

# Monterey Peninsula Water Management District

## GASB 75 OPEB Valuation Report Measured as of June 30, 2019 for Disclosures for the Fiscal Year Ending June 30, 2019

December 3, 2019



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December 3, 2019

Suresh Prasad  
Administrative Services Manager/CFO  
Monterey Peninsula Water Management District  
P.O. Box 85  
Monterey, California 93942

**Re: Monterey Peninsula Water Management District GASB 75 OPEB Valuation Measured as of June 30, 2019**

Dear Mr. Prasad:

At your request, we completed an actuarial valuation of the retiree health and welfare benefits measured as of June 30, 2019, for the Monterey Peninsula Water Management District. This is a roll-forward of the valuation produced for the fiscal year ending June 30, 2018. Please use the information in this report for your financial statements for the fiscal year ending June 30, 2019. This valuation is based on input from the District and from CalPERS, as well as our understanding of GASB Statement No. 75 "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions" (GASB 75).

We greatly appreciate your business. If you have any questions, please feel free to call us at (415) 801-5987.

Best Regards,

A handwritten signature in blue ink that reads "Roger T. Burton".

Roger T. Burton, FSA, MAAA, FCA



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EXHIBIT 8-A  
**Executive Summary**

**Overview**

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**Purpose of the Report**

Precision Actuarial prepared this report to meet employer financial accounting requirements under GASB Statement No. 75 "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions" (GASB 75), issued in June 2015. This report includes information with respect to the obligation to provide future retiree health and welfare benefits for the fiscal year ending June 30, 2019.

**Valuation Date:** June 30, 2018  
**Measurement Date:** June 30, 2019  
**Report Date:** June 30, 2019

**Application to Financials**

This report provides liabilities and expenses for use in the District's 2019 financial reports.

The District should use the liabilities and expense measured as of June 30, 2019, for its financial statements for the year ending June 30, 2019.

**Changes Since the Prior Valuation**

This valuation is a roll-forward of the valuation produced for the prior fiscal year. We updated:

- Discount rate from 3.50% to 3.13%
- Benefit payments

**Actuarial Certification**

Our determinations reflect the provisions and methods prescribed by GASB 75. In preparing this report, we relied on employee census, plan design, premium rates, and administrative fees provided directly or indirectly by the plan sponsor, and demographic assumptions provided by CalPERS. CalPERS' actuaries set the premium rates using community rating. We did not attempt to verify that the community-rated premium rates represent the true cost of claims and administrative fees.

EXHIBIT 8-A  
**Executive Summary**

**Overview**

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**Actuarial Certification** *(continued)*

We based the results in this report on this information, along with the actuarial assumptions and methods used herein. In our opinion, the assumptions used represent reasonable expectations of anticipated plan experience. We reviewed the census information for reasonableness, but we did not audit it.


Actuarial computations under GASB 75 fulfill employer accounting and financial reporting requirements. The calculations are consistent with our understanding of GASB 75. Determinations for purposes other than meeting employer financial accounting requirements may be significantly different from the results in our report. Accordingly, additional determinations may be necessary for other purposes, such as judging benefit security at termination.

No third-party recipient of Precision Actuarial's work product should rely solely on Precision Actuarial's work product. Any third-party recipient should engage qualified professionals for advice appropriate to their own needs.

There is no relationship between Precision Actuarial, its owners, subcontractors, or staff; GovInvest; or the Monterey Peninsula Water Management District beyond the contractual services that we perform for the Monterey Peninsula Water Management District.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, the report is complete and accurate and that we prepared it in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the applicable "Actuarial Standards of Practice" and "Actuarial Compliance Guidelines" as promulgated by the American Academy of Actuaries.

The undersigned is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



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**Roger T. Burton, FSA, MAAA, FCA**  
*Chief Actuary*



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**Christian M. Boughner, ASA, MAAA**  
*Consulting Actuary*

**EXHIBIT 8-A**  
**Executive Summary**

**Accounting Summary**

A summary of the key valuation results follows.

	<b>Valuation Date:</b>	<b>June 30, 2018</b>	<b>June 30, 2018</b>
	<b>Measurement Date:</b>	<b>June 30, 2018</b>	<b>June 30, 2019</b>
	<b>Report Date:</b>	<b>June 30, 2018</b>	<b>June 30, 2019</b>
<b>Present Value of Future Benefits</b>			
Active Employees	\$	3,686,406	\$ 4,134,154
Retirees	+	1,572,263	1,607,742
<b>Total Present Value of Future Benefits</b>	<b>=</b>	<b>5,258,669</b>	<b>5,741,896</b>
<b>Total Present Value of Future Normal Costs</b>	<b>-</b>	<b>1,153,680</b>	<b>1,199,688</b>
<b>Total/Net OPEB Liability</b>	<b>=</b>	<b>\$ 4,104,989</b>	<b>\$ 4,542,208</b>
<b>OPEB Liability</b>			
Active Employees	\$	2,532,726	\$ 2,934,466
Retirees	+	1,572,263	1,607,742
<b>Total/Net OPEB Liability</b>	<b>=</b>	<b>\$ 4,104,989</b>	<b>\$ 4,542,208</b>
Covered-Employee Payroll	\$	2,441,044	\$ 2,508,173
Net OPEB Liability as a Percentage of Covered-Employee Payroll		168.2%	181.1%
<b>Measurement Period</b>		<b>2017-2018</b>	<b>2018-2019</b>
<b>Reporting Period</b>		<b>2017-2018</b>	<b>2018-2019</b>
<b>Expense</b>	<b>\$</b>	<b>268,040</b>	<b>\$ 326,016</b>

EXHIBIT 8-A  
**Executive Summary**

**Reconciliation of the Change in the Total OPEB Liability**

A reconciliation of the changes to the Total OPEB Liability since the prior valuation report follow.

<b>Total OPEB Liability as of Measurement Date June 30, 2018 / Report Date June 30, 2018</b>	<b><u>\$ 4,104,989</u></b>
Service Cost	131,173
Interest Cost	146,469
Expected Benefit Payments	(102,678)
Implicit Subsidy Credit	-
<b>Projected Total OPEB Liability as of Measurement Date June 30, 2019</b>	<b><u>\$ 4,279,953</u></b>
Change in Benefit Payments (Actual versus Expected)	4,136
Change in Calculated Interest	8,799
Changes in Experience	-
Change in Discount Rate from 3.50% to 3.13%	249,320
Other Assumption Changes	-
<b>Total OPEB Liability as of Measurement Date June 30, 2019 / Report Date June 30, 2019</b>	<b><u>\$ 4,542,208</u></b>

**Reconciliation of the Change in the Total OPEB Liability**

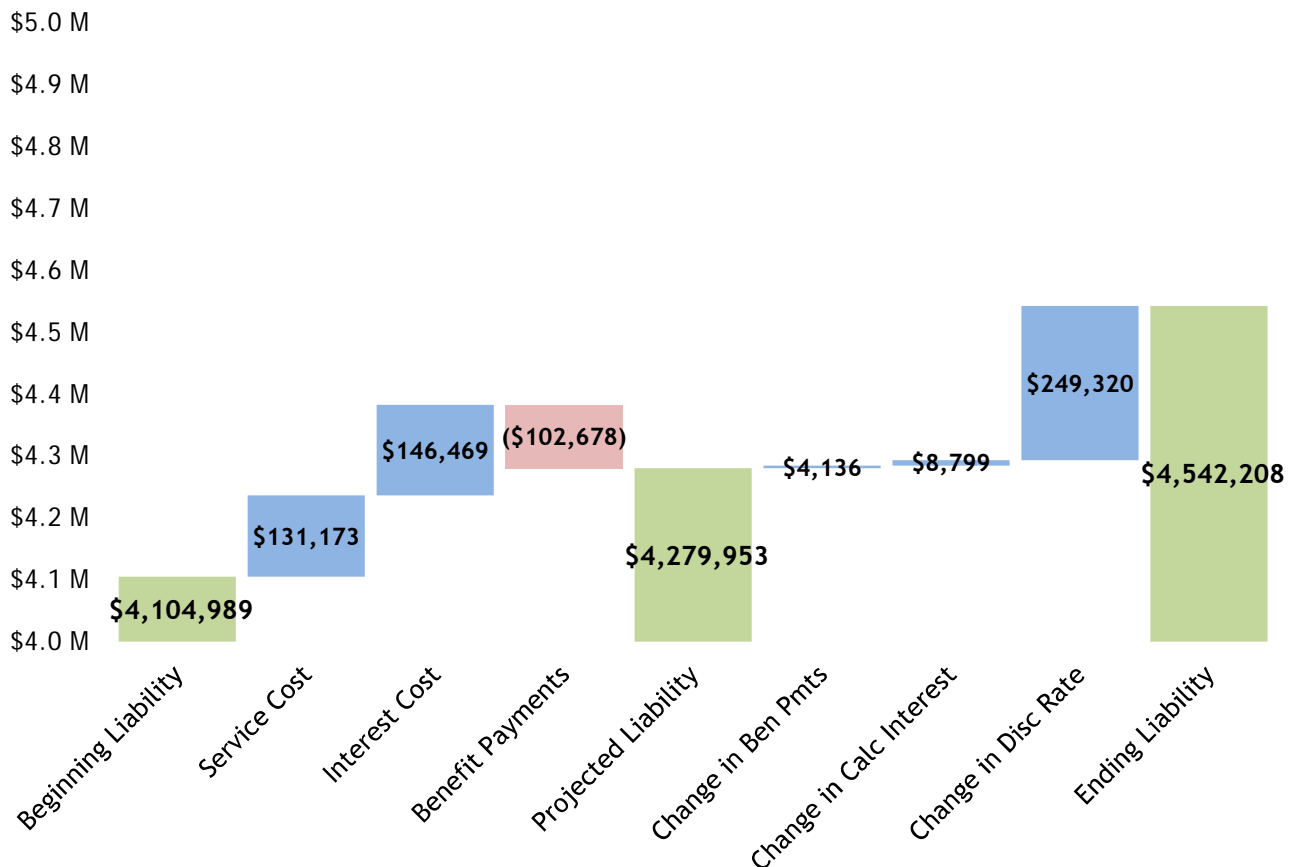


EXHIBIT 8-A  
**Accounting Information**

**Changes in the Net OPEB Liability**

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The funded status of the Plan as of the fiscal year-end, as well as other required disclosure information, follows.

	<i>Increase / (Decrease)</i>
	<u>Total/Net OPEB Liability</u>
<b>Balance as of Measurement Date June 30, 2018 / Report Date June 30, 2018</b>	<b>\$ 4,104,989</b>
<b>Changes for the year:</b>	
Service Cost	131,173
Interest	155,268
Changes of Benefit Terms	-
Differences Between Expected and Actual Experience	-
Changes of Assumptions	249,320
Benefit Payments	(98,542)
Implicit Subsidy Credit	-
Other Changes	-
<b>Net Changes</b>	<u>437,219</u>
<b>Balance as of Measurement Date June 30, 2019 / Report Date June 30, 2019</b>	<b>\$ 4,542,208</b>



**EXHIBIT 8-A**  
**Accounting Information**

**Development of Deferred Outflows and Inflows of Resources**

Balances as of Measurement Date June 30, 2019 / Report Date June 30, 2019

**Deferred Outflows and Inflows of Resources Arising from Differences Between Expected and Actual Experience**

Measurement Date — June 30:	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in Expense Through Measurement Date June 30, 2019 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2018	\$ -	\$ -	\$ -	\$ -	\$ -
2019	-	-	-	-	-
Total				\$ -	\$ -

**Deferred Outflows and Inflows of Resources Arising from Changes in Assumptions**

Measurement Date — June 30:	Increase in Total Liability (a)	Decrease in Total Liability (b)	Amounts Recognized in Expense Through Measurement Date June 30, 2019 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2018	\$ -	\$ -	\$ -	\$ -	\$ -
2019	249,320	-	39,575	209,745	-
Total				\$ 209,745	\$ -

**EXHIBIT 8-A**  
**Accounting Information**

**Expense and Deferred Outflows and Inflows**

	Measurement Period:	2017-2018	2018-2019
	Reporting Period:	2017-2018	2018-2019
<b>Expense</b>			
Service Cost	\$	127,662	\$ 131,173
Interest on Total OPEB Liability		140,378	155,268
Changes of Benefit Terms		-	-
Recognized Differences Between Expected and Actual Experience		-	-
Recognized Changes of Assumptions		-	39,575
Other Miscellaneous (Income)/Expense		-	-
<b>Total Expense</b>	<b>\$</b>	<b>268,040</b>	<b>\$ 326,016</b>

**Deferred Outflows and Inflows of Resources**

**Report Year Ending June 30, 2019**

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences Between Expected and Actual Experience	\$ -	\$ -
Changes of Assumptions	209,745	-
Contributions Subsequent to the Measurement Date	-	-
<b>Total</b>	<b>\$ 209,745</b>	<b>\$ -</b>

Amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Report Year Ending June 30:	Amount
2020	\$ 39,575
2021	39,575
2022	39,575
2023	39,575
2024	39,575
Remaining	11,870

**EXHIBIT 8-A**  
**Accounting Information**

**Reconciliation of Expense**

	<b>Total/Net OPEB Liability</b>	<b>Deferred (Inflows)</b>	<b>Deferred Outflows</b>	<b>Net Deferrals</b>	<b>Net OPEB Liability plus Net Deferrals</b>	<b>Annual Expense</b>
Balance as of Measurement Date June 30, 2018 / Report Date June 30, 2018	\$ (4,104,989)	\$ -	\$ -	\$ -	\$ (4,104,989)	
Service Cost	(131,173)					\$ 131,173
Interest on Total OPEB Liability	(155,268)					155,268
Effect of Changes of Benefit Terms	-					-
Effect of Liability Gains or Losses	-	-	-	-		-
Effect of Assumption Changes or Inputs	(249,320)	-	249,320	249,320		-
Benefit Payments	98,542				98,542	-
Implicit Subsidy Credit	-				-	-
Recognition of Liability Gains or Losses		-	-	-		-
Recognition of Assumption Changes or Inputs		-	(39,575)	(39,575)		39,575
Annual Expense					(326,016)	\$ 326,016
Balance as of Measurement Date June 30, 2019 / Report Date June 30, 2019	\$ (4,542,208)	\$ -	\$ 209,745	\$ 209,745	\$ (4,332,463)	

**EXHIBIT 8-A**  
**Accounting Information**

**Interest on Total OPEB Liability**

<b>Interest on Total OPEB Liability</b>	<b>Amount for Period (a)</b>	<b>Portion of Period (b)</b>	<b>Interest Rate (c)</b>	<b>Interest on the Total OPEB Liability (d) = (a) × (b) × (c)</b>
Beginning Total OPEB Liability	\$ 4,104,989	100%	3.50%	\$ 143,675
Changes of Benefit Terms	-	100%	3.50%	-
Difference Between Expected and Actual Experience	-	100%	3.50%	-
Changes of Assumptions	249,320	100%	3.50%	8,726
Service Cost	131,173	100%	3.50%	4,591
Benefit Payments	(98,542)	50%	3.50%	(1,724)
Implicit Subsidy	-	50%	3.50%	-
<b>Total Interest on Total OPEB Liability</b>				<b>\$ 155,268</b>

**EXHIBIT 8-A**  
**Accounting Information**

**OPEB Cash-Flow Projections**

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OPEB cash-flow projections for current participants for the next twenty-five years follow.

<b>Measurement Period Ending June 30:</b>	<b>Expected Retiree</b>		<b>Total Expected</b>
	<b>Benefit Payments</b>	<b>Implicit Subsidy</b>	<b>Credited Benefit Payments</b>
2020	\$ 116,531	\$ -	\$ 116,531
2021	129,327	-	129,327
2022	144,354	-	144,354
2023	160,839	-	160,839
2024	168,803	-	168,803
2025	181,766	-	181,766
2026	198,728	-	198,728
2027	208,130	-	208,130
2028	221,071	-	221,071
2029	235,403	-	235,403
2030	245,053	-	245,053
2031	256,613	-	256,613
2032	266,010	-	266,010
2033	279,653	-	279,653
2034	288,191	-	288,191
2035	284,206	-	284,206
2036	292,844	-	292,844
2037	297,861	-	297,861
2038	302,596	-	302,596
2039	308,868	-	308,868
2040	309,456	-	309,456
2041	312,433	-	312,433
2042	310,824	-	310,824
2043	310,642	-	310,642
2044	307,108	-	307,108

**EXHIBIT 8-A**  
**Accounting Information**

**OPEB Cash-Flow Projections for Current Participants**

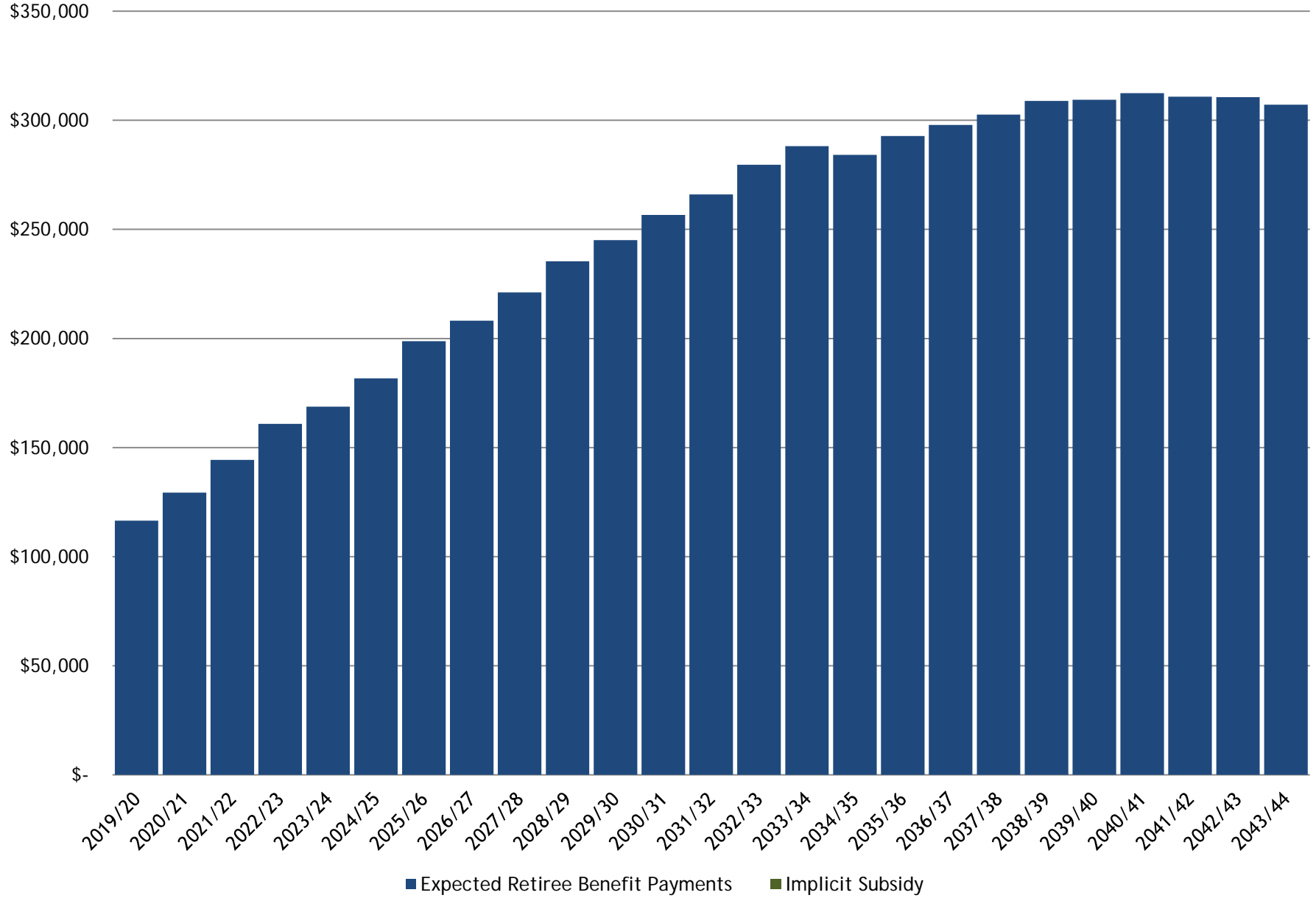


EXHIBIT 8-A  
**Accounting Information**

**Schedule of Implicit Subsidy Liability**

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Actuarial standard of practice (ASOP) number 6, "Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Program Periodic Costs or Actuarially Determined Contributions", requires the inclusion of the implicit subsidy in OPEB valuations.

The implicit subsidy arises when an employer allows a retiree and the retiree's dependents to continue on the plans for active employees, and pay the active-employee premiums. Retirees are not paying the true cost of their benefits because they have higher costs than active employees, and therefore are partially subsidized by the active employees. **The District's retirees participate in a plan that is priced separately from the employer-sponsored active plan, so there is no implicit subsidy.**

<b>Measurement Date:</b>	<b>Jun. 30, 2018</b>	<b>Jun. 30, 2019</b>
<b>Report Date:</b>	<b><u>Jun. 30, 2018</u></b>	<b><u>Jun. 30, 2019</u></b>
Benefit Payments	\$ 4,104,989	\$ 4,542,208
Implicit Subsidy	<u>-</u>	<u>-</u>
<b>Total OPEB Liability</b>	<b><u>\$ 4,104,989</u></b>	<b><u>\$ 4,542,208</u></b>
Discount Rate	3.50%	3.13%





**EXHIBIT 8-A**  
**Accounting Information**

**Schedule of Changes in the Total/Net OPEB Liability and Related Ratios**

GASB 75 requires a disclosure of the changes in Net OPEB Liability for the last ten fiscal years, or for as many years as are available.

	<b>Measurement Date:</b>	<b>Jun. 30, 2018</b>	<b>Jun. 30, 2019</b>
	<b>Report Date:</b>	<b>Jun. 30, 2018</b>	<b>Jun. 30, 2019</b>
<b><u>Total/Net OPEB Liability</u></b>			
Service Cost	\$	127,662	\$ 131,173
Interest		140,378	155,268
Changes of Benefit Terms		-	-
Differences Between Expected and Actual Experience		-	-
Changes of Assumptions		-	249,320
Benefit Payments		(92,380)	(98,542)
Implicit Subsidy Credit		-	-
Net Change in Total/Net OPEB Liability		175,660	437,219
Total/Net OPEB Liability – Beginning		<b>3,929,329</b>	<b>4,104,989</b>
<b>Total/Net OPEB Liability – Ending</b>		<b><u>\$ 4,104,989</u></b>	<b><u>\$ 4,542,208</u></b>
<b>Covered-Employee Payroll</b>	<b>\$</b>	<b>2,441,044</b>	<b>\$ 2,508,173</b>
<b>District's Net OPEB Liability as a Percentage of Covered-Employee Payroll</b>		<b>168.2%</b>	<b>181.1%</b>

Notes to schedule: the District adopted GASB 75 for the fiscal year ending June 30, 2018.

**EXHIBIT 8-A**  
**Accounting Information**

**Draft Notes to the Financial Statements**

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*A draft of the required notes to the District's financial statements, based on the requirements of GASB 75 and our understanding of the District's retiree health plan, follows.*

**Notes to the Financial Statements  
for the Year Ended June 30, 2019**

**Summary of Significant Accounting Policies**

*Other Postemployment Benefits Other Than Pensions (OPEB)*

For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense information about the fiduciary net position of the District Retiree Benefits Plan (the Plan) and additions to/deductions from the Plan's fiduciary net position have been determined on the same basis as they are reported by the Plan. For this purpose, the Plan recognizes benefit payments when due and payable in accordance with the benefit terms.

**Note X – Other Post-employment Benefits (OPEB)**

*Plan Description*

The District administers an Agent Multiple-Employer defined-benefit post-employment healthcare plan. Dependents are eligible to enroll, and benefits continue to surviving spouses for 1 year following the member's death.

*Benefits Provided*

Retirees are eligible for medical benefits if they retire at Age 50+. A retiree who was hired before 7/1/2013 and retires with 15+ years of service is eligible to receive a payment of \$1,219 per month for fiscal-year end 6/30/2019. The amount of this payment increases 3% annually. All other retirees are eligible to receive \$540 per month with no service requirements. There are no disability benefits.

*Employees Covered by Benefit Terms*

At June 30, 2018 (the census date), the benefit terms covered the following employees:

<b>Category</b>	<b>Count</b>
Inactive employees, spouses, or beneficiaries currently receiving benefit payments:	10
Inactive employees entitled to but not yet receiving benefit payments:	0
Active employees:	24
<b>Total</b>	<b>34</b>

EXHIBIT 8-A  
**Accounting Information**

**Draft Notes to the Financial Statements**

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*Contributions*

The District pays benefits as they come due.

**Net OPEB Liability**

The District's total OPEB liability was valued as of June 30, 2018 and was used to calculate the net OPEB liability measured as of June 30, 2019.

*Actuarial Assumptions*

The total OPEB liability in the June 30, 2019 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Inflation: 2.50%

Salary increases: 2.750%. Additional merit-based increases based on CalPERS merit salary increase tables.

Healthcare cost trend rates: 6.00% in the first year, trending down to 3.84% over 56 years.

Mortality rates were based on CalPERS tables.

*Discount Rate*

The discount rate used to measure the total OPEB liability is 3.13%. The District's OPEB Plan is an unfunded plan, therefore the discount rate was set to the rate of tax-exempt, high-quality 20-year municipal bonds, as of the valuation date.

**EXHIBIT 8-A**  
**Accounting Information**

**Draft Notes to the Financial Statements**

Changes in the Net OPEB Liability	<i>Increase/Decrease</i> <u>Total/Net OPEB Liability</u>
<b>Balance as of Report Date June 30, 2018</b>	<b>\$ 4,104,989</b>
Changes for the year:	
Service Cost	131,173
Interest	155,268
Changes of Benefit Terms	-
Differences Between Expected and Actual Experience	-
Changes of Assumptions	249,320
Benefit Payments	(98,542)
Implicit Subsidy Credit	-
Other Miscellaneous Income/(Expense)	-
<b>Net Changes</b>	<b><u>437,219</u></b>
<b>Balance as of Report Date June 30, 2019</b>	<b><u>\$ 4,542,208</u></b>

Sensitivity of the net OPEB liability to changes in the discount rate. The net OPEB liability of the District, as well as what the District's net OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (2.13%) or one percentage point higher (4.13%) follows:

	<b>1% Decrease</b>	<b>Discount Rate</b>	<b>1% Increase</b>
	<u>2.13%</u>	<u>3.13%</u>	<u>4.13%</u>
<b>Net OPEB Liability (Asset)</b>	<b>\$ 5,330,803</b>	<b>\$ 4,542,208</b>	<b>\$ 3,903,931</b>

Sensitivity of the net OPEB liability to changes in the healthcare cost trend rates. The net OPEB liability of the District, as well as what the District's net OPEB liability would be if it were calculated using healthcare cost trend rates that are one percentage point lower (5.00%) or one percentage point higher (7.00%) than current healthcare cost trend rates follows:

	<b>1% Decrease</b>	<b>Trend Rate</b>	<b>1% Increase</b>
	<b>5.00%</b>	<b>6.00%</b>	<b>7.00%</b>
	<b>Decreasing to</b>	<b>Decreasing to</b>	<b>Decreasing to</b>
	<u>2.84%</u>	<u>3.84%</u>	<u>4.84%</u>
<b>Net OPEB Liability (Asset)</b>	<b>\$ 3,865,885</b>	<b>\$ 4,542,208</b>	<b>\$ 5,393,305</b>

EXHIBIT 8-A  
**Accounting Information**

**Draft Notes to the Financial Statements**

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**OPEB Expense and Deferred Inflows and Outflows of Resources Related to OPEB**

For the report year ended June 30, 2019, the District recognized an OPEB expense of \$326,016. At June 30, 2019, the District reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences Between Actual and Expected Experience	\$ -	\$ -
Changes of Assumptions	209,745	-
Contributions Subsequent to the Measurement Date	-	-
<b>Total</b>	<b>\$ 209,745</b>	<b>\$ -</b>

Amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

<u>Report Year Ending June 30:</u>	<u>Amount</u>
2020 \$	39,575
2021	39,575
2022	39,575
2023	39,575
2024	39,575
Remaining	11,870

**EXHIBIT 8-A**  
**Basis of Valuation**

**Substantive Plan**

A summary of the substantive plan used as the basis of the valuation follows.

<b>Tier 1 – Hired Before 7/1/2013 or Classic Member under PEPRA</b>	
<b>Less than 15 Years of Service</b>	
<b>Eligibility</b>	On attainment of age 50.
<b>Duration of coverage</b>	Retiree's lifetime.
<b>Dependent coverage</b>	Eligible to enroll but no employer contribution.
	Surviving spouse benefits available for one year after retiree death, if applicable
<b>Medical plan choices</b>	Retiree will be enrolled in the Laborers Northern California Trust Special Plan.
<b>Core Benefit</b>	District contributes up to \$540. This amount is fixed.
<b>15 or More Years of Service</b>	
<b>Eligibility</b>	On attainment of age 50 and 15 years of Service.
<b>Duration of coverage</b>	Retiree's lifetime.
<b>Dependent coverage</b>	Eligible to enroll but no employer contribution.
	Surviving spouse benefits available for one year after retiree death, if applicable.
<b>Medical plan choices</b>	Retiree will be enrolled in the Laborers Northern California Trust Special Plan.
<b>Core Benefit</b>	District contributes up to \$1,219 per month for fiscal-year end 6/30/2019. This cap increases by 3% on July 1st of each successive year.

<b>Tier 2 – Hired After 1/1/2013 or PEPRA New Member Under PEPRA</b>	
<b>Eligibility</b>	On attainment of age 50.
<b>Duration of coverage</b>	Retiree's lifetime.
<b>Dependent coverage</b>	Eligible to enroll but no employer contribution.
	Surviving spouse benefits available for one year after retiree death, if applicable.
<b>Medical plan choices</b>	Retiree will be enrolled in the Laborers Northern California Trust Special Plan.
<b>Core Benefit</b>	District contributes up to \$540. This amount is fixed.

**EXHIBIT 8-A**  
**Basis of Valuation**

**Participant Summary**

Census Date: June 30, 2018  
Age and service determined as of the census date.

Active Participants												
Age	Years of Service										Total	
	< 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+		
< 25	1											1
25-29		1										1
30-34		1										1
35-39				1								1
40-44		1	1		1							3
45-49		1	1		1	1	1					5
50-54		1					2					3
55-59							1	1				2
60-64			2	1	1		1	2				7
65-69												0
70+												0
<b>Total</b>	<b>1</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>24</b>	

Average Employee Age: 49.7  
Average Years of Service: 15.9

Inactive Participants			
Age	Retiree	Spouse*	Total
< 50			0
50-54	1		1
55-59			0
60-64	4		4
65-69	1		1
70-74	2		2
75-79	2		2
80-84			0
85-89			0
90+			0
<b>Total</b>	<b>10</b>	<b>0</b>	<b>10</b>

Average Inactive Age: 66.0

\*Retiree spouse ages are unknown

**EXHIBIT 8-A**  
**Basis of Valuation**

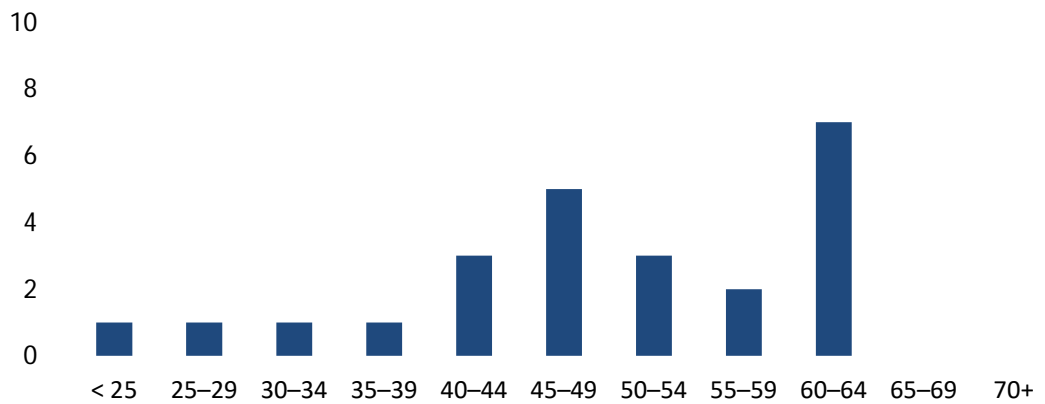
**Participant Summary Charts**

Census Date: June 30, 2018

Age and service determined as of the census date.

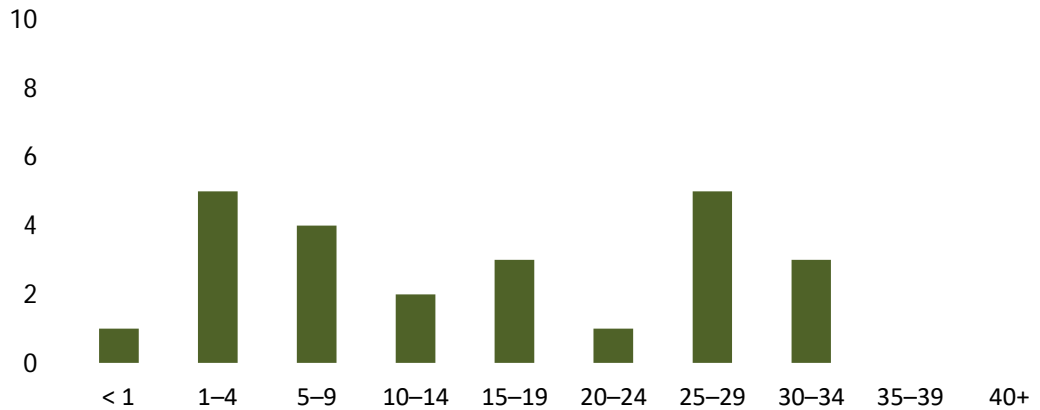
**Count of Actives by Age Bracket**

Average Employee Age: 49.7



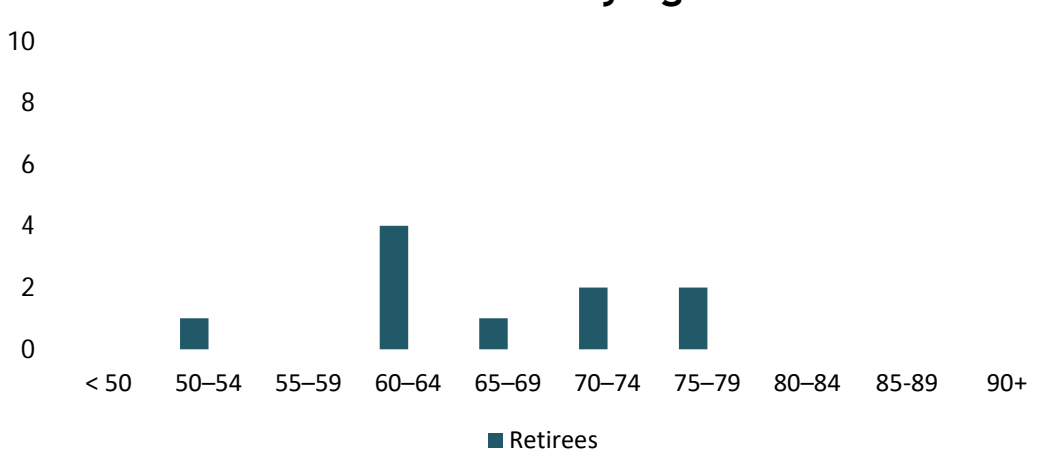
**Count of Actives by Years of Service**

Average Years of Service: 15.9



**Count of Inactives by Age Bracket**

Average Inactive Age: 66.0





**EXHIBIT 8-A**  
**Basis of Valuation**

**Actuarial Assumptions**

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A summary of the actuarial assumptions used for this valuation follows. We considered the reasonableness of each assumption independently based on its own merits, consistent with each other assumption, and the combined impact of all assumptions.

<b>Assumption</b>	<b>Rates</b>
<b>Actuarial Cost Method</b>	Entry-Age Normal, Level Percentage of Salary
<b>Valuation Date</b>	June 30, 2018
<b>Measurement Date</b>	June 30, 2019
<b>Report Date</b>	June 30, 2019
<b>Discount Rate</b>	The discount rate selected is 3.13%. The discount rate is the long-term rate of return for the plan's assets, as our projections show that the assets will be sufficient to cover the projected benefit payments should the District continue to contribute to the plan with an amount of at least the ADC each year. Should the assets not be sufficient to cover the projected benefit payments at any time in the future, we would employ a discount rate reflecting the 20-year tax-exempt municipal bond yield or index rate to the period after which we project assets to run out. We would then use a single, blended discount rate equivalent to the long-term rate of return and the 20-year tax-exempt municipal bond yield. If there are no assets, we would use only the 20-year tax-exempt municipal bond yield for the valuation.
<b>Mortality</b>	Same as CalPERS. See appendix.
<b>Termination Rates</b>	Same as CalPERS. See appendix. Also known as "turnover".
<b>Disability</b>	Same as CalPERS. See appendix.
<b>Retirement</b>	Same as CalPERS. See appendix.

**EXHIBIT 8-A**  
**Basis of Valuation**

**Actuarial Assumptions**

<b>Assumption</b>	<b>Rates</b>						
<b>Aging or Morbidity Factors</b>	Based on actual CalPERS HMO and PPO population data.						
<b>Participant Contributions</b>	Retiree pays any difference between premiums and the benefit received by the retiree.						
<b>Salary Increases</b>	2.750% The salary increase is used to determine the growth in the aggregate payroll. Individual Salary Increases: 2018 CalPERS Merit Salary Increases.						
<b>Inflation Rate</b>	2.50%						
<b>Marital Status</b>	Current Retirees: Actual spouse coverage is used. Future retirees: 70% assumed to be married.						
<b>Spouse Gender</b>	Assumes spouse of opposite gender for current and future retirees.						
<b>Spouse Age Difference</b>	Actual spouse age is used for current retirees. Assumes males are three years older than females for future retirees.						
<b>Participation</b>	Current Retirees: Assume current elections continue until decrement. Future Retiree election assumptions summarized below*: <table border="1" data-bbox="534 1152 1255 1270"><thead><tr><th>Hire Dates</th><th>Service Retirement</th></tr></thead><tbody><tr><td>Pre-2013, 15+ Years of Service</td><td>90%</td></tr><tr><td>All Others</td><td>75%</td></tr></tbody></table> *Assumed all covered spouses elect survivor spouse benefits.	Hire Dates	Service Retirement	Pre-2013, 15+ Years of Service	90%	All Others	75%
Hire Dates	Service Retirement						
Pre-2013, 15+ Years of Service	90%						
All Others	75%						
<b>PEMHCA Administrative Fee</b>	Not applicable.						
<b>Annual PEMHCA Amount</b>	Not applicable.						
<b>ACA Excise Tax</b>	Assumed that the District will pass the ACA Excise Tax on to the retirees.						

**EXHIBIT 8-A**  
**Basis of Valuation**

**Actuarial Assumptions**

**Assumption**

**Rates**

**Premiums**

A single retiree premium was developed based on current enrollment patterns.

Grouping	Employee	Two-Party
Pre-Medicare Plans	\$ 11,064	\$ 22,128
Medicare Plans	4,368	8,736

**Trend Rates**

Medical Long-Term Trends from Society of Actuaries "Long Term Healthcare Cost Trends Model v2018\_c" using baseline assumptions. Applied to both

Year	Pre-Medicare Trend	Medicare Trend
2018	6.50%	5.50%
2019	6.00%	5.50%
2020	5.50%	5.30%
2021	5.20%	5.20%
2022	5.20%	5.20%
2023	5.20%	5.20%
2024	5.19%	5.19%
2025	5.19%	5.19%
2026-2074	...	...
2075+	3.84%	3.84%

**Benefit Cap Trend Rate**

Assumed annual growth of 3% for the retirees hired before 2013 with 15+ years of service. Assumed no annual increase for other retirees.

**EXHIBIT 8-A**  
**Appendix**

**About GASB 75**

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This section includes a brief summary of GASB 75, as well as definitions of some of the key terminology used in this report.

**About GASB 75**

*In General.* In June 2015 the Governmental Accounting Standards Board released GASB 75, "Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions". GASB 75 replaced GASB 45 for fiscal years beginning after June 15, 2017, for employers that sponsor OPEB plans. The provisions in GASB 75 are similar to the provisions of GASB 68 for pensions.

*Accounting.* GASB 75 requires a liability known as the Net OPEB Liability (NOL). The employer recognizes the NOL on its balance sheet. The employer also recognizes an OPEB expense in the income statement. GASB 45 recorded the Unfunded Accrued Actuarial Liability (UAAL) in the notes to the financial statement, whereas GASB 75 records the NOL, which is very similar to the UAAL with just a few technical differences, on the balance sheet.

*Financial Statement Impact (Employers).* One of the biggest changes to the financial statements of governmental employers that provide OPEB is the reporting of the OPEB liability on the face of the statements rather than in the footnotes. Governments that do not provide OPEB through a trust are required to recognize the entire OPEB liability in the financial statements. For governments that provide OPEB through an OPEB plan that is administered through a trust, the government's OPEB liability is recognized net of the amount of the OPEB plan's fiduciary net position.

*Changes to the Measurement of the Total OPEB Liability.* Measurement of the OPEB liability includes discounting future benefit payments for current and former employees and their beneficiaries to their present value and allocating the present value over past and future periods of the employee service (total OPEB liability), less the amount of the OPEB plan's fiduciary net position. The calculation continues to include employee-related events, such as projected salary increases and projected years of service, if they affect the amount of OPEB payments employees will receive, as well as provisions for automatic cost-of-living adjustments (COLAs) and other automatic benefits. Additionally, ad hoc COLAs and other ad hoc benefit changes, which are made at the discretion of the government, are included in projections as well, if they routinely recur.

GASB 75 requires governments to discount projected OPEB payments to their present value. Under the new standard, governments discount the projected OPEB payments to be made in each year and the amount of plan assets (if a government administers the OPEB through a trust) available for providing those benefits to current active and inactive employees and their beneficiaries. Similar to the pension standards, the discount rate used is based on whether the plan assets are projected to be sufficient to make future payments. If the plan assets are sufficient, governments discount future payments using the long-term expected rate of return. If projected plan assets are insufficient to make all future payments to current and inactive employees and their beneficiaries, or if there are no plan assets held in trust, the discount rate is based on a high-quality 20-year tax-exempt general obligation municipal bond yield or index rate. "High-quality" is defined as being rated AA or higher (or an equivalent rating).

*Cost Method.* The Entry Age Normal Cost method must be used.

**EXHIBIT 8-A**  
**Appendix**

**About GASB 75**

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**About GASB 75 (continued)**

Factors that affect a government's OPEB liability, such as actual earnings on plan investments when the OPEB plan is administered as a trust, employee compensation changes, interest on the outstanding OPEB liability, contributions from employees and employers, and actual demographic and economic changes that are not in line with assumptions made in the actuarial calculations, are considered when determining the government's OPEB expense. A government's annual OPEB expense is calculated with consideration for factors affecting the OPEB liability within the reporting period. Several causes of changes in OPEB liability are immediately factored into the calculation of OPEB expense for the period, such as benefits earned each year, interest on the total OPEB liability, changes in benefit terms, and projected earnings on plan investments, if administered through a trust.

Governments are required to recognize deferred outflows of resources or deferred inflows of resources and then introduce into the expense calculation, systematically and rationally over the average remaining years of employment (active employees and inactive employees, including retirees), the effect on the total OPEB liability of differences between assumptions and actual experience.

EXHIBIT 8-A  
**Appendix**

**About GASB 75**

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**Key Terminology**

<b>Actuarially Determined Contribution</b>	A target or recommended contribution to a defined benefit OPEB plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.
<b>Actuarial Present Value of Projected Benefit Payments</b>	Projected benefit payments discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment.
<b>Agent Employer</b>	An employer whose employees are provided with OPEB through an agent multiple-employer defined-benefit OPEB plan.
<b>Closed Period</b>	A specific number of years that is counted from one date, which declines to zero with the passage of time. For example, if the recognition period initially is five years on a closed basis, four years remain after the first year, three years after the second year, and so forth until no years remain.
<b>Contributions</b>	Additions to an OPEB plan's fiduciary net position for amounts from employers, non-employer contributing entities, or employees.
<b>Dates and Periods</b>	
• <b>Census Date</b>	The date of the census. It is usually the same as the <b>Valuation Date</b> .
• <b>Measurement Date</b>	The date on which assets are measured. The liabilities are rolled forward to this date from the <b>Valuation Date</b> , should it differ, using actuarial roll-forward techniques.
• <b>Measurement Period</b>	The year ending on the <b>Measurement Date</b> .
• <b>Report Date</b>	The date on which the amounts are reported in the financial statements. It is the same as the fiscal year-end. It may be up to one year ahead of the Measurement Date, with no roll-forward of liabilities or assets required.
• <b>Reporting Period</b>	The year ending on the <b>Report Date</b> . It is the same as the fiscal year.
• <b>Valuation Date</b>	The date on which the liabilities are valued.
<b>Deferred Inflows and Outflows of Resources</b>	The portion of the changes in the <b>Net OPEB Liability</b> that are not recognized in the current pension expense and are recognized in later periods. The changes deferred include differences between expected and actual experience, changes in assumptions, and differences between expected and actual earnings on OPEB plan investments.

EXHIBIT 8-A  
**Appendix**

**About GASB 75**

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**Key Terminology (continued)**

<b>Defined-Benefit OPEB</b>	OPEB for which the benefits that the employee will receive at or after separation from employment are defined by the benefit terms. The OPEB may be stated as (a) a specified dollar amount (b) an amount that is calculated based on one or more factors such as age, years of service, and compensation, or (c) a type or level of coverage such as prescription drug coverage or a percentage of health insurance premiums. OPEB that does not have all of the terms of defined contribution OPEB is classified as defined-benefit OPEB.
<b>Discount Rate</b>	<p>The single rate of return that, when applied to all projected benefit payments, results in an actuarial present value of projected benefit payments equal to the total of the following:</p> <p>a. The actuarial present value of benefit payments projected to be made in future periods in which (1) the amount of the OPEB plan's fiduciary net position is projected to be greater than the benefit payments that are projected to be made in that period and (2) OPEB plan assets up to that point are expected to be invested using a strategy to achieve the long-term expected rate of return, calculated using the long-term expected rate of return on OPEB plan investments.</p> <p>b. The actuarial present value of projected benefit payments not included in (a), calculated using a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (or equivalent quality on another rating scale).</p>
<b>Fiduciary Net Position</b>	The market value of assets as of the <b>Measurement Date</b> .
<b>Implicit Subsidy</b>	The implicit subsidy arises when an employer allows a retiree and the retiree's dependents to continue on the plans for active employees, and pay the active-employee premiums. Retirees are not paying the true cost of their benefits because they have higher costs than active employees, and therefore are partially subsidized by the active employees. Once a retiree reaches Medicare eligibility, the rates are set for Medicare retirees separately, and are set to be sufficient to cover the true costs of the Medicare retirees. Thus, there is no implicit subsidy for Medicare retirees.
<b>Net OPEB Liability</b>	The <b>Total OPEB Liability</b> minus the <b>Fiduciary Net Position</b> .
<b>Normal Cost</b>	See <b>Service Cost</b> .

EXHIBIT 8-A  
**Appendix**

**About GASB 75**

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**Key Terminology (continued)**

<b>Other Postemployment Benefits (OPEB)</b>	Benefits (such as death benefits, life insurance, disability, and long-term care) that are paid in the period after employment and that are provided separately from a pension plan, as well as healthcare benefits paid in the period after employment, regardless of the manner in which they are provided. OPEB does not include termination benefits or termination payment for sick leave.
<b>Projected Benefit Payments</b>	All benefits estimated to be payable through OPEB plan to current active and inactive employees as a result of their past service and their expected future service.
<b>Service Cost</b>	The portions of the actuarial present value of projected benefit payments that are attributed to valuation years. Also called <b>Normal Cost</b> .
<b>Substantive Plan</b>	The plan terms as understood by the employer and the plan members at the time of the valuation, including only changes to plan terms that have been made and communicated to employees.
<b>Total OPEB Liability</b>	The liability of employers and non-employer contributing entities to employees for benefits provided through a defined-benefit OPEB plan that is administered through a trust that meets the criteria in paragraph 4 of GASB 75.



**EXHIBIT 8-A**  
**Appendix**

**Decrement Tables**

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The valuation used the following decrement tables from the CalPERS OPEB Assumption Model, revised December 20, 2017:

<b>Mortality</b>	<b>Source Table</b>
Miscellaneous Employees	Mort and Disb Rates_PA Misc
<b>Disability Rates</b>	
Miscellaneous Employees	Mort and Disb Rates_PA Misc
<b>Terminated Refund Rates</b>	
Miscellaneous Employees	Terminated Refund Rates_Misc
<b>Terminated Vested Rates</b>	
Miscellaneous Employees	Terminated Vested Rates_PA Misc
<b>Salary Scale Rates</b>	
Miscellaneous Employees	Salary Scale Rates_PA Misc
<b>Service Retirement Rates</b>	
Miscellaneous Employees	
• 2.0% at 55	Rx PA Misc 2% @ 55
• 2.0% at 62	Rx PA Misc 2% @ 62

**EXHIBIT 8-A**

**Appendix**

**Sample Mortality and Disability Rates**

Attained Age	Public Agency Miscellaneous													
	Pre-Retirement Mortality				Post-Retirement Mortality						Disability			
	Male Assumptions		Female Assumptions		Male Assumptions			Female Assumptions			Male Assumptions		Female Assumptions	
	Non Industrial Death	Industrial Death	Non Industrial Death	Industrial Death	Healthy Recipients	Non Industrially Disabled	Industrially Disabled	Healthy Recipients	Non Industrially Disabled	Industrially Disabled	Non Industrial Disability	Industrial Disability	Non Industrial Disability	Industrial Disability
1	0.00000	0.00000	0.00000	0.00000	0.00023	0.00555	0.00128	0.00015	0.00346	0.00098	0.00000	0.00000	0.00000	0.00000
5	0.00000	0.00000	0.00000	0.00000	0.00023	0.00565	0.00129	0.00015	0.00350	0.00099	0.00000	0.00000	0.00000	0.00000
10	0.00000	0.00000	0.00000	0.00000	0.00024	0.00572	0.00130	0.00015	0.00354	0.00099	0.00000	0.00000	0.00000	0.00000
15	0.00023	0.00000	0.00017	0.00000	0.00024	0.00584	0.00132	0.00016	0.00361	0.00101	0.00017	0.00000	0.00010	0.00000
20	0.00031	0.00000	0.00020	0.00000	0.00025	0.00604	0.00135	0.00017	0.00372	0.00104	0.00017	0.00000	0.00010	0.00000
25	0.00040	0.00000	0.00023	0.00000	0.00029	0.00637	0.00141	0.00021	0.00392	0.00109	0.00017	0.00000	0.00010	0.00000
30	0.00049	0.00000	0.00025	0.00000	0.00039	0.00693	0.00153	0.00028	0.00428	0.00121	0.00019	0.00000	0.00024	0.00000
35	0.00057	0.00000	0.00035	0.00000	0.00060	0.00788	0.00178	0.00046	0.00492	0.00143	0.00049	0.00000	0.00081	0.00000
40	0.00075	0.00000	0.00050	0.00000	0.00110	0.00949	0.00225	0.00091	0.00605	0.00188	0.00122	0.00000	0.00155	0.00000
45	0.00106	0.00000	0.00071	0.00000	0.00227	0.01221	0.00318	0.00200	0.00804	0.00281	0.00191	0.00000	0.00218	0.00000
50	0.00155	0.00000	0.00100	0.00000	0.00501	0.01680	0.00501	0.00466	0.01158	0.00466	0.00213	0.00000	0.00229	0.00000
55	0.00228	0.00000	0.00138	0.00000	0.00599	0.01973	0.00599	0.00416	0.01149	0.00416	0.00221	0.00000	0.00179	0.00000
60	0.00308	0.00000	0.00182	0.00000	0.00710	0.02289	0.00754	0.00436	0.01235	0.00518	0.00222	0.00000	0.00135	0.00000
65	0.00400	0.00000	0.00257	0.00000	0.00829	0.02451	0.01122	0.00588	0.01607	0.00838	0.00210	0.00000	0.00118	0.00000
70	0.00524	0.00000	0.00367	0.00000	0.01305	0.02875	0.01635	0.00993	0.02211	0.01395	0.00180	0.00000	0.00114	0.00000
75	0.00713	0.00000	0.00526	0.00000	0.02205	0.03990	0.02834	0.01722	0.03037	0.02319	0.00142	0.00000	0.00118	0.00000
80	0.00990	0.00000	0.00814	0.00000	0.03899	0.06083	0.04899	0.02902	0.04725	0.03910	0.00142	0.00000	0.00118	0.00000
85	0.00000	0.00000	0.00000	0.00000	0.06969	0.09731	0.07679	0.05243	0.07762	0.06251	0.00000	0.00000	0.00000	0.00000
90	0.00000	0.00000	0.00000	0.00000	0.12974	0.14804	0.12974	0.09887	0.12890	0.09887	0.00000	0.00000	0.00000	0.00000
95	0.00000	0.00000	0.00000	0.00000	0.22444	0.22444	0.22444	0.18489	0.21746	0.18489	0.00000	0.00000	0.00000	0.00000
100	0.00000	0.00000	0.00000	0.00000	0.32536	0.32536	0.32536	0.30017	0.30017	0.30017	0.00000	0.00000	0.00000	0.00000
105	0.00000	0.00000	0.00000	0.00000	0.58527	0.58527	0.58527	0.56093	0.56093	0.56093	0.00000	0.00000	0.00000	0.00000
110	0.00000	0.00000	0.00000	0.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.00000	0.00000	0.00000	0.00000
115	0.00000	0.00000	0.00000	0.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.00000	0.00000	0.00000	0.00000
120	0.00000	0.00000	0.00000	0.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	0.00000	0.00000	0.00000	0.00000

**Notes:**

- 1) Pre-Retirement and Post-Retirement mortality rates include 20 years of projected on-going mortality improvement using Scale BB published by the Society of Actuaries.
- 2) Miscellaneous Plans usually have Industrial Death rates set to zero unless the agency has specifically contracted for Industrial Death benefits. If so, each Non-Industrial Death rate shown above will be split into two components: 99% will become the Non-Industrial Death rate and 1% will become the Industrial Death rate.
- 3) The Miscellaneous Non-Industrial Disability rates are used for Local Prosecutors.
- 4) Normally, Industrial Disability rates are zero for miscellaneous plans unless the agency has specifically contracted for Industrial Disability benefits. If so, each miscellaneous non-industrial disability rate will be split into two components: 50% will become the Non-Industrial Disability rate and 50% will become the Industrial Disability rate.

**EXHIBIT 8-A**

**Appendix**

**Sample Termination Rates**

		Sample Terminated Refund Rates Public Agency Miscellaneous									
		Entry Ages									
Service		15	20	25	30	35	40	45	50	55	59
0		0.18120	0.17420	0.16740	0.16060	0.15370	0.14680	0.14000	0.13320	0.12620	0.12080
5		0.02320	0.02120	0.01930	0.01740	0.01550	0.01360	0.01160	0.00970	0.00780	0.00620
10		0.01550	0.01380	0.01210	0.01040	0.00880	0.00710	0.00550	0.00380	0.00210	0.00080
15		0.00700	0.00600	0.00510	0.00420	0.00320	0.00230	0.00140	0.00040	0.00020	0.00020
20		0.00450	0.00370	0.00290	0.00210	0.00130	0.00050	0.00010	0.00010	0.00010	0.00010
25		0.00240	0.00170	0.00110	0.00050	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010
30		0.00110	0.00050	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00000	0.00000
35		0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00000	0.00000	0.00000
40		0.00010	0.00010	0.00010	0.00010	0.00010	0.00010	0.00000	0.00000	0.00000	0.00000
45		0.00010	0.00010	0.00010	0.00010	0.00010	0.00000	0.00000	0.00000	0.00000	0.00000
50		0.00010	0.00010	0.00010	0.00010	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

		Sample Terminated Vested Rates Public Agency Miscellaneous									
		Entry Ages									
Service		15	20	25	30	35	40	45	50	55	59
0		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
5		0.07140	0.06560	0.05970	0.05370	0.04770	0.04180	0.00000	0.00000	0.00000	0.00000
10		0.05940	0.05300	0.04660	0.04030	0.03390	0.00000	0.00000	0.00000	0.00000	0.00000
15		0.05110	0.04430	0.03730	0.03050	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
20		0.04050	0.03330	0.02610	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
25		0.02880	0.02120	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
30		0.01500	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
35		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
40		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
45		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
50		0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

When a member is eligible to retire, the termination with vested benefits probability is set to zero



**EXHIBIT 8-A**

**Appendix**

**Matrix of Sample Service Retirement Assumption Rates**

Service	Attained Ages				Public Agency Miscellaneous 2% @ 55			
	50	55	60	65	70	75	79	
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
5	0.0080	0.0400	0.0580	0.1450	0.1500	1.0000	1.0000	
10	0.0130	0.0400	0.0750	0.1730	0.1710	1.0000	1.0000	
15	0.0180	0.0560	0.0930	0.2010	0.1920	1.0000	1.0000	
20	0.0210	0.0930	0.1260	0.2330	0.2390	1.0000	1.0000	
25	0.0220	0.1090	0.1430	0.2660	0.3040	1.0000	1.0000	
30	0.0330	0.1540	0.1690	0.2890	0.3300	1.0000	1.0000	
35	0.0500	0.2100	0.2070	0.3160	0.3300	1.0000	1.0000	
40	0.0000	0.2400	0.2800	0.3300	0.3300	1.0000	1.0000	
45	0.0000	0.0000	0.2800	0.3300	0.3300	1.0000	1.0000	
50	0.0000	0.0000	0.0000	0.3300	0.3300	1.0000	1.0000	

Service	Attained Ages				Public Agency Miscellaneous 2% @ 62			
	50	55	60	65	70	75	79	
0	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
5	0.0000	0.0100	0.0310	0.1080	0.1200	1.0000	1.0000	
10	0.0000	0.0190	0.0510	0.1410	0.1560	1.0000	1.0000	
15	0.0000	0.0280	0.0710	0.1730	0.1930	1.0000	1.0000	
20	0.0000	0.0360	0.0910	0.2060	0.2290	1.0000	1.0000	
25	0.0000	0.0610	0.1110	0.2390	0.2650	1.0000	1.0000	
30	0.0000	0.0960	0.1380	0.3000	0.3330	1.0000	1.0000	
35	0.0000	0.1520	0.1830	0.3480	0.3870	1.0000	1.0000	
40	0.0000	0.1800	0.2040	0.3600	0.4000	1.0000	1.0000	
45	0.0000	0.0000	0.2040	0.3600	0.4000	1.0000	1.0000	
50	0.0000	0.0000	0.0000	1.0000	1.0000	1.0000	1.0000	