GASB Statements No. 43 and No. 45
City of Duluth, Minnesota

as of January 1, 2015

Report Revised June 30, 2015

City of Duluth, Minnesota
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Actuarial Certification

I, Frank T. Vedegys, am a consulting actuary associated with the firm CBIZ Benefits & Insurance Services of Ohio, Inc. I am a member of the American Academy of Actuaries and meet its qualification standards to provide statements of actuarial opinion for OPEB valuations. I have completed an actuarial valuation of the medical, pharmacy, dental, and life insurance benefits for the City of Duluth, Minnesota as of January 1, 2015. This report contains the results of the valuation.

To the best of my knowledge, the information supplied in this report is complete and accurate. In my opinion, the methods and assumptions used in the valuation comply with the Governmental Accounting Standards Board Statement 45, "Accounting and Financial Reporting by Employers for Post-employment Benefits Other Than Pensions". The assumptions are related reasonably to the past experience of the Plan, and they represent my best estimate of anticipated experience under the Plan. Nevertheless, the actual costs of the plan in the future will differ from the results of the valuation, as the emerging experience varies from the assumptions projected in the valuation.

I have relied on the City of Duluth, Minnesota for the accuracy and completeness of the benefit plans, premium rates, contributions, and the employee census. While I have not audited the data, I have reviewed if for reasonableness and consistency. A summary of my understanding of the plan features is provided in this report.

This report has been prepared for the use and benefit of the City in assessing the effect of GASB Statement No. 45 on accounting for post-employment benefits other than pensions. It should not be relied upon for other purposes, and it is not intended to benefit any other party. It may be shared in its entirety with all auditors and the general public.

Neither CBIZ nor any of the employees working on this engagement has any relationship with the City of Duluth, Minnesota that may impair, or appear to impair, the independence and objectivity of our work.

This actuarial valuation was prepared in accordance with the applicable Statements of the Governmental Accounting Standards Board and the Actuarial Standards of Practice issued by the American Academy of Actuaries.

Frank T. Vedegys, FSA

Frank T. Vedegys, FSA, MAAA	6/30/2015 Date

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Summary of Assets

Development of the January 1, 2015 Irrevocable OPEB Trust Balance

		Fair Value
Balance as of January 1, 2014	$	38,719,222
Employer Contributions		556,234
Investment Income (Expense)		4,385,190
Total Additions	$	4,941,424
Benefit Payments		(400,000)
Expenses		(2,812)
Total Deductions	$	(402,812)
Net Change	$	4,538,613
Balance as of December 31, 2014	$	43,257,834
Money-Weighted Rate of Return		11.30%

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Annual Required Contributions

The City of Duluth, Minnesota can contribute the Annual Required Contribution (ARC), an amount actuarially determined according to the parameters of GASB Statement 45. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover the Normal Cost each year and amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed thirty years. The ARC will be used by the auditor to construct a historical Schedule of Employer Contributions for the City's financial statement notes. Although there is no requirement to actually contribute the ARC or any other amount, the auditor and/or rating agencies will consider the City's plan of action to address the unfunded liabilities when assessing the overall creditworthiness of the City.

Contributions for Year Beginning January 1, 2015

Normal Cost Component	Total
Normal Cost	$951,248
Interest	54,221
Total Normal Cost	$1,005,469
Amortization Component	
Actuarial Accrued Liability	$172,507,535
Less Assets	43,257,834
Unfunded Actuarial Accrued Liability	$129,249,701
Amortization Factor Over 30 Years at 5.70%	15.02866
Amortization Payment	$8,600,217
Interest on Amortization Payment	$490,212
Total Amortization Payment	$9,090,429
Annual Required Contribution	$10,095,898

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Annual OPEB Cost

The City of Duluth, Minnesota's Net Other Post Employment Benefit Obligation is calculated based on the Annual Required Contribution of the employer (ARC), an amount actuarially determined according to the parameters of GASB Statement 45. The following table shows the components of the City's Annual OPEB Expense for the year, the benefit payments and employer contributions to the plan, and changes in the City's Net OPEB Obligation to the Employee Benefit Plan.

ANNUAL OPEB COST AND NET OPEB OBLIGATION

	12/31/2015	12/31/2014	12/31/2013
1. Net OPEB Obligation as of beginning of year	$41,654,583	$37,091,031	$32,041,570
2. Annual Required Contribution	10,095,898	14,249,437	14,249,437
3. Interest on Net OPEB Obligation to end of year	2,374,311	2,114,189	1,826,369
4. Adjustment to Annual Required Contribution	(2,929,663)	(2,608,698)	(2,253,557)
5. Annual OPEB Expense : 2 + 3 - 4	$9,540,547	$13,754,928	$13,822,249
6. Benefit Payments*	(8,608,446)	(8,635,142)	(8,178,824)
7. Contributions to Irrevocable Trust*	0	(556,234)	(593,964)
8. Change in Net OPEB Obligation : 5 - 6 - 7	$932,101	$4,563,552	$5,049,461
9. Net OPEB Obligation at end of year	**$42,586,684**	**$41,654,583**	**$37,091,031**

*12/31/2015 amounts are estimated. TBD at Fiscal Year End

Annual OPEB Expense, % of Annual OPEB Expense contributed to the Employee Benefit

Fiscal Year Ended	Annual OPEB Expense	Annual OPEB Contribution	Percent Contributed	Net OPEB Obligation
12/31/2015	$9,540,547	$8,608,446	90.23%	$42,586,684
12/31/2014	13,754,928	9,191,376	66.82%	41,654,583
12/31/2013	13,822,249	8,772,788	63.47%	37,091,031
12/31/2012	14,988,558	9,699,313	64.71%	32,041,570
12/31/2011	15,031,231	11,830,474	78.71%	26,752,325
12/31/2010	17,399,118	10,043,975	57.73%	23,551,568
12/31/2009	17,474,172	13,488,168	77.19%	16,196,425
12/31/2008	23,720,514	13,171,329	55.53%	12,210,421
12/31/2007	23,742,663	22,081,427	93.00%	1,661,236

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Funded Status

Actuarial valuations involve estimates of the value of reported amounts, as well as assumptions about the probability of events in the future. The valuation is based on the substantive plan as of the valuation date. The funded status of the plan and the Annual Required Contributions are subject to continual revision as actual results tabulated at the end of the year are compared to past expectations, and as new projections are made about the future.

1. Present Value of Benefits as of January 1, 2015	$178,323,788
2. Actuarial Accrued Liability as of January 1, 2015	$172,507,535
3. Actuarial Value of Plan Assets as of January 1, 2015	43,257,834
4. Unfunded Actuarial Accrued Liability funding shortfall or (excess) : (2) - (3)	$129,249,701
5. Funded Ratio : (3) / (2)	25.08%
6. 2015 Annual OPEB Expense	$9,540,547

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Schedule of Funding Progress

The required schedule of funding progress provides multiyear trend information that shows whether the actuarial value of plan assets is increasing or decreasing over time, relative to the actuarial accrued liability for benefits.

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Annual Covered Payroll (c)	UAAL as Percent of Payroll (b - a) / c
January 1, 2015	$43,257,834	$172,507,535	$129,249,701	25.08%	$30,154,437	428.63%
January 1, 2013	$31,743,134	$214,255,582	$182,512,448	14.82%	$35,546,938	513.44%
June 1, 2011	$27,753,929	$219,748,555	$191,994,626	12.63%	$39,716,268	483.42%
June 1, 2009	$16,740,064	$224,338,111	$207,598,047	7.46%	$51,536,853	402.81%
June 1, 2007	$13,700,000	$267,381,748	$253,681,748	5.12%	$44,748,212	566.91%
January 1, 2005	$0	$279,934,736	$279,934,736	0.00%	N/A	N/A

Projected Retiree Benefit Payments

Exhibit C is a graph that shows the projection of expected benefit payments under the OPEB plan. These payments only reflect those participants who have already been hired or who are retired. Expected benefit payments are equal to the number of retirees each year times the per retiree cost to the employer, and it includes the implicit liability. The first year's projected benefit payments total $8,608,446. As the last participants retire and then reach the end of their benefit period, the benefit payments decline and eventually would reach zero. Exhibit D is a table showing the first 10 years of expected benefit payments.

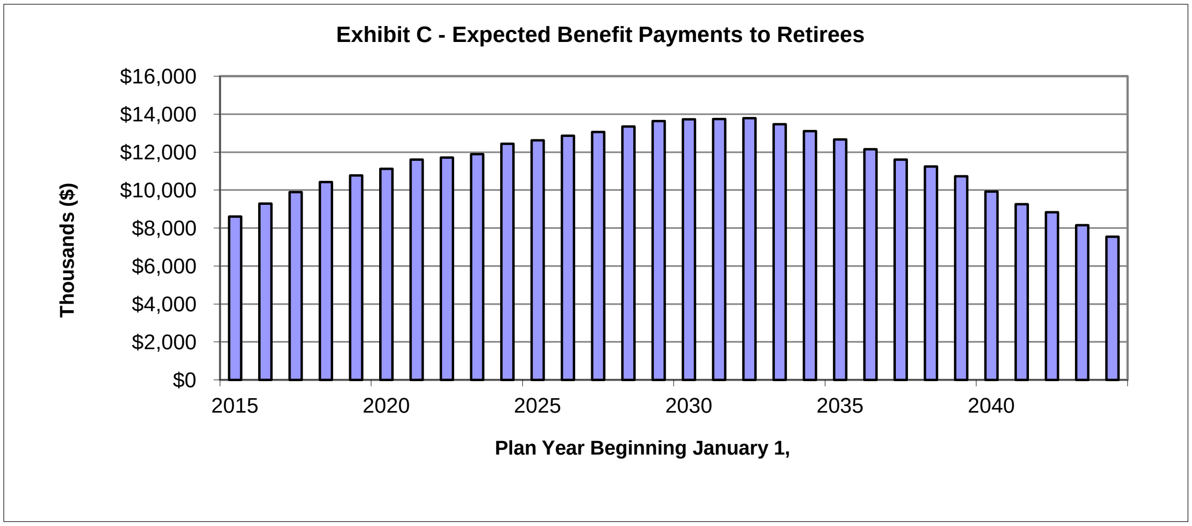

Exhibit D: First 10 Years of Expected Benefit Payments

Plan Year Beginning January 1,	Total
2015	$8,608,446
2016	$9,289,414
2017	$9,892,891
2018	$10,422,586
2019	$10,770,887
2020	$11,115,231
2021	$11,615,138
2022	$11,707,757
2023	$11,893,754
2024	$12,443,622

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Plan Provisions

Valuation Date January 1, 2015

Retiree Benefits

1. Continuation of medical, pharmacy, and dental benefits under the City's group plan. Pre-Medicare retirees are enrolled in the same self-insured plan as active employees. Medicare eligible employees are enrolled in a fully-ensured Medicare Supplemental plan sponsored by the City.
2. Life Insurance: $25,000 life insurance for all eligible retirees.
3. Long-Term Disability: eligible to continue receiving health benefits and $50,000 life insurance.
4. Retirees pay 100% of dental benefit costs, resulting in no liability for the City.

Eligibility

Police and Firefighters:

Any age with 5+ years of service if hired before 1/1/2007
Age 50 with 5+ years of service if hired after 12/31/2006

All Others:

Age 55 with 5+ years of service. Supervisors may be eligible if involuntarily terminated.

Dependent Coverage Spouses and Surviving Spouses and children up to age 26 are eligible for healthcare benefits.

Length of Benefits

Retiree : Lifetime
Spouse : Lifetime
Surviving Spouse : Lifetime or until remarriage

2015 Monthly Premium Equivalents

	3A	Freedom/National
Single	$697.00	$256.00
Family	$1,715.00	$512.00

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Plan Provisions

Medical and Prescription Drug Retiree Contributions

City Police and Fire:

Hired after 12/31/2006: 100% of Premium Equivalent Rates

Hired before 1/1/2007: Percentage of Premium Equivalent Rates according to length of service, as shown below

City Supervisory, LELS, and Confidential

Hired after 12/31/2005: 100% of Premium Equivalent Rates

Hired before 1/1/2006: Percentage of Premium Equivalent Rates according to length of service, as shown below

All Other City Employees:

Hired after 12/31/2006: 100% of Premium Equivalent Rates

Hired before 1/1/2007 with 15 years of service, and retired before 12/15/2009: City pays full premium.

Hired before 1/1/2007: Percentage of Premium Equivalent Rates according to length of service, as shown below

Years of Service	Retiree Percentage of Premium	Years of Service	Retiree Percentage of Premium
5	75%	13	35%
6	70%	14	30%
7	65%	15	25%
8	60%	16	20%
9	55%	17	15%
10	50%	18	10%
11	45%	19	5%
12	40%	20	0%

Life Insurance

City pays the full premium: $0.30 per month per $1,000 of coverage.

Participant Data as of January 1, 2015

	Active Employees	Covered Retirees & Spouses
Count	829	1,547
Average Age	45.4	68.6
Average Service	11.7	N/A
Percent Male	71.2	48.3

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Actuarial Methods and Assumptions

Discount Rate 5.70%

Inflation Rate 2.20%

Actuarial Cost Method Projected Unit Credit.

Amortization Method Level Dollar over an open 30 period

Actuarial Value of Assets Market Value

Per Capita Medical/Rx Claims Cost (Monthly)

Plan	Medical	Prescription Drugs
3A	$681	$162
National/Freedom	$256	

Pre-65 per capita claims costs are based on enrollment and paid medical and prescription drug claims for retirees paid from January 1, 2013 through December 31, 2014 and smoothed with expected 2015 costs. Medical and prescription drug claims were projected to the 2015 plan year assuming healthcare trend detailed below. The projected 2013 claims were weighted 20% and the projected 2014 claims were weighted 80%. 20% of the calculated costs are blended with 80% of the expected costs.

Fixed Costs (Monthly)

Tier:	Single	Family
Rate:	$41.35	$103.84

Monthly fixed costs include: HealthPartners administration fees, $400,000 specific stop-loss premium, 120% Aggregate Stop-Loss attachment point, as well as fees for Cancer Management Program, Healthy Pregnancy Program, Low Back Pain Program, and a Fiduciary Fee.

Healthcare Trend (Annual)

Year	Pre-65 Costs	Post-65 Costs
2016	10.00%	3.75%
2017	9.50%	3.75%
2018	9.00%	3.75%
2019	8.50%	3.75%
2020	8.00%	3.75%
2021	7.50%	3.75%
2022	7.00%	3.75%
2023	6.50%	3.75%
2024	6.00%	3.75%
2025	5.50%	3.75%
2026+	5.00%	3.75%

Medical trend applies to the per-capita medical claims costs as well as the premium equivalent rates charged to participants. Fixed costs are assumed to increase with inflation.

Actuarial Methods and Assumptions

Morbidity

The pre-Medicare per-capita claims costs have been aged using a 2% per year aging factor centered at the group's average age of 60. The post-Medicare per-capita claims costs have been aged using a 1% per year aging factor centered at the group's average age of 72. This accounts for lower costs expected at younger ages and higher costs expected at older ages. Fixed costs and premium equivalent rates are unaged.

Election Rates

Future Retirees:
100% of employees who receive a City contribution are assumed to elect medical benefits once they are eligible for retirement.

25% of employees who pay the full premium are assumed to elect medical benefits once they are eligible for retirement.

25% of members are assumed to elect dental benefits once they are eligible for retirement.

Current Retirees: Based on current coverage election. It is assumed no one will opt-in or opt-out of coverage once initial retirement election is made.

Spousal Election Rates

Future Retirees: 100% of future retirees are assumed to be married at retirement. 65% of married participants at retirement will elect to cover their spouse.

Current Retirees and Spouses: Based on current coverage election

Spouse Age

Male spouses are assumed to be 3 years older, and female spouses are assumed to be 3 years younger. Actual age is used for spouses of current retirees, if provided.

Mortality Rates

Healthy:
IRS 2008 Generational Mortality Table
Disabled:
Disability Mortality Rev Rul 96-7

Actuarial Methods and Assumptions

Turnover Rates

The following representative termination table incorporates all types of withdrawals, such as disability, resignations, layoffs, and dismissals.

Age	Police, Fire	Others - Male	Others - Female
20	8.6%	8.4%	8.4%
30	2.8%	5.4%	5.4%
40	1.3%	3.0%	3.5%
50	0.5%	2.0%	2.5%
60	0.0%	0.0%	0.0%

Disability Rates

Age	Rate
20	0.03%
30	0.03%
40	0.04%
50	0.21%
60	1.01%

Retirement Rates

Age	Police, Fire	Other - Eligible for Rule of 90	Other - Not Eligible for Rule of 90
<50	Same as Term	0%	0%
50-51	20%	0%	0%
52	30%	0%	0%
53-54	35%	0%	0%
55-59	40%	67%	10%
60	75%	67%	25%
61	75%	67%	40%
62-64	80%	67%	40%
65	100%	50%	50%
66-69	0%	40%	40%
70	0%	60%	60%
71	0%	100%	100%

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Definitions

Actuarial Accrued Liability (AAL)	The portion of the Actuarial Present Value of Benefits allocated to past service based on the selected Actuarial Cost Method. In effect, this is the part of the future benefit that the employee has already "earned."
Actuarial Cost Method	The method that is used to spread the value of benefits expected to be paid in the future over the years of employment remaining until the employee is fully eligible to receive benefits.
Actuarial Present Value of Benefits	The estimated value of projected benefits payable to plan members in the future, discounted back to the valuation date to reflect the time value of money.
Annual OPEB Expense	The amount recognized in the employer's financial statement each accounting period for its contributions to an OPEB plan, on the accrual basis of accounting.
Annual Required Contribution (ARC)	The Normal Cost plus the part of the Unfunded Actuarial Accrued Liability that is amortized that year.
Discount Rate	The interest rate used to reflect the time value of money. The discount rate should reflect the long-term rate of return the employer expects to earn on the assets backing the OPEB liability. In the absence of OPEB assets, the discount rate should reflect the long-term rate of return the employer expects to earn on assets in its general fund.
Employers Contributions	Contributions made in relation to the ARC. An employer has made a contribution if it has paid benefits directly to or on behalf of a retiree, made premium payments to an insurer, or irrevocably transferred assets to a dedicated trust which provides benefits to retirees.
Fair Value of Assets	The market value of the assets in the trust as of the valuation date.
Full Eligibility Date	The date that the employee has satisfied all of the requirements to receive full benefits under the plan.
Healthcare Cost Trend Rates	Annual change in per capita plan costs due to factors such as health care inflation, utilization of services, and technological advances.
Market Related Value of Assets	The value of assets determined by using the asset valuation method that is used to calculate the expense.

Definitions

Net Other Post Employment Benefit Obligation	The accumulated value of the employer's contributions in excess of (less than) the annual OPEB Cost (expense).
Normal or Service Cost	The present value of benefits earned during the plan year, which is part of the annual expense.
Per Capita Plan Costs	The average cost of providing health care benefits covered by the plan to a participant after adjusting for administrative costs, Medicare reimbursements, deductibles, coinsurance, and co-payments.
Post-Employment Benefit Plan	An arrangement between an employer and its employees, whereby an employer agrees to provide benefits after the employee retires in exchange for services. A plan may be written or implied by a well-defined practice of paying post-employment benefits or from oral representations made to current or former employees. In some situations, the "substantive plan" used to determine the expense might differ from the written plan.
Valuation Date	The date that the assets and liabilities are measured.