

**BARTEL**  
ASSOCIATES, LLC

## CITY OF NOVATO RETIREE HEALTHCARE PLAN

January 1, 2014 GASB 45 Actuarial Valuation  
Final Results

*Presented by* **John E. Bartel, President**  
*Prepared by* Bianca Lin, Assistant Vice President & Actuary  
Corina Barbu, Actuarial Analyst  
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**Bartel Associates, LLC**

October 28, 2014

### AGENDA

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## BENEFIT SUMMARY

■ Eligibility	<ul style="list-style-type: none"> <li>Service or disability retirement directly from the City under CalPERS</li> <li>Part time employees not eligible</li> </ul>						
■ Retiree Medical Benefit	<ul style="list-style-type: none"> <li>City contributes the PEMHCA minimum monthly amount:</li> </ul> <table style="margin-left: 20px;"> <tr> <td style="width: 100px;">2014</td> <td style="width: 100px; text-align: right;">\$ 119.00</td> </tr> <tr> <td>2015</td> <td style="text-align: right;">122.00</td> </tr> </table>	2014	\$ 119.00	2015	122.00		
2014	\$ 119.00						
2015	122.00						
■ Post-Retirement Health Benefits Contribution	<ul style="list-style-type: none"> <li>City contributes the following to individual accounts for post retirement health benefits:</li> </ul> <table style="margin-left: 20px;"> <thead> <tr> <th style="text-align: left;"><u>Unit</u></th> <th style="text-align: left;"><u>Monthly Amount</u></th> </tr> </thead> <tbody> <tr> <td>A</td> <td style="text-align: right;">\$100</td> </tr> <tr> <td>B</td> <td style="text-align: right;">75</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>Unit H employees contribute \$75 per month</li> <li>Contributions are made to individual accounts and therefore not included in valuation</li> </ul>	<u>Unit</u>	<u>Monthly Amount</u>	A	\$100	B	75
<u>Unit</u>	<u>Monthly Amount</u>						
A	\$100						
B	75						
■ Survivor Medical Benefit	<ul style="list-style-type: none"> <li>100% of retiree medical benefit continues to surviving spouse of retirees who electing CalPERS joint &amp; survivor payment option</li> </ul>						
■ Other OPEB	<ul style="list-style-type: none"> <li>No contribution for dental, vision, life, or Medicare Part B</li> </ul>						

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## BENEFIT SUMMARY

■ Pay-As-You-Go Costs <sup>1</sup>	<u>Year</u>	<u>Payment</u>
	2013/14	\$ 85,000 <sup>2</sup>
	2012/13	74,322
	2011/12	72,080
	2010/11	62,634
	2009/10	55,318
	2008/09	47,443

<sup>1</sup> CAFR amounts

<sup>2</sup> Estimated amount from the City

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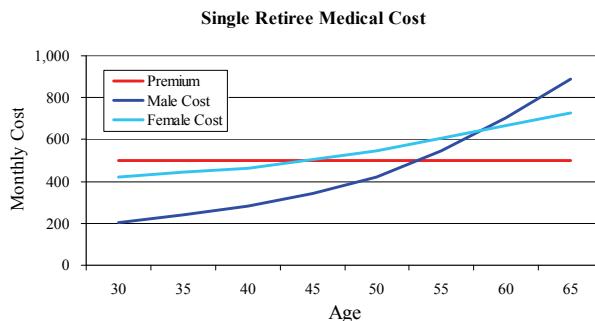
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## BENEFIT SUMMARY

### ■ Implied Subsidy

- Non-Medicare eligible retirees pay active medical rates instead of actual cost
- Active employee premiums subsidize non-Medicare eligible retiree medical cost



- GASB 45 defers to Actuarial Standards of Practice (ASOP) for implied subsidy
- Until May 2014, Actuarial Standards of Practice No. 6<sup>3</sup> (ASOP 6) allowed agencies with community rated plans to value their liability using premiums, resulting in no implied subsidy

<sup>3</sup> Measuring Retiree Group Benefits Obligations and Determining Retiree Group Benefits Plan Costs or Contributions.

## BENEFIT SUMMARY

### ■ Implied Subsidy (Continued)

- ASOP 6 revised in May 2014 requires the City to include implied subsidy beginning with 1/1/16 valuation
- Implied Subsidy impact depends on a number of factors including:
  - CalPERS provided information
  - Miscellaneous/Safety mix
  - Active/retiree proportions
  - Level of pre-funding
- AAL/ARC increase relative to current plan likely very large
- This valuation does not include implied subsidy

## DATA SUMMARY

### Participant Statistics

	1/1/10 Valuation	1/1/12 Valuation	1/1/14 Valuation
■ Actives			
• Count	209	179	192
• Average age	45.7	46.0	46.0
• Average City service	10.3	11.5	11.4
• Average CalPERS service	11.5	12.6	12.3
• Average pay	\$ 76,426	\$ 69,256	\$ 70,622
• Total payroll (000's)	15,973	12,397 <sup>4</sup>	13,559
■ Retirees			
• Count	124	143	149
• Average age	65.1	66.1	66.7
• Average retirement age <sup>5</sup>	55.5	55.9	55.3

<sup>4</sup> 2011 calendar year reported payroll

<sup>5</sup> Excludes surviving spouses



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## DATA SUMMARY

### Participant Reconciliation

Participants	Actives	Retirees	Total
■ January 1, 2012	179	143	322
• Death/withdrawal	(19)	(7)	(26)
• New Retirees	(8)	8	-
• New Survivor	-	2	2
• New Hires	40	-	40
• Data Corrections	-	3 <sup>6</sup>	3
■ January 1, 2014	192	149	341

<sup>6</sup> 3 service retirees not previously reported



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## ACTUARIAL ASSUMPTIONS HIGHLIGHTS

<b>Assumption</b>	<b>January 1, 2012 Valuation</b>	<b>January 1, 2014 Valuation</b>
■ Valuation Date	<ul style="list-style-type: none"> <li>• January 1, 2012</li> <li>• 2012/13 and 2013/14 ARCs</li> </ul>	<ul style="list-style-type: none"> <li>• January 1, 2014</li> <li>• 2014/15 and 2015/16 ARCs</li> </ul>
■ Discount Rate	<ul style="list-style-type: none"> <li>• 6.25% Full ARC pre-funded with PARS Moderate OPEB trust, 55% confidence level</li> </ul>	<ul style="list-style-type: none"> <li>• 6.25% Full ARC pre-funded with PARS Balanced OPEB trust, 60% confidence level</li> </ul>
■ Funding Policy	<ul style="list-style-type: none"> <li>• Full ARC pre-funded with PARS moderate OPEB trust</li> </ul>	<ul style="list-style-type: none"> <li>• Full ARC pre-funded with PARS Balanced OPEB trust</li> </ul>
■ Mortality, Termination, Disability	<ul style="list-style-type: none"> <li>• CalPERS 1997-2007 Experience Study</li> <li>• Generational Mortality Projection - Scale AA</li> </ul>	<ul style="list-style-type: none"> <li>• CalPERS 1997-2011 Experience Study</li> <li>• Generational Mortality Projection - Scale AA</li> </ul>



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## ACTUARIAL ASSUMPTIONS HIGHLIGHTS

<b>Assumption</b>	<b>January 1, 2012 Valuation</b>		<b>January 1, 2014 Valuation</b>																												
■ Service Retirement	<ul style="list-style-type: none"> <li>• CalPERS 1997-2007 Experience Study</li> </ul> <table style="margin-left: auto; margin-right: auto;"> <tr> <th></th> <th style="text-align: center;"><u>Level</u></th> <th style="text-align: center;"><u>ERA</u></th> </tr> <tr> <td>Misc</td> <td style="text-align: center;">2%@55</td> <td style="text-align: center;">≈ 59.5</td> </tr> <tr> <td>Safety</td> <td style="text-align: center;">3%@55</td> <td style="text-align: center;">≈ 56.0 (Police)</td> </tr> </table>		<u>Level</u>	<u>ERA</u>	Misc	2%@55	≈ 59.5	Safety	3%@55	≈ 56.0 (Police)		<ul style="list-style-type: none"> <li>• CalPERS 1997-2011 Experience Study</li> </ul> <table style="margin-left: auto; margin-right: auto;"> <tr> <th></th> <th style="text-align: center;"><u>Tier 1</u></th> <th style="text-align: center;"><u>ERA</u></th> </tr> <tr> <td>Misc</td> <td style="text-align: center;">2%@55</td> <td style="text-align: center;">≈ 59.8</td> </tr> <tr> <td>Safety</td> <td style="text-align: center;">3%@55</td> <td style="text-align: center;">≈ 56.4 (Police)</td> </tr> <tr> <th></th> <th style="text-align: center;"><u>Tier 2/ PEPRA</u></th> <th style="text-align: center;"><u>ERA</u></th> </tr> <tr> <td>Misc</td> <td style="text-align: center;">2.5%@67</td> <td style="text-align: center;">≈ 62.0</td> </tr> <tr> <td>Safety</td> <td style="text-align: center;">2.7%@57</td> <td style="text-align: center;">≈ 56.8 (Police)</td> </tr> </table>		<u>Tier 1</u>	<u>ERA</u>	Misc	2%@55	≈ 59.8	Safety	3%@55	≈ 56.4 (Police)		<u>Tier 2/ PEPRA</u>	<u>ERA</u>	Misc	2.5%@67	≈ 62.0	Safety	2.7%@57	≈ 56.8 (Police)	
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## ACTUARIAL ASSUMPTIONS HIGHLIGHTS

<b>Assumption</b>	<b>January 1, 2012 Valuation</b>	<b>January 1, 2014 Valuation</b>
■ PEMHCA Administrative Fee	<ul style="list-style-type: none"> <li>• 0.25% of premium for 2012/13+</li> </ul>	<ul style="list-style-type: none"> <li>• 0.33% of premium for 2013/14+</li> </ul>
■ Participation	<ul style="list-style-type: none"> <li>• Actives: <ul style="list-style-type: none"> <li>➢ Currently covered: 60%</li> <li>➢ Currently waived: 20%</li> </ul> </li> <li>• Retirees: <ul style="list-style-type: none"> <li>➢ Currently covered: 100%</li> <li>➢ Currently waived: 20% waived retirees elect coverage at 65</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Actives<sup>7</sup>: <ul style="list-style-type: none"> <li>➢ Currently covered: 75%</li> <li>➢ Currently waived: 5%</li> </ul> </li> <li>• Retirees: <ul style="list-style-type: none"> <li>➢ Currently covered: 100%</li> <li>➢ Currently waived: 5% waived retirees elect coverage at 65</li> </ul> </li> </ul>

<sup>7</sup> Based on current experience of retirees who retired since 2010



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## ACTUARIAL METHODS

<b>Method</b>	<b>January 1, 2012 Valuation</b>	<b>January 1, 2014 Valuation</b>
■ Cost Method	<ul style="list-style-type: none"> <li>• Entry Age Normal</li> </ul>	<ul style="list-style-type: none"> <li>• Same</li> </ul>
■ Funding Policy	<ul style="list-style-type: none"> <li>• Full ARC pre-funding</li> </ul>	<ul style="list-style-type: none"> <li>• Same</li> </ul>
■ Actuarial Value of Assets	<ul style="list-style-type: none"> <li>• None as of valuation date</li> </ul>	<ul style="list-style-type: none"> <li>• Investment gains and losses spread over a 5-year rolling period</li> <li>• Not less than 80% nor more than 120% of market value</li> </ul>
■ Amortization Method	<ul style="list-style-type: none"> <li>• Level Percent of Payroll</li> </ul>	<ul style="list-style-type: none"> <li>• Same</li> </ul>
■ Amortization Periods	<ul style="list-style-type: none"> <li>• 26-year fixed (closed) period fresh start for 2012/13 ARC</li> </ul>	<ul style="list-style-type: none"> <li>• 24-year fixed (closed) period fresh start for 2014/15 ARC</li> </ul>



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**PARS FUNDING OPTIONS**

**PARS Fund Options**<sup>8</sup>

	<b>Capital Appreciation</b>	<b>Balanced</b> <sup>9</sup>	<b>Moderate</b>	<b>Moderately Conservative</b>	<b>Conservative</b>
■ Target Allocation					
• Equity	75%	60%	50%	30%	15%
• Fixed Income	20%	35%	45%	65%	80%
• Cash	<u>5%</u>	<u>5%</u>	<u>5%</u>	<u>5%</u>	<u>5%</u>
• Total	100%	100%	100%	100%	100%
■ Median Return	7.39%	6.88%	6.48%	5.67%	5.00%
■ Discount Rate-Confidence Level					
• 50%	7.50%	7.00%	6.50%	5.75%	5.00%
• 55%	7.00%	6.50%	6.25%	5.50%	4.75%
• 60%	6.75%	6.25%	6.00%	5.25%	4.50%

<sup>8</sup> City selected to pre-fund with Balanced portfolio, 60% Confidence Level

<sup>9</sup> Previously Moderately Aggressive. Same allocation.



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**PARS FUNDING OPTIONS**

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**ASSETS**

**Market Value of Plan Assets (PARS)**

(Amounts in 000's)

	<b>2012/13</b>	<b>2013/14</b>
<b>■ MVA (Beginning of Year)</b>	\$ -	\$140
• Contributions	140	150
• Benefit Payments <sup>10</sup>	-	-
• Expenses	(0)	(0)
• Earnings	<u>(0)</u>	<u>15</u>
<b>■ MVA (End of Year)</b>	140	305
<b>■ Approximate Return</b>	(0.9)%	9.6%

<sup>10</sup> Paid outside of Trust directly to retirees.



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**ASSETS**

**Actuarial Value of Plan Assets**

(Amounts in 000's)

	<b>2012/13</b>	<b>2013/14</b>
<b>■ AVA (Beginning of Year)</b>	\$ -	\$ 140
• Contributions	140	150
• Benefit Payments	-	-
• Expected Earnings <sup>11</sup>	<u>-</u>	<u>10</u>
<b>■ Expected AVA (End of Year)</b>	140	300
<b>■ MVA (End of Year)</b>	140	305
<b>■ 1/5 of (MVA - Expected AVA)</b>	-	1
<b>■ Preliminary AVA</b>	140	301
• Minimum AVA (80% of MVA)	112	244
• Maximum AVA (120% of MVA)	168	366
<b>■ AVA (End of Year)</b>	140	301
<b>■ Approximate Return</b>	4.8%	6.9%

<sup>11</sup> Net of expenses.



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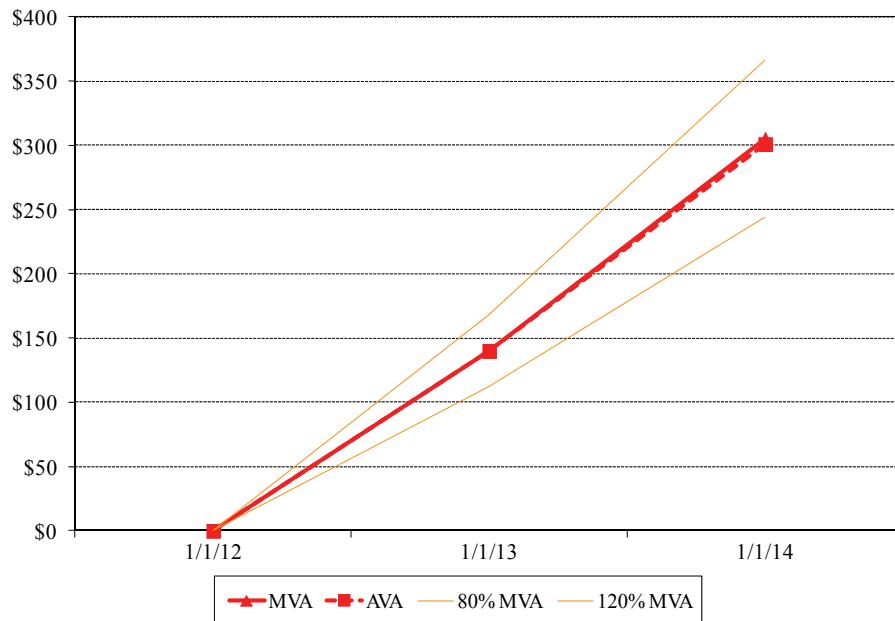
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## ASSETS

### Historical Assets

(Amounts in 000s)



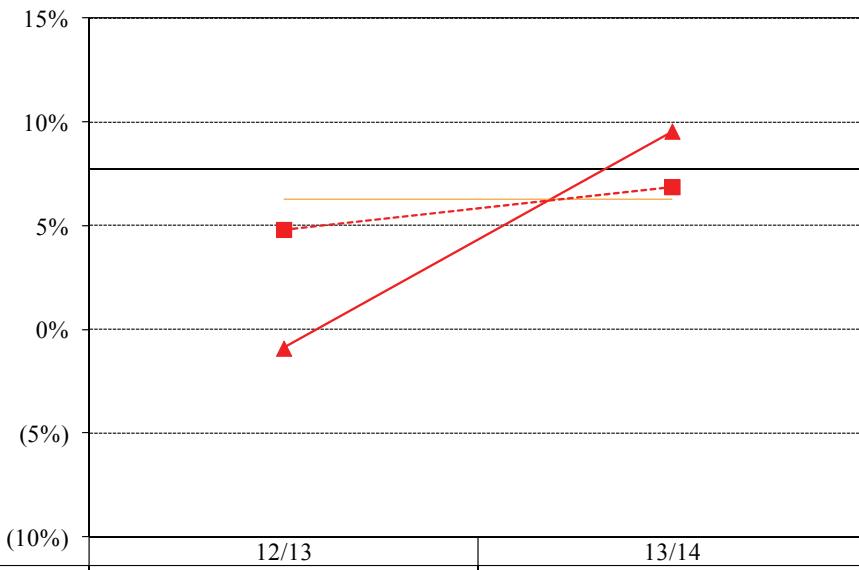
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## ASSETS

### Historical Asset Returns



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## RESULTS

### Actuarial Obligations

(Amounts in 000's)

	1/1/08	1/1/10	1/1/12	1/1/14	Proj. 6/30/14
<b>■ Discount Rate</b>	<b>5.00%</b>	<b>4.50%</b>	<b>6.25%</b>	<b>6.25%</b>	<b>6.25%</b>
<b>■ PVPB</b>					
• Actives	\$ n/a	\$ 2,695	\$ 1,746	\$ 1,994	
• Retirees	<u>898</u>	<u>1,547</u>	<u>1,571</u>	<u>1,623</u>	
• Total	n/a	4,242	3,317	3,617	
<b>■ Actuarial Accrued Liability</b>					
• Actives	905	1,239	925	1,075	
• Retirees	<u>898</u>	<u>1,547</u>	<u>1,571</u>	<u>1,623</u>	
• Total	1,803	2,786	2,496	2,698	\$2,786
<b>■ Actuarial Assets</b>	<u>-</u>	<u>-</u>	<u>-</u>	<u>146</u>	<u>301</u>
<b>■ Unfunded AAL</b>	1,803	2,786	2,496	2,553	2,485
<b>■ Normal Cost</b>	117	152	96		103
<b>■ Pay-As-You-Go Cost</b>	47	63	74		92



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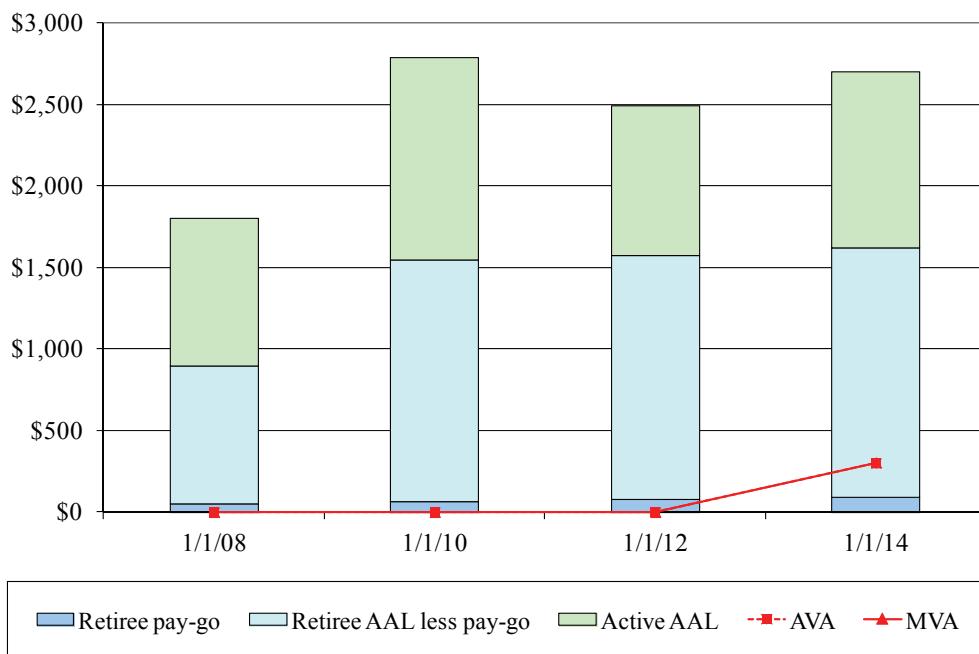
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## RESULTS

### Historical Actuarial Accrued Liability

(Amounts in 000's)



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## RESULTS

### Actuarial Gain/Loss Analysis

(Amounts in 000's)

	<b>AAL</b>	<b>(Assets)</b>	<b>UAAL</b>
■ Actual @ 1/1/2012	\$ 2,496	\$ -	\$ 2,496
■ Expected @ 6/30/2014	2,942	(338)	2,604
■ Assumption changes			
• CalPERS Assumptions 07 - 11	(0)		(0)
• Participation at retirement	(68)		(68)
■ Experience (gains)/losses			
• Premiums and PEMHCA min increased less than expected	(57)		(57)
• Investment return		(2)	(2)
• Contribution loss		39	39
• Demographic & other	(31)	—	(31)
■ Total changes	(156)	37	(119)
■ Projected @ 6/30/2014	2,786	(301)	2,485



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## RESULTS

### Schedule of Funding Progress

(Amounts in 000's)

<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets (a)</b>	<b>Entry Age Actuarial Accrued Liability (b)</b>	<b>Unfunded Actuarial Accrued Liability (b-a)</b>	<b>Funded Ratio (a/b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as Percentage of Covered Payroll ((b-a)/c)</b>
1/1/2008	\$ -	\$ 1,803	\$ 1,803	-	\$ 17,616	10.2%
1/1/2010	-	2,786	2,786	-	15,730	17.7%
1/1/2012	-	2,496	2,496	-	12,397	20.1%
1/1/2014	146	2,698	2,553	5.4%	13,778	18.5%



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## RESULTS

### Annual Required Contribution (ARC)

(Amounts in 000's)

Annual Required Contribution	1/1/2012 Valuation		1/1/2014 Valuation	
	2012/13	2013/14	2014/15	2015/16
■ ARC - \$				
• Normal Cost	\$ 96	\$ 99	\$ 103	\$ 107
• UAAL Amortization	<u>148</u>	<u>154</u>	<u>150</u>	<u>155</u>
• ARC	244 <sup>12</sup>	253	253	261
■ Projected Payroll	12,800	13,216	13,778	14,225
■ ARC - %				
• Normal Cost	0.7%	0.7%	0.7%	0.7%
• UAAL Amortization	<u>1.2%</u>	<u>1.2%</u>	<u>1.1%</u>	<u>1.1%</u>
• ARC	1.9%	1.9%	1.8%	1.8%

<sup>12</sup> From 1/1/12 valuation report, CAFR listed \$257,000.

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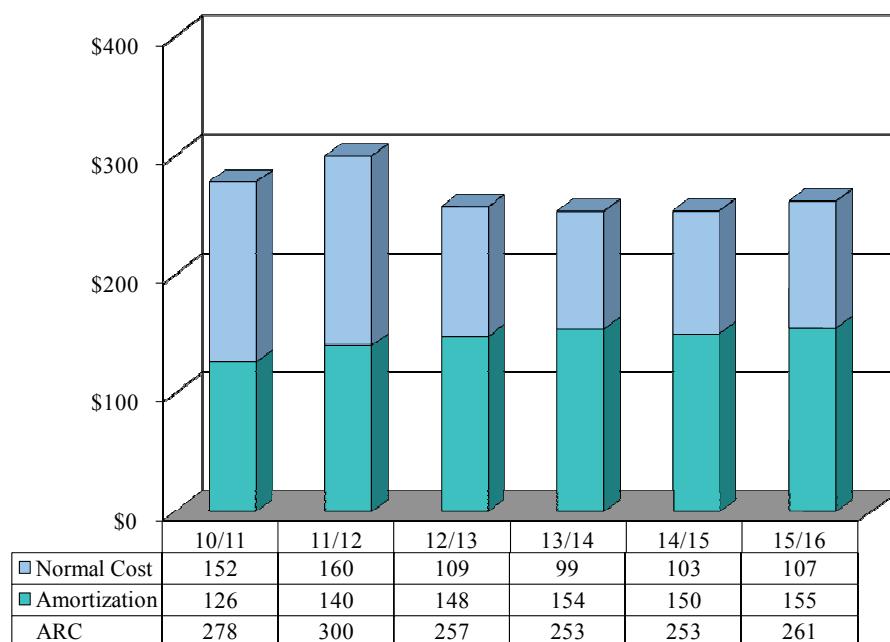
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## RESULTS

### Annual Required Contributions

(Amounts in 000's)



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**RESULTS**

**Amortization Bases**

(Amounts in 000's)

	<b>1/1/2012 Val</b>		<b>1/1/2014 Val</b>	
	<b>6/30/2012</b>	<b>6/30/2013</b>	<b>6/30/2014</b>	<b>6/30/2015</b>
<b>■ Outstanding Balance</b>				
• 2012 Fresh Start UAAL	\$ 2,582			
• 2013 Fresh Start UAAL		\$2,652		
• 2014 Fresh Start UAAL			\$2,485	
• 2015 Fresh Start UAAL	_____ -	_____ -	_____ -	<u>\$2,490</u>
• Total	2,582	2,625	2,485	2,490



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**RESULTS**

**Amortization Payments**

(Amounts in 000's)

	<b>1/1/2012 Val</b>		<b>1/1/2014 Val</b>	
	<b>2012/13</b>	<b>2013/14</b>	<b>2014/15</b>	<b>2015/16</b>
<b>■ Amortization Payments</b>				
• 2012 Fresh Start UAAL	\$ 148			
• 2013 Fresh Start UAAL		\$ 154		
• 2014 Fresh Start UAAL			\$ 150	
• 2015 Fresh Start UAAL	_____ -	_____ -	_____ -	<u>\$ 155</u>
• Total	148	154	150	155
<b>■ Average Amortization Years</b>	26.0	25.0	24.0	23.0



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**RESULTS**

**Estimated Net OPEB Obligation (NOO)**

(Amounts in 000's)

<b>Estimated Net OPEB Obligation</b>	<b>CAFR 2012/13</b>	<b>Estimated 2013/14</b>	<b>Estimated 2014/15</b>	<b>Estimated 2015/16</b>
<b>■ NOO at Beginning of Year</b>	\$ 720	\$ 750	\$ 770	\$ 772
<b>■ Annual OPEB Cost (AOC)</b>				
• Annual Required Contribution	257 <sup>13</sup>	253	253	261
• Interest on NOO	32	47	48	48
• Amortization of NOO	(45)	(44)	(46)	(48)
• Annual OPEB Cost	244	256	255	262
<b>■ Contributions</b>				
• Benefit Payments	74	85	92	101
• Trust Pre-Funding	140	150	161	160
• Total Contribution	214	235	253	261
<b>■ NOO at End of Year</b>	750	770	772	772

<sup>13</sup> Different from \$244,000 on 1/1/12 valuation report.

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**RESULTS**

**Pre-Funding (Full ARC Contribution) Illustration**

**6.25% Discount Rate**

(Amounts in 000's)

<b>FYE June 30,</b>	<b>Beginning of Year Net OPEB Obligation</b>	<b>ARC</b>	<b>Annual OPEB Cost (AOC)</b>	<b>Contribution</b>			<b>Payroll</b>	<b>ARC as % of Payroll</b>	<b>Contr. as % of Payroll</b>
				<b>Benefit Pmts</b>	<b>Pre- Funding</b>	<b>Total Contr.</b>			
2015	\$ 770	\$ 253	\$ 255	\$ 92	\$ 161	\$ 253	\$ 13,778	1.8%	1.8%
2016	772	261	262	101	160	261	14,225	1.8%	1.8%
2017	772	270	269	112	158	270	14,688	1.8%	1.8%
2018	771	279	276	122	157	279	15,165	1.8%	1.8%
2019	768	288	283	134	154	288	15,658	1.8%	1.8%
2020	763	297	290	145	152	297	16,167	1.8%	1.8%
2021	756	307	298	156	151	307	16,692	1.8%	1.8%
2022	747	317	305	169	148	317	17,235	1.8%	1.8%
2023	736	327	313	181	146	327	17,795	1.8%	1.8%
2024	722	338	321	194	144	338	18,373	1.8%	1.8%

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**RESULTS**

**Actuarial Obligations by Group**

January 1, 2014  
6.25% Discount Rate  
(Amounts in 000's)

	<b>Miscellaneous</b>	<b>Safety</b>	<b>Total</b>
<b>■ PVPB</b>			
• Actives	\$ 1,248	\$ 746	\$ 1,994
• Retirees	<u>1,010</u>	<u>613</u>	<u>1,623</u>
• Total	2,258	1,359	3,617
<b>■ Actuarial Accrued Liability</b>			
• Actives	776	300	1,075
• Retirees	<u>1,010</u>	<u>613</u>	<u>1,623</u>
• Total	1,786	913	2,698
<b>■ Actuarial Assets<sup>14</sup></b>	<u>96</u>	<u>49</u>	<u>146</u>
<b>■ Unfunded AAL</b>	1,689	864	2,553
<b>■ Normal Cost (2014/15)</b>	64	39	103
<b>■ Pay-As-You-Go Cost (2014/15)</b>	63	29	92

<sup>14</sup> Assets allocation is based on Actuarial Accrued Liability



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**RESULTS**

**Annual Required Contribution (ARC) by Group**

2014/15 Fiscal Year  
6.25% Discount Rate  
(Amounts in 000's)

	<b>Miscellaneous</b>	<b>Safety</b>	<b>Total</b>
<b>■ ARC - \$</b>			
• Normal Cost	\$ 64	\$ 39	\$ 103
• UAAL Amortization <sup>15</sup>	<u>99</u>	<u>51</u>	<u>150</u>
• ARC	163	90	253
<b>■ Projected Payroll</b>	8,603	5,175	13,778
<b>■ ARC - %</b>			
• Normal Cost	0.7%	0.8%	0.7%
• UAAL Amortization	<u>1.2%</u>	<u>1.0%</u>	<u>1.1%</u>
• ARC	1.9%	1.8%	1.8%

<sup>15</sup> Allocated in proportion to the AAL



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## ACTUARIAL VALUATION CERTIFICATION

This report presents the City of Novato's Retiree Healthcare Plan ("Plan") January 1, 2014 actuarial valuation. The purpose of this valuation is to:

- Determine the Governmental Accounting Standards Board Statement Nos. 43 and 45 January 1, 2014 Benefit Obligations,
- Determine the Plan's January 1, 2014 Funded Status, and
- Calculate the 2014/15 and 2015/16 Annual Required Contributions.

The report provides information intended for reporting under GASB 43 and 45, but may not be appropriate for other purposes. Information provided in this report may be useful to the City for the Plan's financial management. Future valuations may differ significantly if the Plan's experience differs from our assumptions or if there are changes in Plan design, actuarial methods, or actuarial assumptions. The project scope did not include an analysis of this potential variation.

The valuation is based on Plan provisions, participant data, and asset information provided by the City as summarized in this report, which we relied on and did not audit. We reviewed the participant data for reasonableness.

To the best of our knowledge, this report is complete and accurate and has been conducted using generally accepted actuarial principles and practices. Additionally, in our opinion, actuarial methods and assumptions comply with GASB 43 and 45. As members of the American Academy of Actuaries meeting the Academy Qualification Standards, we certify the actuarial results and opinions herein.

Respectfully submitted,



John E. Bartel, ASA, MAAA, FCA  
President  
Bartel Associates, LLC  
October 28, 2014



Bianca Lin, FSA, MAAA, EA  
Assistant Vice President  
Bartel Associates, LLC  
October 28, 2014



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## EXHIBITS

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**PREMIUMS**

**2013 PEMHCA Monthly Premiums**

Bay Area

<b>Plan</b>	<b>Non-Medicare Eligible</b>			<b>Medicare Eligible</b>		
	<b>Single</b>	<b>2-Party</b>	<b>Family</b>	<b>Single</b>	<b>2-Party</b>	<b>Family</b>
Blue Shield	\$784.63	\$1,569.26	\$2,040.04	\$261.32	\$522.64	\$783.96
Blue Shield NetValue	670.21	1,340.42	1,742.55	261.32	522.64	783.96
Kaiser	668.63	1,337.26	1,738.44	288.37	576.74	865.11
PERS Choice	667.03	1,334.06	1,734.28	325.74	651.48	977.22
PERS Select	487.20	974.40	1,266.72	325.74	651.48	977.22
PERSCare	1,083.11	2,166.22	2,816.09	370.43	740.86	1,111.29
PORAC	581.00	1,088.00	1,382.00	418.00	833.00	1,331.00



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**PREMIUMS**

**2014 PEMHCA Monthly Premiums**

Bay Area

<b>Plan</b>	<b>Non-Medicare Eligible</b>			<b>Medicare Eligible</b>		
	<b>Single</b>	<b>2-Party</b>	<b>Family</b>	<b>Single</b>	<b>2-Party</b>	<b>Family</b>
Anthem Select	\$657.33	\$1,314.66	\$1,709.06	\$341.12	\$682.24	\$1,023.36
Anthem Traditional	728.41	1,456.82	1,893.07	341.12	682.24	1,023.36
Blue Shield	836.59	1,673.18	2,175.13	298.21	596.42	894.63
Blue Shield NetValue	704.01	1,408.02	1,830.43	298.21	596.42	894.63
Kaiser	742.72	1,485.44	1,931.07	294.97	589.94	884.91
UnitedHealthcare	764.24	1,528.48	1,987.02	193.33	386.66	579.99
PERS Choice	690.77	1,381.54	1,796.00	307.23	614.46	921.69
PERS Select	661.52	1,323.04	1,719.95	307.23	614.46	921.69
PERSCare	720.04	1,440.08	1,872.10	327.36	654.72	982.08
PORAC	634.00	1,186.00	1,507.00	397.00	791.00	1,264.00



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**PREMIUMS**

**2015 PEMHCA Monthly Premiums**  
**Bay Area**

<b>Plan</b>	<b>Non-Medicare Eligible</b>			<b>Medicare Eligible</b>		
	<b>Single</b>	<b>2-Party</b>	<b>Family</b>	<b>Single</b>	<b>2-Party</b>	<b>Family</b>
Anthem Select	\$662.41	\$1,324.82	\$1,722.27	\$445.38	\$890.76	\$1,336.14
Anthem Traditional	827.57	1,655.14	2,151.68	445.38	890.76	1,336.14
Blue Shield	928.87	1,857.74	2,415.06	352.63	705.26	1,057.89
Blue Shield NetValue	870.60	1,741.20	2,263.56	352.63	705.26	1,057.89
Kaiser	714.45	1,428.90	1,857.57	295.51	591.02	886.53
UnitedHealthcare	850.67	1,701.34	2,211.74	267.41	534.82	802.23
PERS Choice	700.84	1,401.68	1,822.18	339.47	678.94	1,018.41
PERS Select	690.43	1,380.86	1,795.12	339.47	678.94	1,018.41
PERSCare	775.08	1,550.16	2,015.21	368.76	737.52	1,106.28
PORAC	675.00	1,292.00	1,642.00	402.00	802.00	1,281.00



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**DATA SUMMARY**

**Participant Statistics**  
**January 1, 2014**

	<b>Misc.</b>	<b>Safety</b>	<b>Total</b>
■ Actives			
• Count	133	59	192
• Average age	49.9	37.1	46.0
• Average City service	12.3	9.3	11.4
• Average CalPERS service	13.5	9.8	12.3
• Average pay	\$ 63,661	\$ 86,314	\$ 70,622
• Total payroll (000's)	8,467	5,093	13,559
■ Retirees			
• Count	100	49	149
• Average age	69.1	61.9	66.7
• Average retirement age <sup>16</sup>	59.4	47.6	55.3

<sup>16</sup> Excludes 9 surviving spouses



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**DATA SUMMARY**

**Participant Statistics**  
**January 1, 2012**

	Misc.	Safety	Total
■ Actives			
• Count	123	56	179
• Average age	49.5	38.5	46.0
• Average City service	12.3	9.9	11.5
• Average CalPERS service	13.4	10.9	12.6
• Average pay	\$ 63,178	\$ 82,605	\$ 69,256
• Total payroll (000's) <sup>17</sup>	7,771	4,626	12,397
■ Retirees			
• Count	98	45	143
• Average age	68.5	61.0	66.1
• Average retirement age <sup>18</sup>	60.1	47.5	55.9

<sup>17</sup> 2011 calendar year reported payroll

<sup>18</sup> Excludes 7 surviving spouses



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**DATA SUMMARY**

**Medical Plan Participation**  
**Non-Waived Participants**

Plan	Actives	Retirees		
		<65	>65	Total
<b>Blue Shield</b>	18%	3%	3%	3%
<b>Blue Shield NetValue</b>	5%	3%	0%	2%
<b>Kaiser</b>	58%	63%	59%	61%
<b>PERS Choice</b>	12%	17%	17%	17%
<b>PERS Select</b>	3%	3%	0%	2%
<b>PERSCare</b>	0%	0%	21%	10%
<b>PORAC</b>	4%	10%	0%	5%
<b>Total</b>	100%	100%	100%	100%



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**DATA SUMMARY**

**Active Medical Plan Coverage<sup>19</sup>**

<b>Medical Plan</b>	<b>Single</b>	<b>2-Party</b>	<b>Family</b>	<b>Waived</b>	<b>Total</b>
Blue Shield	16	3	1	-	20
Blue Shield NetValue	3	1	2	-	6
Kaiser	34	18	14	-	66
PERS Choice	10	2	2	-	14
PERS Select	2	-	1	-	3
PORAC	-	1	3	-	4
Waived	-	-	-	79	79
Total	65	25	23	79	192

<sup>19</sup> All plans in Bay Area region



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**DATA SUMMARY**

**Retiree Medical Plan Coverage**  
**Under Age 65**

<b>Medical Plan</b>	<b>Region</b>	<b>Single</b>	<b>2-Party</b>	<b>Family</b>	<b>Waived</b>	<b>Total</b>
Blue Shield	Bay Area	-	1	-	-	1
Blue Shield NetValue	Bay Area	1	-	-	-	1
Kaiser	Bay Area	11	5	1	-	17
	Sacramento	1	-	-	-	1
	South	1	-	-	-	1
PERS Choice	Bay Area	1	2	-	-	3
	North	-	-	-	-	-
	Out of State	2	-	-	-	2
PERS Select	Bay Area	1	-	-	-	1
PERSCare	Bay Area	-	-	-	-	-
	Out of State	-	-	-	-	-
PORAC		-	2	1	-	3
Waived		-	-	-	34	34
Total		18	10	2	34	64



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**DATA SUMMARY**

**Retiree Medical Plan Coverage**  
**Over Age 65**

<b>Medical Plan</b>	<b>Region</b>	<b>Single</b>	<b>2-Party</b>	<b>Family</b>	<b>Waived</b>	<b>Total</b>
Blue Shield	Bay Area	1	-	-	-	1
Blue Shield NetValue	Bay Area	-	-	-	-	-
Kaiser	Bay Area	9	7	1	-	17
	Sacramento	-	-	-	-	-
	South	-	-	-	-	-
PERS Choice	Bay Area	1	1	-	-	2
	North	-	1	-	-	1
	Out of State	1	1	-	-	2
PERS Select	Bay Area	-	-	-	-	-
PERSCare	Bay Area	1	2	-	-	3
	Out of State	3	-	-	-	3
PORAC		-	-	-	-	-
Waived		-	-	-	56	56
Total		16	12	1	56	85



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**DATA SUMMARY**

**Actives by Age and Service**  
**Miscellaneous**

<b>Age</b>	<b>City Service</b>								<b>Total</b>
	<b>&lt; 1</b>	<b>1-4</b>	<b>5-9</b>	<b>10-14</b>	<b>15-19</b>	<b>20-24</b>	<b>≥ 25</b>		
< 25	-	1	-	-	-	-	-		1
25-29	3	5	-	-	-	-	-		8
30-34	1	3	6	1	-	-	-		11
35-39	-	-	4	3	1	-	-		8
40-44	1	-	4	2	2	-	-		9
45-49	3	3	7	5	2	-	-		20
50-54	-	-	9	7	8	1	3		28
55-59	2	2	3	3	4	4	7		25
60-64	-	2	1	3	2	2	5		15
≥ 65	-	-	4	1	2	1	-		8
Total	10	16	38	25	21	8	15		133



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**DATA SUMMARY**

**Actives by Age and Service**  
**Safety**

Age	City Service							
	< 1	1-4	5-9	10-14	15-19	20-24	≥ 25	Total
< 25	2	3	-	-	-	-	-	5
25-29	5	5	3	-	-	-	-	13
30-34	-	1	4	2	-	-	-	7
35-39	1	1	4	8	-	-	-	14
40-44	-	1	2	5	-	-	-	8
45-49	-	-	1	1	1	2	1	6
50-54	-	-	-	-	1	1	1	3
55-59	-	-	-	1	-	-	2	3
60-64	-	-	-	-	-	-	-	-
≥ 65	-	-	-	-	-	-	-	-
Total	8	11	14	17	2	3	4	59



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**DATA SUMMARY**

**Actives by Age and Service**  
**Total**

Age	City Service							
	< 1	1-4	5-9	10-14	15-19	20-24	≥ 25	Total
< 25	2	4	-	-	-	-	-	6
25-29	8	10	3	-	-	-	-	21
30-34	1	4	10	3	-	-	-	18
35-39	1	1	8	11	1	-	-	22
40-44	1	1	6	7	2	-	-	17
45-49	3	3	8	6	3	2	1	26
50-54	-	-	9	7	9	2	4	31
55-59	2	2	3	4	4	4	9	28
60-64	-	2	1	3	2	2	5	15
≥ 65	-	-	4	1	2	1	-	8
Total	18	27	52	42	23	11	19	192



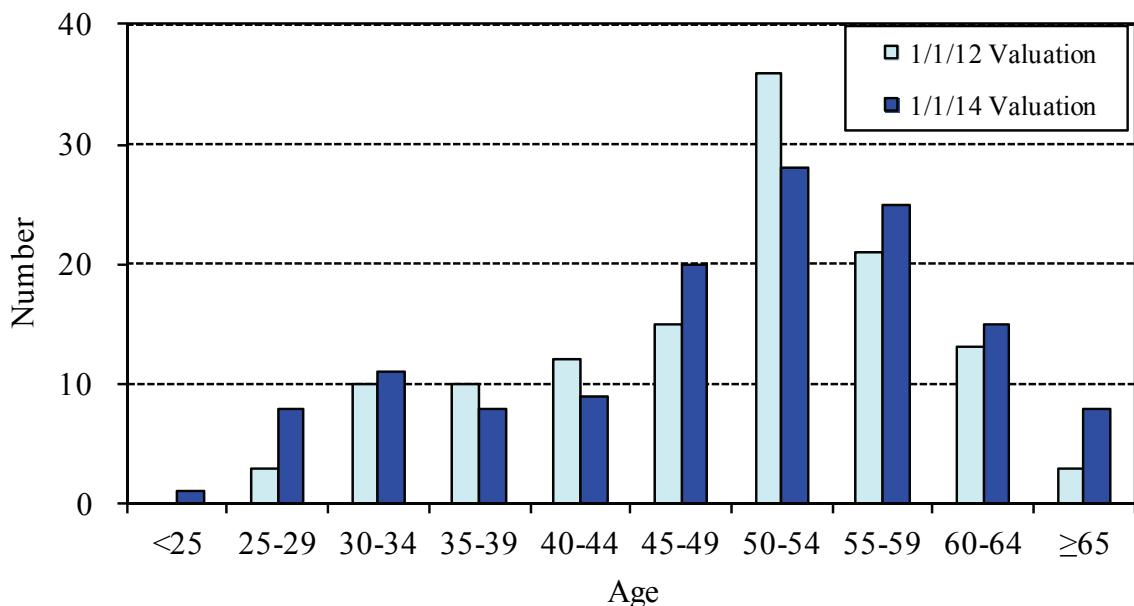
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## DATA SUMMARY

### Active Age Distribution Miscellaneous



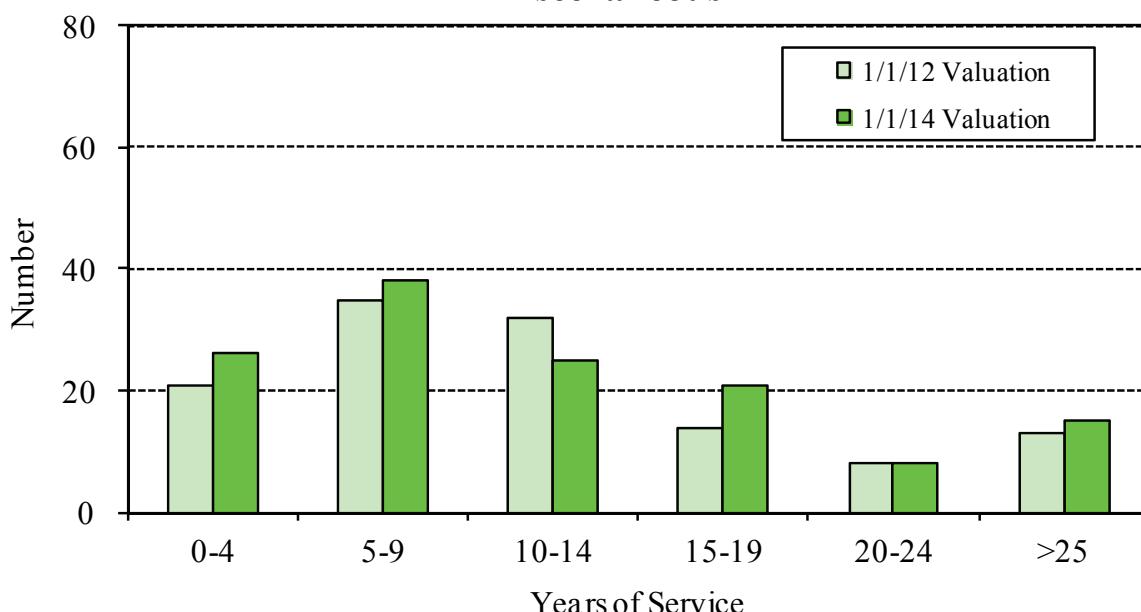
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## DATA SUMMARY

### Active Service Distribution Miscellaneous



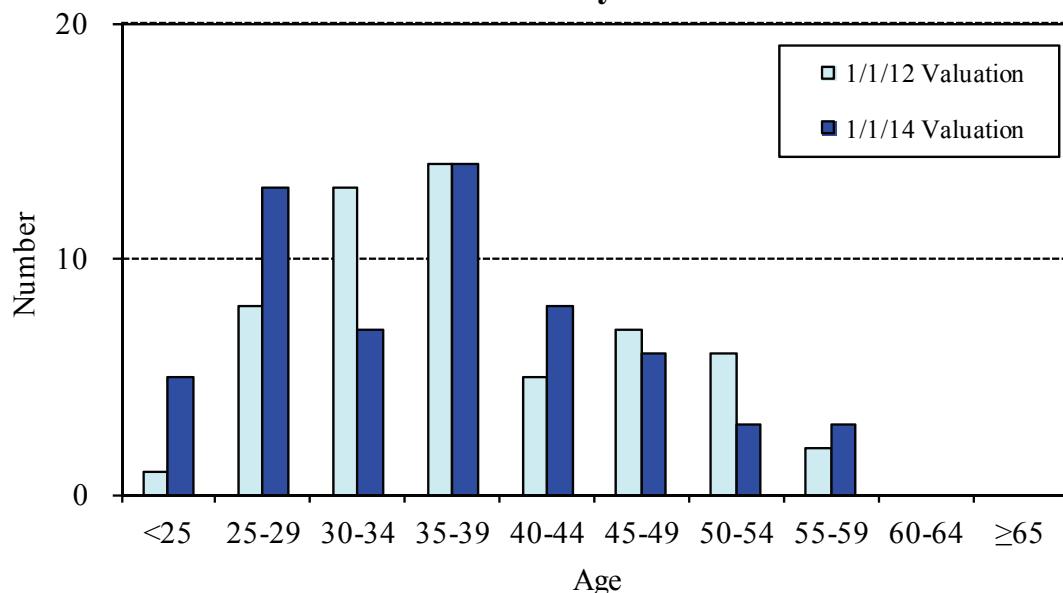
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## DATA SUMMARY

### Active Age Distribution Safety



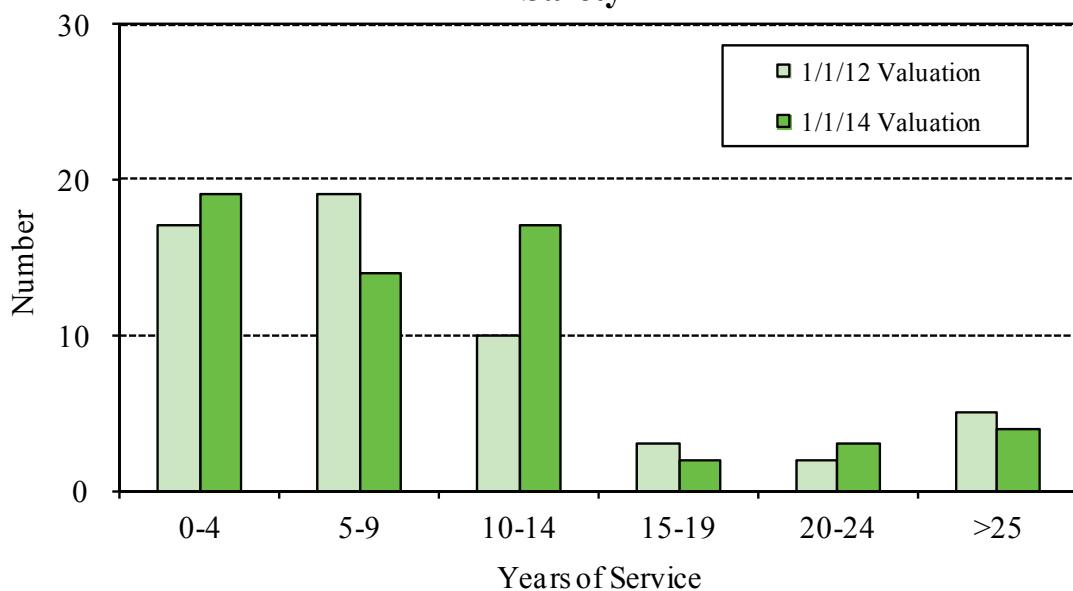
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## DATA SUMMARY

### Active Service Distribution Safety



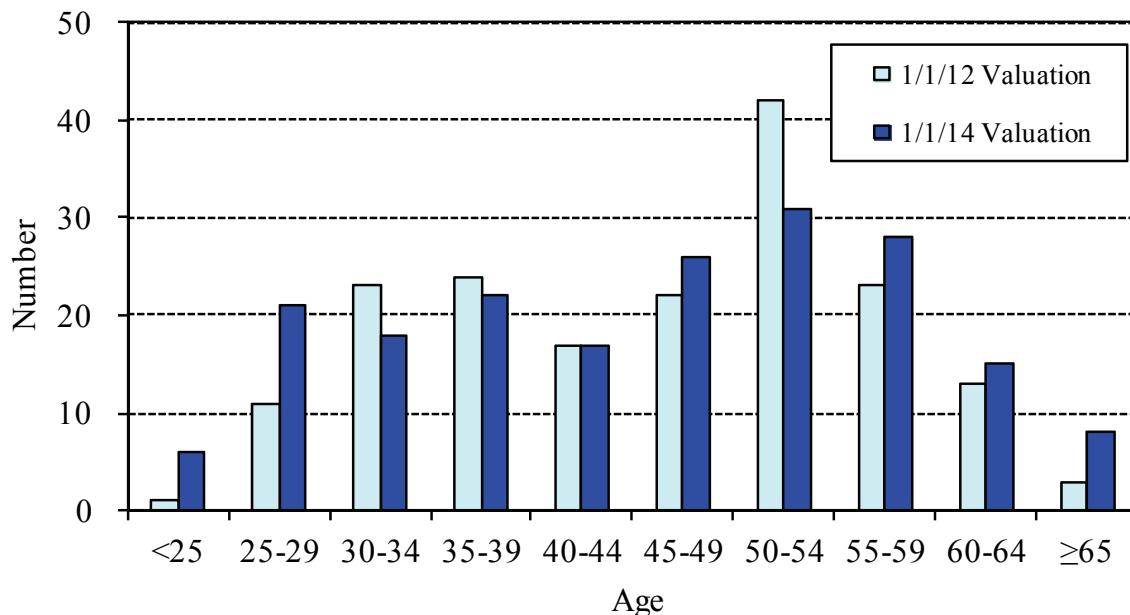
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## DATA SUMMARY

### Active Age Distribution Total



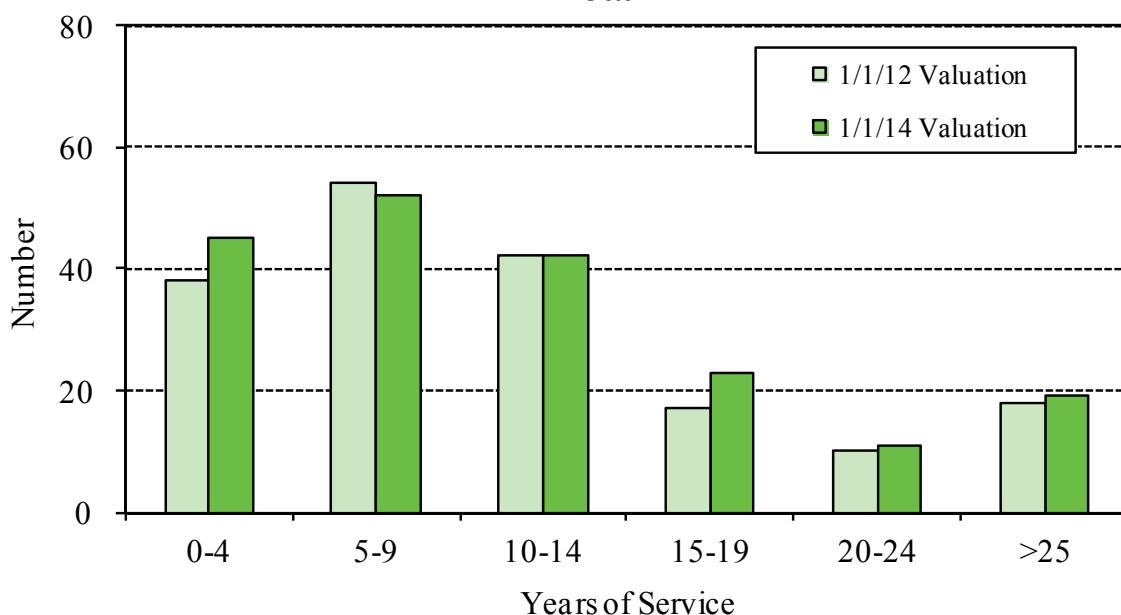
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## DATA SUMMARY

### Active Service Distribution Total



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**DATA SUMMARY**

**Retiree Healthcare Coverage by Age Group**

**Miscellaneous**

<b>Age</b>	<b>Single</b>	<b>2-Party</b>	<b>Family</b>	<b>Waived</b>	<b>Total</b>
Under 50	-	-	-	1	1
50-54	-	-	-	2	2
55-59	5	-	-	6	11
60-64	6	5	-	10	21
65-69	9	4	1	16	30
70-74	3	3	-	11	17
75-79	2	-	-	2	4
80-84	-	1	-	4	5
Over 85	1	-	-	8	9
Total	26	13	1	60	100

Average Age	67.2	68.0	66.5	70.1	69.1
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**DATA SUMMARY**

**Retiree Healthcare Coverage by Age Group**

**Safety**

<b>Age</b>	<b>Single</b>	<b>2-Party</b>	<b>Family</b>	<b>Waived</b>	<b>Total</b>
Under 50	-	-	-	2	2
50-54	3	-	-	6	9
55-59	3	3	1	3	10
60-64	1	2	1	4	8
65-69	1	1	-	9	11
70-74	-	3	-	4	7
75-79	-	-	-	1	1
80-84	-	-	-	1	1
Over 85	-	-	-	-	-
Total	8	9	2	30	49

Average Age	57.5	64.4	59.6	62.5	61.9
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**DATA SUMMARY**

**Retiree Healthcare Coverage by Age Group**

**Total**

<b>Age</b>	<b>Single</b>	<b>2-Party</b>	<b>Family</b>	<b>Waived</b>	<b>Total</b>
Under 50	-	-	-	3	3
50-54	3	-	-	8	11
55-59	8	3	1	9	21
60-64	7	7	1	14	29
65-69	10	5	1	25	41
70-74	3	6	-	15	24
75-79	2	-	-	3	5
80-84	-	1	-	5	6
Over 85	1	-	-	8	9
Total	34	22	3	90	149

Average Age	64.9	66.6	61.9	67.6	66.7
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**ACTUARIAL ASSUMPTIONS**

<b>Assumption</b>	<b>January 1, 2012 Valuation</b>	<b>January 1, 2014 Valuation</b>
■ Valuation Date	<ul style="list-style-type: none"> <li>• January 1, 2012</li> <li>• 2012/13 and 2013/14 ARCs</li> </ul>	<ul style="list-style-type: none"> <li>• January 1, 2014</li> <li>• 2014/15 and 2015/16 ARCs</li> </ul>
■ Discount Rate	<ul style="list-style-type: none"> <li>• 6.25% Full ARC pre-funded with PARS moderate OPEB trust, 55% confidence level</li> </ul>	<ul style="list-style-type: none"> <li>• 6.25% Full ARC pre-funded with PARS Balanced OPEB trust, 60% confidence level</li> </ul>
■ Funding Policy	<ul style="list-style-type: none"> <li>• Full ARC pre-funded with PARS moderate OPEB trust</li> </ul>	<ul style="list-style-type: none"> <li>• Full ARC pre-funded with PARS Balanced OPEB trust</li> </ul>
■ General Inflation	<ul style="list-style-type: none"> <li>• 3.0%</li> </ul>	<ul style="list-style-type: none"> <li>• Same</li> </ul>
■ Aggregate Payroll Increases	<ul style="list-style-type: none"> <li>• 3.25%</li> </ul>	<ul style="list-style-type: none"> <li>• Same</li> </ul>
■ Merit Pay Increases	<ul style="list-style-type: none"> <li>• CalPERS 1997-2007 Experience Study</li> </ul>	<ul style="list-style-type: none"> <li>• CalPERS 1997-2011 Experience Study</li> </ul>
■ Future New Entrants	<ul style="list-style-type: none"> <li>• None – Closed Group</li> </ul>	<ul style="list-style-type: none"> <li>• Same</li> </ul>



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## ACTUARIAL ASSUMPTIONS

<b>Assumption</b>	<b>January 1, 2012 Valuation</b>		<b>January 1, 2014 Valuation</b>	
	<u>Year</u>	<u>Amount</u>	<u>Year</u>	<u>Amount</u>
■ PEMHCA Minimum Increase	2012	\$112.00	2013	\$115.00
	2013	115.00	2014	119.00
	2014	119.00	2015	122.00
	2015+	4.5%/yr	2016+	4.5%/yr
■ Mortality, Termination, Disability	<ul style="list-style-type: none"> <li>• CalPERS 1997-2007 Experience Study</li> <li>• Mortality Scale AA</li> </ul>		<ul style="list-style-type: none"> <li>• CalPERS 1997-2011 Experience Study</li> <li>• Mortality Scale AA</li> </ul>	



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## ACTUARIAL ASSUMPTIONS

<b>Assumption</b>	<b>January 1, 2012 Valuation</b>		<b>January 1, 2014 Valuation</b>																												
■ Service Retirement	<ul style="list-style-type: none"> <li>• CalPERS 1997-2007 Experience Study</li> </ul> <table style="margin-top: 10px; border-collapse: collapse;"> <tr> <th></th> <th style="text-align: center;"><u>Level</u></th> <th style="text-align: center;"><u>ERA</u></th> </tr> <tr> <td>Misc</td> <td style="text-align: center;">2%@55</td> <td style="text-align: center;">≈ 59.4</td> </tr> <tr> <td>Safety</td> <td style="text-align: center;">3%@55</td> <td style="text-align: center;">≈ 56.0 (Police)</td> </tr> </table>			<u>Level</u>	<u>ERA</u>	Misc	2%@55	≈ 59.4	Safety	3%@55	≈ 56.0 (Police)	<ul style="list-style-type: none"> <li>• CalPERS 1997-2011 Experience Study</li> </ul> <table style="margin-top: 10px; border-collapse: collapse;"> <tr> <th></th> <th style="text-align: center;"><u>Tier 1</u></th> <th style="text-align: center;"><u>ERA</u></th> </tr> <tr> <td>Misc</td> <td style="text-align: center;">2%@55</td> <td style="text-align: center;">≈ 59.8</td> </tr> <tr> <td>Safety</td> <td style="text-align: center;">3%@55</td> <td style="text-align: center;">≈ 56.4 (Police)</td> </tr> </table> <table style="margin-top: 10px; border-collapse: collapse;"> <tr> <th></th> <th style="text-align: center;"><u>Tier 2/ PEPRA</u></th> <th style="text-align: center;"><u>ERA</u></th> </tr> <tr> <td>Misc</td> <td style="text-align: center;">2.5%@67</td> <td style="text-align: center;">≈ 62.0</td> </tr> <tr> <td>Safety</td> <td style="text-align: center;">2.7%@57</td> <td style="text-align: center;">≈ 56.8 (Police)</td> </tr> </table>			<u>Tier 1</u>	<u>ERA</u>	Misc	2%@55	≈ 59.8	Safety	3%@55	≈ 56.4 (Police)		<u>Tier 2/ PEPRA</u>	<u>ERA</u>	Misc	2.5%@67	≈ 62.0	Safety	2.7%@57	≈ 56.8 (Police)
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■ CalPERS Service	<ul style="list-style-type: none"> <li>• Actual CalPERS Service</li> </ul>		<ul style="list-style-type: none"> <li>• Same</li> </ul>																												
■ PEMHCA Administrative Fee	<ul style="list-style-type: none"> <li>• 0.25% of premium for 2012/13+</li> </ul>		<ul style="list-style-type: none"> <li>• 0.33% of premium for 2013/14+</li> </ul>																												



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## ACTUARIAL ASSUMPTIONS

<b>Assumption</b>	<b>January 1, 2012 Valuation</b>		<b>January 1, 2014 Valuation</b>		
	<u>Non-Medicare</u>	<u>Medicare</u>	<u>Non-Medicare</u>	<u>Medicare</u>	
	<u>Year</u>	<u>All Plans</u>	<u>Year</u>	<u>All Plans</u>	
■ Medical Trend	2012 2013 2014 ↓ 2021+	actual 2012 premiums actual 2013 premiums 8.5% ↓ 5.0%	8.9% ↓ 5.0%	actual 2012 premiums actual 2013 premiums actual 2014 premiums actual 2015 premiums 7.5% ↓ 5.0%	7.8% ↓ 5.0%
		• For calculating PEMHCA administrative fee only		• For calculating PEMHCA administrative fee only	
■ Medical Plan at Retirement		• Currently covered: same as current election • Currently waived: Kaiser Bay Area • For calculating PEMHCA administrative fee only		• Same	



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## ACTUARIAL ASSUMPTIONS

<b>Assumption</b>	<b>January 1, 2012 Valuation</b>		<b>January 1, 2014 Valuation</b>	
	<u>Actives</u> <sup>20</sup> :	<u>Retirees</u> :	<u>Actives</u> <sup>21</sup> :	<u>Retirees</u> :
	➤ Currently covered: 60%	➤ Currently waived: 20%	➤ Currently covered: 75%	➤ Currently waived: 5%
■ Participation	• Actives <sup>20</sup> : ➤ Currently covered: 60% ➤ Currently waived: 20%	• Retirees: ➤ Currently covered: 100% ➤ Currently waived: 20% waived retirees elect coverage at 65	• Actives <sup>21</sup> : ➤ Currently covered: 75% ➤ Currently waived: 5%	• Retirees: ➤ Currently covered: 100% ➤ Currently waived: 5% waived retirees elect coverage at 65
■ Marital Status at Retirement	• Currently Covered – Same as current election • Currently Waived – 80% married		• Same	

<sup>20</sup> Based on current experience of retirees who retired since 2007

<sup>21</sup> Based on current experience of retirees who retired since 2010



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## ACTUARIAL ASSUMPTIONS

<b>Assumption</b>	<b>January 1, 2012 Valuation</b>	<b>January 1, 2014 Valuation</b>
■ Spouse Age	<ul style="list-style-type: none"> <li>• Current actives - Males 3 years older than females</li> <li>• Current retirees - Males 3 years older than females if spouse birth date not available</li> </ul>	• Same
■ Surviving Spouse Participation	<ul style="list-style-type: none"> <li>• 100%</li> </ul>	• Same



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## DEFINITIONS

■ GASB 45 Accrual Accounting	<ul style="list-style-type: none"> <li>• Project future employer-provided benefit cash flows for current active employees and current retirees</li> <li>• Discount projected cash flow to valuation date using discount rate (assumed return on assets used to pay benefits) and other actuarial assumptions to determine present value of projected future benefits (PVB)</li> <li>• Allocate PVB to past, current, and future periods using the actuarial cost method</li> <li>• Actuarial cost method used for this valuation is the Entry Age Normal Cost method which determines Normal Cost as a level percentage of payroll (same method used by CalPERS)</li> <li>• Normal Cost is amount allocated to current fiscal year</li> <li>• Actuarial Accrued Liability (AAL) is amount allocated to prior service with employer</li> <li>• Unfunded AAL (UAAL) is AAL less plan assets pre-funded in a segregated and restricted trust</li> </ul>
■ PayGo Cost	<ul style="list-style-type: none"> <li>• Cash subsidy is the pay-as-you-go employer benefit payments for retirees</li> <li>• Implied subsidy is the difference between the actual cost of retiree benefits and retiree premiums subsidized by active employee premiums</li> </ul>



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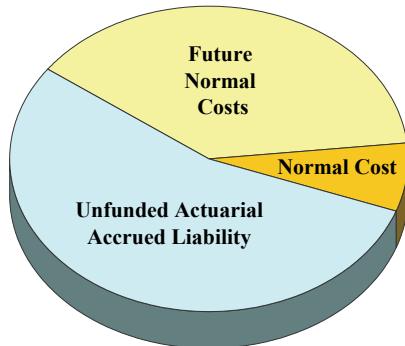
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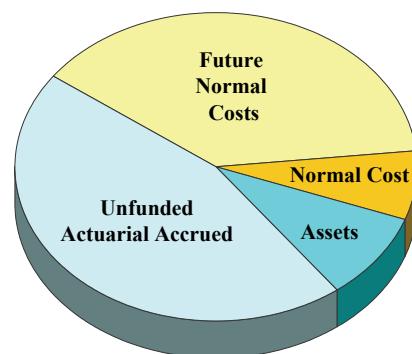
## DEFINITIONS

### Present Value of Benefits

**Present Value of Benefits  
(Without Plan Assets)**



**Present Value of Benefits  
(With Plan Assets)**



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## DEFINITIONS

<b>■ Annual Required Contribution (ARC)</b>	<ul style="list-style-type: none"> <li>● “Required contribution” for the current period including:           <ul style="list-style-type: none"> <li>➢ Normal Cost</li> <li>➢ Amortization of:               <ul style="list-style-type: none"> <li>- Initial UAAL</li> <li>- AAL for plan, assumption, and method changes</li> <li>- Experience gains/losses (difference between expected and actual)</li> <li>- Contribution gains/losses (difference between ARC and contributions)</li> </ul> </li> </ul> </li> <li>● ARC in excess of pay-as-you-go costs not required to be funded</li> </ul>
<b>■ Net OPEB Obligation (NOO)</b>	<ul style="list-style-type: none"> <li>● Net OPEB Obligation is the accumulated amounts expensed but not funded</li> <li>● Net OPEB Asset if amounts funded exceed those expensed</li> </ul>
<b>■ Annual OPEB Cost (AOC)</b>	<ul style="list-style-type: none"> <li>● Expense for the current period including:           <ul style="list-style-type: none"> <li>➢ ARC</li> <li>➢ Interest on NOO</li> <li>➢ Adjustment of NOO</li> </ul> </li> <li>● NOO adjustment prevents double counting of expense since ARCs include an amortization of prior contribution gains/losses previously expensed</li> </ul>



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