



**TOWN OF STERLING**

**OTHER POSTEMPLOYMENT BENEFITS PROGRAM**

**ACTUARIAL VALUATION**

**July 1, 2012**

Prepared by:

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November 14, 2013

Ms. Anne M. Cervantes  
Treasurer/Collector  
Town of Sterling  
One Park Street  
Sterling, MA 01564

Dear Anne:

Enclosed is our report summarizing the results of an actuarial valuation of the Town of Sterling's Other Postemployment Benefits (OPEB) as of July 1, 2012. Our valuation was performed in accordance with the provisions contained in the GASB Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions (GASB 45).

A summary of the valuation results is shown in Section 1. The principal results of our valuation are summarized in Section 2. The Plan Provisions and Actuarial Assumptions and Methods are shown in Sections 6 and 7, respectively. Section 8 summarizes the demographic profile of active employees and retirees.

The required disclosures under GASB 45 are presented in Section 3.

Our best estimate health care cost trend assumptions are based on recent experience and anticipated future cost increases under the Town of Sterling medical plans. Section 5 illustrates the sensitivity of actuarial accrued liability and normal cost to a one percentage increase and decrease in the health care cost trend assumption for each future year.

Our actuarial valuation is based on a discount rate of 4.0% compounded annually. To illustrate the impact on cost of fully prefunding the Town's benefit liabilities, our report also includes valuation results based on an alternative 8.0% discount rate.

We also provide 30-year forecasts of the OPEB liability under a pay-as-you-go arrangement and a fully-funded arrangement as well as a 10-year forecast of the Annual OPEB Cost and the Net OPEB Obligation in Section 4.

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K M S A C T U A R I E S

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Ms. Anne M. Cervantes  
November 14, 2013  
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Our calculations were based on participant census data and other information provided by the Town of Sterling and the benefit provisions of the medical plans as described in the benefit summaries. Our valuation is also based on medical plan rates provided in the worksheet "Actuarial Study - Monthly Cost of Health Insurance".

Our valuation follows generally accepted actuarial methods and we perform such tests as we consider necessary to assure the accuracy of the results. The amounts presented in this report have been appropriately determined according to the actuarial assumptions and methods stated herein.

We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

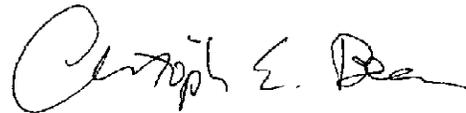
We appreciate this opportunity to be of service to the Town of Sterling. We are available to answer any questions with respect to our valuation.

Respectfully submitted,



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Linda L. Bournival, FSA, EA, MAAA  
Member, American Academy of Actuaries  
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## ACTUARIAL CERTIFICATION

This report presents the results of the Actuarial Valuation for the Town of Sterling Postemployment Benefits Other Than Pensions as of July 1, 2012. The report presents the accounting and financial reporting information in accordance with Statement Number 45 of the Governmental Accounting Standards Board (GASB 45).

This valuation was performed using employee data and financial information provided to us by the Town. Although we did not audit the data used in the valuation, we believe that the information is complete and reliable.

This report was completed in accordance with generally accepted actuarial standards and procedures, and conforms to the Code of Professional Conduct of the American Academy of Actuaries. The actuarial assumptions other than those explicitly applicable to the postemployment benefit plans are consistent with those used by the Worcester Regional Retirement System's actuaries for the Retirement System pension valuations.

This report is intended for the sole use of the Town of Sterling and is intended to provide information to comply with the stated purpose of the report. It may not be appropriate for other purposes.

The undersigned credentialed actuaries are Members of the American Academy of Actuaries and together meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinion contained herein. They are available to answer any questions with regard to this report.

Respectfully submitted,



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Linda L. Bournival, FSA, EA, MAAA  
Member, American Academy of Actuaries  
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## SECTION 1 - SUMMARY

### BACKGROUND

The Town of Sterling provides postemployment medical benefits to Town retirees and their covered dependents. The Town provides benefits as follows:

- ◆ Group 1 employees hired before April 2, 2012: retire after attaining age 55 with 10 or more years of service or any age with 20 or more years of service
- ◆ Group 1 employees hired after April 1, 2012: retire after attaining age 60 with 10 or more years of service
- ◆ Group 4 employees hired before April 2, 2012: retire after attaining age 55 or any age with 20 or more years of service
- ◆ Group 4 employees hired after April 1, 2012: retire after attaining age 55

Medical coverage continues to the spouse after the death of the retiree provided the spouse makes the required contributions.

### GASB 45

The Governmental Accounting Standards Board (GASB) is responsible for establishing accounting standards for governmental entities. Calculations developed in accordance with GASB standards are required when providing financial statements.

GASB believes that postemployment benefits are a form of deferred compensation whose cost should be recognized while the employee actually renders services rather than when the actual benefits are paid, many years later. Ideally under the GASB standard the entire postemployment liability is recognized by the time an active participant begins to receive postemployment benefits. GASB 45's focus is on postemployment benefits other than pensions, such as medical, dental and life insurance benefits. Unlike pensions where sponsors are pre-funding for benefits due in the future, the impact of GASB 45 will be to significantly increase cash pay-as-you-go expense.

The effective date for GASB 45 is a function of the Town's total annual revenues in the first fiscal year ending after June 15, 1999. We understand that this is your fiscal year that ended June 30, 1999, and that your related revenues were less than \$10 million. As a result, the Town was required to comply with GASB 45 for the fiscal year ending June 30, 2010.

### ACTUARIAL VALUATION

As of July 1, 2012, there are 61 active employees who may be eligible for benefits in the future and 42 retired employees, covered spouses and survivors who are currently receiving benefits. Coverage is for individuals and families or individuals and spouses depending on the coverage selected.

## SECTION 1 - SUMMARY

Prior to GASB 45, the annual cost recognized was the annual premiums or benefits paid plus administrative expenses less any participant contributions paid towards the coverage. Under GASB 45, an annual cost for postemployment coverage is developed for any person who is currently receiving or who is currently actively employed and may be eligible to receive benefits in the future. In developing the GASB 45 cost for the Town of Sterling, the payment of future benefits is determined using the current schedule of premiums under the plans provided by the Town modified to reflect the population and the fact that actual healthcare expenses are higher as individuals age. These age-adjusted costs are increased in the future under the annual healthcare cost trend rate assumptions. The age-adjusted per capita costs utilized in this valuation are detailed in Section 7, Actuarial Assumptions and Methods.

It is important to understand that even though the Town charges participants for coverage based on the individual or family premium schedule presented in our report, in developing a liability for the Town, GASB requires that these premiums be adjusted as noted above. The plan premium represents less than 100% of the actual cost that is required to be recognized under the GASB standard.

### SUMMARY OF PRINCIPAL RESULTS

Valuation Date	<u>July 1, 2012</u>	<u>July 1, 2009</u> *
<b>Summary of Member Data</b>		
Active Members	61	54
Average Age	47.5	46.1
Average Service	9.8	11.4
Retired Members and Survivors	38	37
Average Age	70.6	N/A
Covered Spouses of Retired Members	4	0
<b>Discount rate</b>	4.00%	4.00%
<b>Actuarial Accrued Liability</b>	\$11,463,201	\$6,918,399
<b>Normal Cost</b>	\$515,192	\$209,740
<b>Assets</b>	\$0	\$0
<b>Unfunded Actuarial Accrued Liability</b>	\$11,463,201	\$6,918,399
<b>Annual Required Contribution</b>	\$1,198,855	\$594,444
<b>Expected Employer Premiums</b>	\$278,635	\$254,498

\* Based on the actuarial report prepared by Primoris.

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## SECTION 1 - SUMMARY

### ACTUARIAL ASSUMPTIONS

The most important assumption for GASB 45 is the discount rate, which is used to discount future benefits to current age. GASB 45 requires that the discount rate accurately reflects the rate of return on assets dedicated to paying the retiree medical benefits. This means that a traditional pay-as-you-go system, which pays benefits from the Town's annual budget and not a dedicated trust, must use a discount rate close to the rate of return on cash. Full pre-funding by use of a dedicated trust with a mixture of stocks and bonds can employ a higher discount rate that accurately reflects the expected return on trust assets dedicated to pay retiree medical benefits. For the Town of Sterling, we selected a 4.0% discount rate to reflect a pay-as-you-go system with an expected return close to the rate of return on cash.

### CHANGES

Some assumptions used in this valuation have changed from those used in the July 1, 2009 valuation and are detailed in Section 7. The major assumption changes are summarized below:

- ◆ the trend rates were changed from 9.3% in year one, decreasing by 1% per year to an ultimate rate of 5%, to 9% in year one, decreasing by 1% per year to an ultimate rate of 5%.
- ◆ the mortality table was changed from the RP-2000 Mortality Table (no projection for mortality improvement) to the RP-2000 Mortality Table projected to 2012 using Scale AA.
- ◆ the retirement rates and termination rates were changed in this valuation to reflect the rates used by the Worcester Regional Retirement System for the Retirement System pension valuations, including rates applicable to general and public safety employees.
- ◆ disability rates were incorporated in this valuation to reflect the rates used by the Worcester Regional Retirement System for the Retirement System pension valuations.

### RESULTS

We have provided results based on a discount rate of 4.0%. As shown in Table 4.3 of Section 4, the Annual OPEB Cost for the fiscal year ending June 30, 2013 under GASB 45 is \$1,182,275 and the estimated Annual OPEB Cost for the fiscal year ending June 30, 2014 under GASB 45 is \$1,228,667.

The accumulated Net OPEB Obligation as of June 30, 2013 is \$1,833,178 and the estimated Net OPEB Obligation as of June 30, 2014 is \$2,775,882.

The Actuarial Accrued Liability (AAL) as of July 1, 2012 is \$11,463,201. The AAL by status breakdown is shown below:

Actives:	\$7,200,051
Retirees, Beneficiaries and Surviving Spouses:	4,263,150
Total:	\$11,463,201

Town of Sterling Postemployment Benefits Other Than Pensions  
Actuarial Valuation as of July 1, 2012

## SECTION 1 - SUMMARY

### ACTUARIAL GAIN/LOSS ANALYSIS

In performing the actuarial valuation, various assumptions are made regarding future premium rates, mortality, retirement, disability and withdrawal rates as well as investment returns. A comparison of the results of the current valuation and the prior valuation is made to determine how closely actual experience relates to expected. Below is the development of the estimated Actuarial Gain/(Loss) for the current period:

	Year 1
Actuarial Accrued Liability, prior valuation	\$6,918,399
Normal Cost, prior valuation	209,740
Expected Employer Premiums, prior valuation	254,498
Interest	280,086
Expected Actuarial Accrued Liability	\$7,153,727
	Year 2
Actuarial Accrued Liability, prior year	\$7,153,727
Normal Cost, year two	218,130
Expected Employer Premiums, year two	283,412
Interest	289,262
Expected Actuarial Accrued Liability, year two	\$7,377,706
	Year 3
Actuarial Accrued Liability, prior year	\$7,377,706
Normal Cost, year three	226,855
Expected Employer Premiums, year three	289,622
Interest	298,447
Expected Actuarial Accrued Liability, year three	\$7,613,385
Actual Actuarial Accrued Liability	\$11,463,201
Gain/(Loss)	(\$3,849,816)

The actuarial loss of \$3,849,816 was mostly comprised of the following:

◆ loss as a result of demographic and premium changes from the prior valuation	(1,788,900)
◆ loss as a result of updated demographic assumptions	(1,307,821)
◆ loss as a result of inclusion of the PPACA Excise Tax in this valuation	(749,686)
◆ Total Gain/(Loss)	(\$3,846,407)

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## SECTION 1 - SUMMARY

### REIMBURSEMENT FOR HEALTHCARE PREMIUM CONTRIBUTIONS

Whenever the service of a retired employee is attributable to service in more than one governmental unit and the retired employee receives a healthcare premium contribution, Section 9A1/2 of M.G.L. Section 32B provides for reimbursement by other governmental units for the portion of healthcare premium contributions that corresponds to the percentage of the retiree's creditable service that is attributable for each governmental unit. The other governmental units shall be charged based on the Town of Sterling's contribution rate or the contribution rate of the first employer, whichever is lower.

For purposes of this valuation, we have not taken into account any prior service rendered at other Massachusetts entities for current or future retirees for the Town of Sterling nor have we taken into account any service rendered by former Town of Sterling employees currently working at or retired from other Massachusetts entities that may notify the Town of Sterling of reimbursement due for former Town of Sterling employees.

## SECTION 2 - PRINCIPAL VALUATION RESULTS

Section 20 of M.G.L. Chapter 32 allows municipal entities to establish an OPEB trust for purposes of accumulating assets to prefund the OPEB liabilities. We understand that the Town of Sterling has not established an irrevocable trust for the purpose of prefunding OPEB liabilities.

The Actuarial Value of Plan Assets is equal to the market value. The asset activity during the 2-year period July 1, 2011 through June 30, 2013 follows:

**TABLE 2.1 - OPEB TRUST ASSETS**

<b>Market Value of Assets</b>		
<b>Fiscal Year Ending</b>	<b><u>6/30/2013</u></b>	<b><u>6/30/2012</u></b>
Assets as of Beginning of Year	\$0	\$0
Contributions Receivable	\$0	\$0
Assets as of Beginning of Year	\$0	\$0
Employer Contributions		
Paid Premiums	\$240,729	\$239,904
OPEB Trust Deposits	0	0
Total Employer Contributions	\$240,729	\$239,904
Benefits Paid	(240,729)	(\$239,904)
Expenses	0	0
Investment Earnings	0	0
Assets as of End of Year	\$0	\$0

## SECTION 2 - PRINCIPAL VALUATION RESULTS

The Actuarial Accrued Liability is the portion of the Actuarial Present Value of Future Benefits which is allocated to all periods prior to a valuation year and therefore is not provided for by future Normal Costs. Below is the Actuarial Accrued Liability assuming a discount rate of 4.0%, the rate of return on cash, and 8.0%, the rate of return on a dedicated trust if the Town were to fully pre-fund benefits:

**TABLE 2.2 - ACTUARIAL ACCRUED LIABILITY**

	Pay-As-You-Go	Full Pre-Funding
<b>Discount Rate</b>	<b>4.0%</b>	<b>8.0%</b>
<b>Current Active Employees</b>		
Pre-Medicare Gross Benefit	\$3,964,137	\$2,135,001
Pre-Medicare Participant Contributions	480,859	264,404
Net Pre-Medicare Benefit	\$3,483,278	\$1,870,597
Post - Medicare Gross Benefit	\$4,736,028	\$1,769,181
Post - Medicare Participant Contributions	1,019,255	392,602
Net Post - Medicare Benefit	\$3,716,773	\$1,376,579
<b>Total Current Active Employees</b>	<b>\$7,200,051</b>	<b>\$3,247,176</b>
<b>Current Retirees</b>		
Pre-Medicare Gross Benefit	\$1,654,561	\$1,290,621
Pre-Medicare Participant Contributions	227,456	180,722
Net Pre-Medicare Benefit	\$1,427,105	\$1,109,899
Post - Medicare Gross Benefit	\$3,581,514	\$2,191,280
Post - Medicare Participant Contributions	745,469	463,496
Net Post - Medicare Benefit	\$2,836,045	\$1,727,784
<b>Total Current Retirees</b>	<b>\$4,263,150</b>	<b>\$2,837,683</b>
<b>Total Actuarial Accrued Liability (AAL)</b>	<b>\$11,463,201</b>	<b>\$6,084,859</b>

## SECTION 2 - PRINCIPAL VALUATION RESULTS

The Normal Cost is the portion of the Actuarial Present Value of Future Benefits which is attributed to services rendered by active employees in the current year. Below is the Normal Cost assuming a discount rate of 4.0%, the rate of return on cash, and 8.0%, the rate of return on a dedicated trust if the Town were to fully pre-fund benefits:

**TABLE 2.3 - NORMAL COST**

	Pay-As-You-Go	Full Pre-Funding
<b>Discount Rate</b>	<b>4.0%</b>	<b>8.0%</b>
<b>Current Active Employees</b>		
Pre-Medicare Gross Benefit	\$272,099	\$122,372
Pre-Medicare Participant Contributions	31,969	14,568
Net Pre-Medicare Benefit	\$240,130	\$107,804
Post - Medicare Gross Benefit	\$349,711	\$109,271
Post - Medicare Participant Contributions	74,649	24,135
Net Post - Medicare Benefit	\$275,062	\$85,136
<b>Total Current Active Employees</b>	<b>\$515,192</b>	<b>\$192,940</b>
<b>Current Retirees</b>		
Pre-Medicare Gross Benefit	\$0	\$0
Pre-Medicare Participant Contributions	0	0
Net Pre-Medicare Benefit	\$0	\$0
Post - Medicare Gross Benefit	\$0	\$0
Post - Medicare Participant Contributions	0	0
Net Post - Medicare Benefit	\$0	\$0
<b>Total Current Retirees</b>	<b>\$0</b>	<b>\$0</b>
<b>Total Normal Cost (NC)</b>	<b>\$515,192</b>	<b>\$192,940</b>

## SECTION 2 - PRINCIPAL VALUATION RESULTS

Under GASB 45, the Annual Required Contribution (ARC) of the employer equals the Normal Cost plus a provision for amortizing the Unfunded Actuarial Accrued Liability. We have assumed level dollar amortization over the maximum acceptable amortization period of 30 years. For the period beginning July 1, 2012, the ARC, calculated under the parameters of this actuarial valuation, would be:

**TABLE 2.4 - ANNUAL REQUIRED CONTRIBUTION and ANNUAL OPEB COST**

	Pay-As-You-Go	Full Pre-Funding
<b>Discount Rate</b>	<b>4.0%</b>	<b>8.0%</b>
1. Normal Cost	\$515,192	\$192,940
2. Unfunded Actuarial Accrued Liability		
a. Actuarial Accrued Liability	\$11,463,201	\$6,084,859
b. Actuarial Value of Plan Assets	\$0	\$0
c. Unfunded Actuarial Accrued Liability	\$11,463,201	\$6,084,859
3. Amortization of Unfunded Actuarial Accrued Liability		
a. Unfunded Actuarial Accrued Liability	\$11,463,201	\$6,084,859
b. Amortization Period in years	30	30
c. Factor Increasing Rate	0.0%	0.0%
d. Amortization Factor	17.98	12.16
e. Amortization Amount (3.a. / 3.d.)	\$637,553	\$500,400
4. Interest on 1. and 3.e.	\$46,110	\$55,467
5. Annual Required Contribution (1. + 3.e. + 4.)	\$1,198,855	\$748,807
6. Net OPEB Obligation / (Asset) beginning of year	\$929,538	Not Applicable
7. Interest on Net OPEB Obligation at 4.00%	\$37,182	Not Applicable
8. Adjustment to Annual Required Contribution at 4.00%	\$53,762	Not Applicable
9. Annual OPEB Cost (5. + 7. - 8.)	\$1,182,275	Not Applicable

Town of Sterling Postemployment Benefits Other Than Pensions  
Actuarial Valuation as of July 1, 2012

## SECTION 3 - GASB 45 ACCOUNTING DISCLOSURE

GASB 45 requires disclosure of the annual OPEB cost, the Net OPEB Obligation and the Schedule of Funding Progress. In addition, information about the Actuarial Methods and Assumptions used in the valuation and a summary of the Substantive Plan Provisions are disclosed, which are provided in Section 6 and Section 7, respectively.

<b>Annual OPEB Cost and Net OPEB Obligation</b>			
Fiscal Year Ending	<u>6/30/2013</u>	<u>6/30/2012</u>	<u>6/30/2011</u>
Discount rate	4.00%	4.00%	4.00%
Annual Required Contribution	\$1,198,855	\$578,127	\$584,499
Interest on Net OPEB Obligation	37,182	0	0
Adjustment to annual required contribution	(53,762)	0	0
Annual OPEB cost/(expense)	\$1,182,275	\$578,127	\$584,499
Employer contributions (including subsidy)	(278,635)	(289,622)	(283,412)
Change in Net OPEB Obligation	\$903,640	\$288,505	\$301,087
Net OPEB Obligation (Asset) - beginning of year	\$929,538	\$641,033	\$339,946
Net OPEB Obligation (Asset) - end of year	\$1,833,178	\$929,538	\$641,033

<b>Plan History</b>				
Fiscal Year Ended	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB Obligation	
6/30/2013	1,182,275	23.6%	1,833,178	
6/30/2012	578,127	50.1%	929,538	
6/30/2011	584,499	48.5%	641,033	

<b>Schedule of Funding Progress</b>						
Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) / c)
7/1/2012	0	11,463,201	11,463,201	0.00%	3,240,255	353.8%
7/1/2009	0	6,918,399	6,918,399	0.00%	2,652,985	260.8%

Town of Sterling Postemployment Benefits Other Than Pensions  
Actuarial Valuation as of July 1, 2012

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## SECTION 4 - FORECASTS

### OVERVIEW

In Section 4, we have provided 30-year forecasts of the annual funding requirements, accrued liability, assets and unfunded actuarial accrued liability under a pay-as-you-go scenario and a fully-funded funding scenario. The entries in Tables 4.1 and 4.2 are based on the assumptions stated below:

- ◆ Expected Employer Premiums are developed in the actuarial valuation and are based on the assumptions detailed in Section 7.
- ◆ Normal Cost with interest is assumed to increase annually by 4%.
- ◆ Assets are assumed to grow annually at the selected discount rate plus Additional Funding amounts made at the end of each fiscal year.
- ◆ Actuarial Accrued Liability (AAL), end of year, equals AAL, beginning of year, plus Normal Cost less Expected Employer Premiums plus interest on these items.
- ◆ Unfunded Actuarial Accrued Liability (UAAL) equals the AAL less Assets.
- ◆ the Annual Required Contribution (ARC) is the sum of the Normal Cost with Interest and the Amortization Amount with Interest.

**Table 4.1** is based on funding the expected Employer share of premiums on a pay-as-you-go basis.

- ◆ The assumed discount rate is 4%.
- ◆ Amortization Amount with Interest is the amount necessary to amortize the Unfunded Actuarial Accrued Liability over 30 years at a discount rate of 4% on an open amortization basis. The open amortization period is 30 years, recalculated at each valuation date.

**Table 4.2** is based on fully funding the Annual Required Contribution (ARC) each year.

- ◆ The assumed discount rate is 8%.
- ◆ Amortization Amount with Interest is the amount necessary to amortize the Unfunded Actuarial Accrued Liability over 30 years at a discount rate of 8% on a closed amortization basis. The closed amortization period is 30 years at year one declining to zero after 30 years. This method fully funds the UAL at the end of 30 years.
- ◆ Assumes Additional Funding of the excess of the ARC over the Expected Employer Premiums.

## SECTION 4 - FORECASTS

**TABLE 4.1 - ANNUAL REQUIRED CONTRIBUTIONS**

FYE June 30	(1) Normal Cost	(2) Actuarial Accrued Liability	(3) Assets, BOY	(4) Unfunded Actuarial Accrued Liability (2) - (3)	(5) Expected Employer Premiums	(6) Employer Contributions	(7) Amortization Amount	(8) Interest	(9) ARC (1) + (7) + (8)
2013	515,192	11,463,201	-	11,463,201	278,635	278,635	637,553	46,110	1,198,855
2014	535,800	12,173,375	-	12,173,375	285,963	285,963	677,051	48,514	1,261,365
2015	557,232	12,925,916	-	12,925,916	311,088	311,088	718,905	51,045	1,327,182
2016	579,521	13,705,225	-	13,705,225	306,851	306,851	762,248	53,671	1,395,440
2017	602,702	14,543,208	-	14,543,208	323,818	323,818	808,855	56,462	1,468,019
2018	626,810	15,421,516	-	15,421,516	367,770	367,770	857,704	59,381	1,543,895
2019	651,882	16,315,206	-	16,315,206	418,547	418,547	907,409	62,372	1,621,663
2020	677,957	17,218,936	-	17,218,936	465,321	465,321	957,672	65,425	1,701,054
2021	705,075	18,138,232	-	18,138,232	498,381	498,381	1,008,800	68,555	1,782,430
2022	733,278	19,088,788	-	19,088,788	524,098	524,098	1,061,668	71,798	1,866,744
2023	762,609	20,080,472	-	20,080,472	533,878	533,878	1,116,823	75,177	1,954,609
2024	793,113	21,132,353	-	21,132,353	594,408	594,408	1,175,326	78,738	2,047,177
2025	824,838	22,196,305	-	22,196,305	558,309	558,309	1,234,500	82,374	2,141,712
2026	857,832	23,372,623	-	23,372,623	582,897	582,897	1,299,923	86,310	2,244,065
2027	892,145	24,605,232	-	24,605,232	651,695	651,695	1,368,478	90,425	2,351,048
2028	927,831	25,852,671	-	25,852,671	667,589	667,589	1,437,857	94,628	2,460,316
2029	964,944	27,170,912	-	27,170,912	680,025	680,025	1,511,174	99,045	2,575,163
2030	1,003,542	28,567,798	-	28,567,798	741,583	741,583	1,588,865	103,696	2,696,103
2031	1,043,684	29,997,925	-	29,997,925	729,949	729,949	1,668,405	108,484	2,820,573
2032	1,085,431	31,538,869	-	31,538,869	645,755	645,755	1,754,108	113,582	2,953,121
2033	1,128,848	33,270,728	-	33,270,728	694,517	694,517	1,850,430	119,171	3,098,449
2034	1,174,002	35,067,288	-	35,067,288	677,057	677,057	1,950,350	124,974	3,249,326
2035	1,220,962	37,000,477	-	37,000,477	682,552	682,552	2,057,869	131,153	3,409,984
2036	1,269,800	39,054,228	-	39,054,228	695,669	695,669	2,172,093	137,676	3,579,569
2037	1,320,592	41,227,543	-	41,227,543	702,571	702,571	2,292,967	144,542	3,758,101
2038	1,373,416	43,533,576	-	43,533,576	706,575	706,575	2,421,222	151,786	3,946,424
2039	1,428,353	45,982,703	-	45,982,703	675,380	675,380	2,557,436	159,432	4,145,221
2040	1,485,487	48,618,743	-	48,618,743	651,351	651,351	2,704,046	167,581	4,357,114
2041	1,544,906	51,444,149	-	51,444,149	659,131	659,131	2,861,187	176,244	4,582,337
2042	1,606,702	54,436,433	-	54,436,433	617,250	617,250	3,027,610	185,372	4,819,684

Town of Sterling Postemployment Benefits Other Than Pensions  
Actuarial Valuation as of July 1, 2012

30 years open, 4.0% discount rate.

## SECTION 4 - FORECASTS

**TABLE 4.2 - Funding the Annual Required Contribution (ARC)**

(1) FYE June 30	(2) Expected Employer Premiums	(3) AAL at Beginning of Year	(4) Assets at Beginning of Year	(5) Normal Cost with Interest	(6) Amortization Amount with Interest	(7) ARC (5) + (6)	(8) Additional Funding (7) - (2)	(9) Assets at End of Year	(10) AAL at End of Year	(11) UAAL at End of Year (10) - (9)
2013	278,635	6,084,859	-	208,375	540,432	748,807	470,171	-	6,490,457	6,490,457
2014	285,963	6,490,457	-	216,710	581,717	798,427	512,465	501,246	6,929,222	6,427,976
2015	311,088	6,929,222	501,246	225,379	581,425	806,804	495,715	1,024,857	7,385,646	6,360,789
2016	306,851	7,385,646	1,024,857	234,394	581,681	816,075	509,224	1,604,032	7,892,003	6,287,971
2017	323,818	7,892,003	1,604,032	243,770	581,920	825,690	501,872	2,221,523	8,430,611	6,209,089
2018	367,770	8,430,611	2,221,523	253,520	581,597	835,117	467,348	2,852,164	8,976,383	6,124,219
2019	418,547	8,976,383	2,852,164	263,661	581,720	845,381	426,834	3,490,752	9,523,188	6,032,436
2020	465,321	9,523,188	3,490,752	274,208	581,699	855,907	390,585	4,142,342	10,075,674	5,933,332
2021	498,381	10,075,674	4,142,342	285,176	581,488	866,664	368,283	4,822,461	10,648,971	5,826,510
2022	524,098	10,648,971	4,822,461	296,583	581,574	878,157	354,059	5,541,756	11,252,813	5,711,057
2023	533,878	11,252,813	5,541,756	308,446	581,881	890,327	356,449	6,320,601	11,906,662	5,586,060
2024	594,408	11,906,662	6,320,601	320,784	581,769	902,553	308,145	7,111,076	12,562,252	5,451,176
2025	558,309	12,562,252	7,111,076	333,615	581,746	915,361	357,053	8,015,112	13,320,636	5,305,524
2026	582,897	13,320,636	8,015,112	346,960	581,722	928,682	345,785	8,979,239	14,127,483	5,148,244
2027	651,695	14,127,483	8,979,239	360,838	581,601	942,439	290,745	9,962,756	14,941,259	4,978,502
2028	667,589	14,941,259	9,962,756	375,272	581,903	957,175	289,586	11,023,173	15,818,053	4,794,880
2029	680,025	15,818,053	11,023,173	390,283	581,851	972,133	292,108	12,170,457	16,767,077	4,596,619
2030	741,583	16,767,077	12,170,457	405,894	581,306	987,200	245,617	13,360,618	17,743,662	4,383,043
2031	729,949	17,743,662	13,360,618	422,130	581,534	1,003,664	273,715	14,674,547	18,826,700	4,152,153
2032	645,755	18,826,700	14,674,547	439,015	581,625	1,020,640	374,885	16,198,062	20,100,762	3,902,701
2033	694,517	20,100,762	16,198,062	456,576	581,368	1,037,944	343,427	17,810,087	21,443,636	3,633,549
2034	677,057	21,443,636	17,810,087	474,839	581,368	1,056,207	379,150	19,587,483	22,930,348	3,342,865
2035	682,552	22,930,348	19,587,483	493,832	581,368	1,075,200	392,649	21,520,353	24,549,280	3,028,926
2036	695,669	24,549,280	21,520,353	513,586	582,071	1,095,657	399,988	23,614,678	26,303,847	2,689,169
2037	702,571	26,303,847	23,614,678	534,129	582,025	1,116,154	413,583	25,889,873	28,212,151	2,322,278
2038	706,575	28,212,151	25,889,873	555,494	581,917	1,137,411	430,835	28,364,179	30,290,322	1,926,144
2039	675,380	30,290,322	28,364,179	577,714	581,071	1,158,785	483,406	31,090,223	32,589,387	1,499,164
2040	651,351	32,589,387	31,090,223	600,823	582,409	1,183,232	531,880	34,083,769	35,120,457	1,036,688
2041	659,131	35,120,457	34,083,769	624,855	580,116	1,204,971	545,840	37,330,452	37,869,959	539,508
2042	617,250	37,869,959	37,330,452	649,850	582,668	1,232,518	615,268	40,907,941	40,907,941	-

30-years closed, 8.0% discount rate.

Town of Sterling Postemployment Benefits Other Than Pensions  
Actuarial Valuation as of July 1, 2012

## SECTION 4 - FORECASTS

**TABLE 4.3 - ANNUAL OPEB COST and NET OPEB OBLIGATION**

FYE June 30	ARC	Interest on Net OPEB Obligation	ARC Adjustment	Amortization Factor	Annual OPEB Cost	Employer Contributions	Change in Net OPEB Obligation	Net OPEB Obligation Balance
								929,538
2013	1,198,855	37,182	53,762	17.29	1,182,275	278,635	903,640	1,833,178
2014	1,261,365	73,327	106,025	17.29	1,228,667	285,963	942,704	2,775,882
2015	1,327,182	111,035	160,548	17.29	1,277,669	311,088	966,581	3,742,463
2016	1,395,440	149,699	216,452	17.29	1,328,687	306,851	1,021,836	4,764,299
2017	1,468,019	190,572	275,552	17.29	1,383,039	323,818	1,059,221	5,823,520
2018	1,543,895	232,941	336,814	17.29	1,440,022	367,770	1,072,252	6,895,772
2019	1,621,663	275,831	398,830	17.29	1,498,664	418,547	1,080,117	7,975,889
2020	1,701,054	319,036	461,301	17.29	1,558,789	465,321	1,093,468	9,069,357
2021	1,782,430	362,774	524,543	17.29	1,620,661	498,381	1,122,280	10,191,637
2022	1,866,744	407,665	589,453	17.29	1,684,956	524,098	1,160,858	11,352,495

Notes:

1. ARC and Employer Contributions are from 30-Year Forecast of Annual Required Contributions (Table 4.1).
2. Interest on Net OPEB Obligation is computed on the prior year Net OPEB Obligation Balance.
3. ARC Adjustment is the prior year Net OPEB Obligation Balance amortized over 30 years.
4. OPEB Cost is the ARC plus Interest on Net OPEB Obligation less ARC Adjustment.
5. Change in Net OPEB Obligation is the difference between the OPEB Cost and Employer Contributions.
6. Net OPEB Obligation is the prior year Net OPEB Obligation Balance plus Change in Net OPEB Obligation.
7. Year one Interest on Net OPEB Obligation and ARC Adjustment computed at prior discount rate of 4.00%.
8. Subsequent years' Interest on Net OPEB Obligation and ARC Adjustment computed at current discount rate of 4.00%.

## SECTION 5 - SENSITIVITY TO HEALTH CARE COST TREND RATE

Below we illustrate the sensitivity of Actuarial Accrued Liability to a one percentage increase and decrease in health care cost trend assumption for each future year:

**TABLE 5.1 - ACTUARIAL ACCRUED LIABILITY**

	<u>Assumed Trend</u>	<u>Trend +1%</u>	<u>Trend -1%</u>
<b>Discount Rate</b>	<b>4.0%</b>	<b>4.0%</b>	<b>4.0%</b>
<b>Current Active Employees</b>			
Pre-Medicare Gross Benefit	\$3,964,137	\$4,671,627	\$3,380,764
Pre-Medicare Participant Contributions	480,859	564,166	411,932
Net Pre-Medicare Benefit	\$3,483,278	\$4,107,461	\$2,968,832
Post - Medicare Gross Benefit	\$4,736,028	\$6,266,741	\$3,630,168
Post - Medicare Participant Contributions	1,019,255	1,337,153	787,716
Net Post - Medicare Benefit	\$3,716,773	\$4,929,588	\$2,842,452
<b>Total Current Active Employees</b>	<b>\$7,200,051</b>	<b>\$9,037,049</b>	<b>\$5,811,284</b>
<b>Current Retirees</b>			
Pre-Medicare Gross Benefit	\$1,654,561	\$1,761,153	\$1,557,467
Pre-Medicare Participant Contributions	227,456	240,989	215,076
Net Pre-Medicare Benefit	\$1,427,105	\$1,520,164	\$1,342,391
Post - Medicare Gross Benefit	\$3,581,514	\$4,115,803	\$3,142,386
Post - Medicare Participant Contributions	745,469	852,640	657,033
Net Post - Medicare Benefit	\$2,836,045	\$3,263,163	\$2,485,353
<b>Total Current Retirees</b>	<b>\$4,263,150</b>	<b>\$4,783,327</b>	<b>\$3,827,744</b>
<b>Total Actuarial Accrued Liability (AAL)</b>	<b>\$11,463,201</b>	<b>\$13,820,376</b>	<b>\$9,639,028</b>

## SECTION 5 - SENSITIVITY TO HEALTH CARE COST TREND RATE

Below we illustrate the sensitivity of Normal Cost to a one percentage increase and decrease in health care cost trend assumption for each future year:

**TABLE 5.2 - NORMAL COST**

	<u>Assumed Trend</u>	<u>Trend +1%</u>	<u>Trend -1%</u>
<b>Discount Rate</b>	<b>4.0%</b>	<b>4.0%</b>	<b>4.0%</b>
<b>Current Active Employees</b>			
Pre-Medicare Gross Benefit	\$272,099	\$336,174	\$221,415
Pre-Medicare Participant Contributions	31,969	39,393	26,082
Net Pre-Medicare Benefit	\$240,130	\$296,781	\$195,333
Post - Medicare Gross Benefit	\$349,711	\$483,677	\$256,315
Post - Medicare Participant Contributions	74,649	102,287	55,206
Net Post - Medicare Benefit	\$275,062	\$381,390	\$201,109
<b>Total Current Active Employees</b>	<b>\$515,192</b>	<b>\$678,171</b>	<b>\$396,442</b>
<b>Current Retirees</b>			
Pre-Medicare Gross Benefit	\$0	\$0	\$0
Pre-Medicare Participant Contributions	0	0	0
Net Pre-Medicare Benefit	\$0	\$0	\$0
Post - Medicare Gross Benefit	\$0	\$0	\$0
Post - Medicare Participant Contributions	0	0	0
Net Post - Medicare Benefit	\$0	\$0	\$0
<b>Total Current Retirees</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total Normal Cost</b>	<b>\$515,192</b>	<b>\$678,171</b>	<b>\$396,442</b>

## SECTION 6 - PLAN PROVISIONS

**Eligibility:**

Group 1 employees hired before April 2, 2012: retire after attaining age 55 with 10 or more years of service or any age with 20 or more years of service

Group 1 employees hired after April 1, 2012: retire after attaining age 60 with 10 or more years of service

Group 4 employees hired before April 2, 2012: retire after attaining age 55 or any age with 20 or more years of service

Group 4 employees hired after April 1, 2012: retire after attaining age 55

**Medical Premium Rates:** The total monthly cost by plan are shown below:

<u>Non-Medicare Plans - July 1, 2013</u>	<u>Individual</u>	<u>Family</u>
Network Blue	\$691.90	\$1,850.68
Blue Care Elect	\$875.01	\$2,340.55
<u>Medicare Plans - July 1, 2013</u>		
Medex 2/Medex Rx	\$330.34	

**Participant Contributions:** Retired employees contribute the following percentages of the total medical premium rates:

	Retired	
	<u>Before</u> <u>7/1/2009</u>	<u>On or After</u> <u>7/1/2009</u>
Network Blue	10%	20%
Blue Care Elect	25%	25%
Medex 2/Medex Rx	25%	25%

**Dental Premium Rates:** The total monthly cost is shown below:

	<u>Individual</u>	<u>Family</u>
Dental Blue	\$44.15	\$92.86

**Participant Contributions:** Retired employees contribute 25% of the total dental premium rates.

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## SECTION 6 - PLAN PROVISIONS

<b>Continuation of Coverage to Spouse After Death of Retiree:</b>	Surviving spouse may continue coverage for lifetime by paying the required medical premium rates.
<b>Medicare Penalty Reimbursement:</b>	The Town reimburses the Medicare late-enrollment penalty based on information provided in the retiree data.
<b>Life Insurance Benefit:</b>	Retirees are eligible for a \$5,000 life insurance benefit.
<b>Life Insurance Premium:</b>	The total monthly cost is \$4.80.
<b>Life Insurance Contributions:</b>	Retired employees contribute \$1.20 per month for life insurance.
<b>PPACA Excise Tax:</b>	The Patient Protection and Affordable Care Act (PPACA) applies a 40% excise tax to the cost of plan benefits in excess of statutory thresholds beginning in 2018. The 2018 thresholds are assumed to be \$10,200 for individual and \$27,500 for family coverage and increase by CPI in future years. The annual limits are increased by \$1,650 for individual and \$3,450 for family coverage for retirees not eligible for Medicare benefits.

## SECTION 7 - ACTUARIAL ASSUMPTIONS AND METHODS

**Valuation Date:** July 1, 2012

**Discount Rates:** 4.00% pay-as-you-go.  
8.00% full pre-funding.

**Amortization Method:** Level dollar amount over thirty (30) years on an open amortization period for pay-as-you-go.  
Level dollar amount over thirty (30) years on a closed amortization period for full pre-funding.

**Health Care Cost Trend Rates:**

Year	Current	Prior
1	9.00%	9.30%
2	8.00%	8.00%
3	7.00%	7.00%
4	6.00%	6.00%
5	5.00%	5.00%
6	5.00%	5.00%
Ultimate	5.00%	5.00%

	Year	Current	Prior
<b>Dental Trend</b>	1	5.00%	0.00%
	2	5.00%	7.00%
	3	5.00%	6.50%
	4	5.00%	6.00%
	5	5.00%	5.50%
	6	5.00%	5.00%
	Ultimate	5.00%	5.00%

**CPI:** 3% per year.

**Mortality Table:** RP-2000 Healthy Annuitant Table, projected to 2012, using Scale AA. For the period after disability, RP-2000 Healthy Annuitant Table set forward 2 years.

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## SECTION 7 - ACTUARIAL ASSUMPTIONS AND METHODS

### Turnover Rates:

<u>Groups 1 and 2</u>		<u>Group 4</u>	
Service	Rate	Service	Rate
0	15.00%	0-10	1.50%
1	12.00%	11+	0.00%
2	10.00%		
3	9.00%		
4	8.00%		
5-9	7.60%		
10-14	5.40%		
15-19	3.30%		
20-24	2.00%		
25-29	1.00%		
30+	0.00%		

### Disability Rates:

<u>Groups 1 and 2</u>		<u>Group 4</u>	
Age	Rate	Age	Rate
20	0.01%	20	0.10%
30	0.03%	30	0.30%
40	0.10%	40	0.30%
50	0.19%	50	1.25%

## SECTION 7 - ACTUARIAL ASSUMPTIONS AND METHODS

**Retirement Rates:**

Age	Groups 1 and 2		Group 4
	Male	Female	All
50	1.00%	1.50%	2.00%
51	1.00%	1.50%	2.00%
52	1.00%	2.00%	2.00%
53	1.00%	2.50%	5.00%
54	2.00%	2.50%	7.50%
55	2.00%	5.50%	15.00%
56	2.50%	6.50%	10.00%
57	2.50%	6.50%	10.00%
58	5.00%	6.50%	10.00%
59	6.50%	6.50%	15.00%
60	12.00%	5.00%	20.00%
61	20.00%	13.00%	20.00%
62	30.00%	15.00%	25.00%
63	25.00%	12.50%	25.00%
64	22.00%	18.00%	30.00%
65	40.00%	15.00%	100.00%
66	25.00%	20.00%	
67	25.00%	20.00%	
68	30.00%	25.00%	
69	30.00%	20.00%	
70	100.00%	100.00%	

**Medical Plan Participation:** 95% of eligible retirees will elect to participate. Previously, 80%.

**Dental Plan Participation:** 60% of eligible retirees will elect to participate. Previously, 80%.

**Life Insurance Participation:** 80% of eligible retirees will elect to participate. Previously, 100%.

**Dependent Status:** Male spouses are assumed to be three years older and female spouses are assumed to be three years younger than the retired employee.

60% of employees are assumed to retire with a covered spouse. Previously, 80%.

For current retirees, the actual census information is used.

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## SECTION 7 - ACTUARIAL ASSUMPTIONS AND METHODS

**Medical Per Capita Costs:** Annual per capita costs for the fiscal year beginning July 1, 2012 are as follows:

<u>Age</u>	<u>Cost</u>
Under 55	\$11,385
55-59	\$13,508
60-64	\$16,403
65-69	\$3,205
70-74	\$3,662
75-79	\$4,083
80-84	\$4,377
85-89	\$4,532
90+	\$4,577

**Retiree Contributions:** Annual per capita participant contributions for the fiscal year beginning July 1, 2012 are as follows:

<u>Age</u>	<u>Contribution</u>
Under 65	\$2,152
65 and older	\$909

**Excise Tax:** For purposes of estimating the excise tax, per capita plan costs are developed for individual and family coverage for both Medicare and non-Medicare members. These plan costs are compared to the thresholds stipulated in the Patient Protection and Affordable Care Act (PPACA). Beginning in 2018, a 40% excise tax is applied on the excess of the plan costs over the thresholds, which increase annually by CPI.

**Actuarial Cost Method:** Projected Unit Credit. The costs of each employee's postemployment benefits are allocated on a pro rata basis from the employee's date of hire to the date the employee is fully eligible for benefits.

**Employee Data:** Employee and retiree data were submitted by the Town. We made reasonable adjustments for missing or invalid data.

## SECTION 8 - PLAN MEMBER INFORMATION

**TABLE 8.1 - ACTIVE EMPLOYEES BY AGE and YEARS OF SERVICE AS OF JULY 1, 2012**

Age	Years of Service									Total	Percent
	<u>0 to 4</u>	<u>5 to 9</u>	<u>10 to 14</u>	<u>15 to 19</u>	<u>20 to 24</u>	<u>25 to 29</u>	<u>30 to 34</u>	<u>35 to 39</u>	<u>40 &amp; up</u>		
Under 25	0	0	0	0	0	0	0	0	0	0	0%
25 to 29	2	4	0	0	0	0	0	0	0	6	10%
30 to 34	1	1	2	0	0	0	0	0	0	4	7%
35 to 39	3	2	3	0	1	0	0	0	0	9	15%
40 to 44	2	1	2	2	0	0	0	0	0	7	11%
45 to 49	2	1	2	1	1	1	0	0	0	8	13%
50 to 54	4	4	0	0	0	0	0	0	0	8	13%
55 to 59	2	3	1	0	1	0	1	1	0	9	15%
60 to 64	2	1	2	0	0	2	0	0	0	7	11%
65 to 69	1	0	0	1	0	0	0	0	0	2	3%
70 & up	0	0	0	0	1	0	0	0	0	1	2%
Total	19	17	12	4	4	3	1	1	0	61	
Percent	30%	27%	20%	7%	7%	5%	2%	2%	0%		100%
	Average Age: 47.5			Average Service: 9.8							

## SECTION 8 - PLAN MEMBER INFORMATION

**TABLE 8.2 - RETIRED PLAN PARTICIPANTS, COVERED SPOUSES and SURVIVORS AS OF JULY 1, 2012**

Age	Network Blue	Blue Care Elect	Medex	Life Only	Total
Under 40	0	0	0	0	0
40 to 44	0	0	0	0	0
45 to 49	1	0	0	0	1
50 to 54	0	0	0	0	0
55 to 59	4	0	0	0	4
60 to 64	0	2	2	0	4
65 to 69	0	0	10	0	10
70 to 74	0	0	9	0	9
75 to 79	0	0	2	0	2
80 to 84	0	0	4	1	5
85 to 89	0	0	2	0	2
90+	0	0	1	0	1
<b>Total</b>	<b>5</b>	<b>2</b>	<b>30</b>	<b>1</b>	<b>38</b>
<b>Covered Spouses</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>

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## SECTION 9 - GASB 45 GLOSSARY OF TERMS

**Actuarial Accrued Liability** – The portion of the Actuarial Present Value of future benefits which is allocated to all periods prior to a valuation year and therefore is not provided by future Normal Costs.

**Actuarial Assumptions** – Assumptions as to the occurrence of future events affecting OPEB costs, such as mortality, withdrawal, disablement and retirement; changes in compensation and Government provided pension benefits; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; characteristics of future entrants for Open Group Actuarial Cost Methods; and other relevant items.

**Actuarial Present Value of Future Benefits** – The present value of the cost to finance all benefits payable in the future, discounted to reflect the probability of payment and the time value of money.

**Actuarial Valuation** – the determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets and related Actuarial Present Values for an OPEB plan.

**Actuarial Value of Assets** – The value of plan assets used in an actuarial valuation. The Actuarial Value of Assets may reflect smoothing techniques intended to dampen year-to-year fluctuations in the market value of assets.

**Annual OPEB Cost** - The accrual basis annual cost for the OPEB plan sponsored by the employer. In the year of implementation of GASB 45, the Annual OPEB Cost equals the ARC. In subsequent years, if an employer has a Net OPEB Obligation, Annual OPEB Cost equals the ARC plus one year's interest on the Net OPEB Obligation plus an adjustment to the ARC.

**Annual Required Contribution (ARC)** – Includes the employer's Normal Cost and a provision for amortizing the Unfunded Actuarial Accrued Liability.

**Explicit Subsidy** – The difference between (a) the blended rates based on combined active and retired member experience and (b) actual cash contributions made by the employer.

**Funded Ratio** – The Actuarial Value of Assets expressed as a percentage of the Actuarial Accrued Liability.

**Health Cost Trend Rate** – The rate of change in per capita health claims cost over time as a result of factors such as medical inflation, utilization of healthcare services, plan design, and technological developments.

**Implicit Subsidy** – In an experience-rated healthcare plan that includes both active employees and retirees with blended premium rates for all plan members, the difference between (a) the age-adjusted premiums approximating claim costs for retirees in the group and (b) the blended rates based on combined active and retired member experience.

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## SECTION 9 - GASB 45 GLOSSARY OF TERMS

**Net OPEB Obligation** – The cumulative excess since adoption of GASB 45 of Annual OPEB Cost over the employer's contributions to the plan.

**Normal Cost** – The portion of the Actuarial Present Value of Future Benefits which is allocated to a valuation year.

**OPEB** – Other Postemployment Benefits including medical, dental, vision, hearing and life insurance benefits.

**Plan Assets** – Investments segregated and restricted in a trust or similar arrangement under which:

- employer contributions to the trust are irrevocable,
- assets are dedicated to providing plan benefits, and
- assets are legally protected from creditors.

**Pay-As-You-Go** – A method of financing an OPEB plan under which the contributions to the plan are generally made at about the same time and in about the same amount as benefit payments and expenses becoming due.

**Present Value of Future Benefits** – The actuarial present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value of money and the probabilities of payment.

**Projected Unit Credit Actuarial Cost Method** – A method under which the projected benefits of each individual included in an Actuarial Valuation are allocated by a consistent formula to valuation years. Projected Unit Credit is one of the actuarial cost methods allowed and most often used for developing liabilities under GASB 45.

**Substantive Plan** – The terms of an OPEB plan as understood by the employer and plan members.

**Unfunded Actuarial Accrued Liability** – The excess of Actuarial Accrued Liability over the Actuarial Value of Assets.

## SECTION 10 - RESULTS BY SUBGROUP

Unit	<u>Town</u>	<u>DPW</u>	<u>Water</u>	<u>Fire</u>	<u>Police</u>	<u>Total</u>
<b>Summary of Member Data</b>						
Active Members	27	12	4	5	13	61
Average Age	51.5	48.4	48.3	41.1	40.5	47.5
Average Service	8.2	12.2	6.1	9.1	12.2	9.8
Retired Members and Survivors	16	10	4	3	5	38
Average Age	70.2	70.6	67.6	77.5	70.1	70.6
<b>Actuarial Accrued Liability - July 1, 2012</b>						
Active Employees	1,829,961	1,388,940	346,041	769,093	2,866,016	7,200,051
Retired Employees and Survivors	1,540,937	1,637,687	599,735	149,820	334,971	4,263,150
Total	3,370,898	3,026,627	945,776	918,913	3,200,987	11,463,201
<b>Actuarial Value of Plan Assets - July 1, 2012</b>						
	0	0	0	0	0	0
<b>Unfunded Actuarial Accrued Liability</b>						
	3,370,898	3,026,627	945,776	918,913	3,200,987	11,463,201
<b>Annual Required Contribution (ARC) for FYE 2013</b>						
Normal Cost	164,276	83,037	47,469	60,405	160,005	515,192
Amortization of UAL	187,480	168,333	52,602	51,108	178,030	637,553
Interest	14,070	10,055	4,003	4,461	13,521	46,110
<b>Total</b>	<b>365,826</b>	<b>261,425</b>	<b>104,074</b>	<b>115,974</b>	<b>351,556</b>	<b>1,198,855</b>
<b>Annual OPEB Cost for FYE 2013</b>						
Annual Required Contribution	365,826	261,425	104,074	115,974	351,556	1,198,855
Interest on Net OPEB Obligation	8,523	12,538	2,302	1,844	11,975	37,182
Adjustment to annual required contribution	(12,323)	(18,129)	(3,328)	(2,666)	(17,316)	(53,762)
Annual OPEB cost/(expense)	362,026	255,834	103,048	115,152	346,215	1,182,275
Expected Employer premiums	(136,963)	(70,783)	(33,392)	(10,244)	(27,253)	(278,635)
OPEB Trust contributions	0	0	0	0	0	0
Employer contributions (including subsidy)	(136,963)	(70,783)	(33,392)	(10,244)	(27,253)	(278,635)
Change in Net OPEB Obligation	225,063	185,051	69,656	104,908	318,962	903,640
Net OPEB Obligation (Asset) - beginning of year*	213,063	313,464	57,540	46,088	299,383	929,538
Net OPEB Obligation (Asset) - end of year	438,126	498,515	127,196	150,996	618,345	1,833,178

Town of Sterling Postemployment Benefits Other Than Pensions  
Actuarial Valuation as of July 1, 2012

## SECTION 10 - RESULTS BY SUBGROUP

Unit	<u>Town</u>	<u>DPW</u>	<u>Water</u>	<u>Fire</u>	<u>Police</u>	<u>Total</u>
<b>Actuarial Accrued Liability - July 1, 2013</b>						
Total	3,536,905	3,161,866	998,922	1,008,044	3,467,638	12,173,375
<b>Actuarial Value of Plan Assets - July 1, 2013</b>	0	0	0	0	0	0
<b>Unfunded Actuarial Accrued Liability</b>	3,536,905	3,161,866	998,922	1,008,044	3,467,638	12,173,375
<b>Annual Required Contribution (ARC) for FYE 2013</b>						
Normal Cost	170,847	86,359	49,368	62,821	166,405	535,800
Amortization of UAL	196,713	175,855	55,557	56,065	192,861	677,051
Interest	14,702	10,489	4,197	4,755	14,371	48,514
<b>Total</b>	<b>382,262</b>	<b>272,703</b>	<b>109,122</b>	<b>123,641</b>	<b>373,637</b>	<b>1,261,365</b>
<b>Annual OPEB Cost for FYE 2014</b>						
Annual Required Contribution	382,262	272,703	109,122	123,641	373,637	1,261,365
Interest on Net OPEB Obligation	17,525	19,941	5,088	6,040	24,733	73,327
Adjustment to annual required contribution	(25,340)	(28,832)	(7,357)	(8,733)	(35,763)	(106,025)
Annual OPEB cost/(expense)	374,447	263,812	106,853	120,948	362,607	1,228,667
Expected Employer premiums	(126,538)	(78,240)	(35,959)	(11,035)	(34,191)	(285,963)
OPEB Trust contributions	0	0	0	0	0	0
Employer contributions (including subsidy)	(126,538)	(78,240)	(35,959)	(11,035)	(34,191)	(285,963)
Change in Net OPEB Obligation	247,909	185,572	70,894	109,913	328,416	942,704
Net OPEB Obligation (Asset) - beginning of year	438,126	498,515	127,196	150,996	618,345	1,833,178
Net OPEB Obligation (Asset) - end of year	686,035	684,087	198,090	260,909	946,761	2,775,882

\* Net OPEB Obligation as of June 30, 2012 is based on an allocation of results from the July 1, 2009 valuation prepared by Primoris and entries from the Town's 2010, 2011 and 2012 Financial Statements.