, 2011, CalPERS valuations provided information at both 7.5% and 4.82% discount rates. The June 30, 2012, CalPERS valuations provided information at both 7.5% and 2.98% discount rates. For the purpose of comparison, we have estimated the liability values at both 4.82% and 2.98% for both valuation dates, using relationships taken from the CalPERS valuations.

Note B: Household counts for the districts were obtained from material from each district's website. Except for the Golden Gate Bridge district, the covered population in the district was divided by 2.5 to give an estimate of the household count. 2.5 is approximately the average household size in the County.

For the Golden Gate Bridge district, which includes six Northern California counties, we did not feel that the covered population of the counties (one of which is near the Oregon border) was an appropriate way to estimate the household count of people who paid the costs of the Golden Gate Bridge district. So, as a proxy for household count, we took the number of paid tolls and paid fares for the Golden Gate Bridge district and divided by 260. 260 is approximately the number of workdays in the year and paid tolls and paid fares are substantially spread across workdays.